Supplement to the Survey of Current Business

NATIONAL INCOME

1954 EDITION

UNITED STATES DEPARTMENT OF COMMERCE

OFFICE OF BUSINESS ECONOMICS

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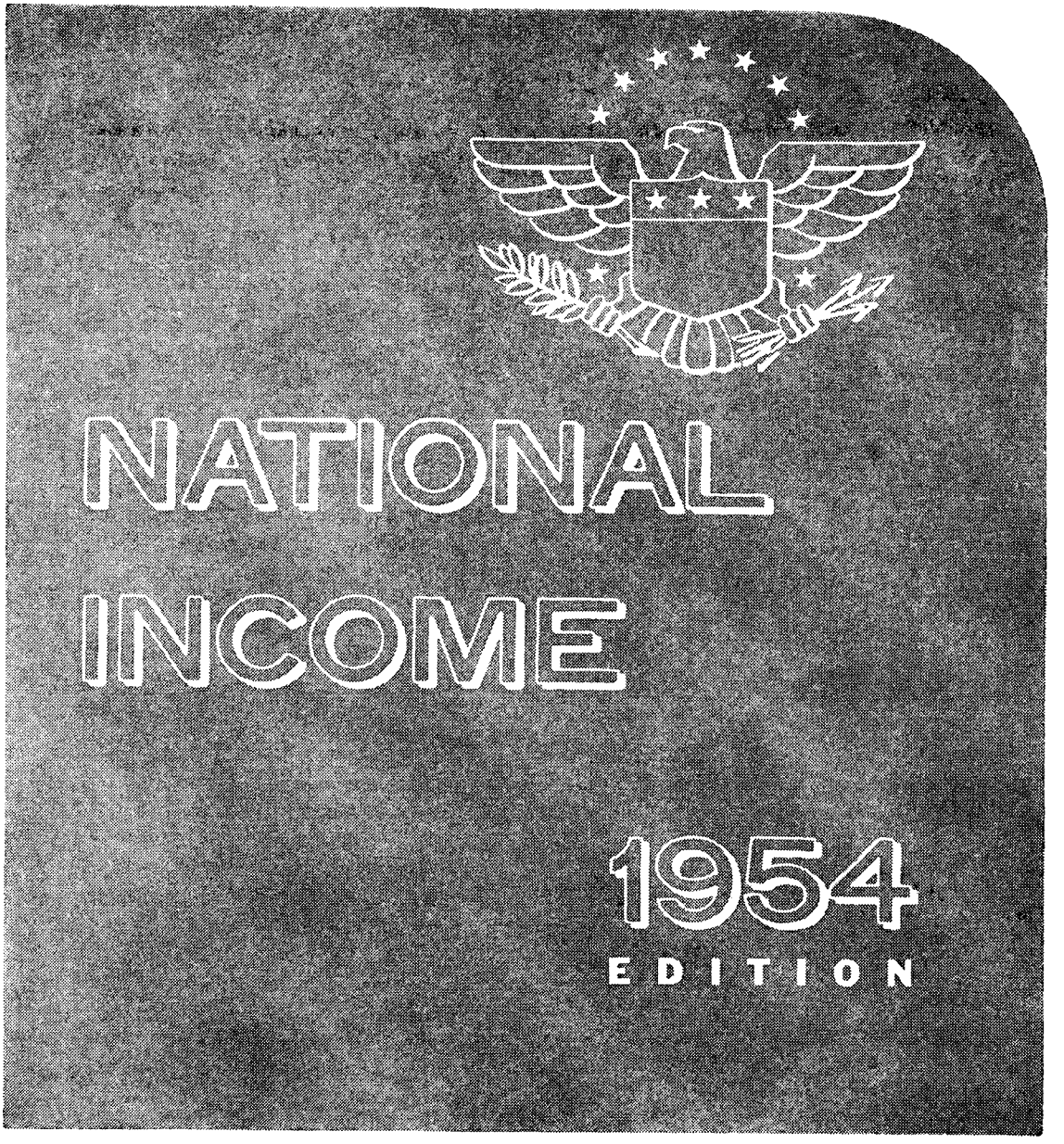
A Supplement to the Survey of Current Business



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Foreword

This volume carries forward the official work on United States national income initiated in 1932 in response to Senate Resolution No. 220 of the 72d Congress. The information presented is designed to meet in comprehensive fashion the needs of business and other users of national income data.

Since publication in 1934 of the first of a series of national income reports by the Department of Commerce, steady progress has been achieved in extending the scope of the estimates, in improving their quality, and in making them available promptly, as well as in sharpening the concepts. A principal contribution of the present report—which is closely similar in form to the 1951 NATIONAL INCOME supplement so as to facilitate use by those familiar with that volume—is the presentation of estimates incorporating data collected in the postwar industrial and population censuses.

In the preparation of these new estimates, opportunity was also taken to rework many of the income and product series for the entire period back to 1929 in order to reflect additional data sources and improvements in estimating techniques. A special feature is the presentation of constant-dollar gross national product in 1947 prices instead of 1939 prices, as previously used.

The tables presented in this volume incorporate the results of the first comprehensive review of sources and methods since the initial publication of the national income statistics in the form of an economic accounting system in the 1947 NATIONAL INCOME supplement. While the changes that have been introduced do not alter the overall picture of the United States economy afforded by the income and product accounts, they improve the data in many detailed aspects.

The text material in the 1951 volume also has undergone review. This resulted principally in reworking the descriptions of statistical sources and methods to accord with the new estimates and bringing up to date the summary of economic developments.

The statistical changes have been examined for the light they shed on the reliability of the estimating techniques. This analysis confirms the adequacy of these techniques to produce reliable preliminary measures of national output and its major components on the basis of incomplete information. Revisions for some of the more detailed components, however, were substantial and underscore the need which we have repeatedly stressed for further development of the primary data sources on which the national income estimates are based.

The present report contains all the national income statistics of the Office of Business Economics except the annual series on income by States and the distributions of family income by size classes. With these exceptions it supersedes all previously published figures, and the series contained in this volume will be kept up to date in the monthly SURVEY OF CURRENT BUSINESS.

We take this opportunity to express our appreciation for the continued cooperation of the many Government and private agencies that assist the Office of Business Economics in preparing these economic guides. Acknowledgment is made in the accompanying statement which also recognizes the work of the individual members of our staff.

M. Joseph Meehan

Director, Office of Business Economics

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Acknowledgments

The present edition of the *National Income* supplement was prepared under the joint direction of George Jaszi, Chief of the National Income Division, and Charles F. Schwartz, the Assistant Chief.

In charge of major areas of the statistical work were Lawrence Grose, Raymond Nassimbene, and Harlow D. Osborne. Special acknowledgement is due to Edward O. Bassett for his contribution to methodology in the complex task of incoporating the data collected in the postwar industrial censuses into the commodity flow estimates.

This volume builds upon the foundations laid by its predecessors—the 1951 and 1947 editions of the *National Income* supplement. Work on the 1951 edition was initiated by Milton Gilbert, former Chief of the National Income Division, and carried through under the direction of Mr. Jaszi and Mr. Schwartz. The conceptual framework and statistical methodology underlying the estimates, which were explained in detail for the first time in the 1951 volume, had been established initially in the 1947 report, under the direction of Mr. Gilbert. His principal assistants in this major undertaking of fundamentally recasting the official national income statistics were Edward F. Denison, now Assistant Director of the Office of Business Economics, Mr. Jaszi, and Mr. Schwartz.

Part I of this report, dealing with trends in national income and product, was prepared initially by Carl P. Blackwell, formerly of the National Income Division, and revised for the present edition by George M. Cobren. The accompanying charts were prepared under the direction of Edwin C. Warren, Chief Draftsman in the Printing Division of the Department of Commerce, with the cooperation of Anna M. Guindon of the Office of Business Economics.

Numerous staff members of the National Income Division participated in the initial writing of the various sections of the technical notes in Part III and their revisions for the new edition. Special credit is due to Harlow D. Osborne in connection with the sections on income of unincorporated farm enterprises, rental income of persons, corporate profits, new construction, net foreign investment, and capital consumption allowances.

Acknowledgments to others are listed in the sequence in which the technical notes appear in Part III. Wages and salaries—Franklin M. Aaronson and Lawrence Grose; contributions for social insurance and other labor income, and income of unincorporated enterprises—Lawrence Grose; interest—Elwyn T. Bonnell; personal consumption expenditures for commodities—Edward O. Bassett and Raymond Nassimbene; personal consumption expenditures for services—Carolyn G. Bernhard; producers' durable equipment—Robert C. Wasson and Raymond Nassimbene; change in business inventories—George M. Cobren; government receipts and expenditures—Carl P. Blackwell; transfer payments—Lawrence Grose; capital consumption allowances—Robert C. Wasson.

In addition, the Balance of Payments Division and the Business Structure Division of the Office of Business Economics provided materials relating to the descriptions of net foreign investment and personal consumption expenditures for commodities, respectively.

In the initial preparation of the estimates of constant-dollar gross national product described in Part IV, John W. Kendrick was principal assistant to Mr. Jaszi. Major contributions were also made by Edward O. Bassett, Carolyn G. Bernhard, Morris Cohen, Joseph B. Epstein, and Millard L. Gallop.

The vast statistical work underlying the estimation of the multiplicity of income and product series contained in this report is the result of the cooperation of all the members of the National Income Division and others in the Office of Business Economics, and is founded on their effort and experience. However, in a larger sense, the statistics rest upon the work of Government statistical agencies as a whole and of private agencies as well. These provide the basic source data and the considerable volume of supplementary information needed to construct the national income and product accounts. The statistical work of the Bureau of the Census of the Department of Commerce, the Health, Education, and Welfare, Treasury, Agriculture, and Labor Departments, and the various regulatory commissions is of fundamental importance in this regard.

Certain of the estimates themselves are prepared outside the National Income Division: farm income by the Agricultural Economics Division of the Department of Agriculture; direct estimates of personal saving by the Securities and Exchange Commission; new construction activity by the Building Materials and Construction Division of the Department of Commerce, in cooperation with the Bureau of Labor Statistics of the Department of Labor; net foreign investment by the Balance of Payments Division; and personal consumption expenditures for commodities since 1940 by the Business Structure Division, except 1947 for which benchmark estimates were prepared in the National Income Division.

Progress in the national income field has been facilitated by the Bureau of the Budget, not only by its direct support, but by its continuing recognition and furtherance of the needs of the Office of Business Economics' national income work in the development of the Government's statistical program. Finally, it is recognized that what has been achieved has been possible only by the support and encouragement given by the Congress continuously since these studies were initiated at the direction of the 72d Congress.

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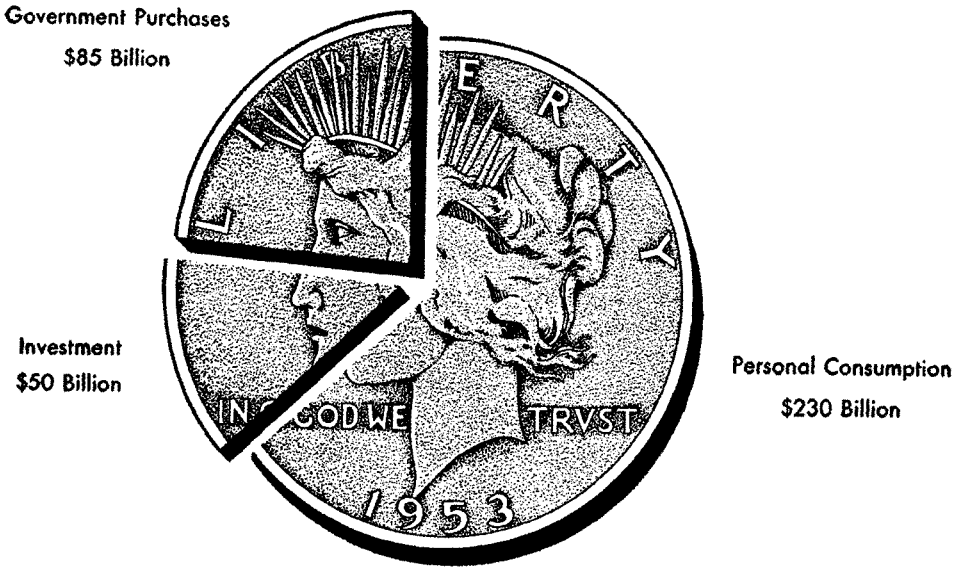
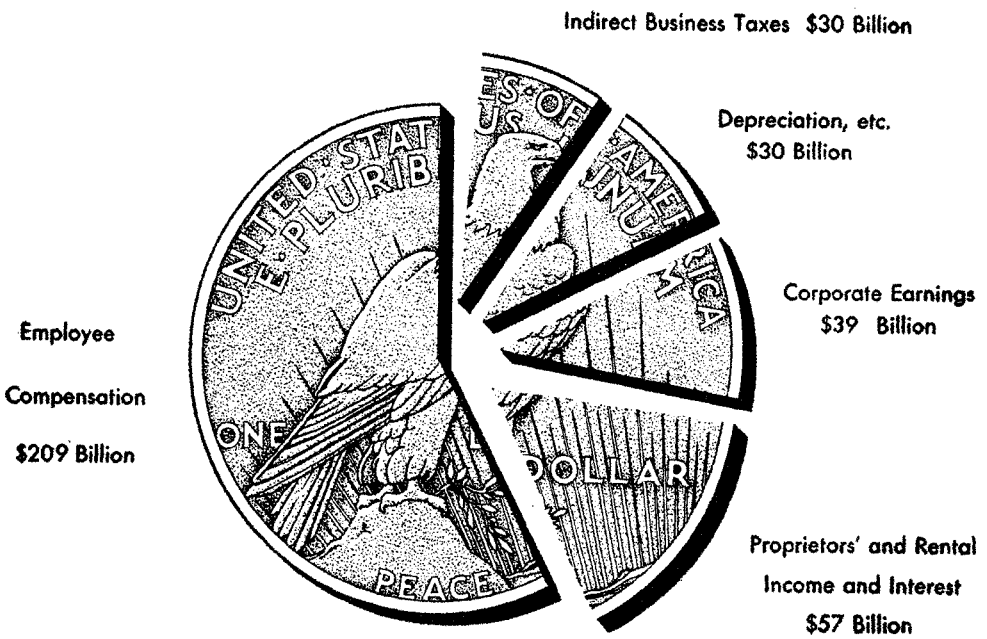


The 1953 Income-Product Coin



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PART I

National Income and Product, 1929–53

A Review

The national income statistics presented in this report cover a quarter of a century of highly varied economic developments in the United States.

In broad outline, this period embraces the following sequence of events: The precipitous fall from the prosperity of 1929 into the deep depression of the early nineteen-thirties; the subsequent recovery, interrupted by the brief recession of 1938, but then continuing through the remaining prewar years; the tremendous performance of the economy in the prosecution of World War II; reconversion and the postwar boom, with attendant inflationary strains; the mild business recession of 1949; and the rapid recovery of 1950, merging in the latter half of that year into the period of hostilities in Korea.

The national income data provide a detailed statistical description of the way the economy has functioned under these widely diverse conditions. They reveal important fluctuations and long-term changes in the volume, composition, and use of the Nation's output, in the industrial structure through which it is produced, and in the distribution of the resultant income.

The nature of national income statistics is fully described in subsequent parts of this report. The following general summary highlights their major features as a prelude to an analysis of the functioning of the economy and of the path traversed in reaching peak levels of income and production in 1953.

National product: The flow of goods and services

Total output is measured from two principal points of view: As the summation of final products produced by the economy; and as the summation of costs incurred in producing those products. Both of these approaches yield comprehensive measures of economic activity, but the analytical breakdowns to which they most readily lend themselves throw light on different aspects of the economy.

The gross national product measures the Nation's output of goods and services in terms of its market value. When expressed in current prices, this series reflects the total dollar value of production; when expressed in constant dollars to eliminate the influence of price changes, it provides an overall index of the physical volume of goods and services produced by the economy.

In both current and constant prices, the gross national product is broken down to show its disposition among broad groups of users—consumers, business, government, and foreign countries. The commodity and service composition of purchases by each of these major groups is delineated in considerable detail for the current dollar series and in summary fashion for the constant dollar series.

National income: Earnings from production

Total output is also measured, in terms of the factor costs of producing it, by the national income—the aggregate earnings of labor and property which arise from current production. This measure differs from the gross national product chiefly in that it is computed after deduction of indirect business taxes and of depreciation charges and other allowances for business consumption of durable capital goods.

The national income is broken down by distributive shares, by industry of origin, and by legal form of organization. The first of these breakdowns represents a classification of earnings according to the forms in which they accrue to residents of the Nation—compensation of employees, profits of corporate and unincorporated enterprises, net interest, and rental income of persons. The second indicates the use of economic resources and the contribution to total output by each of a number of industrial subdivisions, as measured by income originating in the respective industries. The third shows an important special aspect of the institutional structure of the economy—the portions of total economic activity (also measured by income originating) conducted by various types of productive units, including corporations, sole proprietorships and partnerships, other private business, government and government enterprises, and households and institutions.

In addition to a summary account showing the national income and product, accounts are maintained for each of the major sectors of the economy. These consist of current income and outlay accounts for the business sector, for persons, for government, and for the rest of the world in its transactions with the United States.

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A consolidated saving and investment account for the economy as a whole is also provided. The system of accounts is designed to furnish a description of the economic process in terms of the expenditures and receipts of the various sectors, arranged to show their interactions upon each other. The nature and classification of the transactions recorded for each sector are governed to a considerable extent, of course, by the central objective of measuring total output.

Personal income: Receipts of consumers

Particular interest centers upon the personal account, which covers the activities of the consuming public. On the one hand, it gives total personal income—the current income received by persons from all sources, inclusive of transfers from the government and from business; and on the other, it indicates the disposition of personal income for consumption, taxes, and savings. Personal income is a third major aggregate, generally coordinate in significance for economic analysis with the national income and the gross national product.

In general outline, then, this is the body of statistical information utilized in the the following review of economic developments since 1929. While this framework permits a comprehensive study of such developments, it by no means covers all significant elements in the operation of the economy. It does not, for example, provide direct information regarding the monetary and credit system of the United States. In the discussion below, therefore, only incidental attention will be devoted to trends in that field—not because they are lacking in importance, but because they fall outside the scope of the statistics with which this review is primarily concerned. Although a number of other relevant factors are similarly excluded, the picture of the economy in action which emerges from the national income accounts is a highly significant one.

BASIC TRENDS IN THE ECONOMY

Despite the violence of the economic fluctuations which have occurred, the outstanding feature of economic developments over the past 25 years is the tremendous growth of the United States economy.

The population increased by over 30 percent, from 122 million in 1929 to 160 million in 1953, and the number of persons engaged in production rose in roughly similar proportion. This larger work force was equipped with a greatly expanded volume and improved quality of machinery and plant facilities, as well as with such intangible assets as better education and advanced scientific knowledge. Through utilization of these enlarged human and material resources, the economy has been able to produce a vastly increased flow of goods and services, including a wide array of new products.

Growth of the Economy

The gross national product amounted to $365 billion in 1953, as compared with $104 billion in 1929. This comparison reflects the combined influence on the current market value of total output of both greatly increased physical volume and much

Chiefly as a result of the inflation associated with World War II and its aftermath, and the Korean conflict, the general level of prices in 1953 was more than two-thirds above that of 1929. After allowance for this factor, the physical volume of the Nation's output, as measured by the gross national product in constant dollars, is found to have risen 105 percent over the period. In terms of real output per capita, the increase amounted to 57 percent. See chart on page 5.

A simple and meaningful comparison of the long-term rate of growth in national production is provided by the average annual percentage increase in constant-dollar gross national product from 1929 to 1953, which were both years of high utilization of productive resources. According to this calculation, the rate of expansion in the real volume of output has averaged over this 25-year period about 3 percent per year.

In part, this growth has reflected the gradual increase of the Nation's manpower resources. The advance in production, however, has outstripped this increase by a wide margin, owing to the achievement of sizable gains in productivity per unit of manpower utilized.

Large advance in productivity

Trends in productivity may best be examined in terms of gross product, excluding that arising in general government because the method by which the contribution of government to constant-dollar national product is estimated makes no allowance for changes in productivity.

With this exclusion, the real increase in output from 1929 to 1953 was almost 100 percent. During the same period the number of persons producing this output—full-time equivalent employees plus active proprietors—rose by 27 percent, or about 1 percent per year on the average. An annual rate of growth in real product per person engaged averaging approximately 1¾ percent is thus indicated.

Moreover, this rate of increase occurred during a span of years in which average hours worked per week in the private economy were reduced by about 10 percent. On a man-hour basis, accordingly, the rise in productivity has been considerably greater. Real product per man-hour was well over half again as large last year as in 1929, implying an average annual rate of increase somewhat in excess of 2 percent.

Many factors influence productivity

It is important to recognize that productivity increases as computed above, although expressed in terms of output per unit of labor input, are attributable not only to labor, but jointly to all of the factors influencing productivity. Foremost among these, undoubtedly, have been the technological improvements and increased amounts of capital equipment utilized by the Nation's industries. Better organization and management of productive operations have also contributed, as have advances in the education, training, and health of the population.

These types of influences affect directly the technical efficiency of particular productive processes. In addition, the productivity measures given above also register shifts within individual industries among products involving varying amounts of output per unit of labor input and, furthermore, shifts of workers between

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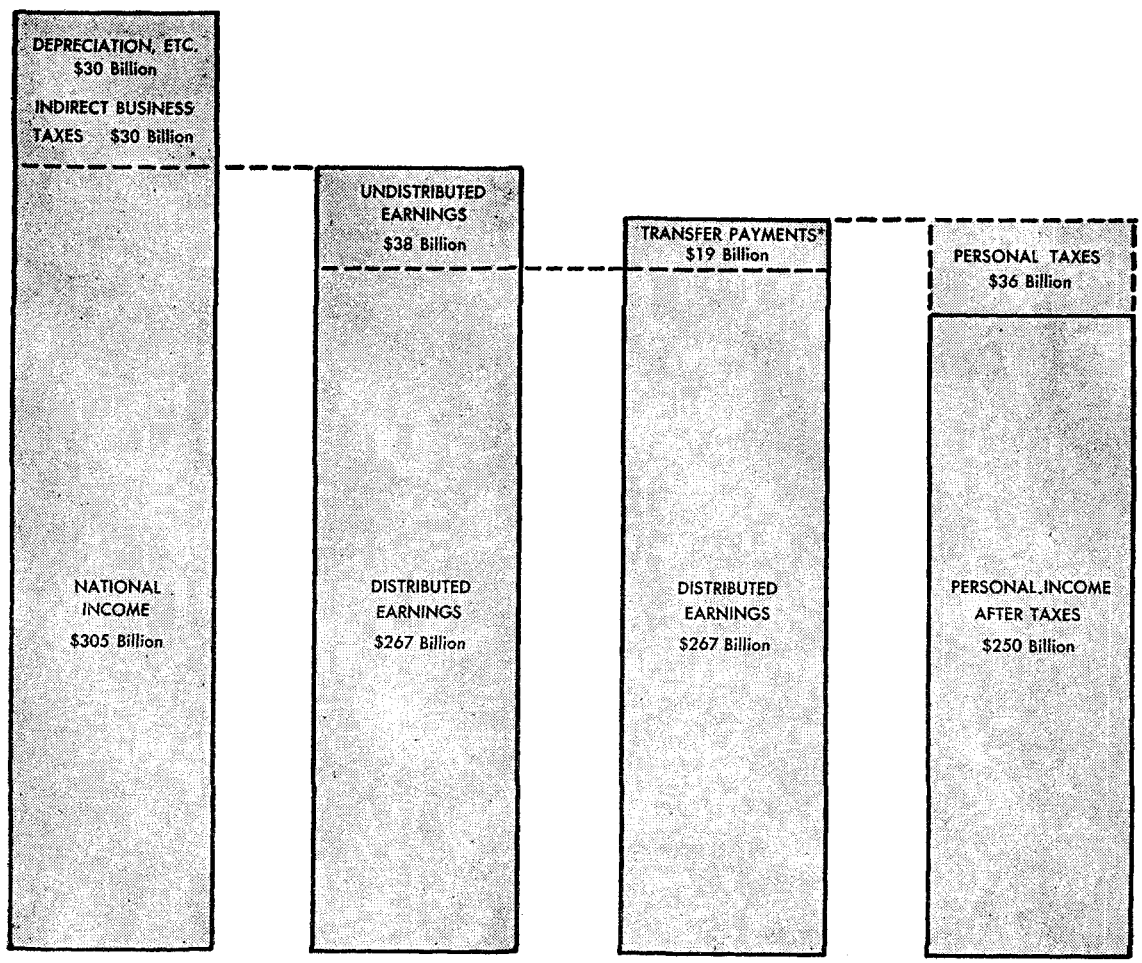
National Output, Income, and Consumer Purchasing Power in 1953

★ Gross national product was 20% larger than national income. It includes in addition depreciation and indirect business taxes

★ Seven-eighths of the national income was distributed as personal income

★ Personal income exceeded national income distributed, as individuals also received $19 billion in transfer payments

★ After taxes, $250 billion of personal income was available for spending or saving



*INCLUDING $5 BILLION OF NET INTEREST PAID BY GOVERNMENT

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An appreciable part of the productivity rise since 1929 can be traced to a shift of the latter type. The proportion of the labor force engaged in farming—where real product per man-hour is substantially less than in the private nonfarm sector—has declined markedly and almost continually. This shift of workers to nonfarm industries has in itself contributed about one-fifth of a percentage point to the average annual rate of growth in real product per man-hour, quite apart from the improvement of productivity in each of the sectors separately. Relative shifts of labor among industries within the nonfarm sector have probably affected total productivity in a similar fashion. While information is not available for precise calculation of the effects of these industrial shifts, indirect evidence suggests that in the aggregate they may compare in importance with the farm-nonfarm movement.

Shifts in the Use of National Output

Along with the huge expansion of the gross national product since 1929, there have been significant changes in its disposition among major groups of users and in the composition of purchases by each of these groups.

All major domestic purchaser groups have shared—though to somewhat different degrees—in the increased volume of production. See chart on page 6. Net foreign investment, which measures net purchases of United States output by the rest of the world, is the only principal component of national product to show a decline from 1929 to 1953.

The most notable change since 1929 in the use of the Nation's output is a shift from private to government use. In terms of the current dollar estimates of gross national product, government purchases of goods and services, which absorbed 8 percent of the gross national product in 1929, took 23½ percent in 1953. Personal consumption expenditures, on the other hand, dropped from 75½ percent of the total in 1929 to 63 percent last year. The proportion of the value of output going into investment was reduced moderately from 1929 to 1953.

Percentage Distribution of Gross National Product

	1929	1953
In current dollars:		
Personal consumption expenditures	75.6	63.1
Gross private domestic investment	15.5	14.1
Net foreign investment	.7	−.5
Government purchases of goods and services	8.1	23.4
Total	100.0	100.0
In 1947 dollars:		
Personal consumption expenditures	71.9	64.2
Gross private domestic investment	18.0	12.8
Net foreign investment	1.1	−.1
Government purchases of goods and services	9.1	23.1
Total	100.0	100.0

In terms of the constant-dollar gross national product, the shift to government use is similar. It is seen, however, to be at the expense of both personal consumption and of investment, rather than mainly of personal consumption, as indicated by the current-dollar figures. These value and volume relationships are summarized in the table above.

Consumption patterns reflect price shifts

Although the proportion of total national product going to consumers was smaller last year than in 1929, owing to the larger share used for public purposes, the absolute volume of goods and services purchased for personal consumption was, of course, vastly increased. In terms of constant (1947) dollars, the expansion amounted to 83 percent—a gain of two-fifths in real consumption per capita.

Reflecting also a 59 percent rise in average prices, the dollar volume of total consumer outlays last year reached $230 billion, as compared with $79 billion in 1929. The distribution of these outlays by major objects of expenditure shifted markedly over the two and a half decades. Nondurable goods absorbed an appreciably larger share of the consumer expenditure dollar, rising from 47½ percent in 1929 to 51½ percent in 1953, while the proportion spent on services dropped from 40½ percent to 35½ percent last year. Durable goods purchases accounted for about the same proportion (12–13 percent) in both years.

To a very considerable degree, these shifts reflect differential movements of prices for major items in the respective expenditure classes, rather than fundamental alterations of the consumption pattern in real terms. In particular, much of the relative decline in the importance of service outlays has stemmed from the marked lag of rent and household utility charges behind the general upswing of consumer prices in the last decade, while most of the increased relative importance of nondurable commodities is traceable to the considerably above-average rise in prices for food and clothing. The chart on page 7 shows rental outlays in relation to total consumption.

Changes in real spending, however, have also occurred. Such factors as the development and marketing of innumerable new products, increased reliance upon private automobile transportation, and the expanding use of household appliances have induced marked shifts in the pattern of spending for commodities. At the same time, demands for some classes of services—of which the employment of domestic servants is a conspicuous example—have tended to decline or to lag behind the general advance.

Equipment share of investment higher

Gross private domestic investment last year amounted to $51½ billion, or 14 percent of total gross national product, as compared with about $16 billion, or 15½ percent, in 1929. In real terms, as shown in the accompanying table, the share of domestic investment in the total was appreciably lower last year than in 1929, the difference in movement reflecting a sharper rise in the prices of capital goods than of goods and services in general. It may be noted that the constant-dollar data take only incomplete account of quality change. Inasmuch as quality improvements in fixed equipment probably exceeded those in other goods and services comprising the national product, the indicated decline in the proportion of real investment would be moderated if adequate allowance for quality change could be made.

There was a marked shift from 1929 to 1953 in the general composition of investment expenditures. New private construction put in place accounted for about 54 percent of the total in the earlier period, but for only 50 percent last year, while business purchases of durable equipment rose in relative importance from 36 to 47 percent. Net accumulations of business inventories represented 10 percent of total domestic investment in 1929, about three times the 1953 proportion.

The relative decline in construction activity was attributable to the decrease in the proportion of expenditures for nonresidential construction, consisting mainly of outlays for

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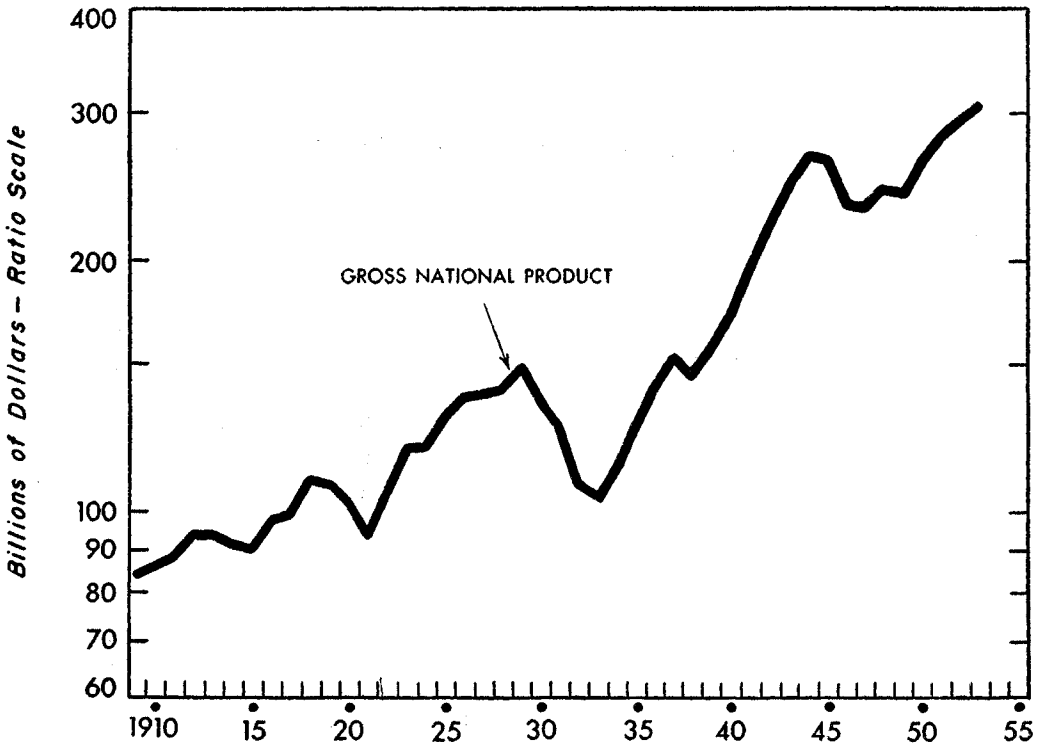
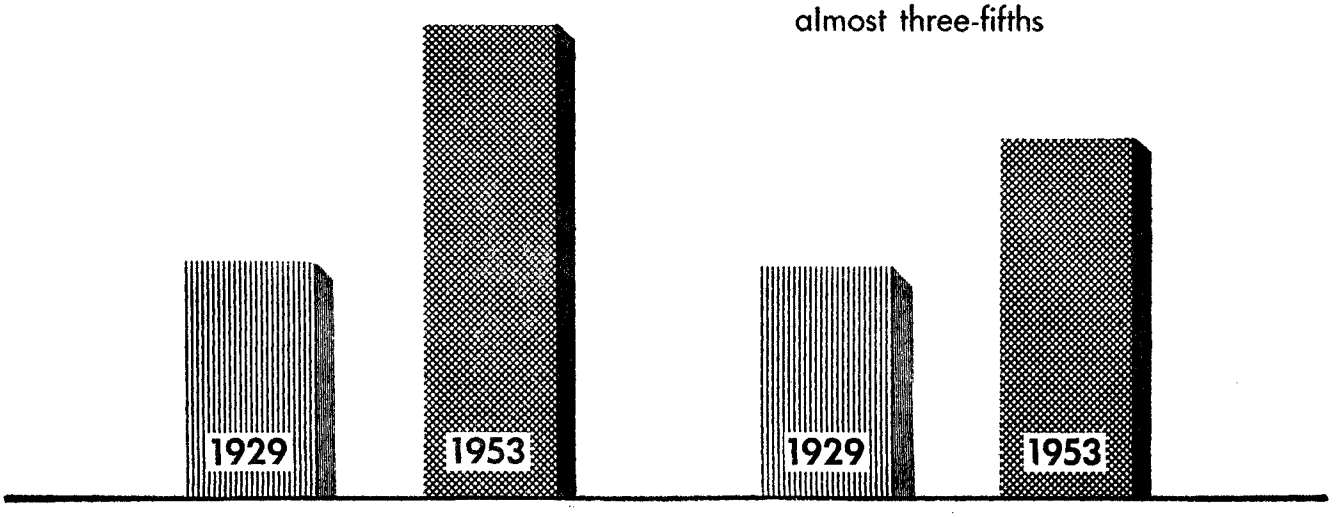
The National Output

In Constant (1947) Dollars

- Growth has averaged about 3 percent per year



- Since 1929
  - Real Output has more than doubled
  - Real output per capita has increased by almost three-fifths



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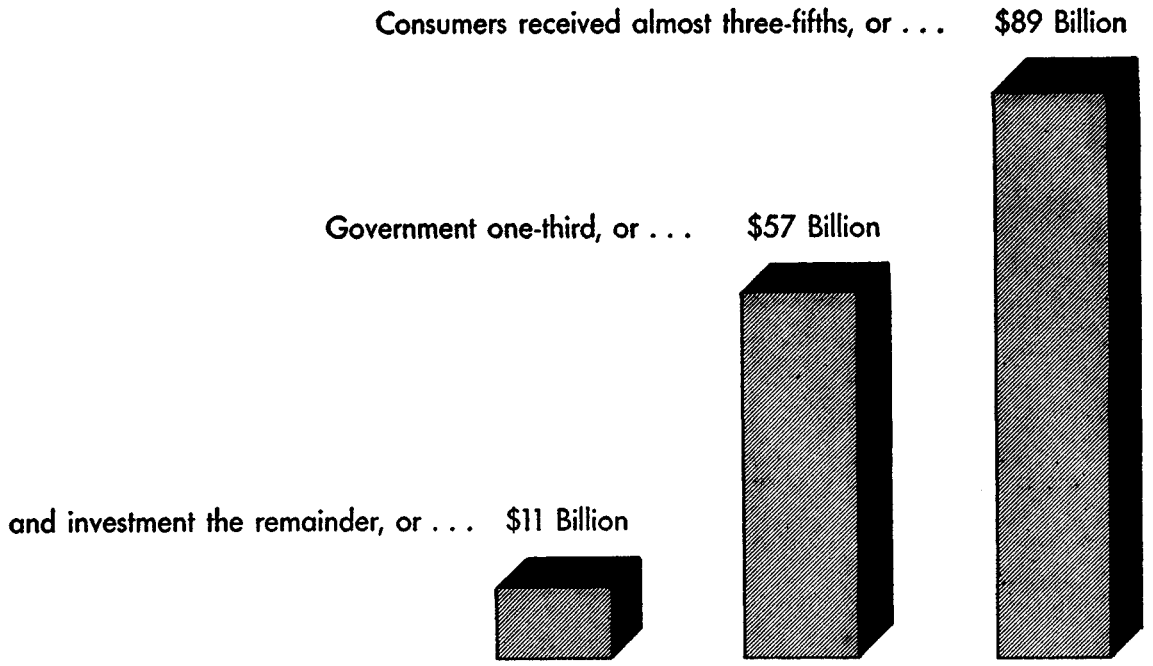
Distribution of Increased Output—in 1947 Dollars

Of the $157 billion increase in the total volume of National Output from 1929 to 1953 . . .



business plant. Nonresidential construction expenditures were reduced from 31 percent of gross private domestic investment in 1929 to 26 percent in 1953. In contrast, there was little difference between the two terminal years in the percentage of outlays for new nonfarm dwelling units. Thus, an outstanding feature of the shift in investment was that business expenditures for fixed capital facilities in 1953 were concentrated much more heavily upon acquisition of new equipment, and proportionately less upon plant expansion, than they were in 1929. See chart on page 8. Over the 25-year period, these broad changes in the relative importance of construction and producers' durable equipment were even greater in real terms than in current dollars, since construction costs rose twice as much as equipment prices during the period.

Shift in foreign transactions

Net foreign investment was a relatively minor component of national product both in 1929 and in 1953. In large measure, the shift from a positive foreign balance of $1 billion to a negative balance of $2 billion reflects a change in the means by which foreign countries financed their net acquisitions of United States goods and services. In 1953, they obtained large quantities of American exports by grants from the United States Government. Such amounts are recorded in the national income statistics as Government, rather than foreign, purchases. Corresponding exports in 1929, being then financed through regular commercial channels, entered gross national product under the net foreign investment heading. When allowance is made for this factor, the net flow of United States output to other countries shows a relative increase from 1929 to 1953.

The low ratio of net foreign investment to total production should not, of course, be interpreted as an indication of the importance of international trade to the domestic economy. Actually, its importance is much greater than is suggested by such a net concept. The net balance is a composite of much larger gross flows of United States output into export channels and of goods and services produced abroad into domestic consumption, capital formation, and government procurement. These gross flows in both directions, however, were smaller in relation to domestic economic activity last year than in 1929.

Growth of government purchases

Combined Federal, State, and local purchases of goods and services rose from $8½ billion in 1929 to $85 billion in 1953. As already noted, these purchases represented an increasing proportion of total national output. See chart on page 11.

Over the two and a half decades, the entire increase in this proportion was attributable to expanded Federal Government

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activities. In the main, the expansion stemmed from the imposition upon the economy of a national defense burden much heavier in recent years than in the prewar period. National security purchases, which constituted less than 1 percent of gross national product in 1929, represented more than 14 percent in 1953.

Part of the increase in the national security outlays of the Federal Government may be traced to the large volume of foreign aid—both military and economic—a type of activity which was nonexistent in 1929. Federal purchases of goods and services for all other purposes combined accounted for only a minor portion of the 1929–53 expansion.

Changes in the Income Flow

Accompanying the expansion of the national output and the shifts in its composition and use since 1929, there have been marked changes in the size of the corresponding income flow, in its industrial origin, and in the form of its distribution to residents of the Nation.

The national income rose from $88 billion in 1929 to $305 billion last year—an increase of 250 percent. This rise, of course, reflected not only the expansion of the physical volume of production but also the sharply higher prices prevailing in 1953.

Shifts in industrial pattern

Perhaps the most important of the changes in the income flow since 1929 are those relating to its industrial origin. Such changes are indicative of the way in which the allocation of economic resources has been altered to meet the shifting character of demand for the Nation's output.

Income originating in each industry measures the earnings of the economic resources—both labor and property—utilized by it. Accordingly, the breakdown of the national income by industry of origin provides a measure of the net contribution of each industrial segment of the economy to the total value, at factor cost, of the net national output.

Private nonagricultural domestic industries accounted for about the same proportion (83–84 percent) of the national income in 1929 and 1953. The principal changes in the income originating in the remainder of the economy were in government, which showed a substantial rise over the period, and in agriculture, which declined in relative importance.

Large increase in manufacturing

Industrial shifts within the private nonagricultural domestic sector are illustrated in the chart on page 12, which shows the percentage increases since 1929 in national income originating in several broad groups of industries. Since 1929 and 1953 were both prosperous, full-employment years, this comparison is little affected by cyclical influences. Corresponding data in somewhat greater detail, covering also the intervening years, are presented in the table at the end of Part I.

The most striking feature of the 1929–53 comparison is the large increase in the relative importance of the manufacturing industries. From 30 percent in 1929, their contribution to private nonagricultural domestic income rose to 39 percent last year. This rise is a direct reflection of the increasing degree to which meet it, has centered upon commodities, including those required for national defense. In general, fabrication and processing of a progressively more complex character have also been involved.

Parallel growth in distribution

Also immediately affected by the relative increase in demand for commodities were the wholesale and retail trade industries, whose share of the private nonagricultural domestic total was 21 percent in 1953, as compared with 18 percent in 1929. This expansion was closely allied with the growth of manufacturing output, the bulk of which is distributed to ultimate buyers through trade channels.

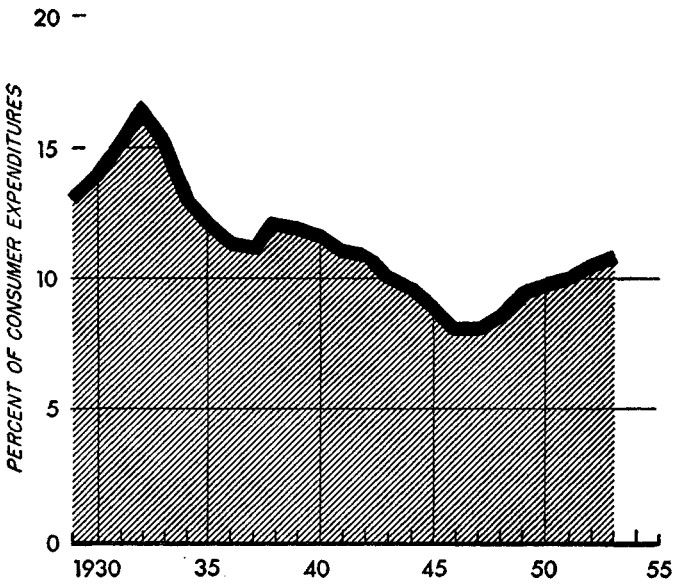
With the relative growth of manufacturing and trade, the percentages contributed by all other private industrial divisions declined except that for contract construction, which advanced from 5 to 6 percent of the total, and communications and public utilities which maintained the same proportion of the total in both years. By far the greatest decline in relative position from 1929 to 1953 was registered in the finance, insurance, and real estate division. Its share, which had matched that of wholesale and retail trade in the earlier period, was down to about 10 percent last year.

Factors in decline of finance group

Two major factors contributed to this drop in the finance group. Earnings in the real estate industry—especially on residential property—were relatively depressed during most of the period,

Rent and Consumer Expenditures

The proportion of rent in total consumer expenditures has risen since the war, but is still lower than in the nineteen-thirties



NOTE: NONFARM SPACE RENTS, INCLUDING IMPUTED RENTS

both because the industry was little affected by the growth of commodity output and because rents did not keep up with the

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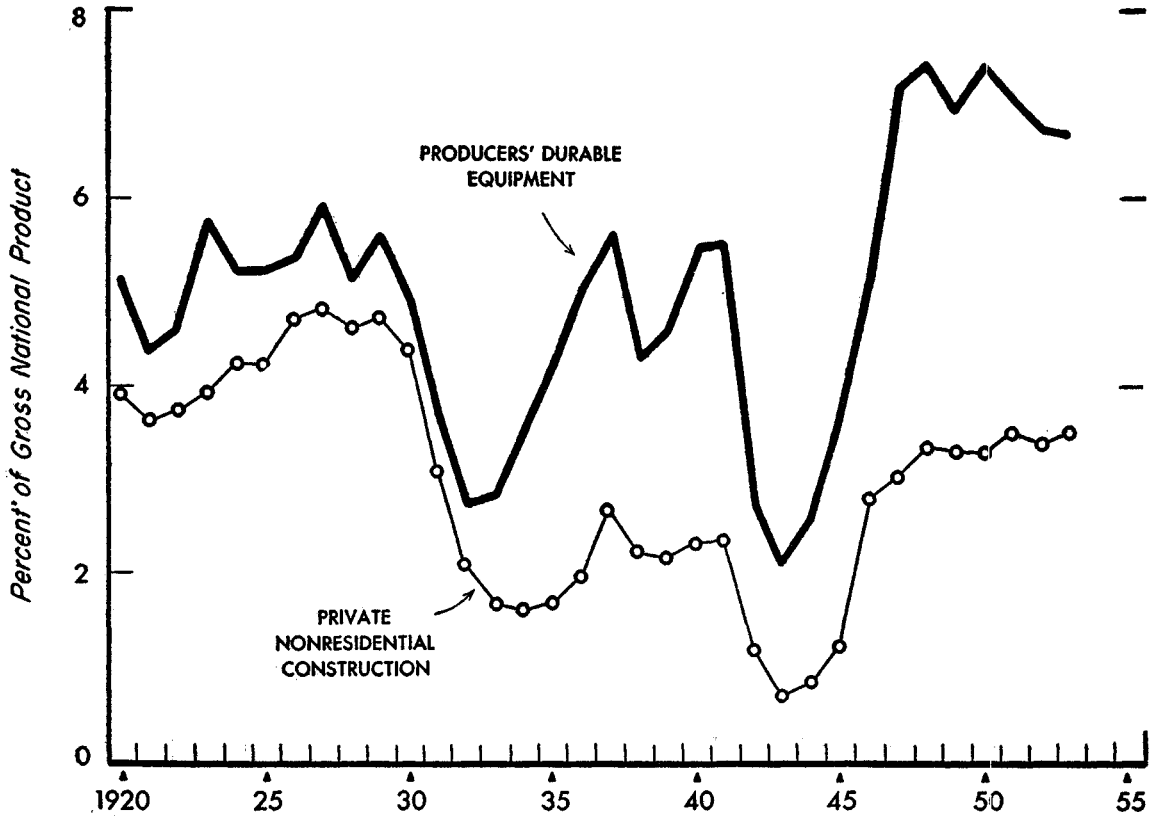
Business Capital Investment

Business has spent relatively more on machinery and equipment than on structures in the postwar period



housing was held down by war and postwar rent controls. It should be noted, however, that most of the relative decline in real estate occurred long before the imposition of such controls. Among the broad factors contributing to it was the necessarily slow adjustment of the supply conditions emerging from the building boom of the 1920's to the depressed housing demand of the prewar decade, when there was a temporary slackening in the rate of family formation and population growth. More recently the industry has been operating in a more favorable economic climate, and rents have risen relative to prices in general since the gradual elimination of rent controls.

In banking and other financial industries, income originating was much lower relative to the total than in 1929, owing mainly to an approximate halving of average interest rates and to the marked shift from external financing of business investment to financing out of retained earnings. The large expansion in public debt obligations held by banks by no means compensated for the fact that the volume of private interest was sharply reduced in relation to total economic activity.

Two other major industrial divisions experiencing fairly substantial declines in relative importance from 1929 to 1953 were transportation and services. The share of the former in total private nonagricultural domestic income fell from 9 percent to 6½ percent, entirely as a result of the much below-average expansion of the railroad industry. In the case of services, the decrease—from 14 percent to 11½ percent—was centered in the private household segment, where the relative decline of domestic service was the most important factor.

The proportion of income originating in the remaining industry division, mining, was 2 percent last year, about ½ of a percentage point below 1929.

Increase in Federal employment

Outside of the private nonagricultural domestic sector, a significant change over the period under review was the sizable increase in the contribution of government. As a percentage of total national income, it rose from 6 in 1929 to 11½ in 1953. These percentages, it should be emphasized, represent only the return to resources (in this case, labor) directly employed by government and government enterprises—not the production of other industries whose output is purchased by government.

The increase was almost entirely in the Federal Government component, which expanded over the two and a half decades from less than 2 percent to about 7 percent of the national income. The compensation of military personnel accounted for more than half of this growth, and much of the remainder was in civilian payrolls associated with the expansion of the defense establishment.

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Income from agriculture

The share of the national income originating in agriculture, forestry, and fisheries, which consists almost wholly of income from farming, amounted to 5½ percent last year. This was much below the 9½ percent contribution of the agricultural sector in 1929. Because of the erratic annual movements which characterize farm income, however, it is difficult to draw significant long-run conclusions from a 2-year comparison of this type.

The decline in agriculture's percentage of the national income from 1929 to 1953 was by no means commensurate with the decrease over the same period in the proportion of the population engaged in agricultural production. Accordingly, the net value of output per person engaged in production rose by about 220 percent in agriculture, as against about 140 percent in the private nonfarm sector.

Changes in distributive shares

Along with the shifts in the industrial origin of the national income, there have been noteworthy alterations of its composition in terms of distributive shares. Some of these alterations have represented fundamental changes in the relative importance of various forms of income as such, while others have merely reflected the influence of industrial shifts in combination with the existing differences among the respective industries as to prevalent forms of organization and characteristic types of income arising therefrom. Both sorts of changes in the distributive-share pattern, of course, are of considerable interest.

This breakdown of the national income is simply a classification of total earnings, before deduction of direct taxes, according to the forms in which they accrue—compensation of employees, corporate and unincorporated business profits, rental income of persons, and net interest. Such a classification, it should be realized, does not reflect the relative distribution of total income among various groups in the population, since many of these have multiple sources of income. Nor do the distributive shares indicate the relative remuneration of the various factors of production in a theoretical sense; most of them include more than one element of factor cost, and each of them represents only a partial measure of the factor cost suggested by its caption.

Over these two and a half decades, there have been marked increases in the relative importance of employee compensation and of corporate profits and parallel declines in the other income shares. The percentage of the total going to proprietors of nonfarm unincorporated enterprises, however, was only moderately lower than in 1929.

Employee share of national income

Compensation of employees rose from $51 billion in 1929 to $209 billion in 1953, or from 58 to 68½ percent of total national income. Much of this increase reflected developments which occurred outside the ordinary business system. Income arising outside business firms consists of a series of income flows which originate in wholly unrelated activities. In most of these there is only one type of income, and changes in the relative importance of various income types for the nonbusiness segment combined merely reflect changes in the relative importance of various types

The relative size of these flows has changed greatly since 1929. The more important, and their movements relative to the national income from 1929 to 1953, are: (1) the compensation of government employees, including military personnel, increased sharply. (2) The compensation of domestic servants and employees of nonprofit institutions declined relative to the national income. (3) Income arising from individually-owned property was greatly reduced relative to the national income. This income consists almost entirely of rental income and interest, with compensation of employees minor. Both rental income and interest originating in this sector dropped sharply relative to the national income total. (4) Interest originating in private households showed a relative decline mainly because of the drop in interest paid on loans from brokers. (5) Corporate profits originating abroad (branch profits and dividends combined) increased, while interest received from abroad dropped sharply.

The net result of these shifts was a very sharp rise in the proportion of all income originating outside ordinary business firms which consisted of the compensation of employees. The offset appeared almost entirely in interest and rental income.

Within the ordinary business sector, as well, important changes have taken place in industrial structure and, largely for this reason, in legal form of organization. Since the usual division of income by type varies widely among industries and as between corporate and noncorporate firms, these changes also alter the share distribution of the total national income.

In the important corporate sector of the economy, accounting for more than half of the national income, the ratio of employee compensation to total income originating was substantially stable at about three-fourths of the total in prosperous peacetime years throughout the period from 1929 through 1951. In 1951 (the last year for which final data are available) it amounted to 74 percent as compared with 74½ percent in 1929. It then increased to 76 percent in 1952 and 77½ percent in 1953. Corporate profits in 1952 were adversely affected by the steel strike and in 1953 by the business adjustment that started in the second half of that year.

Some increase in the employee share is indicated by the data to have occurred in unincorporated nonfarm enterprises from 1929 to 1953. Developments in the construction and service industries were largely responsible for this rise. The change in the labor percentage in these two industry divisions reflected mainly a larger increase in the number of wage and salary workers than in the number of self-employed, rather than divergent movements in average employee compensation and average net income per entrepreneur. In agriculture the share of labor income has shown no apparent trend since 1929. Although the 1953 percentage was above that in 1929, it had been lower as recently as 1951.

An additional element stands out in the change in the employee share of national income. This was the internal shift to a somewhat lower proportion of wages and salaries and a higher proportion in the form of supplements to wages and salaries. The latter were an inconsequential element in 1929, consisting chiefly of compensation for injuries. Their growth to significant proportions—3½ percent of national income in 1953—stems from the creation and expansion of the various social insurance programs and from the marked growth in recent years of private

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pension, health, and welfare funds. Employers' contributions to these funds, both public and private, are viewed as supplementary compensation of employees.

Shifts in proprietors' and rental income

The advance of entrepreneurial earnings from $14½ billion in 1929 to $38½ billion last year was less percentagewise than the rise in national income, due primarily to the relatively small rise in the farm component. As a share of the national income, farm proprietors' income declined from 7 percent in 1929 to 4 percent in 1953. The erratic behavior of farm income makes it difficult, however, to assess long-term trend from this type of comparison. The farm income percentage was markedly above the 1929 figure as recently as 1948, and averaged close to 6 percent in the ensuing three years. In view of the sizable decline in the number of farm proprietors since 1929, the lower percentage share of 1953 represented an improvement in the relative position of the average farmer.

Nonfarm business and professional proprietors' income was 8½ percent of the total last year, about 1½ percentage points below 1929. A rise in the relative importance of the retail and wholesale trade component was more than offset largely by the fact that entrepreneurial earnings in the service industries did not maintain their relative standing.

One of the two distributive shares exhibiting a sharp proportionate decline over the past 25 years was rental income. The $5½ billion going to persons in this form in 1929 constituted 6 percent of national income, while last year's $10½ billion represented little more than half that much, percentagewise.

The principal reasons for the diminished importance of rental income in relation to the total are those outlined above in connection with the real estate industry as a whole. It should be remembered, however, that the rental income share—including imputed net rent on owner-occupied nonfarm dwellings—consists only of net rents and royalties accruing to persons not primarily engaged in the real estate business. Other rents are merged unidentifiably with noncorporate business earnings and with corporate profits.

Combined profits and interest share

The corporate profits share of the national income—corporate profits and inventory valuation adjustment—increased from $10 billion in 1929 to $38½ billion last year—from 11½ to 12½ percent. This rise was a reflection of the greatly reduced burden of corporate debt, and does not signify a commensurate expansion of the property share of current income. In combination, profits and interest originating in corporate business was fractionally lower in 1953 than in 1929 in relation to total national income. It was down also in relation to total income originating in corporations—the counterpart of the increase in the labor share already discussed. In the main, however, the combined property share of total income originating in corporate business has been fairly uniform in prosperous peacetime years of the period under review. This uniformity is brought out in the chart on page 14, and contrasts with the extreme variability of the property income share during the business cycle.

Influence of inventory profits and losses

The foregoing remarks are based upon measures of corporate profits after inventory valuation adjustment. Profits before tax as reported under prevalent inventory accounting practices, which generally charge goods to cost of sales in terms of prior-period inventory costs rather than current replacement costs, showed a somewhat greater increase from 1929 to 1953. These figures included moderate inventory losses in 1929, when—with prices falling—book costs of goods sold exceeded replacement costs, and included inventory profits last year, when—with prices rising moderately—the reverse was true.

Such inventory profits and losses—which become major elements in book profits in years of sharp price change—are eliminated, in order to secure an economically more meaningful measure of income originating in current production, by application of the inventory valuation adjustment. In effect, this adjustment substitutes the current replacement cost of goods sold for their book cost in the computation of profits.

Because of the very large increase in Federal corporate income tax rates, the percentage of national income taken by such taxes, in combination with similar State levies, more than trebled from 1929 to 1953. The share of profits after tax (including inventory profits) has fallen from 9½ percent in 1929 to 6 percent in 1953. Most of this decline has occurred since 1950 as a result of the increase in taxes during the Korean war period.

One of the salient trends in corporate financing during this period—toward greater reliance upon internal funds—is reflected in the divergence between the terminal years with respect to the disposition of profits after tax. In 1929, 70 percent was paid out as dividends and 30 percent retained, whereas in 1953 only 51 percent was distributed to stockholders and 49 percent was retained. This disparity between the 2 years is reduced if inventory profits and losses are excluded from the comparison. On this basis, undistributed profits rose from 33 percent of profits after tax in 1929 to 46 percent last year. It may be noted that in all but one of the postwar years (1952) the contrast with 1929 in the proportion of corporate earnings withheld and paid out was even greater than in 1953.

Net interest

The remaining distributive share, net interest, fell from 7½ percent of national income in 1929, to only 3 percent last year. The major factors underlying this decline are those cited above to explain the diminished proportion of income originating in the financial industries—namely, the virtual halving of average interest rates and the relatively small expansion of private debt since 1929.

In addition, part of the decline is attributable to a statistical peculiarity of the series. To offset the inclusion in business incomes of government interest, which is viewed as a transfer in the national income accounts, government interest received by business is deducted from the interest component of national income. Had the statistically more difficult procedure of deducting it from business incomes been followed, the relative decline in net interest from 1929 to 1953 would have been less, while the other affected shares would have shown correspondingly smaller increases.

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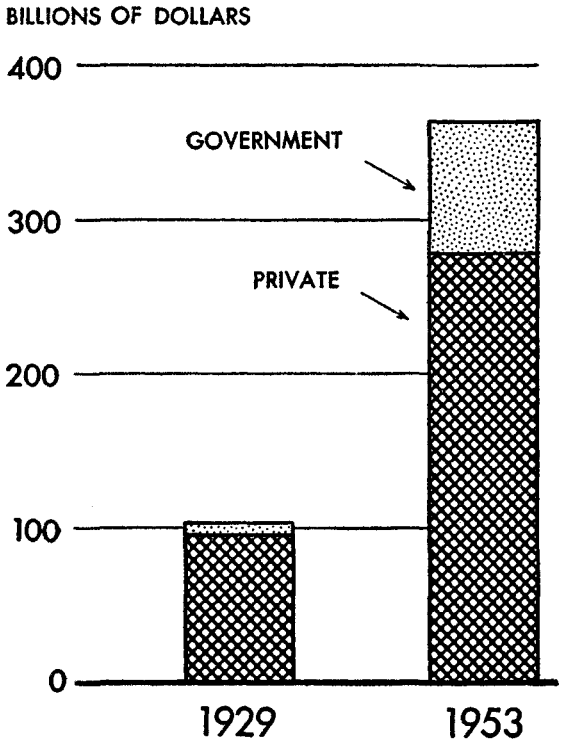
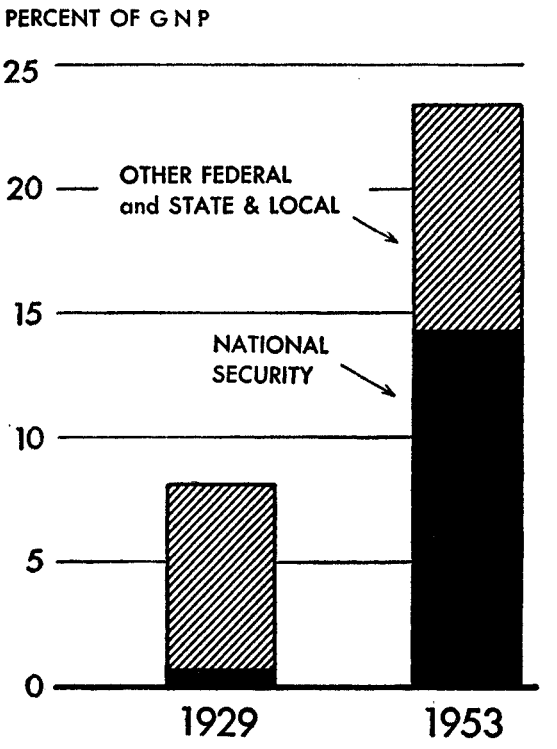
GOVERNMENT PURCHASES

amounted to 23% of the Gross National Product in 1953 as contrasted with 8% in 1929...



with the bulk of the increase in the government proportior going for defense purposes



Expansion of Personal Income

Personal income differs from national income by the exclusion of those portions of income earned in current production which are not paid out to persons, and by the inclusion of certain items not arising in current production—chiefly transfer payments and government interest.

In 1929, personal income totalled $86 billion; by 1953, it had mounted $286 billion. On a per capita basis, the increase was from about $700 to $1,800, or more than 150 percent.

Along with this advance in the total, there were significant shifts in its composition. Most of these—the increased relative importance of payrolls and the reduced proportions of interest, rental income, dividends, and farm proprietors' earnings—have already been noted in the discussion of distributive shares.

Transfer payments increase in importance

In addition, there have been important changes, stemming from the expanded role of government in the economy, in other elements of personal income. Foremost among these developments is the growth of transfer payments. From $1½ billion, or less than 2 percent of personal income, in 1929, they rose to $14 billion, or nearly 5 percent, in 1953.

Most of the rise was in the Federal Government component, which in 1929 consisted chiefly of military pensions and related items. By 1953, as a result of World War II and the Korean war,

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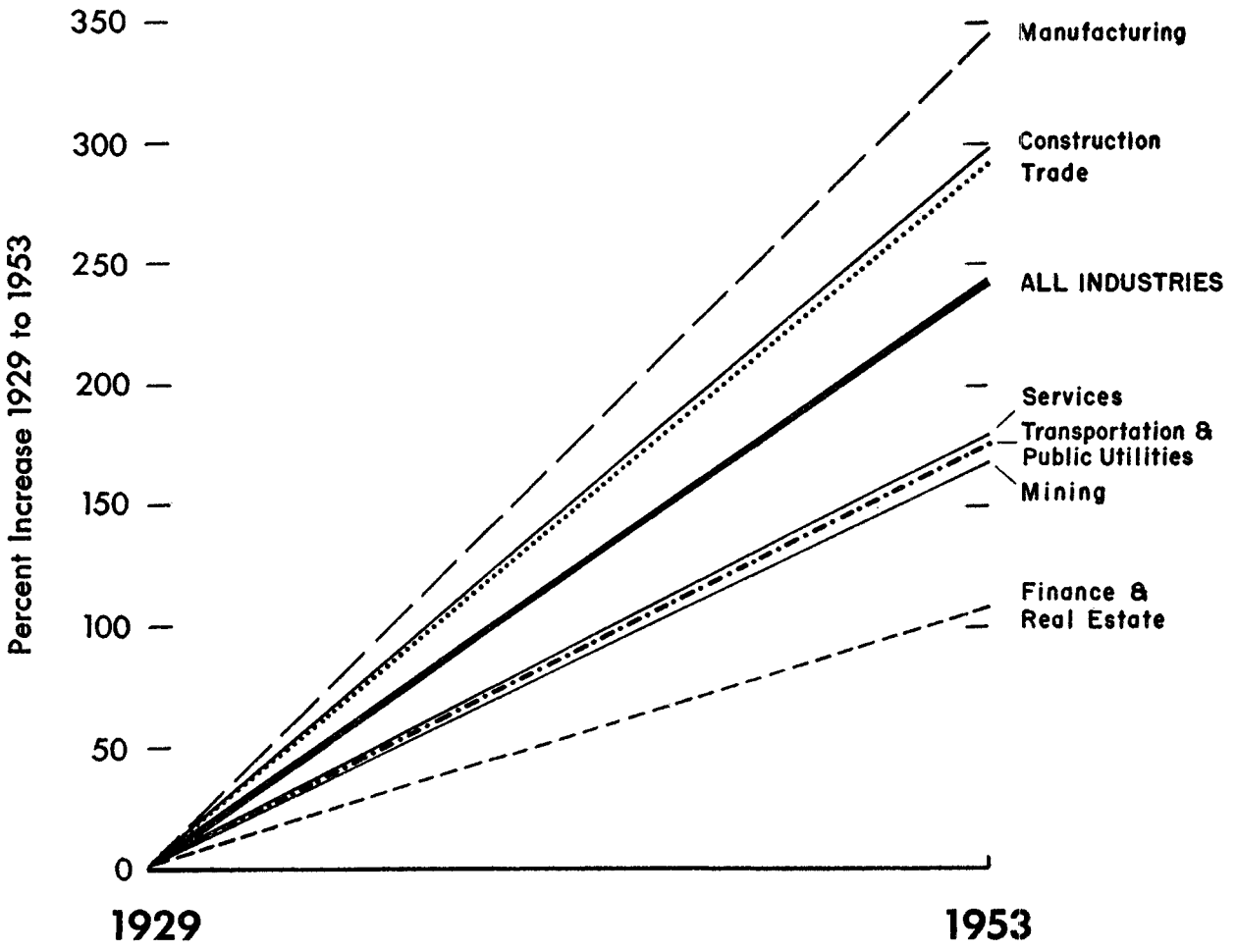
Growth in Private Nonagricultural National Income Since 1929

Manufacturing, construction, and trade have shown above-average growth



these payments were greatly enlarged, both absolutely and in relation to personal income, and new classes of veterans' benefits under the servicemen's readjustment acts were flowing in large volume. Moreover, payments from Federal social insurance funds, which in 1929 had been confined to civilian retirement and veterans' life insurance benefits, last year included not only increased amounts under these headings, but also $4½ billion of old-age and survivors', railroad retirement, and unemployment insurance benefits.

State and local government transfer payments, although overshadowed by those of the Federal Government, have also risen markedly since 1929. State veterans' bonuses have contributed in recent years, but most of the increase has been in special types of public assistance for such groups as the blind, the aged, the disabled, and dependent children. It may be noted that while these payments are made by State and local governments, they are financed in part by Federal grants-in-aid.

Growth of social insurance contributions

For the personal sector of the economy as a whole, the growth of transfer payments has been partly offset by the concomitant expansion of social insurance contributions. Confined in 1929 to a few public employee retirement systems and veterans' life insurance funds, but since extended by the establishment and development of the various Social Security programs, these now take an appreciable portion of current personal earnings. To date, contributions for social insurance have consistently exceeded benefit payments from the funds—in most years by a sizable margin. On balance, however, the combined effect of social

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insurance transactions and transfer payments from general government funds has been a material net addition to currently earned personal income.

Government interest increases with debt

Also of consequence in the expansion of personal income since 1929 has been the sharp increase of government interest payments associated with the tremendous growth, mainly during World War II, of the public debt. Owing to the inclusion of government interest, which is treated in the national income accounts as a transfer item, personal interest income declined much less in relative importance from 1929 to 1953 than did the net interest component of the national income.

Real income up substantially

Each of the elements of personal income is measured without reference to the impact of direct personal taxes. Much of the increase in the total over the past two and a half decades, however, has been absorbed by such taxes. Personal tax and nontax payments amounted to about $2½ billion, or 3 percent of personal income, in 1929. In 1953 they were 14 times as large, totalling $36 billion and absorbing about 12½ percent of personal income. See chart on page 16. The relative increase was entirely in the Federal Government component, and resulted almost wholly from the broadened base and sharply higher rates of the individual income tax. State and local personal taxes, although doubling from 1929 to 1953, declined slightly as a percentage of personal income.

After deduction of these taxes, there remained disposable personal income of $250 billion last year, as compared with $83 billion in 1929. Corresponding figures on a per capita basis were approximately $1,570 and $680, respectively. With consumer prices averaging 59 percent higher in 1953 than in 1929, the increase in real disposable income per capita was thus about 45 percent. See chart on page 19.

The proportion of disposable personal income spent for current consumption last year was lower than in 1929—with 8 percent going into personal saving as compared with 5 percent in the earlier year. However, the true extent of the change may differ somewhat from that indicated by the figures, because the saving estimates are computed as residuals, and hence are sensitive even to minor statistical imperfections in the measurement of disposable income and consumption expenditures.

FLUCTUATIONS IN ECONOMIC ACTIVITY

The substantial growth of the economy, as revealed by the foregoing summary comparison of national income and product data for 1929 and 1953, was extremely irregular. Likewise, the associated changes in the economic structure did not occur in smooth progression, but emerged from a series of fluctuations of unprecedented magnitude, including the great depression and the vast expansion of World War II. In order to illuminate the processes by which the economic scene has been transformed, it is desirable to trace in a general way the course of economic development during the period under review.

Gross National Product Patterns

Before this summary is given, some of the major factors in the fluctuations of economic activity since 1929 will be highlighted with the aid of two interrelated percentage distributions of the gross national product—one by type of expenditure and one by type of receipt—which are presented in tabular form at the end of this summary.

The distribution by type of expenditure indicates the proportions of total output bought by each major sector of the economy: by persons, by business (for fixed investment and inventory accumulation), by the rest of the world (net), and by Federal, State, and local governments.

The percentage breakdown of gross national product by type of receipt reflects broadly the corresponding distribution of currently-generated purchasing power, exclusive of borrowing transactions. It shows the proportions of the gross income flow received by consumers as disposable personal income; by the business sector in the form of gross retained earnings, including capital consumption allowances; and by all levels of government in the form of tax and nontax receipts net of amounts transferred (such as interest and transfer payments) to other sectors.

Each of these breakdowns of gross national product is of interest in itself, but they provide particularly valuable insight into the functioning of the economy when studied in combination, with the respective expenditure and receipt shares of each major sector paired. Such an arrangement of the data is shown in the chart on page 21.

In each panel of the chart are plotted the percentage receipt and expenditure shares of one of the major sectors, the rest of the world sector being included with the business sector for this purpose. The shaded areas between the lines measure, respectively, the government surplus or deficit; personal saving or dissaving; and the excess or shortfall of gross investment in relation to gross business saving—each expressed as a percentage of gross national product. It will be noted that the three expenditure percentages, represented by the solid lines, add to 100 in every year, as do the three receipt percentages (dashed lines), except for the statistical discrepancy between the estimates of national income and national product.

Strategic role of investment

The middle panel strikingly displays the strategic role of investment expenditures in the business cycle. Clearly depicted are their disproportionate collapse in the great depression and their gradual rise in relative importance, briefly reversed in the 1938 recession, during recovery. Also illustrated is the severe cut in private capital formation required during World War II and its resurgence afterwards. In connection with the wartime figures, however, it should be remembered that sizable installations of plant and equipment undertaken directly by the Government are reflected in the bottom panel rather than as business investment.

The uniformity of the proportions of output going into investment in prosperous peacetime years is noteworthy, as is the contrast between these proportions, all in the neighborhood of 16

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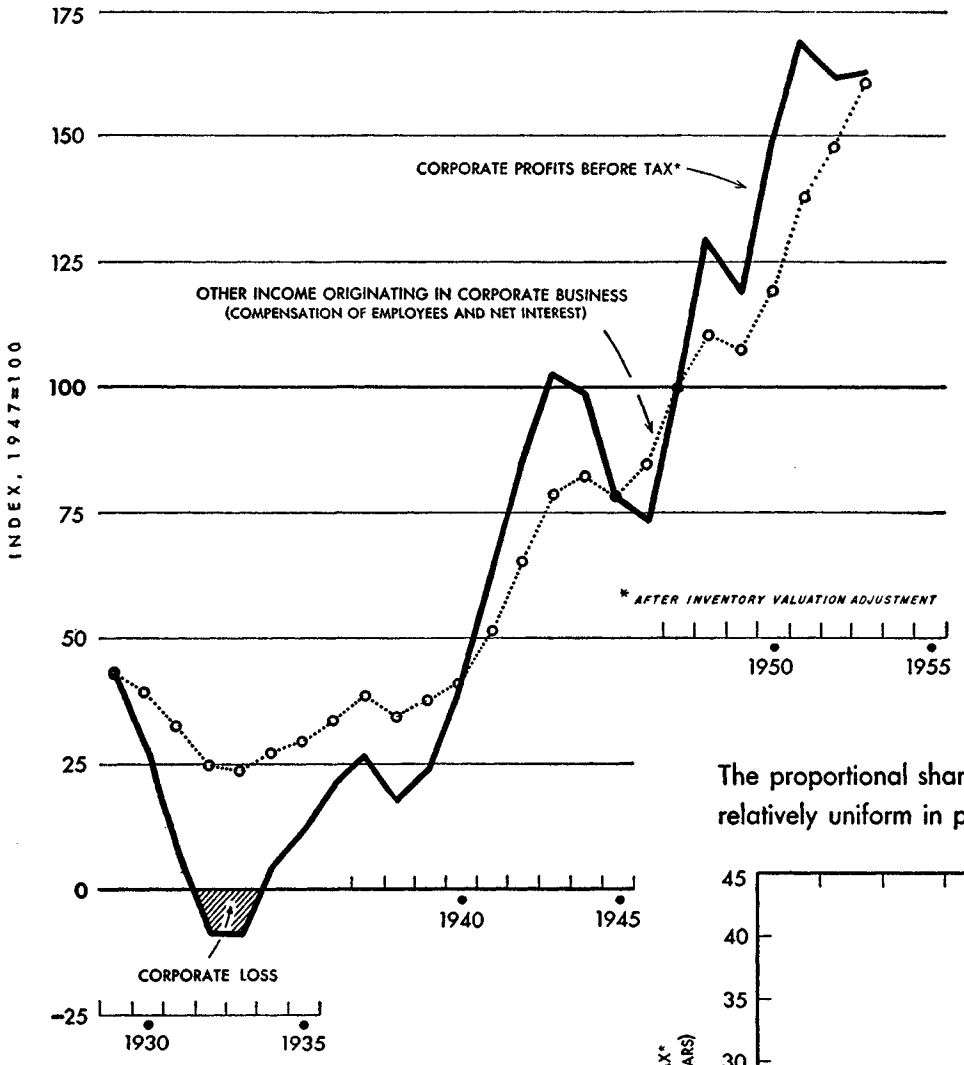
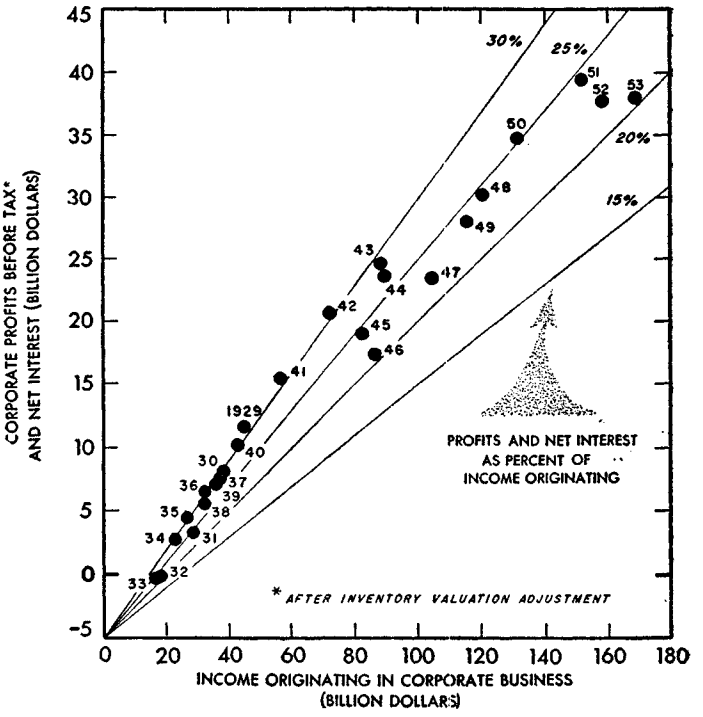
CORPORATE PROFITS SINCE 1929

Profits fluctuate more than other income originating in corporate business



The proportional share of profits and interest is relatively uniform in prosperous peacetime years



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percent, and the limitation of investment to 2 or 3 percent of the gross national product at the bottom of the depression.

Gross business saving, while also showing a disproportionate swing in the major business cycle, has been a great deal steadier than investment, reflecting the relative stability of depreciation allowances. In the expanding United States economy, gross business saving has usually fallen short of gross investment. Apart from the World War II period, this has been true in all years except those of the great depression and 1938. The financing of the excess of investment has required funds made available by the other sectors, including those left on deposit with banks, as well as those provided through purchase of stocks or bonds.

Cyclical stability of consumer spending

The percentage of output bought by consumers—charted in the top panel—has exhibited a contracyclical tendency, as attested by its rise from 1929 to 1932, in 1938, and in 1949. It should be remembered, of course, that these were rising proportions of a diminishing total output. Except in the mild recession of 1949, they represented declining physical volumes and dollar values of consumption expenditures in absolute terms. Conversely, falling percentages are observable in most years of peacetime expansion in economic activity. These, however, have been associated with increases in the absolute volume and value of consumer spending.

Another outstanding feature of the top panel is the broad picture it gives of the characteristics of consumer finances during World War II. Disposable income was reduced by heavy taxation, but consumption expenditures were cut far more by the diversion of productive resources to war use, in combination with price controls and exhortations to save. The resultant extraordinary volume of personal savings is clearly illustrated. This phenomenon was not repeated during the Korean war period, as the proportion of total output diverted to national security use was much more moderate, and was financed largely by taxation.

War generates large Government deficit

The counterpart to these wartime personal savings, as well as to the concurrent excess of gross business saving over investment, appears in the bottom panel of the chart, where the huge World War II Government deficit stands out. Although government purchases reached a peak of about 46 percent of total output, government at no time claimed a commensurate proportion of currently-generated purchasing power. Net government receipts averaged 22 percent of gross national product at their relative maximum in 1943 and 1944.

The difference between the share of output bought by the Government and its share of receipts was financed by borrowing on an unprecedented scale. The inflationary impact of this deficit financing was restrained to a considerable extent during the war period itself, despite scarcities of civilian goods and services, by such factors as price control, rationing, and the willingness of the public not only to buy Government bonds, but also to accumulate other liquid assets. After the cessation of hostilities, however, the postponed effects of wartime deficit financing contributed to the postwar inflation.

In the Korean war period, net government receipts again mounted to almost 22 percent of the gross national product, but government purchases of goods and services fell considerably short of the World War II peak. Accordingly no comparable deficits were generated in the later period.

It should be noted, especially in connection with the postwar figures, that the relative rise in total tax and nontax receipts of Federal, State, and local governments has been greater than that of the net receipts item plotted in the chart. There has been a material increase in the divergence between these two measures because of the disportionate expansion of the volume of gross receipts required to finance veterans' benefits, interest on the public debt, and other transfers deducted in deriving the net figures.

Basic expansion in role of government

A final feature of the three panels in combination is the shift from private to public consumption, which has already been noted in the foregoing discussion of long-run changes in the use of current-dollar gross national product. The shift is evidenced by comparison of the top and bottom panels, which show a distinct, although irregular, uptrend in the government share, whether in terms of purchases or of net receipts, together with a generally offsetting long-term decline in the personal share. The latter movement is reflected in disposable income, as well as in consumption expenditures. Primarily, of course, the rising percentage share of government reflects the increasing responsibilities assumed by the Federal Government with respect to national defense.

Neither in gross investment nor in gross business saving has there been any noticeable long-term change in relative importance, despite extreme cyclical and wartime variations.

Chronological Review: 1929-53

The year 1929 marked the end of an era of relatively full employment, business confidence, and general prosperity. Economic activity had been advancing strongly, with only minor interruptions, for eight years.

Business decline: 1929-33

The 1929 downturn, the ultimate causes of which are still a matter of controversy, was most clearly reflected in the collapse of investment demand. Gross private domestic investment dropped about one-third from 1929 to 1930, as new construction and producers' purchases of durable equipment were cut sharply and the accumulation of nonfarm business inventories ceased. Foreign purchases also declined in 1930, although the drop was not reflected in net foreign investment because of a matching reduction in import demand.

With employment and incomes adversely affected by the sharp reduction of investment, consumer purchases also decreased, contributing to the general contraction and inducing still further cuts in outlays for investment.

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Consumer purchases, however, held up much better in 1930 than investment demand. The aggregate income flow to individuals shrank less than production and the incomes generated by it, as undistributed corporate profits absorbed a disproportionate share of the over-all decrease in earned income. Also, consumers tended to spend a higher proportion of current income or to dissave in the attempt to preserve previous living standards.

Essentially the same pattern of cumulative decline persisted, and in fact accelerated, during 1931 and 1932. By the latter year, gross private domestic investment had fallen to the very low level of less than $1 billion, as contrasted with $16 billion in 1929. The further moderate decline of the gross national product in 1933 was in consumer purchases, where it reflected primarily lower average prices rather than a further decrease in volume.

National product halved in value

Over the entire period of contraction from 1929 to 1933, the gross national product dropped by nearly one-half, from $104 billion to $56 billion. At the bottom of the depression less than 3 percent of the Nation's output went into business investment, as compared with 15½ percent in 1929. Conversely, consumer purchases rose from three-fourths of the total in 1929 to five-sixths in 1933. Government purchases, although little changed in absolute dollar volume, were considerably increased in relative importance by the collapse of private demand.

More than half of the 1929–33 decline in the market value of the national product stemmed from lower prices. As measured by the gross national product in constant (1947) dollars, real output fell by three-tenths.

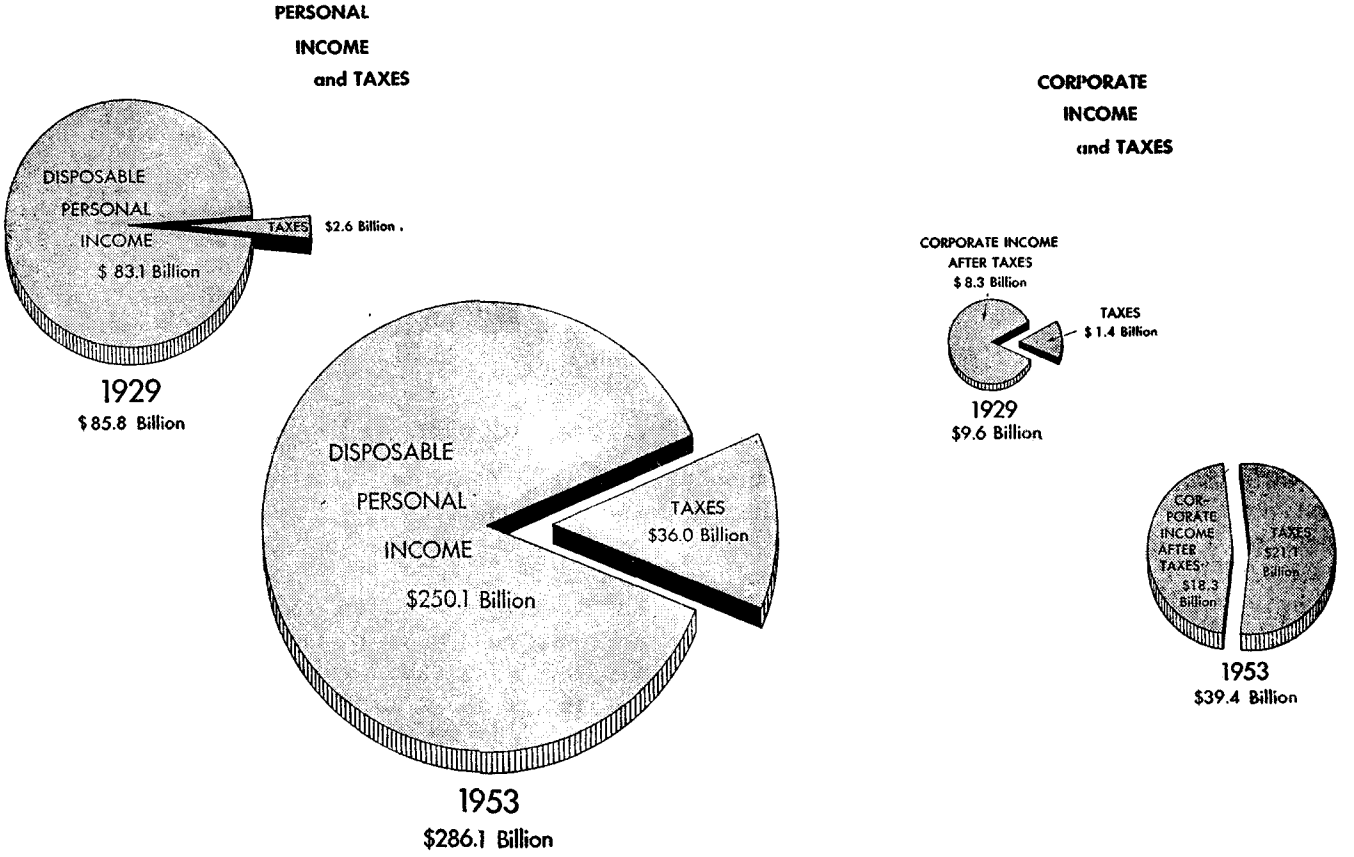
Foremost among the factors underlying the shrinkage of real output was the reduction of employment. At the depth of the depression, the number of persons engaged in production was almost one-fifth lower than in 1929, and unemployment was almost 13 million—close to one-fourth of the Nation's labor force. Moreover, average hours worked per week by those who remained employed were considerably reduced.

Recovery: 1933-37

Some of the most serious deflationary forces underlying the post-1929 collapse were by 1932 beginning to spend themselves. Installations of new plant and equipment had virtually ceased in most segments of the economy, and such gross fixed business investment as did persist represented primarily the fulfillment of minimum replacement needs. As replacements had been cut to the bone for several years, the feasibility of further postponing them was rapidly diminishing by the end of 1932. Business pur-

INCOME AND TAXES

Personal and corporate taxes have taken an increased share of incomes



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chases of durable equipment, accordingly, fell no lower in 1933. Private construction activity did continue downward, but the drop was smaller than in any of the three preceding years.

Sizable inventory liquidation continued in 1933, but as it had already carried working stocks close to a minimum even in relation to the low current volume of sales, the rate of liquidation was considerably reduced. It had previously been possible for businesses to meet the sagging volume of sales partly out of relatively excessive existing inventories, with the consequence that production—and hence total income—was reduced even more than consolidated business sales. Now, however, this possibility was vanishing, and it became necessary to keep output at least on a par with current demand. Here too, then, a weighty deflationary force was exhausting itself.

With the marked retardation of income declines stemming directly from reduced investment expenditures, the fall in consumer demand was measurably slowed in 1933. The stage was thus finally set for recovery. It was evidenced in a few industries as early as the fall of 1932, but appears to have dated generally from the spring of 1933. Monthly personal income data show the low point in March, after which there was a slow and uneven rise during the remainder of the year.

With its decline arrested in 1933, fixed business investment turned up moderately in 1934, when both construction and equipment outlays began to expand again. Nonfarm inventory liquidation ceased, and a general trend toward rebuilding of stocks depleted during the depression set in. It was stimulated not only by the emerging recovery of sales, but by the rise in prices already under way during 1933.

Government supplements private recovery

In the meantime, the Federal Government had assumed an active role in the economy, and was making strenuous efforts to promote recovery. Along with the adoption of other measures, it entered the market directly on an expanding scale, especially in its work relief activities, and also provided substantial aid to State and local governments.

With the increase of incomes generated by the pick-up of business investment and the growth of government purchases, personal consumption expenditures also rose in 1934. Their expansion, in turn, fed the income stream and provided stimulus for a further upsurge of investment. This was at first mainly confined to long-deferred replacement of capital facilities which had deteriorated during the depression; but as profits reappeared and business confidence in future prospects was gradually restored, an increasing proportion went into wholly new plant and equipment, and inventories were expanded to meet the rising volume of sales. Residential building, spurred in part by Federal aid to homeowners, moved ahead once more, and total gross private domestic investment advanced steadily from $1½ billion in 1933 to $11½ billion in 1937.

Consumer purchases also continued to rise. At $67 billion in 1937, they were 45 percent above the low mark of 1933. Although their rate of increase was proportionately smaller than that of domestic capital formation, they represented quantitatively the largest element in the upward spiral of employment, production, and incomes.

Apart from the newly expanded role of government, the whole mechanism of the recovery was thus very similar to that of the downswing, except that it operated in reverse and also more slowly. Of the $35 billion increase in gross national product from 1933 to 1937, about 30 percent was in private domestic investment, raising it from 2½ to 13 percent of the total. Consumer outlays accounted for about 60 percent of the change—substantially less than their share of total output—and government purchases, dropping slightly in relative importance, absorbed the remaining 10 percent of the increment.

The recession of 1938

Incomplete as was the recovery of the economy by 1937, it was interrupted by a downturn beginning in the latter part of that year and extending through mid-1938. Although of brief duration, this downturn was relatively severe. Within a few months, unemployment rose sharply. Industrial production fell by over one-fourth from August, 1937 to January, 1938, and personal income dropped at a pace comparable to that prevailing in 1931–32. The decline tapered off thereafter, however, and production began to pick up again in the second half of 1938. For the year as a whole, the decrease in gross national product was about 6 percent.

The 1937–38 recession was much steeper in its initial descent than the previous downswing, but it was of a less basic character. Of the $5½ billion decline in gross national product from 1937 to 1938, almost three-fifths was attributable to a shift from accumulation to liquidation of business inventories. Inventory shifts accounted for only 16 percent of the drop in output from 1929 to 1930.

Business plant and equipment expenditures contracted about as sharply in 1938 as in 1930, but residential construction activity, contrastingly, continued to rise, and consumption expenditures, despite the drop in employment and personal income, declined by only 4 percent, as compared with 10 percent in 1930. The consuming public as a whole sustained its spending close to the 1937 rate by a $3 billion cut in personal saving. Moreover, the moderate decline in consumer outlays which did occur was very largely counterbalanced by increased government buying and net foreign investment.

Altogether, purchases of goods and services by final users of the Nation's output declined by less than 3 percent in 1938, as compared with 11 percent in 1930, and the major portion of the swing in production was absorbed by the change in inventories. Curtailment of production ceased as soon as the strength of final demand became apparent. The drop in fixed business investment proved to have been instigated by short-run considerations, rather than by any fundamental lack of investment opportunities. The basic underlying situation, in fact, was that large capital requirements accumulated during the depression still remained to be fulfilled, and that many new investment opportunities stemming from technological advances remained to be exploited.

Renewed recovery: 1938-41

Following the jar of the 1938 recession, the recovery was renewed and continued steadily into 1941, when it was merged with the first stages of military preparation for World War II.

All forms of business investment were expanding steadily

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during this period. Purchases of producers' durable equipment nearly doubled in dollar volume from 1938 to 1941, and private construction activity also rose strongly. Inventory liquidation ceased in 1939, when production was brought back in line with current sales, and inventories were accumulated on a mounting scale in the next two years.

By 1941, total gross private domestic investment was not far from three times as large as in 1938. For the first time, it surpassed the 1929 total, both in value and in physical volume. Net foreign investment was also sizable in the three years following 1938, being especially stimulated in 1940 and 1941 by foreign demand for munitions and other supplies required for the Allied war effort.

Responding to the increased incomes generated by expanding employment—and contributing, in turn, to the advance of profits, business investment, employment, and incomes—personal consumption expenditures rose from $64½ billion in 1938 to $82 billion in 1941. The relative rise was particularly marked—about two-thirds—in outlays for durable goods. Higher prices figured in the advancing rate of consumer spending, but the major portion represented enlarged quantities of goods and services. The real volume of personal consumption per capita increased 16 percent from 1938 to 1941, and exceeded the 1929 figure from 1939 on.

Military requirements become dominant

Government purchases were approximately stable until the latter part of 1940. After the fall of France, the national defense program got under way on a rapidly expanding scale with progressively greater influence upon economic conditions. Throughout 1941 and thereafter it was the dominant factor in the economy.

In this second stage of recovery from the depression, from 1938 to 1941, the dollar value of the Nation's output advanced by almost 50 percent, to $126 billion. With a general price rise in the neighborhood of 9 percent, the increase in the physical volume of production was close to two-fifths.

The year 1941 was one of marked expansion, and on the average did not represent full peacetime capacity. During much of the year, there were idle manpower resources, as is attested by the fact that the proportion of the labor force unemployed was slightly higher than in 1930, the first year of the depression.

Nevertheless, the degree of recovery evidenced by 1941 was impressive. In constant dollars, the gross national product stood one-third higher than in 1929. This expansion of real output was achieved with an increase of only 15 percent in the total number of persons engaged in production. Moreover, average hours worked per week were reduced considerably over the 12 years. In the private sector, where the increase in output was about 30 percent, total man-hours utilized differed but little from those in 1929.

That so large an increase in the volume of output was nonetheless accomplished was attributable to the rise in real product per man-hour worked in the private economy. Although lagging in the depression, productivity had advanced rapidly after 1934, and by 1941 was near the level indicated by its long-term trend.

The larger output of 1941 was being distributed to major economic groups in a somewhat different fashion from that of 1929. The most noteworthy change was in the share bought by government. With substantial military preparations getting under way, this share—including a slightly smaller portion for State and local governments—amounted to roughly one-fifth of the gross national product as compared with less than one-tenth in 1929. The proportion purchased by consumers, on the other hand, was reduced from 76 to 65 percent, while the percentages going into gross private domestic and net foreign investment were little changed.

The war economy: 1942-45

Preparations for war began at a time when the economy was operating at less than full capacity, with unemployed labor, plant, and equipment, and an abundance of raw materials. At first, because of the availability of these unused economic resources, war production could be superimposed upon the civilian economy. It acted as a stimulant, and civilian production increased concurrently. Gross private domestic investment proceeded at a high rate, and consumer purchases—especially of durable goods—were buoyant.

During most of 1941, the needs of the war program were thus compatible with expanding civilian production. Moreover, much of the capital equipment acquired during this period later proved to be readily convertible to war production. Also, the additions to the stock of capital, along with additions to the stock of durable consumer goods, subsequently permitted the diversion of more productive resources from civilian use than would otherwise have been possible except with sharper cuts in living standards.

Emergence of war-time problems

As the dimensions of the war effort expanded, however, serious problems emerged. Although the rising volume of war production generated a rapid expansion of incomes, it provided no goods and services to satisfy the resultant growth of civilian demand. Instead, it impinged upon their availability as soon as the slack in the economy had been taken up. Shortages of specific labor skills, capital facilities, and raw materials began to be more and more frequently encountered. After Pearl Harbor, it became obvious that the war program would take proportions of output so huge that they could not be provided by enlarged production alone, and that civilian demand would have to be restricted.

During the period of transition to a full war economy, accordingly, a succession of measures was adopted with a view to ensuring maximum war production together with the optimum functioning of the civilian economy. Rates of taxation were steeply increased, not only to help finance Government war expenditures, but also to restrict the amount of civilian purchasing power available to bid for the limited volume of goods and services remaining after military requirements had been met. Fiscal measures were supplemented by the imposition of direct controls, including priorities, inventory limitation orders, allocations, manpower regulations, price and wage controls, and rationing. In addition, individuals were urged to restrict consumption voluntarily and to invest their surplus purchasing power in Government bonds.

On the whole, the flexibility of the economy in the transition to full-scale war production proved great and total production continued to rise rapidly despite conversion.

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War peak reached in 1944

In 1944, the peak year of war production, the dollar value of the Nation's output was $211 billion—$85½ billion higher than in 1941. Because of the extreme changes in the nature and composition of output, it is difficult to measure how much of this dollar increase reflected physical volume. According to the constant-dollar gross national product series, the expansion of real output from 1941 to 1944 was more than one-third. Whatever the precise figure, it is clear that there was a large rise in physical production during World War II. The major underlying factors were an extraordinary expansion of the labor force and employment, an increased stock of capital equipment, large-scale operations and technological progress in war production, and a better utilization of labor and productive capacity in many civilian industries.

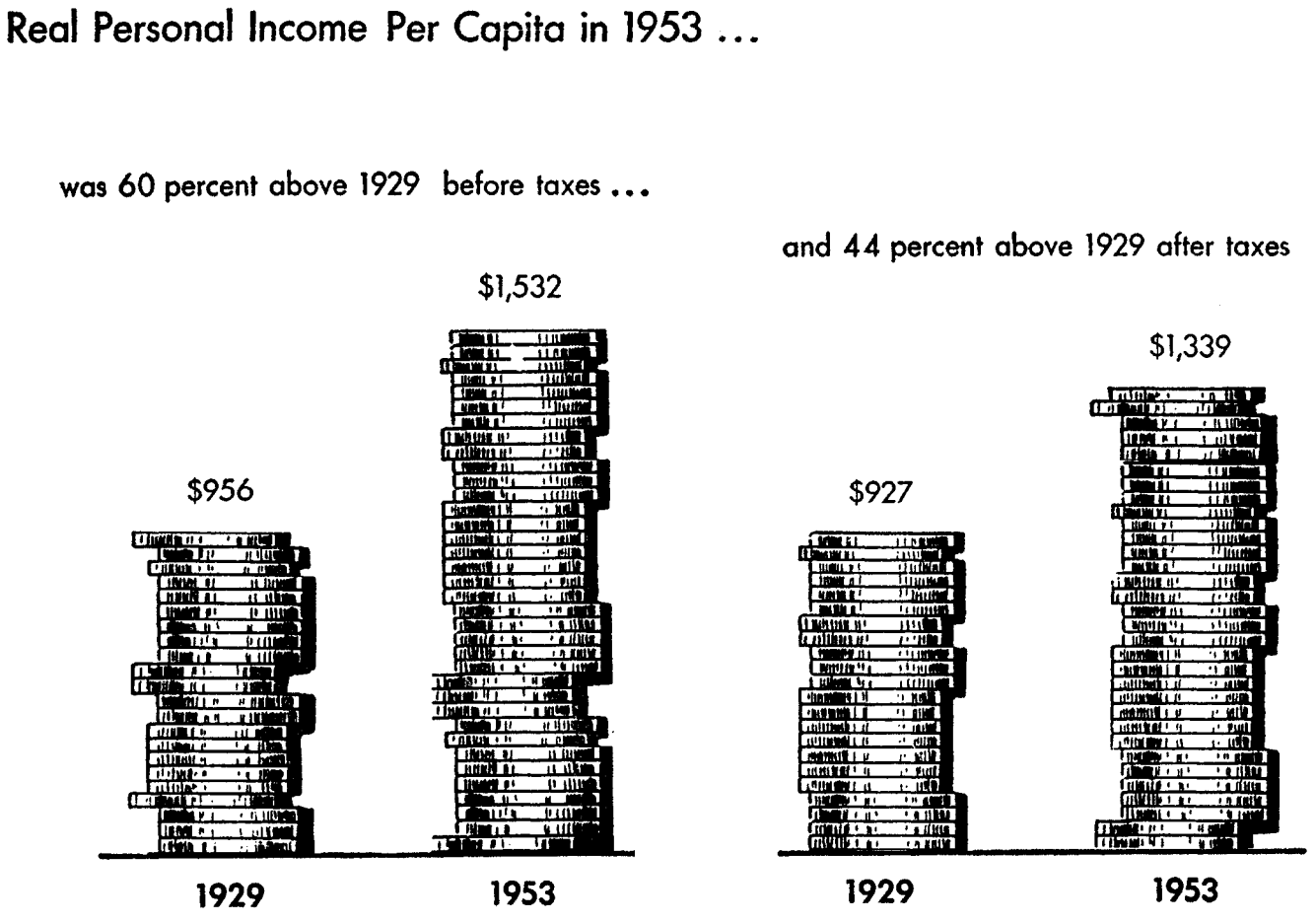
The increase in physical output was by far the most important source of war output. Next in importance were reductions in gross fixed investment, consumer durables, and government nonwar purchases. According to available evidence, real consumption of nondurable goods and of services was more than maintained in total. While the wartime level of personal consumption is somewhat exaggerated in the constant dollar figures because of the impossibility of measuring fully the actual price rise which occurred during the war, it is evident that, in the aggregate, real consumption was not curtailed.

Although personal consumption held up during the war, it was much lower in relation to income than it would have been in ordinary peacetime years of high economic activity. An unprecedented proportion of wartime incomes was absorbed by taxes, and the saving rate was abnormally high. The latter reflected a combination of restricted civilian supplies regulated by price control and rationing and the response to patriotic appeals for investment in war bonds.

War changes distribution of output

As a result of these wartime changes, the composition of gross national product in 1944 differed drastically from that in 1941. Government purchases amounted to 46 percent of the total in 1944. The comparable figure for 1941 was only 20 percent, including twice as large a proportion for civilian programs of Federal, State, and local governments.

All other major uses of output were reduced far below their usual relative importance, with the sharpest cuts being those in domestic and net foreign investment and in consumer durables. Private fixed capital formation fell to about 4 percent of the national product as compared with 11 percent in 1941; and requirements were also met in part through a net drain upon both



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business inventories and foreign sources of supply. The proportion representing consumer outlays for durable goods was more than halved as compared with that of 1941, and the relative share of personal consumption expenditures for nondurables and services also decreased—though by a much smaller margin.

Reconversion and postwar boom: 1945–48

At the end of World War II, the Nation faced a set of economic problems which in some ways were the counterpart to those of the original mobilization. It was widely recognized that the transition from a situation in which roughly two-fifths of economic resources were being employed in war production to one in which most of the resources would again be devoted to civilian output could only be accomplished in an orderly fashion by widespread cooperation among all major groups in the economy. As in the mobilization itself, the striking flexibility of the economy was demonstrated.

A broad Government program designed to speed reconversion, and to ease its impact upon the returning soldier and upon business, was enacted. With the quick resurgence of business, personal, and foreign demands, as well as the vast Government programs undertaken to aid in the rehabilitation of war devastated areas, the immediate postwar economic decline was held to moderate proportions.

Although war purchases of the Federal Government were cut back with great speed—from an annual rate of $90 billion in the second quarter of 1945 to $28 billion in the first quarter of 1946—much of the slack was quickly taken up by the rapid expansion of private spending. Total gross national product dropped 12 percent over these three quarters, or by $27 billion at annual rates; thus more than half of the drop in war expenditures was offset. Discharged servicemen and war plant workers were speedily absorbed in civilian pursuits, and at no time did unemployment rise appreciably above 2½ million.

After the first quarter of 1946, the buoyancy of private demand more than offset the moderate further declines in government purchases. Strong inflationary pressures characterized the 1945–46 reconversion, even before controls were eliminated, and continued to dominate the economic scene for the next two years.

Influence of liquid saving and backlog demands

Several key factors underlay the strength of private demand. During the war, both consumers and businesses had accumulated an enormous volume of savings—much of it in liquid form. At the same time, they had built up a backlog of urgent demands for all types of civilian goods, and especially for durables.

As regards the purchasing power of consumers, it may be further noted that in the brief contraction from mid-1945 to early 1946 the flow of disposable personal income was maintained. Undistributed corporate earnings absorbed a large share of the swing in total income arising from production, and the Government disbursed mustering-out payments and other veterans' benefits in large volume and lowered the wartime tax rates. Not only did the pent-up demand for durable consumer goods materialize as expected, but an insistent consumer demand for nondurables and services also became an active and powerful force in the economy.

Business speeds investment

At the same time, business plant and equipment investment programs were pushed ahead fast in the immediate reconversion period and continued to expand strongly thereafter. Inventories, very low at the close of the war, had to be accumulated rapidly to bring working stocks into line with the heavy volume of business. The pace of residential building activity also accelerated steadily.

Moreover, net foreign investment assumed a relative importance far beyond its usual role. With financial support provided both by wartime accumulations of gold and dollar balances and by a large volume of United States Government loans, and under the stimulus of world-wide shortages stemming from the impairment of productive facilities abroad, net foreign purchases of American output reached unprecedented proportions.

In combination, these heavy demands placed a severe strain upon the productive capacity of the economy, which was reduced considerably below the wartime peak. Despite low unemployment, the number of persons engaged in production was 7 million, or 11 percent, lower in 1946 than in 1944. This was due to the withdrawal from the labor force of sizable classes of individuals—such as adolescents, housewives, and persons past the normal retirement age—who are not ordinarily employed, but who had been induced by special wartime circumstances to accept employment. In addition, average hours worked per week fell off as overtime schedules were abandoned, and there appears to have been some loss during the reconversion period in real output per man-hour worked in private industries.

Rapid price rise until 1948

With the physical volume of production thus pressing against capacity, much, if not most, of the pressure exerted by intensive consumer, business, and foreign buying was reflected in price movements. Prices were already advancing, though often in covert fashion, in the early reconversion period. After the termination of wartime controls in the latter half of 1946, they spurted up very sharply, and, except for a brief interlude of hesitation in the spring of 1947, serious inflationary tendencies accompanied the postwar boom until 1948.

In that year a better balance between supply and demand emerged, and the price rise tapered off. This was brought about partly through an appreciable expansion of real output and partly through a diminution in the intensity of some of the demands, including those from abroad, from which the greatest pressures had emanated.

There was a break in agricultural prices early in 1948. Although these recovered briefly, their downward slide, influenced by the prospect of excellent domestic harvests and an improved crop situation abroad, was resumed after midyear. Agricultural prices are a substantial element in the total price picture, and their decline was an important factor shaping the course of economic developments during 1948.

More notable, however, was the increasing stability in consumer markets. The upsurge in personal consumption expenditures, stimulated by backlog demands and reinforced by large holdings of liquid assets and a low volume of consumer debt outstanding, had constituted one of the main foundations of the

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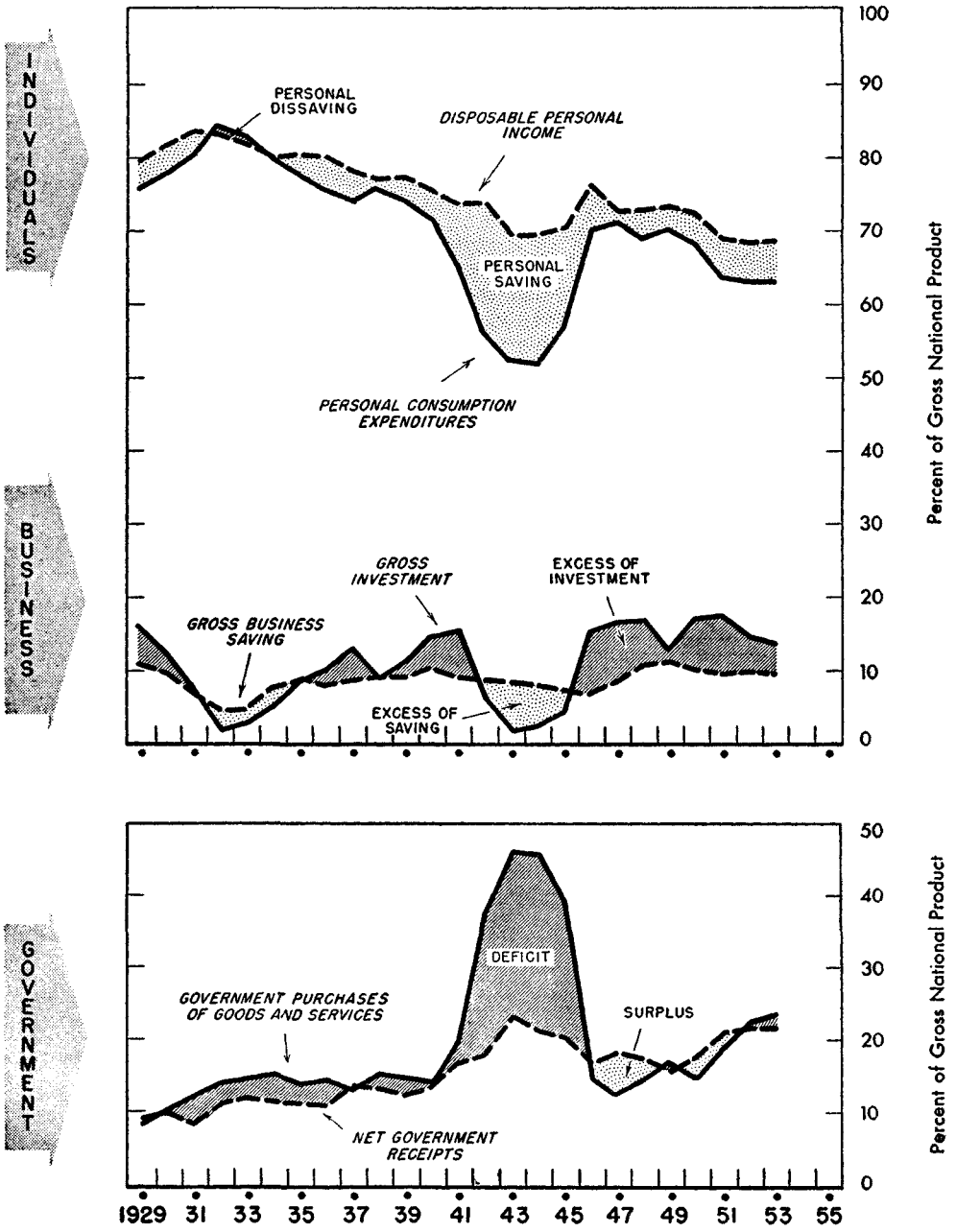
Two Distributions of the Gross National Product

1. BY PURCHASES -- SOLID LINES
2. BY RECEIPTS -- DASHED LINES

- The sums of the receipts and expenditures are equal
- But each part of the economy does not spend what it receives. It saves a portion or draws on the savings of others
- Shifting positions indicate the relative swings in purchasing power and market demands



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Percentage Distributions of National Income by Distributive Shares, 1929–38

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	Total national income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2	Compensation of employees	58.2	61.9	66.6	73.0	73.6	70.0	65.4	66.1	65.1	66.6
3	Wages and salaries	57.4	61.0	65.5	71.6	72.2	68.8	64.3	64.6	62.6	63.6
4	Supplements to wages and salaries	.8	.9	1.0	1.4	1.3	1.2	1.1	1.5	2.5	3.0
5	Income of unincorporated businesses	16.8	15.2	14.6	12.5	13.9	14.3	18.2	16.1	17.2	16.5
6	Business and professional [1]	10.0	9.8	9.3	8.0	7.9	9.3	9.4	10.1	9.6	10.1
7	Farm	6.8	5.5	5.3	4.5	6.1	5.0	8.8	6.1	7.6	6.4
8	Rental income of persons	6.2	6.3	6.3	6.4	4.9	3.5	2.9	2.7	2.8	3.8
9	Corporate profits and inventory valuation adjustment	11.5	8.7	2.7	−4.6	−5.0	2.2	5.1	7.7	8.4	6.3
10	Corporate profits before tax	11.0	4.4	−1.3	−7.1	.4	3.5	5.5	8.8	8.5	4.9
11	Corporate profits tax liability	1.6	1.1	.8	.9	1.3	1.5	1.7	2.2	2.0	1.5
12	Corporate profits after tax	9.4	3.3	−2.1	−8.0	−.9	2.0	3.8	6.7	6.4	3.4
13	Dividends	6.6	7.2	6.8	6.0	5.1	5.3	5.0	7.0	6.4	4.7
14	Undistributed profits	2.8	−4.0	−9.0	−14.0	−6.0	−3.3	−1.2	−.3	.1	−1.4
15	Inventory valuation adjustment	.5	4.3	4.9	2.5	−5.3	−1.3	−.4	−1.1	.0	1.4
16	Net interest	7.3	7.9	9.8	12.8	12.6	9.9	8.3	7.3	6.4	6.9

1. Includes noncorporate inventory valuation adjustment.

Percentage Distribution of National Income by Sector of Origin, 1929–38

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	National income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2	Government and government enterprises	5.8	7.0	9.1	12.1	13.3	12.8	11.8	12.5	10.6	12.6
3	Agriculture, forestry and fisheries	9.4	8.2	8.2	7.8	9.2	7.6	11.2	8.3	9.8	8.7
4	Rest of the world	.9	1.0	.9	.9	.8	.6	.6	.5	.4	.6
5	Private nonagricultural industries	83.9	83.8	81.8	79.1	76.7	79.0	76.3	78.7	79.3	78.1

Percentage Distribution of Private Nonagricultural Income by Industrial Division, 1929–38

6	Private nonagricultural industries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
7	Mining	2.8	2.6	2.0	2.0	2.1	3.0	2.8	3.0	3.3	2.8
8	Contract construction	5.2	5.0	4.5	3.1	2.5	2.8	3.0	3.9	3.6	3.8
9	Manufacturing	29.7	28.7	25.4	21.4	24.6	28.2	30.5	31.7	33.1	28.4
10	Wholesale and retail trade	18.1	19.3	19.9	18.9	17.8	20.8	21.1	20.7	20.9	22.6
11	Finance, insurance and real estate	17.2	16.7	17.7	20.1	18.7	14.6	13.6	12.9	12.4	14.5
12	Transportation	9.0	8.8	8.9	9.5	9.9	8.8	8.5	8.4	7.9	7.7
13	Communications and public utilities	3.9	4.4	5.4	6.8	6.5	5.7	5.2	4.9	4.7	5.1
14	Services	14.0	14.5	16.1	18.2	18.1	16.1	15.3	14.6	14.1	15.0

Percentage Distributions of Gross National Product, 1929–38

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
	By type of expenditure										
1	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2	Personal consumption expenditures	75.6	77.9	80.4	84.3	82.9	79.9	77.6	75.7	74.1	75.8
3	Gross private domestic investment	15.5	11.3	7.2	1.6	2.5	4.4	8.7	10.2	12.9	7.8
4	Net foreign investment	.7	.8	.3	.3	.3	.7	−.1	−.1	.1	1.3
5	Government purchases of goods and services	8.1	10.1	12.1	13.8	14.4	15.0	13.8	14.3	12.9	15.0
6	Federal	1.3	1.5	2.0	2.5	3.6	4.6	4.0	5.8	5.0	6.2
7	State and local	6.9	8.5	10.1	11.3	10.7	10.4	9.7	8.5	7.9	8.8
	By type of receipt										
8	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
9	Disposable personal income	79.6	81.6	83.7	83.2	81.7	80.0	80.4	80.0	78.2	77.1
10	Gross business saving [1]	11.0	9.6	6.8	4.6	4.6	7.5	8.7	7.9	8.6	9.2
11	Statistical discrepancy	.3	−1.1	1.1	1.3	1.7	1.1	−.2	1.4	−.3	.5
12	Net government receipts	9.1	9.8	8.4	10.9	11.9	11.4	11.1	10.7	13.5	13.2
13	Federal [2]	2.4	1.9	−.8		1.3	.2	.5	1.6	4.8	3.9
14	State and local [3]	6.7	7.9	9.1	10.9	10.7	11.2	10.5	9.1	8.7	9.3

1. Consists of undistributed corporate profits and corporate inventory valuation adjustment, capital consumption allowances, and excess of wage accruals over disbursements.
2. Consists of personal tax and nontax receipts, corporate profits tax accruals, indirect business tax and nontax accruals, contributions for social insurance, and current surplus of government enterprises, less subsidies, transfer payments, net interest paid, and grants to State and local governments

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Percentage Distributions of National Income by Distributive Shares, 1939–53

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1
66.1	63.9	61.9	61.9	64.3	66.4	68.0	65.5	65.3	63.6	65.2	64.3	65.1	67.2	68.5	2
63.1	61.0	59.3	59.6	62.1	64.0	64.9	62.3	62.3	61.0	62.1	61.1	61.7	63.6	64.9	3
3.0	2.8	2.6	2.3	2.2	2.4	3.1	3.3	3.0	2.6	3.0	3.3	3.4	3.6	3.6	4
16.0	15.9	16.6	17.4	16.6	16.2	17.0	19.6	17.5	17.3	15.8	15.1	14.7	13.7	12.6	5
10.0	10.3	10.4	10.1	9.9	9.9	10.5	11.9	10.1	9.8	9.9	9.5	8.9	8.8	8.6	6
5.9	5.6	6.2	7.3	6.7	6.3	6.5	7.8	7.3	7.6	5.9	5.5	5.8	4.9	4.0	7
3.8	3.5	3.3	3.3	3.0	3.0	3.1	3.5	3.3	3.2	3.6	3.5	3.3	3.4	3.5	8
7.8	11.2	13.9	14.3	14.0	12.6	10.2	9.6	12.0	13.8	13.0	14.6	14.4	13.1	12.6	9
8.8	11.4	16.2	15.2	14.4	12.8	10.5	12.6	15.0	14.8	12.1	16.7	14.9	12.8	12.9	10
2.0	3.5	7.3	8.3	8.3	7.1	5.9	5.1	5.7	5.6	4.8	7.4	8.1	6.9	6.9	11
6.8	7.9	9.0	6.9	6.2	5.7	4.6	7.5	9.3	9.1	7.3	9.2	6.7	5.9	6.0	12
5.2	5.0	4.3	3.1	2.6	2.6	2.6	3.2	3.3	3.3	3.4	3.8	3.3	3.1	3.1	13
1.6	3.0	4.7	3.8	3.5	3.1	2.0	4.3	5.9	5.9	3.9	5.4	3.5	2.8	2.9	14
−1.0	−.2	−2.4	−.9	−.5	−.2	−.3	−2.9	−3.0	−1.0	.9	−2.0	−.5	.3	−.3	15
6.3	5.5	4.3	3.1	2.1	1.8	1.8	1.7	1.9	2.0	2.4	2.5	2.4	2.6	2.8	16

Percentage Distribution of National Income by Sector of Origin, 1939–53

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1
11.7	10.7	10.0	11.9	15.9	18.5	20.3	12.6	9.4	8.9	10.1	9.8	10.9	11.8	11.4	2
8.2	7.7	8.1	9.0	8.3	7.9	8.2	9.7	9.3	9.4	7.7	7.2	7.3	6.4	5.5	3
.4	.4	.3	.3	.2	.2	.2	.3	.4	.5	.5	.5	.6	.5	.5	4
79.7	81.2	81.5	78.9	75.6	73.4	71.3	77.4	80.9	81.3	81.7	82.5	81.2	81.3	82.6	5

Percentage Distribution of Private Nonagricultural Income by Industrial Division, 1939–53

100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6
2.7	2.8	2.7	2.4	2.1	2.2	2.1	2.1	2.6	2.9	2.5	2.5	2.5	2.2	2.2	7
4.0	3.9	4.9	6.0	4.2	3.1	3.3	4.7	5.3	5.7	5.9	5.8	6.0	6.1	6.0	8
30.9	33.7	38.7	41.8	45.2	44.9	40.2	34.9	36.8	37.0	35.5	37.5	39.0	38.0	38.6	9
21.5	21.6	20.2	18.7	18.5	19.2	21.7	24.7	23.4	23.1	22.9	21.9	21.3	21.5	20.8	10
13.7	12.4	10.7	9.8	9.0	9.1	9.9	10.4	9.6	9.6	10.7	10.4	10.0	10.3	10.5	11
8.1	7.6	7.4	7.9	8.4	8.4	8.2	7.4	7.2	7.0	6.8	6.7	6.6	6.6	6.4	12
4.9	4.6	3.9	3.4	3.1	3.0	3.3	3.4	3.2	3.3	3.7	3.6	3.7	3.9	4.0	13
14.3	13.4	11.5	10.1	9.5	10.2	11.3	12.4	11.9	11.4	12.0	11.5	11.0	11.3	11.5	14

Percentage Distributions of Gross National Product, 1939–53

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1
74.2	71.4	65.1	56.4	52.2	52.0	57.0	70.1	71.0	69.0	70.2	68.1	63.5	63.1	63.1	2
10.2	13.1	14.4	6.2	2.9	3.4	4.9	13.0	12.8	16.0	12.6	18.0	17.3	14.6	14.1	3
1.0	1.5	.9	−.1	−1.2	−1.0	−.7	2.2	3.8	.8	.2	−.8	.1	----------	−.5	4
14.6	14.0	19.7	37.5	46.0	45.7	38.8	14.8	12.3	14.2	17.0	14.7	19.1	22.3	23.4	5
5.7	6.1	13.4	32.7	42.2	42.1	35.0	10.0	6.8	8.2	9.9	7.8	12.5	15.6	16.5	6
9.0	7.9	6.2	4.8	3.8	3.6	3.8	4.8	5.5	6.0	7.1	7.0	6.6	6.7	6.9	7
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	8
77.3	75.6	73.9	73.8	69.4	69.4	70.4	76.1	72.8	72.9	73.1	72.3	68.9	68.4	68.5	9
9.1	10.3	9.1	8.9	8.5	8.1	7.3	6.7	8.6	10.6	11.1	10.0	9.7	9.9	9.6	10
1.3	.8	.3	−.5	−.9	1.3	2.1	.4	.6	−.8	.0	.1	.4	.2	.3	11
12.3	13.3	16.7	17.8	23.1	21.1	20.2	16.8	18.0	17.3	15.7	17.6	21.0	21.5	21.5	12
3.2	4.7	9.4	11.8	17.9	16.3	15.2	11.0	12.1	11.3	9.0	11.0	14.5	14.8	14.6	13
9.1	8.6	7.3	6.0	5.1	4.8	5.0	5.7	6.0	6.0	6.8	6.6	6.5	6.7	6.9	14

3. Consists of personal tax and nontax receipts, corporate profits tax accruals, indirect business tax and nontax accruals, contributions for social insurance, current surplus of government enterprises, and Federal grants-in-aid, less transfer payments and net interest paid.

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Selected Per Capita Income and Product Series in Current and Constant (1947) Dollars, 1929–38

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
	Current dollars										
1	Gross national product	857	740	614	468	445	514	569	646	704	656
2	National income	720	615	481	341	320	357	448	506	571	520
3	Personal income	704	624	529	401	376	424	473	534	573	527
4	Disposable personal income	682	604	514	389	364	411	458	517	551	505
5	Personal consumption expenditures	648	576	494	395	369	410	442	488	522	497
	Constant (1947) dollars										
6	Gross national product	1,225	1,098	1,020	861	825	897	1,003	1,112	1,190	1,123
7	Disposable personal income [1]	927	859	822	703	679	725	792	888	913	858
8	Personal consumption expenditures	880	819	789	711	689	723	764	839	865	845
9	Addendum: Population (thousands) [2]	121,881	123,188	124,149	124,949	125,690	126,485	127,362	128,181	128,961	129,969

1. This series was obtained by dividing current-dollar disposable personal income by the implicit deflator for personal consumption expenditures shown in table 41, Part V.

2. Continental United States including Armed Forces abroad, as of July 1.

boom. As the more urgent backlog demands were satisfied, and as the abnormally high spending rate of 1947 made inroads into the net liquid asset positions of many consumers, the rising trend of consumption flattened out in the latter part of 1948.

Closely allied with this tapering-off was the appearance of substantial inventory accumulations, prevented in 1947 largely by the intensity of consumer demand. These related developments, more than any others, slowed the price rise and brought the inflationary spiral to an end during 1948. Late that year, there came a general downturn in prices, and the postwar economy entered a new phase.

Business readjustment and recovery: 1949–50

Businessmen adopted more cautious buying policies toward the end of 1948, and the large inventory accumulations of that year were sharply reduced in the first quarter of 1949. Substantial inventory liquidation emerged in the next quarter, and the drain upon stocks persisted during the remainder of the year. The shift in the inventory position was reflected in a curtailment of production mainly in the manufacturing industries, where the bulk of all inventories held in the economy is produced.

By contrast, total final purchases—that is, elements of the gross national product other than the change in inventories—held up extremely well during 1949. Consumer spending in the first quarter dropped but slightly below its dollar volume at the crest of the postwar boom, then climbed slowly upward again during the remainder of the year. Residential building activity decreased from a peak in the second quarter of 1948 but picked up again in the spring and advanced strongly thereafter. And government purchases, chiefly because of the expanding Federal foreign aid and farm price support programs, more than offset the moderate declines which occurred in business outlays for plant and equipment. For the year as a whole, total final purchases actually exceeded those of 1948.

That the curtailment of employment and payrolls in the manufacturing sector had no greater impact upon consumption expenditures in 1949 was attributable in part to the payment of sizable unemployment compensation benefits, and also in some degree to the cushioning effects upon disposable personal income of lower Federal income taxes as a result of the previous year's Revenue Act. It may also be noted that dividends were sustained, notwithstanding the sharp fall in profits. Perhaps more important than any of these factors, however, was the apparent willingness of the consuming public as a whole to spend increasing proportions of current income to maintain living standards during the recession.

It became apparent in the second half of 1949 that the curtailment of output had been excessive in relation to the existing stable volume of business sales. Accordingly, production was stepped back up, and the accumulation of inventories was resumed. Meanwhile, the recovery of residential construction had grown into a sustained building boom, and consumer demand, already strong, was being bolstered by large Government payments to veterans. These factors, moreover, were being reinforced by a renewed upturn in fixed business investment.

This widening resurgence of production generated increases in employment and incomes, adding further impetus to consumer purchasing. Before mid-1950, a business upswing of substantial dimensions was under way and was carrying the economy close to full-capacity operation.

Korean war period

It was upon this expansionary situation that the urgent demands resulting directly and indirectly from the outbreak of hostilities in Korea were superimposed, as the Nation decided upon a defense program encompassing a sharp step-up in direct military potential as well as the establishment of a broad base of productive facilities to permit quick economic mobilization in case of full-scale war.

The ensuing rise in national output continued without interruption for three years, until the second quarter of 1953, when gross national product reached a peak of $370 billion at seasonally adjusted annual rates, one third above the rate of $276 billion in the second quarter of 1950. About half of this rise represented expansion in physical volume while the remainder reflected the sharp advance in prices which occurred in large part during the first nine months of the period.

In terms of current dollars, Federal Government purchases, mainly for national security purposes, accounted for more than two-fifths of the increase in national output. These purchases tripled over the three-year period, and their share of total output rose from 8 to 17 percent. All other types of national expenditure combined rose by about one-fifth, with consumption, invest-

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Selected Per Capita Income and Product Series in Current and Constant (1947) Dollars, 1939–53

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
695	762	943	1,180	1,408	1,527	1,526	1,480	1,611	1,755	1,725	1,879	2,126	2,204	2,286	1
555	618	785	1,021	1,246	1,320	1,295	1,270	1,368	1,512	1,449	1,582	1,795	1,853	1,911	2
556	596	722	916	1,107	1,197	1,224	1,259	1,322	1,424	1,386	1,497	1,654	1,727	1,792	3
538	576	697	871	977	1,060	1,075	1,126	1,173	1,279	1,261	1,359	1,465	1,509	1,567	4
516	544	614	665	735	794	870	1,037	1,145	1,211	1,211	1,279	1,350	1,391	1,441	5
1,202	1,299	1,486	1,658	1,820	1,938	1,880	1,654	1,611	1,663	1,619	1,745	1,833	1,874	1,921	6
925	981	1,113	1,245	1,277	1,312	1,282	1,247	1,173	1,211	1,203	1,280	1,290	1,306	1,339	7
888	927	981	950	961	982	1,038	1,149	1,145	1,146	1,155	1,205	1,189	1,205	1,232	8
131,028	132,122	133,402	134,860	136,739	138,397	139,928	141,389	144,126	146,631	149,188	151,683	154,360	157,022	159,629	9

ment, and State and local government outlays each registering substantial gains.

In real terms the shifts in the use of output were more pronounced, with the Federal Government absorbing about two-thirds of the increase in constant-dollar gross national product. But on this basis also a margin was left which permitted an expansion in other purchases in spite of the increased demands of national security. Total real consumption was about 9 percent higher in mid-1953 than three years earlier, reflecting mainly a larger volume of nondurable goods and services. On a per capita basis the increase amounted to more than 3 percent. Real purchases of State and local governments showed a similar movement. The rate of aggregate investment decreased somewhat in real terms, although fixed investment was higher, due to a larger volume of producers' durable equipment.

Inflationary upsurge

While the defense buildup was the dominant factor in the economic situation throughout the three years following mid-1950, its character and impact varied considerably during this period.

In the initial stage the increase in national security expenditures was heavily concentrated in military payrolls, food, clothing, and other related outlays which were capable of rapid expansion in a comparatively short time. The strength of the Armed Forces increased by 1¾ million persons in the first year of the defense effort—about four-fifths of the ultimate total increase—and national security outlays mounted from 6 percent to 11 percent of the gross national product.

At the same time there was a strong advance in investment by businesses that were participating in the growing volume of defense orders. This included investment in inventories and in plant and equipment, the latter receiving a special stimulus from the rapid amortization provisions that had been granted for emergency facilities.

Although the demands stemming directly from the defense program contributed to expansionary developments, it was the waves of anticipatory buying, set in motion by the expectation of commodity shortages and price increases, that determined the tone of the business situation in this period. Consumer buying spurted in the third quarter of 1950 and again in the first quarter of 1951, following the further extension of the Korean conflict. Responding to sharply rising sales, as well as to the same expectations that motivated consumers, businessmen added greatly to their inventories, and fixed investment not related to the defense program was also stimulated.

Although production continued to rise briskly, demand outstripped the supply of goods, and prices bounded upward.

Shift to defense production

By mid-1951 the situation had changed significantly. Output was expanding at a rapid rate, and it became apparent that the productive capacity of the economy had been underestimated. Taxes had been raised, and the establishment of price and wage controls gave some assurance to the public that inflation would be kept in check. Other measures, including controls on credit and on the flow of strategic materials, had been introduced to ensure that the necessary resources would be channeled in an orderly fashion into the defense program.

As a consequence of these developments, and the well-stocked position of consumers after several months of extraordinarily heavy buying, spending propensities eased markedly during 1951. The rate of consumer spending out of disposable income, which had risen to 96 percent during the buying surge in the first quarter fell to about 91 percent in the succeeding quarters of the year. Since the trend of income was strongly upward, the absolute dollar value of consumption in the final quarter of the year exceeded the first-quarter rate in spite of this decline in the spending rate.

The easing in the urgency of consumer demand was paralleled by a curtailment of business buying, which had been geared to the same sort of anticipations and to the resultant abnormal volume of sales. The shift entailed a very substantial inventory readjustment—with a notable scaling down in the accumulation of civilian goods.

In the setting of rapidly increasing physical production, of Government measures designed to minimize the disruptive effects of economic mobilization upon the economy, and of less urgent private demand, it was possible to achieve a substantial expansion in national defense expenditures and allied fixed capital outlays concurrently with a high rate of civilian consumption and a diminution of inflationary pressures.

The absolute increase in national security expenditures in the

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second year of the defense buildup was nearly as large as in the previous year although the percentage increase was smaller. It was concentrated in hard goods, such as planes, tanks, and electronic equipment. Deliveries of these items were reaching a high volume, after design difficulties had been overcome and the long lead-time involved in their production had elapsed. Defense-connected fixed investment also expanded rapidly in this period. In contrast, the advance in total fixed investment was limited by offsetting declines in investment not related to the defense effort.

General expansion

In the third year of the defense effort—from mid-1952 to mid-1953—the Nation's capacity to produce continued to expand substantially while the rate of growth of national security outlays tapered off. This shift in the relation of supply and demand permitted the relaxation and subsequent removal of economic controls.

Civilian demand proved strong, particularly in the durable goods lines previously restricted by controls and material shortages. Residential, institutional, and State and local construction, business investment in plant and equipment other than in defense-connected industries, and consumer and inventory demand for automobiles and other durable goods became major factors supporting further economic growth. Together with the still rising military demand they provided the basis for a balanced economic expansion which, unlike that of the previous year, was shared by most industries.

Agriculture was the principal sector of the economy that ran counter to the generally favorable trend. As a consequence of lower farm prices, income originating in agriculture was reduced substantially during 1952 and 1953. The steady downward pressure on prices reflected the unusually heavy output of farm products—which reached successive highs in the 2 years—and the appreciable decline in foreign sales. Domestic consumption remained firm, however, and the full force of the other developments was not reflected in farm income, as large quantities of the chief crops and dairy products were placed under loan to the Commodity Credit Corporation, both in 1952 and 1953.

The restoration of civilian durable goods production was retarded by the steel strike which occurred in the second quarter of 1952 and affected end products mainly in the third. As a consequence final purchases and inventory accumulation of durables were particularly heavy in the fourth quarter of 1952 and were probably raised also in the opening half of 1953.

National output reduced

Total production reached a peak in the second quarter of 1953 and receded moderately in the latter half of the year. The major change occurred in the net flow of goods into the inventories of durable goods industries. These inventories had been replenished and the immediate need for further accumulation had thus been removed. In addition, sizable liquidations were made when it became apparent that, relative to actual and prospective demand, some of the earlier build-up had been excessive.

National security expenditures, entering a new phase, registered moderate declines, mainly in the procurement of hard goods, and consumer purchases of commodities, particularly durables, also drifted downward. The effect of these reductions on total final purchases was offset, however, by advances in other components of national expenditures, notably consumer expenditures for services, State and local government purchases, and the agricultural price support outlays of the Federal Government. Hence final purchases were maintained in the aggregate in the latter half of 1953.

While the percentage decline in total national output was small, it was heavily concentrated in durable goods and thus had a disproportionate impact upon the durable goods manufacturing industries where it led to substantial reductions in production, employment, wages, and profits. The year 1954 opened with these developments still in progress.

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PART II

The Conceptual Framework of National Income Statistics

In the past two decades national income statistics have undergone a basic transformation. This is manifest in the considerably broadened scope of the field.

The traditional purpose of national income research is to provide information on the outcome of economic activity through comprehensive measures of the size, composition, and use of national output. In the more recent period, the measurement of national output has continued to be the basic aim. But, with the growing realization that they can furnish a statistical picture of the economic structure and process, national income statistics have been used also to an increasing extent to facilitate an understanding of the factors which determine the outcome of economic activity. Much more fully and systematically than in the past, national income statistics have been designed with the dual objective of measuring the national output and placing it against the background of the transactions which underlie its production and distribution.

The national income statistics for the United States contained in this report are constructed according to this broader plan. They are therefore a comprehensive single source of integrated information on the Nation's economic life.

NATURE AND SIGNIFICANCE OF THE INCOME DATA

Because they reduce the voluminous detail of economic activity to intelligible proportions, national income statistics have become widely used as the factual background for economic analysis and the preparation of economic programs. They provide the basic statistical framework required for the study of long-term economic trends and of business fluctuations, and for the formulation of business and government economic policies. Needless to say, the statistics do not throw light on all aspects of the economy, and often must be supplemented by other bodies of economic information.

Two broad, practical uses of national income data may be cited. These data are needed, in the first place, when the automatic working of the market mechanism cannot be fully relied upon. The mitigation of business cycles and economic mobilization for national defense are important instances in which an understanding of the economic mechanism, such as is facilitated by the use of national income statistics, is a prerequisite to intelligent action.

Secondly, even when active influencing of the broad course of economic events is not the aim, it is desirable to have some knowledge of these events so that the best possible adjustments to them can be made. For example, the businessman wants to gauge the probable market for his output so as to obtain a more rational basis for determining his policies; and the tax administrator must estimate what governmental revenues are likely to be so that intelligent decisions can be made about matters relating to the expenditure and revenue policies of the various levels of government.

Whether for the purpose of exerting active influence on economic events or for passive adaptation to them, national income data are the most important single statistical tool for orientation in the economic world. They do not, of course, furnish direct answers to the economic problems involving their use, but they do provide the relevant, and often indispensable, statistical background for arriving at intelligent solutions. This statistical background consists of a quantitative description of the structure of the economy over a period of years. The framework of this description is a national economic accounting system which summarizes the transactions linking the economic units whose interplay determines the functioning of the economy.

Economic accounting system

The production and distribution of the Nation's output necessitate countless transactions of buying and selling, hiring labor, investing capital, renting property, paying taxes, and other operations inherent in the functioning of the economic system. The

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records of these transactions kept by the business, consumer, and governmental units participating in them obviously are highly relevant for obtaining a statistical view of the economy because they reflect the most concrete manifestations of the Nation's economic life. However, these innumerable records must be summarized into a limited number of significant categories if a comprehensible and useful description of the economic process is to emerge. This is the basic task of the national economic accounting system.

The plan of the accounting system underlying the United States estimates is based upon a division of the economy into four major sectors—business, consumers, government, and foreign. The economic behavior and motivation of these four sectors is quite different; to distinguish among them appears necessary for an understanding of the economy in terms of the interactions of its constituent parts.

In the construction of the economic accounting system, a national income and product account is first established. This account provides measures of total national output, which is the sum of the outputs produced by the four sectors of the economy.

Next, accounts are set up for the sectors. In addition to showing the portions of national output originating in each of them, they are designed to depict the economic structure in terms of the interrelated transactions of the four major economic groups.

Specifically, four current accounts are shown, one each for business, consumers, government, and the rest of the world. These trace the transactions determining the current income of each of the sectors, and what part of that income is used up and what part is devoted to saving. The sector account for business is in essence a consolidated profit and loss account for the business system as a whole. For the other sectors, the accounts represent current receipt and expenditure accounts, in conformance with the nonprofit-making character of their transactions.

Most of the current transactions that appear in the account of one sector are matched by corresponding entries in another. However, this is not so with respect to the items of saving or investment. With these, the corresponding entry is found in the capital or gross saving and investment account, which shows on a consolidated basis the saving and investment for the economy as a whole. This is the sixth account in the national economic accounting system.

Main advantage of accounting approach

The principal advantage of formulating and presenting national income statistics as a system of accounts has been intimated in the preceding discussion. Such a system yields a set of interrelated tables which are a tremendous aid in revealing the structure of the economy and thereby contribute toward a better understanding of its functioning. Two aspects of the analytical value of the accounting system may be considered.

It throws into clear relief the nature of accounting relations that must always hold true among the component transactions summarized. The sense in which saving and investment are necessarily equal is a prime example of such a relationship. The establishment of an economic accounting system displaying this and other accounting relationships has been an aid to simplicity and clarity in economic discussions.

Also, light has been thrown on the relative magnitudes of the component flows of the economic process, and the study of the functional relationships among them has been facilitated. In contrast to the accounting relationships, which are a matter of definition and must always hold, these functional relationships are regularities that hold by and large as a matter of economic experience, but which can and do change in response to technological, institutional, and psychological changes. Measurement and study of these relationships—such as those between consumption and disposable income and between wages and profits—are essential for an understanding of the working of the economy. However, because they cannot be counted upon to hold without fail, these relationships must be the object of continuing investigation.

Technical uses of economic accounting system

The establishment of a system of national economic accounts has benefited also the producers of national income data. It has aided their work in both its theoretical and statistical phases.

With respect to the former, it must first be recognized that national economic accounting has been of some aid in improving the definition of national output. It is true that no genuinely new criteria for solving definitional problems have been provided, and also that many definitions of national output are compatible with the principles on which the system is based. Yet, it has helped the discussion in several ways.

A great deal of the discussion of definitions was obscured by the failure to distinguish clearly between the income and product measurements of output and by the lack of a clear grasp of the relation between them. The development of national income statistics in an economic accounting framework has made for clarity. Some of the larger issues involved in the definition of output were brought into better focus, and a powerful tool was provided for the consistent treatment of financial intermediaries, nonprofit institutions, imputed income and product, and similar problem areas in the formulation of national income concepts.

Economic accounting has contributed to problems of definition also by depriving them of some of their importance. In substantial part, these problems revolve around the question of whether or not certain items—such as government interest, business taxes, transfer payments, and subsidies—should be included in the aggregate measures of national output. Prior to the establishment of the system of accounts, the decision to omit such moot items from total output meant that their record, insofar as national income statistics were concerned, was lost. Since the items are germane to economic investigations in which national income data are used, there often was reluctance to exclude them, even though this may have been indicated from the standpoint of measuring output. With the presentation of national income statistics in the form of a complete statistical picture, the record of transactions excluded from the principal aggregates is no longer lost. The problem of defining output can be faced squarely on its own merit.

Moreover, to the extent that fully satisfactory solutions to definitional problems cannot be found, the economic accounting system has made it easier to live with them. Many of the controversial items (irrespective of whether defined as part of the output aggregates) are shown separately in the account tables, and alternative measures of output can be constructed depending on particular needs and preferences.

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In two general ways, the accounting approach is an aid to the statistical aspect of national income work. To begin with, it is of considerable help in defining the task of statistical data collection. Once the particular accounting framework providing the most useful summary of the economic structure has been decided upon, a comprehensive list of requirements for economic statistics emerges rather automatically. A list obtained in this way provides a useful guide for planning the collection of primary statistical data so as to yield the information most relevant to economic analysis.

The use of the accounting approach also facilitates the estimation of the various national income aggregates and their components from the available statistical material. It does this by making clear that many items of information can be obtained from the records of either the buyer or the seller, and hence affords flexibility in adapting estimating methods to available information.

In addition, this approach enables one to check every account for internal consistency by comparing the debit and credit totals as well as the relations among the various debit and credit entries. It also enables one to derive as residuals components of the national economic accounts which cannot be estimated directly from available data.

Improvements of the accounting system

In the derivation of the definitions and classifications used in the national economic accounting system, an attempt is made to set forth the distinctions that are most meaningful from the standpoint of economic analysis, taking account of the limitations imposed by the nature of the accounting data available for the four major economic groups. Fortunately, there is a great deal of parallelism between the requirements of economic analysis and those of the accounting systems used by business and other economic units. Over wide areas no conflict arises from the fact that economic questions have to be answered by reference to measures constructed from such accounting data. On the contrary, a major advantage of the system of national economic accounts is that it summarizes the actual transactions of economic units as reflected in their own accounting records.

However, some of the most difficult problems of national income estimation arise when the definitions underlying these records do not yield the type of information demanded by economic analysis. National income work is continually concerned with the modification of the basic accounting data in order to improve their economic significance. Often these data can be adjusted to meet the requirements of economic analysis, but when the transition cannot be accomplished supplementary information must be introduced to complete the picture.

Comprehensive national economic accounting is a recent development the potentialities of which have not yet been fully realized. The set of accounts presented in this report should not be regarded as the definitive system. Apart from possible improvements in the formal design of the accounts, several elaborations of the present system would be desirable.

For instance, only four major economic groups are distinguished, whereas, in view of their heterogeneity, further breakdowns would be useful for many types of analysis. Also, saving and investment accounts for each of the four major sectors would constitute an important supplement to the consolidated account for the economy as a whole. The construction of balance sheet accounts, showing the structure of the assets and liabilities of the various sectors, likewise would expand the scope and usefulness of the national economic accounting system.

It is to be emphasized, however, that further expansion of the national accounts must be made with due regard to the flow of statistical information (which would constitute a generally limiting factor) and to the danger of an overelaboration that might add unduly to their complexity and not proportionately to their value.

Coordinate in importance to further work on the conceptual framework, articulation, and coverage of the economic accounting system is the improvement of its statistical reliability. For the entries in the national economic accounts represent estimates which are subject to error. The problem of statistical reliability is discussed in Part III of this report.

The detailed statistics

In the preceding discussion the main emphasis was on the summary aspects of the economic accounting system underlying United States national income statistics. However, sight should not be lost of the wealth of statistical information that now exists to elaborate and supplement various aspects of this accounting system. For in many uses of the data it is specifically this information which is of primary interest and value.

Attention may be drawn first to the many statistical tables in Part V of this report, of which the six national account tables briefly described above are but highly condensed summaries. These detailed tables present further information on the breakdowns of the income flow by type of income and legal form of organization and of the product flow by type of product. Also given are breakdowns of national income and its constituent distributive shares by industry of origin.

Secondly, the conversion of gross national product and its components into constant dollars, which is presented in Part IV, represents an important addition to the current dollar series in terms of which the complete accounting system is stated.

Thirdly, the annual estimates of personal income by States, not included in this report, may be regarded as the elaboration in a regional dimension of the depiction of the economic structure. Of a similar nature, as also involving further articulation of the consumer sector, are the estimates of the size distribution of income prepared in the National Income Division.

Plan of the following discussion

In the following pages of this Part of the report, the conceptual framework of the United States national income statistics is explained in greater detail. Since the measurement of output totals is the prime objective of national income statistics and, moreover, is largely independent of the full-fledged economic accounting system depicting the economic structure, the derivation of these totals is first explained, in a summary manner. Next, the structure of the complete accounting system is developed. In the course of this discussion, the more detailed aspects of the definitions of the output totals are also covered. A final section provides, for convenient summarization, a series of definitions to which the national income and product aggregates and their components conform.

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SUMMARY CONSTRUCTION OF NATIONAL OUTPUT MEASURES

In this section the basic notions underlying national income and product are stated; the derivation of these measures in terms of their conceptual content is explained; and the adequacy of definition of the resulting aggregates is examined.

Basic Notions Underlying National Output Measurement

Economic production

In the definition of a measure of national output, the first task is to delimit economic production from the pursuit of other activities that resemble it in that they involve the use of human effort and other resources and are useful. For instance, the production of radio sets has its counterpart in the hobbies of the radio amateur, commercial shaves are akin to self-administered ones, and the educational services of teachers often are supplemented by those of parents. In spite of resemblances, a distinction must be drawn between economic production and noneconomic pursuits. For a measure of national output must, broadly speaking, be confined to the former; it cannot, in any systematic way, take account of activities outside the economic sphere.

In the present report, the basic criterion used for distinguishing an activity as economic production is whether it is reflected in the sales and purchase transactions of the market economy. The exclusion of illegal transactions is a tradition-based convention which is an exception to this general rule.

Product and income flows

A fundamental distinction relevant to the measurement of economic production so delimited is suggested by observation of the operations of a typical business firm. On the one hand, such a firm produces and sells a flow of product values. On the other hand, it pays out (or retains) incomes that accrue in the course of its operations. This double aspect of the activities of the single business firm suggests that the measurement of national output can be approached in a two-fold manner, either by summing product values or by summing income flows. It will be seen that the measure of national output in terms of product flows which is obtained by pursuing this approach is the gross national product and that the corresponding measure in terms of income flows is the national income.

Final and intermediate products

In the measurement of national output via product flows, a further distinction, between "final" and "intermediate" products, must be made. A nonduplicative total is desired, one that is confined to the value of the final, or end, products of the economy and excludes all others, labelled intermediate. To use a simple example, if the production process during a year involves the production of wheat, its milling into flour, and the baking of bread which is sold to consumers, then the value of national output should equal the full value of the bread and should not count also the separate values of the wheat and flour which have been used up in the course of producing it. This result is obtained by counting only the value of the bread, as the end product, and ignoring the other product values.

A distinction between final and intermediate products cannot be drawn on the basis of the technical characteristics of the output involved. In the above example, for instance, flour is an intermediate product. If, however, the flour is sold not to bakeries, but directly to housewives for home baking, it becomes the final product of the economy, even though in a technical sense it is not fully fabricated.

However, an effective criterion for distinguishing between final and intermediate products can be established by reference to business practices followed in the production of goods and services. There emerges a working definition of final product as a purchase that is not resold, and of intermediate product as one that is resold. A more technical, but sometimes more convenient, phrasing of the same idea is that a final product is a purchase that is not charged to current cost whereas an intermediate product is one that is so charged. The phrase "during the accounting period" is sometimes appended to these formulations so as to make them more exact.[1]

Imputations

In the measures of national output shown in this report, the foregoing criteria are the basic tools for distinguishing economic production from noneconomic pursuits and the part of economic production which is final from that which is intermediate. However, modifications in the definitions are made in certain instances to enhance the significance of the measurements.

The most important of these modifications concern the inclusion in national output of the so-called "imputations," or items of production and income "in kind." For instance, food furnished to employees would not become part of the national output if the initial definition were rigidly followed. It would be an intermediate product, since it is an element of the current cost charges of the employer furnishing the food. However, it seems desirable to count it as part of national production, if only to secure uniformity of treatment with respect to employees who buy food out of the correspondingly higher money wages given them. Other imputations that are made in measuring national output are for the value of food produced and consumed on farms, the rental value of owner-occupied houses, and for nonmonetary income and product flows arising in connection with financial intermediaries.

Charges against final product

In this report, the product measure of national output is derived by adding the values of final products and omitting intermediate products, as in the bread and flour example. It is termed

1. In order to simplify the discussion, changes in business inventories are not taken into explicit account in this section. But it should be noted that, according to the above definitions, an increase in inventories is a positive component of final product and a decrease in inventories a negative component. (A detailed explanation of the treatment of inventories in the national accounts is given later in this Part.)

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the *gross national product*. However, the same total could be obtained also by adding in the first instance the total product (final and intermediate) of each producing unit and then deducting for each the intermediate product it bought from other units. For the economy as a whole, purchases and sales of intermediate products would cancel, and what would remain would be the value of final products.

The total value of final products can thus be broken down into elements consisting of the total product of each producing unit less its purchases of intermediate products. However, for each producing unit the difference between the value of its product and its intermediate purchases consists of the incomes that accrue in the course of production (wages and salaries, interest, profits, etc.) plus certain "nonincome" charges against the value of its production, the most important of which are taxes (such as property, excise, and sales taxes) and depreciation charges for the wear and tear and obsolescence of fixed capital.

Thus, since (1) the value of the final product of the economy equals the sum of the total product of each producing entity less its purchases of intermediate products, and (2) for each producing entity, product less intermediate purchases equals income plus nonincome charges against the value of production, it follows that (3) for the economy as a whole the total value of final product equals the sum of incomes accruing in production plus nonincome charges against the value of production.

Factor incomes and other charges

A measure of national output in terms of total charges against the value of gross national product, and therefore numerically equivalent to it, can thus be obtained. However, this is not the income flow measure generally used. The common measure, *national income*, is derived by emphasizing the distinction, which has already been emerging, between two types of charges against the value of final product: factor costs and other costs.

Briefly, the sum of employee compensation, interest, and business incomes is considered to represent the remuneration of factors of production. In national income terminology, their aggregate measures the total factor cost incurred in producing the output of the Nation. By contrast, no factor incomes correspond to the other charges against gross national product. Indirect business taxes do not form the cost or income of any factor of production. Depreciation and kindred charges reflect allowances for the consumption of fixed capital, and not its net income or return. Thus, a further total is distinguished—the national income—which represents the sum of factor incomes or factor costs. This is the income measure of national output most widely used.

Two other magnitudes can be derived by recombining the components so far discussed. *Net national product* may be obtained as gross national product less depreciation and kindred allowances for the consumption of fixed capital. A corresponding measure of total charges against net national product may also be obtained by deducting these allowances from total charges against gross national product. These two aggregates are in a theoretical sense more clearly defined than the corresponding measures of gross national output, since some duplication is involved by the inclusion in the latter of the production of fixed capital which serves merely for replacement purposes. However, as a practical matter, a fully satisfactory measure of net capital formation, and hence of net national product, cannot be calculated since depreciation charges are not available on a basis of valuation comparable to that of the gross production of fixed capital.

Personal and disposable income

Another aggregate, *personal income*, measures the actual current income receipts of persons from all sources. It differs from the national income in that it excludes certain types of income which accrue in production but are not received by persons (for instance, the undistributed part of corporate profits) and, on the other hand, includes certain types of income which do not arise in current productive activity but constitute personal receipts (such as relief and unemployment benefits). Hence personal income, unlike the national product and national income aggregates, is not a measure of national production. Since the bulk of personal income is derived from production, however, it can in ordinary circumstances be used as an indicator of productive activity and has, in fact, gained prominence in this use as the only comprehensive income or product total available on a monthly basis. Personal income net of taxes—*disposable personal income*—is another useful aggregate, being the closest overall statistical approximation to consumer purchasing power derived from current incomes.

National Income and Product Account

The foregoing basic notions underlying national output measurement are incorporated in the National Income and Product Account shown in table I, which presents for 1950 the several alternative measures of United States output.

The right side of this account shows the gross national product as the sum of final product flows. The summary listing includes personal consumption expenditures, gross private domestic investment (consisting of new construction, purchases of producers' durable equipment, and the change in business inventories), net foreign investment (reflecting, in general, net purchases by foreign nations), and government purchases of goods and services. These components represent purchases of the four major sectors into which the economy has been divided and conform to the operational definition of final products as purchases not resold during the accounting period. However, certain modifications in this definition, especially with respect to imputed income and product, have been made in deriving the national income and national product measures.

On the left side of the account are listed the charges against the value of gross national product. In principle, the sum of these charges should numerically equal the value of gross national product. However, because of statistical estimating errors, the nature of which is discussed in Part III, this is not actually the case. To secure balance, an item termed "statistical discrepancy" is entered on the left side of the account.

Total charges are broken down into factor costs and other charges. The former, consisting of employee compensation, net interest, and the various types of business incomes, corporate and noncorporate, are added to obtain the national income. The other charges against the value of gross national product are arranged so as to permit a further subtotal of charges against net national product.

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Coverage of National Income and Product Account

The economy covered by this account, and hence by the various income and product aggregates, is the continental United States. Thus it does not coincide with the customs area of the Nation since territories and possessions are excluded. Also, it is important to note, the account measures the income and product attributable to factors of production supplied by residents of the country, rather than the income and product of factors physically located in the country.

Not only individuals who contribute their labor and property to the productive process, but nonprofit institutions and governmental bodies supplying capital resources are viewed as residents supplying factors of production.[2]

Anatomy of the Output Totals

The foregoing discussion has attempted to give a general notion of the major concepts underlying the measurement of national output and of the nature and relation of the major alternative output measures. However, it has passed over much that is essential to a precise understanding of the output concepts.

National income and national product are comprehensive measures of total national output. They include not only business production, but also production contributed by the nonbusiness sectors of the economy—households and institutions, government, and the rest of the world. Measurement of output in each of these sectors is subject to special problems of its own. The principles underlying the measurement of production in the various sectors are next explained. The sector measurements based on these principles are then added to obtain the national income and product totals shown in table I.

Measurement of business output

The bulk of national output originates in the business system, and the framework adopted for the measurement of business output sets a pattern for the whole. In deriving national output as the summation of the outputs originating in the several sectors of the economy, it is therefore convenient to start with the business sector.

The Consolidated Business Income and Product Account, presented in table II, shows the portion of national output originating in the business system. Business output is measured in terms of the concepts underlying the major income and product aggregates covered in table I and discussed in connection with it.

The right (or credit) side of the account shows the market value of the consolidated production of the business system. On the left side of the account appear the charges against this production. The two column totals are equal in principle, for reasons which have been stated in broad terms.

The nature of the equality can be understood in an alternative, and perhaps more precise manner, if it is realized that the business income and product account is similar to a profit and loss account for the business system as a whole from which intrabusiness sales and purchases on current account and intrabusiness flows of interest and dividends have been eliminated by a process of consolidation. The two sides of such an account must always balance because profits are derived as the residual of sales and costs. However, for statistical reasons equality is not achieved in practice, and in the estimates embodied in table II the "statistical discrepancy" is entered on the debit side as a reconciliation item.

In addition to consolidation, certain other operations have been performed to transform the column totals of the profit and loss account into a measure of business output. Capital gains and losses have been eliminated as not reflecting the value of current production. Inventory change has been entered on the right side of the account to convert sales into a measure of production, and subsidies have been transferred to the left side as not being part of the market value of the products shown on the right side. Further, certain items have been netted, also with the aim of obtaining column totals that measure the contribution of the domestic business system to national output.

In the first place, imports, which in a consolidated statement of domestic business would appear on the left side of the account, have been transferred to the right side and netted against exports (under consolidated net sales to abroad). Imports must be deducted from the credit side since they reflect foreign production included in the value of the column totals prior to the deduction. The fact that, in table II, they are netted against the export item is merely a matter of convenience.

The second netting which is made in table II is in connection with property income flows. In a consolidated account not further adjusted, receipts of interest and dividends from other sectors would appear on the credit side and would be reflected correspondingly in the total of the charges entered on the debit side. Since receipts of interest and dividends from other sectors do not represent output of the business system, it is necessary to remove them from the credit side of the account and to net them against elements of factor income in order to make the sum of factor incomes on the debit side of the account reflect the factor cost of business output. In practice, interest received is netted against interest paid under the heading "net interest," and dividends received are netted against dividends paid under the heading "dividends." In these instances also, the particular matching adopted is essentially a matter of convenience.

The components of business production listed on the credit side of table II conform to the definition of final product specified in connection with table I. It may also be noted that the entries are very similar. Differences arise because table II is confined to business output, whereas table I provides a summary of national output which covers the nonbusiness sectors as well. Similar comments apply to the charges against the value of business product listed on the debit side of the account. Factor income charges

2. The meaning of the term "resident individual" is largely self-explanatory and agrees with the definition adopted for balance-of-payments-purposes by the International Monetary Fund. The classification of certain special categories may be noted explicitly. United States Government employees, civilian and military, whose usual residence is in the United States are considered United States residents even when stationed abroad. Residents of foreign countries hired abroad by the United States Government are not considered United States residents. This treatment applies symmetrically to employees of foreign governments in the United States. In principle, foreign border workers working in the United States are not regarded as United States residents. United States residents whose place of work is across the border are so regarded. As explained in section 12 of Part III, however, the statistical information for implementing the definition of resident with respect to border workers is lacking. Also, there are marginal cases in which it is difficult to decide whether an individual is to be classified as a resident or as a foreigner. In practice, these cases are quantitatively unimportant.

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Table I.—*National Income and Product Account, 1950*

[Millions of dollars]

1	Compensation of employees:		22	Personal consumption expenditures	194, 026
2	Wages and salaries	146, 526			
3	Supplements	7, 799	23	Gross private domestic investment	51, 219
4	Income of unincorporated enterprises and inventory valuation adjustment	36, 140	24	Net foreign investment	−2, 201
			25	Government purchases of goods and services	42, 023
5	Rental income of persons	8, 473			
6	Corporate profits and inventory valuation adjustment:				
7	Corporate profits before tax:				
8	Corporate profits tax liability	17, 829			
9	Corporate profits after tax:				
10	Dividends	9, 207			
11	Undistributed profits	12, 934			
12	Inventory valuation adjustment	−4, 864			
13	Net interest	5, 912			
14	*National income*	*239, 956*			
15	Indirect business tax and nontax liability	23, 741			
16	Business transfer payments	843			
17	Statistical discrepancy	215			
18	Less: Subsidies minus current surplus of government enterprises	204			
19	*Charges against net national product*	*264, 551*			
20	Capital consumption allowances	20, 516			
21	CHARGES AGAINST GROSS NATIONAL PRODUCT	285, 067	26	GROSS NATIONAL PRODUCT	285, 067

differ from those in table I in magnitude only, because table I includes nonbusiness items. Nonfactor cost charges are identical, in magnitude as well as with respect to classification, because, as will be seen, these charges are confined to the business system.

Treatment of taxes and subsidies

Some of the most important decisions that must be made in defining business output have to do with the classification of charges against the value of business product between factor-cost and nonfactor-cost charges, and involve in particular the treatment of taxes and subsidies.

According to the definitions used in this report, employment taxes under the social security and related programs are included in the compensation of employees (the employers' share as a supplement to wages and salaries and the employees' share as a part of them). This is done on the ground that these taxes are an element of the cost of hiring labor and accordingly should be included in a measure of total factor costs. A supplementary argument is that social insurance contributions reflect a benefit received by the employee in the wage bargain which should be taken into account in calculating total employee compensation. Contributions of self-employed persons under the recent extension of the old-age and survivors insurance program are treated analogously; that is, the income of self-employed persons is measured before deduction of these contributions.

Secondly, a distinction is made in this report between corporate profits taxes, which are considered as part of factor cost—corporate profits are measured before deduction of these taxes—and other (indirect) business taxes, which are considered nonfactor charges—business incomes are calculated net of them. This distinction is based upon the following reasoning.

Since national income is designed to measure output in terms of the costs or incomes of the factors of production, it should change only if either the volume of factor services or their unit remuneration changes, and not because of a mere change in tax rates. If it is assumed that corporation profits taxes are not shifted and indirect business taxes are generally shifted forward, inclusion of corporate income taxes in national income and exclusion of indirect business taxes from it are clearly indicated, since on these assumptions mere changes in tax rates will not cause changes in an income total so defined.

The classification of business taxes in this report is dictated by the belief that the above assumptions about tax shifting are the most realistic summary ones that can be made. It may be noted, however, that the entire subject of tax shifting and incidence is a rather controversial one and that definitive and final conclusions are not available. Moreover, the operational definition of indirect taxes is drawn in a rather summary fashion. All taxes that are chargeable as business expense (other than employment taxes) are classified as indirect business taxes. Thus certain taxes—business property taxes, for instance—are included in this group even though a detailed study of their proper treatment from the standpoint of tax shifting and incidence might call for a different classification.

The classification of taxes in the national income represents an instance in which an accounting distinction—whether a tax is chargeable to expense or not—is adopted as a basis for classification and yields, broadly speaking, satisfactory results. In instances in which it fails to do so and can be superseded by a superior distinction—as in the case of employment taxes—modifications are made. However, where the disadvantages of the accounting distinction are less apparent and less easily remediable because of conceptual or statistical difficulties, it is maintained.

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Subsidies, which are a type of business receipt, appear on the debit side of the account (with a negative sign) because they are not part of the market value of business output; the subsidized products are included at their market values under business sales. As a matter of long-standing convention, subsidies are regarded as payments necessary to elicit factor services. Accordingly, they are included in the sum of factor incomes (by considering them as a gross receipt in the calculation of business profits) and are deducted in reconciling the factor income originating in the business system with the market value of business output.

Other aspects of business output

The measurement of business output has, in addition to the treatment of taxes and subsidies, many other aspects which must be discussed—such as the precise delimitation of the business sector; the classification of income shares and nonfactor charges; the measurement of capital formation and consumption, including inventory change; the imputations for wages and salaries in kind, food produced and consumed on farms, and the rental value of owner-occupied dwellings; the imputations made in the case of financial institutions; and the special methods adopted in measuring the transactions of these institutions and of other organizations such as government enterprises.

Decisions that are made in these areas affect the definition of national output and hence are relevant to the present discussion. However, these decisions are regarded as less crucial to the definition of national output than those concerning taxes and subsidies that have been reviewed; also, the treatment of some of them is rather complex. Therefore, their discussion is postponed until later (to the detailed presentation of the business sector) so as not to interrupt unduly the derivation of the national output or to blur its outline by excessive detail.

Measurement of nonbusiness output

Production included in the measures of national output is not confined to the business system, but occurs also in each of the nonbusiness sectors of the economy: households and institutions, government, and the rest of the world. In the household sector, account is taken of certain services—such as domestic service—which, although of a market character, are better thought of as involving direct factor services rather than business production. In the government sector, the services provided by the government to the community are accounted for. In the rest-of-the-world sector, the production accruing to United States residents by virtue of their net claims on foreigners is measured.

For each of these sectors, the measurement of output differs basically from that employed for the business sector. The twofold measurement of output in terms of product flows and factor costs is not available for the nonbusiness sectors of the economy, and factor cost must be used for both aspects of the value added by them to total output. A single measure must be used in these instances to depict both income and product originating because there is no sales transaction involving the output produced as distinguished from the purchase of the ingredient factors of production and supplies and materials. It may be noted parenthetically that the factor cost measurement of output in the non-

Table II.—*Consolidated Business Income and Product Account, 1950*

[Millions of dollars]

1	Compensation of employees:		26	Consolidated net sales:	
2	Wages and salaries:		27	To persons	184, 340
3	Disbursements	120, 565	28	To government	17, 828
4	Excess of accruals over disbursements	0	29	To abroad	1, 302
5	Supplements:		30	To business on capital account	43, 868
6	Employer contributions for social insurance	3, 146	31	Change in inventories	7, 351
7	Other labor income	3, 440			
8	Income of unincorporated enterprises and inventory valuation adjustment	36, 140			
9	Rental income of persons	8, 473			
10	Corporate profits and inventory valuation adjustment:				
11	Corporate profits before tax:				
12	Corporate profits tax liability	17, 829			
13	Corporate profits after tax:				
14	Dividends	8, 781			
15	Undistributed profits	12, 360			
16	Inventory valuation adjustment	−4, 864			
17	Net interest	3, 708			
18	*Income originating*	*209, 578*			
19	Indirect business tax and nontax liability	23, 741			
20	Business transfer payments	843			
21	Statistical discrepancy	215			
22	Less: Subsidies minus current surplus of government enterprises	204			
23	*Charges against net product*	*234, 173*			
24	Capital consumption allowances	20, 516			
25	CHARGES AGAINST BUSINESS GROSS PRODUCT	254, 689	32	BUSINESS GROSS PRODUCT	254, 689

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business sectors also conforms to the definition of final output underlying national income accounting: the factor services purchased, in terms of which output is measured, are not resold.

Households and institutions

Exhibit 1 presents the measurement of output originating in the personal or consumer sector of the economy. Its measurement is in terms of the direct factor services bought by households and

Exhibit 1.—*Income and Product Originating in Households and Institutions, 1950*

[Millions of dollars]

1.	Compensation of employees:	
2.	Wages and salaries paid	6,312
3.	Supplements paid:	
4.	Employer contributions for social insurance	18
5.	Other labor income	53
6.	Interest paid	1,956
7.	*Income originating and net and gross product*	8,339

institutions, consisting of employee compensation and payments of interest. The latter represent payments by households to nonpersonal lenders and payments by institutions. As in the case of business production, discussion of more detailed points is postponed.

Government

The value added by government to total output is shown in exhibit 2. As in the case of households and institutions, it is measured by the value of factor services purchased, except that in this instance only payments for labor are considered payments for factor services. Interest paid by government is not counted.

Exhibit 2.—*Income and Product Originating in Government, 1950*

[Millions of dollars]

1.	Compensation of employees:	
2.	Wages and salaries	19,631
3.	Supplements:	
4.	Employer contributions for social insurance	812
5.	Other labor income	330
6.	*Income originating and net and gross product*	20,773

The accounting for government production in general and government interest in particular is, and probably will remain, a controversial point in national output measurement. Basically, this seems due to the fact that government activities are substantial and quite different in economic character from other types of production. Accordingly, they are difficult to put on a common denominator with other types of production in a summation designed to obtain a comprehensive measure of national output.

The exclusion of government interest paid from factor incomes stems, as a practical matter, from the fact that the bulk of government debt was created to finance wars and current expenditures. In no commonsense use of the term can interest payments on such debt be taken to represent currently produced goods and services or the current use of economic resources. For example, it seems sensible that a comparison of the prewar and postwar volumes of production should not be distorted by the continuing interest on the national debt that arose during the war. The treatment of government interest is given further consideration in the discussion of the government sector below.

Rest of the World

Finally, account must be taken of United States production arising in the rest-of-the-world sector. As stated in connection with the National Income and Product Account, the output of the United States economy is defined as that accruing to factors of production supplied by residents of the United States, as distinguished from the alternative of defining national output in terms of the physical location of the factors of production.

Hence, to obtain a measure conforming to the definitions used in this report, there must be deducted from the components derived so far a measure of the output produced in the United

Exhibit 3.—*Income and Product Originating in the Rest of the World, 1950*

[Millions of dollars]

1.	Wages and salaries (net)	18
2.	Interest (net)	248
3.	Dividends (net)	426
4.	Branch profits (net)	574
5.	*Income originating and net and gross product*	1,266

States but accruing to foreign residents, and there must be added a measure of the value of output not produced in the United States but accruing to United States residents. The deduction and addition are accomplished, on a net basis, by the separate measurement of United States output originating in the rest of the world, equal to the net international inflow of factor incomes, as shown in exhibit 3.

National income and product, by sector of origin

In table Ia the contributions of each of the four major sectors are summed to yield the totals of national output as shown in table I, in a breakdown, however, which displays more clearly their conceptual building blocks. The items in table Ia are cross-referenced to tables I and II and exhibits 1–3 so as to permit a precise tracing of how national output is derived from the component output series of the four sectors.

Little need be said about table Ia since it represents only a summary of the preceding discussion. However, certain of the major points may be repeated for emphasis.

In table Ia, the measures of national output given in table I are derived by summing the values added to total output by each of the four major sectors of origin. For the nonbusiness sectors—households and institutions, government, and the rest of the world—contribution to total output is measured identically in the product and factor income measures, since a distinction between the two is not possible. For the business sector, however, the product measure differs from the factor income measure. The difference represents nonfactor charges against the value of business production, which are entered in table Ia and reconcile the value of national income with that of the gross national product.

Anatomy of Product and Income Components

A tolerably precise derivation of the measures of total output presented in table I has been obtained in table Ia. However, it will be noted that the components of output as given in the second table differ from the conventional classifications shown in table I. Those of table I are drawn up, on the credit side of the account, in terms of the purchases of product by the four sectors of the

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Table Ia.—*National Income and Product Account, by Sector of Origin, 1950*

[Millions of dollars]

Income originating in		Gross product originating in	
Households and institutions (exhibit 1, item 7)	8,339	Households and institutions (exhibit 1, item 7)	8,339
Government (exhibit 2, item 6)	20,773	Government (exhibit 2, item 6)	20,773
Rest of the world (exhibit 3, item 5)	1,266	Rest of the world (exhibit 3, item 5)	1,266
Income originating in nonbusiness sectors	30,378	*Gross product originating in nonbusiness sectors*	30,378
Income originating in business (table II, item 18)	209,578	Gross product originating in business (table II, item 32)	254,689
National income (table I, item 14)	239,956		
Other charges against net national product (table II, items 19, 20, 21, and 22)	24,595		
Charges against net national product (table I, item 19)	264,551		
Capital consumption allowances (table II, item 24)	20,516		
CHARGES AGAINST GROSS NATIONAL PRODUCT (table I, item 21)	285,067	GROSS NATIONAL PRODUCT (table I, item 26)	285,067

economy; and, on the debit side, they do not separate the costs incurred in production by each of the sectors. By contrast, the classifications in both sides of table Ia refer to sector of production.

As the next step in explaining the content of national income and national product, each of the components as given in table I is derived from the measurements underlying table Ia. Product and income items are taken up in turn.

Gross national product

Personal consumption expenditures

The personal consumption expenditures shown in table I are derived as in exhibit 4. The bulk of them consists of purchases from the business system. Direct purchases of factor services by households and institutions account for another part. These two are entered as the first and second items in exhibit 4, with references to the previous tabulations in which they have been included. It will be apparent, upon reflection, that the sum of these two items falls short of a complete enumeration of consumer expenditures by the amount of direct purchases from abroad (mainly tourist expenditures). This item, which has not so far appeared in the derivation of national output, is entered as the third item in the exhibit.

Exhibit 4.—*Derivation of Personal Consumption Expenditures, 1950*

[Millions of dollars]

Consolidated net business sales to persons (table II, item 27)		184,340
Gross product originating in households and institutions (exhibit 1, item 7)	8,339	
Net purchases of households and institutions from abroad	1,347	
Personal consumption expenditures (table I, item 22)		194,026

Gross private domestic investment

Gross private domestic investment as shown in table I is derived simply by combining consolidated net sales to business on capital account and the change in inventories, each as taken from the business account (table II). The derivation is given in exhibit 5.

Exhibit 5.—*Derivation of Gross Private Domestic Investment, 1950*

[Millions of dollars]

Consolidated net business sales to business on capital account (table II, item 30)	43,868
Change in business inventories (table II, item 31)	7,351
Gross private domestic investment (table I, item 23)	51,219

Government purchases of goods and services

The derivation of government purchases of goods and services is indicated in exhibit 6. The procedure is similar to that employed for consumer expenditures. In addition to purchases from business and purchases of direct factor services, which are entered as the first and second items in exhibit 6, government makes purchases from abroad, which have not appeared so far in the accounting for national output. These purchases are entered as the third item in exhibit 6 to complete the enumeration of government purchases as shown in table I.

Exhibit 6.—*Derivation of Government Purchases of Goods and Services, 1950*

[Millions of dollars]

Consolidated net business sales to government (table II, item 28)	17,828
Gross product originating in government (exhibit 2, item 6)	20,773
Net purchases of government from abroad	3,422
Government purchases of goods and services (table I, item 25)	42,023

Net foreign investment

With two exceptions, all of the elements underlying the construction of gross national product by sector of origin in table Ia have now been used to derive components of gross national product as shown in table I. These two exceptions are "consolidated net business sales to abroad" and "gross product originating in the rest of the world." On the other hand, in the derivation of personal consumption expenditures and government purchases two items were added which have not appeared as components of gross national product by sector of origin. These are "net purchases of households and institutions from abroad" and "net purchases of government from abroad." Hence, adding the first two

Exhibit 7.—*Derivation of Net Foreign Investment, 1950*

[Millions of dollars]

Consolidated net business sales to abroad (table II, item 29)	1,302
Gross product originating in rest of the world (exhibit 3, item 5)	1,266
Less: Net purchases of households and institutions from abroad (from exhibit 4)	1,347
Less: Net purchases of government from abroad (from exhibit 6)	3,422
Net foreign investment (table I, item 24)	−2,201

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of these items to the components derived in exhibits 4, 5, and 6 and then subtracting the second two items will yield the correct total of gross national product.

But the difference between these additions and subtractions is numerically equal to "net foreign investment," the remaining component of gross national product in table I which has not yet been derived. This is so because the four items combined equal the net receipts of the United States from abroad, from factor incomes as well as from the sale of goods and services. These net receipts represent the balance of payments on current account, and their financing implies a change in the net international asset position of the United States, which is net foreign investment.[3] The derivation of net foreign investment is shown in exhibit 7.

The derivation of gross national product as shown on the credit side of table I is now complete. The next task is to derive the income flows shown in the breakdown on the debit side of that table.

National income

Wages and salaries

The derivation of wages and salaries is given in exhibit 8. It consists of a summation of payroll accruals in the four sectors of the economy.

Exhibit 8.—*Derivation of Wages and Salaries, 1950*

[Millions of dollars]

Business (table II, item 2)	120,565
Household and institutions (exhibit 1, item 2)	6,312
Government (exhibit 2, item 2)	19,631
Rest of the world (exhibit 3, item 1)	18
Wages and salaries (table I, item 2)	146,526

Supplements to wages and salaries

Supplements to wages and salaries are obtained in a similar manner, as shown in exhibit 9.

Exhibit 9.—*Derivation of Supplements, 1950*

[Millions of dollars]

Business (table II, item 5)	6,586
Households and institutions (exhibit 1, item 3)	71
Government (exhibit 2, item 3)	1,142
Supplements (table I, item 3)	7,799

Income of unincorporated enterprises and inventory valuation adjustment, and rental income of persons

These two items are taken directly from table II.

Corporate profits tax liability

This item is taken directly from table II.

Dividends

The calculation for dividends is shown in exhibit 10.

Exhibit 10.—*Derivation of Dividends, 1950*

[Millions of dollars]

Business (table II, item 14)	8,781
Rest of the world (exhibit 3, item 3)	426
Dividends (table I, item 10)	9,207

3. In the definitions adopted in this report, international cash gifts, which are also current account items, are included with goods and services.

Undistributed corporate profits

Undistributed corporate profits are obtained in exhibit 11.

Exhibit 11.—*Derivation of Undistributed Corporate Profits, 1950*

[Millions of dollars]

Business (table II, item 15)	12,360
Branch profits (rest of the world) (exhibit 3, item 4)	574
Undistributed profits (table I, item 11)	12,934

Corporate inventory valuation adjustment

This item is taken from table II.

Net interest

The calculation necessary to derive net interest, as shown in table I, is given in exhibit 12.

Exhibit 12.—*Derivation of Net Interest, 1950*

[Millions of dollars]

Business (table II, item 17)	3,708
Households and institutions (exhibit 1, item 6)	1,956
Rest of the world (exhibit 3, item 2)	248
Net interest (table I, item 13)	5,912

Nonfactor cost charges

All the components of national income, as listed in table I, have now been derived by allocating the entire national income as constructed in table Ia. The nonfactor charges against the value of gross national product shown in table I are all taken directly from table II.

The Output Measures Examined

The measures of national output have now been derived with sufficient precision to make possible their evaluation in terms of the basic concepts that underlie them—of the national product as an aggregate of final product values and the national income as an aggregate of factor costs.[4]

The concept of final product

As noted earlier, measures of national output must be defined essentially in terms of the market economy. They cannot encompass the broad range of nonmarket activities that may bear some resemblance to economic production. In this report the market economy is taken as the area over which sales and purchase transactions occur. Once this criterion has been adopted, there remains the necessity of distinguishing between final and intermediate production within the market economy.

The operational definition of final product underlying the present national product measures rests on the obvious fact that purchases not resold do not become elements in the value of other goods and services, and that hence there is a presumption that they should be counted in a comprehensive enumeration of the

4. For a more detailed discussion of these concepts see Milton Gilbert, George Jaszi, Edward F. Denison, Charles F. Schwartz, "Objectives of National Income Measurement," *Review of Economics and Statistics*, August 1948.

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value of the final output of the Nation's economy. It also takes cognizance of the corollary fact that purchases which are resold are used up in further production and included in the value of other goods and services, and hence may be presumed to be intermediate products which should not be counted separately in an unduplicated measure of production.

The practical consequence of this general definition is to enumerate capital formation and purchases by consumers and general government, and to exclude from final production the raw materials used up by business in the course of further production.

Capital formation is clearly a part of final product to the extent that it consists of items that are not used up but are added to wealth. (Only the inclusion in gross national product of capital formation for replacement purposes must be noted as a limitation in this connection.) The inclusion of consumer and government purchases and the exclusion of business purchases charged to current account also are broadly reasonable.

Since the expenditures of individual consumers and nonprofit institutions serving individuals are incurred largely to meet the needs of individuals, they consist in the main of goods and services that determine what is commonly regarded as the standard of living. Government purchases consist essentially of goods and services provided on behalf of the community as a whole, which it has been found better to secure collectively rather than individually. They should likewise be included in a measure of the total goods and services provided to satisfy the needs of the members of the community. In contrast, the bulk of business purchases of goods and services consists of items that are raw materials in the production process, rather than items that directly satisfy human needs. Their separate count is accordingly not necessary in enumerating the flow of final goods and services.

It is believed that this is a realistic description of the general nature of consumer, government, and business purchases and that the criteria employed in United States national income statistics for distinguishing between final and intermediate products are accordingly useful for segregating the major types of goods and services provided to satisfy the needs of individuals.

It is evident, however, that, because of differences in institutional arrangements, certain anomalies may result from the restriction of the national output measure to the market economy and from strict application of the purchase-not-for resale convention. Thus, the dividing line between the final products enumerated and similar nonmarket benefits excluded may not be appropriate. For instance, literal implementation of the operational definition of final product would count the net value of services rendered by rental housing but would exclude the counterpart for owner-occupied housing. Moreover, within the market economy the distinction between final and intermediate product would sometimes be unsuitable. Food purchased by employees, for example, would be classified in national income and product whereas food furnished to them by their employers would not.

Peculiarities of this type can be dealt with to some extent by appropriate modification of the definitions, but the potentialities of this approach are limited. This is obvious with respect to the extension of output measures beyond the market economy, but it also holds true of modifications in the basic convention for distinguishing between final and intermediate production.

In the first place, it is not feasible from a purely physical standpoint to examine every purchase by consumers, government, and business so as to determine which were simply means of facilitating production, and hence intermediate, and which served an end use, and hence were final products. As a practical matter, one must generally deal with types of buyers and categories of goods and services.

But more important, one must place basic reliance on a broad convention because in most cases in point there is no alternative. No precise line can be drawn between final and intermediate products from mere observation of the nature of the products or the uses to which they are put. It would be easy, for example, if all consumer purchases were for goods like Sunday clothes and holiday dinners, which are obvious elements of the good life, and if all business purchases were raw materials for further processing, which are obvious intermediate goods. Between these two extremes, however, there is a wide range of purchases for which neither the motivation nor the use is so clear-cut and which must be placed in one category or the other by somewhat arbitrary rules.

For this reason any measure of total production must be somewhat conventional. For instance, it must overlook the fact that the expenditures of individuals in their business capacity are influenced by their standards as consumers, and that expenditures of consumers are influenced by their activities as producers. It must overlook also the fact that the conditions under which work is performed have an important bearing on the welfare of individuals. These conditions are affected by business expenditures on goods and services that are classified as intermediate just because there is no satisfactory way to take account of their benefits in a quantitative measure of final output.

Adjustment by imputation

In the present estimates, adjustments have been made to take account of institutional peculiarities to the extent of imputing factor returns in the form of income in kind and entering corresponding inputed items in personal consumption expenditures. Even in this direction cognizance has been taken, in the main, only of sizable and unequivocal types of factor income in kind which have come to be recognized through tradition as elements of real income. It is apparent that other additions to the national output could be made if the relevant information were available. For example, income and consumption expenditures could be imputed for recreational facilities provided by business, which are not counted because they are charged to current cost by business.

The limitation of imputations to cases clearly associated with factor incomes serves to confine the field, but it is not a principle of selection which could be firmly defended on theoretical grounds. The services of the radio broadcasting and television industries are an outstanding example of an item which is not listed in the national product because it is financed by business via charges that are made to current cost. Yet radio broadcasting and television are important forms of recreation, similar to legitimate theaters and motion pictures for which explicit entries, representing admission fees, are made in consumer expenditures.

No imputation is made for radio broadcasting and television in measuring national product. Formal neatness can be given to this

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omission by general reference to the limitation of imputations to items that are associated with factor incomes, on the ground that broadcasting services do not accrue to a distinct factor of production, but to the consuming public owning receiving sets at large. However, it would seem preferable not to stress this point unduly and to recognize the essentially arbitrary and tradition-based nature of the decisions that must be made in this area.

Quasi-intermediate products

The process of reclassification of intermediate products could be extended in the opposite direction by deducting from factor income, and hence shifting from consumption expenditures to business costs, business-type expenses incurred by individuals. As an example, "miners' expenditures for explosives, lamps, and smithing" (a small item of consumer expenditure in table 30, Part V) are certainly the sort of cost ordinarily borne by business rather than by the wage earner, and are unlike the vast bulk of consumption goods. It is a peculiarity of the coal mining industry that these materials customarily are paid for by the miner rather than purchased by the enterprise and charged to current cost.

No attempt has been made to adjust the pattern of consumer transactions along this line because there is no tradition of adjustment that provides an adequate standard of what is appropriate. In any event, it would appear that the magnitude of such adjustments would be very limited, unless the concept of "production expense" were stretched far into the broad region of mixed motivations in which no useful and commonly accepted exclusions from final product can be made.

Similar considerations apply to government purchases as well as to consumer purchases. It is possible to think of cases in which the treatment of government purchases as final product would not necessarily be the best procedure. For example, if certain government purchases reflected clear-cut aid to business it might be preferable to view them as "subsidies in kind" and, in accord with the handling of subsidies, to eliminate them from government purchases and the national product. Such a treatment, it should be recognized, would be somewhat artificial and statistically difficult, and would obscure the national economic accounts in their capacity as records of actual transactions, thus rendering them less meaningful for many purposes. Also, the feasibility of its application to government services used jointly by business and individuals, like the maintenance of highways, is highly questionable.

If government services consisted of the running of public recreation grounds on the one hand and of the provision of free raw materials to business on the other, a classification of the latter as subsidies in kind might be useful and important. This is not, however, the actual character of government operations. Clear-cut types of direct subsidies in kind that are of any quantitative importance have not come to attention. Even if account is taken of the more consequential cases of government services involving the use of a public service jointly by individuals and by business, the problem remains quantitatively small. It looms large only if the concrete notion of aid to business is stretched to cover the broad range of government services to the public which actually reflect a complexity of causes and purposes and cannot appropriately be classified under any such narrow head.

Neither government expenditures nor consumer expenditures, it is to be emphasized again, are susceptible in logic or statistical practice to any detailed, selective functional classification designed to add up those particular items which may be considered "final." However, when any sort of concrete, workable criterion of intermediate product is applied, it becomes evident that the present scheme of summary classification does not lead to significant distortion.

Need for market-type measures of output

It is apparent that even if substantial departures from the present definition of final product were logically defensible and statistically feasible, they would not result in a measure of national product that could serve as a substitute for the present one. This measure is tied closely to the modern market-economy and is obtained, broadly speaking, by summing actual transactions of its major constituent economic groups. As such it is an important element of the economic accounting system designed to facilitate an understanding of the functioning of the economy in terms of the interaction of these groups.

For this purpose, the definition of the consumer and government purchases components of national product is generally appropriate, as is the exclusion of intermediate production according to the present definition of the term. Even if basic departures from these definitions could be justified on other grounds, the resulting measures of national output would probably not be useful in the study of business cycles, in problems of economic mobilization and fiscal policy, in market research, and in many other types of investigations in which national income statistics are increasingly employed.

The concept of factor cost

Underlying the definition of national income in terms of factor cost is the general idea that the output of the Nation is the result of the services rendered by agents of production who cooperate in the production of that output. These agents of production are the labor and capital, the entrepreneurial ability and natural resources which are used in the production process. It is the services of these agents or factors as valued in the market by their earnings for which a quantification is sought in the national income, to the extent permitted by the data available as statistical raw material.

It is hardly necessary to stress the importance in studies of resource allocation of such a measure of the services rendered by productive agents. To give only a few examples, one may wish to know the incomes of the various factors of production used in each industry in order to compare the relative importance of industries, or to marshal information about the relative amounts of factors of production that are available for allocation to various uses, or to compare the relative importance of labor and property factors in the outputs of various industries.

It must be recognized, of course, that the concept of factors of production is not given precisely in economic theory but must, to some extent, be formulated with reference to the problem at hand. Furthermore, the use of factor returns for some problems of the type indicated is limited by such facts as the temporary or permanent non-transferability of factors to other uses, and by monopoly and imperfect competition. In addition, property income is only tenuously related to the type of measure of the contribution of property and enterprise which might be desired for problems

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involving resource allocation. This is because it includes a residual share, profits, which fluctuates widely over the business cycle.

In spite of these limitations and difficulties, the idea of factor costs has always been of fundamental importance in economic analysis, and national income defined as an aggregate of factor earnings is the only general measure by which the idea can be quantified.

It is true that difficulties are encountered in the course of this quantification. The assumptions about tax incidence that are made in the classification of taxes as between factor income and nonfactor cost, the somewhat conventional rationale that leads to the calculation of national income gross of subsidies, and the common sense consideration on which the exclusion of government interest is based are all open to question.

Yet it would appear that for the items that are large and of strategic importance in the dynamism of the United States economy, the assumptions made are sufficiently realistic to provide useful economic measurements. For instance, in spite of the theoretical uncertainty which surrounds the incidence of corporate profits taxes, it appears in statistical investigation that corporate profits before taxes are more invariant to mere changes in tax rates than are profits after tax, and that the before-tax series must be used in studying the economic regularities reflected in the movement of the various income shares. Nor would any realistic study of national output be advanced by the inclusion in national income and product of interest paid by the government.

One important aspect of the factor-cost definition of national income should be understood. The constituent income shares of national income so defined cannot be construed as measures of benefits accruing to the recipient groups. For instance, the definition of the income shares gross of direct taxes levied on them is necessary in order to reflect the factor costs of current production, but would not be appropriate for measuring benefits received.

DETAILED STRUCTURE OF THE ACCOUNTS

As noted at the outset, an important recent development in national income research is the expansion of national income statistics from measures of the national output into an economic accounting system giving a statistical picture of the economy. The national output aggregates and their major components now having been derived in broad outline, and presented in the National Income and Product Account in table I, the groundwork has been laid for an explanation of how a comprehensive national economic accounting system is constructed. Incident to this explanation, further light will be shed on the definition of national output and its various components.

The plan is to derive a set of accounts which will summarize the economic process in terms of the interrelated transactions of the four major economic groups into which the economy can be divided—business, persons (households and institutions), government, and the rest of the world. This will involve the construction of a current account for each of the constituent economic groups or sectors and of a consolidated saving and investment account for the economy as a whole.

The Business Sector

The business sector is defined broadly to include all organizations which produce goods and services for sale at a price intended at least to approximate costs of production. In the main, it covers all private enterprises organized for profit, both corporate and noncorporate, including farm operators, independent professional practitioners, and lessors of real property. Mutual financial institutions, cooperatives, and nonprofit organizations serving business are also included, as well as government enterprises. Owner-occupied houses and buildings used by nonprofit institutions serving individuals are considered to be business establishments selling their current services to their owners.

The business sector thus covers a wide variety of organizations, and for some purposes it would be desirable to distinguish further between corporations and unincorporated enterprises, financial institutions and nonfinancial business, and so forth. Also, it would be instructive to treat industries or industry groups as separate sectors in order to reveal the flow of intermediate output among them, and to show their complete sales, cost, and profit structures.

Such breakdowns of the business sector are not presented in this report, although important elements of them are contained in Part V. (See the tables on national income by legal form of organization and by industry of origin.) To regard the business system as an entity is sufficient for many purposes, and the statistical information for establishing further sectors within it either is unavailable or could be assembled and utilized only at the expense of disproportionate effort. However, a further development of national income statistics does lie along these lines and would serve to integrate them with other studies of the industrial structure, such as the interindustry relation studies.

The business account

The receipts of the business system and their disposition have already been exhibited in table II, in connection with the derivation of national income and product via the summation of sector incomes and products. This Consolidated Business Income and Product Account serves as the current account for the business sector in the present economic accounting system. Several essential features of this account—its basic affinity to a consolidated profit and loss statement and the netting, transposition, and classification of items necessary to obtain significant measures of output originating in business—have already been explained. At this point further characteristics will be considered.

Classification of business transactions

The right side of the business account consists of the consolidated net sales of the business system, adjusted for the change in inventories in order to measure business output. Since this account covers all types of enterprises that are included in the business sector, the definition of "sales" is broad. For instance, fees for professional services and gross rental receipts are included, although they are not always thought of as sales in the daily meaning of the term.

Sales are subdivided according to the four major purchaser groups: consumers, government, business (on capital account) and foreign nations. To a large extent the content of the items is

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adequately conveyed by their designations. Aspects needing further explanation will be taken up later, particularly in the discussions of capital formation (which concerns sales to business on capital account and the change in inventories) and of imputations and the treatment of financial institutions (which affect the definition of business sales to persons).

Types of factor income

The left side of the business account lists the charges against the value of national product. These charges are classified into factor costs or incomes and nonfactor charges. The former are listed in five main categories—compensation of employees, income of unincorporated enterprises and inventory valuation adjustment, rental income of persons, corporate profits and inventory valuation adjustment, and net interest.

The compensation of employees consists mainly of wages and salaries but includes additional forms of compensation under the heading of supplements to wages and salaries. Wages and salaries include payments received in kind in addition to monetary remuneration. They are subdivided into "disbursements" and "excess of accruals over disbursements" to take account of differences (due to retroactive wage adjustments) between amounts charged to cost and actual disbursements to individuals.

Supplements to wages and salaries consist of employers' contributions for social insurance and of "other labor income." The former item comprises employer taxes, or contributions, under social security and kindred publicly administered schemes. The corresponding employee contributions are included in wages and salaries. Other labor income includes employer contributions to private pension and related funds, compensation for injuries, and certain minor items which are charged against the value of business production and can conveniently be classified as factor charges under the heading of supplements to wages and salaries.

Income of unincorporated enterprises and inventory valuation adjustment, rental income of persons, and corporate profits and inventory valuation adjustment cover the business incomes of the private enterprises that are counted as part of the business sector of the economy. Within the noncorporate part of the business sector a distinction is drawn between unincorporated enterprise and rental income. The former covers the earnings of sole proprietorships and partnerships (including farm and nonfarm businesses as well as independent professional practitioners) and of producers' cooperatives; the latter consists of the net rentals of individual landlords who are not primarily engaged in the real estate business. The earnings of professional real estate operators are classified under income of unincorporated enterprises. Both the income of unincorporated enterprises and rental income include, in addition to monetary earnings, important items of income in kind.

The definition of monetary business earnings is in general accordance with Federal income tax regulations. Significant modifications are made, however, in the treatment of capital gains and losses, inventory profits and losses, depletion charges, and receipts of property income.

Business incomes in the national income and product accounts are stated exclusive of capital gains and losses, because these do not represent a return for the current use of economic resources. The "inventory valuation adjustment" is designed to eliminate from corporate profits and the income of unincorporated enterprises an element which is very similar to capital gain or loss. The adjustment is often large and uncertain statistically, and there is a great deal of interest in the corporate profit figure prior to the adjustment. Hence the accounts are set up to give the unadjusted figures and the adjustment separately, with the two adding up to the proper total for purposes of national income measurement. By contrast, ordinary capital gains and losses are eliminated outright.

With respect to depletion charges, no deduction is made for them in computing business net incomes. The value of new discoveries of natural resources is not counted as part of capital formation or of profits, and consequently deduction of a capital consumption charge for impairment of the stock of natural resources would be inappropriate.

Finally, all corporate receipts of dividends are netted out of corporate profits (and dividends) to avoid double counting and to arrive at income originating in the business system; and interest and dividends received by the owners of unincorporated enterprises are considered to be received by them in their personal capacity, rather than treated as an element of business income, except in a few financial industries in which the earning of property incomes is an integral part of business operations.

In table II corporate profits before tax are broken down further to show tax liability, dividends, and undistributed profits. A similar breakdown is not presented for unincorporated business and rental incomes. With few exceptions, there are no taxes levied specifically against these types of income (business incomes are merged with other types of income in determining individuals' income tax liability). Moreover, in the noncorporate area a realistic distinction between distributed and undistributed business income is difficult to establish in principle and to measure statistically.

Net interest measures the excess of interest payments of the business system over its receipts. In addition to monetary interest flows, it covers imputed interest arising in connection with the operations of financial intermediaries.

Nonfactor charges listed in table II consist of indirect business tax and nontax liability, business transfer payments, the statistical discrepancy, subsidies minus the current surplus of government enterprises, and capital consumption allowances.

The classification of indirect business tax and nontax liability as a nonfactor charge already has been discussed in summarizing the derivation of national output.

Business transfer payments

Business transfer payments represent transfers from business to persons which are charges against business product for which no return in the form of factor services is received. Major items included are corporate gifts to nonprofit institutions and allowances for consumer bad debts. The nature of the latter item can be understood as follows. Sales to consumers, on the credit side of the account, are stated at their sales price and are not (except in the case of professional fees) adjusted by an allowance for consumer defaults. However, the incomes of sellers and lenders, on the debit side, have been calculated net of these defaults. Hence, an accounting discrepancy between the two sides arises which can best be resolved by regarding the value of consumer bad

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debts as reflecting goods and services transferred from business to consumers with no *quid pro quo*.

Subsidies are listed as a (negative) nonfactor charge against the value of business output. They are not considered part of the value of product, but are included as receipts in calculating profits. The current surplus of government enterprises is an item akin to business profits earned in the course of making the sales listed on the credit side of the account. Hence it must be included on the debit side to ensure balance. However, for reasons to be noted later, it is classified as a nonfactor rather than a factor charge.

The foregoing nonfactor charges reconcile the income originating in business with the market value of business net product. To arrive at the total designated in table II as charges against business gross product, capital consumption allowances must be added.

Capital consumption allowances

Capital consumption allowances consist of depreciation proper, capital outlays charged to current expense, and accidental damage to fixed capital. The first of these items measures the wear and tear and obsolescence of fixed capital and (with the exception of agricultural depreciation, which is on a replacement cost basis) is based on accounting practices used for tax purposes—largely straight-line amortization of original cost to the current owner.

Capital outlays charged to current expense are an entry in lieu of depreciation proper for items of durable capital listed on the credit side of the account (on the basis of the durability definition there adopted) but charged to current cost in accepted business practice. It is apparent that the value of these items must be entered on the debit side also in order to preserve the balance of the accounts. In a stationary economy capital outlays charged to current expense would, for business as a whole, approximate the charges for depreciation which would have been made for these items had they been capitalized instead of expensed. In a situation in which net capital formation occurs, the entry will overstate actual depreciation; when capital formation falls below replacement needs, it will fall short of an adequate capital consumption allowance for the types of equipment involved.

Accidental damage to fixed business capital measures the value of such capital destroyed by accidents. The accounting necessity for an entry of this type stems from the fact that business profits are net of such losses on the debit side while no corresponding entry appears on the credit side. Its classification as a species of capital consumption allowance is based on the practical fact that, for the business system as a whole, the magnitude of the item is steady and can be regarded as akin to regular depreciation. If there were large fluctuations in these losses, a strong argument could be made for treating these unusual deviations from the average experience like capital gains and losses—that is, calculating profits and total income without deduction for them. This treatment would prevent fluctuations in national income due to the accidental destruction of fixed business property.

As has been noted, depletion charges are not deducted in calculating profits, since the value of the corresponding discoveries of natural resources is not an element of capital formation or profits. Similarly, these charges are not included with capital consumption allowances.

Interpretation of income share breakdown

The breakdown of the income shares given in table II reflects to a large extent the actual institutional, legal, and financial arrangements in force at any particular time which determine the form in which income accrues to individuals. An additional, broader grouping sometimes found helpful consists of employee compensation and net interest, which are contractual incomes, and of other incomes, all of which are residual shares.

The recording of earnings in the forms in which they accrue means, for example, that shifts in the legal form of organization as between corporations and unincorporated enterprises, or changes in the relative importance of internal and external business financing, will be reflected in the several income shares. In many economic investigations which deal with the concrete arrangements of economic society, a breakdown of this type will be appropriate. However, it will present handicaps in analyses in which it is desired to abstract from such arrangements.

The attempt to use the income share breakdown to study the ultimate factors which cooperate in production is a case in point. It deserves special mention because it is directly suggested by the definition of total income originating as the sum of factor incomes or factor costs. In the light of this general definition, one might be tempted to go further—to make identifications of particular income shares with the various factors of production envisaged in economic theory.

Along these lines, it is possible to say that employee compensation consists of labor income, that unincorporated enterprise and rental incomes are mixed returns to labor and other productive factors, and that corporate profits and net interest are components which do not contain a labor return element, in any ordinary sense of the term. However, in view of difficulties attaching to the factor of production notion and in view of the lack of statistical information, one cannot go much further in the way of identifying factors with the income shares, and it is important to have in mind the limitations of the data for this general type of use.

With respect to a segregation of the returns to the factor of production "labor," it should be noted that employee compensation is heterogeneous in character. It includes the wages of the charwomen as well as the bonuses of the corporation executive. Moreover, it is not the only income share in which returns to labor are reflected. In the income of unincorporated enterprises and the rental income of persons the labor of the owner is an element, although it cannot be quantified and segregated.

In connection with the classification of income shares other than employee compensation, no identification can be made between the rental income of persons and the rent concepts of economic theory. Rental income is confined to the net rentals of individual property holders (including imputed rentals on owner-occupied nonfarm homes) whose main occupation is not the renting of property. Rental income of professional real estate operators is classified under the income of unincorporated enterprises; gross rental receipts of corporations are merged with their other business receipts and (after deduction of costs) reflected in corporate profits; both the imputed net rental value of farm homes and agricultural net rents received by farmer landlords are included in the income of unincorporated farm enterprises; and the return on user-owned business real estate becomes a component either

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of the income of unincorporated enterprises or of corporate profits.

The dividing lines between profits and net interest also call for comment. First, net interest represents the payments less the receipts of the business system. An increase in corporate interest receipts from other sectors (most importantly from government) is therefore reflected in a decrease of net monetary interest and an offsetting increase in profits, and vice versa, even though no change in the profit and interest flows that are an integral part of business operations has occurred.

Also, the breakdown of property income between interest and profits is affected by the manner in which interest flows are channelled through the economic system. For instance, if money is lent by corporate or other professional lenders the interest paid on it is counted in business receipts and reflected in profits. But if individual lenders are involved, the interest paid to them appears as such in the business account.

Finally, of course, the breakdown between profits and interest is influenced by the choice between external and internal financing. For all these reasons, it is more appropriate for some types of economic analysis to combine the interest and profit shares than to consider them in isolation.

Fixed investment

Fixed investment by business (business purchases on capital account) includes new construction and durable equipment acquired by private business enterprises. New residential construction purchased by owner-occupants (as well as by business proper for rental purposes) is included because home-ownership is treated as a business in the national income accounts. Acquisitions of fixed capital by nonprofit institutions serving individuals also are included.

Fixed capital formation is defined, in the United States statistics, as including all newly produced durables (goods with an average life exceeding 1 year) acquired by their ultimate business users. Thus fixed capital formation is stated gross of capital consumption, and includes plant and equipment bought for replacement purposes.

From a theoretical standpoint, a net concept would be preferable. The definition of gross capital formation must needs be somewhat arbitrary, because the size of the category will depend on the particular definition of durability adopted. The shorter the average life used in defining durability, the larger will be the apparent volume of gross capital formation, although it should be noted that the magnitude of this variation is very small for alternative definitions of durability that one might consider in practice. (See section 10, Part III.)

In addition, the considerations dictating elimination of intermediate production to achieve output measures without duplication also call for the statement of fixed capital formation on a net basis, since, broadly viewed, capital outlays for replacement purposes are really a species of intermediate product.

Measurement of fixed capital formation on a gross basis has been advocated as being more appropriate for certain types of analysis concerned mainly with the short-term availability of resources. If fixed capital need not be replaced in the short run, the total value of production available for alternative uses is measured better, it is contended, by the gross than by the net totals.

While this argument has some merit, there is no reason to believe that gross fixed capital formation as measured in the business account is appropriate for the purpose. It would give an exaggerated view of production available for alternative purposes in the short run if it included essential replacements that could not be postponed without interfering with the operations of the productive apparatus. On the other hand, it would fail to reveal the true short-run production potential if there were ways of utilizing the fixed capital more intensively than normal or of postponing maintenance and repair, as distinguished from replacement. In short, the use envisaged calls for estimation of the capital stock that is consumable in the short run, including the stock of business inventories as well as consumer and government held tangible assets; it cannot be served adequately by a fixed capital formation series defined on the gross basis used in the national income and product accounts.

Measurement of fixed capital formation gross of replacement may be preferable for certain purposes in business cycle and market analysis. Replacement demand is an important factor in aggregate demand and it is useful to have an explicit record including it. However, in this as in the preceding case, the present definition of gross capital formation is imperfectly adapted to the purpose envisaged. For instance, it excludes maintenance and repair outlays although these too have a significant bearing on cyclical fluctuations in demand.

In any event, in designing an unduplicative measure of national production these and related considerations must remain subsidiary. Defining fixed capital formation gross of capital consumption allowances must rather be justified largely on the ground that it sidesteps the unsolved problems involved in the definition of net capital formation.

The problem of what is meant by "keeping capital intact" is a most controversial one in economic theory, basically because in a dynamic economy the nature of capital equipment changes and the notion of replacing worn out capital consequently loses its simplicity. But even apart from theoretical difficulties, the statistical problem of estimating capital consumption in a manner consistent with gross capital formation is quite formidable. The bulk of the capital consumption allowances recorded in table II is derived from financial accounting records and is on an original cost basis. While from the standpoint of accounting consistency these allowances are appropriate for inclusion on the debit side of the business account—business profits are calculated as a residual consistent with them—they do not measure capital consumption on the current price basis which underlies the values shown for fixed capital formation on the credit side, and hence cannot be used to obtain a measure of net capital formation in current prices.

The statistical information, on prices and on the age composition of the capital reflected in depreciation charges, that would be necessary to convert these accounting charges into a price level comparable to that of gross capital formation is deficient. Useful approximations in this direction have been made (the pioneering study in this field is Solomon Fabricant's *Capital Consumption and Adjustment,* National Bureau of Economic Research, 1938). However, in the national income and product accounts no revaluation of the accounting charges is attempted, and consequently a measure of fixed net capital formation is not presented.

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It will be noted that business profits, income originating in business, and national income all incorporate the same depreciation charges which are considered inadequate as measures of capital consumption for the purpose of arriving at fixed net capital formation, business net product, and net national product. Net measures of income had long been established before the problem of valuing depreciation charges was met in particularly acute form in connection with fixed capital formation, and their continued use reflects in part the accident of this historical sequence.

Inventory change and the inventory valuation adjustment

The measurement of inventory change in business accounting practice is subject to the same type of deficiency from the standpoint of national income and product as fixed capital depreciation. As a broad proposition, original cost instead of current replacement cost is used to value inventories consumed in the process of production, and hence a measure of net change based on business accounting records would be misleading for national income purposes.

In this instance, however, an adjustment is made in the national accounts to convert reported "book" value data to a current replacement cost valuation. The distortions that would result from failure to make such an adjustment would be more disturbing here. It is not possible to sidestep the issue by dealing with a gross concept, as in the case of fixed capital formation; also, short-term comparisons, for which national income data are frequently used, are particularly affected by the methods of inventory valuation.

Moreover, the conceptual and statistical difficulties that stand in the way of an adjustment, although formidable, are less overwhelming than in the case of depreciation. Use over a long period of years is not involved, as with fixed capital formation, and consequently the conceptual problem of defining replacement which stems from quality change and the emergence of new products looms less large. In addition, information on prices and age composition is more readily available for inventory goods than for capital goods.

Nature of inventory valuation adjustment

According to the prevalent methods of business accounting, the book valuation of the physical volume of inventories used up in production differs from current replacement cost in times of changing prices.[5] When prices are rising, book charges fall short of current replacement cost; when prices are falling, they exceed it.

No deviation from a current price valuation occurs with goods added to inventory during a given accounting period. These are valued at prices current in that period.

The change in the book value of inventories represents additions to inventories minus inventories used up. Hence it reflects not only (1) the change in the physical volume of inventories valued at current prices, but also (2) the excess of the replacement cost of inventories used up in production over their book valuation.

The former element of book value change is appropriate for inclusion as a component of national product, because it conforms to the principle of current price valuation applied to all the other components. To include, however, the "inventory gain" or "inventory loss" measured by the second element of book value change would be misleading. In extreme cases the inventory movement as indicated by the change in book values would differ in direction from that of the actual volume of inventories. Therefore, the "change in inventories" line in business and national product is derived by adjusting the reported book value change in inventories to exclude the inventory gain or loss element.

For similar reasons, business profits as initially calculated on the basis of business accounting methods of inventory valuation are, for purpose of inclusion in national income, adjusted to exclude inventory gain or loss. This is done in table II by adding the "inventory valuation adjustment" to corporate and noncorporate business profits as estimated from "book" data reported by business. When negative, the inventory valuation adjustment measures the inventory gain, and when positive, the inventory loss, which arises from the fact that inventories used up in production are not valued at current replacement costs. Its affinity to capital gains and losses, which also are eliminated in calculating national income and product, is readily evident.

The statistical methodology for estimating the inventory components of national income and product is explained in Part III of this report. The following numerical examples may serve to set forth more precisely the accounting principles involved.

FIFO method

Suppose that a firm had beginning inventories of 1,000 units valued at $5 each, that it purchased during the accounting period 400 units valued at $3 each, and that it used up, in production and sale, 300 units of inventories. According to the first-in, first-out (FIFO) method of inventory valuation, which charges inventories to cost of sales in the order of their acquisition, inventories used up would be valued at $5 each, resulting in a total of $1,500. The inventory change would be registered as minus $300, the difference between $1,200 of acquisition and the $1,500 used up.

The book value change of minus $300 is the algebraic sum of a physical volume change, in current prices, of plus $300 (100 units at $3 each) and an inventory loss of $600, which measures the difference between the book cost and the current replacement cost of inventories used up ($2 on 300 units). Since purchases of inventory goods are valued at current prices, the departure from current valuation in the measure of inventory change reflects entirely the manner of valuing inventories used up.

For national output measurement it would be misleading to register an inventory decline of $300 when the volume of inventories has actually increased. Accordingly, on the credit side of the business account, the change in business inventories is entered at plus $300, equal to the physical change of 100 valued at $3 each, in conformance with the current-price valuation basis used for the other components of the product and income flow. Correspondingly, on the debit side an inventory valuation adjustment of $600 is added to business profits as based on the FIFO method of inventory valuation. This adjustment corrects profits for the difference between the book cost of goods sold ($1,500) and their current replacement cost ($900). Essential to note is that the adjustment is equivalent to the excess of the physical inventory change in current prices ($300) over the book value inventory change (minus $300). Needless to say, if current prices exceed

5. The following discussion is concerned with the treatment of nonfarm inventories. The estimates of farm inventory change are computed directly from data on physical stocks and current prices. No problem of adjusting book value data is involved; that is, an "inventory valuation adjustment" is not necessary.

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book cost prices an inventory gain instead of an inventory loss occurs, and the sign of the inventory valuation adjustment is negative.

The above example is based upon the straight cost variant of the FIFO method of inventory accounting. But a revaluation of the inventory change reported by business is also necessary for other business accounting methods in which the valuation of inventories used up departs from a current replacement cost basis. Consideration of two of these is pertinent: the "cost or market, whichever is lower" practice of valuing year-end inventories, which is frequently associated with the FIFO method, and the last-in, first-out (LIFO) method of inventory accounting.

Under the cost-or-market practice, year-end inventories are written down by businesses if market prices are below cost prices. This practice generally necessitates a revaluation of book value change for national income purposes. However, it should be recognized that the cost-or-market procedure is not the prime cause leading to revaluation of book value changes in the national income and product accounts. It represents only a special case in which revaluation is necessary because of a departure from the current replacement cost basis of valuing inventories used up in production.

For instance, if the cost-or-market procedure is followed in the example given, the ending value of inventories will be reported as $3,300 (1,100 units at $3 each, the lower market price). The book value change of inventories will be minus $1,700, and an inventory valuation adjustment of $2,000 will be needed to adjust the change in book values to national income and product definitions. However, even without exercise of the method an inventory valuation adjustment (of $600) is needed, as previously shown.

LIFO method

The LIFO method of inventory accounting yields results most akin to national income practice. As a general proposition, it yields identical results when the physical volume of inventories increases, but divergent results when the physical volume decreases. In the former case no revaluation of the book value change is necessary, but in the latter an inventory valuation adjustment must be applied to inventories charged on a LIFO basis.

As long as the physical volume of inventories is increasing, inventories used up represent, according to the LIFO convention of assuming that units acquired last are charged out first, current acquisitions valued at current prices. There is no difference in this case between the LIFO and national income methods of inventory valuation. This can be seen by applying the LIFO method to the above numerical example. Inventories used up are valued at $900, because they are assumed to represent the 300 units most recently acquired at their current price of $3 each. The book value change therefore amounts to plus $300 (purchases of $1,200 minus $900 of inventories used up), which is equal to the change as measured for national income purposes.

However, when the physical volume of inventories decreases "last-in" prices no longer represent current prices. Inventories used up reflect past-period acquisitions valued at past-period prices, which in general differ from current prices. To illustrate this case numerically, it may be assumed that in the initial example 500 units rather than 300 units are used up, so that the physical volume of inventories decreases by 100 units. According to LIFO practice, the inventory change would be minus $500. This represents acquisitions of 400 units valued at $1,200, minus 400 units used up valued at $1,200 (corresponding to the acquisitions), and minus 100 units valued at $500, reflecting the cost price of the units included in the initial stock. According to the method adopted in this report, however, the inventory change would be valued at minus $300, measuring the physical volume change at current prices, and an inventory valuation adjustment of $200 would be necessary. This adjustment would account for the inventory loss which arises because the 100 units of inventories used up in excess of current acquisitions are valued at $5 each, $2 more than the current market price of $3.

The foregoing summary treatment of the problem of inventory valuation should not create the impression that the subject is a settled one. On the contrary, there is a great deal of discussion among accountants and national income technicians both as to the broad principles and detail involved.

It should also be mentioned that many simplifying assumptions have been introduced into the summary in order to bring out more clearly the basic nature of the problem. In their absence, some of the generalizations made would have to be qualified, although not changed in essence. In particular, the assumption underlying the numerical examples, as well as some of the statements in the text, that the prices of inventory goods change discontinuously between accounting periods but remain constant within them, has permitted the neglect of some complicating factors which, although significant, are definitely of secondary importance. This assumption should be noted specifically, because the fact of continuous price change during the year is quite important from the standpoint of the statistical calculations described in the section on Change in business inventories in Part III.

Imputations

As noted earlier, the measures of national output presented in this report cover not only output whose production and distribution give rise to explicit monetary transactions, but also certain types of income and product flows which do not take monetary form. It has also been pointed out that from a theoretical standpoint these imputations represent modifications of the operational concept of final output, and that they are made to correct for anomalies and other disturbing omissions that would otherwise result. The imputations made are the result of concrete considerations and of the traditions of national output measurement. They do not and cannot represent a logically clear-cut exhaustive list, but merely a pragmatic selection among a wide variety of possible imputations.

The general prodecure for allowing for nonmonetary income and product flows in the national accounts is to imagine that the flows in question take monetary form and to reconstruct the accounts to reflect consistently these flows. The business account is affected by four imputations: wages and salaries paid in kind, the rental value of owner-occupied houses, food and fuel produced and consumed on farms, and nonmonetary income and product flows arising in connection with financial intermediaries. These will be discussed in turn.

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Wages and salaries paid in kind

An imputation is made for wages and salaries paid in kind in the form of food and lodging in industries in which this type of arrangement is of quantitative importance and is regarded as involving a clear supplement to monetary wages and salaries. Imputed items are valued at cost to the employer. Needless to say, difficult and somewhat arbitrary decisions are involved in delimiting the area of this imputation and in establishing the proper valuation.

In effect, the imputation takes the form of assuming that the employer, instead of furnishing his employees with free food and lodging, pays them corresponding amounts of wages, and that the employees in turn use them to buy the items previously purchased by the employer. Wages and salaries (in income originating in business) and sales to persons (in business product) are thus raised by corresponding amounts. In terms of the more technical implication of the procedure, intermediate purchases by the employer are converted into factor costs (wages and salaries) and final purchases (consumer expenditures).

Rental value of owner-occupied homes

The imputation for the rental value of owner-occupied homes is made to provide comparable treatment between rented and owner-occupied housing. It assumes that home ownership is a business producing housing services which are sold to the homeowner in his capacity as tenant. These sales are estimated in terms of the sum for which the particular type of home could be rented, and the expenses of the home owners are deducted to obtain imputed net rent. The imputed gross total becomes a part of sales to persons, or consumer expenditures, and imputed net rent becomes a part of the rental income of persons.

It may be wondered how the balance of the accounts can be maintained if for imputed rents a gross item is entered on the credit side and a net item on the debit side. The inconsistency is only apparent. Adjustments corresponding to the expense items which constitute the difference between imputed gross and net rent are made simultaneously in several components of the gross income and product flow, and secure balance.

One of the expense items, depreciation on owner-occupied homes, is added to capital consumption allowances. In the absence of imputation, it would not enter the purview of the national accounts. Indirect business taxes are raised by the amount of property taxes included in the expenses of owner-occupants. Otherwise, these taxes would be classified as personal taxes (see the discussion of the personal account below). Mortgage interest serves to raise the "net interest" item in the business account. Without the imputation, it would be entered as interest paid by the personal sector. Finally, all other expenses, such as for supplies and materials necessary for the maintenance of owner-occupied homes, are classified as intermediate business purchases charged to current account. Without the imputation, they would be counted as final products, as elements of business sales to persons.

Food and fuel produced and consumed on farms

The imputation for food and fuel produced and consumed on farms closely follows the scheme of the rental imputation. In this instance the accounts are reconstructed to conform to a situation in which the farmer sells the food and fuel to himself. An imputation for the full value of the food and fuel (at prices received by farmers for this type of product) is made in business sales to persons, and an imputed net profit on the production of this food and fuel is included in the income of unincorporated farm enterprises. The apparent inconsistency of a gross imputation on the product side and a net imputation on the income side is resolved in a manner similar to that of the rental imputation.

Use of the rental and farm imputations, it should be noted, avoids statistical difficulties that would occur if measurement were restricted to monetary transactions. The imputation for farm food and fuel, for instance, obviates the necessity, in arriving at the income and product totals, of allocating expenses between production for the market and for home consumption. Similarly, it is unnecessary to allocate interest, maintenance, taxes, depreciation, and other housing expenses between owner-occupied and tenant-occupied units. The statistical basis for making such allocations is tenuous. (Some of the detailed information shown in Part V involves allocations of this type. However, within the framework of the imputation procedure these do not affect the income and product aggregates.) The estimation of consumption, saving, and investment would be greatly complicated in the absence of a rental imputation because it would be necessary to estimate the transfer of existing housing units between owner-occupied and tenant-occupied status. The amounts involved in some periods are believed to be large but information required for their determination is deficient.

Commercial banks and investment trusts

Imputed income and product flows arising in connection with financial intermediaries involve some of the most complex constructions of national income and product measurement. Several distinct types of procedures are involved, and will be discussed in turn.

Exhibit 13.—*Income and Product Account of a Commercial Bank, Monetary Transactions Only*

[Thousands of dollars]

Wages paid	50	Service charge receipts	10
Net interest paid	−95	Less: current account purchases from other firms	25
Interest paid on deposits	5		
Less: interest received	100		
Profit	30		
Income originating	−15	Product originating	−15

The ordinary methods of measuring value added to total output in terms of income and product flows break down in the case of commercial banking. This is because an element of the income and product in this area does not take monetary form. An imputation is introduced to make it explicit and, as a consequence, a much more satisfactory picture of value added emerges.

The problem is illustrated in exhibit 13 by means of an income and product account for a commercial bank, drawn up in conformity with the principles of the Consolidated Business Income and Product Account. Only a few essential transactions are covered, in order to simplify the presentation.

On the credit side of this account, the value added to output by the commercial bank is calculated in terms of monetary product flows by deducting from its sales, consisting of monetary service

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charges, its current account purchases from other firms. (It will be remembered that, for industry in general, this netting yields the desired value of final production since sales and purchases of intermediate products cancel for the economy as a whole.) In terms of monetary income flows, value added is obtained on the debit side by summing the distributive shares, with interest netted.

Since monetary service charges made by commercial banks are low in relation to total costs incurred, income and product originating appears low—in the present example it is actually negative. It is evident that the conventional method fails to give a proper accounting of output originating in the commercial banking area. Some income and product flows not taking monetary form must occur, omission of which results in seriously incomplete measurement.

The product flows in question are identified as the services rendered by banks without explicit charge to their depositors, such as checking, bookkeeping, and investment services in connection with the handling of deposits. In lieu of monetary service charges, banks finance the cost of these services by retaining part of the property income earned by investing deposits instead of paying it out to the depositors. This retained income is assumed to represent the income flows not taking monetary form.

Exhibit 14.—*Income and Product Account of a Commercial Bank, Monetary and Imputed Transactions*

[Thousands of dollars]

Wages paid	50	Service charge receipts	105
Net interest paid	0	Monetary	10
Monetary interest paid on deposits	5	Imputed	95
Imputed interest paid on deposits	95	Less: current account purchases from other firms	25
Less: monetary interest received	100		
Profit	30		
Income originating	80	Product originating	80

To obtain an adequate picture, the accounts are redrawn as they would appear if this short-circuiting of income and service flows had not occurred and, instead, commercial banks had (1) paid out to depositors all property income earned on the investment of their deposits and (2) charged them fully for the cost of the services rendered to them. An item for imputed interest paid (equaling property income received minus interest paid on deposits) is entered on the debit side of the accounts. On the credit side, an entry is made for imputed service charges (equalling total operating expenses of banks, including profits, less monetary service charges). It can be seen by reference to exhibit 13 that the two must always balance: imputed service charges=wages paid (50)+current account purchases (25)+profits (30)−monetary service charges (10)=imputed interest paid=interest received (100)−interest paid on deposits (5)=95.

This imputation is added, in exhibit 14, to the data shown in exhibit 13.

The nonmonetary income and product flows having been made explicit, a more adequate accounting of the value added by commercial banks appears. Also, these banks are revealed in their role of financial intermediaries. Interest is seen not to originate in banking, but to be transferred by banking from the industries in which it originates to the depositors to whom it accrues. (A minor complication is introduced if, in addition to receipts of interest income, receipts of dividends by commercial banks are taken into account. See Part III, section on Interest.)

Next, the imputed banking flows must be traced further through the economy to determine their ultimate effect on the size and structure of national income and product. This is done on the basis of the ownership of the deposits in connection with which the imputed flows arise. To the extent that these deposits are owned by businesses, matching debit and credit entries are made in their accounts—the debit for imputed service charges paid and credit for imputed interest received. The balancing of the accounts is not disturbed; for businesses affected, purchases of intermediate products are increased by the amount of imputed service charges and net interest paid is decreased by the amount of imputed interest received.

Thus, to the extent that the deposits of commercial banks are held by business owners, the imputation process does not change the size of national product or income. Imputed service charges cancel as intermediate products in the consolidation of the business system, and so do the inter-industry imputed interest flows. All that occurs is a redistribution in the industrial origin of output, in the process of which the share of banking is increased and that of other industries is reduced.

To the extent, however, that the ownership of bank deposits is vested in persons, the results are different. Imputed service charges made to persons constitute payment for a final product and appear as a component of sales to persons under personal consumption expenditures for "services rendered without explicit charge by financial intermediaries, other than life insurance." Imputed interest paid by banks to persons serves to increase net interest by an identical amount. Both product and income originating are thus raised to reflect nonmonetary income and product received by persons from banking. (In this discussion, it will be noted, the accounting for imputed flows between banking and government has been neglected. For this detail, see the section on Interest, in Part III.)

The above description of the measurement of imputed flows in banking is only a brief summary of a complex subject which is still the subject of lively discussion among technicians in the field. The procedure has been criticized in general as unduly complex and, more specifically, as based on certain assumptions of doubtful validity. Particular exception has been taken to the assumption that all banking services not explicitly charged for are rendered to depositors and that the borrowers of bank loans are not involved, as well as to the assumption that these services are distributed in proportion to the ownership of the volume of deposits irrespective of turnover.

While these and other objections have some merit and it is hoped that a simpler and more cogent solution may be found to deal with the underlying problem of measuring the value added to output by banking, it would appear that the present procedure, all things considered, is the most satisfactory devised so far. Whatever its particular limitations, it attempts to measure a real element of income and product in the business economy and permits a sensible solution to the problem of allocating income by industries.

An imputation essentially similar to that for banking is made in connection with investment trust type of financial institutions. The precise mechanism of this imputation can be traced in the light of the above discussion of banking on the basis of the additional detail provided in the section on Interest, in Part III.

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Life insurance and mutual financial intermediaries other than life insurance

The treatment of life insurance involves the second major type of imputation which is made in connection with financial intermediaries. Imputations are introduced because the standard national income and product classifications break down owing to the combined saving and insurance functions performed by life insurance. It is not possible to classify the explicit transactions which occur between life insurance companies and their policy holders into the conventional classifications of current receipts versus capital transfers and of consumption and saving. Accordingly, in the income and product accounts imputed transactions are substituted for the explicit transactions.

Specifically, claims and premiums are disregarded. Next, the property income of life insurance companies which is withheld to the account of policy holders is treated as if it were actually disbursed in the current period. This item becomes imputed interest in the net interest component of income. Finally, the companies are regarded as explicitly charging policy holders for their services, as measured by operating expenses. An imputation equal to these expenses is entered in the business account under sales to persons. It appears in personal consumption expenditures as "Expense of handling life insurance."

That a balance between the income and product accounts is secured if life insurance is treated in this manner can be seen most simply by realizing that, as far as the totals are concerned, life insurance companies have in effect been treated as individuals rather than businesses. Claims and premiums have been cancelled as though they constituted transfers among individuals; property income received by these companies has been converted via the interest imputation into property income received by policy holders; and operating expenses incurred by the companies have been converted by means of the service charge imputation into final purchases made by policy holders. The balance of the Consolidated Business Income and Product Account thus reflects, in essence, the balancing accounts of the business system other than life insurance.

The effect of the treatment of life insurance on personal saving may be anticipated at this stage. Since the property income and operating expenses of life insurance are imputed to policy holders, and receipts and payments of premiums and death claims are disregarded, a measure of personal saving results (in the personal income and expenditure account described later) which consolidates the saving of life insurance companies with that of policy holders.

An illustrative treatment involving mutual life insurance, shown in exhibit 15, may serve to make this summary more concrete.

The upper panel of the exhibit records the monetary transactions which occur in a simple economy involving life insurance companies, other businesses, and persons. The lower panel reflects the transactions that would be recorded in the national income and product accounts. (Since nonbusiness production does not occur in this example, a distinction between business output and national output need not be made.) The lower panel differs from the upper panel by excluding death claims and premiums and by including imputed income and service transactions.

Gross national product (2200) is obtained from the lower panel by adding sales (imputed) to persons by life insurance companies (600), sales to persons by other business (1100), and business capital formation (500). National income and personal income (also 2200) are obtained by adding wages paid by life insurance (200), wages paid by other business (1200), and (imputed) interest paid by life insurance (800). Personal saving (500) is obtained by deducting from personal income (2200) monetary and imputed personal consumption expenditures (1700). It can be seen that personal saving reflects the consolidated saving of persons and life insurance, as shown by the consolidated change in their net asset positions (400 for life insurance and 100 for persons, as indicated by the differences between the credit and debit totals in the upper panel).

The treatment of stock life insurance companies is essentially similar to that of mutual life insurance except that the operating expenses of stock life insurance companies are measured to include the companies' profits, which are correspondingly included in total income.

Further detail on the specific items entering the calculation of the property income flows (in the present example only interest was allowed for), together with information on somewhat similar imputations in connection with mutual financial intermediaries other than life insurance, is given in Part III in the section on Interest. This should be read in the general framework provided above.

Exhibit 15.—*Illustration of Treatment of Mutual Life Insurance*

[Thousands of dollars

Mutual Life Insurance				Other Business				Persons			
Debits		Credits		Debits		Credits		Debits		Credits	
Death claims	100	Premiums	300	Interest	800	Sales	400	Premiums	300	Death claims	100
Wages	200	Interest	800	Wages	1200	Sales	1100	Purchases	1100	Wages	200
Cost purchases	400					Sales (business capital account)	500			Wages	1200
	700		1100		2000		2000		1400		1500
Wages	200	Interest	800	Interest	800	Sales	400	Purchases	1100	Wages	200
Cost purchases	400	Sales	*600	Wages	1200	Sales	1100	Purchases	*600	Wages	1200
Interest	*800					Sales (business capital account)	500			Interest	*800
	1400		1400		2000		2000		1700		2200

*Imputed.

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Government enterprises

In addition to financial institutions, other types of business organizations require special treatment in the national income and product accounts. Government enterprises deserve explicit comment, not because they are important quantitatively in the United States economic structure, but because they complicate the accounts in a rather obtrusive way.

The distinction between government enterprises and general government can be understood readily even though it cannot be drawn with theoretical precision. Government enterprises are those agencies of government whose operating costs are at least to a substantial extent covered by the sale of goods and services, in contrast to the general activities of government which are financed mainly by tax revenues and debt creation. Government enterprises, in other words, conduct operations essentially commercial in character even though they perform them under governmental auspices. The Post Office and public power systems are typical examples of government enterprises. On the other hand, State universities and public parks, where the fees and admissions collected cover only a nominal part of operating costs, are part of general government activities.

Since a choice must be made, it is preferable to consolidate government enterprises with business rather than with government. However, it seems desirable in handling these entities to introduce certain departures from the standard procedures adopted for ordinary business enterprises. (1) The profits of government enterprises are not included as part of factor cost in income originating in business, but instead are treated as a nonfactor charge against the value of output (see "subsidies minus current surplus of government enterprises" in table II). (2) The capital formation of these enterprises (including both fixed capital formation and inventory change) is classified in government purchases rather than gross private domestic investment. (3) The profits ("current surplus") of government enterprises are calculated without deduction either of net interest paid by them or of depreciation. Therefore, depreciation charges of government enterprises are not included in capital consumption allowances; and net interest payments by government enterprises are not counted as net interest payments by business. Since these modifications of the standard treatment of businesss enterprises do not involve changes in the debit or credit totals, it can be seen that the balance of the business account is not disturbed.

The effect of the treatment of government enterprises on the government account (see table IV) may be anticipated at this stage by noting that net interest paid by these enterprises is combined with that paid by general government and that their current surplus is treated as a receipt in the government account. These steps, in conjunction with (2) above, serve to consolidate the surplus (or deficit) of general government with that of government enterprises. This is so because net interest paid plus capital formation less current surplus of government enterprises measures the net excess of their expenditures over their revenue.

Several considerations suggested the particular accounting for government enterprises adopted in this report. With respect to the profits ("current surplus") of government enterprises, it was thought desirable to exclude them from factor charges because, in a way too difficult to disentangle, they were recorded net of losses which in effect reflected government subsidy operations conducted through the medium of government enterprises, mainly in World War II. The inclusion of government enterprise losses due to subsidy operations would have offset the corresponding subsidies in total income originating, and would have run counter to the general procedure of treating government subsidies as part of total factor cost.

The decision not to count net interest paid by government enterprises as net interest paid by business (and, correspondingly, to calculate the current surplus of government enterprises before deduction of net interest paid by them) was closely related to the decision not to treat their profits as part of factor cost. In general, a meaningful total of factor cost with respect to property factors can be obtained only if profits and interest are combined, and the inclusion of net interest paid alone might have been misleading.

Next, government enterprise capital formation was combined with government purchases rather than with private investment because the dividing line between capital purchases by government enterprises and those by general government is quite arbitrary. For instance, the construction of post offices is recorded in the general budget of the United States rather than in the accounts of the Post Office. Pending an exhaustive classification of all government purchases of capital goods, it was thought preferable to merge government enterprise capital formation with government purchases.

Finally to be noted is that the government surplus or deficit (consolidating both government enterprises and general government) which is obtained by this general procedure is the most useful definition of government surplus or deficit for many types of economic analysis.

The main aspect of the handling of government enterprises is their treatment as business-type organizations in order to avoid the classification of their current expenses as final purchases. Beyond this aspect, however, the treatment of government enterprises is in essence not more than a convenient means of disposing of a type of operation that has not reached quantitative importance in the United States total income and product picture. Were government enterprise operations to assume greater importance in the United States economy, it is entirely possible that some modification of their treatment in the national income accounts would be called for.

The Personal Sector

The personal sector of the economy covers essentially the consuming public. It consists chiefly of individuals in their capacity as income receivers and consumers, but it includes also nonprofit institutions, private trust funds, and private pension, health, and welfare funds.

Personal account

Unlike business transactions, which are summarized by a profit and loss type of statement exhibiting the profit or loss realized in the current period, personal transactions are summarized by a statement of current receipts and expenditures. This difference reflects, of course, the fundamentally dissimilar nature of the two sectors of the economy.

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The personal account, shown in table III, represents a consolidation of the accounts of all the persons who constitute the personal sector, just as the business account presented in table II was derived by consolidating the accounts of all the firms included in the business sector.

The personal account shows, in general, the transactions of persons with the other sectors of the economy. Since nonprofit institutions, private trust funds, and private pension and related funds are regarded as part of the personal sector, income receipts of these entities from other sectors are included in personal receipts and their purchases from other sectors are included in personal expenditures.

Conversely, since the account is consolidated, most transactions between these entities and individuals, as well as among individuals, are cancelled out in the process of consolidation. This process of cancellation is not extended, however, to the transactions among persons that are regarded as purchases of the services of factors of production—for instance, wages paid to domestic servants and payments of wages and interest by nonprofit institutions. Instead, these transactions are reflected on both the receipt and expenditure sides of the account, in order to preserve a record of them which is needed in tracing the total flow of production in the economy.

Classification of personal income

The classification of personal income on the right side of the personal account in table III follows closely the classification of the income items on the left side of the business account in table II. In addition, however, to the incomes originating in business, it also includes incomes received from general government and from abroad, as well as incomes derived from production within the personal sector.

The nature of the incomes derived by persons from the business system has been covered in the discussion of the business account. Separate entries for each of the items disbursed by the business system can be found in the personal account except for interest and dividend payments, which are included in the interest and dividend entries but not available separately, for lack of statistical information.

It will be noticed that only incomes currently received by persons are included in the personal account. Thus, the wage and salary component measures disbursements in the current period, and differs from wages and salaries earned in the same period by the "excess of wage accruals over disbursements" (see table II). Similarly, only corporate profits distributed in the form of dividends appear in the personal account. For unincorporated enterprises, however, no useful distinction can be made between distributed and undistributed income, and the entire amount is transferred to the personal account. Finally to be noted is that personal contributions for social insurance—including contributions by both employees and self-employed—are excluded from personal income. Along with the contributions by employers on behalf of their employees, they constitute receipts to government rather than to individuals.

Income receipts from government consist of wages and salaries, other labor income, interest, and transfer payments. With the exception of interest payments, they are listed separately in table III. Government interest payments to persons are included in personal interest income.

The definition of each of these income receipts is similar to that of the corresponding receipts derived from business and does not require separate discussion. It should be kept in mind, however, that although the formal definitions of the items are similar their actual content may be very dissimilar owing to the different nature of government operations. For instance, wages and salaries received from government include military wages and salaries, a type of payment which is not made by the business sector. Similarly, government transfer payments include social security benefits, relief, and various payments to former members

Table III.—*Personal Income and Expenditure Account, 1950*

[Millions of dollars]

1	Personal consumption expenditures:		15	Wage and salary disbursements:	
2	Purchases of direct services:		16	Business	120, 565
3	Compensation of employees:		17	Government	19, 631
4	Wages and salaries paid	6, 312	18	Households and institutions	6, 312
5	Supplements paid:		19	Rest of the world	18
6	Employer contributions for social insurance	18	20	Other labor income:	
7	Other labor income	53	21	Business	3, 440
8	Interest paid	1, 956	22	Government	330
9	*Income originating in and net and gross product of households and institutions*	*8, 339*	23	Households and institutions	53
10	Net purchases from business	184, 340	24	Income of unincorporated enterprises and inventory valuation adjustment	36, 140
11	Net purchases from abroad	1, 347	25	Rental income of persons	8, 473
12	Personal tax and nontax payments	20, 920	26	Dividends	9, 207
13	Personal saving	12, 104	27	Personal interest income	10, 628
			28	Government transfer payments	14, 304
			29	Business transfer payments	843
			30	Less: Personal contributions for social insurance	2, 894
14	PERSONAL OUTLAY AND SAVING	227, 050	31	PERSONAL INCOME	227, 050

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of the military establishment, all of which constitute payments that are unique to government operations and have no genuine counterpart in business.

Net wage and salary receipts from abroad appear explicitly as receipts of the personal sector.[6] Personal interest and dividend receipts from abroad are included with other personal interest and dividend receipts under personal interest income and dividends.

Personal income derived from households and institutions consists of income receipts of individuals for productive services rendered within the personal sector of the economy. Incomes included under this heading are those received for labor services rendered directly to households, such as domestic service, and the incomes received by employees of, and personal suppliers of capital funds to, nonprofit institutions. (The labor income is shown explicitly in table III, but the interest income is merged with other personal interest receipts.) As has been noted, in order to maintain a comprehensive record of total productive activity these transactions are not cancelled in deriving the consolidated personal account even though they occur within the personal sector.

Relation of national income and personal income

The bulk of personal income is derived from production, and personal income is therefore used widely as an indicator of economic activity. However, it is not a measure of the value of national output because it excludes certain incomes that accrue in production but are not distributed to persons and includes certain other income receipts that do not accrue in production. The relation between national income, which is a measure of output in terms of factor income flows, and personal income is shown in exhibit 16.

Exhibit 16.—*Relation of National Income and Personal Income, 1950*

[Millions of dollars]

National income	239,956
Less: Undistributed corporate profits	12,934
Corporate profits tax liability	17,829
Corporate inventory valuation adjustment	−4,864
Contributions for social insurance	6,870
Excess of wage accruals over disbursements	0
Plus: Net interest paid by government	4,716
Government transfer payments	14,304
Business transfer payments	843
Equals: Personal income	227,050

In this exhibit, personal income is derived by deducting from national income all incomes earned in current production but not received by persons and by adding to it the incomes received by persons but not earned in current production. The deductions consist of all elements of the "corporate profits and inventory valuation adjustment" component of national income except dividends (undistributed corporate profits, corporate profits tax liability, and corporate inventory valuation adjustment) and of the parts of employee compensation and unincorporated enterprise income not regarded as distributed to individuals (contributions for social insurance and the excess of wage accruals over disbursements). The additions consist of transfer payments from government and business and of net interest paid by government. The latter item represents the excess of the total interest payments by government over its total interest receipts, and must be added to national income because the net interest component of national income falls short of the interest receipts of persons by that amount. (For a detailed tracing of interest flows, reference is again made to the Interest section of Part III).

6. For certain statistical limitations of this item, see section 12 of Part III.

Personal outlay and saving

The debit side of the personal account contains three general categories: personal consumption expenditures, personal tax and nontax payments, and personal saving.

Personal consumption expenditures consist chiefly of net purchases from business, corresponding to the credit entry for consolidated net sales to persons in the business account. Also included are purchases made directly by persons from abroad (mainly while traveling abroad, but including also international remittances) and purchases of direct factor services.

Purchases by persons of direct factor services measure production originating in the personal account. They are entered at their full cost, which consists of the compensation of employees and interest payments. As already mentioned, much of this expense is matched by a receipt entry in the personal account itself. However, employer and employee contributions for social insurance appear as a receipt in the government account, while the interest cost of production in the personal sector is composed of payments to all sectors of the economy.

It will be noted that there is no entry for purchases of goods and services from government. This is simply because all government agencies which are conceived as selling their services for a market price are defined as government enterprises and classified in the business sector, so that consumer payments to them, such as for postage stamps, appear as purchases from business.

Payments by persons to general government, consisting chiefly of direct personal taxes, are classified as personal tax and nontax payments, the second general category on the left side of the personal account. This entry does not include contributions for social insurance, which are excluded in the computation of personal income. It may be noted, however, that the total individual income tax, including the portion withheld at source, is treated as though initially received by the personal sector. In other words, personal income is measured before deduction of this tax. The different treatment of income taxes and social insurance contributions is somewhat arbitrary. Disposable personal income, of course, is measured net of both of them.

The amount remaining out of personal income after the purchase of goods and services and payments to government is personal saving. It comprises the saving of individuals, including owners of unincorporated enterprises, and the saving of the organizations that are considered part of the personal sector, namely private pension, health and welfare funds, private trust funds, and nonprofit institutions serving individuals. It is the algebraic sum of the saving and dissaving of these groups.

Seen from another aspect, personal saving measures the net change in the asset position of persons as between the beginning and end of the accounting period. Personal saving is made up of the net increase in all the kinds of assets in which recipients of personal income invest, offset by the net increase in all the kinds of liabilities which they incur.

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Exhibit 17.—*Illustration of Treatment of Nonprofit Institutions Serving Individuals*

[Thousands of dollars]

Nonprofit Institutions		Individuals		Corporations	
Debits	Credits	Debits	Credits	Debits	Credits
Wages (1) 15	Gifts (6) 11	Gifts (6) 11	Wages (1) 15	Wages (13) 45	Interest (3) 2
Interest (2) 3	Gifts (7) 5	Dues (8) 8	Wages (12) 6	Gifts (7) 5	Sales (4) 12
Interest (3) 2	Dues (8) 8	Purchases (10) 40	Wages (13) 45	Interest (9) 7	Sales (10) 40
Purchases (4) 12	Interest (9) 7	Interest (11) 1	Interest (2) 3		Interest (11) 1
Cash relief (5) 4		Wages (12) 6	Cash relief (5) 4		
36	31	66	73	57	55

Included are not only the items commonly thought of in connection with personal saving, such as changes in cash and deposits, in security holdings, and in personal indebtedness, but also the net investment of noncorporate business in realty, equipment, and inventories. Personal saving also includes changes in the reserves of life insurance companies and mutual financial institutions, as explained above in the discussion of the treatment of these entities in the national income and product accounts.

Assets are defined, of course, in the context of the conceptual framework underlying national income measurement. Capital gains and losses are not counted as changes in asset position, and all consumer purchases of goods except residences are classified as consumption rather than as investment.

A breakdown of personal saving by type of asset or liability is provided in table 6, Part V of this report.

Imputations

As in the case of business output, the measurement of output in the personal sector is not confined to monetary transactions, but also takes into account imputed income and product flows. The most important of the imputations is for the value of food provided free to employees of households and nonprofit institutions. The imputation involves an increase in the wages and salaries of employees, equal to the cost of the food to the employer, on both the credit and debit sides of the personal account. The reconstructed account depicts the situation which would prevail if monetary wages were raised by the value of the imputation and the corresponding food were purchased by the employees rather than by their employers.

An imputation is also made for the value of free lodging furnished to clergymen, employees of nonprofit hospitals, and certain quantitatively unimportant groups. None is made in the case of domestic servants, because it is felt that, as a general proposition, they do not regard the lodging furnished them as an addition to income.

Nonprofit institutions

Nonprofit institutions include religious organizations, social and athletic clubs, labor organizations, nonprofit schools and hospitals, charitable and welfare organizations, and other nonprofit organizations furnishing services to individuals. It has already been pointed out that they are consolidated with individuals in the personal account. While the principle of consolidation is clear, some fairly intricate manipulations of items are involved. These may be illustrated by reference to exhibits 17 and 18, which are designed to show the treatment of the major transactions involving nonprofit institutions. Certain simplifications have been made to keep the example to manageable proportions. Investment by nonprofit institutions (counted as part of private domestic investment) has been excluded, as have government payments to nonprofit institutions (included in government transfer payments).

Exhibit 17 shows a set of interrelated transactions of nonprofit institutions, individuals, and corporate business. Exhibit 18 gives the Personal Income and Expenditure Account corresponding to these transactions. In essence, the latter account is obtained by consolidating the transactions of nonprofit institutions and individuals. In this process, the transactions involving cash relief, gifts, and dues cancel out. However, cancellation is not extended to transactions between nonprofit institutions and individuals involving payments for factor services. The record of these transactions is preserved in the comprehensive accounting for national output.

Exhibit 18.—*Personal Income and Expenditure Account Based on Exhibit 17*

[Thousands of dollars]

Personal consumption expenditures:		Wage and salary disbursements:	
Purchases of direct services:		Wages (1)	15
Compensation of employees:		Wages (12)	6
Wages and salaries paid:		Wages (13)	45
Wages (1)	15	Personal interest income:	
Wages (12)	6	Interest (2)	3
Interest paid:		Interest (9)	7
Interest (2)	3	Business transfer payments:	
Interest (3)	2	Gifts (7)	5
Interest (11)	1		
Income originating in and net and gross product of households and institutions	27		
Net purchases from business:			
Purchases (4)	12		
Purchases (10)	40		
Personal saving	2		
PERSONAL OUTLAY AND SAVING	81	PERSONAL INCOME	81

Thus, employee compensation [wages (1)] and interest paid by nonprofit institutions to individuals [interest (2)] appear on both sides of the personal income and expenditure account and constitute components of "income originating and net and gross product of households and institutions," which measures the value added to national output by the personal sector. In addition, this measure includes the compensation of household employees [wages (12)] and interest paid to the business sector by nonprofit institutions [interest (3)] and by households [interest (11)].[7]

7. The above summary covers the principal features of the national income accounting treatment of nonprofit institutions. If allowance is made also for depreciation on plant and equipment owned by nonprofit institutions, it can be seen that they are measured in personal consumption expenditures by their current operating expenditures including depreciation (but excluding domestic cash benefits paid). In the personal consumption expenditure estimates in table 30, Part V, the current operating expenditures of nonprofit institutions are in some instances measured net of the institutions' receipts accounted for separately in consumer expenditures, such as receipts from the sale of food, housing, and recreational services. Of further note, it is often not possible to measure current operating expenditures directly. In such instances, indirect approximations—such as gross receipts less benefits paid—are used, and the items in table 30 are labeled correspondingly.

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Private trust funds and private pension, health, and welfare funds are also consolidated with individuals in the personal sector. In these cases, however, the procedure is more straightforward since the administrative expenses of these entities are small and, in practice, can be neglected.

Further breakdowns of personal account

The personal account, like the business account, includes somewhat heterogeneous elements, and further breakdowns of it would be useful. In particular, individuals might be distinguished from the various types of quasi-individuals included in the personal account; and, more important, individuals might be subdivided into significant social groups, such as farmers, other businessmen, independent professional practitioners, and wage earners, showing separately the incomes of these groups and their disposition among consumption, taxes, and saving. At the present stage, inadequacy of statistical materials limits the development of comprehensive measures of this sort.

The National Income Division does prepare, however, two sets of estimates, not included in this report, that represent breakdowns of the personal account which have wide analytical significance. These are the series on personal income by States and by size of income.

The Government Sector

The government sector includes Federal and State and local general governments and the social insurance funds administered by them. These funds comprise those set up under the Social Security and Railroad Retirement programs, State health insurance funds, the retirement funds established for government employees, and military life insurance funds. The distinction drawn between general government and government enterprises, which are included in the business sector, has already been described.

Government account

The transactions of government are summarized by a consolidated statement of receipts and expenditures, as presented in table IV. In many ways this statement resembles the conventional budgets of governmental bodies. However, there are several differences.

In the first place, the account shown in table IV is consolidated. All levels of American government, the social insurance funds administered by them, and the net expenditures of government enterprises are covered. (However, separate breakdowns for the Federal Government, State and local governments, and social insurance funds are given in tables 8, 9, and 10 in Part V.)

Second, the account excludes receipts from the sale of, and expenditures for the acquisition of, financial assets and second-hand fixed assets. Third, the timing of receipts and expenditures differs from that of conventional budget statements, being synchronized with the timing of the corresponding expenditures and receipts in the other accounts. Personal taxes are on a cash basis, other taxes are on an accrual basis, and purchase entries reflect time of acquisition rather than of payment. Finally, the classification of transactions differs from that of conventional budget statements, being adapted to the needs of national output measurement and general economic analysis.

Classification of receipts and expenditures

Most of the transactions contained in the government account have already been discussed in connection with the business and personal accounts.

The labor cost items, which appeared on a receipt basis in the personal account, are on an accrual-cost basis in the government account. The difference consists of employers' and employees' contributions under retirement systems for government employees. In table IV the employer contribution is treated as a simultaneous government expenditure and receipt. The employee contribution appears as a deduction in the personal account (under "personal contributions for social insurance") and as a receipt in the government account.

Transactions with abroad, not yet discussed, appear explicitly under "net purchases from abroad" and are included also in "net interest paid." The former entry measures the excess of government purchases from foreigners over government sales to them (cash gifts are treated like purchase and sale transactions in this connection, but loans are excluded). Net interest paid is defined as the excess of total interest payments by government to all sectors over total interest receipts from all sectors. Government enterprises are covered in both payments and receipts.

Most of the salient features of the classification of government receipts and expenditures have come to attention already, in connection with the construction of measures of total national output. However, certain points may be elaborated now that all government transactions have been assembled.

The value of government output

Value added by government to national output, like value added in all other nonbusiness sectors of the economy, is measured by total factor cost incurred. In the case of the government, factor cost is confined to the compensation of government employees. Interest payments are not counted. Two issues should be considered as relevant to this treatment: first, the distinction between employee compensation and transfer payments; and, second, the exclusion of monetary interest and the question of substituting an imputed interest series for it.

Employee compensation versus transfer payments

A distinction is made between two types of government payments to individuals in their nonbusiness capacity—employee compensation and transfer payments. The former is in return for current productive services rendered; to the latter no such services correspond. This distinction is a basic one, because it segregates flows which are taken as measures of value added to national output from flows which are not so regarded. Hence it is important to see how it is made in practice.

Difficulties arise in the concrete interpretation of the term "productive service." For instance, in the classification of work relief wages that were paid in the depression of the thirties, the question arose as to whether they should be classified as labor returns or as transfers. A more fundamental issue is raised by the national income estimates of some foreign countries, in which military employee compensation has been excluded from factor income and

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Table IV.—*Consolidated Government Receipts and Expenditures Account, 1950*

[Millions of dollars]

1	Purchases of goods and services:		16	Personal tax and nontax receipts	20,920
2	Purchases of direct services:		17	Corporate profits tax accruals	17,829
3	Compensation of employees:		18	Indirect business tax and nontax accruals	23,741
4	Wages and salaries	19,631			
5	Supplements:		19	Contributions for social insurance:	
6	Employer contributions for social insurance	812	20	Personal contributions	2,894
			21	Employer contributions:	
7	Other labor income	330	22	Business	3,146
			23	Government	812
8	*Income originating and net and gross product*	*20,773*	24	Households and institutions	18
9	Net purchases from business	17,828			
10	Net purchases from abroad	3,422			
11	Transfer payments	14,304			
12	Net interest paid	4,716			
13	Subsidies minus current surplus of government enterprises	204			
14	Surplus (+) or deficit (−) on income and product transactions	8,113			
15	GOVERNMENT EXPENDITURES AND SURPLUS	69,360	25	GOVERNMENT RECEIPTS	69,360

treated as a transfer on the basis of some more ultimate, philosophical notion of productiveness.

In the United States estimates, the criterion for classifying an item as employee compensation or as transfer hinges on the current performance of work. No attempt is made to probe into the issue of whether the work is performed efficiently or whether, in some more basic sense, it is "productive." The practical impossibility of drawing distinctions of this type has been covered inferentially in the evaluation of the basic notions underlying national output measurement.

But even on the basis of the simple current-work-performed criterion, a clear-cut distinction between wages and salaries and transfer payments does not emerge in all cases. For it is not always possible to say whether a specific payment is made for the current work that is performed or for other reasons. Allowances for soldiers' dependents presented a classification problem of this type. It was decided to classify them as employee compensation rather than transfer payments, although a case for the opposite decision also could have been made. On the other hand, retroactive terminal leave payments, bonuses, and other deferred payments (such as under the "GI bill") to members of the Armed Forces of World War II were considered transfers, as they were disbursed at a date far removed from the time the military service was performed. Counting these payments as compensation for services would have necessitated allocating them over past years on an accrual basis—a course which seemed artificial and would have involved continuous revisions of the national income and product estimates for the war period.

Government interest

Government interest payments are not included in value added to output by government because they are subject to fluctuations which, it is believed, it would be artificial to regard as representing corresponding changes in the value of current production. It may be added that business interest can be included in a measure of national output without such explicit consideration of its behavior. Any fluctuations in it not reflecting productive activity are offset by opposite changes in business profits. Hence, the inclusion of business interest has no distortive effect on the output measure and, in fact, is necessary to secure the correct total.

Thus, value added by government takes account only of the services of the labor factor whereas the valuation of business output includes also returns to nonlabor factors. The question accordingly arises as to whether an allowance should be made for the services of government-owned property by the imputation of a rate of return to it, somewhat analogous to the imputation of a return to owner-occupied homes in the business sector of the economy.

An imputation for government-owned property is not made in the national income accounts for the United States because the conceptual and statistical bases for making a realistic and useful imputation are absent. The analogy to the housing imputation does not hold. The bulk of this imputation is anchored to realistic estimates of the gross rental value of owner-occupied houses available from Census reports, based on comparisons of owner-occupied property with rental property of similar type. In the case of the government no similar, market-based information to establish the rental value of the vast bulk of government structures and equipment is, or can be, available. The rental value of the highway system or of the Tennessee Valley Authority cannot be estimated by reference to the rental value of property of similar type.

In the absence of a realistic market evaluation of the rental value of government property, its net return would have to be derived by estimating the total value of government real capital assets, segregating the part which is deemed to be in productive use, and then applying to the latter a rate of return to reflect the value added by the property. Clearly, each of these steps would be highly speculative, and a measure of imputed return useful in realistic analysis would not be likely to result.

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Decisions affecting valuation of business output

In the national product, output is valued at market prices—inclusive of indirect business taxes and exclusive of subsidies. The manner in which these two items are defined therefore affects the total value of national product.

Indirect business taxes versus personal taxes

Indirect business taxes are taxes (other than social insurance contributions) that are chargeable to current cost by business enterprises; and personal taxes are taxes paid by persons that are not so chargeable.

This distinction leaves the treatment of retail sales and related taxes somewhat ambiguous, since in some instances these taxes are included in the sales price and charged to current expense, and in others excluded and paid separately by the consumer. In the latter case it would be possible to regard these taxes as personal taxes and to list the corresponding purchases at values excluding them. In this report the procedure of treating all these taxes as indirect business taxes forming a part of market price has been adopted, because it is thought to be the more meaningful from the standpoint of studying market behavior.

Further emphasis on this type of study underlies a proposal to depart from the accounting distinction between personal and indirect business taxes used in this report. It has been suggested that for analysis of consumer behavior all taxes that are closely tied to consumer purchases should be treated as indirect business taxes and included in personal consumption expenditures, regardless of whether they are chargeable to current cost by business. For instance, automobile license and registration fees paid by personal consumers would, according to this plan, be classified in personal consumption expenditures and indirect business taxes, rather than in personal taxes as at present. The logic would be that payment of these taxes is a determinant in the choice of consumers as between automotive and other types of expenditures. While this suggestion has some merit, it would raise difficult problems of classification. The influence of various types of taxes on personal consumption is a matter of degree and does not provide a clear-cut criterion of classification.

Subsidies versus purchases

Subsidies are monetary grants to business, and it is usually easy to distinguish them from government purchases of goods and services. However, in certain instances a subsidy element may be included in the purchase price of an item in lieu of an explicit subsidy. Cases of this type have involved payments by government enterprises (such as payments by the Post Office for air mail contracts, which until recently have included an element of subsidy.) By virtue of the accounting for the current surplus and deficit of government enterprises, as described earlier, indirect subsidies of this type receive in effect the same treatment as explicit subsidies. Payments of similar type on the part of general government have not come to notice. To the extent that they occur, they are regarded as purchases, and no attempt is made to segregate the subsidy element.

Imputations

Imputations are made for wages and salaries paid in kind to government employees. The most important of these imputations is for food and standard clothing issued to members of the Armed Forces. It may be noted that only standard, or personal, clothing is included, not special clothing and equipment. Also, the rental value of shelter provided is not allowed for. The principal line of reasoning is that in many instances the provision of lodging to servicemen does not reduce their cash housing expenditures and hence is not a clear addition to their income.

In the recording of the imputations, the accounts are reconstructed to correspond to a situation in which the government paid out to its employees additional wages equal to the cost (to the government) of the food and clothing provided and the employees themselves purchased these items from the business system. In the government account (table IV), compensation of employees (and income and net and gross product originating in government) is raised by the value of the imputation. But total government purchases of goods and services are not changed because government purchases from business are reduced by a corresponding amount. In the business account (table II), there is a corresponding shift from sales to government to sales to persons. Finally, in the National Income and Product Account (table I), the imputation raises personal consumption expenditures and gross national product, on the one hand, and the compensation of employees, national income and the sum of charges against the value of national product, on the other.

In view of the fact that an imputation is made for wages and salaries received in kind, it may be wondered why transfer payments, and also subsidies, are confined to monetary transactions—why specific goods and services given to individuals are not included in transfer payments, and why those given to business are not counted in subsidies. The basic reason for this apparent inconsistency is that, whereas in the case of wages and salaries a generally accepted procedure for imputation, partly pragmatic and partly tradition-based, is available, this is not so with respect to transfer payments and subsidies. The principal difficulties in the way of establishing such a procedure have been set forth in the discussion of the basic notions underlying national output measurement.

By way of supplementary argument, it may be noted that the introduction of transfer payments and subsidies in kind would interfere with the function of the accounts as a record of actual transactions. Of course, wage and salary and other imputations that are made in the national accounts have a similar effect. In these instances, however, it is felt that the resulting improvement in the income and product components and totals outweighs the disadvantages involved.

Two examples of the rather extreme complications of the accounts that can arise from the introduction of imputations of transfer payments and subsidies may be given.

Suppose, for instance, that services rendered by government employees in the administration of relief programs were to be regarded as transfer payments in kind. In the government account (table IV), transfer payments would be increased and compensation of government employees correspondingly reduced. In the personal account (table III), transfer payments would be increased on the credit side and employee compensation (and hence purchases of goods and services and income and net and gross product originating) on the debit side. In effect, the government employees rendering the services classified as trans-

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fer payments in kind would now be classified in the personal sector, as household employees. Finally, in the National Income and Product Account (table I), personal consumption expenditures would be raised, and government purchases lowered, by the amount of the imputed transfer payments. It is apparent that these reclassifications would greatly reduce the value of the accounts as records of the income and product flows that actually occur among the major sectors of the economy.

Or, assume that a subsidy in kind consisted of services rendered by government employees. In this instance the reclassification would involve labelling as subsidies in the government account payments actually made for wages. In the business account wages would have to be increased, to include wage payments actually made by the government, and offset by a corresponding increase in the deduction made for subsidies.

Social insurance funds

The consolidation of social insurance funds with the accounts of general government is a straightforward procedure which need not be detailed. However, certain differences between the treatment of social insurance funds and of privately administered pension funds may be pointed out. These stem from the fact that the social insurance funds are consolidated with government while private pension funds are consolidated with individuals in the personal sector.

With respect to the measurement of employee compensation (and national income), the difference is merely one of classification between shares—employer contributions to government-administered funds are listed under "employer contributions for social insurance," whereas employer contributions to private pension funds are included in "other labor income." However, the effect of the difference in treatment on personal income and saving is more substantive. Employer contributions and property income received by privately administered funds become elements of personal income, and the saving of these funds part of personal saving. Employee contributions into these funds, as well as benefit payments made by them, are canceled as constituting transfers within the personal sector. Employer and employee contributions and property income received by social insurance funds, on the other hand, enter government receipts; benefit payments made by them are explicitly recognized (as transfer payments by the government) as a component of personal income; and the saving of social insurance funds is a component of the government surplus rather than of personal saving.

Rest of the World Sector

The transactions of the rest of the world with the United States are summarized in the rest-of-the-world account presented in table V. The rest of the world covers foreign countries, territories and possessions of the United States, international organizations, and the United States monetary gold stock. The gold stock is included in this sector because net acquisitions of gold by the monetary authorities from domestic sources are considered foreign investment.

It may seem strange at first that the "rest of the world" is a sector of the national economy, and, indeed, there would be no need to consider it in the case of a closed economy which had no dealings with foreign countries. In the real world, however, trade and investment do cross international boundaries. Consequently, to complete the set of accounts it is necessary to include one which summarizes the transactions of foreigners with the three domestic sectors of the economy.

The rest-of-the-world account is a receipt and expenditure account and, like the other accounts, consolidated. It bears a close affinity to the balance-of-payment statement. It differs from this statement mainly in arrangement, with respect to netting and the classification scheme applied to the transactions involved.

The debit side of this account shows the net purchases of United States goods and services by the rest of the world. It is divided among net purchases of direct factor services and other purchases (net) from business, government, and persons. Net purchases of direct factor services from the United States by the rest of the world, as shown by the net inflow of factor incomes to the United States, measure United States national income and product originating in the rest of the world.

Because of the inclusion of gifts in net purchases from United States persons and government, net purchases of goods and services by the rest of the world cover all its current transactions with the United States. The excess of purchases over sales must be financed by a change in the net international asset position (an

Table V.—*Rest of the World Account, 1950*

[Millions of dollars]

1	Net purchases of goods and services:		12	Net disinvestment in the United States	−2,201
2	Net purchases of direct services:				
3	Wages and salaries	18			
4	Interest	248			
5	Dividends	426			
6	Branch profits	574			
7	*Income originating and net and gross product*	*1,266*			
8	Net purchases from business	1,302			
9	Net purchases from government	−3,422			
10	Net purchases from persons	−1,347			
11	NET CURRENT PAYMENTS TO THE UNITED STATES	−2,201	13	NET DISINVESTMENT IN THE UNITED STATES	−2,201

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increase of United States claims on abroad or a decrease of foreign claims on the United States). From the standpoint of the rest of the world, this excess constitutes net foreign disinvestment in the United States, as shown on the credit side of the account.

International gifts

Inclusion of cash gifts received by foreigners from the United States in sales to United States persons and to the United States Government, together with the corresponding inclusion of gifts made by foreigners in purchases from the United States, secures a treatment of these transactions which is appropriate for the measurement of national product. Net gifts made by United States persons and Government appear in personal consumption expenditures and government purchases but are offset in the net foreign investment component of national product.

Needless to say the treatment of gifts as purchases is a somewhat unsatisfactory short-cut. It was adopted in order to simplify the structure of the accounts at a time when the important role of gifts in international transactions was not yet apparent. It has not been discarded because the alternative, more elaborate treatment also has serious shortcomings.

This alternative treatment consists of the establishment of a separate category of international transfers in the income and product accounts to cover the gifts now included in the purchases and sales of goods and services. These international transfers would affect, in addition to the rest-of-the-world account, the personal and government accounts (tables III and IV). The detail of the national income and product account (table I) also would be affected. Personal consumption expenditures and government purchases of goods and services would be reduced by the amount of net gifts made, and the entry under net foreign investment would be increased by a corresponding amount (with an appropriate change in the designation of the term to indicate that it would no longer reflect net foreign investment, but the balance of transactions in actual goods and services).

The complication of the accounts which would be involved in the establishment of a separate category of international transfer payments, while considerable, would be warranted if it would throw into clear relief the large international aid transactions involving the United States Government. However, this would not be accomplished for the reason that international aid, in addition to cash grants, involves also loans and aid in kind. The three forms of aid often are almost indistinguishable from one another in their economic aspects.

There is no clear-cut procedure available for distinguishing between international aid rendered in kind and government purchases for domestic purposes. For instance, in World War II it would have been rather unrealistic to distinguish between lend-lease, which presumably would have been classified as international aid in kind, and other government purchases for war purposes. Nor is there available an uncontroversial yardstick for classifying loans into loans proper and those that in effect represent international transfers. Since the relative magnitudes of the three media for extending international aid of essentially similar nature have been subject to considerable shifts, it would not have been instructive to establish a separate category for cash gifts alone, the only type of aid that could have been distinguished objectively.

It may be noted that conceptually similar problems arise with respect to the domestic operations of government. Aid to individuals and business also involves monetary grants, goods and services rendered in kind, and loans. In the case of these domestic transactions, monetary aids (in the form of transfer payments and subsidies) are recorded, but the two other types of aid are not recognized as such. While from some standpoints this dividing line is somewhat arbitrary, it is much more meaningful than a corresponding line would be for international aid. In the domestic sphere, shifts in the relative importance of the three media in extending aid of essentially similar nature have not been present in a comparable degree.

Treatment of gold

In essence, the treatment of gold production in national income and national product is the same as that of any other commodity. The distributive shares arising directly or indirectly in its production (together with nonfactor charges, such as indirect business taxes and depreciation) are reflected on the debit side of the national income and product account. The value of gold produced enters the credit side either as such or as an ingredient of the value of some other final product, although the classification in the product flow is less transparent than in the case of other commodities. Domestic nonmonetary use of gold may be reflected in any of the domestic components of national product—personal consumption, domestic investment including inventory change, and government purchases. To convert domestic nonmonetary use into a measure of total domestic production, monetary use and exports must be added and imports must be deducted.

These items—the change in the monetary gold stock and net gold exports—which in combination measure net domestic business sales of gold for export and monetary purposes, are included in net purchases by the rest of the world from United States business. In other words, the monetary gold stock is set up as part of the rest of the world and its transactions with United States business are treated as foreign transactions. Thus, changes in the monetary gold stock not offset by gold exports and imports come to be reflected in net foreign investment.

Silver is not regarded as an international monetary asset. It is classified in the product flow exactly like any other commodity.

Gross Saving and Investment Account

The entries in the sector current accounts presented so far show the current transactions of each of the four major economic groups, yielding in each case a residual which represents a form of saving. A logical extension of this system of sector current accounts would be the establishment of corresponding sector saving and investment accounts showing the disposition of these savings in the form of net financial and real investment.

Sector saving and investment accounts of this type have not been constructed on a comprehensive scale (a statement of this type for persons is presented in table 6, Part V) and cannot yet be made an integral part of the national economic accounting system. A consolidated saving and investment account for the Nation as a whole is presented instead, in table VI.

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In the process of consolidation the financial investments involving transactions among the domestic segments of the economy are canceled, and all that remains are matching flows of saving and of domestic investment (fixed capital formation and inventory change) and foreign investment. The consolidated capital account is obtained from the four sector current accounts by assembling all items in these accounts that so far have been entered only once because they constitute transactions not with other current accounts but with the capital accounts of the same or other sectors.

The content of the gross saving and investment account is determined by the basic concepts and classifications underlying national income accounting. Only business assets are included in fixed capital formation and inventory change. Consumer- and government-held tangible assets are not included in capital formation. It should also be recalled that fixed capital formation is presented gross and that, therefore, capital consumption allowances appear as a component of (gross) saving.

DEFINITIONS OF CONCEPTS AND TERMS

The following definitions of the national income and product aggregates and their components are intended to give concise, accurate descriptions of the coverage of the various series and, at the same time, to call attention to the principal aspects of the series which are not readily apparent from their titles. The definitions of the national aggregates should be considered in conjunction with the definitions of their components as the details of the latter are not repeated in the former.

I. National Income and Product Aggregates

National Income is the aggregate earnings of labor and property which arise from the current production of goods and services by the Nation's economy. Thus, it measures the total factor costs of the goods and services produced by the economy. The Nation's economy in this context refers to the labor and property supplied by residents of the Nation. Earnings are recorded in the forms in which they accrue to residents of the Nation, inclusive of taxes on those earnings. As such, they consist of the compensation of employees, the profits of corporate and unincorporated enterprises, net interest, and the rental income flowing to persons.

Gross National Product or Expenditure is the market value of the output of goods and services produced by the Nation's economy, before deduction of depreciation charges and other allowances for business and institutional consumption of durable capital goods. Other business products used up by business in the accounting period are excluded. The Nation's economy in this context refers to the labor and property supplied by residents of the Nation. Gross national product comprises the purchases of goods and services by consumers and government, gross private domestic investment (including the change in business inventories), and net foreign investment.

Net National Product or Expenditure is the market value of the net output of goods and services produced by the Nation's economy. All business products used up by business in the accounting period are excluded. The Nation's economy in this context refers to the labor and property supplied by residents of the Nation. Net national product comprises the purchases of goods and services by consumers and government, net private domestic investment (including the change in business inventories), and net foreign investment.

Personal Income is the current income received by persons from all sources, inclusive of transfers from government and business but exclusive of transfers among persons. Not only individuals (including owners of unincorporated enterprises), but nonprofit institutions, private trust funds, and private pension, health, and welfare funds are classified as "persons." Personal income is measured on a before-tax basis, as the sum of wage and salary disbursements, other labor income, proprietors' and rental income, interest and dividends, and transfer payments, minus personal contributions for social insurance.

Disposable Income is the income remaining to persons after deduction of personal tax and nontax payments to general government.

Table VI.—*Gross Saving and Investment Account, 1950*

[Millions of dollars]

1	Business purchases on capital account	43,868	5	Excess of wage accruals over disbursements	
2	Change in business inventories	7,351	6	Undistributed corporate profits (domestic)	12,3
3	Net disinvestment in the United States by rest of world	−2,201	7	Corporate inventory valuation adjustment	−4,8
			8	Capital consumption allowances by private business	20,5
			9	Foreign branch profits (net)	5
			10	Personal saving	12,1
			11	Government surplus (+) or deficit (−) on income and product transactions	8,1
			12	Statistical discrepancy	2
4	GROSS INVESTMENT	49,018	13	GROSS SAVING AND STATISTICAL DISCREPANCY	49,0

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II. Components of National Income and Product Aggregates

A. National Income (as in table 1, Part V).

Compensation of Employees is the income accruing to persons in an employee status as remuneration for their work. From the employer's standpoint, it is the direct cost of employing labor. It is the sum of *wages and salaries* and *supplements to wages and salaries.*

Wages and Salaries consists of the monetary remuneration of employees commonly regarded as wages and salaries, inclusive of executives' compensation, commissions, tips, and bonuses, and of payments in kind which represent income to the recipients.

Supplements to Wages and Salaries is the monetary compensation of employees not commonly regarded as wages and salaries. It consists of employer contributions for social insurance; employer contributions to private pension, health, and welfare funds; compensation for injuries; directors' fees; pay of the military reserve; and a few other minor items of labor income.

Income of Unincorporated Enterprises measures the monetary earnings and income in kind of sole proprietorships, partnerships, and producers' cooperatives from their current business operations—other than the supplementary income of individuals derived from renting property. As with *corporate profits,* capital gains and losses are excluded and no deduction is made for depletion.

Inventory Valuation Adjustment measures the excess of the value of the change in the volume of nonfarm business inventories, valued at average prices during the period, over the change in the book value of nonfarm inventories. This adjustment is required because corporate profits and income of unincorporated enterprises are taken inclusive of inventory profit or loss, as is customary in business accounting, whereas only the value of the real change in inventories is counted as current output in the national product. No valuation adjustment is required for farm inventories because farm income is measured exclusive of inventory profits.

Rental Income of Persons consists of the monetary earnings of persons from the rental of real property, except those of persons primarily engaged in the real estate business; the imputed net rental returns to owner-occupants of nonfarm dwellings; and the royalties received by persons from patents, copyrights, and rights to natural resources.

Corporate Profits Before Tax is the earnings of corporations organized for profit which accrue to residents of the Nation, measured before Federal and State profit taxes, without deduction of depletion charges and exclusive of capital gains and losses. Profits accruing to residents are measured by eliminating intercorporate dividends from profits of domestic corporations and by adding the net receipts of dividends and branch profits from abroad. In other major respects, the definition of profits is in accordance with Federal income tax regulations.

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Corporate Profits Tax Liability comprises Federal and State taxes levied on corporate earnings. Disbursements of tax refunds are deducted from tax liability in the year in which the tax liability was incurred.

Net Interest measures total interest (monetary and imputed, private and government) accruing to United States persons and governments minus total interest paid by United States governments. Government interest (Federal and State and local) is deducted because it is not considered income arising in current production. It is necessary not only to exclude the portion of it paid directly to persons and governments, but also to deduct the portion of it paid to business, because the latter is reflected in the incomes paid out or retained by the business system. The *imputed interest* component of net interest is measured in general as the excess of property income received by financial intermediaries from funds entrusted to them by persons over property income actually returned in monetary form by these intermediaries to persons. A portion of imputed interest is numerically equal to the value of financial services received by persons without explicit payment; the remainder represents property income withheld by life insurance companies and mutual financial intermediaries on the account of persons.

B. Gross National Product (as in table 2, Part V).

Personal Consumption Expenditures consists of the market value of purchases of goods and services by individuals and nonprofit institutions and the value of food, clothing, housing, and financial services received by them as income in kind. It includes the rental value of owner-occupied houses but does not include purchases of dwellings, which are classified as capital goods.

Gross Private Domestic Investment consists of acquisitions of newly produced capital goods by private business and nonprofit institutions and of the value of the change in the volume of inventories held by business. It covers all private new dwellings, including those acquired by owner-occupants.

Net Foreign Investment is the net change in international assets and liabilities, including the monetary gold stock, arising out of the current international flows of goods and services, factor incomes, and cash gifts and contributions. Thus it measures the excess of (1) domestic output sold abroad over purchases of foreign output, (2) production abroad credited to United States-owned resources over production at home credited to foreign-owned resources, and (3) cash gifts and contributions received from abroad over cash gifts and contributions to foreigners. The net transfer of cash gifts and contributions offsets corresponding entries in *personal consumption expenditures* and *government purchases of goods and services.*

Government Purchases of Goods and Services measures purchases of goods and services by government bodies, exclusive of acquisitions of land and used depreciable assets and of current outlays of government enterprises. It consists of general government expenditures for compensation of employees, purchases from business (net of sales by government of consumption goods and materials), net government purchases from abroad and inter-

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national contributions, and the gross investment of government enterprises. Therefore, *government purchases of goods and services* excludes transfer payments, government interest, and subsidies, as well as loans and other financial transfers outside the scope of income and product transactions.

C. *Personal Income and Disposition of Income* (as in table 3, Part V).

Wage and Salary Disbursements is equal to *wages and salaries*, except that retroactive wages are counted when paid rather than when earned.

Other Labor Income is the same as *supplements to wages and salaries* exclusive of employer contributions for social insurance in national income.

Proprietors' and Rental Income is the sum of *income of unincorporated enterprises and inventory valuation adjustment* and *rental income of persons* as given in the components of national income.

Dividends measures cash dividend disbursements by corporations organized for profit to stockholders who are United States persons.

Personal Interest Income measures total interest (monetary and imputed, private and government) accruing to United States persons. The *imputed interest* component of personal interest income is the same as in national income.

Transfer Payments consists of monetary income receipts of individuals from government and business (other than government interest) for which no services are rendered currently, of government payments and corporate gifts to nonprofit institutions, and of individuals' bad debts to business.

Personal Contributions for Social Insurance consists of payments by both employees and self-employed. Contributions of the self-employed, which relate to old-age and survivors insurance, were first made in 1952.

Personal Tax and Nontax Payments consists of the taxes levied against individuals, their income, and their property that are not deductible as expenses of business operations, and of other general government revenues from individuals in their personal capacity. It includes payments for such specific services as are provided within the framework of general government activity. It excludes, however, purchases from government enterprises. Tax refunds are deducted from payments as of the time of refund.

Personal Consumption Expenditures is the same as in gross national product.

Personal Saving is the excess of personal income over personal consumption expenditures and personal tax and nontax payments. It consists of the current saving of individuals (including owners of unincorporated businesses), nonprofit institutions, and private pension, health, welfare, and trust funds. Personal saving may be in such forms as changes in cash and deposits, security holdings, indebtedness, and reserves of life insurance companies and mutual savings institutions, the net investment of unincorporated enterprises, and the acquisition of real property net of depreciation.

D. *Reconciliation Items Between National Income and Gross National Product* (as in table 4, Part V).

Depreciation Charges represents the charges made by private business against receipts for the current consumption of durable capital goods and comparable allowances for nonprofit institutions. It includes depreciation charges against owner-occupied houses. Depreciation reported by business is not adjusted for changes in the replacement value of capital goods, except for farm enterprises.

Accidental Damage to Fixed Capital measures the value of the physical losses by fire, natural events, and other accidents to fixed capital of private business, not covered by depreciation charges.

Capital Outlays Charged to Current Expense represents new construction and purchases of new durable capital goods included in *gross private domestic investment* that are charged as current expense by business rather than entered on capital account.

Indirect Business Tax and Nontax Liability consists of tax liabilities incurred by businesses, except corporate income taxes, and other general government revenues from business. It includes all sales taxes. It includes payments for such specific services as are provided within the framework of general government activity. It excludes, however, purchases from government enterprises. Government receipts from the sale of surplus property are not included in this item. Tax liabilities are net of refunds.

Subsidies Minus Current Surplus of Government Enterprises:

Subsidies are the monetary grants provided by government to private business.

Current surplus of government enterprises represents the excess of sales receipts over current operating costs of government enterprises. In the calculation of the current surplus, no deduction is made for charges to depreciation or other reserves and interest is not counted in either receipts or costs.

Subsidies and current surplus are shown as a single item because of the difficulties involved in segregating subsidies paid through Federal Government enterprises from other expenditures of these enterprises.

Statistical Discrepancy is the excess of the value of the estimated gross national product computed by the final products method over its independently estimated value computed by adding necessary conceptual adjustments to the national income.

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PART III

Sources and Methods of National Income Estimation

INTRODUCTION

The statistical methodology underlying United States national income estimates is of interest to two broad groups—to users of the data and to producers of similar and related estimates. The importance of the former group is obvious. The importance of serving the latter group is easily appreciated if it is realized that it includes workers in the entire field of economic statistics, not only in this country but all over the world.

Users of national income statistics are concerned with sources and methods mainly from the standpoint of their bearing on the accuracy of the statistics. The interest of this group in methodological detail is limited because much of it is not germane to the question of the reliability of the estimates. Producers of statistical data, on the other hand, want to learn about sources and methods in order to derive assistance in their related tasks. They are likely to require knowledge in greater detail.

In practice, however, this conflict of interests is not too serious. For, as will become apparent, the user of the data cannot form a judgment of their reliability without a considerable acquaintance with statistical methodology. In turn, the interest of the professional statistician in specific detail tends to be limited, because much of it is not applicable to his situation. Hence, in writing the statistical descriptions which follow, it seemed appropriate to plan a compromise that would be helpful to general users of the data as well as to technicians.

Salient Features of the Statistical Methodology

Stages of statistical measurement

Since national income and product are measures of total national output, it might appear that the most direct way to obtain these measures would be to sum the values added to total output by each of the industrial sectors of the economy. In terms of product flows, these values would, in general, be measured as the total product of the industry minus its purchases of intermediate products from other industries. This difference equals the sum of wages, interest, profits and other distributive shares accruing in the industry plus certain additional charges against the value of its production. Seen from this aspect, the summation of industrial values added would yield a measure of output in terms of income flows. If national output were calculated according to this plan, its breakdowns by industry of origin would be the basic statistical building blocks. In fact, however, the data on value added by each industry are not available directly, and total output must be estimated by other procedures.

National income, which is a measure of total output in terms of factor income flows, is estimated by summing estimates of the various distributive shares. Data to estimate these shares are not always available on an industrial basis, and only as the result of often complex supplementary calculations is an estimate of national income by industrial origin obtained.

National product, which is a measure of total output in terms of product flows, is obtained generally by adding component estimates of the purchases of final products by major purchaser groups. Since measurement is restricted to final product flows, the mutually canceling purchases and sales of intermediate products, which would be necessary to determine the industrial distribution of output, cannot be taken into account.

This lack is not felt to be a significant gap in the statistics, since the corresponding breakdown of national income serves most needs for an industrial distribution of total output. (It may be noted that an indirect measure of gross national product by industrial origin could be obtained by adding to the national income originating in each industry other charges against gross national product and deducting subsidies. However, most of these elements of reconciliation have not been distributed on an industrial basis.)

Moreover, this lack of an industrial distribution of national product is more than counterbalanced by the economic significance of the breakdowns of the product flow by type of purchaser (and also by type of product) which are yielded by the final product approach. In fact, these breakdowns provide essential elements for extending the scope of national income and product statistics beyond the mere measurement of output totals into a comprehensive national economic accounting system providing a statistical picture of the economy.

The components of national income and national product are the core of this picture. The remaining statistical task consists of deriving supplementary breakdowns and series necessary for a fully articulated picture of the economy, mainly in terms of the interrelated transactions of its major constituent groups—businesses, households and institutions, government, and foreign nations.

The reporting units

Only on a limited scale is reliable statistical information available from individual consumers, because of the general inferiority of consumers' records and other difficulties involved in the collection of data from them. Hence, even over the broad areas in which national income and product flows reflect transactions in which individual consumers are involved, the statistical information for making the estimates is usually derived from the other parties to the transactions—chiefly businesses and government. These sources, in general, are decidedly preferable. The character of the underlying records is superior; the number of reporting units is smaller; and the reporting systems necessary for the procurement of reliable information can be developed more readily.

Major reporting systems

The entries into the national income and product tables are derived from a multiplicity of statistical sources ranging over most of the essential phases of the Nation's economic life.

A large body of statistical data is collected by the government, mainly with the intent of providing information which is of general interest to broad user

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groups. The various censuses—such as the Census of Manufactures, the Census of Business, and the Census of Agriculture—are prime examples in this category. Of equal importance is the statistical information which becomes available as the byproduct of the administrative functions of the government. The wage and salary data provided in connection with the old-age and survivors and unemployment insurance programs by the Health, Education, and Welfare, and Labor Departments are an outstanding example. Another is the information on the incomes of corporations and of proprietorships and partnerships furnished as a byproduct of Federal income tax administration by the Internal Revenue Service.

Government-produced statistics are the mainstay of national income and product estimates, but they are supplemented by a wide variety of information obtained from private sources, such as trade associations, labor organizations, research organizations, private educational groups, and religious and welfare organizations.

By any comparative standard the available information for estimating national income in the United States must be judged abundant. Also, long experience in the reporting and collection of economic data, the stringent requirements of governmental administrative agencies, and emphasis on sound statistical techniques make for a generally high degree of reliability.

The adequacy of the data has improved. Outstanding in this connection has been the signal increase in the current reporting of economic information. This development, closely connected with advances in the theory and practice of sampling techniques, has put the preliminary estimates of national income and product, which are made pending the availability of final benchmark data, on a much firmer basis. And, indeed, it has made it possible for these estimates to be made with little time lag and in considerable detail.

Estimating procedures

In spite of the abundance and general reliability of statistical information, the task of the national income estimator is complicated because the basic data are not collected in the framework of a coordinated statistical program designed to fill the needs of national income measurement. Without significant exception, the reported information is not in a form in which it can be entered directly into the national income and product accounts. It must be processed further to fill gaps in coverage and to adjust for differences in definition. This processing of the data involves procedures that are often quite complex. Although the mathematical operations used are usually simple, involved estimation may be necessary to combine and adjust a multiplicity of diverse sources to produce series that have the coverage and definition required by the national income estimates.

Reliability of the Estimates

It is clear from this summary discussion of the derivation of national income estimates that they are subject to error. Hence it is important to evaluate the degree of their reliability.

A comprehensive statement of the degree of accuracy of a given estimate is usually thought to involve the specification of a frequency distribution of similar estimates around the universe value. In the field of national income this ideal cannot be approximated. The many source materials and procedures utilized are not of such a nature as to permit calculations of the probable errors in the various income and product series.

The replacement of present estimating methods by the sampling approach would not be a solution. Serious difficulties in applying sampling techniques would be encountered with income and product components for which knowledge about the size and characteristics of the universe was lacking, or whose composition was heterogeneous or subject to rapid change.

Moreover, the sampling errors that could be calculated would provide only partial approximations to the errors in the final estimates. Faulty reporting, willful misstatement, and negligent enumeration are all sources of error in reported data (and hence in the estimates) which are outside the scope of sampling-error measurement. Such sources of error might be checked upon and allowed for; but in the sampling process, as well as in the varied other methods now used in national income estimation, they generally are unknown and hardly ever can be quantified. In practice, they are likely to be much more important factors in the reliability of the national income estimates than are sampling errors.

Thus, the reliability of the national income and product estimates cannot be assessed with mathematical precision. Rather, the main approach must be to make a detailed analysis of the statistical sources and methods underlying them and to use this as the basis for qualitative judgment. The general aim must be to decide whether the reliability of the estimates is sufficiently high to warrant the specific use intended, and, if this does not appear to be the case, whether the plan of investigation can be simplified to take account of the limitations of the estimates.

This task is admittedly difficult. It is complicated by the fact that throughout the period since 1929 relatively few series of estimates are derived from the same sources and methods, and hence have the same range of error in all parts of the period. Many series are a time-period admixture of sources and methods of widely varying type and quality.

Given this situation, it often will not be fruitful or possible to judge the reliability of the estimates in an overall sense. The investigator not only will have to take account of general features of the series involved, but often will have to distinguish between benchmark and other-period estimates and make such determinations as whether annual levels or year-to-year changes are principally relevant and whether components are being used in isolation or in relation to other components. Having determined what aspects of reliability are relevant in a particular instance, he can proceed to a study of the national income data with these aspects in mind and obtain optimum results.

Factors affecting reliability

Consideration of four major factors should prove helpful in forming a judgment about the reliability of estimates of the various components of the income and product flow.

In the first place, one must consider whether the economic units (such as businesses, governmental agencies, or individuals) are reporting on an item which is represented by straightforward transactions of simple definition, or on an item which requires complex calculations on their part or is somewhat vague in definition. In practice, the former case is likely to be associated with the occurrence of monetary transactions.

The second factor to be considered is the quality of the records kept by the economic units whose transactions are being measured. Lack of adequate records leads to less reliable reporting or to an absence of reported data. In either case, the reliability of the resulting estimates is impaired.

The third factor which should be given weight is the reporting system—its character and the quantity of data it produces. The obvious distinction here, as to the former, is between complete census-type coverage and sampling. However, this distinction in itself does not throw much light on the problem of reliability. While, other things being equal, complete enumerations are more reliable than samples—and, for that matter, large samples are more reliable than small ones—the *ceteris paribus* qualification in this instance deprives the statement of much of its practical significance.

So much depends on the quality of the censuses and of the samples—including the skill and training of enumerators—that only a detailed investigation of all the relevant characteristics can yield well-founded conclusions regarding reliability. Needless to say, such investigations are difficult undertakings and often may not prove conclusive. In particular, recent advances in sampling techniques have considerably narrowed the area over which a flat claim of superiority for the results of census-type reporting can be made.

With respect to the quantity of information yielded by a reporting system, it is first to be observed that large and frequent quantity does not necessarily, of course, make for reliable estimates. But smallness of quantity, even of high quality, results in data gaps impairing the adequacy of an income or product series.

The final point to be considered is to what extent the items that enter the income and product accounts differ from those that are actually reported. Such differences almost always imply that estimating procedures have been introduced. This means an impairment of reliability of the final figures which can be evaluated only by an examination of the procedures. In general, a long and involved estimating chain can be taken as a sign of statistical weakness, although this rule must be qualified in the light of the adequacy of the supplementary data introduced and of the cogency of the procedures adopted. Simplicity of procedure, however, cannot be taken as an evidence of absence of statistical weakness. It may only mean that

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reliable data for making necessary adjustments are not available, and that summary, arbitrary assumptions have been used instead.

Application of factors to broad income and product components

It may prove of interest and value to test some of the major components of national income and product against these four criteria of reliability. For brevity this is done in a very general way, and with frequent resort to personal judgments of the type which have sometimes proved erroneous in the past.

Considering first the components of national income, there can be no doubt that wages and salaries rank highest in reliability. This conclusion is based on the relative simplicity of the concept, the comprehensiveness and high quality of the record-keeping and of the reporting system (both to a large extent byproducts of the social security system), and the fact that the adjustments to the reported totals that are necessary to bring them into conformance with the requirements of the income and product accounts are small and well-founded statistically. In this instance the statement seems warranted that since 1939 the departure of the annual estimates from their true value is probably very small. Any marked lowering in the quality of the 1929–38 estimates is precluded by the fact that periodic industrial-census results and the sample wage indexes compiled by the Bureau of Labor Statistics are available to extrapolate the social security based series.

The estimates of rental income of persons are on the other end of the reliability scale. In this instance, a profit-type income is involved, the definition of which to the reporting unit must always be complex and somewhat vague. Both record-keeping and reporting systems are fragmentary and poor, and the estimating procedures which are necessary to convert reported data into national income entries are unusually complex and tenuous.

Estimates of the other income shares range between these two extremes on the scale of reliability. Supplements to wages and salaries follow wages and salaries closely. Large parts of them are as well-founded as the wage and salary data, for reasons that are essentially similar. Supplements rank somewhat lower because their "other labor income" component includes certain items which are statistically less well-founded, especially with respect to the tentative estimates for the most recent years.

On the lower end of the scale the "income of unincorporated enterprises and inventory valuation adjustment" may be considered as superior to rental income. The problems of calculating entrepreneurial income confronting the reporting units are similar to those involved in the calculation of rents—both constitute a type of profit income. Records and reporting systems are, however, somewhat more satisfactory than in the case of rental income; and the estimating procedures that are applied to the reported data are somewhat more direct and incorporate better information. It should be noted, however, that the entrepreneurial income estimates are subject to significant shortcomings when compared with the other income shares.

Broad generalizations of this type, it is recognized, are not apt to be of much concrete help for any particular use of the entrepreneurial income data. For one thing, the estimations of farm and nonfarm incomes, although handicapped by certain common limitations, are fundamentally dissimilar. There is no parallel in the nonfarm segment to the Department of Agriculture's systematic long-period study of farm income and development of reporting sources. And the estimation of farm income has no counterpart to the necessarily heavy reliance that is placed upon income-tax return information in deriving the net income of nonfarm unincorporated enterprises. Moreover, the data and procedures used to estimate farm income since 1929 are characterized by substantial uniformity over the period, whereas those underlying the nonfarm total vary widely in different subperiods.

Corporate profits before tax are a series whose probable deviation from true universe values must be adjudged smaller than that of any of the other distributive shares except employee compensation. The definition of profits is not simple, and measurement at the level of the individual business firm involves complicated computations that can be performed with varying accounting criteria. Yet the quality of corporate records is surely good, and the reporting system developed over a period of many years by the Internal Revenue Service doubtless has gone far toward standardization of reporting. This system has produced comprehensive annual data not requiring unduly large estimating adjustments before inclusion in the national income tables.

In judging the corporate profit series, two limiting aspects should not be overlooked. First, the estimates for recent years are not based on Internal Revenue Service tabulations, in which there is a 2-year lag, and are less firmly grounded. Secondly, the addition of the "inventory valuation adjustment" to corporate profits before tax appreciably reduces the statistical reliability of the profit series. This adjustment—designed to put inventories charged to cost of sales on a uniform and current pricing basis, differing from the diverse pricing practices followed in business accounting—is introduced because it is thought to constitute a significant improvement in the economic meaningfulness of the statistics. But the adjustment is based on information that is slender and procedures that are complex and subject to error.

The remaining income share, net interest, is based in part on corporate sources of data (obtained mainly from the Internal Revenue Service), but its reliability is weakened by the inadequacy of information on interest flows originating in certain major noncorporate areas, and by the general lack of reliable data for the latest years.

Government purchases of goods and services are highest on the scale of reliability among the components of gross national product. Were it not for certain problems involving the timing of purchases which are important when the level of government expenditures is changing sharply, the data for the Federal Government would parallel the quality of the wage and salary estimates, using the criteria of definitional clarity, quality of record-keeping and reporting, quantity of available information, and the statistical foundation of the estimating adjustments. However, the problem of timing, together with the fact that the series on State and local government purchases is less well-founded than the Federal series, reduces the reliability of the combined government purchases series below that of wages and salaries.

The estimates of change in business inventories probably rank lowest on the product scale. The measurement of inventories presents substantial problems of cost allocation and pricing to reporting units, and for important segments of the noncorporate economy records are not adequate and reporting is unsatisfactory, especially for recent years. More important, however, is the fact that the change in business inventories represents the difference between large and volatile annual totals, and hence is subject to significant percentage errors. Also the reported inventory data require substantial estimating adjustment. Involved in the measurement of nonfarm inventory change is the inventory valuation adjustment, the inadequacy of which was noted above in the comments on corporate profits.

Estimates of producers' purchases of durable equipment and of personal consumption expenditures for commodities—both based largely on producers' records—follow government purchases in reliability on the product side. The definitional problems confronting the ultimate reporting units do not loom too large; record-keeping and reporting are relatively adequate; estimating procedures applied to the reported basic data are fairly complex and reduce reliability, particularly in the case of consumer commodities, but on balance, the two series must be rated rather high. These generalizations, it is important to add, refer to the methodology adopted for years for which benchmark data are available. For estimates for other years, the evaluation would be less favorable. As will be noted, however, in the sections covering these series, actual experience to date with provisional estimates prepared before the availability of benchmark data has been very satisfactory.

The series on personal consumption expenditures for services is based largely, but by no means exclusively, on producers' sales records. The concept of sales is simple, and comprehensive, census-type reporting systems yield generally reliable data for items comprising the bulk of the total. The estimation problem is simplified by the absence of intermediary enterprises between the producer and consumer and by the comparatively small extent to which reported sales must be adjusted for the elimination of sales to nonconsumers. But reliability is significantly lowered by the fact that many of the comprehensive sources on which heavy reliance is placed become available only rather infrequently. Of lesser effect is the inadequacy of materials for many of the numerous smaller items forming part of the services total.

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The field of private construction is an extremely difficult one for statistical estimation. The concept of "value of work performed" used in the new private construction series is not a simple one on which to report, and consequently little of the reported information is obtained on this basis. Neither enumeration nor sampling is well suited for establishing universe levels, and complex statistical methods are necessary to adjust for the coverage gaps and timing deficiences of data secured through varied reporting systems.

The estimates of public construction are much more firmly based, mainly because of the comprehensiveness and superiority of Federal agency records. However, these estimates are not an independent component of gross national product, but are used only in obtaining a breakdown of total government purchases.

Estimates of individual series entering into the computation of net foreign investment are based on a great deal of solid statistical information. But this component of gross national product is derived as the difference of large minuends and subtrahends. Consequently, substantial percentage errors are likely, especially in years when the absolute magnitude of the component is small.

Personal income is more reliable than national income. The major items included in personal income but not in national income (government transfer payments and government interest) are reliable. The exclusions that are made either do not affect reliability (such as the accurate deduction of social insurance contributions) or else actually increase it (such as the deduction of the corporate inventory valuation adjustment and all other components of corporate profits except dividends).

With respect to the disposition of personal income, the major point relates to saving. This item is the difference between large totals, and is therefore subject to sizable percentage error. Supplementary information that should be considered in interpreting the reliability of this component of the accounts is discussed in the section of the methodological descriptions dealing with personal saving.

Although a study of the methodology underlying the national income and product estimates is the main basis for an evaluation of reliability, there are two other types of evidence whose examination throws light on the subject. The first is the record of the "statistical discrepancy;" the second is the record of the revisions that are made of the estimates as originally published. These two will be discussed in turn.

Significance of the statistical discrepancy

The "statistical discrepancy" measures the excess of the gross national product as estimated by summing its component product flows over the gross national product as estimated by summing components of the national income and all other charges against the total value of gross national product. It arises because of errors in the component estimates, and hence is relevant to the problem of reliability.

In the national income and product account the statistical discrepancy is entered on the debit side, as an item reconciling national income with charges against national product. This manner of entering the statistical discrepancy is purely a matter of convenience. It permits the two most widely used aggregates—national income and gross national product—to be broken down into component items which do not include the "statistical discrepancy." It does not signify that the national income and the gross national product have been correctly estimated, and that the error has been made in the estimation of one or more of the items reconciling the two. Quite to the contrary, it is likely that the aggregates are affected whenever a statistical discrepancy appears.

The statistical discrepancy appears also in the business income and product account, and similar comments apply to the form in which the entry is made there. It may be noted that in the accounts as shown the item always reflects discrepancies between the estimates of business income and production. This is so because business income and production are obtained statistically by making consistent deductions for nonbusiness income and production from the two sides of the national income and product account. Hence, the results of all estimating inconsistencies, whatever their origin, are shifted into the business account.

The adjustment for statistical discrepancies appears also in the gross saving and investment account. It signifies an error either in total saving and/or total investment and in one or more of their components.

The statistical discrepancy is a measure of the difference in error between the two estimates of the total gross national product. While its presence is conclusive evidence that errors have been committed, a zero discrepancy does not constitute proof to the contrary. Strictly speaking, the discrepancy measures lack of consistency, and it does not register absolute errors which compensate in the accounts. To the extent, however, that the sources and methods of estimating the components of the credit and debit sides of the national income and product account are independent—in the sense that errors committed in estimating components on the one side do not involve corresponding errors on the other—it is reasonable to give some weight to the statistical discrepancy in evaluating the reliability of the totals. In these circumstances, greater confidence can be attached to the value of the national income and product totals if the size of the discrepancy is small than if it is large.

Degree of independence of income and product estimates

It is important, therefore, to consider to what extent the two sides of the income and product account are in fact independent as to statistical sources and methods. Quantification is not possible, but certain relevant considerations can be presented. These are of a summary nature and should be supplemented by the detail contained in the following statistical notes.

It is not possible to classify the estimates of the various components of the income and product flow into two neat groups, consisting of those that are based on independent sources and methods, on the one hand, and of those lacking such independence, on the other. In fact, the estimates range over a wide scale.

Largely due to the utilization of social security data, the estimates of employee compensation are the outstanding example of a close approximation to statistical independence on the income side of the accounts. Even this statement has to be qualified, because certain components of these estimates are entered identically on the product side (for instance, the sizable item for domestic service).

A second example of a high degree of statistical independence is provided by the estimates of government purchases, on the product side of the accounts. The degree of independence is probably somewhat smaller in this instance, because estimates of government employee compensation, in the national income, are based upon records and reporting systems related to those upon which the estimates of government purchases are made. However, in spite of this qualification, the degree of independence is very large.

While, on the other end of the scale, there is considerable interdependence of statistical methodologies, no major component of the income or product flow can be said to lack independence completely. However, the opportunity for consistent error is also wide. In particular, there is substantial interdependence between the business income components of the national income and the estimates of several of the components of the product flow. This is so because inventory and sales data are used in a related fashion.

The inventory valuation adjustment is perhaps the most clear-cut example of such a relationship. It is made in the form of identical entries on the income and product sides, consisting of an adjustment to the income of unincorporated enterprises and corporate profits, on the one hand, and to the change in the book value of inventories, on the other, in the measurement of the change in nonfarm business inventories.

Moreover, there is close interrelation between the estimates of unincorporated enterprise income and corporate profits and the change in the book value of inventories. For benchmark-year estimates, errors in corporate inventories result in identical errors in corporate profits, since both estimates are based on balancing corporate accounts submitted to the Internal Revenue Service. For noncorporate business inventories, the offset is complete in the case of farming, and it tends to hold for other unincorporated business to the increasing extent that the estimates are based upon balanced accounting data similar to those used for corporations.

Instances in which related sales or gross receipt series underlie the estimates of both business profits and product flows are analytically similar, although in statistical practice effective interdependence is usually reduced. Clear-cut examples are afforded by the rent and professional service estimates. Errors in gross dwelling rents and in the estimates of gross receipts of professional practitioners from consumers affect both personal consumption expenditures for services and the corresponding business incomes, although not necessarily to the same extent. The same type of relationship can be found in other areas of business income, unincorporated as well as corporate, although it may be attenuated by the particular statistical procedures adopted, or harder to trace because of a less explicit coordination of them.

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In the examples of interdependence hitherto given, all reference has been to instances in which for accounting reasons errors in the estimates of the product components must lead to offsetting errors in the income components. It may be noted that complete interdependence is not involved. Independent errors are still possible, for instance, when in deriving business profits current expenses are wrongly reported or estimated.

So far no reference has been made to compensating errors which are a matter of statistical probability rather than accounting necessity. For instance, when wage and sales data are taken from identical sources, lack of complete coverage of the basic reports may lead to similar errors in both items. However, this need not be the case. Both in census-type reports and in sample-based estimates, the error in the one component may differ from that of the other. Prior to the introduction of the social security data, the United States estimates were susceptible to this type of common error to an important extent. Large segments of the estimates of wages and salaries and of the product flow were derived from identical, industrial census, sources. Since the utilization of social security data, there do not appear to be any important areas of the income and product flows in which this type of error is significant.

The statistical discrepancy measures the net residual of error which remains after the best possible estimates of the various components of the income and product flow have been made. If initial estimates of the components lead to a sizable statistical discrepancy or to erratic movements in it, they are reexamined and an effort is made to trace the source of the discrepancy and to eliminate it as far as possible. This reexamination of the initial estimates consists mainly of a critical comparison of the methodology of the component estimates for error and inconsistency. This is an essential step of the estimating procedure which cannot be taken by the individual estimators responsible for the preparation of the component series, but must be reserved until initial estimates of all the components have been prepared. While significant improvements can sometimes be made in this manner, a residual discrepancy will remain.

The suggestion has been made that this residual discrepancy should be eliminated, either by the exercise of further judgmental decisions of the type used in reducing it from its initial size, or by the application of more formal mathematical procedures that tend in the direction of greater objectivity. Superficially, complete elimination of the statistical discrepancy would be desirable, from the standpoint of convenience to the users of the data. Basically, however, it would be harmful. A statistical discrepancy of substantial size or irregular movement reflects troublesome errors in the estimates. If this is the situation, the users of the data should be aware of it so that they can exercise due caution in the application of the estimates in economic analysis.

Characteristics of the revisions

Recent-year estimates of national income and product are based on incomplete data and are revised as additional information becomes available. A few of the components do not undergo significant revisions after the publication of the initial estimates, but this is not the usual case. Fairly widespread revisions can be expected in the estimates for the two most recent years because of the lag in the availability of Internal Revenue Service tabulations from income tax returns, which serve as benchmarks for many of the component estimates. Revisions extending further back reflect the incorporation of census information obtained at intervals which can range up to 10 years. In certain, much less frequent, instances, improved sources and/or methods may become available which call for revisions over an even longer number of years.

Some inferences as to reliability can be drawn from the record of the revisions which initial estimates of the income and product flows underwent in subsequent years. Frequent and large revisions in the estimates are a positive evidence of lack of reliability. However, absence of sizable statistical revisions can be taken as positive evidence of reliability only if the more recent estimates incorporate additional information which is known to be more reliable. In this case meaningful judgments as to the relative reliability of recent-year estimates as compared with later benchmark estimates can be made. But it is not possible to go further than this. Absence of revisions in estimates of several significant components of the income and product flow reflects only a lack of data accretion subsequent to the publication of the initial estimates, rather than constituting a positive sign of reliability.

With reference to the national income and product aggregates, it may be said that since their publication on a new basis in July 1947 the revisions in the initial estimates have been very moderate—generally less than 1 percent. Thus, for the years from 1942 through 1952—starting with the period in which estimates presented in the 1947 supplement have undergone at least one intermediate revision—the maximum difference between the present estimate of national income and any previous estimate published in the 1947 and 1951 supplements and in July issues of the SURVEY OF CURRENT BUSINESS is less than 1 percent in 8 of the 11 years. The exceptions are 1943 (1.2 percent), 1947 (2.7 percent), and 1948 (2.1 percent). Over the same time span, the maximum difference between the present and any previous estimate of the gross national product provided in the same reports is less than 1 percent in 6 years and 1.1 to 1.6 percent in three years. It amounts to 2.6 percent in 1946 and 2.0 percent in 1948.

Revisions of the annual changes initially shown by the totals have been much larger, of course. The worst record was with respect to the decrease from 1945 to 1946. In this instance, the initial estimate was cut from $9.4 billion to $4.3 billion for the gross national product and from $4.6 billion to $1.7 billion for the national income. The years immediately following the war, it may be noted, saw drastic changes, giving rise to unusual estimating problems, in both the composition of the national product and in the legal-form and industrial structure of the national income.

Of particular interest from the standpoint of gauging statistical reliability are the revisions incorporated in the present edition of the *National Income* supplement. As will be evident from the statistical notes which follow this Introduction, the major feature of these revisions is the incorporation into the estimates of the results of the postwar censuses (the 1947 Census of Manufactures, the 1948 Census of Business, the 1950 Census of Population and Housing, and the 1950 Census of Agriculture). Opportunity was taken at the same time to introduce numerous other new data sources and improvements in estimating techniques, some of them affecting series back to 1929.

As a consequence of the incorporation of the postwar census data, the new estimates replace for more than one-half of the gross national product total (but for a very much smaller proportion of the national income) preliminary series which represented extrapolations ranging up to 11 years of benchmark estimates based on prewar censuses. Evidence as to the reliability of the estimating procedures used by the National Income Division pending the availability of census information is accordingly provided.

That this evidence is distinctly favorable can be seen from the fact that in none of the years 1947 to 1950 did the estimates of gross national product incorporating the census data differ by more than $\frac{1}{10}$ of 1 percent from the preliminary estimates which they replaced. It may be noted that a favorable outcome of this general type had been expected with confidence. This was because the estimates of the national income, which are dependent on census data only in minor degree, had confirmed the gross national product estimates in the interim period. The statistical advantages of estimating income and product flows in an interrelated accounting framework are clearly apparent in this connection.

Needless to say, these favorable results should not be taken to indicate that census information is inessential to the estimates incorporated in this report. Census data provide indispensable benchmarks for these estimates, and the above evidence relates only to the feasibility of extrapolating such census-based benchmarks. Moreover, there is no assurance that the results of extensive extrapolation would be similarly accurate in future periods. Finally, extrapolating errors in the components of the income and product flow were larger than in the estimates of the aggregates, as will be noted in the subsequent sections dealing separately with these components. Frequent, comprehensive, and accurate census data are indispensable to the reliability of much of the detailed income and product breakdown.

It is generally true that percentage revisions in the national income and product totals are much smaller than those in some of their components. To a substantial extent, this is due to the effect of offsetting errors. According to past experience, such offsets may be counted upon to increase the reliability of the estimates as their finest components are added to obtain broader subtotals.

The national income and product series are published in somewhat greater detail than is warranted by the statistical reliability of some of the ultimate components. While it would be hazardous to attach precise significance to the level and movement of these components, offsetting errors make it feasible to recombine them into reliable subtotals differing from the published ones and better adapted to specific types of economic analysis. It is in order to facilitate judicious recombinations of this type that some of

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the detail (in particular recent-year detail on the industrial origin of some of the income shares and on the product breakdown of some of the consumer commodity and service flows) is published, and one should be aware that the use that can be made of these series in isolation is limited.

Allowing for statistical error

While the foregoing survey may provide a sufficiently definitive basis for the general conclusion that the estimated annual totals of gross national product, national income, and personal income are subject to only a small percentage of error, it clearly indicates that there is no easy way of providing the users of national income data with measures of statistical reliability. Relevant quantitative measures are not available; and, owing to the basic nature of the data, the prospect of their ever being constructed on a comprehensive scale appears quite limited. A study of the statistical methodology underlying the national income estimates, supplemented by analysis of the statistical discrepancy and of the revisions, will remain the major avenue for

Exhibit 1.—*Industrial Classification for the National Income* [1]

A. MANUFACTURING INDUSTRIES

Industrial division or industry [2]	Industrial content in terms of the Standard Industrial Classification 1942 edition (basis for 1929–47 national income data)	Industrial division or industry [2]	Industrial content in terms of the Standard Industrial Classification 1945 edition (basis for 1948–53 national income data)
Manufacturing	**19 to 39.**	**Manufacturing**	**19 to 39.**
Food and kindred products	20.	Food and kindred products	20.
Tobacco manufactures	21.	Tobacco manufactures	21.
Textile-mill products	22.	Textile-mill products	22.
Apparel and other finished fabric products	23.	Apparel and other finished fabric products	23.
Lumber and timber basic products	24.	Lumber and wood products, except furniture	24.
Furniture and finished lumber products	25.	Furniture and fixtures	25.
Paper and allied products	26.	Paper and allied products	26.
Printing, publishing, and allied industries	27.	Printing, publishing, and allied products	27.
Chemicals and allied products	28.	Chemicals and allied products	28.
Products of petroleum and coal	29.	Products of petroleum and coal	29.
Rubber products	30.	Rubber products	30.
Leather and leather products	31.	Leather and leather products	31.
Stone, clay, and glass products	32.	Stone, clay, and glass products	32.
Iron and steel and their products, including ordnance	19 and 33.	Primary metal industries	33.
Nonferrous metals and their products	34.	Fabricated metal products, including ordnance	19 and 34.
Machinery, except electrical	35.	Machinery, except electrical	35.
Electrical machinery	36.	Electrical machinery	36.
Transportation equipment, except automobiles	37.	Transportation equipment, except automobiles	37 (exc. 371).
Automobiles and automobile equipment	38.	Automobiles and automobile equipment	371.
Miscellaneous manufacturing	39.	Instruments	38.
		Miscellaneous manufacturing	39.

B. NONMANUFACTURING INDUSTRIES

Industrial division or industry [2]	Industrial content in terms of the Standard Industrial Classification 1942 edition (basis for 1929–53 national income data)	Industrial division or industry [2]	Industrial content in terms of the Standard Industrial Classification 1942 edition (basis for 1929–53 national income data)
Agriculture, forestry, and fisheries	**01 to 09.** [3]	**Transportation**—Continued	
Farms	01 to 06.	Air transportation (common carriers)	771.
Agricultural services, forestry, and fisheries	07 to 09.[3]	Pipeline transportation	78.
		Services allied to transportation	744, 766, 772, 773, and 80.
Mining	**10 to 14.**		
Metal mining	10.	**Communications and public utilities**	**81 to 83.**
Anthracite mining	11.	Telephone, telegraph, and related services	81 (exc. 813).
Bituminous and other soft-coal mining	12.	Radio broadcasting and television	813.
Crude petroleum and natural gas	13.	Utilities: electric and gas	821, 822.
Nonmetallic mining and quarrying	14.	Local utilities and public services, n. e. c.	823, 83.[3]
Contract construction	**16 and 17.**	**Services**	**84 to 96 (exc. 88), 707.**
		Hotels and other lodging places	84.
Wholesale and retail trade	**40 to 61 and 88.**	Personal services	85.
Wholesale trade	40 to 47.	Private households	86.
Retail trade and automobile services	48 to 61 and 88.	Commercial and trade schools and employment agencies	874, 953, and 954.
		Business services, n. e. c.	87 (exc. 874), 942, and 707.
Finance, insurance, and real estate	**62 to 70 (exc. 707).**	Miscellaneous repair services and hand trades	89.
Banking	62.	Motion pictures	90.
Security and commodity brokers, dealers and exchanges	66.	Amusement and recreation, except motion pictures	91.
Finance, n. e. c.	63, 64, 65, and 67.	Medical and other health services	92.
Insurance carriers	68.	Legal services	93.
Insurance agents and combination offices	69.[4]	Engineering and other professional services, n. e. c.	941 and 949.
Real estate	70 (exc. 707).	Educational services, n. e. c.	951 (exc. 953 and 954).
		Nonprofit membership organizations, n. e. c.	96.
Transportation	**72 to 80.**		
Railroads	72.	**Government and government enterprises** [2]	**97.**
Local and highway passenger transportation	73, 741, 742, 743, and 749.	Federal—general government [5]	
Local railways and bus lines	73 and 741.	Federal—government enterprises [6]	
Highway passenger transportation, n. e. c.	742, 743, and 749.	State and local—general government [7]	
Highway freight transporation and warehousing	75 and 79.	State and local—government enterprises [8]	
Water transportation	76 (exc. 766).		
		Rest of the world [9]	

1. Numbers refer to the code numbers in the Standard Industrial Classification Manual. (Government Printing Office, 1942 and 1945 editions.)
2. All establishments operated by government agencies or corporations are classified in the Government and government enterprises industrial division, regardless of their classification in the Standard Industrial Classification Code.
3. The National Income Division classification includes irrigation system operation in "Local utilities and public services, n. e. c."
4. In National Income Division classification, includes insurance agents, brokers, and services, and establishments regularly engaged in any combination of real estate, insurance, loans, or legal activities when none of these activities alone constitutes the principal business of the establishment.
5. Includes all Federal Government agencies and operations except those included in the industry, "Federal—government enterprises."
6. The following list enumerates all Federal enterprises: Agricultural Marketing Act Revolving Fund, Alaska Railroad, Army Post Exchanges, Banks for Cooperatives, Bonneville Power Administration, Boulder Canyon Project, Commodity Credit Corporation, Defense Homes Corporation, Defense Plants Corporation, Defense Supplies Corporation, Disaster Loan Corporation, Electric Home and Farm Authority, Emergency Crop and Feed Loan Program, Export-Import Bank, Federal Crop Insurance Corporation, Federal Deposit Insurance Corporation, Federal Farm Mortgage Corporation, Federal Home Loan Banks, Federal Housing Administration, Federal Intermediate Credit Banks, Federal Land Banks (until July 1, 1947), Federal National Mortgage Association, Federal Prison Industries, Inc., Federal Savings and Loan Insurance Corporation, Home Owners Loan Corporation, Inland Waterways Corporation, Maritime Administration (operating activities), Metals Reserve Company, Navy Ship Stores and Ship's Service Stores, Panama Canal Company, Panama Canal Zone, Panama Railroad Company, Petroleum Reserves Corporation, Post Office, Production Credit Corporations, Public Housing Administration, Reconstruction Finance Corporation, Regional Agricultural Credit Corporations, RFC Mortgage Company, Rubber Development Corporation, Rubber Reserve Company, Rural Electrification Administration, Smaller War Plants Corporation, Tennessee Valley Authority, U. S. Commercial Company, War Damage Corporation, War Shipping Administration (commercial operating and war risk insurance activities).
7. Includes all State and local government agencies and operations except those included in the industry, "State and local—government enterprises."
8. Includes State workmen's compensation funds, and business-type activities involving significant amounts and accounted for as enterprises, mainly alcoholic beverage monopolies; water, electric, gas, and transit systems; housing authorities; highway toll facilities; ports and terminals; and airports.
9. Includes foreign countries, United States territories and possessions and international organizations.

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obtaining an evaluation of their reliability. If best use is to be made of national income statistics, their reliability will have to be evaluated concretely on the basis of this evidence, from the standpoint of the specific economic problem at hand.

While the task of evaluating statistical reliability confronting the user of national income data is difficult, it should also prove rewarding. Analysis of methodology and of relevant supplementary evidence will forestall many misuses of the data. It will lead to more effective utilization of the data by channeling them into uses warranted by their nature and degree of accuracy. It will serve to make the informed user wary of many seemingly significant conclusions that are drawn from small changes in the data which are obviously well within their margin of error. Also, for any analysis an awareness of hitherto unknown limitations of particular national income series may demonstrate the advisability of marshaling all other relevant information, within and outside the scope of national income. Clearly, if the evidence is supportive and consistent, greater confidence can be attached to the indicated conclusions than if the evidence is contradictory.

Finally to be noted is that the suggested approach to evaluation of reliability is methodic, even though presently permitting quantitative definiteness in only few instances. Large strides may be anticipated from the integration into it of the results of further work and experience. For it must be recalled that official national income work in the United States spans merely two decades, and that the new and expanded series were established only in 1947. The scope for analysis of methodology will be substantially expanded over time with the continued improvement of source materials, the opportunity for testing past sources and the procedures applied to them, and a broadened basis for analyzing the record of revisions. The statistical notes and related material presented in this report represent only a start in the indicated direction.

Aim and Plan of Statistical Descriptions

The following sections in this Part deal with the sources and methods used in estimating the income and product flows. Insofar as feasible, the sections are written according to a uniform plan.

An introductory part first discusses the general nature and reliability of the series. Next follows a discussion of methodology, covering both base-year, or "benchmark" year, estimates and their extrapolations, whenever such a distinction is relevant. This discussion is intended largely as an evaluative review but also contains considerable descriptive material, with the dual objective of giving information about the principal methods used and affording an independent basis for judgment about reliability. Concluding remarks are made on the characteristics of revisions in instances in which a separate discussion of this subject appeared pertinent.

Only the annual estimates are covered by the sections on sources and methods. No reference is made to the monthly or quarterly series, or to the summary annual data derived from them which are published each February in the Annual Review Number of the *Survey of Current Business*.

In general, more emphasis is placed on recent-period estimates than on those for the period, say, 1929–39; and the discussion is aimed principally at covering the totals of the various components, rather than their industry or commodity breakdowns *per se*. Nevertheless, a considerable amount of information on these breakdowns is introduced, as it often is relevant to an evaluation of the broader categories and also is of substantial interest to users of the estimates.

The various income and product components selected for discussion cover all of those listed in the first four tables in the statistical section (Part V) of this report. These are the summary tables on national income by distributive shares, gross national product or expenditure, personal income and its disposition, and the relation of gross national product, national income, and personal income. At the end of this introduction is provided a summary of the stubs of these four tables, cross-referenced against the numbers of the various sections on sources and methods.

In the following descriptions of sources and methods numerous "exhibits", or supporting tables of data, are presented. Most of these exhibits refer to 1950. This year was chosen because the 1953 estimates (and the revised figures for 1951 and 1952) were not completed until after the text had been written and sent to press.

Although geared directly to the first four tables, the following sections on methodology furnish partial or complete coverage of nearly all of the other 35 tables of annual estimates. Many of these tables relate to income flows by industry. As already indicated, the discussions of the various distributive shares give considerable attention to their industry breakdowns; but national income by industrial origin, which is obtained statistically by aggregating these individual-share breakdowns, is not separately discussed. It is convenient at this point, therefore, to give consideration to an important summary aspect of the industry data—the basis of industrial classification underlying them.

Industrial classification of national income

The industrial distribution of national income is based primarily upon a classification of establishments rather than of companies, or firms. Use of the word "primarily" connotes a statistical exception (noted below), not one of definition.

The establishment is the preferred unit since it yields an industrial classification much closer to an activity basis than does the use of the company. It also largely prevents discontinuities due to mergers or other changes in the structure of ownership.

Industrial classification by establishments, for example, places in bituminous coal mining a soft coal mine owned by a corporation engaged primarily in the production of iron and steel products, whereas classification by companies places it in the iron and steel industry. The establishment classification, nevertheless, is quite different from an activity or product classification since many establishments produce secondary products which fall within industries other than those in which their major products are classified. Force-account construction is an important special type of secondary product.

The establishment basis is used for the industrial classification of wages and salaries, supplements to wages and salaries, income of unincorporated enterprises and inventory valuation adjustment, and interest paid by noncorporate enterprises. But, because of statistical necessity, the company basis of industrial classification is used for corporate profits, the corporate inventory valuation adjustment, and interest paid and received by corporations.

The data for these items are all calculated from tabulations of corporation income tax returns filed with the Internal Revenue Service. During the years from 1934 to 1941 such returns were filed by every corporation, with certain exceptions, and separately classified by industry. From 1929 through 1933, and again in 1942 and subsequent years, affiliated corporations were permitted to file consolidated returns. More precisely, then, from 1934 to 1941 the unit of classification for corporate profits and corporate interest is the individual corporation; from 1929 to 1933 and from 1942 on it is a corporate unit consisting of either a single corporation or of affiliated corporations.

Because the bulk of total income originating is comprised of distributive shares which are classified by establishments, and because of the probable tendency for subsidiary activities of corporations operating in more than one industry to be offsetting, it is unlikely that the industrial distribution of the total national income is seriously distorted by the use of a company, rather than an establishment, classification for corporate profits and corporate interest. This is a serious limitation, however, on the comparability of the distributive share estimates for some industrial groups, and one which should be considered carefully by those who use the data for particular industries.

The estimates of the national income and of the various distributive shares by industry are based upon the Standard Industrial Classification Code, which is published by the Office of Statistical Standards of the Bureau of the Budget and recommended for use by all agencies classifying data industrially. Departures from that Code were dictated, for the most part, by statistical necessity.

For the years 1948 to date, the national income estimates are based upon the 1945 edition of the Code for manufacturing and on the 1942 edition for nonmanufacturing industries.[1] The industry estimates for 1947 and prior years, however, are based wholly upon the 1942 edition of the Code. This difference introduces an element of noncomparability into the estimates for a number of industries in the manufacturing division, since the 1945 edition of the Code (now generally adopted by Federal statistical agencies) incorporated extensive changes for that division as compared with the 1942

1. Changes in classification for the nonmanufacturing industries were made in the 1949 edition of the Standard Industrial Classification Code. They are in general insignificant at the level of detail shown in the national income classification and are not incorporated into the present report. It may be noted that the State unemployment insurance wage data—the principal statistical source for the national income estimates—are not reported on the new basis.

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GUIDE TO SECTIONS ON METHODOLOGY

Income and product components	Section Number
NATIONAL INCOME BY DISTRIBUTIVE SHARES	
Compensation of employees:	
Wages and salaries	1
Supplements to wages and salaries	2
Income of unincorporated enterprises and inventory valuation adjustment:	
Income of unincorporated enterprises	3
Inventory valuation adjustment	11
Rental income of persons	4
Corporate profits and inventory valuation adjustment:	
Corporate profits before tax	5
Inventory valuation adjustment	11
Net interest	6
GROSS NATIONAL PRODUCT OR EXPENDITURE	
Personal consumption expenditures:	
Durable and nondurable commodities	7
Services	8
Gross private domestic investment:	
New construction	9
Producers' durable equipment	10
Change in business inventories:	
Nonfarm	11
Farm	3
Net foreign investment	12
Government purchases of goods and services	13
PERSONAL INCOME AND DISPOSITION OF INCOME	
Wage and salary disbursements	1
Other labor income	2
Proprietors' and rental income:	
Income of unincorporated enterprises and inventory valuation adjustment:	
Income of unincorporated enterprises	3
Inventory valuation adjustment	11
Rental income of persons	4
Dividends	5
Personal interest income	6

Income and product components	Section Number
PERSONAL INCOME AND DISPOSITION OF INCOME—Continued	
Transfer payments	14
Less: Personal contributions for social insurance	2
Less: Personal tax and nontax payments	13
Equals: Disposable personal income	
Less:	
Personal consumption expenditures:	
Durable and nondurable commodities	7
Services	8
Equals: Personal saving	15
RELATION OF GROSS NATIONAL PRODUCT, NATIONAL INCOME, AND PERSONAL INCOME	
Gross national product	
Less: Capital consumption allowances	16
Equals: Net national product	
Plus: Subsidies minus current surplus of government enterprises	13
Less:	
Indirect business tax and nontax liability	13
Business transfer payments	14
Statistical discrepancy	
Equals: National income	
Less:	
Undistributed corporate profits	5
Corporate profits tax liability	5
Corporate inventory valuation adjustment	11
Contributions for social insurance	2
Excess of wage accruals over disbursements	1
Plus:	
Net interest paid by government	6
Transfer payments	14
Equals: Personal income	

edition previously in force. Accordingly, in the industry tables in Part V, estimates for the manufacturing industries which were basically affected by changes in the Code cannot be shown for the entire period since 1929. For other industries, estimates are shown for all years of the period in spite of some noncomparability, but its approximate magnitude (for the year 1948) is indicated by footnotes in all instances in which it is significant.

The exhibit on page 66 provides a comparison of the National Income Classification with the Standard Industrial Classification Code.

1. WAGES AND SALARIES [1]

The annual estimates of total wages and salaries for the period since 1939 are extremely reliable. Over 90 percent of the total consists of reported payroll information taken from accounting records of business and government. The lag between preliminary and final estimates is short, and the largest revision that has been required in recent years by the accession of later data has been less then 1 percent of the total.

From the standpoint of sources and methods, the estimates may be divided into those covered by the social security systems and those not covered. The former include virtually the whole of industrial and commercial employment. They account for almost 80 percent of total wages and salaries and almost 95 percent of private-industry wages and salaries.

The area of the economy not completely covered by the Social Security and Railroad Retirement Acts, and therefore estimated independently, consisti of government, agriculture, private households, and a few quantitatively minor industries. The following tabulation shows a breakdown of wages and salaries into the segments estimated from different sources.

Industries Covered by Social Security Programs

Total payrolls

The reporting system that has been developed under the Social Security and Railroad Retirement Acts approaches the ideal as a source for income

1. This section covers also, at the end, "wage and salary disbursements," which is a component of personal income.

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estimates. It has the advantages of comprehensive coverage, regularity of reporting, and of being largely "self-policing," in that the wages reported by employers—upon which the size of benefits partly depends—can be verified by the employee. Because the reports from every firm list the employees and their wages individually, unlike other enumerative surveys, the possibility of omissions and accounting errors is minimal. Reported figures account for practically the entire total of wages and salaries in covered industries; only about 1 percent of the total must be filled in by estimation.

In industries covered by the old-age and survivors insurance program (OASI), each employer with one or more employees files a quarterly list of his employees and the taxable earnings paid to each employee—through 1950, the first $3,000 earned during the calendar year; thereafter, the first $3,600. Taxable payrolls are compiled from these lists for each calendar quarter and an estimate added for delinquent employers. The four-quarter sum of these totals represents about four-fifths of the total wages of these firms.

Exhibit 1.—*Wages and Salaries, 1950*

Item	Millions of dollars	Percent
Industries covered by social security programs	**114,770**	**78.3**
Industries not covered:		
Federal Government	11,843	8.1
State and local governments	10,368	7.1
Farms	2,724	1.9
Private households	2,668	1.8
Nonprofit hospitals	1,202	.8
Educational services, n. e. c. (part)	958	.7
Nonprofit membership organizations, n. e. c. (part)	827	.6
Insurance carriers (part)	279	.2
Agricultural services, forestry and fisheries (part)	98	.1
Federal Reserve banks	54	.04
Rest of the world	18	.01
Tips (in all industries)	717	.5
Total wages and salaries	**146,526**	**100.0**

Nearly all of nontaxable earnings in employment covered by the OASI program is reported under the State unemployment insurance (UI) programs. The State agencies obtain from employers covered by their programs regular quarterly reports on both total and taxable payrolls and summarize these reports for the Bureau of Employment Security of the Department of Labor. Taxable earnings under the OASI program and nontaxable earnings reported to the State unemployment insurance agencies together have represented in most years more than 99 percent of total wages and salaries in industries covered by the Social Security Act.[2]

The two sources are not quite complete because some of the UI programs exempt firms with few employees (ranging at present from 1 to 7, according to the individual State laws) and firms in business intermittently or for short periods. As such firms are covered by the OASI program, only their nontaxable wages must be estimated. This is done by a method developed in the Division of Research and Statistics of the Department of Health, Education and Welfare. The taxable payroll of firms not covered by the State laws is multiplied by a ratio of nontaxable to taxable earnings. The first of these factors, the taxable payroll, is obtained by subtracting taxable wages paid under the UI programs from taxable wages under the OASI program. The second factor, the ratio, is approximated from UI data and then adjusted, by use of a 1943 OASI study, to apply to firms not under the UI program.

The overall wage and salary estimates for industries covered by the Social Security Act are thus built up as the sum of (1) taxable earnings reported under OASI, (2) nontaxable earnings reported under UI, and (3) estimates, based on social security data, of nontaxable earnings in these industries not reported under UI.

Total wages paid under the Railroad Retirement Act are ascertained in much the same way. Wages taxable under this program—the first $3,600 for each employee—are reported quarterly to the Railroad Retirement Board, which processes and tabulates these data. The Board has an accurate basis for raising taxable wages to the total, by multiplying them by the ratio of total wages reported by employers to the Interstate Commerce Commission to the taxable wages of the same employers, which account for about 97 percent of taxable compensation.

Information necessary for computation of the "covered" wage and salary total has become available 6 months after the period in which the wages were earned. Thus in June of each year data have been available for the previous calendar year.[3] The figures are subject to revisions of two types: (1) Correction of errors in reported data and (2) substitution of actual data from delinquent reports for the earlier estimates of delinquent wages. In the past, revisions of either type have been negligible.

The relation of the reported to the estimated elements of wages and salaries for covered industries is shown in *Exhibit 2.* This covers the 1950 estimates prepared for publication in July 1954. The estimated portion was slightly less than 1 percent of the total. In the first estimates for 1950, published in July 1951, the estimated portion was somewhat higher—about 2 percent—because of the necessary higher allowance for delinquent wages.

Exhibit 2.—*Derivation of Wage and Salary Total for Covered Industries, 1950*

[Millions of dollars]

Item	Total	Reported by employers	Estimated
Industries under Social Security Act			
Taxable wages	87,204	87,184	[1] 20
Nontaxable wages	22,239	21,514	[2] 725
Industries under Railroad Retirement Act			
Taxable wages	4,704	4,704	----
Nontaxable wages	623	608	15
Total wages and salaries, covered industries	**114,770**	**114,010**	**760**

1. Estimated delinquency as of April 1954.
2. Nontaxable wages paid by employers not covered under State laws.

Industrial distribution of payrolls

The method used to derive an all-industry total of "covered" wages and salaries cannot be followed satisfactorily for the separate industries, chiefly because old-age and survivors insurance data have not until recently been collected or tabulated on an establishment basis. As noted in the Introduction to this Part, this is preferred to the company basis of classification.

The preparation of an industry breakdown of the covered payroll total relies heavily on the Bureau of Employment Security's reports summarizing wages and salaries under the UI programs, in which the establishment basis of classification is used. This source and the Interstate Commerce Commission's *Statistics of Railways* reports together provide accurate, employer-reported data by industries for about 95 percent of total covered payrolls.

The missing part consists of the payroll of firms (1) covered by the OASI program but not by the State laws and (2) covered by the Railroad Retirement Act but not reporting to the Interstate Commerce Commission. The latter element, quantitatively very small and affecting only a few industries, is estimated from data furnished by the Railroad Retirement Board. A satisfactory basis for estimating the former is furnished by special tabulations of old-age and survivors' insurance data showing by industries the taxable payroll of the small firms not covered by the State laws. These are available for the third quarter of 1940 and 1943 and the first quarter of each of the years 1945–49 and 1951.

For nearly all covered industries, the process of obtaining provisional estimates (before adjustment to the controlling total) involves simply the addition of these OASI and Railroad Retirement Board data to the comprehensive data reported under the UI programs and by the Interstate Commerce Commission. This general method was departed from only in those few instances where more reliable data were available from other sources or where the portion of employment in firms not covered by the unemployment insurance data was so large as to suggest use of another procedure. The industries thus

2. This percentage refers to the relation of the specified source materials in the 1939–50 period. Since 1951, taxable earnings under the OASI program ($3,600) have no longer coincided with those under the UI law ($3,000), and coverage of OASI has been expanded to include some groups, chiefly agricultural and private household workers, not covered under the UI programs. The Bureau of Old-Age and Survivors Insurance, however, furnishes a special estimate of what the OASI taxable wage total for the year would have been in terms of the 1950 coverage provisions—thus permitting extension of the basic procedure being described, which represents an integration of OASI taxable wages and UI nontaxable wages. This special estimate is derived from sample data which serve, in effect, to adjust reported taxable wages for the year to a 1950 coverage basis.

3. At present, however, there is a time lag of one year in the availability of the special estimate of total OASI taxable wages on the 1950 coverage basis. This is not a significant limitation, as the taxable wage total for the most recent year can be estimated within narrow limits by means of the change in this aggregate shown by UI data.

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receiving special treatment include "agricultural services," "forestry," "fisheries," "banking" (prior to 1943), "water transportation" (prior to 1947), "medical and other health services," and "legal services." The data utilized in making estimates for these industries were obtained from the population and industry censuses, the Maritime Commission, governmental banking regulatory bodies, and special surveys of the professions (described in the section on Income of unincorporated enterprises) conducted by the National Income Division.

The summation of direct industry estimates from these general and special sources yields a payroll aggregate falling short of the independent controlling total in most years by only a fraction of 1 percent.[4] A large part of this discrepancy can be traced to exclusions from the industry estimates of amounts unclassified by industry in both the unemployment insurance data and the special tabulations of OASI small firms, as well as to the omission of nontaxable wages from the latter. Adjustment to the controlling total is accomplished by allocating the amount of the discrepancy among the industries in proportion to the estimates of wages not covered by the State unemployment insurance programs.

For the years 1929–38, before social security data were available, wages and salaries for the "covered" segment of the economy were derived from diverse sources, the most important being the periodic censuses of industry and business. These provided coverage of manufacturing,[5] retail trade, wholesale trade, most of the "covered" services, mining, construction, insurance, communications and public utilities, and parts of banking, highway transportation, and services allied to transportation. Reliable, comprehensive data were available from Federal reports also for banking, railroads, pipeline transportation, and air transportation. For the industry groups for which censuses furnished one or more benchmarks, the general procedure for estimating the intercensal years was through interpolation or extrapolation by sample data on payrolls and employment collected by the Bureau of Labor Statistics. The series prepared for individual industries for the years 1929–39 were used to extrapolate the 1939 estimates derived from social security data.

Industries Not Covered by the Social Security Programs

Federal Government

Civilian payrolls of the Federal Government—executive, legislative, and judicial—are reported monthly to the Civil Service Commission and the Department of Labor from records of the individual agencies. The data become available with about a 2-month lag; subsequent revisions due to late reporting are negligible. Two small items are estimated by the National Income Division and added to the reported payroll total for the continental United States: (1) the pay of employees stationed abroad who are citizens of the continental United States, and (2) the pay of civilian employees of Army post exchanges and Navy ship stores and ships' service stores.

Prior to September 1933, monthly payroll data for the civil executive service were not available. The Bureau of Labor Statistics derived the 1929–33 annual estimates largely on the basis of *Budget of the United States Government* figures and detailed employment data collected by the Civil Service Commission.

Federal Government civilian payrolls have been divided between general government and government enterprises on the basis of these sources, supplemented on occasion by direct reports from certain of the individual agencies such as the Post Office Department, the largest of the enterprises. Little estimation has been necessary.

Military wages are estimated as the sum of cash pay and allowances and of pay in kind. Information on cash wages is secured separately on a fiscal-year basis from the five armed services. These accounting (budgetary) records must be adjusted in some instances to eliminate nonwage items. The adjustments likewise are based on detailed data furnished by the services. The data are generally adequate for the purpose, even though not developed for it. The fiscal-year figures are then converted to a calendar-year basis by means of monthly estimates supplied by the armed services to the Bureau of Labor Statistics. Prior to 1934, when monthly payroll estimates were not available, this conversion was made by monthly distributions of personnel.

Pay in kind includes the cost value of food consumed by the Armed Forces and standard issues of personal clothing. This is estimated by the various services from their cost records, since no suitable accounting data for the two items are available. The procedure involves multiplication of the number of personnel receiving the food or clothing by the estimated cost per person.

Necessary revisions of the calendar-year estimates of military wages are usually small but on occasion have been as large as 5 percent.

Wages and salaries in Federal work relief projects, covering the period 1933–43, are compilations of the Department of Health, Education, and Welfare from records of the various agencies which administered the projects.

State and local government

Estimates of public education payrolls—classified in general government—have been based since 1946 on information reported by the Bureau of the Census. In the preparation of these estimates, three series of payroll data have been utilized, covering (1) the school years 1945–46, 1948–49, and 1949–50, (2) 1 month of each quarter for the period 1946–49, and (3) each month since early 1951. These data were derived from samples covering a very large proportion of the universe (in general, 80 percent or more) and, as indicated in Census Bureau reports, having a small degree of sampling variability.

The school-year figures were converted to calendar-year totals for 1946, 1949, and 1950 by use of patterns shown by the monthly data noted in (3) above. Estimates for the calendar years 1947 and 1948 were obtained by interpolation. For this purpose an annual series was prepared for 1946–49 which represented for each year a combination of reported data for 4 months—see (2) above—and estimates for the other months based on the later monthly payroll distributions. For the period beginning with 1951, annual totals are the sum of the monthly amounts reported by the Census Bureau. Totals derived from this monthly series, it may be noted, check closely with the annual data collected by the Census Bureau in its comprehensive 1952 survey and published in *Summary of Government Finances in 1952.*

For the period 1929–39, the annual estimates of public education payrolls are those prepared by the State, county, and municipal survey conducted by the Department of Labor with Works Projects Administration funds and published by the Department in *Employment and Payrolls in State and Local Governments, 1929–39.* This survey collected data from all States and a comprehensive sample of local governmental units.

Estimates of public education payrolls for the years 1940–45 represent interpolations of the 1939 Labor Department estimate and the 1946 Census-based estimate by means of a series constructed from detailed payroll data given in the *Biennial Survey of Education* of the Office of Education. The 1939 and 1946 values in this series, it may be noted, agreed closely with the totals used for those years.

For the years 1940–50, total nonschool payrolls (except work relief)—general government and government enterprises combined—were estimated by the Census Bureau for 1 month in each quarter from a mail sample of government units. Months not sampled were filled in by the National Income Division by straight-line interpolation. Estimates for years since 1951 represent the sum of sample-based monthly figures reported by the Census Bureau. As in the case of the public education series, the Census Bureau's nonschool payroll data have been obtained from samples accounting for a very large part of the estimated total and subject to small sampling variability.

The Census Bureau generally has provided separate data for 1 month in the year on government enterprise payrolls. These are interpolated for intervening months by total nonschool payrolls. Subtracting enterprise payroll from total nonschool payroll yields the general government portion of the latter.

The annual estimates of nonschool (except work relief) payrolls for the period 1929–39 are those prepared by the State, county, and municipal survey noted above. Separate data were provided for general government and government enterprises.

State and local government payrolls include also a small amount of income in kind, representing the value of food and lodging received by government hospital employees and of food received by State prison employees. This has

4. In 1950, for example, the total of the direct industry estimates was lower than the $114.7 billion aggregate by only $500 million.

5. For a description of the methodology used for this large industry, see the article on wages and salaries by Edward F. Denison in the June 1945 *Survey of Current Business*, pp. 23–24.

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been estimated from data contained in two Census Bureau publications: *Patients in Mental Institutions* and *Prisoners in State and Federal Prisons and Reformatories.*

State and local work relief wages, covering the period 1929–42, were derived largely from reports of the Federal Emergency Relief Administration, supplemented by compilations of the Departments of Labor and Health, Education and Welfare. For lack of complete data, the estimates for 1929–32 (totaling only $50 million for the period) are subject to sizable percentage error.

Farms

Farm wages, including both cash payments and the cost of board, lodging, and other perquisites furnished to hired workers, are estimated by the Agricultural Economics Division of the Department of Agriculture. The cash part, comprising more than four-fifths of the total, is taken as reported in the Census of Agriculture. The census figures are extended to other years by sample data on employment obtained monthly and wage rates quarterly from a mail questionnaire of between 15,000 and 20,000 farmers.

When the results of the 1950 Census of Agriculture became available, it was necessary to correct the 1949 estimates of cash wages derived from the sample by only 3 percent. Larger corrections had been required to adjust to the censuses covering 1929, 1939, and 1944.

The basic data for estimating wages in kind were obtained from two early census enumerations and several sample surveys. Sample data on employment, wage rates, and the prices of perquisite items are used for extrapolation.

Private households

Estimates of the total cash pay of domestic servants are obtained as the product of employment and average annual earnings. For the period beginning with 1940, the employment totals used represent monthly averages of data collected by the Census Bureau in its continuing sample study of the labor force reported in *Current Population Survey*. Prior to 1940, it was necessary to base the movement of employment on indirect data (employment in industrial and commercial pursuits), and the resulting series was adjusted to an estimate of the number of domestic servants derived from 1930 Census of Population data.

For the years 1939 and 1949, estimates of average cash earnings of domestic servants were computed from data in the 1940 and 1950 Census of Population showing the frequency distribution of such persons by detailed size-of-earnings classes. Estimates for other years since 1939 have been obtained by interpolating and extrapolating the 1939 and 1949 census-based averages by means of the domestic service component of the Consumer Price Index of the Bureau of Labor Statistics. To obtain average earnings figures for the period 1929–38, the 1939 estimate was extrapolated by an index of the average earnings of domestics prepared by the National Bureau of Economic Research from data collected from employment agencies by the National Income Division and the National Bureau.

The value of board furnished domestic service employees is based on a standard budget for 1935–36 derived from the National Resources Planning Board study on *Family Expenditures in the United States, 1935–36*, moved by changes in food prices and multiplied by the proportion of employees receiving board in 1936, as estimated from a survey of employment agencies made by the National Income Division.

It should be noted that the level of private household employment indicated for 1950 by the Census Bureau's *Current Population Survey*—as incorporated in the present estimates—is about one-third higher than that shown by the decennial Census of Population. The Census Bureau has found that data pertaining to employment of women 25 years old and over and in industries where part-time and occasional work is common tend to be reported more accurately in its current survey than in the decennial census. It is believed that for areas where labor force classification is difficult—including domestic service—the *Current Population Survey* yields more reliable results by reason of the greater skill and experience of its permanent enumerative staff.

Nonprofit hospitals

Direct estimates of nonprofit hospital payrolls have not been prepared separately. Instead, these are derived by subtracting the payroll of proprietary hospitals, as obtained from social security records, from independent estimates for all privately controlled hospitals. The following description relates to the latter.

Virtually complete data on the cash payroll of privately controlled hospitals have been collected annually by the American Hospital Association since 1944. Only slight estimation is required to secure the aggregate, of which nonprofit hospitals account for about four-fifths. The value of maintenance furnished employees is added by the National Income Division. The value of maintenance per employee receiving maintenance was derived from the 1935 Census of Hospitals and has been extrapolated to 1944 and later years by an index constructed by weighting the Consumer Price Index by one and the food component of this index by four. The proportion of employees receiving maintenance was estimated from the 1935 census, and, in the absence of later information, this proportion has been held constant. Maintenance accounts for about one-fifth of total wages and salaries.

Prior to 1944 the only comprehensive payroll data were those provided by the 1935 Census of Hospitals. The 1935 census total (cash and maintenance) was extended back to 1929 mainly by data collected in a special survey of hospitals made by the National Income Division in 1935.

Estimates through 1941 were prepared by extrapolating the 1935 payroll by estimates constructed from such information as the number of hospital beds and the average salary per bed, per capita expenditures for hospital inpatient service, and the average daily census of patients. Unemployment insurance data (covering largely proprietary hospitals) were used to interpolate between the 1941 and the 1944 payroll estimates.

Since the hospital estimates for the period 1936–43 are based on diverse and partial sources, it may be noted that the original estimate for 1944 differed by only 2 percent from the final estimate subsequently derived from the basic data provided by the American Hospital Association, adjusted to include maintenance.

Nonprofit membership organizations, n. e. c. (part)

The bulk of wages and salaries of nonprofit membership organizations not covered under the social security laws is comprised of the payroll of religious organizations. This payroll is estimated separately for payments in cash and in kind.

The basic estimate of cash payrolls was derived from the 1936 Census of Religious Bodies, reported totals being raised to allow for churches not reporting. This figure has been extrapolated by multiplying estimated annual employment by an index of average salaries computed from data supplied the National Income Division by various denominations, with the movement between 1940 and 1950 adjusted on the basis of earnings information reported for clergymen in the Census of Population. The employment estimates have been derived from data obtained from the following sources: the 1930, 1940, and 1950 Census of Population; the *Official Catholic Directory;* a special survey of Catholic dioceses made by the National Income Division, covering 1929–35; and correspondence with other denominations.

The rental value of parsonages was assumed to be 10 percent of their value, as reported in the 1926 and 1936 Censuses of Religious Bodies. The rent component of the Bureau of Labor Statistics' Consumer Price Index has been used for interpolation and extrapolation. The value of board received by Catholic clergymen—the other item of pay in kind—was estimated for 1934 from data collected in the special survey by the National Income Division. The extrapolation to other years has been made by the product of number of clergymen and the food component of the Consumer Price Index.

Estimates of payrolls for other nonprofit organizations not covered by social security are based on the 1935 Census of Nonprofit Organizations, Office Buildings, and Miscellaneous. To obtain estimates for other years of the 1929–39 period, the 1935 census data were extrapolated largely on the basis of the domestic current expenditures of private social welfare and relief agencies (as included in table 30, pt. V). For the period beginning with 1940, the National Red Cross payroll has been obtained directly; and the remainder represents an extrapolation—with adjustment to the employment level indicated by the 1950 Census of Population—chiefly on the basis of payrolls in "covered" nonprofit membership organizations.

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Educational services, n. e. c. (part)

Estimates of wages and salaries for private educational services not covered by the social security laws are prepared separately for parochial schools, other elementary and secondary schools, higher education, and a miscellaneous category of institutions and agencies. The general procedure is one of piecing together information on average earnings and employment (the latter adjusted to conform with results of the 1940 and 1950 Census of Population). The Office of Education has been the principal source of data, including not only the *Biennial Survey of Education* and other published reports, but also numerous special tabulations. Other sources include the National Catholic Welfare Conference, the National Education Association, State unemployment insurance tabulations, and a special survey of Catholic dioceses made by the National Income Division covering the period 1929–35.

Life insurance carriers (part)

Until the 1951 amendments to the Social Security Act, insurance solicitors on a commission basis were excluded from coverage of that act.[6] The basic estimates of the number of such persons were derived from the 1935 Census of Insurance and from the Institute of Life Insurance's *Fact Book* for 1940 and 1945–50. The 1935 census also presented data permitting the computation of the average earnings of solicitors for that year. Such earnings could be estimated for 1951 through a comparison of the average earnings of insurance employees covered by OASI (including solicitors on a commission basis) with the earnings of those covered by UI (not including solicitors). The 1935 and 1951 average earnings figures were interpolated and extrapolated by average annual earnings of "covered" employees in the insurance industry. Multiplication of employment by average earnings yielded the payroll series used.

Federal Reserve Banks

Wages and salaries are obtained from the annual reports of the Board of Governors of the Federal Reserve System.

Agricultural services, forestry, and fisheries (part)

Only parts of the agricultural service, forestry, and fishery industries are covered by the social security laws. These are deducted from estimates of total payrolls (described below) to obtain the noncovered portions as shown in *Exhibit 1*.

Forestry payrolls (and employment) are estimated separately for (1) gum turpentine and gum rosin production and (2) other forestry. Logging, it may be noted, is classified in manufacturing rather than forestry.

Base-period estimates for the first segment, which accounts for most of the industry, are derived from Census of Manufactures data. Extrapolation to other years has been based mainly on a total labor cost series, computed from Department of Agriculture data. This is derived by multiplying the physical volume of production of turpentine and rosin from gum by estimates of labor cost per unit of naval stores.

Employment in other forestry is estimated as a residual between total employment for the industry as shown by the Census of Population and employment in gum turpentine and gum rosin production. To obtain payroll, the average earnings of turpentine and rosin workers are assigned to this residual group of employees.

Wages and salaries of fisheries were derived for 1939 from employment and earnings data reported in the 1940 Census of Population. The census data could be used directly, with only minor adjustment. The 1950 Census of Population provided another benchmark figure on employment, but the earnings data reported there (for 1949) covered the self-employed as well as employees. Payrolls for 1949, therefore, were estimated in conjunction with the income of unincorporated business, with 1950 census data furnishing a control total for both. Addition of corporate profits to this total yielded a combined aggregate of payroll and business income which was extrapolated to 1945 and 1947 by means of data on the value of the catch furnished by the Department of the Interior. Payrolls for 1945 and 1947 were derived by subtracting from this factor-income total the income of corporate and noncorporate business enterprises as estimated from tabulations of Federal income tax returns to the Internal Revenue Service. For years other than 1939, 1945, and 1947, fishery payrolls were estimated, in the main, through interpolation and extrapolation by the value of the catch series.

Benchmark estimates of the payroll and employment of agricultural and similar service establishments were prepared for 1939 from old-age and survivors insurance data. In that year, although not subsequently, the OASI program provided complete coverage of this industry. Payroll estimates for the period after 1939 were obtained by extrapolating the 1939 benchmark chiefly on the basis of data reported under the UI programs, which—with adjustment for small firms not covered by them but covered by OASI—have accounted for about two-thirds of estimated total payroll in the industry. Prior to 1939, payrolls were estimated as the product of employment and average employee earnings. Employment was derived by extrapolating the 1939 figure by the Department of Agriculture's index of farm production. The average earnings series for that period represents an extension of the 1939 average by the National Income Division series for miscellaneous repair services and hand trades, as adjusted for 1935–39 movement on the basis of data reported for a group of agricultural service industries in the 1935 and 1939 Census of Service Establishments.

Rest of the world

This series is described in the section on net foreign investment.

Tips

Tips are treated in the category "not covered" since it is believed that the extent of actual coverage under the social security laws is small. The social security regulations state that tips are considered wages only if the employee renders to the employer an accounting of the tips. To the extent that tips are covered, however, they offset any exclusions of income in kind, which is treated as being completely reported in the social security payroll data.

Tips were estimated at $0.7 billion in 1950, and are included in the payroll estimates for retail eating and drinking places, railroads, taxicabs, hotels, personal services, and athletic and social clubs (classified in amusements and recreation, n.e.c.).

Tips in eating and drinking places were estimated for 1939 from wage studies in restaurant occupations made by State labor departments of Illinois, New York, Ohio, and Rhode Island. The 1939 estimate has been extrapolated to other years by the Office of Business Economics series on sales of eating and drinking places.

The estimates for the railroads (except dining and buffet cars) were prepared on the basis of a survey for 1929 and 1933 conducted by the Brotherhood of Sleeping Car Porters for the National Income Division, and extrapolated to other years by the number of berth and seat passengers in sleeping and parlor cars (reported annually in *Statistics of Railways*) and estimated changes in the percent of passengers tipping and the average tip. Tips in dining and buffet cars are estimated at 12 percent of dining and buffet car sales (reported annually in *Statistics of Railways*).

Tips in the taxicab industry are calculated at 15 percent of operating revenues, on the basis of several studies of the industry in the midthirties.

The studies for New York and Illinois used in estimating tips in eating and drinking places also provided the basis of the estimates of tips to hotel and club food service employees in 1939. The 1939 figures have been extrapolated to other years largely on the basis of estimated hotel and club receipts from meals and beverages. The allowance made for tips of nonfood employees of hotels—while based in part on studies of the New York State Labor Department—is, of necessity, essentially arbitrary.

Tips in personal services are estimated at 5–8 percent of the receipts of barber shops, beauty parlors, and baths and masseurs. The higher figure has been used for recent years.

Wage and Salary Disbursements

"Wage and salary disbursements," a component of personal income, is equal to wages and salaries plus the excess of wage disbursements over wage accruals.

6. In previous issues of the National Income supplement, such solicitors were classified as proprietors, and their earnings were included in "income of unincorporated enterprises".

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Because of retroactive wage and salary payments, it is necessary to adjust wages and salaries from an accrual basis to a payment basis for inclusion in the personal income estimates. The adjusted series is termed "wage and salary disbursements." The adjustment item, the excess of wage disbursements over wage accruals, reflects the difference in timing, as between receipt and earning, of retroactive wages.

The following example indicates the procedure of moving from wages and salaries to wage and salary disbursements. In 1946 a retroactive wage payment of $30 million was made by the Western Union Telegraph Co., under order of the National War Labor Board. The award applied to work performed in the years 1943, 1944, and 1945, in the amounts of $2, $14, $14 million, respectively. Wages and salaries, which reflect earnings on an accrual basis, in this specific case are $2 million in 1943, $14 million in both 1944 and 1945, and 0 in 1946. The adjustment item, the excess of wage disbursements over accruals is $—2 million in 1943, $—14 million in 1944 and 1945, and $30 million in 1946. Consequently wage and salary disbursements are 0 in each year 1943–45, and $30 million in 1946.

The adjustment of wages and salaries to wage and salary disbursements is not intended to correct discrepancies between the two arising from all retroactive wage payments, but only for the more significant of these actions. While in the case of the Western Union award noted above, it was possible to secure direct information on these payments, more often such information has to be approximated from news accounts or other less formal sources.

2. CONTRIBUTIONS FOR SOCIAL INSURANCE and OTHER LABOR INCOME

This section describes the derivation of (1) *Employer contributions for social insurance*, (2) *Personal contributions for social insurance*, and (3) *Other labor income*. Of these series, the first and third together comprise Supplements to wages and salaries (shown by type in table 34, Part V), a component of the national income. The incomes on which personal contributions for social insurance are paid are measured in the national income before deduction of these contributions. Both employer and personal contributions, however, are excluded from personal income (the latter handled as an explicit deduction item in the computation of the personal income total).

The two series on contributions for social insurance comprise items for which highly reliable data are obtained, with virtually no time lag, almost exclusively from the accounting records of the agencies administering the programs. Employer contributions for social insurance currently account for one-half of total supplements to wages and salaries, although from 1937 until recent years the proportion was much higher. Estimates of *Other labor income* are not so reliable. They are based to a lesser extent on comprehensive accounting data, and these become available with a lag of two to three years. Considerable estimation is involved for the most recent years.

Contributions for Social Insurance

Social Security Programs

Regular contribution reports filed by employers with the administering agencies or with the United States Treasury are the source of data on contributions made by employers under the old-age and survivors insurance program, the State unemployment insurance and cash sickness compensation programs, the railroad retirement and unemployment insurance programs, and the Federal unemployment tax. The reported contributions data are lagged (usually one-quarter year) to time them with the accrual of the wages and salaries on which they were levied, rather than with the receipts of the Government funds.

Like covered payrolls, discussed in the notes on Wages and salaries, these contributions data are a byproduct of operations under the social security laws. They are subject to revision only to the extent that wage reports are in error and that estimates made for delinquent reports are corrected on the basis of [illegible] data. Revisions for any these causes have been negligible.

The industry distributions of employer contributions under these several programs—which are required for the industrial breakdown of the national income—either are available from tabulations of employer reports or can be estimated satisfactorily from taxable wage data.

Data by industry on employer contributions under the State unemployment insurance programs have been obtained for years since 1940 from the Bureau of Employment Security of the Department of Labor. They are summations of employer reports. For the years 1936–39, when reported data were not available on an industry basis, estimates were prepared by extrapolating the 1940 industry figures back to 1936 on the basis of the National Income Division's estimates of wages and salaries, and then adjusting the results proportionately to the all-industry total for each year.

Beginning with 1951, the industrial breakdown of employer contributions under the OASI program has been obtained by multiplying the contribution rate by data on total taxable wages as reported by the Bureau of Old-Age and Survivors Insurance of the Department of Health, Education and Welfare. For the years 1941–50, the industrial distribution of these contributions was derived as the product of (1) the contribution rate and (2) reported taxable wages under the State unemployment insurance programs plus estimated taxable wages of firms covered by old-age and survivors insurance but not covered by the State programs chiefly because of the varying size-of-firm exclusion provisions of the latter.[1] The old-age and survivors insurance data for small firms were estimated from periodic special tabulations by the Bureau of Employment Security of the Department of Labor. In the absence of taxable payroll data by industry prior to 1941, the estimates in each industry for that year were extrapolated to the 1937–40 period by total wages and salaries in the industry, with appropriate adjustment to the annual all-industry aggregate.

The Federal unemployment tax has been allocated by industry on the basis of taxable wages reported under the State unemployment insurance laws.

The all-industry totals for employer contributions under the railroad retirement and unemployment insurance programs have been allocated among the few industries in which there is coverage on the basis of total payrolls, as derived in preparing the estimates of wages and salaries.

Cash sickness contributions by employers, confined to a few States, have been distributed by industry in the same proportion as unemployment insurance contributions in those particular States.

Of the various programs of social insurance listed above, employees contribute to all except railroad unemployment insurance.[2] As in the case of employer contributions, data on contributions by employees are obtained from the administering agency or the United States Treasury, and are lagged so as to make the timing coincide with the payroll disbursements on which the contributions are based.

In addition to employee contributions under these programs and under the Government retirement and life insurance systems covered below, the series on *Personal contributions for social insurance* includes contributions for old-age and survivors insurance by the self-employed. (See table 35, Part V.) They were first paid in 1952, on 1951 incomes, under amendments extending coverage of the OASI system as of January 1, 1951. Data on such contributions, which are paid annually by self-employed individuals with their returns on Federal income taxes, are furnished by the Bureau of Old-Age and Survivors Insurance.

Government systems

Payments made by the Federal Government and by its employees to its civilian employee retirement systems are obtained from records of the Treasury Department or of the agencies responsible for the administration of the systems. Data on the Government's contributions are reported on a

1. The available tabulations of total taxable payrolls under the OASI program were not used for this period in obtaining an industry distribution because they were based in large part on a classification of firms, rather than establishments, and therefore were not comparable to the estimates of wages and salaries. Use of unemployment insurance wage data for this purpose was made possible by the fact that the $3,000 taxable wage provision under the State laws coincided with the OASI provision (which was changed to $3,600 effective January 1, 1951).

2. Under the State unemployment insurance laws, however, employees have contributed [illegible]

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fiscal year basis, and the figures for adjoining fiscal years are averaged to obtain calendar year estimates. The Government's and individuals' contributions to the Government and National Service Life Insurance Funds are compiled monthly from reports of the Veterans' Administration.

Estimates of national income by industry require a separation of Federal Government contributions as between general government and government enterprises. This poses no problem with respect to the numerous (and quantitatively minor) funds other than the civil service fund, since the functions of agencies with separate funds are clearly defined. But since the Federal Government makes one lump-sum payment each year to the civil service retirement fund, it is necessary to make a statistical allocation of the data for this fund between general government and government enterprises.

For years other than 1941–45, this allocation has been accomplished on the basis of Treasury data on employee contributions to the retirement fund classified by individual Federal agencies. To obtain estimates for the 1941–45 period, the 1940 estimate of the Government's contribution for enterprise employees was extrapolated by the relative change in government-enterprise employee contributions (adjusted for the July 1, 1942, rate change), and the Government's contribution for general government employees was obtained as a residual.

This procedure was adopted because, while employee contributions were swelled by the expansion of payrolls, the Government's contribution was not increased proportionately. Most of the war service employees, concentrated in general governmental agencies, were expected to withdraw from the Federal service before attaining eligibility for retirement benefits, taking refunds of their contributions instead of adding to the long-run liabilities of the fund for benefit payments.

Estimates of employer and employee contributions to retirement systems for State and local government employees have been furnished for years beginning with 1936 by the Division of Research and Statistics of the Department of Health, Education, and Welfare. Base year data for these estimates were developed through a joint study by that Division and the Bureau of the Census. Contributions for the fiscal year 1940–41 were estimated on the basis of questionnaires on the operations of retirement systems sent to all State and large local governmental units and to a sample of the smaller units. These base year estimates have been extended to other years by data compiled by the Census Bureau in its annual financial statistics series and in special reports, and from published annual reports for some of the larger retirement systems. The fiscal year data have been adjusted to a calendar year basis by averaging successive fiscal years. The estimates for 1929–35—definitely of lesser reliability—were prepared by extrapolating the 1936 figure provided by the Health, Education and Welfare Department by contributions data obtained from a sample questionnaire survey of State and local government units conducted by the National Income Division.

State and local government employer contributions have been allocated between general government and government enterprises in proportion to the breakdown of employee contributions for 1939 estimated from data furnished by the Census Bureau. The enterprise portion is small, the 1939 estimate amounting to only $3 million.

Other Labor Income

Compensation for injuries

Estimates of benefits paid to workers (and their dependents or survivors) insured under State and Federal accident compensation laws, either on a compulsory or voluntary basis, have been prepared annually since 1939 by the Division of Research and Statistics of the Department of Health, Education, and Welfare. These estimates are based on data for private insurance companies from the Spectator Co.'s annual *Insurance Yearbook*, for State insurance funds from reports of the funds, and for self-insurers from information furnished by the State accident compensation commissions. Reports of the United States Employees' Compensation Commission also are utilized. Data from these sources become available with about a year's lag, and a preliminary estimate is made by the Department of Health, Education, and Welfare from direct information for a few States and industrial injury data compiled by the Department of Labor. The estimates for years prior to 1939 were prepared by the National Income Division by methods paralleling those followed for later years, but greater use was made of data from the State commissions.

The Division also estimates the relatively small amounts of court-awarded benefits received by injured railroad and maritime workers, since these are not covered by the compilations noted above. The estimates for railroad workers are based on Interstate Commerce Commission data on payments by railroads for injuries to persons (employees and passengers) and on the numbers of employees and passengers killed or injured, as published annually in *Statistics of Railways*. The estimates for maritime workers were derived for 1938 from data contained in the Labor Department Bulletin (No. 869) on *Workmen's Compensation and the Protection of Seamen*, and extrapolated to other years by maritime employment.

The industrial breakdown of the 1929–38 totals of workmen's compensation for injuries was prepared in several parts. Estimates were first made separately for the following industries: Federal Government; railroads; maritime employment in water transportation; telephone, telegraph, and related services; all of the mining industries except crude petroleum and natural gas; and stevedoring, a component of services allied to transportation.

The sources of the data for railroads and maritime employment already have been noted. Data for the Federal Government and for stevedoring were obtained from the United States Employees' Compensation Commission. Payments in telephone, telegraph, and related services were estimated by raising the amounts of accident disability benefits and death benefits reported annually by the American Telephone & Telegraph Co. by the ratio of total payroll in the entire industry to the payroll of that company. The industry components of mining were estimated from tabulations of data reported by the accident compensation commissions in the principal mining States.

For all other industries, total payments in 37 States for the period 1929–38 as a whole were tabulated from the report on *Workmen's Compensation Experience Compiled in 1941* of the National Council on Compensation Insurance.[3] To these figures were added data for three additional States compiled from State reports. The 10-year aggregates for each industry were then distributed by years in proportion to employment, and the resulting estimates for each year were adjusted proportionately to the totals for all industries not independently estimated.

In the preparation of estimates by industry for years since 1939, the Division's employment series has been used to extrapolate estimated 1938 payments in each industry except railroads, Federal Government, and maritime employment (which have continued to be estimated separately by the procedures indicated above). The results have then been adjusted to the all-industry aggregate less data for the separately estimated industries.

Employer contributions under private pension and related plans

Contributions in this category relate to the following types of private programs: (1) Pensions, (2) health and welfare programs, and (3) group insurance protection.

(1) The series on employer contributions to private pension plans covers transactions under several different financial arrangements, including contributions to self-administered plans (involving separate funds administered by employers either directly or through a bank or other agent), the purchase of group annuities under plans administered by life insurance companies (where usually there is no separate pension fund with segregated assets), direct payments by employers without the establishment of a fund (of minor magnitude), and contributions to employees' profit-sharing trusts.

The totals for the period 1929–38 were built up as the sum of several estimated parts.[4] Data for railroads were obtained annually from *Statistics of Railways*. Estimates for higher education were derived from contributions data furnished by the Teachers' Insurance and Annuity Association. Data on employer contributions by churches, the Young Men's Christian Association, and the Young Women's Christian Association were obtained annually for the period 1933–38 from the *Church Pension Conference Report* and

3. Data are given in this source for an extremely detailed industrial classification. The time and labor in combining and converting them to the National Income Division classification prohibited the compilation of separate data for each year.

4. Contributions under profit-sharing plans, evidently of inconsequential amount in this period, were not included in the 1929–38 estimates for lack of data.

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extrapolated back to 1929 by church pension payments. The estimates for all other industries (in the aggregate) were derived for the years 1932–38 from direct and collateral information contained in the study by Murray Latimer on *Trends in Industrial Pensions*. For the period 1929–31, with data lacking, they were made on the assumption that contributions dropped annually from 1929 to 1932 by one-half of the average annual drop from 1932 to 1934.

Totals for the period 1939–51 were derived as the sum of estimates for employer contributions for pensions by religious organizations and institutions of higher education (both obtained from the same sources as noted for the 1933–38 estimates), Federal Reserve banks (from the banks' annual reports), and employer contributions in all other industries combined. The last category was available for 1945–51 (as of July 1954) in the Internal Revenue Service *Statistics of Income* publications, the reported data on corporate contributions requiring only minor adjustments for inclusion in the series. It was estimated for the years 1943 and 1944 from special tabulations of pension plans submitted to the Internal Revenue Service for approval for income-tax deduction purposes under the Revenue Act of 1942. The tabulations were not designed primarily for statistical purposes, and the data on number of plans in operation and average annual contribution per plan derived from them were not sufficiently accurate in time-period reference to yield more than rough orders of magnitude for these 2 years.

Estimates for 1941 and 1942 were obtained by proportional interpolation between the 1937 and 1943 values, using the number of plans in operation as an interpolating index. Information on the number of plans in operation was obtained from the Latimer study for 1937 and from the Internal Revenue Service for 1941, 1942, and 1943. Employer contributions in 1939 and 1940 represent straight-line interpolation between the 1938 and 1941 estimates.

The corporate data reported in *Statistics of Income*—accounting for nearly all of the employer contributions total—do not become available until the third year after the period to which they refer. In the interim, the current estimates are prepared very largely by extrapolation on the basis of payrolls and of pension plan information from several sources. These include the Bureau of Labor Statistics' monthly *Current Wage Developments*, which reports coverage and contributions data relating to the more important new plans and revisions of plans already in effect; data from insurance associations on premium payments under plans administered by life insurance companies; and special tabulations of pension plan contributions reported by corporations to the Securities and Exchange Commission. Extrapolations prepared from these materials have significant limitations, and the current estimates are subject to appreciable revision.

Direct information on the industry distribution of employer contributions to private pension funds is at present confined mainly to the comprehensive Internal Revenue corporate tabulations for 1945–51 and to available data permitting the preparation of separate estimates for several industries. These include religious organizations; educational services, n. e. c. (taken as equal to higher education); Federal Reserve banks; railroads; and telephone, telegraph, and related services (compiled from annual reports of the major companies).

In addition, an Internal Revenue Service tabulation of employer contributions by industry covering the 5,116 plans approved through December 31, 1944 was used as the basis of a distribution (apart from the separately estimated industries) for 1944. For all other years of the period since 1929, the 1944 and 1951 estimates have been extrapolated, industry by industry, by wages and salaries, with the resulting distribution adjusted proportionately to the all-industry aggregate exclusive of the separately estimated group of industries.

Employer pension contributions have increased greatly, both in absolute and relative terms, since World War II. For this period, except for the preliminary estimates for the two most recent years, it is to be noted that the pension series is based almost entirely, both in aggregate and by industry, on comprehensive corporate tabulations of the Internal Revenue Service.

(2) Contributions by employers under health and welfare programs have been derived by assembling data for the larger plans known to be in existence and preparing estimates for the remaining smaller plans.

Listings of existing plans, together with statements of their coverage and provisions, have been obtained mainly from publications of the Bureau of Labor Statistics, especially B. L. S. Bulletin 841 and the September 1946 Supplement to this Bulletin, Bulletin 900, and the monthly reports on *Current Wage Developments*. Studies by the Department of Health, Education, and Welfare and the August 1946 Supplement to the periodical *Labor and Nation* also have been utilized.

Data on employer contributions to the principal plans have been obtained for the most part directly from the administering organization. Thus, data have been secured from the Amalgamated Clothing Workers of America, the International Ladies Garment Workers Union, the United Mine Workers of America, and the American Telephone & Telegraph Co.

For other plans, estimates have been prepared by multiplying the number of employees covered by a plan (usually as reported in the general sources cited above, or obtained directly from the union involved) by average earnings of employees in the industry to obtain estimated wages of covered workers. These have been multiplied by estimated contribution rates (the modal rate given in the above sources) to obtain the estimated amount of employer contributions.

The method of estimation, it will be noted, furnished the industrial distribution of employer contributions to health and welfare plans.

(3) Employer contributions for group insurance are based upon studies for the years 1948 and 1951 made by the Department of Health, Education and Welfare and for 1929 from information presented in *Industrial Group Insurance, 1929*, National Industrial Conference Board. The 1948 and 1951 studies utilized reports by life insurance associations, the United States Chamber of Commerce surveys of accident and health insurance, Blue Cross and Blue Shield reports, and other sources. The 1929, 1948, and 1951 estimates were prepared for five categories of group insurance, and each has been interpolated and extrapolated by the National Income Division by data on total premium receipts of the organizations furnishing the particular type of insurance coverage. The totals have been distributed by industry according to the relative distribution of employer contributions to private pension funds, after eliminating from the pension distribution the data for industries, such as coal mining and telephone and telegraph, which are known to have well established welfare funds (included in (2) above) providing group insurance benefits.

Other components

The remaining components of other labor income include pay of military reservists, Government payments to enemy prisoners of war, merchant marine war-risk life and injury claims, directors' fees, jury and witness fees, compensation of prison inmates, and marriage fees to justices of the peace. These items in 1950 amounted to only 11 percent of other labor income. Over the entire period of the estimates only three—military reserve pay, payments to enemy prisoners of war (covering the period 1943–46), and directors' fees—have attained any appreciable magnitude. The other items have always been negligible in amount.

Data on the pay of military reservists have been obtained from the armed services or from the annual *Budget of the United States Government* on a fiscal year basis, and averaged to obtain calendar year estimates. This type of supplement increased sharply in the postwar period.

Fiscal-year data on total Federal payments to enemy prisoners of war were obtained from the Department of Defense. These were converted to a calendar year basis by use of data from that Department on the number of prisoners of war in the United States as an interpolating index. The estimated amounts paid to prisoners of war working for civilian contractors were deducted from the total, since such payments are included under wages and salaries, chiefly in farming.

The estimates of directors' fees are crude. They are prepared in two parts. For the finance, insurance, and real estate industry, which accounts for about half of the total, the estimates are made by multiplying the ratio of directors' fees to compensation of officers in Federal Reserve member banks by the total compensation of corporate officers reported by the Internal Revenue Service in *Statistics of Income*. For other industries, a similar procedure is followed, but direct information on the ratio of directors' fees to compensation of officers was limited to the years 1929 and 1932.

Within each of these two broad groups—finance, insurance, and real estate and all other industries—directors' fees are distributed by industry in proportion to compensation of corporate officers as reported by the Internal Revenue Service.

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3. INCOME OF UNINCORPORATED ENTERPRISES

Apart from farm income, which has been studied systematically by the Department of Agriculture for many years, no comprehensive body of data covering any appreciable time interval exists for the income of unincorporated enterprises. Estimation in this field has generally required the laborious piecing together and adjustment of various types of data from numerous sources, some only inferentially connected with noncorporate business income. In the light of the experience gained in estimation and the changing nature of source materials, the National Income Division has periodically reviewed, and materially revised, its estimating procedures in an effort to develop more refined estimates. No such review, however, has as yet produced really satisfactory results, for refinement of estimating techniques, unfortunately, is not an adequate substitute for reliable source materials.

Still, the latest such revision, prepared for this 1954 edition of NATIONAL INCOME, can be said to mark a significant step forward in the work. The incorporation into the estimates of data on noncorporate business receipts and number of proprietors from the postwar industrial and population censuses was in itself of value. But reference is had mainly to the availability of information from the Internal Revenue Service which afforded for the first time a sound basis for adjusting for understatement the net income data which previously had been provided from tabulations of unaudited tax returns submitted by individual proprietors and by partnerships. With the benefit of this information, the estimates of total nonfarm unincorporated business income for the later period may be adjudged reasonably reliable as to general level.

Exhibit 1.—*Income of Unincorporated Enterprises, 1949*

Industry	Millions of dollars	Percent
Farms	12,718	37.8
Professional services	3,819	11.3
Medical and other health services	2,386	7.1
Legal services	987	2.9
Engineering and other professional services, n. e. c.	227	.7
Accountants	219	.7
Business	17,144	50.9
Retail trade and automobile services	8,012	23.8
Contract construction	2,541	7.5
Services (except professional service)	2,200	6.5
Wholesale trade	1,269	3.8
Manufacturing	1,238	3.7
Finance, insurance, and real estate	775	2.3
Transportation	602	1.8
Mining	243	.7
Agricultural services, forestry, and fisheries	235	.7
Communications and public utilities	29	.1
Total	33,631	100.0

General summary of sources and methods

The statistical approach and methods adopted in national income and product estimation are primarily a function of the character of available data. The force of this general proposition is clearly illustrated by the estimates of the income of unincorporated enterprises. Three broad segments of the estimates may be differentiated with respect to source materials and methods used: Income of professional practitioners, business income (the nonfarm total except for professional service income), and farm income. (See *Exhibit 1.*)

(1) Estimates of the net income of professional practitioners—amounting to 11 percent of the noncorporate total in 1949—are prepared very largely by multiplying the number of persons engaged in independent practice in each profession by their average net income. This method, adopted at an early stage of the official national income work, takes advantage of the basic data on the number of practitioners from enumerations by the decennial Census of Population (and of the records of professional associations and other sources permitting extension of the census data to other years). The dearth of requisite information on income, however, led the National Income Division to undertake the collection of data on the average net income of independent practitioners in the various professions. Questionnaire surveys, first made in 1933 to cover the years 1929–32, have been conducted at periodic intervals. The results of three postwar surveys were published in the August 1949 *Survey of Current Business* for lawyers, the January 1950 *Survey* for dentists, and the July 1951 *Survey* for physicians.

(2) Information for estimating the "business" segment of the income of unincorporated enterprises—one-half of the total in 1949—has been generally fragmentary. Comprehensive data are lacking except for 1945 and 1947, for which years the Internal Revenue Service provided tabulations of the incomes of sole proprietorships and partnerships filing income tax returns. The proportion of the total number of firms filing was very large because of comparatively low income exemptions and the high levels of business activity.

For individual industries comprising this segment, the initial basic step in procedure has been to establish a measure of the universe in terms of either gross receipts or number of active proprietors. Gross receipts have then been multiplied by a profit ratio (ratio of net income to receipts); the number of proprietors, by an estimate of their average net income. For both methods, the years 1939, 1945, and 1947 represent benchmarks, developed almost entirely from Internal Revenue and Census materials.

Comprehensive data on receipts of sole proprietorships and partnerships were reported for most of the larger industries for 1939 and 1947 or 1948 in the industrial censuses and for all industries for 1945 and 1947 in the tabulations of income tax returns. Some of the censuses required some allowance for undercoverage, and the Internal Revenue data had to be adjusted for enterprises not filing returns and for differences in industrial classification from that used by the National Income Division. Noncorporate business receipts were also reported in a few of the 1929 censuses; but for all years other than 1929, 1939, 1945, and 1947 or 1948 receipts almost always have had to be estimated indirectly, generally by interpolation and extrapolation by available data on total receipts (corporate and noncorporate combined) or corporate receipts. The accuracy with which this could be done has varied widely among industries.

Estimates by industry of number of active proprietors also have been derived in large part from the industrial censuses, which for the period prior to 1939 furnished information for this item more frequently than for noncorporate receipts. The other principal source has been the decennial Census of Population. The 1940 and 1950 censuses, with their cross-tabulations of the employed labor force by class of worker and detailed industry, were more useful for this purpose than the 1930 census. Estimates of number of proprietors by industry for noncensal years have been obtained by interpolation and extrapolation techniques utilizing, for the later period, chiefly the business population series of the Office of Business Economics.

For all three benchmark years 1939, 1945, and 1947, the Internal Revenue Service tabulations for sole proprietorships and partnerships filing returns were employed in the estimation of profit ratios and average income per proprietor by industry. It was necessary to adjust the data to represent the universe through estimation of the profit ratios or average net income of enterprises not included in the tabulations. Because of the difference in tax return coverage, this adjustment was quite important for the 1939 estimates but comparatively minor for the 1945 and 1947 estimates.

For extension of the base-year profit ratios or average income figures to other years, Internal Revenue Service tabulations for sole proprietorships for 1941, 1943, and 1949 furnished the most directly relevant data. They required, however, difficult adjustments for differences in scope and other aspects of noncomparability. To adjust, industry by industry, for firms not filing returns in 1941 and 1943—as well as in benchmark year 1939—extensive use was made of the comprehensive IRS tabulations for 1945. Nonfilers were viewed as firms in the lower income and sales classes, and the relationships found to obtain between the reporting (larger) and non-reporting (smaller) firms in the 1945 distribution were used to expand the markedly less complete IRS tabulations for 1939, 1941, and 1943.

In the interpolation and extrapolation of the IRS-based estimates of profit ratios and average income per proprietor, heavy reliance has been placed on corporate profits data.[1] These can be obtained annually from Internal

1. Where it appeared important to improve comparability with the noncorporate data, compensation of corporate officers and sometimes net corporate monetary interest have been added to corporate profits (before tax) prior to calculation of the ratio of corporate profits to sales or average income per corporation.

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Revenue tabulations except for the two or three most recent years, when sample information must be employed. For the period after 1939, data for smaller-sized corporations have been utilized. Prior to that, when small-corporate data were lacking, the movement of noncorporate profit ratios or average income was based to a great extent on data for all corporations.

While the source materials for estimating the income of unincorporated nonfarm businesses have been generally unsatisfactory, a change in this situation is in process. This stems mainly from the broadened coverage of the Federal income tax and the plan of the Internal Revenue Service to mine the comprehensive source of statistical data afforded by the returns. As noted, the Service already has provided detailed industry tabulations of proprietorship and partnership returns for 1945 and 1947 and of proprietorship returns alone for 1949. Proprietorship tabulations for 1951 are now in process.

It is clear that prospect for further improvement in the basic data situation for the entrepreneurial income segment of the national income must rest in the availability of comprehensive, current tax-return tabulations. For, despite limitations, tax returns under a well-administered law are the best source of annual information which it is feasible to secure on the earnings of unincorporated enterprises. In the absence of such information, the necessary resort to indirect data as the basis of estimation cannot be very satisfactory, particularly on an industry basis.

The reliability of any income estimates for noncorporate business is conditioned by the fact that this group characteristically includes a large number of relatively small enterprises, which follow a diversity of accounting practices and frequently maintain only rudimentary records. But now that the income tax and the expanded social security system are covering a very high percentage of business proprietors, it can be anticipated that record-keeping and accuracy of reporting will improve with the passage of time. Not only will the individual firm require systematic records for these purposes, but the growing audit program of the Internal Revenue Service will tend both directly and indirectly to promote standardization and accuracy of reporting.

In this connection, it should be noted that results of the Internal Revenue Service 1949 audit study have been incorporated into the estimates for the "business" segment of income of unincorporated enterprises. This was an intensive audit, based on a representative sample, giving primary emphasis to business income reported by individuals. It was carried on by experienced field investigators through direct contact with taxpayers and examination of their records.

The IRS 1949 audit study permitted an adjustment to be made, by industry, of the net income reported for tax purposes by individual proprietors. For lack of data, the same relative adjustment was applied to the income reported by partnerships. Analysis of collateral audit information indicated that, insofar as size-of-firm differences (as measured by "adjusted gross income") alone are determining, a lesser adjustment might have been in order. However, an estimate of the magnitude of difference involved amounted to only a small percentage of total business income, and would tend to offset any extent to which the audit study could not uncover all errors on the part of taxpayers resulting in understatement of income.

(3) The Department of Agriculture furnishes the estimates of farm proprietors' income included in the national income. The estimation of farm income is a principal part of the over-all statistical services rendered by the Agricultural Marketing Service. From the quinquennial Census of Agriculture, the Department's Crop and Livestock Reporting services, field surveys, and many other sources, it has developed both income and balance sheet statistics for the agricultural industry.

The aggregate net income of farmers is derived as the difference between gross income (calculated in detail by type of product) and production expenditures (estimated separately for about 40 different types of expense). Such a complete development of income data by means of a synthetic income and expense statement is unique with agriculture.

Because the individual industry figures on noncorporate business income are subject to unusual estimating difficulties and are not so reliable as the industry breakdowns for most other types of national income, only industrial division totals are presented in table 17 of Part V. However, to show the general composition of the division totals and the factors underlying their movement over time, *Exhibit 2* gives individual industry estimates of the income of unincorporated enterprises for selected years of a two-decade span. The exhibit does not extend beyond 1949, it may be noted, since that is the latest year for which noncorporate business income data by industry are presently available from the Internal Revenue Service.

The following description of methodology is divided into the three areas noted in the foregoing introductory remarks: Professional services, business, and farm.

Exhibit 2.—*Income of Unincorporated Enterprises, by Industry, 1929, 1939, 1945, and 1949* [1]

[Millions of dollars]

	1929	1939	1945	1949
All industries, total	14,617	11,776	30,941	33,681
Agriculture, forestry, and fisheries	6,033	4,378	11,972	12,953
Farms	5,968	4,317	11,824	12,718
Agricultural services, forestry, and fisheries	65	61	148	235
Mining	54	61	108	243
Metal mining	2	5	3	5
Anthracite mining	2	1	3	4
Bituminous and other soft coal mining	6	7	28	39
Crude petroleum and natural gas	34	42	63	169
Nonmetallic mining and quarrying	10	6	11	26
Contract construction	1,127	646	1,088	2,541
Manufacturing	565	400	2,361	1,238
Food and kindred products	64	88	387	215
Tobacco manufactures	3	1	7	4
Textile-mill products	23	14	119	40
Apparel and other finished fabric products	132	73	603	185
Lumber and timber basic products	38	30	85	[2] 173
Furniture and finished lumber products	18	17	93	
Paper and allied products	5	5	30	14
Printing, publishing, and allied industries	101	52	130	165
Chemicals and allied products	31	15	64	31
Products of petroleum and coal	1	1	5	7
Rubber products	0	1	16	3
Leather and leather products	15	9	75	28
Stone, clay, and glass products	23	12	42	47
Iron and steel and their products, including ordnance	26	19	137	[2] 201
Nonferrous metals and their products	24	17	123	
Miscellaneous manufacturing	23	18	147	
Machinery, except electrical	31	22	213	97
Electrical machinery	3	3	31	10
Transportation equipment, except automobiles	2	1	40	4
Automobiles and automobile equipment	2	2	14	14
Wholesale and retail trade	2,867	3,193	9,676	9,281
Wholesale trade	382	478	1,739	1,269
Retail trade and automobile services	2,485	2,715	7,937	8,012
Finance, insurance, and real estate	762	346	757	775
Banking	2	1	3	2
Security and commodity brokers, dealers and exchanges	392	65	171	34
Finance, n. e. c.	20	17	27	49
Insurance agents and combination offices	162	144	226	340
Real estate	186	119	330	350
Transportation	220	249	426	602
Railroads	0	0	0	0
Local railways and bus lines	0	0	0	0
Highway passenger transportation, n. e. c.	41	27	115	119
Highway freight transportation and warehousing	173	215	289	452
Water transportation	1	4	10	14
Air transportation (common carriers)	0	0	0	0
Pipe-line transportation	0	0	0	0
Services allied to transportation	5	3	12	17
Communications and public utilities	9	7	23	29
Telephone, telegraph, and related services	3	2	6	6
Radio broadcasting and television	0	1	2	4
Utilities: electric and gas	0	0	0	0
Local utilities and public services, n. e. c.	6	4	15	19
Services	2,980	2,496	4,530	6,019
Hotels and other lodging places	123	91	252	192
Personal services	493	396	758	923
Commercial and trade schools and employment agencies	9	6	13	25
Business services, n. e. c.	168	172	345	451
Miscellaneous repair services and hand trades	192	157	449	563
Motion pictures	50	28	112	73
Amusement and recreation, except motion pictures	48	52	157	130
Medical and other health services	1,145	903	1,527	2,386
Legal services	571	553	763	987
Engineering and other professional services, n. e. c.	119	104	103	227
Educational services, n. e. c.	62	34	51	62

[1] "Income of unincorporated enterprises" measures the net income of sole proprietorships and partnerships, except that the series for wholesale trade includes estimated patronage refunds and stock dividends paid by farmers' cooperatives (shown separately in table 12).

[2] Because of changes in industrial classification, as discussed in the Introduction to Part III, basic data are not available for making 1949 estimates for the individual industry groups. Approximate comparibility is possible, however, for the combined-group totals.

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Income of Independent Professional Practitioners

The professional services cover the following industry groups for which estimates are published in table 17 of Part V of this report: Medical and other health services, legal services, accountants (included in business services, n. e. c.), and engineering and other professional services, n. e. c. For the medical group, aggregate net income is the sum of series for physicians and surgeons, dentists, osteopathic physicians, chiropractors, chiropodists, private-duty trained nurses, veterinarians, and miscellaneous curative and healing services. For the engineering and "other" group, income is estimated separately for engineering and architectural service and for other professional services, n. e. c.

Of these various professions, by far the largest are physicians and surgeons, lawyers, and dentists. These three groups accounted for four-fifths of professional service income in 1949.

Medical and legal services

For the medical and legal service industries the income of proprietors measures the earnings of all professional practitioners from independent practice. It is derived by multiplying (1) the number of professional persons in independent practice (full or part time) by (2) average net income figures determined from questionnaire surveys of the professions.

(1) For some or all of the years 1930, 1940, and 1950, data from the decennial Census of Population permitted the derivation of the total number of self-employed persons for the three major groups—physicians, dentists, and lawyers—and also for veterinarians and miscellaneous curative and healing services. For the other medical and health service groups, the universe numbers of persons engaged in independent practice have been estimated in a generally satisfactory manner from such sources as reports of the professional associations, mailing lists of the Fisher-Stevens Service, Inc. (a mail-service company), and, for 1929, the report of the Committee on the Costs of Medical Care. This Committee's report also furnished an estimate of the total number of physicians in independent practice in 1929.

For interpolation and extrapolation, the *American Medical Directory* of the American Medical Association has provided data for most years since 1929 on the total number of physicians (including those not in practice), and for some years on the number engaged in private practice. The American Dental Association has furnished information on the number of dentists for years since 1941, with estimates for 1929 and 1931–39 being obtained by straight-line interpolation and extrapolation of the 1930 and 1940 census-based figures. Straight-line interpolation and extrapolation has also been necessary to fill gaps in the data for the other medical professions. This is not, however, a source of any appreciable error in the medical services total, as these professions form only a small part of it.

For the number of lawyers, interpolations have been based mainly on data obtained from the Martindale-Hubbell Law directory and from compilations of the number of attorneys listed in a selected group of city directories.

In the estimates for physicians, dentists, lawyers, and veterinarians, adjustments have been made for the changing number of professional practitioners in the armed forces after 1940, on the basis of data obtained from the Procurement and Assignment Service of the National Roster of Scientific and Specialized Personnel and from the Department of Defense.

(2) Most of the income surveys yielding the data on average net income used in the estimates for the medical and legal services industries have been conducted by the National Income Division, usually in cooperation with the professional association in the field. In most cases, separate computations of average entrepreneurial income were made for nonsalaried practitioners (those deriving all their net income from independent practice) and for part-salaried practitioners (those deriving income both from independent practice and from salaried work).

All of the periodic questionnaire surveys have relied upon a voluntary response to mailed questionnaires. The respondents were not identified. Questionnaires were mailed either to all persons in the profession or to a representative sample of the profession. Information was requested in each case for a series of years. Usable replies have been received, on the average, from about 15 percent of the mailing, apart from the 1950 survey of physicians, for which the percentage was as high as 45. Because of larger-sized samples, the sampling error in the later surveys (covering the period since 1937)—aside from the question of possible bias in the response—is probably smaller than in the earlier surveys. This consideration is especially important with respect to the legal profession, in which the dispersion of income, and consequently the sampling error, is larger than in the curative professions.

The generally low rate of response to most of the questionnaire surveys raises doubt concerning the representativeness of the sample data on average income. Various tests, however, point to the probability of no marked bias on this score. It has been possible in many cases to check the representativeness of the sample with respect to known characteristics of the profession sampled, such as State of practice, size of city, and age of practitioner. In addition, study of average incomes in the various professions by age classes, years-in-practice classes, city-size classes, and regions—and, in cases where the sample was large enough, by cross-classifications of these characteristics—has been reassuring. The income patterns revealed were both uniform and plausible.

Further substantiating evidence is afforded by the result of the specific check on response bias made in the 1950 physicians' income survey. As explained in the report in the July 1951 *Survey of Current Business*, the first and second follow-ups of the first response modified its findings only slightly and indicated the absence of appreciable bias. Mainly because the initial response rate was so high, however, this result is not conclusively applicable to the earlier surveys.

The questionnaire surveys for physicians, dentists, and lawyers have provided average income data for almost all years of the period since 1929. For these three professions, average income estimates for years not covered by National Income Division surveys have been made in various ways. These include interpolations by the results of questionnaire surveys by other agencies (for physicians, by *Medical Economics* magazine; and for dentists, by the American Dental Association), by reference to the movement of income in one of the other two professions, or by using disposable personal income to interpolate gross receipts and industry (professional) payroll data to interpolate expenses. A recent-period procedure by the Division has been to make short surveys (based on a mailing of only 3,000–5,000 questionnaires) in order to obtain interim information for extrapolation purposes. Reports on such surveys, covering lawyers, dentists, and physicians, were given in the July 1950 and July 1952 issues of the *Survey of Current Business*.

For the remaining group of smaller medical professions, surveys by the National Income Division provided average income data for most years of the earlier period. Later estimates represent extrapolations from survey benchmarks for the year 1941 in the case of private-duty nurses and veterinarians, and for 1937 for osteopaths, chiropractors, and chiropodists. Because of evidence of some past period correspondence, the average net income of physicians has been generally used as an extrapolating series for these groups. Little direct information has been available on average incomes in the miscellaneous curative and healing services.

Other professional services

Estimates of the two remaining professional groups—engineering and other professional services, n. e. c. and accountants—are of lesser validity because of the lack of directly relevant information for most years.

With respect to the former, the component series on engineering and architectural service has been derived from combinations of numerous sources, including income-tax return data, a survey of consulting engineers by the National Income Division covering the 1929–32 period, and an index of the value of all engineering construction contracts awarded as reported by *Engineering News Record*. The other, much smaller, component, other professional services, n. e. c., has been estimated from tax return data and use of the total net income in legal services as an interpolating and extrapolating series.

The net income of independently employed accountants was obtained for 1929–36 by multiplying their estimated number by average income data collected in National Income Division surveys. The total net income of accountants for the period beginning with 1945 was estimated on the basis of tax return data. For intervening years, it was estimated largely from the linear regression between the net income of accountants and that of lawyers in independent practice.

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Income of Business Enterprises

The aggregate net income of noncorporate "business" enterprises—the nonfarm total other than professional service practitioners—represents the summation of separate estimates for about 65 industry subgroups. Many of these, however, are quite small. Three important industries—retail trade, wholesale trade, and construction—largely determine the accuracy of the business total. They accounted for 69 percent of it in 1949.

The following discussion of this segment is divided into the several time-periods characterized by general similarity of source materials and procedural problems. It describes the preparation of the estimates of noncorporate business income prior to correction for audit. To the extent based on tax-returns data, the estimates for each of the periods reviewed were adjusted, industry by industry, by reference to results of the Internal Revenue Service 1949 audit study discussed above. The necessity of using a single adjustment factor for all years was somewhat unfortunate, but nonetheless represented a substantial improvement over the situation when no systematic basis was available for any period to allow for the understatement of income reported in compilations of unaudited tax returns. As described in the 1951 NATIONAL INCOME supplement, the allowances that could be made for this factor were informal and indirect.

Benchmark estimates, 1945 and 1947

The tabulations from tax returns provided by the Internal Revenue Service for 1945 and 1947 represented such high coverage of all proprietors in the business segment as to constitute, after certain necessary adjustments, benchmark materials.

For both 1945 and 1947, the Internal Revenue tabulations showed receipts, expense, and net income information by industry, separately for sole proprietorships (from the business schedule of the individual income tax returns) and for partnerships (from the mandatory informational returns). The information for sole proprietors in 1945 and partnerships in 1945 and 1947 was classified by receipts size-class of firm. The tabulations were based on complete coverage of the larger sized enterprises and on estimates developed through scientific sampling for the smaller enterprises. The definition of net income employed was very similar to that used in national income measurement. Only a few adjustments had to be made, on the basis of reported data, to secure uniformity. These included the addition of depletion charges for proprietorships and partnerships and the elimination of capital gains and losses and property income received from partnership receipts, which were reported inclusive of these items.

The Internal Revenue tabulations, it was evident, differed in some respects as to industrial classification from that used in the national income estimates. Also, the tabulations were incomplete to the extent of not covering firms which did not file tax returns. Adjustments for both of these deficiencies were accomplished through comparison of the universe number of proprietors or gross receipts in each industry, as estimated by the National Income Division, with the data reported by the Internal Revenue Service.

The estimates of number of proprietors in 1945 and 1947—included in the Division's annual series on number of persons engaged in production (table 28, Part V)—were prepared by interpolating base-year estimates derived from the industrial and population censuses by an index of the number of noncorporate firms, adjusted for differences in the estimated number of active partners per partnership on the basis of Internal Revenue compilations. The index of noncorporate firms was constructed, industry by industry, by subtracting the number of active corporations in each year from the quarterly average number of operating firms estimated by the Office of Business Economics as part of its business population series. The sources and methods underlying this series were described in an article in the January 1954 *Survey of Current Business*. For some industries, the 1945–47 movement shown by this index was modified on the basis of Internal Revenue Service tabulations of the number of sole proprietors and partners.

In the estimation for 1945 and 1947 of noncorporate receipts—the universe "control" adopted in the important retail trade sector and in some of the service industries—benchmarks were developed from the 1948 Census of Business. The reported data were adjusted upward to allow for exclusion of concerns which, although in operation during 1948, had gone out of business before enumerators' visit in 1949, or for some other reason were not enumerated. These adjustments, which reflected also any differences in industrial classification, were made largely by comparing the Census of Business data on the number of employees or proprietors with similar data from the social security records or the Census of Population and Housing (the latter data obtained by interpolations of 1940 and 1950 Census enumerations).

To derive estimates for 1945 and 1947 (as well as for other years of the period since 1939), these 1948 receipts figures and similar benchmarks for 1939 were interpolated and extrapolated by available receipts data. In the case of retail trade, the index of noncorporate receipts utilized for the purpose was obtained by deducting corporate sales (as reported annually in the Internal Revenue Service's *Statistics of Income*) from total retail sales as estimated by the Office of Business Economics through 1951 and by the Census Bureau thereafter (described briefly in the section on Personal consumption expenditures for commodities). For personal service industries, the census-based estimates were extended to other years by utilizing as indexes the series on consumption expenditures for personal services (described in the service expenditure notes in Section 8). For both retail trade and personal services, the interpolations and extrapolations were carried out in considerable type-of-store or industrial detail in order to obtain the advantages of proper weighting.

In most industries, the National Income Division estimate of number of proprietors or gross receipts for 1945 and 1947 somewhat exceeded the Internal Revenue figure based on reporting for tax purposes; and the profit ratio or average income shown for one of the smallest receipts classes was assigned the nonreported receipts or proprietors in order to derive net income not reported on the tax returns. This, together with an adjustment for unreported net income disclosed by audit (based on the 1949 study), was added to the amount reported in the tax-return tabulations to secure the estimate of total net income for the industry.

In some industries, however, the Division's estimate of number of proprietors was less than that compiled from income tax returns. The differences were regarded as a matter of industrial classification.[2] In wholesale trade, for example, the excess of proprietors filing income tax returns was adjudged to belong in the Division's retail trade classification. The average income per proprietor in retail trade was assigned to this group of proprietors, and their total income was added to the amount reported on income tax returns to account for part of the income in retail trade not reported to the Internal Revenue Service. In manufacturing, where the Internal Revenue total number of proprietors greatly exceeded the National Income Division estimate the receipts and net income of proprietors in the under $10,000 or under $15,000 receipts classes (varying among the 20 industries) were shifted from manufacturing to miscellaneous repair services and hand trades. This shift was intended to yield data comparable in scope to those for the 1929–39 biennial censuses, when the Census of Manufactures defined the industry (in general) to include firms with $5,000 or more output, and for 1947, when the Census definition of a manufacturing firm was changed to the similar one-or-more employees criterion. The results obtained by the receipts-class cutoffs for 1947 generally approximated the Census of Manufactures data for that year on number of proprietors, which were taken as benchmarks.

In general, then, noncorporate net income in the business industries in 1945 and 1947 was derived through adjustment of the tax return data by using number of proprietors or gross receipts as a measuring rod.

Benchmark estimates, 1939

The coverage of Internal Revenue tabulations for 1939 was limited by reason of the larger income tax exemptions then prevailing. Nevertheless, because these tabulations covered the operations of both sole proprietorships and partnerships in the same year for which Census enumerations were available, there was opportunity to merge information from the two sources to obtain a noncorporate income benchmark.

The principal method of preparing the base-year estimates for 1939 consisted of multiplying, separately for sole proprietorships and partnerships, total receipts reported in the various industrial censuses by profit ratios derived from Internal Revenue tabulations of data from the business schedule

2. Statistical differences were present here too, as well as in cases where the National Income Division estimate exceeded the number reported by the Internal Revenue Service. The Division estimates were subject to estimating errors, and the Internal Revenue data to sampling errors. In most industries, a high proportion of proprietors was in the receipts classes sampled. (For net income, however, the proportion of the total sampled was much smaller.)

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of individual income tax returns and the mandatory informational returns filed by partnerships. The tabulations, published in *Statistics of Income—Part 1* and *Supplement* were based on a complete count for partnerships and for sole proprietorships (in general) with income of $5,000 or more, and on sampling for smaller proprietorships. The sole proprietorship tabulations gave for each industry the receipts and net income of firms classified by gross receipts classes.

Noncorporate receipts totals were available from the 1939 Censuses of Retail Trade, Contract Construction, Service Establishments, Manufactures, and Mineral Industries. The data reported for retail trade, construction, and mining were adjusted upward to allow for undercoverage in the manner indicated in the discussion of the 1945 and 1947 benchmarks.[3]

Adjustment of the Internal Revenue data to take account of the many small firms not filing tax returns in 1939 was necessary before they could be used to derive profit ratios to apply against the industrial census receipts figures. The principal complication in deriving aggregate profit ratios by industry stemmed from the strong negative correlation between the profit ratio and the size of firm as measured by receipts. Because of this correlation, profit ratios computed from data for firms filing returns were almost always too low to be applicable to the entire noncorporate sector of an industry. The general procedure, therefore, was (1) to deduct receipts reported to the Internal Revenue Service from the census-based receipts figures, and then (2) to multiply the resulting estimate of receipts of firms not filing tax returns by the profit ratio calculated for one of the smallest Internal Revenue receipts-size classes. The sum of estimated net income for the firms not filing income tax returns and the net income actually reported on the returns constituted the aggregate net income estimate (prior to the adjustment for audit discussed above).

Two important variants of this general procedure were developed. One was based on the finding that for sole proprietorships in the nonprofessional components of the service industry the ratio of payroll plus net income to receipts tended to be constant throughout the reported receipts-size distribution. Thus, the tendency of the profit ratio to decline as the size of firm increased was just offset by the tendency for the ratio of payroll to receipts to rise. Where payroll data by size of firm could be obtained from the industrial censuses, as in services and contract construction, the use of this relationship permitted the estimation of small-firm profit ratios from data for larger firms. This was helpful, since the data for proprietorships with receipts under $5,000 reported in *Statistics of Income* for 1939 often were fragmentary or appeared to be biased.

The second variant—utilized chiefly in retail trade and most of the manufacturing industries—relied on relationships between small and large firms shown in the 1945 Internal Revenue tabulations, coverage of which was virtually complete. This procedure is described below in connection with the interpolations of the 1939 and 1945 benchmarks.

For a few industries in which adequate data on gross receipts or profit ratios could not be obtained, the net income estimates were prepared as the product of the number of proprietors, taken from the population or industrial censuses, and average income per proprietor, derived by adjusting tax return data for incomplete coverage or from industrial census data on the reported withdrawals of proprietors. Wholesale trade was the most important industry in which this method was applied.

The foregoing brief account of the principal methods used to derive 1939 net income estimates in the "business" area is an oversimplification. The matching of Census and Internal Revenue receipts tabulations by size classes and the preparation of adjusted profit ratios and of average income per proprietor were generally difficult processes subject to appreciable error. Emphasis on the judgmental factor was necessarily considerable. Moreover, variations of, or departures from, the general methods frequently were necessary in particular industries.

3. In the case of contract construction, the adjustment was broader in scope than for the other industries. Labor-force data in the 1940 population census were used to establish the total of employees and proprietors in contract construction. Subtraction of the National Income Division estimate of employees in contract construction yielded the total number of proprietors, whether in establishments or own-account workers (such as carpenters and painters) operating from their own homes. The estimate of average receipts (and of average net income) assigned to the non-establishment group, which was not covered in the Census of Construction, was based on fragmentary information. The total net income of this group was about two-fifths of the Division's published total for contract construction in 1939.

Interpolations, 1940–44 and 1946

For other years of the period 1939–47, estimates of net income of unincorporated enterprises in the business segment were prepared by interpolation of the 1939, 1945, and 1947 benchmarks. Two factors made the process difficult and impaired the accuracy of the estimates.

First was the necessity of making sizable adjustments for noncomparability of coverage of the data on sole proprietorships reported for several years of the period by the Internal Revenue Service. Secondly, the extensive use made of corporate data to estimate the movement of noncorporate sales and income—unfortunate in itself—was complicated by a shift of some firms, because of the tax advantages to be gained, from the corporate to noncorporate form of organization in the war period, and by an opposite shift in the early postwar years after the removal of the corporate excess profits tax.

1. For 1941 and 1943, the Internal Revenue Service provided tabulations of sole proprietorships' tax returns showing receipts, net income, and number of proprietors classified by industry. Because of changes in tax laws and the rising level of economic activity, the coverage of sole proprietorships afforded by these tabulations was much higher than for 1939, though still incomplete in relation to the comprehensive data for 1945. Expansion of Internal Revenue coverage over this period was such as to bring in an increasing proportion of small proprietorships, which, as noted, have very high profit ratios relative to the large proprietorships. In the interpolation procedure, use of the reported data directly, without adjustment for the differing proportions of small-sized firms covered, would have imparted a strong upward bias to the estimates.

2. Most of our limited knowledge about the magnitude and nature of the shift in legal-form of organization is confined to its postwar phase.[4] It is evident that it was minor as to the number of firms involved, but appreciable as to its effects on total sales and net income. The shift was largely between the corporate and partnership forms, and it was restricted mainly to manufacturing, retail trade, wholesale trade, and contract construction. For these industries—in which the relative movements of sales and income from 1939 to 1945 and from 1945 to 1947 differed markedly for the corporate and noncorporate segments—several special procedures were followed to improve the use of available statistical data for interpolation.

The series used to interpolate noncorporate net income in "business" industries between the 1939, 1945, and 1947 benchmarks were prepared as the product of either (1) receipts (sales) and profit ratios or (2) number of proprietors and average income per proprietor. The first was generally the preferred method, although for some industries the choice was merely a matter of statistical convenience.

The interpolations between 1939 and 1945 were carried out separately for sole proprietorships and partnerships. The chief purpose was to utilize the Internal Revenue Service tabulations of sole proprietorships for 1941 and 1943. Data for smaller-sized corporations then furnished the basis of the sole proprietorship interpolations for 1940, 1942, and 1944. The resulting proprietorship series was usually employed for interpolation of the 1939 and 1945 partnership benchmarks. Where small-corporation data (on the ratio of profits to sales or average income per firm) agreed better with the 1939–45 partnership movement, however, such data were used for the partnership interpolations as well. For all industries, the estimates for 1946 were obtained on the basis of interpolations utilizing data for small corporations, without the necessity of making separate estimates for proprietorships and partnerships.

The actual methodology for preparing the 1940–44 and 1946 interpolations was considerably more diverse than indicated from the foregoing summary. However, four aspects of the work were of general importance and provide a convenient framework for describing it.

Estimation of number of proprietors.—For most industries, the method of interpolating net income required separate estimates of number of proprietors and average income. Base-year figures on the number of proprietors were obtained from the industrial or population censuses. For the period since 1939, they

4. This knowledge derives from a special Internal Revenue Service tabulation showing for 1946 the number of corporations, by industry, which had been sole proprietorships or partnerships in the prior year and, for all industries combined, their distribution by asset-size classes; some overall annual data for the period 1945–48 from the Bureau of Old-Age and Survivors Insurance on the number of covered firms undergoing reorganization (believed to comprise mainly legal-form changes); and direct comparisons of Internal Revenue Service corporate and noncorporate sales and income data for 1945 and 1947.

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were interpolated by a series measuring the number of noncorporate firms, with adjustment for changes in the ratio of partners per partnership shown by Internal Revenue data for 1939, 1945, and 1947. The series was derived by deducting the number of active corporations (reported by the Internal Revenue Service) from the Office of Business Economics estimates of the total number of operating firms. For most industries, the separate estimates of sole proprietors and of partners required by the method were also prepared by using the noncorporate-firm series as an interpolating index. But in many of the 20 major types of manufacturing and in contract construction, a special procedure was adopted in the attempt to reflect shifts in legal form of organization. The number of sole proprietorships derived for benchmark years from Census reports was interpolated on the basis of the total number of operating firms, and the resulting series was subtracted from the estimated total number of proprietors for the industry in order to derive the number of partners. The rationale of this procedure stemmed from the fact (noted above) that the legal-form changes occurred largely between corporations and partnerships.

Noncorporate business receipts.—For some industries, mainly retail trade and the personal services, the interpolation procedure required estimates of noncorporate business receipts. As noted earlier, the receipts series for retail trade was derived for benchmark years (1939 and 1948) from the Census of Retail Trade and extended to other years by an index computed by deducting corporate sales from total retail sales; and the series for the personal service industries were based on the Census of Service Establishments, with interpolations by means of the National Income Division estimates of consumption expenditures for personal services.

In principle, it may be noted, this procedure of estimating noncorporate retail sales accounted for sales shifts due to corporations' changing their legal form of organization. The measure, however, doubtless was somewhat blurred by errors of estimation in the residual sales figures. In this connection, it may be noted that little could be done to correct for whatever inconsistency was introduced into the corporate sales data by the change from the unconsolidated basis of filing through 1941 to permissive consolidated reporting beginning with 1942.

It was necessary to prepare separate receipts estimates for sole proprietorships and partnerships for the interpolations between 1939 and 1945, so as to take account of the IRS sole proprietorship data for 1941 and 1943. In the case of retail trade, ratios of proprietorship sales to total noncorporate sales were obtained for 1939 from the Census of Retail Trade and for 1945 from the Internal Revenue compilations. These ratios were interpolated along a straight line for intervening years and then applied to the total noncorporate receipts figures. For the personal services industries, similar sole proprietorship ratios were computed for 1939 and 1948 from the Census of Service Establishments and also interpolated in straight-line fashion.

Expansion of 1941 and 1943 IRS data to full coverage.—Following the preparation of universe estimates of number of proprietors or gross receipts by industry, the next basic step was to adjust to a full coverage basis the sole proprietorship tabulations provided by the Internal Revenue Service for 1941 and 1943. In order to obtain for each industry an interpolating series that was comparable over time, it was necessary to add to the reported Internal Revenue data for 1939, 1941, and 1943 estimates covering the nonreporting proprietorships—assigning to them an average net income or profit ratio appropriate to smaller-sized firms. In this procedure, which required use of the universe estimates of receipts or number of proprietors as a "control," use was made of relationships obtaining between small and large proprietorships in the IRS tabulations for 1945. These tabulations, it will be recalled, provided practically complete coverage of sole proprietors, classified by detailed industry and receipts-size classes.

The procedure adopted assumed that for 1939, 1941, and 1943 the profit ratio to be assigned to nonreported sales—or the average income to be assigned to nonreporting proprietors—bore the same relation to the reported profit ratio (or average income) as shown by the two segments of the 1945 distribution estimated to correspond to the filing and nonfiling segments in those previous years. As an example, if retail trade food store proprietors reporting to the Internal Revenue Service in 1939 accounted for 40 percent of the estimated total sales of all retail food store proprietorships, then the 1945 distribution by receipts size was broken into two parts—one composed of sales in the highest receipts classes covering 40 percent of total sales and the other composed of sales in the receipts classes below that point. The ratios of net income to sales (or average incomes) of the two groups represented by the upper and lower portions of the sales distribution were calculated. The relative difference between the profit ratios (or average incomes) of the two groups was then applied to the reported profit ratio (or average income) of income tax filers in the food group in 1939 to obtain the estimated profit ratio (or average income) of nonfilers in that year.[5]

Use of this procedure of "filling in" the sole proprietorship distributions thus enabled the calculation of sole proprietorship profit ratios or average incomes for 1939, 1941, and 1943 on a consistent basis with the data for 1945 reported by the Internal Revenue Service. For retail trade and most of the manufacturing industries, as noted earlier, this procedure directly provided the data used for the 1939 benchmark.

Use of small corporation data.—The preparation of universe estimates of receipts and number of proprietors and of profit ratios and average income per proprietor for sole proprietorships for 1941 and 1943 provided the framework for subsequent heavy reliance on small-firm corporation data to fill in the remaining estimates through interpolation. The relative movements of either the ratio of corporate profits to sales or average income per corporation were used for interpolation of the similar averages for unincorporated enterprises.

For calculation of the corporate series, data from the Internal Revenue Service "Source Book", unpublished volumes supplementing *Statistics of Income* with more detailed information, were utilized. From the tabulations showing the annual corporation income returns classified by asset-size classes, data for the two or three smallest classes were taken. In order to approximate the noncorporate income concept, the reported compensation of corporate officers was added to net profit before taxes prior to calculation of either the ratio of profits to sales or average net income per corporation.

Although the basis for generalization is still limited, it would appear that data for small corporations provide a fairly satisfactory index to the movement of noncorporate income—and are decidedly superior in this respect to data for corporations in the aggregate. A striking example is afforded by the changes from 1945 to 1947. In nearly all industries, ratios of profits to sales derived from data for corporations in the aggregate were found to be wholly unsuitable for interpolation of the noncorporate ratios. Noncorporate profit ratios declined markedly in most industries from 1945 to 1947, whereas the corporate ratios tended to be stable. Upon analysis, however, it was found that this divergence reflected size-of-firm, and not legal-form, differences. Industry-by-industry compilations of profit ratios (adjusted to include corporate officer compensation) for corporations in the two or three smallest asset-size classes showed the same pattern of decline as exhibited by the noncorporate ratios. The small-firm corporate data, it may be of interest to note, generally showed stability from 1945 to 1946, with all of the 1945–47 decline occurring in 1947.

Based on this and other favorable experience with the use of small corporation data, a principle change in methodology in the revisions of noncorporate business income for the present report has been the fuller utilization of such data. Their incorporation into the 1939-45 interpolations is the major instance. As noted earlier, corporation income data by asset-size classes are not available in comparable industry detail for the period prior to 1939.

Extrapolations, 1929–38

There is comparatively little information for the 1929–38 period relating directly to the net income of unincorporated enterprises in the business area. Noncorporate receipts data were compiled for 1929 in the Censuses of Retail Trade, Manufactures, and Mineral Industries. Useful data on number of proprietors were provided by the Census of Wholesale Trade in 1929, 1933, 1935, and 1939. A compilation of 1936 income tax returns for sole proprietorships and partnerships was made available by the Internal Revenue Service, but this could not be used in many industries either because of large sampling errors in the tabulations or because they could not be satisfactorily adjusted to obtain comparability with 1939.[6]

5. In principle, absolute instead of relative differences should perhaps have been applied because of the probable tendency for income changes over different phases of the cycle (and in the short run generally) to be relatively less volatile for small than for large noncorporate enterprises (chiefly because of the differing relative importance of proprietors' own and family labor versus hired labor). However, tests showed that the amounts of difference involved in the application of the two procedures were quite small.

6. Unlike later tabulations, where sampling was used only for the smaller-sized firms, the 1936 tabulation was based on a 20 percent nonstratified sample of all returns.

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With direct data on noncorporate business income limited largely to the foregoing, the estimating methods for the period 1929-38 necessarily relied to a very large extent on indirect measures. The preparation of estimates for a substantial number of individual industries provided a basis for utilizing available detailed information and for taking account of shifts in the importance of industrial components within the business total. The methods used in a few of the larger industries may be summarized briefly.

In the important retail trade sector, the net income of unincorporated enterprises was derived as the product of receipts and the ratio of net income to receipts, each obtained by extrapolations of base-year figures for 1939.

Receipts were extended to 1929 by a series representing (1) Census values for 1929 and 1939; (2) estimates for 1933 and 1935 derived by preparing legal-form breakdowns of Census aggregates for those years by interpolating between such reported breakdowns for 1929 and 1939 by weighted indexes of chain store sales and independent store sales; and (3) interpolations for all other years on the basis of the Office of Business Economics estimates of total retail sales.

Following the derivation of the receipts series, the ratio of payroll plus net income to receipts for noncorporate retail trade in 1939 was extrapolated to 1929 on the basis of similar data for corporations. Application of the resulting ratios to the noncorporate receipt series and the deduction of estimated noncorporate retail payroll yielded the 1929–38 estimates of total net income. For this extrapolation of the 1939 ratio of net income plus payroll to receipts, the payrolls of corporations and of unincorporated enterprises were estimated by methods analogous to those followed in obtaining receipts. Profits data for corporations were those of the National Income Division, based on annual *Statistics of Income* reports of the Internal Revenue Service.

The above method of estimating the ratio of net income to receipts was an application of the relationship, noted above, developed from 1939 Census Bureau and Internal Revenue Service materials for sole proprietorships in the nonprofessional service industries—that throughout the receipts-size distribution the ratio of payroll plus profits to receipts tended to be constant. This relationship, reflecting the varying proportion of labor performed by paid employees as against proprietors and their families, was assumed to be valid with respect to corporate and noncorporate retail trade in a temporal application. In retail proprietors' income there is a large and comparatively stable element of labor return corresponding to retail corporations' payroll. Analysis for 1939, it may be noted, indicated that the difference in profit ratios between incorporated and unincorporated enterprises in retail trade was accounted for very largely by differences in the relative importance of payroll expense.

The income of proprietors in wholesale trade for the years 1929–38 was estimated as the product of number of proprietors and average net income per proprietor. The 1939 estimate of number of proprietors was extrapolated to 1929 by a series comprising Census of Wholesale Trade data for 1929, 1933, 1935, and 1939 and straight-line interpolations for the other years. Average net income per proprietor was derived for 1936 by adjusting the Internal Revenue Service tabulations for incomplete coverage, and for all other years of the period through interpolation and extrapolation by the average net income estimates for retail trade.

The income of noncorporate enterprises in contract construction was derived for the 1929–38 period by multiplying estimates of receipts by the ratio of net income to receipts. Receipts of corporations, obtained from *Statistics of Income*, were deducted from the estimated total value of contract work to obtain a series on noncorporate receipts that was used to extrapolate the 1939 estimate. Value of work performed was estimated for 1939, by four major types of construction, from the Census of Construction. The 1939 values for these four types were extrapolated to earlier years by components of the construction activity series (see notes on New construction), which covers force-account as well as contract construction, and summated to obtain total value of work performed. The 1939 noncorporate profit ratio in contract construction was extrapolated to 1929 by the absolute changes from year to year in the ratio of profits plus compensation of officers to receipts for corporations in the industry.

The value of product of noncorporate enterprises in manufacturing was taken for 1929 and 1939 from the Census of Manufactures. Separately for the 20 major types of industries, estimates for the intervening odd-numbered years were obtained by interpolation on the basis of the total value of product of all enterprises reported in the biennial manufacturing censuses. The even years were then interpolated by gross sales plus gross receipts from operations of corporations in manufacturing, as published in *Statistics of Income*. The resulting series was then multiplied by estimated profit ratios. These were derived for each industry for 1936 from the special tax return tabulations and extended to other years of the 1929–38 period chiefly through use of a linear regression between noncorporate profit ratios for 1936, 1939, and 1941 and annual (adjusted) corporate profit ratios from 1929 to 1941.

Estimates for 1948 and 1949

After the preparation of the 1947 benchmarks, estimates of noncorporate business income were next established for 1949. In large measure, these were derived by extending the 1947 universe by changes shown for sole proprietorships in the Internal Revenue tabulations for 1947 and 1949. As noted, partnerships' returns were not tabulated for 1949.

The actual use made of the sole proprietorship data for this purpose varied by industry. In many of the 65 industry groups for which separate estimates are prepared, the procedure was simply to extrapolate 1947 net income by the income totals reported for proprietorships alone in the two years. In certain other industries—again, notably retail trade—the sole proprietorship figures were used to extrapolate the 1947 combined profit ratio for partnerships and proprietorships, as well as to furnish a check on the requisite estimates of the sales universe. Analogously, the sole proprietorship data were also used frequently to project average income per proprietor, which was then multiplied by independent estimates of the number of proprietors.

Common to these several types of procedure was the application of the 1947–49 relative experience of sole proprietorships to the noncorporate universe. This was not feasible, however, for industries where partnerships bulked large in the noncorporate total. In such industries, mainly the 20 groups for manufacturing, separate treatment of the partnership segment was indicated. The general procedure was (1) to extrapolate the total net income of sole proprietorships by the reported IRS data and (2) to estimate partnership income as the product of sales and profit ratios. Sales were obtained by multiplying number of partnerships (estimated from changes in the number of noncorporate business firms) by average sales per partnership extrapolated from 1947 by the movement of small-corporation data. Extrapolation of the profit ratios for partnerships relied either on the corporation data (with absolute changes instead of relative changes utilized where the size of the partnership and corporation profit ratios differed markedly) or on the sole proprietorship data. In this and other instances, comparison of the changes shown by partnerships, sole proprietorships, and small corporations from 1945 to 1947 was a useful guide as to choice of procedure.

Interpolations for 1948 made extensive use of small-firm data for corporations. In the case of manufacturing, use was made of unpublished tabulations from the Census of Manufactures of receipts of sole proprietorships and partnerships. These data referred to the 1947 receipts of manufacturing enterprises which were in a noncorporate status at the time the census information was collected, in the first part of 1948. As such, the totals for the relatively small noncorporate segment of manufacturing were appreciably affected by the shift in legal form of organization still progressing throughout 1947. Particularly for partnerships, the reported receipts figures were adjudged for national income purposes to be a closer measure of noncorporate manufacturers' receipts for 1948 than for 1947. With timing adjustments (generally minor) to convert the data for the census universe to a 1948 basis, it was possible to obtain direct approximations of noncorporate receipts in manufacturing for that year.[7]

While the sole proprietorship tabulations for 1949 were thus quite valuable, lack of comparable data for partnerships made for difficulty and impaired the accuracy of the estimates by individual industries. It may be noted, however, that there is reason to believe that the errors by industry were substantially offsetting in the aggregate. For total nonfarm unincorporated business income (including the professional services), the relative changes

7. Earlier it was noted that the 1947 Census of Manufactures furnished the basis for benchmark data on number of proprietors. The number of establishments involved in legal-form changes was relatively quite small, and the number-of-proprietors data were much less affected by this factor than sales or income. Before utilizing the Census of Manufactures data as 1947 benchmarks, adjustments were made to convert the data from measures of number of proprietors as of early 1948 to the estimated average number during 1947. For this purpose, use was made of the OBE quarterly data on number of operating firms and of the special Internal Revenue tabulations of corporations changing their legal form of ownership in 1946.

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from 1947 to 1948 and from 1948 to 1949 were found to check closely against information compiled by the Internal Revenue Service from income tax returns of individual proprietors and partners. This information consisted of data compiled from the "face" of the returns, not tabulations of business income by industry. The data were available only as a single aggregate and required adjustment for this purpose to eliminate the estimated amount of net income reported by farmers. It is not believed that errors in this adjustment could affect the results appreciably.

Current estimates

Pending availability of noncorporate tax-return tabulations on an industry basis, estimates of the net income of unincorporated enterprises in the business segment for current years must be prepared from fragmentary and indirectly relevant data. At the present time, 1949 is the latest year for which such tax return information (for sole proprietorships) is available.

For extrapolating the 1949 estimates through 1951, considerable use was made of information for corporations from Internal Revenue tabulations, available by asset-size classes (for small corporations) through 1950 and for corporations in the aggregate through 1951. For the estimates beyond 1951, corporate data employed in the estimation of noncorporate business income were derived from sample compilations of Government agencies, of private organizations in some cases, and of the National Income Division from published income statements of individual firms. These sample data are described in the section on Corporate profits. To obtain the benefit of appropriate weighting, the extrapolations were carried out in as much industry detail as feasible.

Exhibit 3.—*Comparisons of New and Superseded Series for Income of Business and Professional Unincorporated Enterprises, 1929–52*

[Billions of dollars]

	New series	Superseded series [1]
1929	8.6	8.1
1930	6.7	6.3
1931	5.0	4.7
1932	3.1	2.9
1933	3.7	3.4
1934	4.6	4.3
1935	5.4	5.0
1936	6.6	6.2
1937	7.1	6.7
1938	6.6	6.1
1939	7.5	6.9
1940	8.5	7.8
1941	11.5	10.2
1942	14.3	12.9
1943	17.0	15.1
1944	18.1	17.2
1945	19.1	18.8
1946	23.0	22.4
1947	21.4	21.3
1948	22.1	22.5
1949	21.0	21.0
1950	24.0	24.9
1951	25.1	26.5
1952	25.5	26.1

1. As published in the National Income Number (table 1) of the July 1953 SURVEY OF CURRENT BUSINESS.

For many industries—most of them relatively small—even reasonably satisfactory corporate information is lacking (or entirely inappropriate) for current extrapolations of the proprietors' income estimates. This generalization applies to wholesale trade, agricultural services, forestry and fisheries, and most of the finance, nonprofessional service, and transportation and public utility industries. For these groups, the movement of net income is based on one or a combination of such series as number of proprietors (extrapolated by the Office of Business Economics data on number of operating firms), average earnings of employees, wages and salaries, consumer expenditures, and estimates of net income in related industries. For contract construction, principal reference for this purpose is had to estimates of wages and salaries in the industry and construction activity. For wholesale trade, net income in current years is derived from a sales extrapolation (based on the Office of Business Economics series) and a profit-ratio extrapolation based on estimates for retail trade.

For current extrapolations of noncorporate business income in the important retail trade area, use has been made for recent years of data contained in the year book issues of "Mail-Me-Monday Barometer of Small Business," published by the Accounting Corporation of America. This source summarizes the profit-ratio experience of over 6,000 small enterprises, primarily noncorporate, by line of retail operation. While it has not yet been possible to check the representativeness of the Mail-Me-Monday data against Internal Revenue noncorporate data, one indirect test has been reassuring. It was found that the 1949–50 movements of the Mail-Me-Monday ratios were in good agreement with those shown for profit ratios (adjusted to include corporate officers' compensation) reported for small retail corporations by the Internal Revenue Service. As brought out above, the profit ratio changes of the smaller-sized corporations accorded closely with the noncorporate changes from 1945 to 1947.

In the past few years, it has been possible to make two general-type checks of the current period movement of the estimated total of net income in the business and professional industries. One, already discussed, is provided by Internal Revenue compilations of net business income reported by individuals on the face of their Federal income tax returns. At present, data of this type are available through 1951, and serve to corroborate the income changes estimated to that point from the 1947 benchmark. A second summary test is afforded by comparison of the movement of the noncorporate income estimates with that shown by a series derived from Federal individual nonwithholding tax collections, appropriately lagged and adjusted for tax-rate changes. This series, also available only in the aggregate, consists largely of taxes against the net income of nonfarm unincorporated enterprises, but covers also personal income from higher-bracket salaries, farming, rents, interest, and dividends, as well as capital gains and losses. Allowance for these other sources of personal income is made in the comparison with the tax series; but because of its broader coverage and the difficulty of adjusting for changes in tax rates, the measure of the relative movement in total nonfarm entrepreneurial income which it affords is far from precise. It nevertheless serves as a useful check, particularly in view of the weakness of source materials underlying the individual-industry estimates for very recent years. These estimates are subject to a possible upward or downward adjustment from the analysis of the tax data.

Revisions of the estimates

In *Exhibit 3*, the 1929–52 estimates of the total net income of unincorporated business and professional enterprises prepared for this report are compared with those published in the July 1953 National Income Number of the SURVEY OF CURRENT BUSINESS.

The new estimates, unlike previous ones, incorporated results of the 1948 Census of Business, the 1950 Census of Population and Housing, and the 1949 audit study of the Internal Revenue Service. The audit study, as discussed earlier, was of particular importance since it furnished the first systematic basis for adjusting the noncorporate business income estimates to the extent based on compilations from unaudited tax returns.

In addition to use of new source materials, the current revision of the series reflects improvements in procedures. These included, among others, (1) the method adopted for expanding the 1941 and 1943 Internal Revenue proprietorship tabulations to a full coverage basis by use of the comprehensive 1945 tabulations as a frame of reference, and (2) the fuller use made of small-firm corporation data to serve as a guide to the movement of noncorporate net income.

It will be seen that the overall effect of this statistical reworking has been to raise the level of the series from 1929 through 1944. Revisions for the earlier war years are relatively somewhat larger than for the prior period, mainly by reason of the first change in methodology just noted. The revisions of estimates for the 1929–38 period stem mainly from the higher 1939 base-year figures from which they were extrapolated. Although for a few industries the methodology used for this period was changed, the main procedure was to employ the previous series as indexes for extrapolating the new 1939 estimates.

While, on the whole, the present revisions of noncorporate business income are not large in the aggregate—particularly when the difficulties encountered

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in this area of estimation are considered—they were quite marked for a number of individual industries. In part, this was attributable to use of actual audit information on an industry basis in contrast to the previous procedure of making informal allowances where seemingly appropriate. In addition, numerous other factors centering in the incorporation of the new Census data and their integration with tax return materials had sizable effects in the individual industry series, although operating largely to cancel out in the all-industry total. This experience in the current revisions influenced the decision to curtail the extent of industry detail published in table 17.

The estimates of total noncorporate business income published in the July 1953 SURVEY (as shown in the exhibit) had undergone, it may be noted, two interim statistical revisions of appreciable magnitude. These occurred mainly in the July 1949 and July 1950 national income reports. In the former report, the principal change was to raise the war-period level. This revision—from $16.9 billion to $18.8 billion for 1945—was based on the 1945 Internal Revenue tabulations of sole proprietorships and partnerships. The earlier estimates had not taken account of the war-period shift in legal form of organization.

In the July 1949 report, total noncorporate business income was shown to increase from $22.7 billion in 1946 to $24.7 billion in 1947. In the following year—in the July 1950 report—the availability of Internal Revenue proprietorship and partnership data for 1947 resulted in a revision of the estimates to $22.4 billion in 1946 and $21.3 billion in 1947. This reflected a previous missing of the sharp decline in noncorporate profit ratios in 1947, noted earlier in this section. Like the legal-form shift, this was a phenomenon that could not be discerned or measured from the statistical materials available when the preliminary estimates were made.

Net Income of Farm Proprietors

The estimates included in this report for the net income of farm proprietors were prepared by the Agricultural Economics Division of the Agricultural Marketing Service. They correspond to that Division's published series on "total net income of farm operators from farming, including Government payments." The farm income estimates are described in chapter 20 of *The Agricultural Estimating and Reporting Services of the United States Department of Agriculture* (Miscellaneous Publication No. 703), Washington, 1949, and the description here is therefore limited to very brief compass.

Farming as an industry comprises about 5½ million independent enterprises, most of which do not keep accounts permitting them to calculate net income on any uniform basis. However, an extensive body of both benchmark and current statistics on farming operations in the aggregate has been developed over a long period of time.

The general procedure used by the Agricultural Economics Division in deriving the net income of farm operators is to make an independent estimate for each item required for an income-and-expense statement covering all farms, based on whatever combination of available data best represents that item. Net income of farm proprietors is then calculated by summing the estimates for components of gross farm income and deducting the sum of the production expense estimates, as illustrated in *Exhibit 4* for the year 1949.

Basic data for preparing the farm income estimates are obtained partly from the farmers themselves through the quinquennial Census of Agriculture and a current Crop and Livestock Reporting system designed to include at least one reporter in every farming township in the country. An important part of the basic data, however, is derived from the auxiliary industries and agencies which market, transport, store, process, or otherwise aid or regulate the production or distribution of farm products. As the assembling and processing of many of these products are either dominated by large firms or are subject to sanitary inspection, and the individual products are fairly homogeneous in nature, it is feasible to obtain from auxiliary industries very reliable data (with little time lag) on the marketings and market prices of such important products as meat animals, most dairy products, cotton, tobacco, and sugar beets.

Gross farm income

The major components of gross farm income are cash receipts from the marketing of crops and of livestock and livestock products and the value of food and fuel produced and consumed on farms. Cash receipts and home consumption are calculated for each commodity by States from estimates of the quantities involved and the average prices paid to farmers. The price estimates are based on monthly mail questionnaire returns from about 30 percent of the 35,000 dealers and farmers to whom such questionnaires are sent; the same price series are used in deriving cash receipts from marketings and value of home consumption. The estimates of quantities marketed and consumed on the farm are made in a framework in which production data are reconciled with disposition data.

Crop production is estimated as acreage harvested times average yield per acre. To obtain acreage and yield figures, benchmarks derived from the Census of Agriculture and several annual State assessors' censuses are extended by sample data on acreage and yield changes indicated by a sample of close to 100,000 reporting farmers. The changes reported currently are adjusted on the basis of past relationships between the sample data and the benchmarks.

Disposition of each farm product covers the respective quantities sold, consumed by the farm family, used for feed and seed, and added to inventory.

Exhibit 4.—*Derivation of Net Income of Farm Proprietors, 1949*

[Billions of dollars]

GROSS FARM INCOME		30.9
Cash receipts from farm marketings	27.9	
Meat animals	8.3	
Dairy products	3.8	
Poultry and eggs	3.1	
Cotton	2.6	
Food grains	2.3	
Feed crops	2.3	
Other marketings	5.5	
Value of home consumption	2.2	
Gross rental value of farm homes	1.5	
Government payments	.2	
Value of change in farm inventories	−.9	
LESS: PRODUCTION EXPENSES		18.2
Depreciation	3.6	
Feed purchased	3.0	
Hired labor	2.9	
Operation of motor vehicles	1.7	
Livestock purchased	1.6	
Net rents and Government payments to nonfarm landlords	1.1	
Fertilizer and lime	.9	
Taxes	.8	
Farm mortgage interest	.2	
Other	2.4	
EQUALS: NET INCOME OF FARM PROPRIETORS		12.7

It is generally estimated in percentage terms from annual mail reports filed by a selected sample of producers—by 15,000 wheat growers, for example. For most field and vegetable crops, these percentages are applied to production estimates, and the results for quantity sold are generally reconciled with totals based on annual reports by producers accounting in many cases for the bulk of the commercial movement. Reports from processors, handlers, or sanitary inspectors provide such good coverage of certain other major crops and livestock products that firm estimates of marketings can be based directly on these. Cotton belongs to this class because of reports made by substantially all ginners. Meat animals are another example, for which there are Federal meat inspection reports, returns from a very large stratified sample of butchering firms, and data from common carriers.

Nonrecourse loans to farmers made or guaranteed by the Commodity Credit Corporation, net of current redemptions, are considered cash receipts from farm marketings. Such loans and redemptions are reported currently by the Corporation, and net loans are added to the value of farm marketings discussed above.

Gross rental value of farm dwellings covers housing on owner-occupied as well as rented farms. It is derived by (1) calculating a return on dwelling investment from the estimated value of farm dwellings and the average rate of interest on farm mortgage loans, and (2) adding to this computed net value the portion of total farm expenses estimated to be allocable to the upkeep of dwellings. The basic estimates of the total value of dwellings are prepared from Census of Agriculture data, with only the 1930 Census

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reporting separate data on dwellings as distinguished from other structures. Value relationships are used to derive the proportions of the various expense items allocated to dwellings.

Government payments in connection with the various farm programs are reported from the fiscal records of the responsible agency, the Commodity Stabilization Service.

Change in farm inventories

The value of the change in farm inventories is measured as the difference between physical quantities of crops and livestock on farms at the beginning and end of the year, multiplied by year-end prices. It is derived as the sum of separate State estimates for each crop and livestock item.

This component of gross farm income is entered directly in the gross national product as a component of "Change in business inventories." No inventory valuation adjustment is required, as in the case of estimating the change in nonfarm business inventories, since the farm inventory changes are computed directly from data on physical stocks and current prices.

Benchmark data on the number of each class of livestock on farms are obtained every five years from the Census of Agriculture. These census enumerations are adjusted, where necessary, to obtain complete coverage.

Current estimates of year-to-year changes in the number of livestock on farms are prepared from surveys made each December. The rate of sampling varies among States, depending largely on the needs of the individual States for livestock data. In general, a sample of 3,000 to 6,000 farms is considered satisfactory for a principal livestock-producing State. Special surveys (especially in States where the size of farm varies greatly); records of marketings, slaughterings, and rail shipments; livestock tax assessment data; and State farm censuses are used for checking the inventory estimates derived from the basic survey data.

Estimates of year-end farm inventories of crops are prepared by one of two methods. For all major crops except cotton and tobacco, farm stocks are estimated quarterly. These estimates are based upon the results of mail surveys covering about 80,000 farmers, from which the usable response is approximately 30 percent. Each respondent reports the production of each crop grown on his farm and the quantity on hand at the survey date. For each crop the reported stocks on farms are expressed as a percentage of total production for these farms, separately for each State. These percentages are applied to the estimated total State production of each crop to yield total stocks on farms at the end of each quarter. Studies made in 1948 substantiated the validity of this method.

The estimates of year-end inventories of crops derived in this manner do not include crops which farmers own but may have placed in commercial storage located off their farms. The magnitudes involved are not known, but believed not to be large. Also, for certain crops a part of the estimated stocks on farms may have been used to secure a Commodity Credit Corporation loan. As the proceeds of such loans are included in gross farm income, it is necessary to deduct the quantity of these crops under loan from farm inventories in order to avoid double-counting. The adjustment is made on the basis of reported data on Commodity Credit Corporation loans and redemptions.

For cotton and tobacco and a few relatively minor crops, inventory changes are calculated in terms of inventories "held for ultimate sale." Crops held for use as feed or seed on farms where grown are excluded. To estimate the quantity of each crop still remaining to be sold on January 1 of each year, the amount of the previous year's production of the crop actually sold through December is subtracted from the total amount to be sold.

The prices used to value the change in physical quantities of crops are the December 15 average prices received by farmers for their products as sold at local markets or at points to which the farmers deliver them. For livestock, inventory values per head as of January 1 are used, based on farmers' estimates of replacement costs.

Production expenses

Estimates are made for each of some 40 categories of production expense. Among the largest are depreciation, purchased feed, hired labor, purchases of livestock, costs of operating motor vehicles, net rents to nonfarm landlords, and taxes. These accounted for more than four-fifths of the 1949 total.

Depreciation estimates are made separately for seven categories of farm property, on the basis of replacement cost, rather than original cost. Percentage rates of depreciation have been derived for dwellings from a 1934 survey covering 600,000 farms and for most other items from scattered sample data on length of useful life. These are applied to estimates of current value based on the Census of Agriculture and/or on cumulation of purchases (as a measure of current gross increment), estimated for tractors and other types of machinery and equipment from the annual *Farm Machines and Equipment* reports of the Census Bureau, adjusted to reflect current values on the basis of Department of Agriculture price index series.

Purchases of feed are reported at 5-year intervals in the Census of Agriculture. For interpolation and extrapolation, an index calculated from price and quantity data for 18 important feeds is used. Average price data are based on monthly mail returns from 4,000 reporting merchants. Quantities are estimated as production, indicated by reports from farm or factory producers, plus imports, with the total adjusted for inventory change and exports and other nonfarm uses.

The estimates of wages paid to hired farm laborers are described in the section on Wages and salaries.

Farmers' expenditures for livestock, which are prepared by States, cover purchases from all sources outside the State and from public stockyards within the State. The estimates of cash receipts from livestock are defined in a manner consistent with this treatment.

Estimates of livestock numbers shipped across State lines for stocker and feeder purchases are made from inspection records of State veterinarians, inspections by the Department of Agriculture at 66 public stockyards, and data derived from truck and railway movements of livestock. Estimates of the weight and price of the livestock purchased are obtained from records of transactions at five important stocker and feeder markets, which handle more than one-half of the transactions.

Motor vehicle operating costs are estimated separately for automobiles, trucks, and tractors, and only 40 percent of the total cost for automobiles is charged to farm production. The basic data on number of vehicles are obtained from the Census of Agriculture and extended on the basis of sales data on new tractors, less estimated scrappage, and truck and automobile registrations in predominantly agricultural states. Costs per vehicle for some items were obtained from a survey in 1936, and have been extended on the basis of changes in prices. Consumption of gasoline and oil per vehicle have also been obtained from surveys, supplemented by occasional spot checks of mileage and average mileage per gallon in the case of automobiles and trucks, and the number of days used and fuel consumption per day in the case of tractors.

The series on net rents to nonfarm landlords is discussed in the section dealing with Rental income of persons. This series comprises the only rental figures explicitly included in the farm income statement. The explanation is as follows.

Rental flows within the farm sector do not appear in the statement shown in *Exhibit 4* because it is a consolidated statement in which intra-business flows cancel out. Net rents earned by farmer landlords become merged with the net income of farm operators and are not isolated statistically. However, rents paid to landlords not living on farms must be recorded as flowing out of the farm sector. Only net rents are shown explicitly. The difference between them and the gross rents actually paid consists of expenses that are included among the various expense items of the statement.

Taxes on farm property cover all ad valorem taxes levied on farm property by State and local governments. Real estate tax rates are developed from sample data from local tax officials or from farmers, and from real estate tax data reported in the Census of Agriculture. The tax rate estimates are applied to value of agricultural land calculated from the censuses and interpolated by an index of farm land values constructed by the Department of Agriculture. Personal property taxes are estimated from the real estate taxes in conjunction with ratios of the amounts of farm real and personal property on tax rolls as shown in published reports of State tax commissions, boards of equalization, or similar bodies.

Characteristics of revisions

Revisions of the farm income estimates are made periodically by the Agricultural Economics Division of the Department of Agriculture to incorporate results of the quinquennial Census of Agriculture and of special Department of Agriculture surveys designed to improve certain areas of the esti-

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mates. In addition, when the Agricultural Economics Division publishes each Fall detailed income estimates for the preceding year, it usually presents also revised estimates for several years back, to incorporate newly available or improved data on production, marketings, prices, etc. In 1952, the Agricultural Economics Division introduced a comprehensive revision of the farm income estimates to incorporate new benchmark data reported in the 1950 Census of Agriculture.

The farm proprietors' income series shown in this report agrees statistically for the period 1929 through 1950 with the Agricultural Economics Division's series on "total net income of farm operators from farming, including Government payments" presented in *The Farm Income Situation*, Sept.–Oct., 1953, and thus includes all revisions made through that date. For 1951 and 1952, the present figures include, in addition, some subsequent statistical revisions in component income series that were available from the Agricultural Economics Division at the time the present series was prepared. For 1953, the farm income figure is a preliminary estimate developed from Agricultural Economics Division data.

Subsequent revisions to be made by the Agricultural Economics Division will be incorporated insofar as possible in the present series. However, because of differences in the Commerce and Agriculture publication schedules, it will not be feasible to maintain complete statistical conformity in the series published by the two agencies.

4. RENTAL INCOME OF PERSONS

Rent items appear on both sides of the national income and product accounts. Net rental income of persons is a distributive share of national income, and space rental value of housing is a component of personal consumption expenditures for services. Space rental value of nonfarm housing is estimated at an intermediate stage in the derivation of persons' net rental income arising from nonfarm rental housing or imputed to owner-occupancy of nonfarm dwellings, and is discussed below in connection with these net dwelling rents. Rental value of farm housing is estimated by the Agricultural Economics Division of the Agricultural Marketing Service of the Department of Agriculture, and is described in the section on Income of unincorporated enterprises.

Primary data on rent income are notably inadequate. Rents are received by a large number of individual landlords who maintain only fragmentary accounts. The only major attempt to obtain income statements from these landlords is in connection with the Federal individual income tax. The rent data tabulated by the Internal Revenue Service are derived from a sample of the tax returns and are restricted to the net rent item. Lack of gross rent and expense tabulations precludes systematic use of collateral source materials to adjust the Internal Revenue Service data for inconsistencies due to inadequate bookkeeping and incomplete reporting.

The tax return tabulations were used to derive a 1941 benchmark which covers net rent from property types accounting for about two-fifths of persons' net rents in that year. The remainder of the 1941 estimate and the totals for other years have been derived by subtracting sample-based estimates of expenses from gross rent receipts computed largely from data on rent paid as reported by tenants. Tax returns, census enumerations, and sample surveys—the main sources of rental information—provide much better coverage of rents paid than of rents received.

The resulting estimates of net rent are considerably less reliable than the farm income series, which is derived by a somewhat similar formula. Although the rent estimates pertain to an "industry" comparable in size to agriculture, public interest in real estate renting as an industry has been insufficient to justify any broad special program of data collection such as underlies the farm income estimates. Moreover, the use of data from tenants in estimating persons' net rental income is complicated by the necessity of excluding rent paid to landlords other than persons.

Derivation of the net rent estimates via a detailed structural analysis of gross rent flows and expenses has the virtue of providing a framework which facilitates the consistent use of all available data on rents. While on balance this is a distinct advantage, the necessity of deriving the final figures in this way has made for complexity in the statistical methodology, with consequent danger of errors. In particular, it will be noted the final estimates are often calculated as the difference between much larger items which, in turn, are also obtained as residuals. Even small errors made at the various stages of the estimating procedure may significantly affect the final results. Both as to general level and relative movement the rental estimates must be regarded as among the least satisfactory of national income statistics.

Exhibit 1.—*Components of Net Rental Income of Persons, 1950*

Types of property	Millions of dollars
1. Rented nonfarm property	**4,000**
a. Rented dwellings	1,795
b. Royalty-earning	558
c. Business and industrial	1,647
2. Owner-occupied nonfarm dwellings	**3,379**
3. Farm realty	**1,094**
Total	**8,473**

The property-type components of the net rent estimates may be grouped as above, to show their relative magnitude and the order in which they are discussed in the following pages.

1. Rented Nonfarm Property

Persons' net rental income from rented nonfarm property is derived in the course of a rather intricate estimating procedure. The following synopsis will facilitate understanding of the estimating sequence, details of which are described later.

An estimate of persons' net rental income from rented nonfarm property for 1941 was derived from net rents reported on individual Federal income tax returns. For purposes of extrapolation, the 1941 total was broken down into three groups: (*a*) Net rents from rented dwellings, (*b*) royalties, and (*c*) net rents from business and industrial property.

(*a*) Personal net rents from rented dwellings are calculated annually as the difference between gross rental receipts and landlords' expenses on all such dwellings, after nonpersonal landlords' receipts and expenses have been eliminated from these gross totals.

(*b*) Personal net royalties are estimated annually by applying suitable corporate ratios to the series described below on rental receipts of persons from business and industrial property.

(*c*) Personal net rents from business and industrial property were obtained as a residual for 1941. Their extrapolation involves estimating persons' gross rents from business and industrial property for 1941 and other years as gross rents paid by business and government less gross rents received by business and government from business and industrial property; deducting the 1941 benchmark figure for persons' net rent from such property from the 1941 estimate of persons' gross rent to obtain persons' expenses as a residual; breaking down this residual into component parts and extrapolating them individually by use of corresponding expense items for corporate landlords; and subtracting expenses from gross rents to obtain personal net rents.

Details of these procedures are discussed below.

Benchmark estimates

Total net rents and royalties of individuals and fiduciaries reported on the rent schedules on forms 1040–41, as tabulated by the Internal Revenue Service for 1941, were adjusted to cover nontaxable fiduciaries, individuals reporting on the short form 1040A, and persons and nonprofit organizations not reporting. They were further adjusted to reflect losses on property rentals reported by some filers and to deduct an estimate of net room rents reported, an allowance for neglected or misplaced expense entries, and an estimate of net rents reported by farmers. The original total of $1.8 billion was reduced to a figure of $1.4 billion, representing net rent from nonfarm property and net royalties.

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The taxpayer filing form 1040 may report his net rents either on the business schedule or on the rent schedule. These two schedules are adapted, respectively, to large and complex rental activities and to small or simple transactions. It is reasonable to suppose, therefore, that most taxpayers who receive rent as an occupational income fill in the business schedule, and that rents which are merely a supplemental source of income or accrue to persons without occupation are generally reported on the rent schedule. This distinction between occupational and nonoccupational income underlies the distinction in national income measurement between the distributive shares of income of unincorporated enterprises and rental income of persons.

Statistically, the use of the income tax data has serious drawbacks. Of the total of $1.8 billion reported by the Internal Revenue Service for 1941, nearly three-fourths is an estimate (for income classes under $5,000) based on samples comprising less than 6 percent of the returns. Moreover, reporting requirements are peculiarly difficult to enforce in the case of rental income, because such income is received in small amounts by large numbers of landlords and because difficult accounting problems are involved in calculating net rent. Finally, the various adjustments of the tax data made by the National Income Division had in most cases to be based on fragmentary or otherwise unsatisfactory data.

It would be possible to estimate net rents directly from income tax returns for most other years as well as for 1941. However, the relatively high tax exemption limits in effect in the earlier years meant that a very substantial part of persons' rental income was not reported for tax purposes. After 1941, the movement of net rents indicated by individual income tax return data diverged substantially, not only from the prewar trend, but also from the movement indicated by a rather substantial body of other data. These include sample series on net dwelling rents and synthetic income statements for all rental housing, as well as corporation income tax tabulations showing the net flow of rent out of the corporate sector of business. As individual income tax data do not show gross rent or rent classified by property type, it has not been possible to reconcile the net rent figures from this source with these other data.

Exhibit 2.—*Derivation and Breakdown of Persons' Net Rents From Rented Nonfarm Property and of Royalties, 1941*

Item	Millions of dollars
1. Net rents tabulated from tax returns	1,770
2. Less: Adjustments for coverage and concept	393
3. Equals: Persons' net rents from rented nonfarm property, and royalties	1,377
4. Less: Persons' net rents from rented nonfarm dwellings	664
5. Less: Persons' net royalties	223
6. Equals: Persons' net rents from rented nonfarm business and industrial property	490

The estimating procedure actually adopted for years other than 1941 assumes that corporate tax returns provide a firmer statistical base than tax returns of individuals. It may be noted that incentives to nonreporting of rents received by individuals have increased with the requirement since 1941 that landlords file the long form 1040 instead of the much simpler alternative forms available to most nonlandlords.

The derivation of persons' net rents from rented nonfarm property, and of persons' royalties, in 1941 is summarized in lines 1, 2, and 3 of *Exhibit 2*. For extrapolation the total is broken down as shown in lines 4, 5, and 6, corresponding to items a, b, and c in the synopsis given above for line 1 of *Exhibit 1*. This breakdown and its extrapolation will next be considered.

Persons' net rents from rented nonfarm dwellings

The first step in preparing annual estimates of personal net rents from rented nonfarm dwellings is to derive, separately for urban and rural nonfarm dwellings, midyear annual numbers of rented dwellings and of mean annual contract rent per dwelling. Annual contract rent for each of the two cells is then obtained by multiplication. For the period from 1929 through 1940, dwelling unit numbers and mean and total rentals were estimated separately for each of four cells, being cross-classified between one- and multifamily structures as well as by urbanization. Estimates for 1941 and later years have been made without a structure-type breakdown, in the absence of the required information on mean rents and (except for 1950) number of units.

Next, cell estimates of landlords' total expenses for facility and utility services included in rent are obtained by an analogous formula. Deduction of these from the contract rent aggregates yields *Space rent of tenant-occupied nonfarm dwellings*, a component of personal consumption expenditure and of gross national product.

Landlords' other expenses are then estimated and deducted from space rent to determine landlords' net rental income.

Finally, net rents of nonpersonal landlords are estimated and deducted to obtain the nonfarm rented dwelling component of the rental income of persons.

The magnitudes involved in these calculations are illustrated by the 1950 values shown below.

Exhibit 3.—*Calculation of Space Rent and Net Rent for Nonfarm Rented Dwellings, 1950*

Item	Urban	Rural nonfarm	Total
1. Rented nonfarm dwellings (number in millions)	14,310	3,649	
2. Times: Average annual rent (rounded to dollars)	504	343	
Equals: Total contract rent (millions of dollars)	7,207	1,251	8,458
3. Less: Landlords' expenses for facility and utility services included in rent			1,630
4. Use of cookstoves, refrigerators, furnishings	464	49	
5. Electricity, fuel, water, gas, and miscellaneous	1,083	34	
Equals: Personal consumption expenditure for space rent	5,660	1,168	[1] 6,828
6. Less: Landlords' other expenses			4,739
7. Depreciation	878		
8. Taxes	1,391		
9. Mortgage interest	602		
10. Other	1,868		
Equals: Net rental income of landlords			2,089
11. Less: Nonpersonal landlord net income			294
Equals: Net rental income of personal landlords from nonfarm rented dwellings			1,795

[1] The published series for consumption expenditure for space rent also includes allowances, totalling $234 million in 1950, for certain lodging house rents and lodging received gratis as a perquisite of employment. These allowances are rough approximations based on a variety of census, income tax, social security and other data.

The derivation of the values in *Exhibit 3* is of special importance for two reasons. In the first place, substantially the same procedures and data sources used here are used also in deriving estimates for owner-occupied dwellings. Secondly, the estimated expense series for rented dwellings are used as adjustment factors in extrapolating the expenses incurred by persons as lessors of business and industrial property. For these reasons the exhibit will be discussed line by line. The methodology for owner-occupied dwellings will be indicated at the same time where convenient.

1. The total number of tenant-occupied nonfarm dwelling units has been benchmarked on the decennial Censuses of Population and Housing for 1930, 1940, and 1950. Data for 66 cities included in the Commerce Department's Real Property Inventory of 1934 were used in conjunction with 1940 Census data from the same cities to derive an estimate for 1934. Census Bureau data on the size and composition of the housing stock, based on interviews with scientifically constructed samples of 20,000–30,000 families surveyed in connection with the Bureau's Monthly Report on the Labor Force, were used for the years 1944, 1945, and 1947. These benchmarks are interpolated and extrapolated by estimates of the numbers of rental units, including vacancies.

The estimated numbers of rental units have been derived by adding to census- or survey-based benchmark totals the cumulative net number of new multifamily units provided in each subsequent year by construction or conversion, and deducting an allowance for the number of units demolished. The construction series rest on Bureau of Labor Statistics estimates of housing starts, which are based chiefly on reports of building permits issued. (See section on New construction.) The conversion and demolition series have been derived, partly by graphic interpolation, in the process of reconciling the decennial census totals and the Census Bureau's sample-based data with the estimates for the same dates made by adding new construction cumulatively to the base stock. For the war and early postwar years, such recon-

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ciliations also required allowance for the shift of many dwellings out of the rental market to owner occupancy.

The sums of the estimates for tenant-occupied units plus a similarly derived series for owner-occupied units have been checked for 1948 and subsequent years against annual control totals, for all occupied nonfarm units, based on the numbers of households reported in the Census Bureau's Current Population Surveys. These population surveys also provided the basis for estimates of the effects of the Bureau's adoption in 1950 of new criteria for distinguishing urban, rural nonfarm, and farm dwellings (see its *Current Population Reports—Population Characteristics*, series P–20, No. 33, of February 12, 1951). The discontinuity in the statistical series between 1949 and 1950 which resulted from the change in criteria has been smoothed out by wedging back to April 1947. The principal distortion remaining in the final estimates is an exaggeration of the rate of increase in the number of units between April 1947 and April 1950: of an indicated gain of about 5 million units in the total nonfarm housing stock, just under 1 million represents the smoothed effect of the classification change.

Besides tenant-occupied dwellings, line 1 of *Exhibit 3* includes an allowance for units rented but temporarily unoccupied, based on Census and sample information as to the composition of the stock of vacant units.

The final estimates of the number of rented units are adjusted to represent the average stock for each year.

2. Average annual rent for rented units likewise has been derived from the decennial censuses of 1930, 1940, and 1950 and the sample surveys made by the Census Bureau for 1944, 1945, and 1947. Minor adjustments have been made in the decennial census data for nonreporting of rent and to convert the final means for April to an annual-average basis. The mean for the 1950 Census date is based on a preliminary sample tabulation of census returns for about 46 thousand dwelling units in about 14,000 census enumeration districts systematically selected from all enumeration districts throughout the Nation; arithmetic means for rent were not included in the Census Bureau's final tabulations of all returns. Values for other years represent interpolations and extrapolations by reference mainly to the Rent Index component of the Bureau of Labor Statistics Consumer Price Index. Also used for this purpose were the mean rent data provided by the Financial Survey of Urban Housing for a 12 to 15 percent sample of all families in 52 cities, covering the years 1929, 1932, and 1933.

The Rent Index is based on returns filed by about 40,000 families in 46 cities. The National Income Division has modified the recent-year values in the Index to allow for the comparatively high rent of newly constructed dwellings (as indicated by properties mortgaged under Federal Housing Administration guarantee) and for changes in the common practice of landlords with regard to the inclusion of facilities and utilities in rent. Data for the latter adjustment are obtained through periodic Dwelling Unit Surveys by the Bureau of Labor Statistics.

3. Facility expenses and utility bills, although sometimes paid by the resident family directly to the producer, are often included in contract rent and paid by the landlord. As outlays for these items are classified in gross national product under personal consumption expenditures for household operation, it is necessary to exclude from the housing component the allowance which landlords make for them in fixing rents. The total amount to be excluded for each item is estimated by multiplying together two factors: the average cost of providing the item for one dwelling; and the number of dwellings for which the item is provided at the landlords' expense. The derivation of each of these factors is outlined below under (4) for facilities and under (5) for utilities.

4. The average cost of providing each type of facility (cookstove, refrigerator, or furnishings) for one dwelling is calculated for the present purpose as the sum of annual depreciation plus maintenance cost, since this sum is the extra amount which the rent must cover to make the inclusion of the facilities in it worth while from the landlords' standpoint.

The estimates of average maintenance cost (except for furniture) are flat rates based on trade opinion. Depreciation averages are calculated from the estimated original average price of the equipment in use, by straight-line amortization over the estimated useful life of the equipment.

The length of useful life is determined for most items from studies made for the Internal Revenue Service. The original average price which is amortized is generally calculated as a weighted moving average of annual prices covering a back period equal to the length of useful life. For stoves and refrigerators, it is derived by dividing the total value of sales during the back period by the total number sold during that period. Annual value of sales and number sold have been estimated basically from Census of Manufactures data, which have been interpolated, extrapolated, and raised to cover distribution cost by use of information from trade sources.

For furniture, a sample-based average expense benchmark was derived for 1933 in the Financial Survey of Urban Housing. This is extrapolated by Bureau of Labor Statistics price indexes, and the annual results are averaged over the back period without weighting the years.

The numbers of dwellings for which specific facilities are provided at the landlords' expense are estimated by applying annual percentage ratios to the series on total number of rental units described under (1) above. The most recent general benchmark for each of these ratio series was derived from the Dwelling Unit Survey undertaken by the Bureau of Labor Statistics in 1949–50 in connection with the revision of its Consumer Price Index. City averages from this Survey were weighted by an adaptation of the series of population weights developed by the Bureau from preliminary census tabulations, for its 91-city Survey of Consumer Expenditures for 1950. The Dwelling Unit Survey is described in the July and September 1951 issues of *Construction*, and the Survey of Consumer Expenditures is described in the April 1951 and August 1952 issues of the *Monthly Labor Review*.

Other base-year percentages of dwellings let furnished were determined from the 1940 Census of Population and Housing and from the 1934 Financial Survey of Urban Housing. These benchmarks are interpolated and extrapolated by use of data gathered periodically by the Bureau of Labor Statistics from families in the sample underlying its Rent Index.

Percentages of dwellings let with refrigerator were estimated from the 1934 Financial Survey of Urban Housing, the 1935–36 and 1941 studies of consumer purchases, and the 1949–50 Dwelling Unit Survey. Interpolation and extrapolation have utilized data analogous to those used in extrapolating the percentages of dwellings let furnished.

Most of the source materials for furniture and refrigerators cover only urban housing. Estimates for rural nonfarm units are based on those for urban dwellings, using differentials indicated by the Census or the 1935–36 Consumer Purchases Study.

For cookstoves, the 1949–50 Dwelling Unit Survey provided the only data. The percentages indicated by this source are held constant for all years and for both urban and rural nonfarm units.

5. The aggregates in line 5 of *Exhibit 3* are products of total number of rented units (described under (1)), percentages of units including the respective utilities in rent, and average cost per unit. The percentages involved have been based on the Financial Survey of Urban Housing, the 1949–50 Dwelling Unit Survey, and interim city surveys by the Bureau of Labor Statistics covering families in the sample underlying its Rent Index.

The cost averages are based on data for households purchasing utilities directly, since data on payments through landlords are not available. The principal benchmark was provided by the 91-city Survey of 1950 Consumer Expenditures mentioned above. The general procedure was to (*a*) derive a national average outlay, per surveyed family reporting outlay for the given utility, (*b*) estimate the implied average for families in dwellings of each structure type, and (*c*) combine these to obtain averages presumed applicable to units where utility costs were included in rent.

The weights used in (*a*) for the various cities were those developed by the Bureau of Labor Statistics. The technique for (*b*) involved reconstructing a type-of-structure breakdown for the utility costs represented in the survey. It utilized type-of-structure cost differentials from various sample surveys, and a 1950 Census classification of units by structure. The latter was modified to omit units with utilities included in rent, since these units were not represented in the survey averages. For step (*c*), the structure-type averages derived in (*b*) were weighted together by the estimated number of one-family and multifamily units respectively in which the landlords paid for the utilities. In deriving these weights, the total numbers of such units were obtained as percentages of the total numbers of rented units (see above), and distributed by structure-type on the assumption that multifamily unit rents rather commonly include utilities and that only a residual would consist of one-family units.

The resulting cost means pertained only to urban units. Corresponding averages for rural nonfarm units were derived by applying urbanization differentials based largely on the 1935–36 Consumer Purchases Study. The final implied aggregates were reconciled approximately with the corresponding values shown in Part V, table 30.

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Annual estimates derived from reports by the Edison Electric Institute and the American Gas Association could be reconciled fairly closely for 1950 with these benchmark averages for electric and gas utility costs, and are used to extrapolate them. The 1950 benchmark averages for heating fuel cost, and secondary benchmarks derived from the Financial Survey of Urban Housing of 1934, are interpolated and extrapolated by an indicator representing the product of the Consumer Price Index fuel component times an index of heating season degree days as reported by the Weather Bureau. Average water bills, estimated for 1950 by the procedure described above and for 1932 and 1942 from water utility revenues reported to the Census of Governments, are interpolated and extrapolated by city water utility revenues per capita of population.

A 1940 average for the cost of such minor utilities as rubbish removal and telephone service included in rent, based on data from the Federal Housing Administration, Office of Price Administration, and other sources, is moved from year to year by the weighted average combined cost of the other utilities considered above.

6. The other expenses deductible from contract rent may conveniently be described here for owner-occupied as well as for rental units. Most of these estimates are initially made for tenant-occupied, owner-occupied, and vacant units separately. Expenses on vacant units are subsequently allocated between rental housing and home ownership in proportion to the rental value of the vacant units of each type.

7. Depreciation is derived by applying a flat rate of 2 percent to the estimated original cost value of all nonfarm dwellings. The result is allocated by tenure groups in proportion to aggregate value in each category.

The depreciation rate is based on several surveys of average length of useful life of dwellings, including in particular that made by the National Association of Real Estate Boards for the Internal Revenue Service.

Original cost value of all nonfarm dwellings is estimated by cumulating annual estimates of original and subsequent construction outlays on units still existing. A basic distribution of the stock of housing by year of construction was taken from the 1940 Census of Population and Housing. Unit mean original cost of dwellings in each age group was estimated chiefly from the building permit data described in the section on New construction, and was multiplied by the number of units found by the Census in that age group to obtain a census-year aggregate. The corresponding aggregates for noncensal years are derived by adding subsequent-year construction outlays to (or subtracting previous-year outlays from) the benchmark.

The depreciation totals have been allocated between tenure classes in proportion to assessed value rather than original cost, in order to allow for a somewhat lower depreciation rate on owner-occupied than on tenant-occupied units. (The assessment ratios have been lower for owner-occupied than for rental units.) To estimate assessed values for the years 1929–41, mean rents or rental values were capitalized by use of a regression derived from the 1940 Census of Population and Housing, and multiplied by assessment ratios indicated in State and local government fiscal reports. The resulting averages were then multiplied by the numbers of units involved. The value aggregates so derived have been extrapolated forward from 1941 by original-cost values. These are calculated by cumulating construction outlays as described above, but separately for one-family and multifamily units and with an adjustment for the shifting of units among tenure classes.

8. Taxes are estimated as a variable fraction of the property tax series described in the section on Government receipts and expenditures. This tax series is allocated among nonresidential property, rental housing, and owner-occupied dwellings.

For the period from 1929 through 1941, the allocation was derived from a detailed study of State and local government fiscal reports. For 1949, average taxes per owner-type unit and per rental unit were based on frequency distributions from the Survey of Residential Financing taken in conjunction with the 1950 Census. These 1949 benchmark means were consistent with figures derived from the 1950 Survey of Consumer Expenditures, applying to owner-occupied units, and with figures for rental units in a few cities surveyed by the Office of the Housing Expediter. They were multiplied by the corresponding numbers of units to obtain benchmark totals. Interpolators for 1942–48 and extrapolators from 1949 have been derived by allocation of the overall property tax series: between nonfarm residential and other realty by reference to 1941 taxable values as changed by new construction, depreciation, and trends in assessment practice; and within nonfarm residential by aggregate assessed values.

9. Mortgage interest for 1950 was estimated primarily on the basis of the Survey of Residential Financing mentioned above. Extrapolation utilizes the products of estimated mortgage debt multiplied by estimated effective interest rates.

For 1950, amounts of debt and of interest liability for mortgage loans on rental units and on owner units separately are estimated from distributions of debt by interest rate classes reported in the Survey of Residential Financing. The Survey totals for debt held by savings and loan associations were reconciled with similar totals based on lenders' reports to the Federal Savings and Loan Insurance Corporation. The details of the reconciliation provided a basis for adjusting the Survey debt aggregates to the timing, coverage, and concepts appropriate for the present purpose. Together these adjustments added about 9 percent to the aggregate debt figures reported in the Survey.

The Census of Population and Housing provided the basis for estimates of owner-occupants' total mortgage debt and average interest rate paid in 1940. Interpolation (between 1940 and 1950) and extrapolation utilize the Federal Savings and Loan Insurance Corporation's estimates of debt on one-to-four family properties, its tabulations of mortgage loans and interest income of building and loan associations, and a variety of sample data. Census data for 1940 corresponding to those used for owner-occupied housing were not compiled for rental units. Debt and interest rates on mortgage loans secured by rental housing are extrapolated from the 1950 benchmark by use of the building and loan association data and corporate and other sample information.

10. Other property expense consists of estimates for repair and maintenance, insurance, and miscellaneous costs.

Repair and maintenance cost accounts currently for two-thirds of the sum of these three components. For each of a large number of regional, rent-level, and city-size cells, benchmark averages derived from surveys by the Office of Price Administration, from the 1935–36 Study of Consumer Purchases and from a similar but much smaller survey made in 1941 were multiplied by 1930 and 1940 census data on number of dwellings by tenure in each cell to obtain cell subtotals. These, summed by tenure groups, represent benchmark aggregates for repair and maintenance cost in 1930 and 1940.

For owner units, the 1950 Survey of Consumer Expenditures supplied the basis for an additional benchmark. State sales tax and sample data on sales of building material retailers and (since 1947) tabulations from the 3,000-family Surveys of Consumer Finances made for the Federal Reserve Board are used for interpolation and extrapolation.

Expenditures on rental units are extrapolated from 1940 through 1946 and estimated for 1950 by use of survey data provided by Federal rent control agencies. Estimates for other years have been interpolated or extrapolated by reference to space rent and to average family income.

The foregoing estimates of facility, utility, and other expenses incurred on rental housing are deducted from the estimated rentals of such dwellings to obtain the figure for net dwelling rents of all landlords.

11. Rental housing, however, is owned by business enterprises and government agencies as well as by persons. In the absence of any direct information, contract rentals and expenses on holdings of persons are derived by eliminating the business- and government-owned portions from the totals. In line 11 of *Exhibit 3* only the net adjustment is shown.

For government, the estimates of rental receipts are derived chiefly from reports and records of the Public Housing Administration.

Business dwelling-rent receipts are calculated as the sum of (*a*) real estate corporation apartment building rentals; (*b*) other dwelling rentals received by real estate corporations, and dwelling rentals of insurance companies; (*c*) dwelling-rent receipts of corporations in banking, brokerage, and finance, n. e. c.; (*d*) for all other corporations, an arbitrary five percent of their total rent receipts as reported for income tax purposes; and (*e*) for each of these groups of industries, the same percentage of noncorporate as of corporate total rent receipts. A special tabulation of about 500 returns selected at random from the Survey of Residential Financing lent some support to the total so derived, by confirming the indicated relationship of business to nonbusiness rentals from housing.

(*a*) For corporation-owned apartments, the base-year estimate was obtained by a reconciliation of total rent receipts shown on real estate corporation income tax returns for 1937, which excluded apartment buildings, with those shown on returns for 1938, which included them. This estimate was extrapolated over the 1929–41 period by total rent on multifamily dwellings. For 1942 and later years, it has been extrapolated in combination with

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the remainder of real estate corporation dwelling rentals (see (*b*)), as a variable percentage of total rental receipts of all real estate corporations filing income tax returns. The percentage distribution of such corporations' rentals between dwelling and nondwelling properties has been moved forward from the 1941 benchmark by use of data reported in Moody's Manuals of *Finance, Insurance and Real Estate* for corporate lessors of each type of property.

(*b*) The estimates of insurance company dwelling rentals and, for 1929–41 only, those of nonapartment dwelling rentals of real estate corporations utilize tax return data to determine total rent receipts, which are distributed between residential and nonresidential by use of reported figures on value of life insurance companies' investment holdings of dwelling and nondwelling real estate.

(*c*) An analogous method is applied for banking, brokerage, and finance, n. e. c., using reported data on types of bank-owned realty. Part (*d*) requires no comment, and the noncorporate totals required for (*e*) are benchmarked on Federal tax return data for sole proprietorships and partnerships and extrapolated by the corporate series for the respective industries.

The resulting series for dwelling rental receipts of business is used in two connections—as a deduction from total nonfarm dwelling rents in arriving at dwelling rental receipts of persons, and as the basis for the estimates of business firms' expense on rental housing, which are deducted from total nonfarm dwelling landlords' expenses in arriving at dwelling rental expenses of persons. For the latter purpose, the business receipts series is multiplied by suitable corporate expense ratios. Separate ratios are calculated for interest, depreciation, and the sum of all other expenses.

These expense ratios, and the corresponding ratios mentioned below for the nondwelling properties of realty corporations, are based on a special analysis of the corporate data, as follows.

Tabulations from the income tax returns of corporate owner-operators and lessors of real property permit estimation of these corporations' rental income and associated expenses, but for dwelling and nondwelling properties combined rather than separately. To distribute their rental income by property type, the relevant estimates described under (*a*) and (*b*) above are taken as measuring the residential portion; and the difference between these and the tax-return-based total is taken as a measure of the nondwelling portion. Detailed expense ratios are derived, for dwelling properties and for nondwelling properties separately, from annual income statements appearing in Moody's Manuals for a sample of several hundred concerns specializing in one or another of the two types. These ratios are applied to the respective rental receipts series to obtain estimates, for dwelling and for nondwelling properties separately, of the dollar amounts of each expense item incurred by realty corporations. Finally, the expense estimates so obtained are adjusted pro rata to the corresponding item totals from the tax return data for both sorts of property combined. Expense ratios implied by these final adjusted estimates are attributed to business-enterprise lessors generally.

Expenses on public housing, like rental receipts, are estimated from fiscal reports and accounting records.

Net royalty receipts

These are estimated annually by use of Federal income tax return data, on the assumptions that (1) the ratio of royalty receipts to nonfarm nonresidential rental receipts is the same for persons as for corporations, and (2) the ratio of net to gross royalty income is the same for persons as for corporations specializing in royalty-yielding investments. Preliminary estimates for the two most recent years, pending the availability of the tax return tabulations, are made by extrapolation using a suitably weighted index of mineral production and an index of the net/gross ratio for nonfarm business and industrial property.

Since the basic use made of these estimates of net royalties is in the allocation and extrapolation of the net rents and royalties total derived from the individual income tax returns, any error in the 1941 level is balanced by an opposite error in the benchmark level of persons' net rent from business and industrial property. The net effect of any such error is therefore to mis-weight the extrapolator series.

Rent on business and industrial property

In estimating net rental income of persons from nonfarm business and industrial property, individual income tax return data for 1941 were adjusted for coverage and concept and to eliminate net rent from nonfarm dwellings and net royalties, as shown in *Exhibit 2* above. The resulting benchmark has been extrapolated as the difference between annual estimates of gross rental receipts and of expenses. The calculations involved are illustrated in *Exhibit 4.*

Exhibit 4.—*Persons' Net Rents from Business and Industrial Property, 1941 and 1950*

[Millions of dollars]

Item	1941	1950
Rent on nonfarm business and industrial property:		
1. Paid by business and government	3,681	6,907
2. Less: Received by business and government	1,360	2,654
3. Equals: GROSS RENTAL RECEIPTS OF PERSONS from nonfarm business and industrial property	2,321	4,253
4. Less: PERSONS' EXPENSES as landlords of nonfarm business and industrial property	[1] 1,831	2,606
5. Equals: PERSONS' NET RENTS from such property	[2] 490	1,647

1. Derived as line 3 less line 5, in 1941 only.
2. Benchmark estimate based on data from Federal individual income tax returns. See *Exhibit 2.*

Gross rental receipts of persons from nonfarm business and industrial property (line 3) are estimated by a residual method: business enterprise and government rent receipts other than from dwellings and farm property (line 2) are subtracted from business enterprise and government rent payments (line 1). Of the series used in this calculation, total business enterprise rent receipts and payments are estimated primarily from Federal income tax return data for corporations, partnerships, and sole proprietorships. Total government rent receipts and payments are estimated from the Federal *Budget* and fiscal reports of sample States and municipalities. Dwelling rent receipts by government and business are derived as indicated above (in the discussion of line 11 of *Exhibit 3*) and netted out of their total receipts. Rents on farm property, likewise netted out, are estimated partly from government fiscal records and partly by use of percentages from a 1945 study of a sample of 150,000 farm owners.

Persons' expenses (line 4) were estimated for 1941 as persons' gross receipts (line 3 obtained as described above) less their net rents (line 5 derived from tax data as shown in *Exhibit 2*). This benchmark is broken down by categories of expense, which are extrapolated by the corresponding expenses of corporate lessors of such property, adjusted in four steps as outlined below. The estimates for persons' rental housing and for realty corporations' dwelling and nondwelling property, which are introduced at various stages of the procedure, have already been described. The sum of the extrapolated expenses is then deducted from persons' gross rental receipts to yield annual net rental income of persons from nonfarm business and industrial property.

(1) To allow for the difference in expense patterns between personal and corporate landlords, the itemized estimates of expenses for corporations handling business and industrial property are multiplied for each year by the ratios of persons' to corporations' expense for the same items in connection with rental housing.

(2) The resulting values were summated for 1941, and adjusted pro rata to the global benchmark total for persons' expenses on business and industrial property shown in *Exhibit 2*, line 4. The adjusted amounts were taken as representing a breakdown of this global benchmark total.

To extrapolate them to other years, the unadjusted series obtained in the first step are (3) adjusted for all years by the same percentage found necessary for 1941 in the second step and (4) corrected for the difference between the movements of personal and corporate rental receipts.

Adjustment (4) is necessary because the original series tended to vary directly over time with the ratio of personal to corporate rental receipts from housing, and did not reflect variations in the ratio of personal to corporate rental receipts from business and industrial property. Each expense series is accordingly divided by the former ratio series, based on 1941 as 100, and multiplied by the latter, similarly based.

Tax return data become available at intervals of varying length for the various items used in estimating net rent on business and industrial property. Annual tabulations from corporate income tax returns are completed only after a lag of 3 years; and periodic tabulations from individual and partnership tax returns must be extrapolated over periods ranging up to 4 or 5 years.

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The extrapolations necessitated by these lags have generally been based for corporations upon samples of published corporate financial statements and upon indexes of employment, payrolls, or industrial production; and for noncorporate business, upon the rent series for corporations in the same industries.

2. Owner-Occupied Nonfarm Dwellings

Imputed income derived from owner-occupancy of nonfarm dwellings made up nearly two-fifths of total net rental income of persons in 1950, and a somewhat smaller fraction in most of the earlier years. This imputed income item is defined as the gross return which the owner-occupants of nonfarm dwellings could theoretically have realized had they offered their houses for rent, less their expenses. The implied option is considered from the standpoint of the individual owner-occupant, but without regard to any special treatment accorded under rent control legislation to dwellings previously owner-occupied.

In general, the methods used to estimate the imputed item of rental income as well as the corresponding consumer expenditure component, *Space rental value of owner-occupied nonfarm dwellings*, parallel those discussed above for rental housing in the use of population census benchmarks, periodic sample surveys, and the Rent Index. Even the statistical problem of facilities included in rental value occurs with owner-occupied as well as with rented dwellings, since the 1940 Population and Housing Census, which provides the sole benchmark for rental value of owner units, reported such value inclusive of cookstove, refrigerator, and (for multifamily structures) any utilities included in rent of other dwellings in the same structure.

Accordingly a separate description of the methodology underlying the imputed rent estimates is not given. Only two points of difference between imputed and contractual rent estimation need be noted. First, in the case of owner-occupied dwellings it is unnecessary to allow for ownership by landlords other than persons. Secondly, the estimation of mean contract rental value per unit is complicated for owner-occupied dwellings both by a relative paucity of data and by the more subjective character of such data as exist.

The benchmark data for mean rental value of owner-occupied units are estimates for the individual dwellings reported in the 1940 Census of Population and Housing. Enumerators were instructed to base the estimates on rents actually being charged for similar dwellings in the neighborhood. In deriving the benchmark means from these data, a systematic downward adjustment, amounting to about 2 percent, was made to eliminate the apparent effect of enumerators having occasionally used a rule-of-thumb ratio to market value in estimating rental value.

A direct estimate was also developed for 1930, based on Population Census value data for that year used in conjunction with value-rent relationships indicated by the 1940 Census. Estimates for 1932 and 1933 are extrapolations from 1930 by data for 22 cities from the Financial Survey of Urban Housing. They reconcile very closely with the results of extrapolation back from 1940 by series underlying the Rent Index compiled in the Bureau of Labor Statistics.

Estimates of rental value for 1944 and 1945 were obtained by extrapolation from 1940, as follows: (*a*) The mean rental value of all occupied units combined (rented as well as owned) was extrapolated by mean rent for rented units, which in turn had been estimated from Census Bureau sample data; (*b*) the means for all occupied units and for rented units were multiplied respectively by the corresponding numbers of units, and (*c*) the products were differenced to secure aggregate rental value of owner-occupied units. This procedure was adopted primarily to take account of the effect of the shifting of units from rental to owner-occupancy.

Mean rental values for 1947 and 1950 were estimated by extrapolation from 1945, separately for urban and rural nonfarm owner-occupied units, using the corresponding means for tenant-occupied units as extrapolators.

For other years, compilations made by the Bureau of Labor Statistics for its Consumer Price Index have served as the chief basis for interpolating and extrapolating mean rental value. The compilations used for 1935–39 were indexes of rent by rent ranges. Other interpolation estimates are based in most cases on the published Rent Index.

For all years, the aggregates relating to owner-occupied units have been increased by small allowances for summer homes and other dwellings temporarily unoccupied but held for the owners' use.

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3. Farm Realty

The basic series used in estimating net rent from farm property are prepared by the Department of Agriculture, using the data-collecting system and some of the specific estimates described in the section on Income of unincorporated enterprises. In conformity with the Department of Agriculture treatment, all farm net rents received by or imputed to landlords living on farms are regarded as incident to the business of farming, and hence are included in national income under the heading of net income of unincorporated (farm) business rather than under the heading of rental income of persons. The magnitudes involved in the 1950 rent estimates are as follows:

Exhibit 5.—*Persons' Rentals from Farm Property, 1950*

Item	Millions of dollars
1. Gross farm rent and Government payments to landlords	2,920
2. Less: Rent payable to farmer landlords, nonfarm business, and government	1,053
Equals: Gross rental income of persons from farm property	1,867
3. Less: Expenses of personal landlords	773
4. Equals: Net rental income of persons from farm property	1,094

1. Gross rent payable to landlords includes crop share, livestock share, and cash rents. It is estimated by the Production Economics Research Branch of the Department of Agriculture from acreage and production statistics, using relationships from Agriculture Census reports, Crop Reporter data, and a special survey for 1936 of a sample group of 15,000 reporting landlords. As used by the National Income Division, the series also includes income from Government payments made to landlords *qua* landlords (as distinguished from payments made to farm operators as such).

2. The distribution of the total by landlord groups is based on data from the 1936 survey mentioned above and from over 150,000 returns to a 1945 survey. A primary distribution between landlords living on farms and other landlords is calculated by the Department of Agriculture from these surveys, and ratios from the 1945 survey are used by the National Income Division to break out nonfarm business and government rent receipts for that year from the total going to landlords not living on farms. For other years, the business and government receipts are extrapolated by government fiscal and corporate tax return data.

3. Landlords' expenses represent those shares of farm overhead and production expense items such as taxes, depreciation, repairs, insurance, fertilizer, and seed (see discussion of farm proprietors in the section on Income of unincorporated enterprises) which are borne by personal landlords. The total paid for each item is allocated first between rented and owner-occupied farms, generally by use of acreage or property value ratios derived from the quinquennial Census of Agriculture. The major expense items involved for rented farms can be assumed to be paid by the landlord rather than by the tenant. Seed, fertilizer, and binder twine, however, illustrate a different treatment, lessors being estimated to pay a fraction of these determined by the ratio of share-cropped acreage to total crop acreage. The amounts of expenses ascribed to landlords are prorated between landlords living on and off farms in proportion to the land owned by each, as indicated by the 1936 and 1945 surveys. Finally, expenses of landlords living off farms are prorated between persons and nonpersonal landlords by use of the corresponding distribution of rental receipts described above.

Characteristics of the Revisions

As has been indicated above, the rent estimates are based upon a wide variety of sources, many of which are nonrecurrent, or become available infrequently and irregularly or with substantial delay.

To the extent that the estimates of rents rely on corporate income tax data, the figures for the two most recent years published each July are subject to revision. However, revisions may extend further, for instance when new benchmark data lead to the substitution of interpolations for previous extra-

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polation procedures over a number of years. Important changes of this type have resulted from the incorporation of data from the 1950 Census of Population and Housing, the Survey of Residential Financing, and the 1949–50 Dwelling Unit Surveys and Survey of Consumer Expenditures in 1950 by the Bureau of Labor Statistics.

In addition, Part V of the present supplement incorporates substantial revisions made when preliminary estimates based on a more summary methodology were replaced by the results of the detailed calculations described above. Further details of the new estimates were published in the June 1953 issue of the SURVEY OF CURRENT BUSINESS.

5. CORPORATE PROFITS

The basic data underlying the estimates of corporate profits are the annual tabulations of corporate income tax returns compiled by the Internal Revenue Service. The tabulations are available, for the most part, from its annual *Statistics of Income—Part 2*, or are taken from the "Source Book", unpublished volumes supplementing *Statistics of Income* with more detailed information.

These data are sufficiently complete and reliable to overcome many of the difficulties which are inherent in the estimation of profits. Filing of detailed returns is mandatory, and the returns are prepared in the knowledge that they are likely to be audited. Although the measurement of profits involves many conceptually difficult problems, the imposition of administrative rules and regulations during the long time period over which the Internal Revenue Service reporting system has been in operation has gone far toward standardizing accounting practice for corporate income tax reporting.

On the other hand, certain important problems still arise in the translation of the tax return data into estimates of corporate profits for national income purposes. The data must be adjusted in various ways to secure comparability with other entries in the national income and product tables. One of these adjustments, in particular, involves a considerable amount of estimation—allowance for the additional profits disclosed by auditing. The auditing process to which returns accounting for the bulk of profits in any year are subjected requires about 15 years to complete, and its ultimate, full effect in revising the profits figures originally tabulated must be estimated from reports of its progressive effect on tax liability as the auditing proceeds.

There is a time lag before the tax return data become available. This necessitates reliance on extrapolation procedures to obtain estimates for the two most recent years. As is indicated at the end of this section, such extrapolations have at times led to errors of significant size, particularly on an industry basis. The situation in this respect has improved, however, due to progress in the current reporting of corporate profits through the joint surveys of the Securities and Exchange Commission and the Federal Trade Commission. These surveys have provided improved data on manufacturing since 1947.

The corporate profits estimates are classified industrially on the basis of companies, or firms, rather than establishments. As discussed briefly in the Introduction to this Part, this results in non-comparability with the income shares that are classified on an establishment basis. The most serious practical limitations in this connection arise in the comparison of payrolls and profits in certain industries.

Use of the company, as against the establishment, as the unit of classification leads to an industrial distribution further removed from a product, or activity, basis. This is so because the operations of companies are generally more heterogeneous than those of establishments. Consequently, with companies assigned to specific industry groups on the basis of their major activity as measured by receipts, there is more likelihood that movements in the industry series will reflect changes in classification of firms due to marginal changes in the composition of their activity, rather than substantive changes in the type of industrial activity indicated by the industry designation. Special cases of shifts of this type resulted from Federal tax legislation affecting the filing of consolidated and unconsolidated returns. In this respect, the industry breakdown of corporate profits in the periods 1929–33 and 1942 to date is not strictly comparable to that for the years 1934–41, when, with certain exceptions, filing on an unconsolidated basis was required.

For a number of industries (particularly in manufacturing), the comparability of the 1929–47 estimates with the estimates for later years is impaired as a result of changes in the industrial classification of basic data supplied by the Internal Revenue Service. (See introduction to Part III.) Where quantitatively important discontinuities are involved, their nature and magnitude are indicated by footnotes to table 18 of Part V of the present report.

In the following pages the base year estimates and their current extrapolations will be discussed in turn.

Base Year Estimates

All of the adjustments made in the tax return data are indicated in table 38, Part V. *Exhibit 1* below lists for the year 1950 those which involve no estimation, the required values being shown separately in the tax return data or reported elsewhere on a complete basis. Further adjustments which must be made using estimated values are shown in *Exhibit 2*.

The "Totals as reported" from tax returns are tabulated by the Internal Revenue Service as Compiled net profit, Total tax (consisting of Federal income and excess profits taxes), and Dividends paid in cash and assets other than own stock, respectively. These totals provide the starting points for the estimates described in the present section.

Exhibit 1.—*Adjustments Not Requiring Estimation in the Derivation of Corporate Profits Before Taxes, Profits Taxes, and Net Dividend Payments, 1950*

[Millions of dollars]

Item	Profits before taxes	Profits taxes	Dividend payments
Amounts derived from tax returns:			
Totals as reported	**42,831**	**17,317**	**11,553**
Adjustments:			
Domestic dividends received	−2,460		−2,460
Foreign dividends received	−644		−644
Depletion	+1,709		
Net capital gain	−1,129		
Net gain, sales other than capital assets	−539		
Net loss, sales other than capital assets	+223		
Mutual nonlife insurance companies	−38	−16	+10
Foreign income taxes		−467	
Amounts reported by Federal Reserve System	**+195**	**+197**	**+4**
Totals from tax returns, as adjusted	**40,148**	**17,031**	**8,463**

Dividends received are deducted from profits and dividends to obtain unduplicated totals reflecting income originating in United States corporate production; depletion is added to profits since it is not regarded as an element of capital consumption in the national income and product accounts; and capital gains and losses are eliminated from profits as not measuring incomes arising in current production.

The adjustment for mutual nonlife insurance companies will be commented upon in connection with a similar adjustment in *Exhibit 2* for mutual life insurance companies. The adjustments for foreign dividends received and foreign income taxes paid also will be discussed under *Exhibit 2*, in connection with related international adjustments.

Finally, reported data for the Federal Reserve Banks are added, since they are not included in the basic Internal Revenue Service tabulations. Reserve Bank profits are measured by current net earnings, exclusive of capital gains. Taxes are measured by payments to the United States Treasury in lieu of franchise tax, at a rate of about 90 percent on a base consisting of net earnings (including capital gains) less dividends paid.

In addition to these adjustments, there are others which are made by use of estimated rather than reported values. These are itemized in *Exhibit 2*.

Audit adjustment

The tax return data shown in *Exhibit 1* are compiled from the returns before audit. The first adjustment indicated in *Exhibit 2* is the addition of the

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estimated profits and tax liability disclosed through subsequent audits by the Internal Revenue Service. It should be noted that not all returns are audited, and that even in the audited returns there may remain some understatement of profits.

Furthermore, the national income estimates of the actual results of audit are subject to error because they must be based on data rather unsatisfactory for the purpose. In the first place, the auditing process is far from complete for many of the years for which estimates must be made. Secondly, the results of audit are reported in terms of the effect on tax liability only, and the effect on total profits must be estimated from this.

The estimating procedure is carried out in three steps. The first is to determine the effect on tax liability to date of the auditing process for the given tax year. Increases in tax liability are estimated by cumulating the gross additional tax assessments made on that year's income by the end of the following June, by the end of the second following June, and so on up to the latest reported. Since in some cases the audit process leads to a reduction in tax liabilities, the indicated reductions must be derived and cumulated in like manner. Their annual total is derived as the sum of refunds, credits, and abatements.

The second step is to add the expected results of further auditing of returns for the given tax year. These are estimated by applying experience-based ratios to the totals obtained in the first step. The case of the tax year 1948 will illustrate the method. At present (July 1954), data available for the first step provide measures of the additional taxes assessed and original overassessments found against 1948 income as a result of about 3 years of work by the auditors. Study of the auditors' rate of progress in auditing returns for earlier tax years indicates that the fourth year of the process is likely to add about 24 percent to the gross additional assessments made in the first 3 years; the fifth year is likely to add about 17 percent to the initial 3-year total; and so on. Cumulating the percentages forward suggests that future auditing of 1948 tax returns may add about 76 percent to the gross additional assessments already reported due to audit. The estimate obtained in step 1 is accordingly raised 76 percent. The initial estimate of tax liability reductions is similarly raised by the application of experience-based ratios. The net balance of additional assessments over reductions is taken as the audit adjustment applicable to the tax liability total which was originally tabulated for *Statistics of Income* from the 1948 tax returns.

The third step is to calculate the additional profits implied by the estimated net additional tax assessments. The latter total is divided by the statutory tax rate (representing a marginal effective rate) to derive the corresponding figure for additional profits.

Exhibit 2.—*Adjustments Requiring Estimation in the Derivation of Corporate Profits Before Taxes, Profits Taxes, and Net Dividend Payments, 1950*

[Millions of dollars]

Item	Profits before taxes	Profits taxes	Dividend payments
Totals from tax returns, as adjusted per Exhibit 1	**40,148**	**17,031**	**8,463**
Adjustments:			
Profits disclosed by audit	+556	+207	
"Rest of the world" adjustment	+376		+426
Foreign income tax on branch profits	−226		
Foreign income tax on dividends			+241
Mutual life insurance companies	−1,654	−59	+77
State income taxes	+770	+770	
Carry-back tax refund		−120	
Final estimates	**39,970**	**17,829**	**9,207**

Besides revising upward the gross total of positive profits, the audit process affects the all-corporation net total by revising downward the deficits of some corporations. An allowance for this effect—amounting to about $100 million a year in recent years—is made by including in the audit adjustment (1) an estimate of the total of deficits originally reported by companies found upon audit to have had taxable net income, and (2) an equal amount for deficits reduced but not eliminated. Estimate (1) is based on tabulations by deficit size class for selected years. Estimate (2) is arbitrarily made equal to (1).

Special complications have occasionally been introduced into the first and third steps described above, mainly as a result of tax legislation in connection with World War II and the Korean war. For the first step, adjustments were made in the basic tabulations to eliminate the effects of recomputing emergency amortization charges, and the effects of the carrybacks of net operating loss and of the unused excess profits tax credit. The adjustments applied to profits and/or taxes for these items are derived independently of the audit adjustment, as indicated later in this section. Similarly, the effects of the credits for debt retirement and postwar refund (under the World War II excess profits tax) were eliminated, since tax liability is measured net of these credits in the national income accounts.

For the third step, it was generally necessary to utilize separate estimates of income tax assessments and excess profits tax assessments, and separate estimates of marginal tax rates.

The results obtained by the auditors during the first three or four years after the returns are filed are believed to provide a fairly adequate basis for applying the method that has been outlined. For more recent years, the audit adjustment must be based largely on judgment.

Adjustments for international flows

The international adjustments listed in *Exhibits 1 and 2* are designed collectively to yield: for *profits*, an aggregate which includes profits and dividends received from abroad but excludes profits and dividends paid to abroad; for *dividends*, an aggregate which includes dividends received from abroad but excludes dividends paid to abroad; and for *taxes*, a measure of liability to the United States Government.

For profits, the tax return data as adjusted in *Exhibit 1* exclude (1) the dividends received by United States stockholders of foreign corporations. On the other hand, these data include (2) dividends accruing to foreign stockholders of United States corporations and (3) profits to foreign corporations from their branches in the United States. The "Rest of the world" adjustment added to profits in *Exhibit 2* is a correction for all three of these characteristics of the data.

It is calculated as the total inflow of dividends (item 1 above) less the sum of dividends paid to foreigners (item 2 above) and profits of foreign corporations' United States branches (item 3 above). All of the items in the adjustment are measured net of income taxes levied by the payer country, in accordance with the definitions used in calculating net foreign investment. The same definitional principle requires that foreign taxes be netted out of the income earned by United States corporations from their branches abroad; this is not done in the tax return data and is accomplished by the second international adjustment to profits shown in *Exhibit 2*.

For profits taxes, foreign taxes on both branch profits and dividends are deducted (in *Exhibit 1*) from reported Federal tax liability, against which they constitute a credit.

For dividends, the tax return data as adjusted in *Exhibit 1* have three inappropriate characteristics. They exclude dividends received by United States stockholders from foreign corporations. They include dividends accruing to foreign stockholders of United States corporations. Finally, they are understated by the amount of foreign taxes on United States corporations' dividend receipts, which have been netted out along with the dividend receipts themselves since the latter are reported (and deducted as in *Exhibit 1*) gross of such taxes. In *Exhibit 2*, the "Rest of the world" adjustment (calculated as the total inflow of dividends less dividends paid to foreigners) and the adding back of foreign income taxes paid by United States corporations on dividend receipts from abroad together correct for these characteristics.

Of the series entering into these international adjustments, foreign income taxes are measured by the tax credits claimed on the corporate tax returns. The series composing the rest-of-the-world adjustment are prepared in connection with the balance-of-payments estimates of the Office of Business Economics. (See section on Net foreign investment.) The distribution of foreign income taxes between taxes on branch profits and taxes on dividends is based on the relative proportions of branch profits and dividends earned from abroad.

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Exclusion of mutual insurance companies

Mutual companies are not considered part of the corporate universe for national income purposes, and it is therefore necessary to remove from the tax return data the values included for mutual insurance companies. For mutual nonlife companies, the amounts to be removed are reported separately by the Internal Revenue Service and are used as shown in *Exhibit 1*. Tax return data for mutual life insurance companies are tabulated in combination with the data for stock life insurance companies, and must be isolated statistically to permit the adjustments for them shown in *Exhibit 2*.

The amount of the adjustment to corporate profits before tax is calculated by subtracting an estimate of stock life company profits from the total of life insurance company profits given in the tax return data. The required series for stock life company profits is estimated as the sum of cash dividends paid and Federal income tax liability less stock life company receipts of dividends. The dividend payments and tax liability of life insurance companies as reported to the Internal Revenue Service have generally been applicable to stock companies only. In the most recent years, reported tax liability has included amounts for mutual life companies as well. Estimates of these have been excluded from the reported tax liability of life insurance companies in this adjustment, and are also deducted from total corporate tax liability as shown in the second column of *Exhibit 2*. The dividend receipts of the stock companies are computed as 20 percent of the total dividend receipts reported on life insurance company tax returns, the ratio being based on a special tabulation from reports compiled by the Spectator Company for its *Insurance Yearbook*.

The adjustment shown in the final column of *Exhibit 2* for insurance companies represents the remaining 80 percent of the reported dividend receipts of life insurance companies. These are ascribed to mutual life carriers, and added back to net dividends to cancel the effect of their inclusion in the corporate dividend receipts previously deducted. The original overall deduction and the corresponding adding back of dividend receipts of mutual nonlife insurance companies are shown in *Exhibit 1*.

State income taxes

State income taxes are among the deductions made by the taxpayers in arriving at the profits figures shown in the Internal Revenue Service tabulations, but are not shown separately from other taxes in these tabulations and must therefore be ascertained from other source materials. For 1937 and subsequent years use has been made of statistics compiled by the Governments Division of the Census Bureau on collections reported by the various State governments under their corporation income tax laws. The total so reported for each year has been taken as a measure of the tax liability incurred in the preceding year, to obtain the amount of the adjustment illustrated in *Exhibit 2*. For the years prior to 1936, the adjustment was estimated from a sample including States which in 1939–42 assessed about half of the national total of such taxes. The raising ratio applied to the sample data was varied annually to allow for the adoption of corporation income taxes by additional States.

Carryback tax refunds

These have been occasioned by statutory provisions allowing unused excess profits tax credits and net operating losses for a current year to be carried back and applied in recomputing the tax liability of a previous year or years.

The adjustment of tax liability to allow for reduction from this cause represents the reported amount of "tentative adjustments" claimed by the taxpayers, plus an estimate of the additional carryback refunds found by the auditors to be due. (As noted above, these refunds are not considered in making the regular audit adjustment.) The latter estimate is based on Internal Revenue Service tabulations for selected years, and is derived by a formula similar to the first two steps of the audit adjustment described above. The effect of auditors' disallowance of tentative claims is reflected in the regular audit adjustment.

For the latest years covered by the tax return tabulations, the total of "tentative adjustments" claimed to date provides the basis for preliminary estimates of the carryback adjustment.

Adjustments not applicable to 1950

A number of adjustments not applied for 1950 had to be made in the Internal Revenue Service data to derive profit estimates for other years. (See table 38.) These included corrections for gross renegotiation refunds, emergency amortization acceleration, war losses, and the unjust enrichment and Vinson Act excess profits taxes.

Renegotiation of war contracts led to refunds by the contracting corporations which reduced their profits and their tax liability from the amounts originally reported, mainly for the war years. The totals tabulated from the tax returns originally filed were adjusted accordingly, by use of special tabulations published in *Statistics of Income* for the years in which the item was quantitatively important.

When World War II ended and emergency amortization charges on defense-connected facilities were recomputed retroactively (see section on Capital consumption allowances), both profits and tax liability for the war years were reduced by comparison with the amounts originally reported. The effect on tax liability for each of these years was estimated by use of data and procedures similar to those described above for carryback tax refunds. To determine the corresponding effect on depreciation charges and consequently on before-tax profits, the annual adjustments in tax liability were divided by the marginal tax rates as in the third step of the audit adjustment.

The tax return data on profits, for 1942 particularly, were net of deductions claimed by some corporations for losses due to enemy capture of properties they owned abroad. A minimum allowance for such losses was estimated from the published income statements of United States corporations believed to have such foreign holdings. This allowance was added back to profits as reported in the tax return data, to bring the treatment of the losses involved into conformity with the treatment of capital losses generally.

The unjust enrichment and Vinson Act excess profits tax collections reported by the Treasury Department were allocated to the years in which the liabilities were estimated to have accrued, and were added to the profits tax series for those years.

Industry breakdown of estimates

In the derivation of corporate profits, taxes, and dividends by industry, such of the adjustments in *Exhibits 1* and *2* as are applicable to more than one industry are made separately to the respective *Statistics of Income* industry benchmarks. The corrections illustrated in *Exhibit 1* are generally available in the required industry detail, with the exception of the item for foreign income taxes which appears also in *Exhibit 2*. For those in *Exhibit 2*, the relevant all-industry totals are distributed as follows: the audit adjustments, proportionately to income and excess profits taxes as originally reported; foreign income taxes, proportionately to foreign dividends and branch profits received; and State income taxes, proportionately to Federal corporate income taxes.

Further adjustments are made in the industry estimates so derived to improve their industrial comparability. They deal with changes made by the Internal Revenue Service in its classification system from time to time (mainly in 1938), and, less important, with categories of firms whose precise industrial attachment is not determined by the Internal Revenue Service.

Changes in the classification system cause minor industries previously tabulated under a major industry heading to be transferred to another heading. Generally the resulting discontinuity is eliminated by transferring the prior-year values for the minor industry to the new heading. If the minor industry values to be transferred are not reported separately for all years, those for the missing years are estimated by extrapolation using the broader industry series which contain them. Such statistical procedures, however, could not effectively be applied to correct the noncomparability introduced into several of the manufacturing series by adoption of the new classification code in 1948.

To eliminate the "not allocable" categories in the industrial breakdown of the tax return data, the values in these categories are generally prorated by the corresponding values in the industries among which the "not allocable" totals are to be distributed.

With the principal exception of industry series affected by the 1948 industrial classification change, formal comparability over time in the individual industry estimates has thus been secured by reasonably satisfactory methods. The more fundamental difficulties affecting comparison, for which no adjustment can be made, have been noted earlier.

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Recent Year Estimates

As indicated above, the tax return tabulations do not become available until more than 2 years after the year to which they refer. It is accordingly necessary to use extrapolation procedures to obtain the estimates of profits, taxes, and dividends for the two most recent years. Extrapolators are applied to industrial benchmark estimates uncorrected for audit results, and an adjustment for audit results is then introduced into the resulting estimates.

Exhibit 3.—*Components of Current Corporate Profits Estimates, by Basis for Extrapolation, 1950*

Industry	Data used in extrapolation	Profits before taxes	
		Millions of dollars	Percent of total
All industries, total, excluding Rest-of-the-world.		38,970	100
1. Manufacturing, except newspaper publishing.	Federal Trade Commission and Securities and Exchange Commission, *Quarterly Financial Report for United States Manufacturing Corporations.*	23,025	59
2. Banking; railroads, highway passenger transportation, highway freight transportation and warehousing, air transportation, pipeline transportation; telephone, telegraph and related services; radio broadcasting and television; utilities: electric and gas.	Data reported to Federal regulatory agencies.	5,463	14
3. Mining; newspaper publishing; retail trade; real estate; hotels and other lodging places, motion pictures.	Tabulations of sample data from nongovernment sources.	5,645	15
4. Agriculture, forestry, and fisheries; contract construction; wholesale trade; finance, excluding banking and real estate; water transportation, services allied to transportation; local utilities and public services, n. e. c.; services other than motion pictures and hotels.	Sales data and similar indirect evidence.	4,837	12

The source materials available for the construction of extrapolator series may be classified into four categories. These are listed in *Exhibit 3* together with the industries for which they are used. The results of the individual industry extrapolations are checked by, and occasionally modified in the light of, independent estimates of total corporate profits derived from tax collection data. The estimates obtained by extrapolation and those based on the tax data will be discussed in turn.

Estimates for the Rest-of-the-world industry, which is not included in *Exhibit 3*, are discussed in the section on Net foreign investment.

Industry extrapolations of corporate profits

1. The *Quarterly Financial Report* is by far the most important source noted in *Exhibit 3*, being used for manufacturing industries which accounted for more than one-half the all-industry total of corporate profits in 1950. It is based on regular reports from about 9,000 corporations in a sample drawn primarily from among companies which filed 1949 Federal income tax returns. The sample is stratified, and the sample data are expanded, in terms of asset-size classes within each industry.

Estimates for all manufacturing corporations with securities listed on an exchange, and certain other registered concerns, are prepared in the Securities and Exchange Commission from reports filed by nearly all of such companies. To adjust for any current nonreporting, these companies are cross-classified by industry and asset size, and the reported figures for each cell are multiplied by the ratio of the preceding-year assets of all registered corporations in the cell to the assets of reporting corporations in that cell. Estimates for unregistered manufacturing corporations are prepared in the Federal Trade Commission, by multiplying the data for reporting corporations in each asset-size class in each industry in the sample by the ratio of the estimated total number of unregistered corporations currently in that cell to the total number reporting. A sample of nonrespondents for each quarter is queried to determine the effect of bias introduced in the statistics because of nonresponse.

The measures of profits ("net income before Federal income taxes"), Federal tax liability, and dividends in this survey are based on definitions similar to those used by the Internal Revenue Service except for the effects of (1) consolidated reporting and (2) more liberal rules in the survey for the expensing of current additions to reserves. The chief variations between the national income definitions and those used for the survey are therefore due to the items listed in table 38. The impossibility of adjusting for any of the latter (apart from the expected results of audit) inevitably introduces some error into the estimates.

Although reporting corporations are classified by industry each year, the industry breakdown has some shortcomings, chiefly because of the general use of consolidated returns for affiliated corporations.

In spite of these limitations, the Financial Report series provides extrapolators for these manufacturing industries substantially more reliable than those (compiled from privately published financial statements as described under 3 below) used prior to the initiation of the Financial Report series in 1947.

2. Banking, transportation, and communications and public utility corporations accounting for the bulk of the profits in their industries are subject to Federal regulation, and submit regular financial statements to the respective regulatory agencies—the Federal Deposit Insurance Corporation, the Interstate Commerce Commission and the Civil Aeronautics Board, the Federal Communications Commission, and the Federal Power Commission. The coverage of the data used in extrapolation for most of these industries is consequently very good. On the other hand, neither the industry classification scheme nor the report forms can be made to match exactly the definitions used in national income estimates; in some cases, there are important differences in concept or coverage. These discrepancies affect the level and movement of the extrapolator series, and result in errors in the estimates based on them.

3. For a number of industries covered neither by the Financial Report series nor by reports to regulatory agencies, the estimates are extrapolated with the aid of sample data compiled from published financial reports of individual companies. These samples include substantially every domestic nonmanufacturing corporation for which the requisite data are published in Moody's Manual of *Industrial Securities*. Nevertheless, their coverage is less adequate in general than that of the data obtained from regulatory agencies, and they fall short in coverage also of the manufacturing sample. Moreover, they are much less representative than the latter, since in general only large corporations can be included. Their definitional comparability with the benchmark estimates is subject to the same general limitations as the extrapolators described under (1) and (2) above. Capital gains and losses, as well as charges to special reserves not allowable for tax return purposes, are eliminated to the extent permitted by the published details, in accordance with national income definitions. The results are tabulated and weighted in as fine an industrial breakdown as the sample reports and the basic tax return tabulations allow.

Retail trade is by far the most important industry in this group, accounting for about 60 percent of the profits listed in line 3 of *Exhibit 3*. Sample data on profits, dividends, and taxes are compiled for nine lines of trade (general merchandise, food, apparel, furniture, autos and trucks, auto accessories, filling stations, drugstores, and restaurants) which together account for about four-fifths of total retail profits. For three other groups (auto repair shops; hardware, building materials, fuel and ice dealers; and a miscellaneous category), the estimates are extrapolated by reference to sales series, with rough allowances for changes in profit-sales ratios.

Published financial reports are available for about 200 corporations, which together earned approximately 40 percent of total retail corporate profits in 1950. Sample survey data compiled by various trade groups now provide substantial additional coverage for several lines of trade including general merchandise, apparel, furniture, and auto and truck dealers.

The coverage of the sample data varies widely among the nine lines of retail trade listed, depending in part on the prevalence of large corporations in each line. In general, benchmark profits for each line are extrapolated by the product of sample-based profit-sales ratios and sales indexes based on estimated retail sales in each line of trade. (See section on Personal consumption expenditures for commodities.)

Adequate sample data on profits are not available for the other three trade groups. Sales estimates are obtained, separately for each group, by extrapolating benchmark sales, as tabulated in the corporation income tax returns, by the corresponding components of total retail sales. Profit-sales ratios are

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obtained by moving the benchmark ratios by reference to the movement of sample-based ratios in other lines of retail trade, and on the basis of available limited information from trade sources.

It may be noted that the inclusion of these residual parts of retail trade in line 3 of *Exhibit 3* is somewhat arbitrary and dictated largely by expositional convenience. The methodology is very similar to that applied to wholesale trade, which is listed in line 4 and discussed below.

Retail (and wholesale) trade profits estimates for the year 1952 shown in Part V were extrapolated from 1951 with the aid of sample series, unfortunately not continued in 1953, from the *Quarterly Financial Report.*

Other major components of the total in line 3 of *Exhibit 3* are mining and real estate, which account respectively for about 25 percent and 10 percent of this total. The sample used in extrapolating each includes more than 100 companies. Both samples are unavoidably biased toward corporations whose stock is not closely held.

Similar comments apply to the sample for newspaper publishing and in lesser degree to that for motion pictures. Tabulations by the accounting firm of Horwath and Horwath, based on reports from about 100 hotels in more than 50 cities, provide the indicators used for the hotel industry.

4. The final category of industries distinguished in *Exhibit 3* consists of those for which little or no current data on profits are available. For these industries, base year profits estimates are extrapolated by tenuous procedures involving, in general, indicators of total sales adjusted to allow for probable changes in profit ratios.

Wholesale trade is by far the most important of these industries, accounting for about three-fifths of the total in 1950. The basic estimate of corporate sales is extrapolated by the sales of merchant wholesalers. The sources and methods for estimating this sales series are the same as those for wholesale inventories, summarized in the section dealing with the change in business inventories. A basic ratio of profits to sales for corporate wholesalers is derived from the income tax return data and extrapolated by reference to various indicators including the corresponding sample-based ratio series for retail trade. The resulting ratio series is applied to estimated corporate wholesalers' sales to derive corporate profits.

For other industries in this group sales data are in general less adequate than for wholesale trade and use is sometimes made of other indicators of gross business volume such as payrolls. Applicable profit ratios are estimated in principle by means of regressions of profits against these indicators based on past experience.

Industry extrapolations of profits taxes and net dividends

For the industries listed in lines 1, 2, and 3 of *Exhibit 3*, the latest base-year data on corporate profits tax liabilities are extrapolated in general by the movement of series on "provision for Federal income taxes" taken from the same sources. In instances in which such data are not available, or in which they are subject to erratic movements, effective tax rates are estimated by reference to base-year data with allowance for changes in tax rates. These estimated rates are then applied to the estimates of profits before tax described above. This latter procedure is used also for the industries listed in line 4. It may be noted that the tax provision for carryback of operating losses (and formerly of unused excess profits tax credit) prevents the determination of actual corporate tax liability until the following year's operating experience has been established. In the meantime, it is possible only to base adjustments on the apparent trend of compiled net deficits.

Net dividends (dividends paid minus dividends received) are estimated for each industry by extrapolating base-year figures by total dividends paid. Dividends paid by the industries listed in line 1 of *Exhibit 3* are shown in the same source used for the extrapolation of profits before tax and taxes. Dividends paid by industries listed in lines 2, 3, and 4 are extrapolated by the corresponding industry components of the National Income Division's series on publicly reported dividend payments, compiled monthly from data in Moody's *Dividend Record* and published regularly in the *Survey of Current Business.* For these industries, the coverage of this dividend series is broader than that of the corresponding profits series, because many corporations report their dividends but not their profits.

All-industry estimate based on tax collections

The profits estimates obtained for the two latest years through industry-by-industry extrapolation as described above are summed to obtain a tentative aggregate for all industries combined. This aggregate is checked, and in some cases modified, by reference to an independent estimate of total corporate profits based on collections of current Federal corporation income taxes. These data are available with little time lag. The procedure followed in deriving this estimate may be summarized in terms of five steps.

The first step is to estimate tax liability for the given year from tax collections for the following year, by use of an experience-based ratio. Liability for the most recent past year must be estimated from tax collections made in the current year, which are still incomplete. Collections reported to date in the current year are raised to a full-year basis by use of past patterns.

The second step is to divide the estimated tax liability by an effective tax rate, to obtain a figure for taxable net income of all corporations having net income. The effective tax rate is determined from tax return data for the recent years for which such data are available, and is projected forward with adjustments to take account of changes in statutory tax rates.

The third step is to estimate and to deduct the total net deficit of corporations having no net income, since for national income purposes corporate profits are calculated net of corresponding losses. The net deficit is estimated by projection from recent years for which tax return data are available, its movement being determined in the light of the total obtained in step (2) and the relationships between the two series shown in the tax return data for earlier years.

Taxable income of all corporations, as derived in step (3), is next increased by estimates of tax-exempt interest income, the amount of prior-year operating loss carried forward, and the credit for dividend receipts. These three items together represent the difference between taxable income and the current Internal Revenue Service definition of "compiled net profit".

The interest item is estimated by projecting the trend shown in the tax return data for recent years. The allowance for loss carried forward is likewise projected from tax return data, its year-to-year movement being based on that of estimated (or reported) prior-year losses appropriately lagged. The dividend receipts credit is extrapolated from the latest tax-return-based estimate by the net dividend component of national income.

The final step is to proceed from the estimate of compiled net profit, obtained in step (4), to an estimate of corporate profits as defined for national income purposes. The adjustments required are those indicated in *Exhibits 1* and *2* (and in Part V, table 38). Some of them must be made on a more or less arbitrary basis, in the absence of current data.

The procedure outlined is subject to significant error at several stages: in the ratio of part-year to full-year tax collections; in the ratio of tax liabilities to collections; in the ratio of taxable profits to tax liabilities; in the magnitude of corporate deficits; and in the adjustment items (notably for capital gains and losses) between taxable profits net of deficits and profits as defined for national income purposes. Consequently, a rough range of overall error is calculated. If the sum of the industry estimates falls outside this range, their detail is reexamined and adjustments are made in the direction indicated by the tax data.

Characteristics of the Revisions

Since the estimates published three years after the event are based upon much more nearly complete information (from the tax return data) than are the initial preliminary estimates published with a lag of less than a year, comparisons between the two cast some light on the reliability of the latter. Such comparisons are shown in the first four lines of *Exhibit 4.*

The preliminary estimates shown differed by a maximum of about 4 percent from those which replaced them when the tax return data became available.

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Revisions, usually of minor amounts, have been made in the estimates from time to time after incorporation of the tax return data. These have occurred primarily as a result of changes, based on progressively accumulating data for the given year, in the estimate of the effects of audit. Sizable revisions made this year (shown for 1948–50 in the last line of the exhibit) stem partly from this cause, but reflect chiefly the incorporation of certain

Exhibit 4.—*Preliminary and Revised Estimates of Corporate Profits Earned in 1948–50*

[Billions of dollars

Published in the *Survey of Current Business*	Estimates for year—		
	1948	1949	1950
July 1950	[1] 33.9	[2] 27.6	
1951 supplement	33.8	[1] 28.3	[2] 41.4
July 1952	33.8	27.1	[1] 39.6
July 1953	33.8	27.1	41.0
1954 supplement	32.8	26.2	40.0

1. Extrapolated forward 1 year from tax return data base.
2. Extrapolated forward 2 years from tax return data base.

special tabulations among the source data for the audit adjustment outlined above, as well as associated refinements in the method of estimate.

In general, the industry extrapolations of corporate profits have been less accurate than the sums of these. That is, errors in the individual industry estimates have tended to compensate in the all-industry total.

For the manufacturing division as a whole, recent year estimates have in most instances required only comparatively minor changes when the tax return data became available. Extrapolations for some of the groups within this division have proved considerably less accurate for the years that can be checked, but the quality of such extrapolations for 1952 and later years is believed significantly improved. In the joint SEC–FTC *Quarterly Financial Report* upon which the extrapolations are based, the Federal Trade Commission sample has been strengthened and the technique employed was modified in 1951 to secure better figures for individual industries.

Among the industries for which extrapolation is based on data from regulatory agencies, differences of coverage and concept between the national income estimates of railroad profits and the Interstate Commerce Commission series used as extrapolators have necessitated revisions of significant size. Among the nonmanufacturing industry estimates for recent years based on nongovernmental sample data, those for retail trade have been subjected to percentage revisions somewhat larger than those for the group as a whole. The extrapolations for wholesale trade, the most important based on materials considered definitely inadequate, have likewise been revised by comparatively large percentages when the tax return data became available.

Revisions in the preliminary estimates of taxes have been similar to those in the profits estimates, since both are based largely on a common set of source materials. Sample data for dividend payments are more adequate than for profits or taxes. Revisions in the preliminary estimates of net dividends have in general been smaller percentage-wise than the revisions in the profits series.

6. INTEREST

This section contains a discussion of the interest components of national income and personal income, as well as of the three components of personal consumption expenditures for services which are estimated in an interrelated statistical procedure. These are *Interest on personal debt*, the interest element of *Brokerage charges and interest and investment counselling*, and *Services furnished without payment by financial intermediaries except life insurance.*

The basic accounting data underlying the interest estimates and the reporting systems by means of which they are summarized are quite satisfactory for large areas of the economy. Corporate interest transactions are covered in income tax return tabulations published by the Internal Revenue Service in its *Statistics of Income—Part 2*, and those of mutual financial institutions in reports of regulatory agencies or in other comprehensive summaries of basic data. Information on government interest transactions is also, in large part, comprehensive.

Personal landlords, unincorporated enterprises (farm and nonfarm), households and institutions, and the rest-of-the-world sector are the major remaining groups whose interest transactions must be taken into account in calculating interest flows for national income purposes. The quality of the information with respect to them varies widely. In general, the estimates must rely on distinctly less adequate and regular sources. The largest single item in this group is mortgage interest paid by personal landlords.

Although the interest flows in national income measure amounts accruing to United States persons and government, these accruals cannot be estimated directly, because of lack of information from individual recipients. Instead they are measured as the payments less the receipts of relevant payer groups. This residual method of estimating has some advantages, mainly because it leads to entries consistent with the measurement of corporate profits in the income and product accounts. But it is subject to the shortcomings of all residual estimating procedures, in which small errors in the minuend and subtrahend may lead to significant ones in the remainder. The fact that the recording of interest by creditors and corresponding debtors may differ both as to coverage and timing introduces special hazards into the procedure.

The above evaluation refers to years for which Internal Revenue Service corporate tax return tabulations are available. For the two most recent years, for which information is much less adequate, the reliability of the estimates is reduced, particularly on an industry basis.

As will become apparent, the definition of interest flows in the national income is a complex matter, mainly with respect to the imputed interest flows arising in connection with financial institutions. In this section, the operational procedures used in the determination of these flows are set down precisely, with but little attempt to explain their basic rationale, which is discussed in Part II.

The actual measurement of imputed interest flows is based, in general, upon data of a high order of reliability, but accuracy is somewhat impaired by the necessity in some instances (as explained later) of substituting statistical assumptions where the precise data called for by the definitions are lacking.

Relation of Major Interest Flows

The interest component of the national income, "net interest", measures total interest (monetary and imputed, private and government) accruing to United States persons and governments minus total interest paid by United States governments. Government interest (Federal and State and local) is deducted because it is not considered income arising in current production. It is necessary not only to exclude the portion of it paid directly to persons and governments, but also to deduct the portion of it paid to business, because the latter is reflected in the incomes paid out or retained by the business system.

Since accruals to persons cannot be ascertained directly, net interest is obtained by estimating its algebraic equivalent—the difference between (a) total interest paid by United States business and persons plus total interest paid to the United States by foreigners, and (b) total interest received by United States business plus total interest received by foreigners from the United States.

The interest component of personal income, "personal interest income," measures total monetary and imputed interest paid to United States persons. It is obtained algebraically by adding to the interest component of national income the excess of interest payments by United States governments over their interest receipts.

The nature of these algebraic relationships can be understood from the following schematic presentation. Since for the economy as a whole total payments must equal total receipts, then the sum of total interest:

(1) Paid by United States business,
(2) Paid by United States persons,
(3) Paid by foreigners to the United States, and
(4) Paid by United States governments

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must equal the sum of total interest:

(5) Received by United States business,
(6) Received by United States persons,
(7) Received by foreigners from the United States, and
(8) Received by United States governments.

By deducting (4), (5), and (7) from both sides of this equation, the receipts side is converted into (6)+(8)−(4), the initial formula for the interest component of national income as defined above; and the payments side is converted into the equivalent formula by which this component is actually measured using available data, (1)+(2)+(3)−(5)−(7).

Exhibit 1.—*Derivation of the Interest Components of National Income and Personal Income, 1950*

Item	Millions of dollars
Monetary interest paid	9,879
Imputed interest paid	5,870
Less: Monetary interest received	8,352
Imputed interest received	1,485
Equals: Net interest (component of national income)	5,912
Plus: Net interest paid by government (excess of interest payments by United States governments over interest received by United States governments)	4,716
Equals: Personal interest income (component of personal income)	10,628

The interest component of personal income (6) differs from that of national income in the formula (6)+(8)−(4) by including (4) and excluding (8). It can therefore be calculated from the national income share by adding (4) and deducting (8).

The derivation of the two interest series is shown in summary form in *Exhibit 1*, and will be discussed in the same order in the text. The derivation of the related components of personal consumption expenditures will be explained at appropriate stages of the discussion.

Exhibit 2.—*Chief Industrial Sources of the Interest Component of National Income, 1929, 1939, 1945, 1950*

[Millions of dollars]

	1929	1939	1945	1950
Agriculture	833	455	301	500
Farms	822	448	298	496
All other	11	7	3	4
Finance, insurance, and real estate	2,360	1,979	1,513	2,381
Real estate	2,407	2,083	1,768	2,853
All other	−47	−104	−255	−472
Transportation	559	597	414	333
Railroads	480	516	379	286
All other	79	81	35	47
Communications and public utilities	394	422	350	446
Utilities: electric and gas	323	349	289	311
All other	71	73	61	135
Services	1,675	868	576	1,997
Private households	1,535	734	490	1,868
All other	140	134	86	129
Other industry divisions	624	283	31	255
Rest of the world	577	127	130	248
All other	47	156	−99	7
Total (Part V, table 23)	6,445	4,604	3,185	5,912

While the concept of national income calls for measurement of interest flows on an accrual rather than cash basis, this distinction cannot be maintained in statistical practice. In *Exhibit 1* the major components of the interest flows are labeled uniformly on a cash basis—as "paid" or "received." In the subsequent detailed discussion the terms "paid" and "payable" and "received" and "receivable" are used to indicate the exact nature of the flows whenever possible.

The bulk of all interest stems from a comparatively small number of industries. *Exhibit 2* shows these industries, and their respective contributions to the interest share of the national income, for selected years. The problems of industrial classification and their treatment are substantially the same for interest as for profits (see preceding section and the Introduction to this Part). They have little effect, however, on the estimates of interest shown by broad industry division in Part V or, because of the smallness of the corporate interest series, on the industrial distribution of the national income.

Monetary Interest Paid

The composition of total monetary interest paid in 1950 is shown in *Exhibit 3*.

Corporations

Monetary interest paid by corporations accounted for about one-third of total monetary interest paid in 1950. With the single exception of Federal Reserve Banks, this item is based on Federal corporation income tax returns, tabulated by the Internal Revenue Service in *Statistics of Income—Part 2*. Where greater industrial detail is needed, it is obtained from the supplementary, unpublished "Source Book."

Adjustment of the tax return aggregate to the corporate universe as defined for national income purposes involves for all years the deduction of estimates for mutual insurance carriers and the addition of data for Federal Reserve Banks. In both cases, adjustments have been negligible for the entire period.

For the latest two years, for which Internal Revenue data are not yet available, total corporate monetary interest paid is obtained by adding separate estimates for banking and for the total of all industries except banking.

Banking interest is obtained by extrapolating the last base year estimate by interest payments of insured commercial banks on time and savings deposits, raised to the all-commercial bank level on the basis of yearly asset ratios (Federal Deposit Insurance Corporation data).

Estimates for all corporations except those classified in banking are extrapolated by means of an index representing the regression of annual interest paid against National Income Division estimates of corporate gross long-term debt plus notes and accounts payable as of the beginning of each year. The debt figures are based on *Statistics of Income* balance sheet data, and estimated for current years by adding increments derived from Securities and Exchange Commission, Federal Deposit Insurance Corporation, and Interstate Commerce Commission reports.

To obtain a breakdown of the nonbank total, direct estimates are made for several industries. For farms, the latest *Statistics of Income* figure is extrapolated on the basis of interest paid by unincorporated enterprises in that industry (described below). For contract construction, extrapolation is by the value of new private construction activity (described in the section on New construction). For railroads, telephone and telegraph, and electric and gas utilities, interest paid data (reported, respectively, to the Interstate Commerce, Federal Communications, and Federal Power Commissions) are used as extrapolators.

For each individual industry not listed above, the latest base year figure is extrapolated by the regression-based total for all industries less the industries for which specific estimates are made.

Sole proprietorships and partnerships

In 1950, monetary interest paid by sole proprietorships and partnerships amounted to about 12 percent of total monetary payments. The 12 percent was almost evenly divided as between farm and nonfarm proprietors.

Farm.—The series for long- and short-term interest payable by farmers (exclusive of that payable by nonfarm landlords) is obtained from the Department of Agriculture. In general, the computation of these interest charges is based upon multiplication of the amounts of different types of debt outstanding by relevant interest rates. The long-term debt and interest rates are estimates by the Agricultural Research Service of the Department of Agriculture, based on Census of Agriculture benchmarks and sample reports from lending agencies. The short-term debt to institutional lenders and

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interest rates are based on reported information from Federal farm lending agencies and from commercial banks. The short-term interest payable to noninstitutional lenders (amounting to $193 millions in 1950) has been described by the Department as "merely a rough approximation".

Nonfarm.—Total monetary interest paid in this sector is obtained as the sum of industry estimates. For the years 1929 through 1941, 1939 is the general benchmark. For many industries this benchmark was obtained by multiplying estimated total receipts of all proprietorships and partnerships in the industry (see the section on the Income of unincorporated enterprises) by the ratio of interest paid to total receipts, taken from 1939 informational partnership tax returns published by the Internal Revenue Service in the *Supplement to Statistics of Income—Part 1.* In other areas, where total receipts are not available, a frequently used method was to multiply interest paid per partner (as calculated from the partnership returns) by the total number of active proprietors.

Exhibit 3.—*Components of Monetary Interest Paid, 1950*

Item	Millions of dollars	Percent
Corporations	**3,215**	**32.5**
Corporations reporting to Internal Revenue Service	3,215	
Less: Mutual insurance carriers (life and nonlife)	0	
Plus: Federal Reserve Banks	0	
Sole proprietorships and partnerships	**1,189**	**12.0**
Farm	620	6.3
Nonfarm	569	5.8
Other private businesses	**3,218**	**32.6**
Mutual financial institutions	734	7.4
Mutual savings banks	367	3.7
Mutual nonlife insurance carriers	0	.0
Savings and loan associations	344	3.5
Credit unions	23	.2
Nonprofit organizations servicing business	25	.2
Personal landlords (nonfarm)	2,459	24.9
Households and institutions	**1,956**	**19.8**
Consumers	1,868	18.9
Nonprofit organizations servicing individuals	88	.9
Rest of the world	**301**	**3.0**
Total monetary interest paid	**9,879**	**100.0**

Internal Revenue Service tabulations itemizing interest paid by industry for both partnerships and sole proprietorships in 1945 were used directly to establish nonfarm benchmarks for that year. The coverage of these tabulations was much higher in 1945 than in 1939. Also, partnership tabulations for 1947 permitted benchmarks for that sector and fairly reliable extrapolation from 1945 of the estimates for sole proprietors.

The general method of extrapolation and interpolation used to obtain industry estimates is to employ the corporate interest paid series, adjusting to the three benchmark years. In the mining and manufacturing sub-groups, value-of-product data for 1929 and 1939 from the Census of Mineral Industries and Census of Manufactures permitted a further adjustment for the changing relative importance of the corporate and noncorporate segments.

Other private businesses

Mutual financial institutions.—Mutual financial intermediaries in 1950 accounted for about 7 percent of total monetary interest paid. For each of the components the estimated series is based on reported information from a substantial portion of the industry and is reliable both as to level and to movement.

Interest payments by mutual savings banks from 1943 forward are based on data compiled by the Federal Deposit Insurance Corporation for insured banks, raised to the universe level by asset ratios for all banks to insured banks in each year. Prior to 1943, the series was estimated on the basis of Federal Deposit Insurance Corporation and Comptroller of Currency tabulations, reports on savings banks by the Commissioner of Banks in New York State, reports by the Commissioner of Banks in Massachusetts, and reports by the American Bankers Association.

Interest paid by mutual nonlife insurance carriers, which is small, is based on Internal Revenue Service data.

For savings and loan associations, interest paid and dividends paid to shareholders are together considered interest. The estimates are based on Federal Home Loan Bank Board reports from member associations raised to cover nonmembers. Dividends paid by credit unions (assumed to measure the whole of interest payments on deposit and share accounts) are also estimated on the basis of reports to official agencies.

Nonprofit organizations servicing business.—These organizations (mutual utility companies, farmers' cooperatives, etc.) have been required to report their operations to the Internal Revenue Service. Their combined statements were published in *Supplement to Statistics of Income for 1943—Part 2.* Reporting was incomplete by an indeterminate amount, but the total unreported was undoubtedly small. In general, the method used is to extrapolate the 1943 reported figure over the entire period by other relevant interest series.

Personal landlords (nonfarm).—Monetary interest payable by nonfarm individual property owners (other than professional real estate operators) represented 25 percent of total monetary interest paid in 1950. This component includes interest payable on mortgages against farm property owned by nonfarm landlords, owner-occupied nonfarm dwellings, and other nonfarm residential and nonresidential property owned by individuals. The farm mortgage interest series is prepared by the Agricultural Marketing Service of the Department of Agriculture, using sources and methods outlined above. The two series on nonfarm mortgages are derived in connection with the estimates of the rental income of persons. Revisions in these series, based on the new methodology described in the section dealing with the latter estimates, are reflected in the back-year interest totals shown in Part V as compared with those previously published.

Households and institutions

Monetary interest paid entered under the heading "Households and institutions" amounted to about 20 percent of the total in 1950. The major share of this represents nonmortgage interest paid by individual consumers.

Consumers.—Nonmortgage interest payable by individual consumers is of several types. The first embraces interest on (1) single-payment loans, (2) installment credit held by financial institutions and (3) installment credit held by automobile dealers. The amount of each of these classes of credit is estimated by the Federal Reserve Board, on the basis of monthly reports from a sample of lending agencies and with a periodic adjustment to more comprehensive benchmarks. The portions of (2) and (3) consisting of automobile sales credit extended to business purchasers are deducted, in line with the consumer-business allocation of automobile purchases described below in the section on Personal consumption expenditures for commodities, to obtain a series for personal debt in each category. To derive the corresponding amounts of interest, these series are multiplied by the average effective interest rates indicated by fragmentary sample data from lending agencies. The estimates for 1929–39 are less reliable than those for later years, since the basic series available for use in the formula described were somewhat less suitable in detail for this use.

No interest on charge account debt, service debt, or installment sales credit held by dealers other than automobile dealers is included, for reasons of consistency with the data on interest received by these dealers. It is believed that, in general, business creditors do not enter in their books an explicit interest item as received on such loans, but rather include the amount in the sales price or in "other income."

The second type of consumer interest payments arises in connection with borrowings against life insurance policies. The interest payable to life insurance carriers is estimated by applying an average interest rate to the average amount of policy loans outstanding, both averages being based on data from the Institute of Life Insurance. The third class of consumer payment is that made to United States Government life insurance and adjusted service certificate funds.

The total of these three categories is entered in personal consumption expenditures as *Interest on personal debt.*

A fourth type of interest payments by individuals arises in connection with brokers' loans. This segment was large in 1929, but in recent years has been of minor importance. The method of estimation here is to apply averages of quoted short-term money rates (New York Federal Reserve Bank) against average brokers' loans to customers (members only, New York Stock Ex-

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change). This item is also entered directly in personal consumption expenditures, as part of *Brokerage charges and interest.*

Nonprofit organizations servicing individuals.—Informational returns by labor unions, social groups, etc., to the Internal Revenue Service have been tabulated for 1943 and 1946. Undercoverage in these data is large percentagewise, but the amounts involved are negligible. Larger in amount, but still relatively minor in comparison with the monetary interest paid total, are the payments made by other types of organizations such as churches, hospitals, and private schools. Here only fragmentary data have been available and the estimates take the form of average interest rates applied against estimated mortgage indebtedness, or interest-to-receipts ratios applied against estimated total receipts.

Rest of the world

Interest paid to United States residents by foreigners is estimated in connection with the United States balance of payments estimates of the Office of Business Economics. The series is described in the section on Net foreign investment.

Imputed Interest Paid

In addition to monetary interest, national income and personal income include imputed interest flows. These arise in connection with the transactions of financial intermediaries. In national income accounting commercial banks are conceived of as paying out to their depositors the entire amount of property income received, so that imputed interest paid by commercial banks equals their property income received less interest actually paid on deposits. Correspondingly, they are conceived of as making a charge for the services rendered to their depositors in excess of the monetary service charges actually made. These imputed service charges are numerically equal to imputed interest paid.

Exhibit 4.—*Components of Imputed Interest Paid, 1950*

Item	Millions of dollars	Percent
Corporations	3,624	61.7
Commercial banks	2,927	49.9
Federal Reserve Banks	67	1.1
Finance, n. e. c.	207	3.5
Stock life insurance carriers	423	7.2
Other private businesses	2,246	38.3
Mutual savings banks	292	5.0
Mutual life insurance carriers	1,594	27.2
Savings and loan associations	325	5.5
Credit unions	35	.6
Total imputed interest paid	5,870	100.0

To the extent that these imputed flows represent intrabusiness transactions, they cancel out in the aggregate and have no effect on the size of national income and product, although they do affect its industrial distribution. To the extent that they reflect transactions between commercial banks and persons, they result in matching entries in (a) the interest components of national and personal income and (b) personal consumption expenditures for services.[1] A similar procedure is applied to corporate financial institutions of the investment trust type.

An interest imputation is made also in connection with life insurance. Imputed interest is measured in this instance by property income received, which in national income accounting is treated as accruing directly to policyholders. In turn, policyholders are assumed to make payments to life insurance companies to cover their operating expenses. Mutual financial institutions other than life insurance are given a similar treatment.

Imputed interest paid is described immediately below, and imputed interest received is described following the discussion of monetary interest received. Imputed charges made by financial institutions (analytically distinct from the imputed interest flows) are also discussed, to the extent that they are derived in a statistically interrelated procedure. The charges for life insurance, for which the methodology is different, are covered in the section on Personal consumption expenditures for services.

In general, imputed interest paid by financial intermediaries is measured as the excess of property income received over property income actually returned in monetary form to owners of the funds entrusted to the intermediary. As will be noted in the following discussion, the precise content of this formula varies among the several types of financial institutions involved. The composition of imputed interest paid in 1950 is shown in *Exhibit 4.*

Corporations

Most of the imputed interest paid by corporations originates in commercial banking.

Commercial banks.—In estimating imputed interest paid by commercia banks, basic data are drawn from annual reports of the Federal Deposit Insurance Corporation for the period beginning in 1935 and from the Board of Governors of the Federal Reserve System for the 1929–34 period. This departure from the general use of the Internal Revenue Service data in the corporate area was occasioned by shortcomings in the industrial classification of the *Statistics of Income* banking industry.[2]

Imputed interest paid by commercial banks is measured as the excess of interest and dividends received over interest paid on demand and time deposits. Reported data for member banks (Federal Reserve System) in the 1929–34 period and for member banks (Federal Deposit Insurance System) in later years are raised to all-commercial-bank levels on the basis of asset ratios derived from the above sources and from Comptroller of the Currency data.

Federal Reserve Banks.—Imputed interest paid by Federal Reserve Banks (measured as interest received less interest paid and profits) is calculated from aggregate financial statements published by the Federal Reserve Board.

Finance, not elsewhere classified.—Imputed interest paid by corporations classified in the "Finance, n. e. c." group, mainly investment trusts, holding companies, and long-term and short-term credit agencies, is measured as property income in the form of interest and dividends received less the sum of interest paid and profits (before income and excess profits taxes and without deduction for dividends received).

When income accounts are not in such a form as to permit an isolation of loan and investment activities from other operations, profits as reported reflect both elements, and a statistical isolation of profits earned in loan and investment activities is needed, in order that the imputation procedure be confined to these activities. In view of the fact that operations other than loan and investment activities play a significant role in the "Finance, n. e. c." industry, this refinement seems desirable.

To effect the separation, investment trust companies of the management type are assumed to be institutions in which operations are substantially limited to loan or investment activities. Relationships between imputed interest paid and property income received for investment trust companies are computed and applied to the total property income in "Finance, n. e. c." to estimate total imputed interest paid by this group.

These ratios were based for years prior to 1938 upon a report of the Securities and Exchange Commission, *Investment Trusts and Investment Companies, Part Two* (March 1939), and for 1938 and subsequent years on *Statistics of Income—Part 2,* including unpublished detail from the "Source Book".

Series for interest and dividends received by the "Finance, n. e. c." group generally are based upon *Statistics of Income—Part 2* data and unpublished detail from the "Source Book." Only data for the 1929–33 period and after 1941 have been used directly, because of the break in the series introduced by corporate reporting for tax purposes on an unconsolidated basis from 1934 through 1941. For these years, estimates were interpolated by total monetary interest and net dividends paid by all corporations. For the two most recent years, the *Statistics of Income* series is extrapolated by the sum of (a) monetary interest payments by all corporations except those in the finance industries, and (b) publicly reported cash dividend payments by all United States corporations except those in finance. (The series on publicly reported dividend payments is compiled by the National Income Division from data in Moody's *Dividend Record* and published regularly in the *Survey of Current Business.*)

1. In tracing the detail of the imputed flows, it will be noticed that imputed interest and service charge transactions between commercial banks and government are not recognized and are instead treated as occurring between commercial banks and personal recipients.

2. It may be noted that, as a consequence, net interest originating in commercial banks, as estimated for Part V, differs from dividends received by banking, to which by definition it should be numerically equal.

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Stock life insurance carriers.—The property income (monetary and imputed interest, dividends, and net rents) received by life insurance carriers is regarded as being withheld to the account of policyholders and is treated as though it were actually disbursed. Accordingly, a payment is imputed for life insurance in *Exhibit 4.*

Basic data for the measurement of dividend and monetary interest receipts of both stock and mutual life insurance carriers combined are taken from *Statistics of Income—Part 2,* supplemented by unpublished detail from the "Source Book". Reported dividend figures from 1929 through 1939 were adjusted to include dividends received from foreign corporations. Receipts of mputed interest are derived by procedures described below under Imputed interest received. Series for gross rents received, also taken from Internal Revenue Service sources, are converted to net rents realized by means of net-gross rent ratios. The break between stock and mutual life insurance carriers is estimated on the basis of data published in The Spectator Company's *Insurance Year Book.*

Extrapolation of the series based on *Statistics of Income* to current years is accomplished by means of Institute of Life Insurance data. An extrapolating series is constructed by multiplying security and mortgage asset holdings (averages of year-end figures) by net earning rates.

Other private businesses

Mutual savings banks.—Imputed interest paid by mutual savings banks is measured as (*a*) property income received (interest and dividends) less (*b*) interest and dividends paid depositors and interest paid on capital notes and debentures. The nature of the series for (*a*) and (*b*) is described under "Monetary interest received" and "Monetary interest paid", respectively.

Mutual life insurance carriers.—The procedure for estimating imputed interest paid by mutual life insurance carriers has been described above under "Stock life insurance carriers".

Savings and loan associations.—Imputed interest paid by savings and loan associations is measured as total interest income less the sum of interest and dividends paid. The two flows are identical to those entered under "Monetary interest received" and "Monetary interest paid", except for the addition to the former of imputed interest received from commercial banks, estimated by procedures described below.

Credit unions.—Imputed interest paid by credit unions is measured as interest received less dividends paid (the latter taken as interest payments on both shares and deposits). Interest received by credit unions is assumed to equal interest paid to them by individuals. (See above "Monetary interest paid, Households and institutions".) Dividends paid are obtained from compilations of annual reports to the Bureau of Labor Statistics.

Monetary Interest Received

In the calculation of monetary interest received by business and foreigners, business recipients are defined to include all corporations (63 percent of the total in 1950), unincorporated security and commodity brokerage firms and miscellaneous proprietors in the finance, n. e. c. category (together about 1 percent of the total), mutual financial intermediaries (35 percent), and nonprofit organizations servicing business (negligible). Interest received by the rest of the world from the United States accounts for less than 1 percent of the total. Further details are shown in *Exhibit 5.*

Corporations

The general nature of the basic data covering interest received by corporations has already been discussed under "Monetary interest paid". Interest received by mutual insurance carriers (measured in conformance with the Internal Revenue Service definition of interest received) is removed by use of the data described above, under "Imputed interest paid, stock life insurance carriers". Interest received by Federal Reserve Banks is tabulated by the Board of Governors of the Federal Reserve System.

For the two most recent years, for which tax return data are not available, total monetary interest received by corporations is obtained by adding separate estimates for the banking and insurance industries and for all industries except banking and insurance.

The estimates for banking (excluding Federal Reserve Banks) are obtained by extrapolating the last base year estimate by income from loans and investments reported by insured commercial banks to the Federal Deposit Insurance Corporation (raised to the all-commercial bank level). Interest received by Federal Reserve Banks is available from the Board of Governors of the Federal Reserve System. Current estimates for monetary interest received by stock insurance carriers are prepared jointly for life and nonlife carriers. Interest receipts of all stock insurance companies (life and nonlife) are assumed to vary with the corresponding series obtained for total life insurance. (See "Imputed interest paid, stock life insurance carriers.")

The recent-year estimates for all corporations except banking and insurance are prepared separately for interest received on holdings of taxable United States Government securities and all other investments. This break is available in the *Statistics of Income* data. Interest received on taxable United States Government securities is extrapolated by a series calculated as United States securities held by corporations and associations (excluding banks and insurance companies) times the computed midyear average interest rate on the Federal debt, both available in the *Treasury Bulletin.* All other interest received is extrapolated by the series for monetary interest paid by all corporations except banks and insurance companies.

Exhibit 5.—*Components of Monetary Interest Received, 1950*

Item	Millions of dollars	Percent
Corporations	**5,291**	**63.4**
Corporations reporting to the Internal Revenue Service	6,505	
Less: Mutual insurance carriers (life and nonlife)	1,489	
Plus: Federal Reserve Banks	275	
Sole proprietorships and partnerships	**108**	**1.3**
Security and commodity brokers	52	.6
Finance, n. e. c.	56	.7
Other private businesses	**2,900**	**34.7**
Mutual financial institutions	2,883	34.5
Mutual savings banks	659	7.9
Mutual insurance carriers (life and nonlife)	1,513	18.1
Savings and loan associations	653	7.8
Credit unions	58	.7
Nonprofit organizations servicing business	17	.2
Rest of the world	**53**	**.6**
Total monetary interest received	**8,352**	**100.0**

To obtain further industrial breakdowns, direct estimates are made for railroads, pipeline transportation, telephone and telegraph, and electric and gas utilities, in general by extrapolating the base year estimates by interest received as reported to the respective regulatory commissions. The sum of the estimates for these industries is deducted from the figure derived above for all corporations except banking and insurance. The residual, amounting to about one-tenth of the all-industry total, is used to extrapolate the latest tax-return-based figure for each of the remaining industries.

Sole proprietorships and partnerships

Monetary interest received by unincorporated security and commodity brokers and certain loan companies classified under "Finance, n. e. c." is assumed to be received as an integral part of business operations. It is deducted in arriving at the interest share and correspondingly included in the receipts of these enterprises in calculating their net income.[3] Source materials are similar to those noted under monetary interest paid. Except for security and commodity brokers in 1929, amounts involved are small.

Other private businesses

Mutual financial institutions.—In general, the source materials used for estimating monetary interest receipts of mutual financial institutions are identical to those employed in the "Monetary interest paid" estimates.

3. In general, monetary interest received by owners of unincorporated enterprises is not deducted in computing net interest because it is assumed to be received by them in a personal rather than business capacity; and, correspondingly, it is excluded in estimating incomes of unincorporated enterprises.

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Monetary interest received by mutual savings banks is measured as interest and dividends on securities plus interest and discount on loans. The method of estimation is similar to that used for monetary interest paid.

Monetary interest receipts of mutual insurance carriers are measured as the sum of interest and dividends for national income purposes. (This accounts for the difference between the two entries for these institutions in *Exhibit 5.*) The method of estimate for life insurance carriers has been described above, under "Imputed interest paid, stock life insurance carriers". Receipts of mutual nonlife carriers are obtained from *Statistics of Income* tabulations, extrapolated by the method described under "Imputed interest paid, stock life insurance carriers."

Monetary interest received by savings and loan associations is measured on the basis of reports by member associations to the Federal Home Loan Bank Board. Receipts by credit unions are assumed equal to payments by individual borrowers, and are estimated by methods described above under "Monetary interest paid, households and institutions".

Nonprofit organizations servicing business.—The basis for estimation has been described above, under "Monetary interest paid."

Rest of the world

Interest received by foreigners from United States residents is described in the section on Net foreign investment.

Imputed Interest Received

The outflows from financial intermediaries of imputed interest paid become imputed interest received when viewed from the standpoint of recipients to whom such imputed interest accrues. It is necessary, consequently, to determine what groups receive the imputed interest that arises in each of the financial intermediaries. The underlying procedure in making this determination is based upon the ownership of the funds by use of which financial intermediaries obtained property income.

Data on ownership are not generally available except for commercial banks, for which there is indication of ownership by broad categories. It is necessary, therefore, to solve the problem of ownership in most cases by use of assumptions.

A review of the several financial intermediary groups indicates the substantial validity of assuming that persons own all the funds entrusted to mutual savings banks, life insurance carriers, savings and loan associations, and credit unions. The corporate component of the finance, n. e. c. group, comprising investment trusts, holding companies, and both long-term and short-term credit agencies, is less clear-cut. It is quite possible for business as well as persons to own securities of these companies. Lacking ownership data, it is nevertheless assumed that for this intermediary group also ownership is vested in persons. However, the consequent error of assuming that all imputed transactions in this area are with persons should be appraised in the light of the fact that imputations among affiliated companies are eliminated by the statistical estimating methods employed. (See the reference to the use of consolidated returns under "Imputed interest paid, finance, n. e. c.")

In summary, for all financial intermediaries except commercial banks the flows of imputed interest paid by intermediaries are treated as going entirely to persons. For commercial banks (including Federal Reserve Banks), imputed interest is allocated among recipients by use of estimates of the ownership of deposits. The main sources of data for the allocation to principal classes of recipients are the published banking statistics of the Board of Governors of the Federal Reserve System and the Federal Deposit Insurance Corporation, together with the Federal Reserve liquid asset surveys. The distribution of imputed interest paid by commercial and Federal Reserve Banks is shown in *Exhibit 6.*

This distribution is accomplished in three major steps:

1. Imputed interest received is estimated for three broad groups: (*a*) Federal Government, (*b*) State and local governments, and (*c*) persons and businesses. The procedure consists of allocating the elements of imputed interest paid by commercial banks (total property income, interest paid on demand deposits, and interest paid on time deposits) on the basis of percentage distributions showing the ownership of demand deposits and of time deposits by the three groups, and then deducting the sum of the two interest paid estimates from total property income.

These distributions are computed from Federal Deposit Insurance Corporation deposit data from 1934 forward, and from Federal Reserve Board deposit data from 1929 to 1933. The sources are the *Annual Reports of the Federal Deposit Insurance Corporation* and *Banking and Monetary Statistics.*

2. The further distribution of the total received by persons and businesses is based primarily on *Derivation of Liquid Asset Distribution Estimates* (mimeograph), Board of Governors of the Federal Reserve System. This publication gives the distribution of demand and time deposits by selected groups of holders, as of the end of December, from 1939 forward. For the most part, estimates presented in Solomon Shapiro's article on "Distribution of Deposits and Currency in the United States, 1929–1939", in the *Journal of the American Statistical Association,* December 1943, were used to extrapolate the Federal Reserve figures back to 1929, using a December 1939 link.

Exhibit 6.—*Imputed Interest Paid by Commercial and Federal Reserve Banks, by Major Recipients, 1950*

Item	Millions of dollars	Percent
Imputed interest paid by commercial and Federal Reserve Banks (see *Exhibit 4*); to be distributed among major recipients	**2,994**	**100.0**
Step 1:		
United States Government	85	2.8
State and local governments	219	7.3
Persons and businesses	2,690	89.8
Step 2	**2,690**	**100.0**
Persons	**1,205**	**44.8**
Trust funds for individuals	38	1.4
Nonprofit organizations servicing individuals	43	1.6
Individuals	1,124	41.8
Businesses (see *Exhibit 1*)	**1,485**	**55.2**
Corporations	**923**	**34.3**
Finance, insurance and real estate	114	4.2
Stock life insurance carriers	8	.3
Stock nonlife insurance carriers	26	1.0
Other finance, insurance and real estate	80	3.0
Other industries	809	30.1
Proprietorships and partnerships	**509**	**18.9**
Finance, insurance and real estate	42	1.6
Security and commodity brokers	13	.5
Other finance, insurance and real estate	29	1.1
Other industries	467	17.4
Farm	128	4.8
Nonfarm	339	12.6
Other private businesses	**53**	**2.0**
Mutual life insurance carriers	28	1.0
Mutual nonlife insurance carriers	9	.3
Savings and loan associations	16	.6
Step 3 [1]		

1 Consists of a further detailed industrial breakdown of allocations shown under step 2

3. This step consists of a further industrial breakdown, within the industry groups specified under step (2), thus completing the allocation by major and minor industries under the National Income Division industrial classification. In general, the method is to distribute imputed interest to industries on the basis of relative holdings of cash and deposits, as there is no further information on deposit ownership by industry.

Cash and deposits held by corporations filing balance sheets are tabulated by industry in *Statistics of Income—Part 2.* The reported data are raised (by industry) on the basis of ratios of total compiled receipts of all corporations to total compiled receipts of those submitting balance sheets, and are adjusted to the National Income Division industrial classification.

For sole proprietorships and partnerships, only indirect methods of estimating cash and deposit holdings are available. In general, ratios of cash and deposits to total receipts for proprietorships and partnerships are assumed to equal similar ratios for corporations with assets under $50,000 in the respective industries. These corporate ratios were obtained from *Statistics of Income—Part 2,* for 1941, and extrapolated to all other years by similar ratios for all corporations.

For both corporations and unincorporated firms, the relative distributions of cash and deposit holdings are assumed to remain constant in the two years prior to availability of the tax return data.

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Services furnished without payment by financial intermediaries, except life insurance

It is convenient to describe at this stage the derivation of the series, "Services furnished without payment by financial intermediaries, except life insurance", a component of personal consumption expenditures. This component includes entries for commercial banks, corporate finance, n. e. c., mutual savings banks, savings and loan associations, and credit unions.

Services furnished without payment by commercial banks to persons are numerically equal to imputed interest received by persons from commercial banks. For corporate finance, n. e. c. the entry equals the imputed interest paid item whose derivation has been explained above, under "Imputed interest paid." For mutual savings banks, savings and loan associations, and credit unions the entry equals imputed interest paid, calculated as explained above, less income taxes and retained profits (before deduction of dividends). In general, the series on retained profits and taxes are developed from the same sources as the series on interest and dividend flows.

Net Interest Paid by Government

A breakdown of the government interest calculation is shown in *Exhibit 7*. It should be noted that the transactions covered comprise not only those of general governments (including trust funds) but also those of government enterprises.

Exhibit 7.—*Net Interest Payments by United States Governments, 1950*

Item	Millions of dollars	Percent
Excess of interest payments by United States governments over interest received by United States governments	4,716	
Monetary interest paid by governments	6,428	100.0
Federal Government	5,804	90.3
State and local governments	624	9.7
Monetary interest received by governments	1,712	100.0
Federal Government	1,373	80.2
State and local governments	339	19.8

Monetary interest paid

Federal Government.—The largest component of interest paid by the Federal Government is that paid or payable on the public debt. Data for all years are available in the records kept by the United States Treasury Department. The published source is the *Daily Treasury Statement*. Small amounts of interest are also paid on several types of government-administered trust funds. Calendar year estimates of the latter are obtained by averaging fiscal year data from the *Budget of the United States Government*. Estimates of interest paid by Federal Government enterprises are prepared in connection with the derivation of the enterprise surplus or deficit. (See section on Government receipts and expenditures.)

State and local governments.—Estimates of interest paid by State and local governments, prepared separately for several types of government units, are based upon data drawn from the *Government Finances* publications of the Census Bureau, particularly the releases on *Governmental Debt in the United States* and the *Summary of Governmental Finances in 1952*.

Interest payments by State governments are available for fiscal years 1929–32 and 1937 forward, and for intervening years were interpolated on the basis of the reported gross debt of State governments. The latest fiscal year estimate is obtained by extrapolation on the same basis. Adjacent fiscal years are averaged to obtain calendar year estimates.

Comprehensive coverage of local government interest payments can be obtained from the Census reports for the years 1931, 1936, and 1940 forward. Since the reported data represent diverse fiscal periods, minor adjustments of timing are required to place them on a calendar year basis.

In the years of incomplete coverage, total municipal interest payments are assumed to move proportionately to those reported for the larger cities only, while interest payments by other types of local government units are interpolated or extrapolated on the basis of reported gross debt statistics.

Monetary interest received

Federal Government.—Interest received by the Federal Government comprises interest income of the social insurance funds, interest income covered into miscellaneous receipts of the Treasury, and interest received by government enterprises, as well as trivial amounts received by several other funds. It may be noted that the bulk of these receipts is intragovernmental, and offsets identical amounts under interest paid.

Interest received by the social insurance funds is reported in the *Daily Treasury Statement*. Other miscellaneous interest receipts of the Federal Government are derived from annual analyses of miscellaneous receipts of the Treasury as detailed in the *Budget* document, fiscal year totals being averaged to obtain calendar year estimates. Interest received by Federal Government enterprises is, in general, obtained on the same basis as the corresponding interest paid component.

State and local governments.—Estimates of interest received by these governments, like those of their interest payments, are drawn from the various Census releases on *Government Finances*.

Fiscal year data for State governments are available for the years 1929–32, 1937–40, and from 1952 on. Estimates for the 1933–36 period were obtained by straight-line interpolation, while those for 1941–51 were interpolated by reported investment earnings (not entirely confined to interest) of State pension, sinking, and trust funds. The fiscal year totals are averaged to obtain calendar year estimates throughout the period.

The Census reports of interest received by local governments are fragmentary in most years. A comprehensive benchmark for 1931 can be established from the 1932 Census of Governments, however, on the assumption that the interest component of reported revenue from "highway privileges, rents, and interest" for local units other than cities of more than 30,000 is proportionately the same as for cities of 30,000 to 100,000 (for which, along with the larger cities, a more detailed breakdown is available). Sample-based Census Bureau estimates are available from 1952 on, with a 1-year lag. Interpolations were governed primarily, through 1942, by reported data on investment earnings of public trust, pension, and sinking funds of cities with populations over 100,000. The basic annual interpolator series for 1943–51 cover only cities of 250,000 or more.

Because of the time elapsed in compilation of the basic Census reports, interest receipt estimates for the most recent year, both for States and for local governments, have to be extrapolated in more or less arbitrary fashion, with due regard for the trend of the series and for miscellaneous collateral information.

7. PERSONAL CONSUMPTION EXPENDITURES FOR COMMODITIES

Personal consumption expenditures for commodities—like wages and salaries—represent transactions that can best be estimated from business, rather than individual, records. Unlike wages and salaries, however, consumer commodity purchases involve indirect estimation. The business sales data underlying the latter series neither generally nor uniformly distinguish sales to consumers or to the other broad purchaser groups (such as business and government) relevant to national income measurement.

The general problem, then, is to derive consumer sales, valued at prices paid by consumers, from total sales. This qualification regarding prices is important. If the estimating procedure starts with sales (or output) at the producer level and then adjusts them to cover sales of finished consumption commodities only, there still remains the substantial task of raising their valuation to a consumer-price basis.

Nature of commodity flow method

This approach of starting with producers' sales (or output) is, in fact, the basic one employed in this report. Termed the "commodity flow" method, it was used for the 1929–39 period and 1947 to derive estimates for consumer

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commodities making up over four-fifths of total consumer commodity expenditures. (See *Exhibit 1.*)

First developed by Simon Kuznets of the National Bureau of Economic Research and detailed in his National Bureau volume on *Commodity Flow and Capital Formation* (1938), the procedure involves numerous estimating steps. In broad outline, these entail securing commodity data at producers' prices on the output of factories, farms, and fisheries; segregating for each commodity the portion of total output not requiring further processing,

Exhibit 1.—*Methods of Estimating Consumption Expenditures for Commodities, 1939 and 1947*

Item	1939		1947	
	Millions of dollars	Percent	Millions of dollars	Percent
Estimated by commodity flow method	**34,928**	**83.6**	**94,769**	**83.4**
Estimated by other methods	**6,873**	**16.4**	**18,901**	**16.6**
Retail valuation method	**5,148**	**12.3**	**14,652**	**12.9**
Tobacco products	(1)		3,869	3.4
New cars and net purchases of used cars	1,679	4.0	[2] 4,408	3.9
Gasoline and oil	2,181	5.2	3,630	3.2
Other fuel and ice except fuel produced and consumed on farms	1,288	3.1	2,745	2.4
Imputations	**1,240**	**3.0**	**2,895**	**2.5**
Food produced and consumed on farms	1,114	2.7	2,532	2.2
Fuel produced and consumed on farms	110	.3	134	.1
Standard clothing issued to military personnel	16		229	.2
Miscellaneous	**485**	**1.1**	**1,354**	**1.2**
Flowers, seeds, and potted plants	191	.4	475	.4
Tips in purchased meals and beverages	117	.3	429	.4
Lighting supplies	86	.2	(1)	
Other [3]	91	.2	450	.4
Total	**41,801**	**100.0**	**113,670**	**100.0**

1. Estimated by the commodity flow method.
2. Excludes expenditures for housing type trailers, which were estimated by the commodity flow method.
3. Comprising the following: In 1939, paintings and art objects, products of custom establishments, n. e. c., and expenditures by United States Government personnel abroad; in 1947, expenditures by United States Government personnel abroad.

and destined for personal consumption; and then passing from finished output at producers' prices to final costs to consumers by tracing the commodities through the various stages of the distributive system.[1]

The Census of Manufactures, with its vast commodity detail, is the basic statistical source for the commodity flow method. This census was available biennially for odd-numbered years of the 1929–39 period and for 1947. The most important supplementary sources utilized by the method are the Censuses of Retail Trade and Wholesale Trade, which, during the span covered by this report, were taken for the years 1929, 1933, 1935, 1939, and 1948. These censuses—together with the Censuses of Distribution of Manufacturers' Sales (taken for 1929, 1935, and 1939 in conjunction with the manufacturing censuses)—provide most of the basic information for segregating consumer commodities from total output, tracing their flow, and measuring their costs of distribution.

Taken at frequent intervals, the manufacturing and trade censuses furnished a comprehensive basis for estimating consumer commodity purchases during the 1929–39 period. The gaps during this period left by the absence of one or more of these censuses were filled, in generally satisfactory manner, by an interpolation process carried out within the commodity flow framework. For this purpose, a wide variety of statistical series was assembled from government and trade associations and other private sources, and some reliance was placed on relationships developed from the census materials.

For the period after 1939, the infrequency of industrial census materials has restricted use of the commodity flow method to the single year 1947. Benchmark estimates for the commodity flow segment of consumer commodities for that year are presented for the first time in this report.

The commodity flow method is admittedly "roundabout" and complex. It was adopted mainly because of the very detailed commodity classification and the comprehensive coverage of output afforded by the Census of Manufacturers. For both of these reasons, the method was distinctly to be preferred to the principal alternative method employing the Census of Retail Trade as the basic source. This method, the retail sales approach, involves adjusting retail sales to eliminate all sales by retail establishments not made to consumers and then estimating independently, and adding in, that part of consumer expenditures on commodities not made in retail establishments.

Use of retail sales for interpolation and extrapolation

While it has not been feasible to employ the simpler, more direct retail sales approach in preparing benchmark estimates of consumer commodity expenditures, retail sales data have furnished the principal basis of an interpolation and extrapolation procedure used in deriving estimates for the years 1940–46 and subsequent to 1947. For commodity groups estimated by the commodity flow procedure for 1939 and 1947, relative changes in retail sales data have been used very largely to interpolate between the 1939 and 1947 benchmarks and to extend the latter forward into the current period.

Basing the movement of consumer commodity expenditures on retail sales has significant limitations. In itself, the method cannot take account of year-by-year changes in the relative importance of business purchases at retail and consumer purchases outside retail trade—allowances for which are difficult to make. Moreover, with the exception of department store sales figures, the retail sales data are not available by commodities, but according to a not very detailed classification by type of store. Thus, in the extrapolation of consumer commodity expenditures from one census period to the next, the general assumption is made for the various commodity groups that benchmark relationships of consumer purchases to the sales of selected types of retail stores remain valid.

Although estimates for the recent period continue to be derived through extrapolation by retail sales, the feasibility of basing commodity flow estimates upon product data obtained in the Census Bureau's *Annual Survey of Manufacturers* is receiving thorough study. This is a sample survey, begun in 1950, of manufacturers' shipments (and other data), and is utilized in the producers' durable equipment estimates. (See Section 10.) Sampling variability in the manufacturers' shipments data is substantial, however, for some consumer expenditure groups. Moreover, product information in the annual surveys is much less detailed than in a full census, increasing the difficulties of making consumer-nonconsumer allocations. Among other related problems, the most important has been that of obtaining current information on retailers' markups. But given continued improvement in the annual manufacturing surveys and increased availability of auxiliary data, it may be possible ultimately to institute annual commodity flow estimates.

In short, then, the bulk of all consumer commodity expenditures was estimated by the commodity flow method for the years 1929–39 and 1947 and by interpolation and extrapolation based on retail sales for other years. For certain commodities, different methods were considered preferable. For still others, such as food and fuel produced and consumed on farms, the commodity flow method was not appropriate.

Other estimating methods

The main alternative to the commodity flow method (with interpolation and extrapolation by retail sales) was the direct approach of multiplying estimated quantities purchased by consumers by appropriate average retail prices. This procedure, which may be termed the "retail valuation" method, was used in estimating consumer expenditures for passenger cars and for gasoline and oil for all years; for tobacco products from 1940 to the present; and for "other" fuel and ice (except fuel produced and consumed on farms) for the years 1929–39 and 1947, with a retail sales interpolation and extrapolation being employed for other years. These four groups accounted for 13 percent of the $114-billion commodity total in 1947.

The remaining estimates are of minor importance except for the imputed item covering food produced and consumed on farms. This accounted for about 2 percent of the 1947 total.

General considerations of reliability

The subsequent description of methodology will afford, at various places, judgments about particular aspects of the estimates of consumption expendi-

1. The commodity flow procedure was also used in the estimation of producers' purchases of durable equipment for this period. This is covered more particularly in the section on Producers' durable equipment.

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tures on commodities. Several propositions regarding their general character may be worth noting at this point, with, however, the realization that any appraisal of over-all reliability is necessarily indirect and cannot be definitive.

Concerning the estimates for 1929–39 derived by the commodity flow method, there is the primary fact that they entailed lengthy procedures processing large masses of data and resting at times to an uncomfortable degree on judgment. Counterbalancing this are several considerations pointing toward the general appraisal that the final estimates of the totals are not markedly in error.

The first is the wealth of census information on which the estimates for this period were founded—information which, if not ideal, was adequate for the requirements of most phases of the estimating process. Secondly, certain evident sources of error in the individual commodity estimates—such as the necessity of using type-of-store data in computing retail markups—may be assumed to have a tendency to compensate, or offset, in the total. Thirdly, substantial temporal comparability in the estimates—that is, reliability of movement over time—seems indicated from the use of census data having a high degree of comparability and the application of uniform procedures and assumptions.

Exhibit 2.—*Comparison of Commodity Flow and Provisional Estimates for 1947*

Group	1939 Benchmark estimates	1947 Benchmark estimates	1947 Provisional estimates [1]	Percent divergence of provisional from benchmark estimates
	Millions of dollars			
Food excluding food produced and consumed on farms and tips	17,933	51,210	[2] 54,172	6
Shoes and other footwear	1,226	2,955	2,975	1
Clothing and accessories except footwear	5,893	15,610	16,105	3
Jewelry and watches	355	1,463	1,348	−8
Toilet articles and preparations	486	1,245	1,208	−3
Furniture	949	2,552	[2] 2,521	−1
Kitchen and other household appliances	774	3,179	[2] 3,012	−5
China, glassware, tableware, and utensils	475	1,348	1,442	7
Other durable house furnishings	908	2,453	2,565	5
Semidurable house furnishings	681	2,135	1,868	−13
Cleaning and polishing preparations, and miscellaneous household supplies and paper products [3]	508	1,523	1,146	−25
Stationary and writing supplies	149	440	391	−11
Drug preparations and sundries	612	1,313	1,358	3
Ophthalmic products and orthopedic appliances	172	400	386	−4
Tires, tubes, accessories and parts	484	1,674	1,626	−3
Books and maps	226	536	747	39
Magazines, newspapers, and sheet music [3]	554	1,243	1,118	−10
Nondurable toys and sport supplies	285	910	1,006	11
Wheel goods, durable toys, sport equipment, boats, and pleasure aircraft	228	972	761	−22
Radio and television receivers, records, and musical instruments	420	1,429	1,724	21
Total [4]	33,318	94,590	97,479	3

1. With exceptions indicated in footnotes 2 and 3, these were published in the July 1950 SURVEY OF CURRENT BUSINESS and the 1951 NATIONAL INCOME supplement and were derived by extrapolating the 1939 benchmark estimates by retail sales.
2. Based on 1947 estimates published in July 1949 because adjustments influenced by the 1947 and 1948 censuses were made in the subsequently published estimates for these groups.
3. Retail sales extrapolation is not used in these groups.
4. The benchmark total for 1939 differs from the 1939 commodity flow figure in *Exhibit 1* principally because of the omission above of the tobacco estimate amounting to $1,767 million. In addition, three small non-commodity flow items totaling $157 million are included in the 1939 total above for comparability with 1947. The benchmark total for 1947 is less than the 1947 commodity flow figure in *Exhibit 1* because of the omission above of housing-type trailers, amounting to $179 million.

The estimates for 1947 obtained by the commodity flow approach are of the same general character as the prewar benchmarks. The 1947 Census of Manufactures, it may be noted, provided even greater commodity detail than the biennial censuses of the 1929–39 period—a factor making for more accuracy in the derivation of consumer product values at the manufacturers' level. On the other hand, the postwar industrial census materials were somewhat deficient for purposes of the commodity flow work, notably in the lack of the information provided in earlier censuses on the distribution of manufacturers' sales and on retailers' operating expenses. Certain changes in the basic commodity flow method were therefore required, with some probable impairment of reliability.

Because of the long intervals between the industrial censuses used for benchmarks, the procedure of basing the movement of consumer commodity expenditures on retail sales has assumed signal importance in the period since 1939. A basis for judging the reliability of this procedure is provided by *Exhibit 2.* This compares the new commodity flow benchmarks with previously published estimates for 1947. The last column of the exhibit—showing the percent difference between the provisional and revised estimates—directly affords an appraisal of retail sales extrapolations over the eight-year period through 1947 marked by extensive war and postwar changes and a near tripling in total dollar expenditures. (To the extent, of course, that the 1939 and 1947 benchmark estimates could not be made entirely comparable, this factor also would be reflected in these percentages.)

The results are broadly satisfactory. Of first note is that the projection by retail sales of 1939 consumer expenditures for commodities missed the commodity-flow benchmark total in 1947 by only 3 percent. The showing by commodity groups, it will be observed, is mixed, although for most of them the divergence is 7 percent or less. The series showing the widest percentage discrepancy, moreover, are generally those for which retail sales data are weakest for measuring consumer expenditure changes—usually because the products involved are least closely identified with a particular type of store.

The estimates for the war years, it may be added, may have been subject to special bias. It is possible that the substantial shifts which occurred in the retail spending pattern were accompanied by temporary changes in the relationships of consumer expenditures for specific commodities to sales in the lines of retail trade used for interpolation. For lack of data, little could be done in the commodity estimates to allow for such changes.

The above record of revisions for the commodity flow portion of consumer commodities might be broadened to note that the downward revision for total consumer commodities for 1947 also amounted to 3 percent. Further, consumer expenditures for services, as explained in that section, also underwent statistical revision—notably to incorporate results of the 1948 Census of Business and the 1950 Census of Population and Housing—and, in total, were raised by about 4½ percent for 1947. The net result was that the new 1947 total for commodities and services combined differed by less than one percent from the previous total.

Of the commodity groups derived by methods other than the commodity flow, it may be noted that the estimates for passenger cars, gasoline and oil, and purchased household fuels are subject to a significant qualification. The allocation of these commodities to consumers is based on limited information and may be considerably in error.

Though indirect and inconclusive, some evidence bearing on the general reliability of the consumer commodity totals is afforded by the size of the statistical discrepancy between the income and expenditure sides of the national income and product account. For a component series as large as consumer commodities—comprising in most years nearly half of the gross national product—the small size of the discrepancy throughout the period of the estimates may be taken as some external indication that the general level of the series is not markedly in error. This is particularly the case since considerable reliability can be attached to certain other large income and product components, such as wages and salaries, corporate profits, and government purchases of goods and services.

Additional indirect evidence on the reliability of total consumer commodity expenditures can be adduced. This stems chiefly from the relatively close agreement between the Commerce and SEC estimates of personal saving. (See table 6, Part V.) These two saving series, in very large degree, are based on independent statistical sources. This is also true of disposable income and the two consumer expenditure series (commodities and services) which are subtracted from it to derive the Commerce personal saving estimates. Given these facts—plus the heavy statistical influence of the large consumer commodity series on the calculation of personal saving—it seems reasonable to conclude that the commodity series is relatively accurate. For that not to be true, either of two seemingly unlikely situations would have to obtain. Either (a) the level of personal saving as indicated by the Commerce and SEC series would have to be substantially in error or (b) any marked error posited for the consumer commodity totals would have to be offset regularly in personal saving by errors in disposable income and/or consumer expenditures for services.

The following, main section of the notes gives a description of methodology in terms of the principal types of methods, as summarized in *Exhibit 1.* The description is particularly limited for the large commodity flow segment, since notes of this scope cannot deal with the numerous departures from

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general procedure or with the individual commodity groups, for which the relative importance of the various steps in the estimating procedure (and hence reliability) often varies significantly.

Commodity Flow Method, 1929–39

The individual steps in deriving total personal consumption expenditures estimated by the commodity flow method are summarized for 1939 in *Exhibit 3.* Each of these steps will be described briefly.

1. *Distribution of finished and mixed manufactured commodities.*—The basic source of manufactured commodities is the Census of Manufactures. Detailed output data—for about 4,000 commodities in 1939—were reported there for odd years of the 1929–39 period.

For the most part, the census data were comparable from year to year. There were, however, several minor deficiencies. One was that census coverage was slightly less complete in 1933 than in other years. The 1933 census data were raised whenever some indication was given of the degree of incompleteness in an individual industry—usually less than 2 percent. Another minor deficiency stemmed from the fact that the reported commodity information was somewhat less detailed for some years, notably 1933, than others. It was often necessary to break down combinations of commodities on the basis of the details reported for proximate years.

Still other limitations lay in the difficulty of establishing strictly comparable series over the 1929–39 decade for many commodities made in the textile and apparel industries, and in the differing degrees of coverage of some of these industries in particular census years. Aside from careful attempts to achieve proper classification, little could be done to overcome these limitations. It is possible that, especially for 1935 and 1937, the figures for some of the component commodities of the clothing and semidurable house furnishings groups are slightly too low.

Following these and other minor adjustments of the reported census commodity values, the first major task was to classify the full array of commodities into the categories of finished, unfinished, and mixed.

Finished commodities were defined to include (*a*) commodities that had reached the stage at which they would be taken over by individual consumers without further processing, and (*b*) durable equipment intended for multiple use in production and with an average life of one or more years.[2] Classification under (*a*) did not depend solely on the degree of processing; it was based also on the use to which a commodity is put. Flour, for example, was classified as finished if consumed in households but as unfinished if consumed by a factory making bread or other products for which flour is a raw material.

Unfinished commodities were defined to include (*a*) all commodities entering further into the productive process other than those with an average life of one year or more; and (*b*) in the context of this statistical study, finished commodities purchased by government and by nonprofit institutions serving persons, as well as construction materials—all of which are accounted for in other segments of the gross national product and estimated by methods other than the commodity flow.[3] Exports, counted under net foreign investment, also are unfinished in this context. They were not classified as such initially, but were eliminated at a subsequent step in the estimating process.

The mixed category is a tentative grouping for commodities having appreciable diversity in use, and which therefore could not be classified wholly as finished or unfinished. The mixed commodities belonged in part to the unfinished grouping and in part to the producer durable and/or consumer commodity groupings, and required allocation among them. In the strictest sense, it is realized, most commodities are mixed, but it would not have been feasible to allow for very small fractions of finished or unfinished use. Therefore, only when there was reason to believe that the secondary use of a commodity was appreciable was it assigned to the mixed category for allocation.

Exhibit 3.—*Derivation of Total Personal Consumption Expenditures Estimated by the Commodity Flow Method, 1939*

[Millions of dollars]

1. Distribution of finished and mixed manufactured commodities, before deduction of government purchases of durable equipment	25,978
a. Finished	12,327
1. Producers' durables	1,714
2. Consumer commodities	9,188
3. Combined, allocated to	1,425
a. *Producers'* durables	206
b. Consumer commodities	1,219
b. Mixed, allocated to	13,651
1. Producers' durables	1,112
2. Consumer commodities	8,210
3. Unfinished	4,329
2. Manufacturers' production of finished consumer commodities [1a(2)+1a(3b)+1b(2)]	18,617
3. Subtract: Change in manufacturers' inventories	43
4. Equals: Manufacturers' sales of finished commodities	18,574
5. Producers' sales of finished nonmanufactured commodities	2,641
6. Producers' sales of finished commodities (4+5)	21,215
7. Add: Transportation charges	993
8. Equals: Producers' sales, inclusive of transportation charges, distributed to	22,208
a. Exports	170
b. Wholesalers	12,165
c. Retailers	8,778
d. Consumers	1,095
9. Imports	504
10. Total purchases by wholesalers (8b+9)	12,669
11. Subtract: Change in wholesalers' inventories	106
12. Equals: Cost of goods sold by wholesalers	12,563
13. Add: Wholesalers' markups	2,767
14. Equals: Wholesalers' sales of finished commodities	15,330
15. Subtract: Wholesalers' exports	308
16. Wholesalers' domestic sales, distributed to:	15,022
a. Retailers	14,140
b. Consumers	882
17. Total purchases by retailers (8c+16a)	22,918
18. Subtract: Change in retailers' inventories	231
19. Equals: Cost of goods sold by retailers	22,687
20. Add: Retailers' markups	9,874
21. Equals: Retailers' sales of finished commodities	32,561
22. Consumers' purchases exclusive of general retail sales taxes (8d+16b+21)	34,538
23. Add: General retail sales taxes	390
24. Equals: Personal consumption expenditures estimated by the commodity flow method	34,928

The classification of commodities as finished, unfinished, or mixed was greatly facilitated by the extent of commodity detail in the Census of Manufactures. This detail made it possible to classify as finished or unfinished many product categories which, if combined, would have required allocation. For example, soap chips, flakes, washing powder, cleansers, and similar products were reported in 1939 broken down between packaged and bulk. While consumers buy some of the latter and businesses and other "nonconsumers" some of the former, the reported breakdown undoubtedly furnished a satisfactory basis for distinguishing between consumer and nonconsumer uses. On the other hand, the equally important granulated, powdered, and sprayed soaps were reported without a breakdown between packaged and bulk and therefore had to be allocated.

2. The formulation under (*a*) covers the bulk of the consumer items. A more precise definition of a finished consumer commodity would add to the phrase "without further processing" the qualification *in manufacturing or the services.* This qualification is needed to take account of marginal cases in the application of the commodity flow method. If a commodity is further processed outside manufacturing and the services, it is counted as finished in the present context. For instance, cloth bought by custom tailoring establishments is classified as finished because the output of such establishments is not listed in the Census of Manufactures, and hence would be missed if purchases of materials by custom tailors were not classified as finished. However, if a commodity is purchased by a service establishment and covered in its service receipts it is treated as unfinished in the commodity flow method to avoid duplication, as it is accounted for in personal consumption expenditures for services. For instance, spark plugs purchased and installed by automobile repair service establishments and covered by their service receipts, rather than sold separately to consumers, are classified as unfinished as they are reflected in consumer purchases of services.

3. One complicating element, which is explained in the section relating to producers' durables and need only be mentioned here, is that for statistical reasons government purchases of durable equipment were not eliminated as "unfinished" in the process of commodity classification, but at a later stage.

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The greater number of the commodities reported could be classified directly as either finished or unfinished. An overwhelming proportion of commodities in this initial finished classification could be assigned immediately to either the producers' durable or the consumer commodity category. However, some finished commodities—household furniture and tools are examples—fell into both of these categories, and so required allocation. This combined group of finished commodities was not relatively large—as shown for 1939 by the data in *Exhibit 3*—and its allocation was not a likely source of appreciable error, particularly with respect to the gross national product total. Misallocation between consumer commodities and producers' durables would not lead to error in that total except for the addition of an inappropriate distributive cost element in passing from the producer value to the final value.

Commodities which could not be classified directly as wholly finished or unfinished—the "mixed" commodities—required special study to allocate them among the categories of producers' durables, consumer commodities, and unfinished. Fortunately, census reports provided two types of commodity information that were very useful for this purpose: (1) Data in the biennial Census of Manufactures on the quantity and cost of principal materials consumed in certain industries; and (2) data on the distribution of sales by class of purchaser in the Distribution of Manufacturers' Sales for 1929, 1935, and 1939, and in the Census of Wholesale Trade for 1929, 1933, 1935, and 1939. These census data were checked and supplemented by use of numerous special commodity studies from both government and trade sources, and by correspondence with business firms and commodity experts.

The materials consumed data were used to estimate the unfinished part of a number of mixed commodity items in the large food group. Special commodity data were used in the allocation of durable equipment items. In some cases, with adequate data lacking, the allocations had to be based on judgment, including outside expert opinion. But the method most generally followed in estimating the nonconsumer portion of mixed commodities involved application of the sales distribution data.

In the manufacturers' and wholesalers' sales distributions provided by the censuses, sales to "industrial, commercial, professional, and institutional users"—the 1939 designation, termed "sales to industrial users" for brevity—were taken to indicate nonconsumer use. Included in the coverage of this designation were private institutions and governmental bodies. In addition to sales to industrial users by manufacturers and wholesalers, interplant transfers by manufacturers were included in the measurement of nonconsumer use.

Nonconsumer use of mixed commodities was estimated in two parts. First, the percentages that manufacturers' interplant transfers and sales to industrial users constituted of manufacturers' total transfers and sales were calculated for industries representing the individual commodities most closely. In some instances the industry sales and transfer data were adjusted by commodity data to make their coverage more representative, and thus to prevent bias.

Secondly, the percentages of manufacturers' total interplant transfers and sales formed by their sales to wholesalers were multiplied by the percentages of wholesalers' sales (adjusted for duplication) made to industrial users, with the lines of trade given in the wholesale census having to be matched with the commodities involved.[4]

The two percentages were then added and applied to the detailed commodity totals. For mixed commodities allocated by sales distribution data, the unfinished portion thus represented sales by manufacturers to "industrial users" either directly or through the channels of wholesale trade. The allowance for nonconsumer use represented by wholesalers' sales to industrial users could have been estimated and deducted later, but was handled at the manufacturers' level to simplify the estimating procedure.

By using the sales distribution data, materials consumed data, and special commodity information, it was possible to achieve fairly reliable breakdowns for most of the mixed commodities. Nevertheless, by their very nature these breakdowns were approximations, and undoubtedly were subject to errors. As computed from the data shown in *Exhibit 3*, allocations from mixed commodities formed 44 percent of the estimated value of manufacturers' production of finished consumer commodities in 1939.

At this point the procedure of estimating consumer commodities had arrived at the manufacturers' value of finished production for odd years of the 1929–39 period. This was computed, with reference to *Exhibit 3*, by summing the values of consumer commodities (1) assigned directly as finished, (2) allocated from the combined total of finished output of consumer commodities and producer durables, and (3) allocated from the mixed commodity total.

The detailed commodity figures were next combined into groups (in general, those shown in table 30, Part V). Further steps in the commodity flow procedure related to commodity group totals, rather than to individual products within the groups. In these steps, the various sales, output, inventory, foreign trade, and mark-up data—whether for commodities, industries, lines of wholesale business, or types of retail store—were always first combined so as to correspond best with the commodity groups.

For the even years of the period, the estimates of manufacturers' output of finished consumer commodities were of necessity based on partial information, which was utilized for interpolation between the census-based estimates. Nevertheless, the intercensal figures are believed to be of a fairly high order of reliability.

With respect to the actual procedure, either manufacturers' production or manufacturers' sales were interpolated, depending on whether the best available interpolating data related to production or sales. In instances of the latter, the interpolation was carried out, of course, at the state of the estimating procedure indicated by line 4 of *Exhibit 3*—where manufacturers' sales had been derived by subtracting changes in inventories from manufacturers' production.

From a wide variety of sources were assembled as many different interpolating series for each commodity group as were available. These series, representing various product and industry data, were tested against one another by examination of coverage and of relative movement from one census year to the next. Reasonably good intercensal interpolations were obtained for every commodity group.

2. *Manufacturers' production of finished consumer commodities.*—Following the lengthy process of classifying the biennial census data and then making interpolations for other years, estimates of manufacturers' production of finished consumer commodities were available for all years of the period 1929–39. (The procedural exception noted above regarding interpolations of sales may be mentioned again.) The estimates represented manufacturers' output for export and consumer use.

3. and 4. *Subtraction of change in manufacturers' inventories to derive manufacturers' sales.*—Annual changes in the inventories of finished consumer commodities held by manufacturers were estimated and subtracted (algebraically) from the production figures to obtain manufacturers' sales of finished commodities. Much of the 1929 census data, however, already represented manufacturers' sales, and no adjustment was necessary.

Changes in manufacturers' inventories of consumer products for the years 1937, 1938, and 1939 were estimated from values of finished product inventories reported in the manufacturing censuses for 1937 and 1939. These censuses obtained beginning and ending inventories broken down into finished product inventories and all other inventories—materials, work in process, merchandise, etc. The ratios of finished product inventories to total products of establishments in each appropriate industry were applied to the individual commodity values to obtain beginning and year-end inventories of finished consumer commodities for 1937 and 1939. These were summed by commodity groups, and the resulting inventory totals were differenced to obtain the annual changes for 1937, 1938, and 1939.

For the years 1929–36 the inventory adjustments were based on inventory and sales data compiled by the Internal Revenue Service from corporate income tax returns, as given in *Statistics of Income—Part 2* and the underlying "Source Book," containing further industrial detail. Inventory changes were not actually calculated for this period. Rather, the procedure for translating the commodity output data to sales was to (1) compute sales-production ratios for the commodity groups for the year 1937; (2) extend them to earlier years by similar ratios computed from the corporate industry data; and (3) multiply the commodity group production values by the resulting ratios.

A limitation of the 1937–39 inventory-change estimates stems from the

4. Wholesaling in this analysis is defined to cover service and limited function wholesalers, manufacturers' sales branches and offices, assemblers, and, in 1929 and 1933, chain store warehouses (classified in retail trade by the 1935 and 1939 censuses). Agents and brokers, included in the census definition of wholesale trade, are generally excluded; their operations are covered by sales distribution and other data reported by their principals, manufacturers and wholesalers. Also to avoid duplication, the sales distributions were adjusted to eliminate sales to other wholesalers from the total sales and sales distributions of the trade making them. For most trades, wholesalers' reporting of sales distribution data to the census was substantial but not complete; in each such trade the data reported by each type of wholesaling (service and limited function wholesalers, manufacturers' sales branches, etc.) were blown up to total sales reported by that type and added to give the sales distribution of the trade.

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fact that the census finished-product data on inventories were too broad in scope for the purpose at hand, covering finished nonconsumer, as well as consumer, goods. The corporate data used for the 1929–36 period were much less satisfactory. They represented total corporate inventories (the unfinished part generally being large and relatively volatile), and were available in an industrial detail too limited to provide appropriate representation of many of the individual commodity groups.[5] Little confidence can be placed in the inventory adjustments for the earlier period. Fortunately, however, they do not, for the most part, form an appreciable element of the final consumer commodity values.

5. *Producers' sales of finished nonmanufactured commodities.*—Producers' sales of foods reaching consumers without undergoing manufacture were added at this stage. Since the initial basic data used represented sales, rather than production, no inventory adjustment was required.

Statistics on agricultural products, available annually, were secured from the Department of Agriculture. Because substantial amounts of fruits, vegetables and other farm products are used in the manufacturing process, the estimates of farmers' cash receipts from marketings had to be allocated between finished and unfinished. The allocations for the many individual products—believed, in general, to be fairly reliable—were derived largely from data of the Department of Agriculture.

Nonmanufactured foods also included the products of commercial fisheries. Estimates of the value of edible fish other than that canned, dried, or otherwise preserved (already covered under manufactured foods) were derived chiefly from compilations of the Fish and Wildlife Service.

6. *Producers' sales of finished commodities.*—With the addition of producers' sales of nonmanufactured foods to manufacturers' sales, there was obtained a complete measure of finished commodity sales (f. o. b. at producers' prices) for export and consumer use. In 1939, this measure accounted for 61 percent of the final market value of consumer commodity purchases estimated by the commodity flow method. Manufactured commodities represented 53 percent of that value, and nonmanufactured foods 8 percent.

7. *Addition of transportation charges to producers' sales.*—The transportation allowances added to producers' sales covered transportation from producer to the first buyer, whether retailer, wholesaler, or consumer, and to port of export. Costs of transporting consumer commodities beyond the first buyer were assumed to be included in wholesalers' and retailers' markups. While this treatment was substantially correct, it very probably resulted in some incompleteness of coverage of the transportation cost element.

The estimates of transportation charges were based almost wholly on data from the Interstate Commerce Commission. The procedure followed was to multiply producers' commodity sales by annual ratios of freight revenue per ton to value per ton at point of production for most nearly appropriate Interstate Commerce Commission commodity classifications. Ratios were calculated for 89 of the Interstate Commerce Commission's 157 commodity classifications found to be related to one or more of the consumer commodity classifications.

Freight revenue per ton of freight carried was computed for each year of the 1929–39 period from freight revenue and tonnage data published annually by the Interstate Commerce Commission. Values per ton at point of production were obtained from Interstate Commerce Commission publications for the years 1928, 1930, 1933, 1936, and 1939. Data on value per ton for other years were derived for the relevant Interstate Commerce Commission commodity classifications by interpolation on the basis of 1928–39 price indexes constructed principally from wholesale price series of the Bureau of Labor Statistics.

For lack of data on other forms of transportation, rail freight charges formed the sole basis of the specific transportation allowances in the commodity flow estimates except for a rough supplementation to cover trucking in the case of nonmanufactured foods. Truck transportation is important for many consumer commodities, and to the extent that truck rates differed from rail rates the procedure would lead to error in the estimated cost of moving the commodities from the producer to first buyer.

8. *Distribution of producers' sales, inclusive of transportation charges.*—The distribution of manufacturers' and other producers' sales among exports, wholesalers, retailers, and consumers is a vital step in the commodity flow method. Producers' exports are eliminated at this point since they are accounted for, by a different methodology, in the net foreign investment component of the gross national product. The three remaining channels are differentiated because varied markup treatments must be applied to the finished consumer commodities flowing through them.

No markups are applied to producers' sales direct to consumers, which become immediately a part of the consumption expenditure estimates. Wholesalers' markups are applied to commodities sold by producers to wholesalers and then either exported or sold directly to consumers. Cumulative wholesalers' and retailers' markups are required for consumer commodities sold by producers to wholesalers and then sold by them to retailers. Lastly, only retailers' markups must be added to sales made by producers directly to retailers.

The distribution of manufacturers' sales, inclusive of transportation charges, was estimated for 1929, 1935, and 1939 very largely from data provided in the census reports on *Distribution of Manufacturers' Sales.* With two qualifications noted below, appropriate percentage distributions were derived directly from the reported data for detailed industry groups and applied to the consumer commodity groups. For intercensal years, the derived census-year percentages, which did not change appreciably, were interpolated along a straight line. The distributions of other producers' sales—nonmanufactured foods—were based chiefly on estimates of farmers' sales distributions made by commodity specialists in the Department of Agriculture.

In two particular aspects, sales distributions as reported by the censuses required modification. First, since wholesalers' sales to industrial users had been eliminated in arriving at manufacturers' sales of finished consumer products, census data on manufacturers' sales to wholesalers were reduced by the proportions of wholesalers' sales to industrial users which had been employed in estimating the nonconsumer-use portion of mixed commodities.

Secondly, exports required special estimation since the census sales distributions showed manufacturers' exports separately only in 1939. The export estimates derived for 1939 by applying the industry sales distribution data to the commodity values were extrapolated to the years 1929–38 by selected commodity data on exports obtained from *Foreign Commerce and Navigation of the United States*, published by the Bureau of Foreign and Domestic Commerce.[6] The 1929 and 1935 sales distributions and the annual estimates of producers' commodity sales were then adjusted to eliminate exports, and the distribution estimates were made in terms of domestic sales to wholesalers, retailers, and consumers.

It would appear that the most significant limitations of the estimated distributions of producers' sales stemmed from the necessary application of industry and line-of-trade data to product data. Although every effort was made to achieve appropriate matchings of these data, the distributions for some commodities could have been appreciably in error.

9 and 10. *Addition of imports to producers' sales distributed to wholesalers to arrive at total purchases by wholesalers.*—Imports are a source of commodities sold to consumers and must be added to producers' domestic sales. In the commodity flow process imports are handled entirely as purchases by wholesalers. In the main, this accords with fact, as only a minor portion of consumer product imports is made by manufacturers, by retailers, or by consumers directly.

Imports were estimated for the various consumer commodity groups for the years 1929–39 from annual commodity data on "imports of merchandise for consumption" (with "calculated duty" added) published in *Foreign Commerce and Navigation of the United States* by the Bureau of Foreign and Domestic Commerce. Nonconsumer use was not allowed for explicitly—that is, by carrying out the sort of allocation process employed in classifying the domestic output of manufactured products. Instead, commodities shown in the import statistics were selected by inspection to correspond with the various consumer commodity groups, and reliance was placed on compensating errors of inclusion and omission.

The estimated value of consumer imports, amounting to less than 2 percent of the final value of consumption commodities in 1939, was somewhat understated. Because of the nature of the basic data, the estimates omitted ocean transportation charges from country of export to the United States. Also, they did not cover handling, transportation, and related charges between port of import and purchaser, although this factor is minimized by the fact that to a considerable extent importers are located in ports of import.

5. Failure to take account of the differential movement of inventories in the small noncorporate sector, for which data for the 1929–39 period are fragmentary, was probably only a very minor source of error.

6. The derivation of the export series is discussed in step 15, deduction of wholesalers' exports.

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11 and 12. *Subtraction of change in wholesalers' inventories to obtain cost of goods sold by wholesalers.*—The next stage in the commodity flow procedure calls for estimation of changes in wholesalers' inventories of finished consumption commodities. They are subtracted from wholesalers' purchases in order to derive the costs of commodities sold. To these costs can then be added wholesalers' markups to arrive at their sales of consumer commodities.

The general procedure for estimating changes in wholesalers' inventories of finished consumer commodities was to prepare inventory-cost of goods sold ratios and to apply those ratios to the annual estimates of wholesalers' purchases.[7] The procedure may be outlined as follows.

(1) Ratios of wholesalers' year-end inventories at cost to annual sales (adjusted for duplication) were computed for the years 1929, 1933, 1935, and 1939 from data contained in the Census of Wholesale Trade.

As the first element of these computations, total inventories reported by type of operation—service and limited function wholesalers, manufacturers' sales branches and offices, and, in 1929 and 1933, chain store warehouses—in each relevant line of trade were prorated among sales to other wholesalers, sales to industrial users, and other sales (exports and sales to retailers and consumers). The data did not permit of any other apportionment of reported inventories, but it is believed that the assumption of a uniform rate of inventories to sales within a single trade and type of operation was substantially correct.

Inventories held against sales to other wholesalers were next prorated between sales to industrial users and other sales. This was done by commodity groups, combining all trades and types of operation assigned to each group.

In combining trades and types of operation to obtain rates of inventories to sales for the consumer commodity groups, the weights used were the appropriate census sales totals—exports and sales to retailers and consumers, plus the prorated portion of sales to other wholesalers covering these categories.

(2) The ratios of inventories to sales for the census years 1929, 1933, 1935, and 1939 were converted to ratios of inventories to cost of goods sold by use of wholesalers' markup ratios (described below). With S=sales, M=markups, C=cost of goods sold, and I=inventories, then C+M=S and $\frac{I}{C}$ was computed as $\frac{I}{S}\left(1+\frac{M}{C}\right)$.

(3) The ratios of inventories to cost of goods sold so derived were multiplied by wholesalers' purchases to obtain year-end inventories of consumer commodities for census years.

(4) In the estimation of year-end inventories for intercensal years, one of two procedures was followed. For some commodity groups, the census-based inventory-cost of goods ratios were interpolated and multiplied by purchases. But the more general procedure followed, because of the nature of available data, was to interpolate the census-year inventory figures directly.

The information on wholesalers' inventories by line of trade available for interpolations was quite limited. The wholesale data used were sometimes not directly representative of the individual commodity groups, and in many instances it was necessary to resort to use of retail inventory data.

For the years 1929–34, department-store inventory data from the Controllers' Congress of the National Retail Dry Goods Association were most generally used for interpolation. For the 1935–39 period, the principal interpolating data were sample series on wholesalers' closing inventories compiled by Dun and Bradstreet and by the Bureau of the Census from its monthly Wholesale Survey. For commodity groups for which other information was lacking, use was made for all or part of the 1929–39 period of corporate wholesale trade data from *Statistics of Income*. These related, for all wholesale corporations combined, to the ratio of total inventories to cost of goods sold.

13 and 14. *Addition of wholesalers' markups to obtain wholesalers' sales of finished commodities.*—Wholesalers' markups form an appreciable element of the final market value of consumer commodity purchases, amounting to 8 percent in 1939.

In the estimation of wholesalers' markups, ratios of operating expenses to sales (adjusted for duplication) in 1929, 1933, 1935, and 1939 were derived for each commodity group from wholesale census data for appropriate lines of trade. Because of the lack of a relevant breakdown of the reported operating expense figures, the same sort of procedure was required as that applied to census inventory data in estimating changes in wholesalers' inventories of consumer commodities. In brief, total operating expenses for each relevant type of operation in each trade were first prorated among sales to other wholesalers, sales to industrial users, and other sales (exports and sales to retailers and consumers), after which the operating expenses prorated to sales to other wholesalers were divided by commodity groups between sales to industrial users and other sales. The weights used in combining selected lines of trade and types of operation into a single operating expense-sales ratio for each commodity group were the relevant sales totals, covering exports and sales to retailers and consumers and a prorated portion of sales to other wholesalers attributed to these categories as against industrial users.

Principal sources used to interpolate census-year expense ratios for intercensal years were the series of wholesale surveys made by Dun and Bradstreet and the 1941 report on *Distribution Costs, An International Digest* of the Graduate School of Business Administration, Harvard University. When appropriate wholesale data were lacking, the movement of the comparable group expense ratio for retail trade was used.

It was necessary to add profit ratios (ratios of profits to sales) to the operating expense ratios to obtain gross margin ratios. The available information on wholesale profits by line of trade was scanty. Some of the special wholesale surveys were helpful, but frequent use was made of gross margin-operating expense ratios developed for comparable retail trade groups. And for some commodities the selection of the profit ratios had to be largely arbitrary. Still, it should be noted, even large errors in the profit element of wholesalers' gross margins would have little effect on the consumer expenditure estimates.

The annual wholesale gross margin ratios were converted to markups by use of the equation $M=\frac{100G}{100-G}$, where M is the markup percentage of cost, and G is the gross margin percentage of sales.

15. *Subtraction of wholesalers' exports.*—The basic commodity data, representing production or sales for both exports and consumer use, were adjusted at the producer level for domestic nonconsumer use but not for exports. Exports were deducted in part from manufacturers' sales of finished commodities. Remaining at this stage of tracing the commodity flow was the elimination of wholesalers' exports from their sales.

Wholesalers' exports were derived by deducting previously estimated manufacturers' exports from an independent estimate of total exports. The totals were obtained by a process of commodity selection. The selection was made from the detailed commodity classification of exports (valued at port of exportation) given annually in *Foreign Commerce and Navigation of the United States*. Where the export classification combined products included in the commodity groups with other products not included, the omission or inclusion of the classification was based on rough appraisal of the relative errors involved.

The procedures for deriving wholesalers' and manufacturers' exports may lead to error on several scores. The error involved, however, is less than would obtain from treating total exports as either manufacturers' or wholesalers' exports. This is because of the difference in markup treatment accorded commodities eliminated from producers' sales and wholesalers' sales.

16. *Distribution of wholesalers' domestic sales.*—Wholesalers' domestic sales of finished consumption commodities are broken down into sales to retailers and sales to consumers. The latter, as final sales, are segregated, whereas sales to retailers are still subject to inventory and markup adjustments.

The Census of Wholesale Trade provided the basis for the sales breakdowns for 1933, 1935, and 1939. These censuses collected data on sales to retailers for resale and on sales to consumers. Only limited use could be made of the 1929 wholesale census, which obtained information on sales to consumers, but not to retailers, and in certain other respects was deficient for this purpose.

The sales distributions as reported in the 1933, 1935, and 1939 censuses generally were somewhat incomplete. They were raised to reported total sales by line of trade and type of operation (service and limited function wholesalers, manufacturers' sales branches and offices, and, in 1933, chain store warehouses). The resulting figures were summed for retailers and consumers, and the relationship of the two employed to break down the commodity estimates of wholesalers' domestic sales. The trades selected for

7. In deriving inventories, inventory-cost of goods ratios should be applied to costs of goods sold, not purchases. Application to the latter yields only first approximations of inventories, which could have been adjusted. This was not done because the quality of the data did not warrant the labor involved.

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application to each commodity group were, to the extent possible, the same as those utilized in deriving wholesale inventory and operating expense ratios. Changes in classification of lines of trade were ratio-adjusted so far as possible, but in some cases it was necessary to use 1935 retailer and consumer proportions for 1933.

For some commodity groups, analysis indicated the appropriateness of utilizing for 1929 the proportion of consumer sales to total sales less sales to "industrial consumers" computed from census data. But for most groups it was necessary to carry the 1933 or 1935 proportions back to 1929. In a few instances, where fluctuations in the consumer and retailer proportions appeared to be cyclical, 1939 proportions were used for 1929.

For intercensal years, percentage breakdowns of wholesale sales to retailers and consumers were obtained (except where 1933 or 1935 percentages were held constant back to 1929) by interpolating the census-based percentages along a straight line. The smallness of the changes between census years suggested that this procedure was not markedly in error.

17. *Total purchases by retailers.*—After the distribution of wholesalers' domestic sales is accomplished, total purchases by retailers are secured by summing wholesalers' sales to retailers and (from 8c) producers' sales to retailers.

18 and 19. *Subtraction of change in retailers' inventories to obtain cost of goods sold by retailers.*—Estimates of changes in retailers' inventories of finished consumer commodities were computed from inventory totals derived from a combination of two distinct procedures. (1) Tentative estimates were first prepared, for individual commodity groups, by a procedure paralleling that used in making the wholesale inventory adjustment. (2) Modifications of these estimates for certain years were made after comparing the relative movement of the commodity inventory totals with that of the series on year-end book values of inventories in retail trade derived in the process of calculating the inventory component of the gross national product. (See section on Change in business inventories.)

(1) Year-end inventories of consumer commodities for census years were derived by (*a*) computing ratios of retailers' year-end inventories at cost to annual sales for the appropriate type-of-store classifications, (*b*) converting these ratios to ratios of inventories to cost of goods sold by applying retailers' markup ratios (described below), and (*c*) multiplying the inventory-cost of goods ratios by the estimated retailers' purchases of the various commodities.

Inventory change estimates by commodity groups for other than census years were arrived at by differencing totals computed either by interpolating the census year inventory-cost of goods ratios and multiplying them by purchases, or by interpolating the census year inventory figures directly. In the former procedure, the most important source used was the Internal Revenue Service tabulations of inventories and cost of goods sold from retail corporations' income tax returns. The latter procedure of direct inventory interpolation utilized mainly the department store data published by the Controllers' Congress of the National Retail Dry Goods Association in *Departmental Merchandising and Operating Results of Department Stores and Specialty Stores*. The departmental breakdown of inventories given was detailed and adaptable to the commodity groups. This source could be used only for the 1929–34 period, as the inventory figures after 1934 were presented as stock turns, unsuited to estimation of year-end inventories. For the later years of the period, inventory series from a variety of sources, chiefly Dun and Bradstreet, were utilized.

(2) The relative movement of the total of commodity group inventories derived by the foregoing procedure was similar to that of the retail trade industry data in the 1929–33 period but diverged in the subsequent period. The industry data were used to interpolate between the census-based commodity totals for 1933, 1935, and 1939. The differences between the revised totals and those obtained in step (1) as the summation of commodity groups were prorated among the latter.

This over-all check and modification on the basis of the retail industry estimates was indicated by the weakness of the available data for interpolating census-based estimates for many of the commodity groups. This type of check had not been feasible in the case of the wholesale inventory adjustment because of the large role of unfinished commodities in the operations of the wholesale trade industry.

20 and 21. *Addition of retailers' markups to arrive at retailers' sales of finished commodities.*—Retailers' markups are a very sizable element of consumer commodity purchases estimated by the commodity flow method. In 1939 retail markups formed 28 percent of the final consumer value.

The estimates of retailers' markups in the consumer commodity series, like those of retailers' inventories, represented an integration of the results of two methods. (1) Estimates were first prepared for individual commodity groups, and (2) these were modified for the years 1930–38 on the basis of relevant retail trade industry data.

(1) The first step involved the estimation of retailers' markups in a manner similar to that employed for wholesalers' markups. Census-based ratios of operating expenses to sales were interpolated by noncensus source materials, raised on the basis of these materials to gross margin ratios by the addition of profit and loss allowances, and then converted to markup ratios.

Operating expenses as a percentage of sales for comparable types of stores most closely related to the various commodity groups were derived for 1929, 1933, 1935, and 1939 from the retail censuses. For 1939, the census reported only payrolls; allowances for other operating expenses were based on the 1935 relationship of total operating expenses to payrolls. Since only the 1933 census included a satisfactory allowance for the services of proprietors and firm members of unincorporated establishments, a similar adjustment to the expense data had to be made for the other census years. This was done on a basis comparable with that for 1933.

Data from numerous sources were used to obtain, by interpolation, operating expense-sales ratios for intercensal years. An important source providing commodity data was the annual reports on *Departmental Merchandising and Operating Results of Department Stores and Specialty Stores* published by the Controllers' Congress of the National Retail Dry Goods Association. Studies made by Dun and Bradstreet, the Federal Trade Commission, the Harvard University Graduate School of Business Administration, and various trade groups provided additional ratios for many types of stores. These various sources also provided the basic information on profit-sales relationships necessary to translate the operating expense ratios into gross margin ratios.

Several factors bearing on the validity of these estimates may be noted. First, it is likely that errors stemming from the use of type of store data to estimate retailers' markups for commodities have a tendency to be offsetting, or compensating, in the total—a type of assumption which is much less valid when data on manufacturing industry or wholesale line of trade are applied to commodity data. This is because the preponderant part of retail sales is made to consumers; that is, the nonconsumer element of sales is less in retail trade than in wholesale trade or manufacturing.

Running counter to this consideration, however, is the fact that for all years of the 1929–39 period the data for estimating the volatile profit-and-loss component of retailers' markups for individual commodity groups were partial and generally inadequate. Moreover, the available information for making the interpolations of operating expense-sales ratios between census years was far from comprehensive.

These several considerations were taken to indicate that the commodity totals of retailers' markups were probably not satisfactory in cyclical movement over the period.

(2) This movement was checked against, and modified by, a series which may be termed "adjusted income originating in retail trade." It was derived by two types of adjustment of the National Income Division's 1929–39 estimates of income originating in retail trade and automobile services. The first consisted of subtracting the inventory valuation adjustment and adding depreciation, gross rental payments, and indirect business taxes.

The resulting series, while more nearly representing retail gross margins, was too broad in scope for the purpose at hand. It included certain lines of trade not covered by the commodity flow estimates (such as motor vehicle dealers, service garages, and filling stations) and certain others in which the nonconsumer element was large (such as lumber dealers). Separate income data for these various lines of trade were not available. Accordingly a correction to reduce the scope of the adjusted income total was made by use of operating expense data in the following manner.

For the census years 1929, 1933, 1935, and 1939 total operating expenses for retail trade and automobile services were divided into operating expenses exclusive of the various lines of trade noted above. These ratios, with straight-line interpolations for intercensal years, were then multiplied by the adjusted income originating totals for retail trade and automobile services.

The income series obtained by this second adjustment was used to interpolate between the 1929 and 1939 estimates of retailers' markups obtained by summing the individual commodity groups. The relationship of 1939 to 1929 was similar in the two series, but the movement within the period

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differed appreciably, the income series showing a wider amplitude. The absolute differences between the revised estimates of total retailers' markups for the years 1930–38 and the original estimates obtained as the summation of individual commodity groups were prorated among them.

This adjustment, though rough, probably improved both the estimates of retailers' markups in the consumer commodity series and the statistical consistency between national income and gross national product. A similar adjustment was not made for wholesalers' markups because of the greater importance of unfinished products in the wholesale trade industry.

22. *Consumer commodity purchases exclusive of general retail sales taxes.*—The final market value of consumer commodity expenditures, except for the addition of general retail sales taxes, is arrived at by summing sales of finished commodities to consumers by producers (8d), wholesalers (16b), and retailers (21).

Exhibit 4.—*Derivation of Total Personal Consumption Expenditures Estimated by the Commodity Flow Method, 1947*

[Millions of dollars]

1. Distribution of finished and mixed manufactured commodities, before deduction of government purchases of producers' durable equipment	81,993
a. Finished	42,840
(1) Producers' durable equipment	10,076
(2) Consumer commodities	29,053
(3) Combined, allocated to	3,711
(a) Producers' durable equipment	734
(b) Consumer commodities	2,977
b. Mixed, allocated to	39,153
(1) Producers' durable equipment	3,657
(2) Consumer commodities	18,494
(3) Unfinished	17,002
2. Manufacturers' shipments (or production) of finished consumer commodities [1a(2)+1a(3b)+1b(2)]	50,524
3. Subtract: Changes in manufacturers' inventories	187
4. Equals: Manufacturers' sales of finished commodities	50,337
5 Producers' sales of finished nonmanufactured commodities	8,550
6. Producers' sales of finished commodities (4+5)	58,887
7. Add: Federal manufacturers' excise taxes	2,592
8. Add: Transportation charges	1,696
9. Add: Imports	975
10. Subtract: Changes in wholesalers' inventories	258
11. Add: Wholesalers' markups	6,699
12. Add: State excise taxes paid by manufacturers and wholesalers	424
13. Subtract: Exports	2,613
14. Equals: Sales to retailers and consumers	68,402
a. Producers' sales directly to consumers	3,346
b. Wholesalers' sales directly to consumers	1,325
c. Retailers' purchases (14—14a—14b)	63,731
15. Subtract from retailers' purchases: Changes in retailers' inventories	1,037
16. Equals: Cost of goods sold by retailers	62,694
17. Add: Retailers' markups	25,886
18. Equals: Retailers' sales of finished commodities	88,580
19. Consumers' purchases exclusive of retail taxes (14a+14b+18)	93,251
20. Add: Federal retail excise taxes	521
21. Add: General retail sales taxes	997
22. Equals: Personal consumption expenditures estimated by the commodity flow method	94,769

23 and 24. *Addition of general retail sales taxes to obtain personal consumption expenditures estimated by the commodity flow method.*—General retail sales taxes and part of the alcoholic beverage taxes levied by State and local governments were the main taxes not covered by the trade markups in the 1933–39 period. Fiscal year data for that period were obtained from the surveys of State and local government finances by the Bureau of the Census and shifted to a calendar year basis. Adjustments of the tax totals to make them conform in scope to the consumption expenditure estimates were made by using tax collection data, by type of store, reported for a small number of sample States. The adjusted tax totals then were prorated by the expenditure estimates among applicable commodity groups, with allowance for the exemption of food in certain jurisdictions.

After arrival at the final figures, inclusive of taxes, the individual commodity groups were classified as durable or nondurable, as shown in table 30 in Part V. Durable commodities were generally defined as those having an average life of three years or longer.

Commodity Flow Method, 1947

The commodity flow method used in making the benchmark estimates for 1947 followed the general approach outlined above for 1929–39. Basic values were those of the 1947 manufacturing census, classified and allocated product by product. These products, together with allowance for nonmanufactured foods, were combined into consumption commodity groups and then raised from producers' to consumer expenditure levels by adding estimated taxes, transportation costs, and trade markups with lesser adjustments for exports, imports and inventory changes. In the estimation of markups and inventory changes, the 1948 wholesale and retail censuses were utilized, together with retail margin data obtained from a sample of Federal income tax returns for 1948.

The central procedure which gives the commodity flow method its name, however, had to be modified because of the omission of sales distributions from the 1947 manufacturing census. In the procedure for the prewar series, as already described, manufacturers' sales to their various classes of customers together with similar distributions of wholesalers' sales had been the basis for tracing the flow of commodities through wholesale and retail channels, as well as for estimating direct factory sales to consumers.

For wholesaling, it was necessary to give up the commodity flow approach for 1947, since data for estimating wholesalers' purchases—the core of this approach—were not available. The substitute procedure was to estimate, by commodities, total wholesalers' markups and inventory changes and then to determine the amounts applicable to consumers. This alternative, which had been available at previous business censuses, may seem more direct, but in actual practice (described below) proved complex and probably less reliable.

For retailing, however, continuation of the commodity flow approach proved possible. In the earlier estimates, retailers' purchases had been derived by summing sales to retailers by manufacturers and sales to retailers out of wholesale commodity flows—both unavailable for 1947 in the absence of manufacturers' sales distributions. However, retailers' purchases of consumption commodities for that year could be obtained somewhat indirectly. The basic commodity flow procedure with modifications dictated by lack of manufacturers' sales distribution data yielded a composite total of sales to retailers and consumers; and from this were then deducted estimates of direct sales to consumers by (a) producers and (b) wholesalers. For the former item, which accounts for only a small part of all consumer purchases, it was necessary to follow the general practice of applying to 1947 manufacturers' shipments percentages based on the 1939 sales distributions. Wholesalers' direct sales to consumers were derived as part of the substitute procedure for wholesaling noted above.

Exhibit 4 summarizes the 1947 commodity flow estimates. Following the selection and allocation of basic product values, as well as minor adjustment for manufacturers' inventory changes, sales of finished consumer commodities by manufacturers and other producers appear as item 6. To these producers' sales were added manufacturers' and wholesalers' excise taxes (items 7 and 12), transportation charges (item 8), imports (item 9), and wholesalers' markups (item 11), while deductions were made for changes in wholesalers' inventories (item 10) and exports (item 13). Item 14 (derived from items 6 through 13) consists of total sales to retailers and consumers. From this total, direct sales to consumers by producers and wholesalers (items 14a and 14b) were deducted in order to derive retailers' purchases (item 14c). This served as the commodity flow base for estimating changes in retailers' inventories (item 15) and—after this inventory adjustment to obtain cost of goods sold by retailers (item 16)—for computing retailers' markups (item 17). The addition of retail taxes (items 20 and 21) to the total of items representing sales to consumers (14a, 14b, and 18) completed the derivation of total consumer expenditures by the commodity flow method (item 22).

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Except for those already discussed, procedural changes indicated by comparison of the 1939 and 1947 commodity flow exhibits were minor. Additional taxes had to be estimated because the 1947 census excluded excise taxes. Federal retail excise taxes, moreover, were adopted after 1939. State excise taxes paid by manufacturers and wholesalers are shown separately in the 1947 exhibit (item 12), but in the 1939 exhibit were included as a matter of convenience with wholesalers' markups (item 13). On the other hand, the need for estimating manufacturers' inventory changes was narrowed to a few industries, chiefly in food and clothing, by the fact that the 1947 census generally collected shipments (sales) data and not production data, as in the case of the 1939 census.

The effects of omitting manufacturers' sales distributions from the 1947 census were not limited to the procedural changes indicated by the exhibits. They extended also to the underlying product allocations summarized in item 1, *Exhibit 4.* In the earlier commodity flow work, data on sales to industrial users had been employed extensively in allocating individual commodities between consumer and nonconsumer uses. With such data not available, it was necessary in the 1947 estimates to have recourse largely to trade information and expert opinion concerning commodity uses. Use was also made, as in the earlier period, of materials consumption data collected in the census and of available commodity studies.

Following is a brief discussion of each of the steps in the 1947 commodity flow procedure, as shown in the exhibit. This discussion is presented in light of the preceding, lengthier description of the 1929-39 work, which contains considerable information about the basic commodity flow procedure that is not repeated here.

1. *Distribution of finished and mixed manufactured commodities.*—The problem was to convert the product data in the 1947 manufacturing census, supplemented by other sources, into the consumer product base for the commodity flow estimates. As in preparing earlier benchmarks, the first task was to classify the full census list of commodities into the basic categories of consumer, producers' durables, and unfinished—according to the definitions given in the description of the 1929–39 procedure. For this, the 1947 census provided data on about 6,000 separate products, compared with the 4,000 shown in the 1939 census. Such additional detail serves to break up otherwise mixed product items into products which can be assigned individually, thus reducing the problem of allocation. It also strengthens the classification process in respect to product items which may have appeared to belong entirely in one use category but are shown by the additional census detail to include products of another category or categories, which can then be properly classified.

Another aspect of the 1947 classification of commodities concerned the levels of consumer or nonconsumer use which were considered to require allocation. Unavoidably, there are practical limits to the minor allocations that can be made. Products subject to less important consumer use are omitted altogether, while those with lesser degrees of nonconsumer use are included fully. In the 1947 work, allocations were carried somewhat further than had been attempted in earlier benchmarks.

The absence of manufacturers' sales distributions for 1947 has already been noted as detrimental to the 1947 allocations. Except for a few foods, these allocations had to be made without explicit assistance from the 1947 census. The principal types of allocations employed in the 1947 estimates were as follows:

(1) Adjustment of shipment values to allow for quantities used in further manufacture—obtained from the 1947 manufacturing census for a few products and estimated for others. Allocations of this type were employed mainly in food, but were developed also for some other products. In the 1947 census, "net" shipment figures obtained for the important meat products group represented a very considerable improvement over previously available data, but the only other manufacturing use data reported were for sugar, the bulk of wheat flour, and a few other food products in part.

(2) Deduction of purchases made by governments, institutions, physicians, and others for nonconsumer use. These purchases in some cases were based on reported information; in other cases, they were estimated from sample surveys and other data. Important applications were in allowing for government purchases of food and clothing, for institutional purchases of food, and for the nonconsumer use of pharmaceutical preparations and related products. The allowance for business-use purchases of meals and beverages was necessarily somewhat arbitrary.

(3) Use of sales distribution data as the principal basis for the allocation of textile piece goods to consumers. The largest element in this allocation was wholesalers' sales of piece goods to retailers and consumers, treated as the consumer share of these products. Such sales were estimated in connection with wholesalers' markups (see the description of item 11), by use of wholesalers' sales distributions from the 1948 census. Also included in this allocation were manufacturers' sales of piece goods to retailers—approximated by applying manufacturers' distributed sales proportions for 1939 to their 1947 fabric shipments.

(4) Allocations in accordance with (a) expert opinion or (b) personal judgment as to proportions of various uses. These types of allocations predominated outside of foods, clothing, and piece goods. In the "expert opinion" category, use patterns were often suggested by industry or commodity specialists, obtained by them from trade papers, industrial studies, and personal associations in the industries involved. Where such information was not available, but allocation nevertheless required, recourse to judgment was necessary. This drew heavily on the 1939 percentage allocations, which tended to be carried over to 1947 barring knowledge of changed conditions or other considerations dictating different treatment.

Throughout the procedure of classifying manufacturers' shipments data into the various use categories, the assignments and allocations made were checked against those prepared by the Division of Interindustry Economics of the Bureau of Labor Statistics in a task of generally similar nature. The work of the BLS staff was of material assistance in this phase of the commodity flow work.

2. *Manufacturers' shipments (or production) of finished consumer commodities.*—This is a simple summation of finished consumer products derived in step 1 through specific assignment, allocation of commodities combining consumption and durable equipment uses, and allocation of mixed commodities. The equivalent producers' durable equipment items become the basis for coordinate estimates of expenditures for producers' durable equipment described under that heading.

3 and 4. *Subtraction of changes in manufacturers' inventories to derive manufacturers' sales of finished consumer commodities.*—This item of estimated changes in manufacturers' inventories is much the smallest in *Exhibit 4.* The 1947 census called generally for shipments (and interplant transfers) instead of production as in previous censuses. In the few industries for which production data instead of shipments were obtained, it was necessary to make inventory adjustments in order to derive product shipments. The changes in inventories of finished products reported by these industries in the census were used to estimate the adjustments.

5 and 6. *Addition of producers' sales of finished nonmanufactured commodities to obtain total producers' sales of finished commodities.*—Nonmanufactured products entering the commodity flow estimates consist entirely of nonmanufactured foods. As in the 1929–1939 estimates, data sources for nonmanufactured foods in 1947 were the Department of Agriculture and the Fish and Wildlife Service. Required allocations between fresh or unprocessed consumption and use in manufactured foods were more largely available from published data of the Department of Agriculture than for the 1939 and earlier estimates. Combining nonmanufactured foods (item 5) with manufactured products (item 4) completed the estimates of consumer products at producers' prices shown in item 6.

7. *Addition of Federal manufacturers' excise taxes.*—These tax estimates were introduced in the commodity flow procedure because the 1947 census generally excluded excise taxes from shipment values. Internal Revenue collections data were appropriately lagged to shift them to an accruals basis. Where these adjusted excise taxes could not be assigned directly to a consumption commodity group, the general procedure was to use manufacturers' shipments of the taxed products as the principal basis for any necessary allocation between consumer and nonconsumer categories and apportionment among commodity groups.

8. *Addition of transportation charges.*—Transportation charges were estimated for 1947, as in 1939 and earlier estimates, by multiplying producers' commodity sales by ratios of freight revenue per ton to value per ton at point of production for most nearly appropriate Interstate Commerce Commission commodity classifications. Changes in ICC classifications in 1947, however, limited the applicability of the Commission's study for 1946—there was none for 1947—of values per ton of products shipped. For many commodity groups, it became necessary to estimate values per ton on a basis comparable with the new ICC commodity classification for freight revenue per ton.

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The value-per-ton estimates were based, so far as possible, on quantities and values in the 1947 manufactures census. Export statistics and other shipping weight sources also were used. Due to data limitations, it generally was not possible to develop values per ton for all products in a group. In such cases, producers' sales of products for which values per ton could be obtained were converted into tonnages, and the latter multiplied by freight revenue rates for appropriate ICC commodity classifications. The ratio of freight revenue to producers' sales from the summation of these individual product items was applied to producers' sales for the entire commodity group to derive the transportation charges.

9. *Addition of imports.*—Imports for 1947—accounting for only about one percent of the final value of consumption commodities—were handled in virtually the same fashion as in the 1939 and earlier estimates. Consumer products were selected from the full listing of commodity imports tabulated by the Bureau of the Census. Consumer allocation of individual imports was undertaken in only a few cases. "Calculated duty" figures, which were not available for 1947 for the full product detail, were prorated among finer categories of consumer imports. The area coverage of the import data included offshore territories as well as the continental United States, but adjustments to approximate the latter basis were made for the more important foods involved.

10. *Subtraction of changes in wholesalers' inventories.*—In the estimation of wholesalers' inventory change for each commodity group, the first step was to compute the ratio of inventory change to sales for a single wholesale trade selected as appropriate or representative. The selection was from among trades included in the published merchant wholesaling estimates of the Office of Business Economics—representing combinations of more detailed trades in the wholesale census, on which the estimates are benchmarked. Ratios of inventory change to sales of merchant wholesalers in 1947 from the OBE series were modified to cover manufacturers' sales branches and farm assemblers, for which 1947 estimates were not available, on the basis of differences in ratios of beginning inventories (partly estimated) to sales in the 1948 census. These adjusted ratios of inventory change to sales then were converted into ratios of inventory change to wholesalers' markups. For this conversion, the markups by line of wholesale trade used were consistent with the wholesalers' markups by consumption commodity groups (described immediately below), to which the derived inventory change ratios were applied to obtain commodity group estimates of wholesalers' inventory changes.

11. *Addition of wholesalers' markups.*—Estimating wholesalers' markups was the area of most innovation in the 1947 benchmark procedure. As noted earlier, the lack of manufacturers' sales distributions for 1947 required a new approach to wholesalers' markups.

The principal problem in estimating such markups is to derive the volume of consumer commodities handled by wholesalers, because wholesalers' markup rates cannot be applied to consumer commodity totals, but only to the flow through wholesalers. Manufacturers' sales to wholesalers, estimated for individual consumption commodities from manufacturers' sales distributions and combined into groups, had provided the solution in 1939 and earlier estimates. With the addition of imports and after inventory adjustments, they had furnished the base to which wholesalers' markup rates were properly applied. The 1939 sales distribution patterns conceivably might have been utilized again for 1947—in fact, were utilized in a limited way—but the degree of error that would have been involved was considered definitely greater than in the alternative adopted.

The key to this alternative 1947 procedure was allocation. Following the derivation of wholesalers' sales and gross margins, the latter were broken down by commodities. These commodity margins were then further broken down between consumer and nonconsumer uses. In these breakdowns, or allocations, of wholesale margins, it was practical to utilize the detailed estimates of wholesaling in 1947 by the Interindustry Economics Division of the Bureau of Labor Statistics. The preparation of these BLS estimates will be described below in five steps.

(1) Wholesalers' sales reported in the 1948 census were extended to 1947 by reference principally to the OBE published estimates of merchant wholesaling. Although the extrapolating series were generally quite broad, the extrapolation was carried out in full census detail with respect to lines of trade (such as groceries, confectionery, and meats) and also types of operation (merchant wholesalers, manufacturers' sales branches, etc.). This was necessary for utilization of other census data available in similar detail.

(2) Gross margins were estimated for merchant wholesalers, manufacturers' sales branches, and farm assemblers in each line of trade. Operating expense ratios from the 1948 census were applied to the 1947 sales estimates, and profits were added for merchant wholesalers and farm assemblers, by use of profit ratios (ratios of profits to sales) based on "Statistics of Income" data of the Internal Revenue Service and other available sources on wholesalers' profits.

Neither gross margins for manufacturers' sales offices nor profits for manufacturers' sales branches were allowed for, because these were believed to have been covered by product values reported to the manufacturing census. Commissions of selected types of agents and brokers, obtained by applying commission rates from the 1948 census to the 1947 sales estimates, were included in the gross margin calculations, while commissions of other types were excluded on the grounds that they already had been covered in the expenses of manufacturers or other wholesalers.

(3) Wholesalers' sales and gross margin ratios were adjusted for duplication—to eliminate sales to other wholesalers. Percentage distributions of wholesalers' sales by classes of customers in the 1948 census were used for this purpose. In general, the nature of the adjustment was to reduce sales to a net basis excluding sales to other wholesalers, while margins remained unchanged although at a higher rate to the reduced net sales.

The implicit assumption of such an adjustment was that the sales in question were made to other wholesalers in the same line of trade and type of operation. It was possible to improve upon this, however, in the case of manufacturers' sales branches. Their sales to other wholesalers were assumed to have been made to merchant wholesalers in the same line of trade, and a proportionate share of their margins (actually, only operating expenses) was transferred to margins of the latter.

(4) The estimates of wholesale sales and margins for lines of trade were next transformed to a commodity basis. For sales, this was accomplished by applying commodity percentages for each line of trade and type of operation from the 1948 census to the estimated 1947 sales. Commodity margins were derived by applying to the sales of individual commodities margin rates for the lines of trade handling the major part of the commodity (separately by types of operation). A single rate was selected if possible, but generally the rates in two or more of the principal lines of trade handling the commodity were averaged, using their sales of the commodity as weights. As a check on the detailed estimates, the resulting margin rates on commodities were compared with the margin rates of lines of trade in broad groups, and found to be in close agreement.

(5) As the final step preparatory to allocating wholesalers' margins, the commodity sales and margin estimates were broken down by customer classes [exports, industrial users, retailers, and household consumers; other wholesalers had been eliminated in (3) and were no problem here] by use of wholesalers' sales distributions from the 1948 census. Within each type of operation, customer class percentages of lines of trade handling the major part of each commodity were weighted by their sales of the commodity, and the resulting pattern applied to total sales of the commodity. (Minor adjustments were required to bring export sales thus derived from 1948 percentages into conformity with actual 1947 exports.) Commodity margins were distributed within types of operation in proportion to these customer class sales of each commodity.

As noted, these estimates of the Bureau of Labor Statistics were the basis for deriving wholesalers' markups for the consumption commodity groups. In general, the margins on sales to retailers and "household consumers" of selected commodities—as obtained from step 5—were classified as consumption expenditures. In a few instances, where the customer class distributions seemed inappropriate, other procedures were necessary. These included use of the same pattern of allocations already made of manufacturers' shipments of the products involved and development of markup estimates of the commodity flow type on the basis of 1939 manufacturers' sales distributions.

After this basic procedure of consumer allocation, it is to be noted, wholesalers' markups were still in terms of the wholesale commodity classification used in the 1948 census. Where this did not match the consumer commodity classification of products, wholesalers' markups needed to be apportioned among consumer commodity groups. This was based on producers' sales values of the individual products included in the wholesale commodity classes under apportionment.

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12. *Addition of State excise taxes paid by manufacturers and wholesalers.*—As distinguished from general retail sales taxes (item 20), also largely imposed by the States, these are taxes on specified commodities payable by manufacturers or wholesalers, or upon purchase by retailers, and hence properly included in costs of commodities to retailers. Data on State tax collections were obtained from the Census Bureau's *Compendium of State Government Finances* and adjusted to the 1947 calendar year by prorating 1947 and 1948 fiscal year collections according to the number of fiscal year months in calendar 1947.

13. *Subtraction of exports.*—Consumer items were selected from the detailed Census Bureau listing of domestic merchandise exports and were allocated between consumer and nonconsumer use in the same proportions as producers' sales of the products. Such allocation of exports—a minor departure from 1929–39 procedure, where exports were based only on a process of product selection—was made necessary by the fact that domestic use patterns had been applied to producers' total sales which covered exports as well as domestic sales. As in the case of imports, the area covered included offshore territories, but adjustments were made approximating a continental United States basis for the principal foods involved.

14. *Sales to retailers and consumers.*—Following the various adjustments (items 7–13) of producers' sales (item 6), there were available at this stage of the commodity flow work estimates of producers' and wholesalers' sales of finished consumer commodities to retailers and consumers. In *Exhibit 4*, the overall total (item 14) is shown broken down into three parts: producers' sales directly to consumers (item 14a), wholesalers' sales directly to consumers (item 14b), and retailers' purchases (item 14c), derived as a residual. The first two are final expenditures except for the later addition of retail taxes (in items 20 and 21), but retailers' purchases require further adjustment for retailers' inventory changes (item 15) and retailers' markups (item17).

14a and 14b. *Producers' and wholesalers' sales directly to consumers.*—For most consumer commodity groups, manufacturers' direct sales to consumers were estimated by applying the same commodity group proportions as had been used for 1939 (based on 1939 census product data and manufacturers' sales distributions). For some groups (manufactured food, clothing, and a few others) for which suitable group proportions were not available from the 1939 estimates, direct sales estimates were prepared by applying detailed manufacturers' sales distribution patterns for 1939 to 1947 data on products in the commodity group. Manufacturers' direct sales of books and producers' direct sales of nonmanufactured foods, however, were approximated entirely from 1947 data. The manufacturers' and other producers' direct sales estimates, it may be added, include proportionate amounts of Federal manufacturers' excise taxes and transportation charges.

Wholesalers' sales directly to consumers represented largely selected commodity sales by wholesalers to household consumers from the wholesale estimates already described in reference to wholesalers' markups (step 5 of item 11). In the few instances in which this procedure did not yield the allocation required for measuring personal consumption, resort was had to the allocation patterns previously established for producers' sales. Where wholesale commodity classes did not match consumer commodity groups, moreover, direct sales in these classes were apportioned on the basis of producers' sales of individual products included in them.

14c. *Retailers' purchases.*—As previously indicated, retailers' purchases were obtained as a residual, representing purchases from producers and wholesalers and also presumably some direct purchases of imports. They were the base for calculation of retailers' inventory changes, and after inventory adjustment became the cost of merchandise sold to which retailers' markup rates were applied.

15 and 16. *Subtraction of changes in retailers' inventories to obtain cost of goods sold by retailers.*—Ratios of inventory change to sales in 1947 were obtained for lines of retail trade from regularly published retail estimates of the Office of Business Economics. To derive ratios for consumer commodity groups, the inventory change ratios of the principal lines of trade handling commodities in each group were averaged, using as weights the sales of these commodities by lines of trade as shown in the 1948 census. (This procedure was in contrast with the reliance in the 1929–39 estimates upon the inventory experience of single lines of retail trade selected for each group.)

The inventory change ratios for commodity groups thus derived for 1947 were not directly usable because they related to sales rather than purchases. However, they were readily transformed into inventory change ratios to the cost of goods sold, using for this purpose the retailers' markup rate for each group described under item 17. Finally, the base of reference was shifted from the cost of goods sold to purchases, the resulting inventory change ratios being directly applicable to retailers' purchases (item 14c). Computed inventory changes were subtracted, yielding the cost of merchandise (finished consumer commodities) sold by retailers.

17. *Addition of retailers' markups.*—The estimation of retailers' markups by applying markup rates, largely from selected lines of retail trade, to the cost of goods sold in each commodity group followed earlier procedure in the main. However, retail operating-expense information was not collected in the 1948 census, and the computation of markups was based instead largely on data from a sample of Federal tax returns for 1948 tabulated by the Bureau of the Census and the Internal Revenue Service. The following five numbered paragraphs describe briefly the construction of retail markup rates from these sample data, obtained for 20 selected lines of retail trade.

(1) The markup was defined in the first instance as the difference between total receipts and cost of goods sold as measured by merchandise bought for sale less inventory change. The cost of goods sold reported as such on the returns was not used because it might include wages, materials, and similar costs which generally belonged in the commodity flow retail markup. If these other costs in the reported cost of goods sold were large enough to suggest the presence of manufacturing activity which might have been included in the manufacturing census, however, the individual firm was removed from the sample. This factor was important only for the apparel store sample (used for the clothing markup).

(2) The sample was stratified into four classes: single unit firms in three annual sales classes, divided at $100,000 and $1,000,000, and multiunit firms with four or more units. To obtain the average margin rate for each line of trade, margin rates for these various classes were weighted by 1948 census sales data. (The sales of two and three unit firms, which had been omitted from the sample, were included in the sales weights for single unit firms.) The legal form pattern—a random element in the sample—was found in the weighted sample sales figures to approximate closely that shown in the 1948 census.

(3) The margin rates thus obtained for individual lines of trade then were adjusted to eliminate services. Service receipt percentages shown by the 1948 census were used in this adjustment, the effect of which was to deduct service receipts in equal amount from both sales and margins, and reduce the margin rate accordingly. The assumption underlying this adjustment was that service costs had been included entirely or largely in margins as based on the original sample data.

(4) A further adjustment in these margin rates was made for sales to other retailers. Such sales introduce a duplication in sales but not in margins, and thus depress margin rates for present purposes. To correct for this, sales were reduced to a net basis by 1948 census percentages of sales to other retailers, and margin rates advanced accordingly. Such adjustment necessarily assumed the other retailers to have been in the same line of trade, possibly entailing some errors which, however, should tend to offset in the aggregate.

(5) Finally, since the sample data were for 1948, it was necessary to extrapolate the results for individual trades back to 1947. This was done on the basis of margin rates computed from regularly published corporate returns to the Internal Revenue Service, departmental margin rates of the Controllers' Congress of the National Retail Dry Goods Association, and margin data of various other trade associations.

In addition to the sample data, the sources just noted also were employed in the estimation of retail markup rates for some commodity groups. In the case of the Internal Revenue statistics, however, proprietorship markup data were not tabulated for 1947 and had to be projected from 1945 by the movement of corporate or partnership rates. The markup rates thus computed for 1947 for certain lines of retail trade were weighted by 1948 census sales of these legal forms of organization, and the same adjustments described in (3) and (4) immediately above were then applied. In the case of the departmental data of department and specialty stores published by the Controllers' Congress, "workroom net costs" were added to the indicated gross margin rates before conversion to a markup basis.

For each commodity group, when appropriate, the markup rate of a single line of retail trade or department (in the department store data) was selected.

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In other instances, rates were combined by use of producers' sales of individual products in the group as weights. To obtain retailers' markups for the various commodity groups, the estimated markup rates were applied to retailers' cost of finished consumer commodities sold (item 15).

18 and 19. *Derivation of retailers' sales and consumers' purchases exclusive of retail taxes.*—The addition of retailers' cost of goods sold and markups constituted retailers' commodity sales to consumers (item 18). To these were added sales made directly to consumers by producers and wholesalers (items 14a and 14b) to derive total consumer purchases before retail taxes (item 19).

20–22. *Addition of Federal retail excise taxes and general retail sales taxes to obtain total personal consumption expenditures estimated by the commodity flow method.*—Retailers' excise and general sales taxes were the last adjustments necessary. Federal retail excise taxes, which were treated as entirely chargeable to consumers, were based on Internal Revenue collections lagged two months. The necessary apportionment among commodity groups was made on the basis of manufacturers' shipments of the taxable commodities. State and local general sales, use, and gross receipts taxes required somewhat more extended treatment, in conformity with earlier procedure. Collections of these taxes by States, California cities, and other cities with populations of 25,000 and over were obtained from annual reports of the Bureau of the Census entitled *Compendium of State Government Finances* and *City Finances*, and from *City Sales Taxes in California* and *More City Sales Taxes* issued by the California State Board of Equalization. Processing of the data included conversion of fiscal year collections to the 1947 calendar year in accordance with the fiscal year months included; elimination of estimated taxes on services, nonconsumer commodities, and consumption commodities not in the commodity flow estimates; and apportionment of the remaining taxes among consumer commodity groups pro rata, but with approximate allowances for certain commodity exemptions in some tax jurisdictions. Addition of these retail taxes completed the 1947 estimates of personal consumption expenditures by the commodity flow method, totaled in item 22.

Extension of Commodity Flow Benchmarks

As indicated in the introductory remarks to this section of the notes, the commodity group estimates established for 1939 and 1947 have been interpolated and projected into the current period primarily on the basis of relative movements in retail sales. Retailers' excise taxes and applicable general retail sales taxes have been estimated separately and added, except in cases where the retail extrapolators covered such taxes (mainly the Census Bureau retail sales series beginning in 1951).

The principal retail sales series that have been used in the consumer commodity interpolations and extrapolations are (1) retail sales, by type of store, prepared through 1951 by the Office of Business Economics and since 1951 by the Bureau of the Census, and (2) department store sales, by type of department, compiled by the Board of Governors of the Federal Reserve System. In addition, some specific use has been made of unpublished compilations of State sales tax data, sales data from trade associations and other private organizations, quantity and price data, and Federal retail excise tax collections.

(1) The Office of Business Economics retail sales estimates represented interpolations and extrapolations of sales totals by type-of-store groupings given in the 1939 and 1948 Census of Retail Trade. The annual interpolations and extrapolations of these benchmarks were based primarily on sales tax collection data from a group of 10–20 States, accounting for about one-fourth to one-half of all retail sales, depending on the period and kind of business. Other data used included the Federal Reserve Board department store sales estimates; Internal Revenue Service income-tax tabulations showing sales of corporate and noncorporate retail businesses by kind of business; and tabulations of reports from the Bureau of the Census constant sample of independent retail stores corrected by the Office of Business Economics for changes in the retail store population.

The Bureau of the Census monthly retail sales estimates, starting with January 1951, are based on sales data for all large organizations and a sample of other stores in sample areas. Since May 1953, the large organizations covered have included all those operating 11 or more retail stores in 1948 and all department stores with 1948 sales volume in excess of $5 million, while the sample areas have numbered 230. Small stores in these areas are sampled in a way providing for inclusion of new stores.

(2) The department store sales data, by major departments, of the Federal Reserve Board are based on departmental data reported by about 365 independent department stores located in various cities throughout the country and accounting for about 50 percent of the estimated sales of all department stores, including the national chains. Not all stores report data for all of the departments asked; consequently, the sample for individual departments is not so comprehensive as that for the major departmental groups.

Under the method of interpolating and extrapolating consumer expenditures for 1939 and 1947, estimates for a particular commodity group often have been moved by sales of one or more relevant types of stores (on the assumption that sales of store groups tend to reflect the movement of sales of commodities). However, when a commodity group is not handled almost exclusively by specialized stores, or when data for these stores were not available separately, the movement of total sales of the commodity has been estimated from the experience of departments handling that line in department stores or by use of combined relevant data for specialized stores and department stores. Weights for combining these series usually were derived from the commodity distributions of sales by kinds of business in the 1939 and 1948 Census of Retail Trade. Since departmental sales by type of department more nearly represent commodity sales, they appear to provide a more appropriate index than those specialized stores whose sales cover more than one commodity group. Consequently, the department store data have been given more than their proportionate weight in certain instances.

A significant shortcoming of retail trade data in these applications is that, with the exception of department store sales, they cannot be broken down by commodity groups. The type-of-store classification found in the basic data assigns a store to a single classification on the basis of the commodity accounting for the principal part of its business. But food stores, for instance, sell goods other than food, and food is sold also in other kinds of stores, including drug and department stores. With diverse movements in the sales of various commodities, use of sales data classified by type of store to move commodity groups will give rise to errors. This is borne out by the differences, shown earlier, between the extrapolated 1947 estimates and the 1947 benchmarks for the various commodity groups. The presumption, however, that these errors tend to offset in the total is also borne out, since adjustment to the 1947 commodity flow aggregate amounted to only 3 percent for an extrapolation covering a period of eight years.

Another limitation of retail sales data for the extrapolation of consumer commodities arises from the fact that consumers buy from producers and wholesalers as well as from retailers. In the general absence of data for estimating purchases from producers and wholesalers separately, they have been assumed to vary with retail sales. Errors stemming from this assumption, however, would necessarily tend to be minor because of the relatively small volume of non-retail purchases—about 5 percent—involved in consumer expenditures.

In the interpolation and extrapolation of the commodity flow benchmarks by retail sales, it has been necessary, but difficult, to make some allowance for the changing proportion of business purchases at retail. This has been restricted largely to the war period. Downward adjustments were made in that period for some commodities to allow for the apparent increase in the relative magnitude of business purchases. There was very little quantitative information on which to base the adjustments.

Retail Valuation Method

The main alternative to the commodity flow procedure (with retail sales interpolation and extrapolation) is to multiply by an appropriate average retail price the estimated quantities of consumer commodities purchased. This approach—the retail valuation method—was used for passenger cars and gasoline and oil from 1929 to the present; "other" fuel and ice (except fuel produced and consumed on farms) for 1929–39 and 1947, with estimates for other years based on the movement of retail sales data; and for tobacco products beginning with 1940. In both 1939 and 1947, the groups for which the retail valuation method was employed comprised about one-eighth of total commodity expenditures.

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Passenger cars

Preparation of the consumer expenditure series on "new cars and net purchases of used cars" was carried out in four steps: (1) multiplication of data on number of new cars by an average retail price; (2) addition of gross margins on used car sales ("net purchases of used cars"); (3) allocation of the totals of new passenger cars (after a deduction for government purchases) and of gross margins between personal consumption expenditures and producers' purchases of durable equipment; and (4) addition of housing-type trailer coaches.

(1) The Automobile Manufacturers Association reported for the years 1929–41 the number of passenger cars sold at retail and an average retail price at the factory. The latter was raised to cover estimated transportation costs and also incidental charges by retail dealers. State and local retail sales taxes were not included in the price, but were added separately.

With the discontinuance by the Automobile Manufacturers Association of this retail sales series, the number of new passenger automobiles was estimated for the years 1942–45 from Office of Price Administration rationing statistics. Average prices for this period were obtained by extrapolation of the 1941 price by use of data based on O. P. A. price regulations.

For the years 1946–50, the number series was new passenger car registrations compiled by the R. L. Polk Co., with a small upward adjustment for the estimated difference between registrations and dealers' sales. Beginning with 1951, the number series on new passenger cars has consisted of dealers' sales as reported to the Commerce Department's Business and Defense Services Administration. For the period since 1946, the average retail price of new cars has been based on the Bureau of Labor Statistics composite price for Chevrolet, Ford, and Plymouth, adjusted upward to cover other makes of cars and factory installed extras.

(2) In the 1929–39 period the estimates of gross margins on used car sales covered only used car dealers. Used car margins of new car dealers were assumed to be covered by the average price series used in estimating purchases of new cars. The price series, being an average of list prices, was believed to have exceeded actual prices largely because it did not reflect excessive allowances for trade-ins. Used car margins of new car dealers were introduced in successively larger proportions in 1940 and 1941, and were included entirely, along with the margins of used car dealers, from 1942, when the full retail list price for new cars was assumed to have been realized, through 1951. Beginning in 1952, a procedure of adjusting used car margins, when necessary, for excessive trade-in allowances was adopted.

Data for estimating gross margins on used car sales have been, for the most part, inadequate. For the 1929–39 period, gross margins of used car dealers were based on retail census data on operating expenses and proprietors' compensation, with rough interpolations for intercensal years. The estimates for 1940–41 were obtained by extrapolating used car sales from the 1939 retail census on the basis of sales finance company data and multiplying sales by gross margin ratios which had been adjusted upward moderately from the 1939 gross margin ratio. Sales and gross margin ratios also have been used for years since 1946. Used car sales from the 1948 retail census have been extrapolated over this period by used car purchase estimates of the Federal Reserve Board's *Survey of Consumer Finances*. Gross margin ratios have been developed from corporate tax returns of automobile and truck dealers (1951 being the latest year for which this information is presently available from the Internal Revenue Service), partnership returns of automotive dealers for 1947, the Census Bureau—Internal Revenue Service sample of tax return data of used car dealers for 1948 (described above under commodity flow 1947 retail markups), and data of the National Automobile Dealers Association for the period beginning with 1950. The used car margin estimates for 1942–45 were interpolations on the basis of registrations of new cars and other cars weighted to provide a rough index of used car sales.

(3) The totals of new passenger cars (after a small deduction for Federal, State, and local government purchases) and gross margins on used cars were allocated 70 percent to personal consumption expenditures and 30 percent to producers' durable equipment except during the war period from January 1942 through May 1945. These proportions were derived mainly from surveys made by the Bureau of Public Roads in 1934–37 to determine road use in terms of mileage. The 70–30 allocation was also applied during the war period to gross margins on used cars, since the distribution of used cars was not controlled by rationing. For the new passenger car series, however, after consultation with specialists in the Office of Price Administration, the consumer allocation was reduced to 50 percent during the January 1942–May 1945 period, except that for April and May of 1945 all new cars were counted as producers' durables.

The allocation of the passenger car estimates must be regarded as an uncertain element. Errors in the allocation would affect both consumption expenditures and producers' durables, but not the gross national product total.

(4) The 1947 benchmark for housing trailers, which was a commodity flow estimate, was extrapolated back to 1945 (when postwar trailer production began) and forward from 1947 by a series based on data from the Trailer Coach Manufacturers Association, and representing trailer coach production valued at prices derived from the distribution of manufacturers' shipments by price class. Housing-type trailers were omitted from the earlier estimates because of their relative unimportance.

Gasoline and oil

For the period 1929–39, estimates of purchases of gasoline and oil—prior to consumer allocation—represent the sum of separate series for gasoline and oil, each obtained by multiplying quantities by an average price.

The quantities of gasoline and lubricating oil used in passenger cars were estimates published by the Bureau of Mines in its *Minerals Yearbook*. The gasoline price was the 50-city service station average compiled by the American Petroleum Institute and published in *American Petroleum News*. The 50-city price excluding taxes was used, and these were estimated separately and added. Lubricating oil was valued at the Department of Agriculture average of prices paid by farmers for medium grade motor oil.

For years subsequent to 1939, the procedure of estimating purchases of gasoline and oil has been changed somewhat. With the discontinuance of the Bureau of Mines quantity series, the quantity of gasoline used in passenger cars has been based since 1940 on estimates by the Bureau of Public Roads. The American Petroleum Institute average gasoline price inclusive of taxes has been used. Finally, with the quantity series for lubricating oil no longer available, a roughly equivalent quantity estimate was worked out for 1947, carried back to link with 1939 and forward to 1953 by the movement of the gasoline quantity series, and valued in terms of the Department of Agriculture average price series noted above.

The figures so derived for expenditures on gasoline and oil were allocated 70 percent to personal consumption expenditures in the periods from 1929 through 1941 and beginning with 1946. During the war period, the following percentages were used: 65 for 1942, 55 for 1943 and 1944, and 60 for 1945.

Errors stemming from this thinly based allocation, which was generally the same as that used in the passenger car series, would lead to error in the gross national product through their effect on consumer expenditures. The business-use portion of gasoline and oil expenditures, unlike that of passenger car purchases, is an intermediate product not included in the gross national product, and therefore cannot counterbalance any error in the consumer-use portion.

Household fuels and ice

Expenditures for "other" fuels and ice (except fuel produced and consumed on farms) were estimated for the years 1929–39 and 1947 chiefly by multiplying quantity consumed data from the Bureau of Mines by retail prices selected from series maintained by the Bureau of Labor Statistics. Expenditures in other years represent interpolations and extrapolations on the basis of Office of Business Economics estimates of retail sales of fuel and ice dealers. These are unpublished estimates developed from reported retail sales tax collections in 10–17 States.

The Bureau of Mines quantity data underlying the 1929–39 and 1947 estimates covered anthracite and bituminous coal, coke for domestic use, fuel briquets, packaged fuel, kerosene, fuel oil No. 1 sold as range oil, distillate heating oils, and (in 1947) residual heating oils and liquified petroleum gases. The necessary allocations to consumer use were made after consultation with specialists in the Bureau of Mines. The retail price data used to value consumer quantities were obtained from the Bureau of Labor Statistics except for kerosene, which was valued in part at average prices paid by farmers, from the Agricultural Marketing Service. To these components derived

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mainly from data of the Bureau of Mines and Bureau of Labor Statistics were added estimates for purchased firewood, based on Department of Agriculture data, and for ice. For the period 1929–39, the ice estimates were based upon manufacturing census data marked up by an arbitrary 50 percent; for 1947, upon quantity and price data in the trade magazine *Ice and Refrigeration.* In line with suggestions of the industry association, allocation to consumer use was placed at 60 percent in the period 1929–39 and 20 percent in 1947.

Tobacco products

Expenditures for tobacco products for years after 1939 were derived from quantities multiplied by average prices for each of three components: (1) cigars, (2) cigarettes, and (3) other tobacco. The sum of the three series for 1939 agreed very closely with the commodity flow estimate for that year.

(1) Based on Internal Revenue Service reports, the number of large cigars removed tax-paid (including those manufactured from both domestic and imported tobacco) in each taxable price class was multiplied by estimated average prices for the class. The estimated retail values of small cigars, tax-free large cigars, and imported cigars were minor special adjustments worked out for 1947 and applied percentagewise to the cigar series throughout.

(2) The reported number of cigarettes removed tax-paid, lagged two months, was valued at average retail prices of the Bureau of Labor Statistics and the Agricultural Marketing Service. Purchases of tax-free cigarettes—such as in PX's abroad and on merchant vessels—were estimated for 1947 and added for other years in the same proportion.

(3) The pounds of chewing and smoking tobacco and snuff removed tax-paid, lagged two months, were valued at average prices based on the pipe tobacco retail price series of the Bureau of Labor Statistics and Agricultural Marketing Service, with adjustment by 1947 manufacturing census data to cover other forms of tobacco.

Other Methods

Imputation

Three imputed items, comprising 3 percent of consumption expenditures for commodities in 1939 and 1947, are listed in *Exhibit 1.* Food and fuel produced and consumed on farms are discussed in the section on Income of unincorporated enterprises. The third item, standard clothing issued to military personnel, is covered in the section on Wages and salaries.

The consumer commodity estimates include one other imputation—"food furnished government (including military) and commercial employees"—which is not shown in the breakdown of the estimates for 1939 in *Exhibit 1.* An explanation of this omission may conveniently be used also as a means of discussing an aspect of the commodity estimates not covered in the notes to this point. That concerns the nature of the breakdown of the large food group provided in table 30 in Part V.

For the 1929–39 period and again for 1947, food expenditures were estimated in total by the commodity flow method except for food produced and consumed on farms, which is an independent imputation, and tips, which were estimated and added separately. Purchased meals and beverages and "food furnished" were components estimated for purposes of the breakdown given in table 30, and food purchased for off-premise consumption was derived as a residual by subtracting these two items from the commodity flow food aggregate (exclusive of tips and imputed farm food). For the years 1940–46 and after 1947, however, these three types of food expenditures—off-premise food, purchased meals and beverages (excluding tips), and "food furnished"—represent separately estimated components of the food aggregate, with the last named assuming considerable importance as an imputation in some years.

Miscellaneous

The remaining, "miscellaneous" category, accounting for one percent of consumer commodity expenditures in 1939, warrants only brief comment.

Expenditures for flowers, seeds, and potted plants and for lighting supplies have been estimated primarily from retail censuses and other sources of retail sales data, such as State tax collections. The tips series is described in the notes on Wages and salaries.

None of the other miscellaneous items has been of sizable magnitude in the period since 1929 except for expenditures by U. S. Government personnel abroad, which rose sharply during the war and reached a peak of $1.4 billion in 1945. This component is described in the section on Net foreign investment.

8. PERSONAL CONSUMPTION EXPENDITURES FOR SERVICES

In descriptions of national income methodology, resort is sometimes had to the phrase, "constructed from a great variety of source materials." This easy generalization is probably nowhere so apt as in the case of personal consumption expenditures for services. The 55 service items for which expenditures are shown in table 30 of Part V are comprised of several hundred separate series of estimates; and these represent the incorporation of numerous types of data from many government and private sources, processed by procedures virtually running the gamut of those used in national income estimation. A primary factor in the detailed extent of estimation has been the desire to take advantage of available sources of information, however piecemeal, and to minimize errors stemming from the estimation of broad components on the basis of data differing in scope or internal composition.

Perhaps a meaningful way of classifying the service estimates to facilitate a general explanation of methodology is according to the broad types of underlying statistical sources listed in *Exhibit 1.* This shows that for 1950 items comprising 23 percent of the $65.0 billion total were founded on comprehensive annual reports by government agencies and private sources; that components forming 55 percent of the total were benchmarked on periodic comprehensive sources, mainly the Censuses of Business and Population; that another 13 percent stemmed from sample information; and that items accounting for 9 percent of all consumer service expenditures fell into a "Miscellaneous" category.

Exhibit 1.—*Personal Consumption Expenditures for Services, 1950*

	Total	No substantial allocation problem	Substantial allocation problem	Total	No substantial allocation problem	Substantial allocation problem
	Billions of dollars			Percent		
Comprehensive annual reports	14.8	13.5	1.3	22.8	20.8	2.0
Government agencies	5.8	4.5	1.3	8.9	6.9	2.0
Private sources	9.0	9.0	.....	13.9	13.9	.....
Periodic comprehensive sources	35.9	33.3	2.6	55.2	51.2	4.0
Census of Population and Housing	21.9	21.9	.....	33.7	33.7	.....
Census of Business	10.1	7.5	2.6	15.5	11.5	4.0
Census of Agriculture	1.4	1.4	.....	2.2	2.2	.....
Census of Religious Bodies	1.6	1.6	.....	2.5	2.5	.....
Biennial Survey of Education	.8	.8	.....	1.3	1.3	.....
Sample information	8.4	6.9	1.5	12.9	10.6	2.3
Miscellaneous	5.9	4.3	1.6	9.1	6.6	2.5
Total	65.0	58.0	7.0	100.0	89.2	10.8

The exhibit affords some insight into aspects of both strength and weakness of the estimates of consumer service expenditures. Thus, it is evident that—contrary to an apparent general belief that statistical source materials on consumer services are sparse and inadequate—a substantial body of data exists for estimating this segment of the gross national product. Even so, the reliability of the series is impaired by the necessary heavy reliance on periodic (and sometimes rather infrequent) source materials. This consideration has

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particular relevance to estimates—comprising one-half of the service expenditure total—which are benchmarked on the Censuses of Population and Business. In the present edition of the NATIONAL INCOME supplement are published revised estimates (adjusted to the 1950 Census of Population and 1948 Census of Business) replacing previous provisional figures based on extrapolations over a 12- or 13-year period.

Another key factor bearing on the reliability of the consumer service estimates is brought out in *Exhibit 1*—that components adding to only 11 percent of the total in 1950 constituted a "substantial allocation problem." First to be noted in this connection is that expenditures for consumer services, like those for consumer commodities, are generally estimated from data on producers' sales. In the case of services, however, the estimating procedure is simplified (and, hence, reliability is enhanced) by two facts: (1) There are no intermediary enterprises between the producer and consumer; and (2) in very large degree, consumer-type services are by nature items normally purchased only by persons. The area of estimation centering in the allocation of producers' total sales between consumers and others is relatively small.

To quantify this latter aspect of the consumer services series, and to arrive at the information given in the exhibit, the 1950 estimates were classified according to those (1) representing items purchased wholly, or very nearly so, by persons and thus not requiring an allocation of sales between persons and business and government; (2) representing items purchased in appreciable degree by other groups as well as consumers, but for which reliable information on the nonconsumer element was available; and (3) requiring a sizable allocation for which the available data, if any, for making it were regarded as inadequate.

This classification—in some measure a matter of judgment—resulted in the finding that in 1950 components amounting to 89 percent of consumer service expenditures did not involve any substantial problem of allocating producers' sales to arrive at consumer purchases only. More specifically, components forming as much as 69 percent of the total were classified in the first category, as being normally purchased only by persons and thus presenting no problem in this regard. Items comprising another 20 percent were assigned to the second category, for which the problem of statistical allocation was taken care of adequately (although, for the most part, only periodically) in the basic data. Individual series constituting only 11 percent of consumer services fell into the third category with the label of "substantial allocation problem", and may be viewed as subject, on this score, to sizable error.

The following description of the estimates of personal consumption expenditures for services is outlined according to the four types of statistical sources shown in the exhibit. Probably no broad statistical classification of the numerous and heterogeneous service items would be entirely appropriate, and the present one is no exception. Some items, though relatively few, did not fall readily into any one grouping. The difficulty was usually resolved by assigning them to "Miscellaneous."

Comprehensive Annual Reports

Regular comprehensive reporting systems exist for most of the service requiring large aggregations of capital to produce. In some cases, generally where the producing industry is subject to government regulation, the basic data for estimating consumer service expenditures are furnished by Federal or State agencies. In others, the data are provided directly by private industries with excellent facilities for the collection of statistical information.

Government agencies

The service items for which comprehensive annual data—before deduction of any allowance for nonconsumer use—are collected by Federal and State agencies are listed in *Exhibit 2*, together with the 1950 consumer expenditure value for each.

The estimates of services furnished without payment by financial intermediaries are developed mainly from data furnished by the Federal Deposit Insurance Corporation, Board of Governors of the Federal Reserve System, and Internal Revenue Service (from tabulations of corporations' income tax returns, as published in *Statistics of Income—Part 2*). This series is described in the section on Interest. As pointed out there, the necessary allocations of reported totals to derive measures covering only consumers can be made on a generally satisfactory statistical basis.

The annual reports of the Federal Communications Commission contain statistics on telephone operating revenues and excise taxes. Additional supporting statistics in these reports are used to reduce total revenues to an estimate of consumer payments for telephone service. This allocation, regarded as satisfactory, is accomplished by means of formulae devised with the assistance of the American Telephone and Telegraph Company.

Exhibit 2.—*Consumer Expenditures for Services Based on Comprehensive Annual Reports by Government Agencies, 1950*

Item	Millions of dollars
Services furnished without payment by financial intermediaries except insurance companies	2,028
Telephone [1]	1,943
Railway (including commutation) and sleeping and parlor car	525
Intercity bus	315
Air line	177
Pari-mutuel net receipts	239
Bank service charges, trust services, and safe-deposit box rental	341
Athletic and social clubs—dues and fees [2]	182
Money order fees [3]	51
Total	5,801

1. Component of Telephone, telegraph, cable, and wireless, item V-9 in table 30, Part V.
2. Component of Clubs and fraternal organizations except insurance, item IX-9 in table 30, Part V.
3. Component of Other personal business, item VII-7 in table 30, Part V.

Passenger revenues are compiled annually by the Interstate Commerce Commission for railways and intercity bus lines and by the Civil Aeronautics Administration for airlines. However, the statistical basis for adjusting these comprehensive revenue data to measures of consumer expenditures is limited.

For the railroad series, travel fares paid by the Federal Government are first excluded from passenger revenues. Little direct information on Federal outlays for rail travel has been available except for that regularly furnished the National Income Division by the Pullman Co. For years since 1942, railroad coach passenger revenues from sources other than the Federal Government have been estimated by an indirect, though fairly adequate, method utilizing data on collections by the Government from the tax levied on the various types of transportation of persons. Of total railroad revenues from sources other than the Federal Government, in all years the allocation to consumer expenditures has been placed at 65 percent for railroad coach transportation (excluding commutation) and 40 percent for Pullman service (including both seat and berth charges).

These percentages were drawn from a study made in 1942 by the Office of Defense Transportation, which furnished similar information also with respect to intercity bus transportation. Passengers arriving at major railroad and bus terminals during the survey week were interviewed to determine the purpose of travel. The tabulated results of the study required some adjustment so as to reflect the source (consumer or business) rather than the purpose of expenditure.

The Interstate Commerce Commission data on passenger revenues of motor carriers from intercity schedules have been reported since 1937. These were extended to earlier years by data on total revenue from operation of intercity motor bus companies compiled by *Bus Transportation* magazine. Over the period since 1929, receipts from Federal Government travel have been estimated at 2 to 5 percent of the total. Seventy percent of the remainder has been apportioned as receipts from consumers, as indicated by the 1942 survey of the Office of Defense Transportation.

The reported passenger revenue data for the airlines, covering the period since 1935, were extrapolated to 1929 by data on passenger mileage flown. For the years 1939–41, the consumer source of passenger revenues was estimated as one-third on the basis of sample data presented at hearings before the Civil Aeronautics Board and collected in questionnaire surveys conducted by several of the airlines. This proportion has been modified for other years as indicated by scattered information relating to business and government use of airlines.

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In addition to these several transportation components, estimates of (1) bank service charges, trust services, and safe-deposit box rental and (2) money order fees lack adequate data for making the sizable nonconsumer allocations involved in their derivation.

The series on pari-mutuel net receipts includes the tracks' and States' shares of amounts wagered and of breakage. Data are obtained from the Census Bureau, as summarized in *State Finances*, and from reports of the individual State racing commissions. The data are entered as consumer expenditures without any nonconsumer allowance.

Estimates of dues and fees paid to athletic and social clubs are based on Federal tax collections data. Only very minor estimation, for the nontaxable portion, is required.

Private sources

Comprehensive annual data are available from private sources for estimating the types of consumer expenditures for services shown in *Exhibit 3.* Virtually complete data relating to the two insurance items in the listing are collected annually by the Spectator Company and published in its *Insurance Yearbook.*

Data on the income and expenditures of hospitals are collected in annual censuses of these institutions by the American Hospital Association. These data, with minor adjustments, have supplied measures since 1946 of personal consumption expenditures on privately controlled hospitals and sanitariums. This component consists of payments by patients to proprietary hospitals and of current expenditures (including depreciation) of nonprofit hospitals in providing care of patients.

Prior to 1946, however, considerable estimation was required in the absence of comprehensive annual data. Benchmark figures were derived for 1930 from a study by the Committee on the Costs of Medical Care and for 1935 from the Census of Hospitals. The movement for other years was estimated, for the most part, as the product of the average daily number of patients, published by the American Medical Association, and the hospital price component of the Bureau of Labor Statistics Consumer Price Index.

For the entire period covered by the estimates, the Edison Electric Institute and the American Gas Association have reported annual data relating, in effect, to sales to consumers separately from sales to other customers. Thus, data of the Edison Electric Institute on revenues from residential or domestic sales and from rural sales at distinct rural rates have had to be adjusted only to eliminate revenue from farm business use to furnish a measure of consumer expenditures for electricity (inclusive of landlords' expenditures). And a similar measure of expenditures for gas has been secured annually from data reported by the American Gas Association on revenues from sales to residential consumers.

Exhibit 3.—*Consumer Expenditures for Services Based on Comprehensive Annual Reports by Private Sources, 1950*

Item	Millions of dollars
Expense of handling life insurance	2,035
Accident and health insurance and mutual accident and sick benefit associations—premiums less claims [1]	497
Privately controlled hospitals and sanitariums	1,975
Electricity	1,955
Gas	1,177
Street and electric railways and local bus lines	1,388
Total	9,027

[1] Component of Medical care and hospitalization insurance, item VI-7 in table 30, Part V.

The American Transit Association publishes annual data on passenger revenue receipts from operations of street and electric railways and local bus lines. To them are added estimated taxes on electric railway fares to obtain the consumer expenditures series.

The comprehensive annual data supplied by the several private sources noted above are gathered through well-established reporting systems from relatively small numbers of large and responsible business enterprises keeping adequate accounting records. The estimates of consumer expenditures derived from them, involving only minor problems of estimation, may be presumed to be subject to comparatively little margin of error.

Periodic Comprehensive Sources

The Census of Population and Housing yields benchmark data for items aggregating 34 percent of the consumer service total in 1950; the Census of Business for components amounting to 16 percent. Other periodic comprehensive sources furnish the underlying data for items forming 6 percent of the 1950 services total. The expenditure components based on these various sources are listed in *Exhibit 4.*

For most items classified in this category, periodic universe values of consumer expenditures can be estimated with considerable confidence. The accuracy of the benchmark estimates is somewhat affected, however, by the fact that many of the reporting units are individuals or small business enterprises and tend to have less adequate accounting records. Also, estimating adjustments of the reported data often are necessary.

Exhibit 4.—*Personal Consumption Expenditures for Services Based on Periodic Comprehensive Sources, 1950*

Source and item	Millions of dollars
Census of Population and Housing:	
Space rental value of owner-occupied nonfarm dwellings	12,195
Space rent of tenant-occupied nonfarm dwellings	7,062
Domestic service	2,668
Census of Business:	
Automobile repair, greasing, washing, parking, storage, and rental	2,138
Cleaning, dyeing, pressing, alteration, storage, and repair of garments including furs (in shops), not elsewhere classified	1,466
Motion picture theater admissions	1,394
Barber shops, beauty parlors, and baths	1,049
Laundering in establishments	854
Funeral and burial service [1]	642
Maintenance services for appliances and house furnishings [2]	437
Transient hotels and tourist cabins [3]	403
Photographic studios and photo developing and printing [4]	269
Radio and television repair	324
Shoe cleaning and repair	201
Other [5]	909
Census of Agriculture:	
Rental value of farm houses	1,448
Census of Religious Bodies:	
Religious bodies [6]	1,630
Biennial Survey of Education:	
Higher education (private)	822
Total	35,911

1. Included with cemeteries and crematories and monuments and tombstones in Funeral and burial expenses, item VI-8 of table 30, Part V.
2. Consists of care of electrical equipment except radios and of stoves, upholstery and furniture repair, and rug, drapery, and mattress cleaning and repair, and is a component of Other household operation, item V-11 of table 30, Part V.
3. Component of Other housing, item IV-4 of table 30, Part V.
4. Component of Other recreation, item IX-12 of table 30, Part V.
5. Includes the following recreation items: billiard parlors, bowling alleys, dancing, riding, shooting, skating, and swimming places, amusement devices and parks—components of item IX-10 of table 30, Part V; "other" commercial amusements, component of item IX-12; legitimate theaters and opera admissions, component of item IX-8b; professional baseball and football admissions, components of item IX-8c. Also includes watch, clock, and jewelry repairs, miscellaneous personal services related to clothing, and costume and dress suit rental, components of item II-8; employment agency fees, component of item VII-7; and miscellaneous household operation services, component of item V-11.
6. Component of Religious and welfare activities, item XI of table 30, Part V.

Only to a small degree are the estimates in this grouping impaired by serious difficulties of consumer allocation. Items amounting to 4 percent of the 1950 services total were classified as constituting a "substantial allocation problem."

A major factor bearing on the reliability of the series in this group is that the availability of comprehensive data only periodically necessitates the development of interpolating and extrapolating indexes. In a number of cases, these indexes must be based on data that are partial and unrepresentative or of only indirect relevance.

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It is thus to be expected that many of the individual series included in *Exhibit 4*—mostly items not published separately in table 30, Part V—are subject to appreciable error in relative movement, particularly for years estimated by the projection of benchmark estimates over a considerable span. Such errors, however, cannot be expected to be cumulative. On the contrary, it may be presumed on the basis of experience in estimating individual components from masses of diverse data that errors in the individual series will have a tendency to offset in the total. As the latest evidence on this score, discussed later, recent adjustment of the relevant service expenditure series to the 1948 Census of Business and the 1950 Census of Population and Housing revealed an error in the extrapolating series amounting in the aggregate to about 5 percent, with the range of error for the individual series considerably larger.

Census of Population and Housing

The decennial Census of Population and Housing provides data on the number of dwelling units in each tenure class, on the average monthly rent of rented dwellings, and on the fair market value of owner-occupied units. The census taken in 1940 also included a question on the rental value of owner-occupied units. These basic data have been used to derive benchmark estimates of the space rental value of owner-occupied nonfarm dwellings and of space rental payments on tenant-occupied nonfarm dwellings. Their derivation, along with the construction of estimates for intercensal years, is explained in the section on Rental income of persons.

Expenditures for domestic service (cash payments and value of meals furnished) are equal to wages paid in the Private households industry. These wage estimates, based very largely on benchmarks derived from population census data, are described in the section on Wages and salaries.

Census of Business

Service establishments were canvassed in connection with the 1933 Census of American Business and the 1935, 1939, and 1948 Census of Business. In addition, hotels (both year-round and seasonal) of 25 rooms or more and most types of automobile servicing establishments were covered by censuses in 1929. Power laundries and cleaning and dyeing plants, first included in the Census of Business in 1939, were covered in conjunction with the Census of Manufactures in odd years from 1929 through 1935.

Census coverage of service establishments was accepted as complete throughout in making estimates for automobile repairs. It was necessary, however, to make an estimated adjustment of the data on service receipts of motor vehicle dealers given in the Census of Retail Trade for 1935, 1939, and 1948, so as to include the value of parts used in making repairs—an unidentified element of the reported sales totals. The census data on amusements for 1935, 1939, and 1948 also were taken as reported and used, with the exception of motion pictures in 1935. The 1933 census data on amusements were used in only a few cases. Census coverage of hotels was considered complete except for seasonal hotels in 1933, and for seasonal hotels in the New England and Middle Atlantic States in 1939. (However, for 1929 it was necessary to add estimates for hotels with less than 25 rooms, not canvassed by the Census.) Data on tourist courts were used as given by the Census in all years.

For the consumer expenditure estimates, census data in the category of personal services (apart from laundering and dry cleaning) were accepted as reported except for 1948. For that year, moderate upward adjustments of reported census figures were made in preparing estimates for barber shops and beauty parlors, shoe cleaning and repair, and miscellaneous personal services. These adjustments were based on information available from the Census Bureau—chiefly results of its "Post Enumeration Survey", a sample check on the completeness of the 1948 Census of Business—and on comparison of census data on wages and employment in personal service industries with corresponding data reported under the social security laws.

In the preparation of consumer expenditure estimates relating to laundering and dry cleaning, census data were used as reported except for 1933 and 1948. Upward adjustments of 8.7 percent and 17.1 percent, respectively, were applied to all data for 1933 utilized from the Census of Power Laundries and the Census of Cleaning and Dyeing Establishments. These adjustments were based on information as to coverage reported by the Census Bureau. For 1948, the census data were raised moderately before incorporation into the service expenditure estimates—on a basis similar to that noted above for personal services.

For most consumer service items based on the Census of Business, it has been necessary to make some adjustments for differences in the definition and type of data reported in the various years. These adjustments, based on census data themselves, generally have been of minor magnitude.

Where appropriate, the estimates of consumer service expenditures derived from the Census of Business generally represent the service receipts of retailers (reported in the retail censuses) as well as of service establishments. Sales data are tabulated by line of business, with a general distinction between commodity sales and service receipts in each line. In general, the classification by line of business approximates the desired classification by type of service. The instances in which the line-of-business receipts data could not be taken to indicate expenditures by type of service have been relatively few. The necessary allocations of receipts data in such instances did not affect the consumer services total.

The series derived from Census of Business information that involve substantial problems of consumer allocation are as follows: automobile repair, greasing, washing, parking, storage, and rental; transient hotels and tourist cabins; and miscellaneous household operation services.

The following summary for a number of the larger series based on the Census of Business may serve to indicate more specifically the uses and adjustments made of census data and the nature of the methods—sometimes diverse and indirect because of the inadequacy of available source materials—that are employed for interpolation and extrapolation.

Automobile repairs

Expenditures for automobile repair, greasing, washing, parking, storage and rental were based for 1929 (partly estimated), 1933, 1935, 1939, and 1948 on Census of Business receipts data covering service and retail establishments. As noted above, data on the service receipts of motor vehicle dealers were raised to cover parts used in making repairs.

For the period prior to 1935, interpolations were made by the Motor and Equipment Manufacturers' Association index of shipments of service parts to wholesalers; for the period from 1935 to 1939, they were based on an index of sales of parts and accessories stores computed from sales tax reports in Illinois, Iowa, and Indiana. The estimates for years after 1939 represent interpolations and extrapolations by an index based largely on payrolls in the automobile repair services industry, as compiled by the Bureau of Employment Security of the Department of Labor from summations of employers' reports filed by the various State unemployment insurance agencies. This index was extended from 1942, when the payroll data became available, back to 1939 by a series representing the product of passenger car gasoline consumption (from the Bureau of Public Roads) and the official index on automobile repair prices (from the Bureau of Labor Statistics).

The estimates of total expenditures so derived have been allocated by the proportion of consumer to total highway use of gasoline. This proportion has been estimated as the product of ratios of (1) consumer to total passenger-car use of gasoline and (2) passenger car to total highway use of gasoline. The first ratio is the same as that used in the allocation of expenditures for gasoline and oil (see section on Personal consumption expenditures for commodities). The second has been derived from annual data of the Bureau of Mines and Bureau of Public Roads.

Motion picture admissions

The 1939 and 1948 consumer expenditure figures for admissions to motion picture theaters were taken from the Census of Service Establishments for those years. Other years have been estimated chiefly by using gross receipts from operation of motion picture theater corporations for interpolation and extrapolation, with allowance for changes in the admissions tax, not reflected in the data reported to the Internal Revenue Service. For the two most recent years of the series, when such data are not available, the estimates are made as follows: (1) total admissions to motion pictures and other (largely spectator) amusements covered by the Federal admissions tax are extrapolated by an index obtained by dividing the Federal admissions tax rate into the total collections from this tax and adding the tax collections to the quotient, and (2) the independently estimated admissions to the other amusements are deducted from the total to arrive at the figures for motion pictures.

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Cleaning and dyeing

The consumer expenditure series on cleaning, dyeing, pressing, alteration, and repair of garments is based on census values for the years 1929, 1931, 1933, 1935, 1939, and 1948 (adjusted for undercoverage in 1933 and 1948 as noted above). The census figures required numerous, but minor, adjustments for comparability from year to year. The problem of consumer allocation was obviated by the type of data given in the census reports. Most important in this respect was the provision of data on receipts from cleaning and dyeing at retail (separately from wholesale) of cleaning and dyeing plants, rug cleaning establishments, and power laundries. Estimates for intercensal years prior to 1935 were obtained by interpolation by the American Institute of Laundering index of cleaning plant sales of its member power laundries. The 1936–38 estimates were made by using the Bureau of Labor Statistics index of payrolls of cleaning and dyeing plants for interpolation. This index for 1939–42 extended to later years by State unemployment insurance wage data has also been employed for interpolation and extrapolation of the 1939 and 1948 census benchmarks. The unemployment insurance wage figures used for this purpose are the combined totals for cleaning and dyeing plants and cleaning, pressing, alteration, and garment repair shops.

Barber shops, beauty parlors, and baths

Census data, with 5 to 8 percent (the latter in recent years) added for tips, provided the basis for estimating consumer expenditures for barber shop and beauty parlor services for 1933, 1935, 1939, and 1948. Estimates for 1930 were obtained by multiplying the number of employed persons in these industries, as derived from the 1930 population census, by average receipts per person estimated by reference to census data for later years. For other years of the 1929–35 period, estimates were prepared by using for both the barber shop and beauty parlor series consumer expenditures for laundering as an extrapolating and interpolating index. To obtain interpolations for the two series between 1935 and 1939, the barber shop and beauty parlor service components, respectively, of the Consumer Price Index were multiplied by an output index for laundry services, computed by dividing the Bureau of Labor Statistics index of payrolls in power laundries by its index of average hourly earnings for the same industry.

For the 1940–47 period, it was possible to establish benchmark values for 1945 and 1947 by use of receipts data for barber shops and beauty parlors tabulated by the Internal Revenue Service from income tax returns of corporations, partnerships, and individual proprietors. Interpolations for other years of the period were based largely on the BLS price indexes. For later years, the 1948 Census-based total for barber shops and beauty parlors has been projected by the product of (a) employment for the two types of establishments combined as reported from unemployment insurance data by the Bureau of Employment Security and (b) the barber shop and beauty parlor price indexes of the Bureau of Labor Statistics weighted by the 1948 consumer expenditure values.

The portion of the estimate relating to baths and masseurs is quite small —1.3 percent in 1950. It has been derived principally from data reported in service censuses for 1935, 1939, and 1948, with interpolation and extrapolation by means of the series on consumer expenditures for barber shop and beauty parlor services.

Laundering in establishments

As derived for the years 1929, 1931, 1933, 1935, 1939, and 1948 (adjusted for undercoverage in 1933 and 1948 as noted above) from the Censuses of Power Laundries, Cleaning and Dyeing Establishments, and Service Establishments, the figures on consumer expenditures for laundering in establishments include receipts from bundle work and family services of power laundries, laundry receipts of cleaning and dyeing plants, and 80 percent of the service receipts of hand laundries. (Payments from hand laundries to power laundries were taken at 20 percent of the formers' receipts.) Receipts of hand laundries for 1929, 1931, and 1933, not given in the census reports, were estimated by the movement of the other components.

Estimates for intercensal years of the pre-1939 period were obtained by interpolation by the American Institute of Laundering index of laundry receipts of power laundries. For the later period, the 1939 and 1948 Census-based estimates have been interpolated and extrapolated by an index of laundry payrolls, based on Bureau of Labor Statistics sample data for the years 1939–42 and on Bureau of Employment Security tabulations of unemployment insurance wage data for subsequent years.

Funeral and burial service

Consumer expenditures for funeral and burial service were obtained for 1935, 1939, and 1948 from census receipts data covering funeral directors' and embalmers' services and coffins, plus an estimate of the funeral receipts of combination furniture and undertaking establishments derived from the 1929 Census of Retail Distribution. Odd-year estimates prior to 1935 were obtained by extrapolating the 1935 figure by data on the value of coffins and funeral supplies produced (from the biennial Census of Manufactures). These were interpolated for 1930, 1932, and 1934 by billings of funeral directors and embalmers, as estimated by Rolf Nugent, *Consumer Credit and Economic Stability* (Russell Sage Foundation, New York, 1939). Estimates for other years (1936–38, 1940–47, and 1949–53) are interpolations and extrapolations by data on collections of sales taxes levied on funeral directors' receipts in a number of States.

Census of Agriculture

Estimates of the rental value of farm houses, described briefly in the section on Income of unincorporated enterprises, are prepared by the Agricultural Economics Division of the Department of Agriculture, and based on value data reported in the quinquennial Census of Agriculture. The basis of estimation, however, is not a direct one. Census-based figures on value are multiplied by an annual interest rate, and the product is then converted to a gross measure of rental value by adding an estimate of farm expenses allocable to the upkeep of farm dwellings.

Census of Religious Bodies

The "religious bodies" component of consumer services represents all current expenditures by churches except for local cash relief and charity, plus estimated depreciation of buildings. It is included in group XI of table 30, Part V.

Estimates of cash current expenditures were prepared for 1926 and 1936 from data reported in the Census of Religious Bodies, with a small adjustment for churches not reporting. The value of clergymen's imputed income (see section on Wages and salaries) was added. For all other years of the period since 1929, estimates of total current expenditures (cash and imputed) have been obtained by interpolation and extrapolation on the basis of the National Income Division series on total payroll of religious organizations, as described in the section on Wages and salaries. Depreciation, estimated at about 1.5 percent of the value of church edifices, was derived by a downward modification of hospital building depreciation rates (see section on Capital consumption allowances).

Biennial Survey of Education

Office of Education data reported in the *Biennial Survey of Education*, covering school years ending in even numbers, form the principal basis of the consumer service series on "higher education" and "elementary and secondary schools." The estimated depreciation of educational buildings and equipment (see section on Capital consumption allowances) is added to figures on current expenditures by these institutions for educational services, as derived from the *Biennial Survey*.

Estimates of current expenditures for intervening school years not covered by the *Biennial Survey* are obtained by straight-line interpolation. For the recent years of the series before the *Biennial Survey* becomes available, the latest reported data are projected on the basis of partial information furnished by the Office of Education. The resulting school-year figures are converted to calendar years by averaging. To obtain the estimate for calendar year 1950, for example, the 1949–50 school-year data were weighted by 2 and the 1950–51 school-year data by 1.

It should be noted that the series for elementary and secondary schools is less firmly based than that for higher education. The data published in the *Biennial Survey of Education* for private elementary and secondary schools include capital outlays, and these must be estimated and deducted. Moreover, the published data represent estimates based on reported enrollment in these private schools multiplied by average expenditure per pupil in public elementary and secondary schools. Accordingly, this series is not regarded as being based on periodic comprehensive sources, as listed in *Exhibit 4*, but is included in the "Miscellaneous" category discussed below.

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Sample Information

Consumer service expenditures whose levels have been estimated from sample data comprised 13 percent of the service total in 1950. These series include expenditures for professional services (7.3 percent); interest on personal debt (2.8 percent); automobile insurance, net payments to labor unions, postage, and telegraph, cable, and wireless (combined, 1.9 percent); and foreign travel and remittances (1.0 percent).

The professional services category noted above includes separate expenditure estimates for the services of physicians, dentists, lawyers, osteopathic physicians, chiropractors, chiropodists and podiatrists, private duty trained nurses, miscellaneous curative and healing professions, and veterinarians. The sample information used in making these estimates is obtained very largely from periodic questionnaire surveys by the National Income Division, generally with the cooperation of the professional associations. This information covers (1) average gross income from independent practice, (2) percentage of persons in the profession engaged in independent practice, and (3) the percentage of gross income (in the case of physicians, dentists, lawyers, and veterinarians) received from government or welfare agencies or business organizations, as contrasted with individuals.

These data are used in conjunction with available information on the total number of persons in each profession to secure the consumer expenditure estimates. The main sources of information on numbers in the various professions are the occupational data of the Census of Population, compilations of the individual professional associations (such as the American Medical Association, American Dental Association, and the American Osteopathic Association), and the Fisher-Stevens, Inc. lists.

The methods of estimating consumer expenditures for professional services are directly analogous to those used in deriving the total net income of independent practitioners in the various professions. These professional income series are described at some length in the section on Income of unincorporated enterprises.

Estimates of interest on personal debt, as noted in the section on Interest, are based very largely on consumer credit data (compiled by the Federal Reserve Board from sample reports adjusted periodically to more comprehensive sources), multiplied by fragmentary sample information on interest rates applicable to the various types of credit.

Data from the 1935–36 Consumer Purchases Study (given in reports by the National Resources Planning Board and the U. S. Departments of Labor and Agriculture) provided benchmark materials for estimating the consumer service series on automobile insurance (premiums minus claims paid), net payments to labor unions (dues and fees paid minus cash benefits received), postage, and telegraph, cable, and wireless. Little confidence can be placed in these series. Apart from sampling or reporting errors in the basic data, considerable estimation was required in utilizing the data to obtain the benchmark consumer expenditure values; and the available information for extrapolation is not adequate. Except for the labor union item, the presence of large nonconsumer elements in the extrapolating data is an added difficulty.

The consumer service series relating to foreign travel and remittances (net) are components of group XII in table 30, Part V. The estimation of these series, which involves in substantial degree the problem of consumer allocation, is based largely on questionnaire surveys. (See section on Net foreign investment.)

Miscellaneous

Consumer service expenditures for items classified under "Miscellaneous" sources comprised about 9 percent of the 1950 total. A less rigid basis of classification, as already indicated, might have considerably reduced the proportion of expenditures in this category.

Of the items in this category, only five are shown separately in table 30, Part V. These are elementary and secondary schools, taxicab fares and tips, household expenditures for water, brokerage charges and interest and investment counseling, and bridge, tunnel, ferry and road tolls. Together with two other relatively sizable items—social welfare and foreign relief agencies (included in group XI of table 30) and moving and warehouse expenses (included in item V–11)—these series accounted for about three-fifths of the 1950 "Miscellaneous" total.

For the most part, these seven series incorporate a great deal of relevant statistical information (notably in the cases of social welfare and foreign relief agencies, elementary and secondary schools, and brokerage charges and interest and investment counseling). Difficulty of consumer allocation is present for the series on moving and warehouse expenses, brokerage charges, etc., and taxicab fares and tips, as well as for the estimates of water expenditures with respect to the data used for extrapolation of the 1940 base-year figure.

Of the remaining items in the "Miscellaneous" category, nearly all are relatively small. Source materials vary widely in adequacy among this group of service items but are not satisfactory for many of them. It often is necessary to use indirect estimating methods, and to rely on occasional and incidental information obtained from public and private research studies, correspondence with trade associations, and informal sources such as magazine and newspaper accounts.

Nature of Recent Revisions

As noted before, availability of data from the 1948 Census of Business, the 1950 Census of Population and Housing, and the 1950 Census of Agriculture has permitted preparation of new benchmark estimates for numerous series on consumer expenditures for services, as listed in *Exhibit 4.* In addition, a review has been made of the data and procedures utilized in the estimates for all other service items.

As a result of the incorporation of census materials and this additional review work, about one-half of the items comprising the 55 service series published in table 30, Part V have undergone statistical revision. The net effect was a raising of the series. This amounted in 1950 to 5 percent for the total of items that were revised and to 4½ percent for the overall consumer services aggregate.

Adjustment to the postwar censuses revealed that, in total, the 30-odd service items which had been extrapolated from the 1940 Census of Population and the 1939 Census of Business were low by 7 percent in 1950. About 5 percentage points of this revision may be attributed to deficiencies in the extrapolators. The remainder occurred in the automobile repair series as a result of correcting it to include parts used in making repairs.

The revision in this area is a modest one when viewed against the problem of making 10-year extrapolations of series which, in total, increased by 145 percent. Still, it should be noted that this result reflected a netting of errors in the individual components—a tendency for them to offset in the total. While the degree of revision was tolerable for most components in this group, it ranged up to 25 percent or more for some of them. Consideration of these revision results, while gratifying in the overall, influenced the decision to compress the extent of published detail on consumer services.

It may be added that not since the census of 1936 have benchmark expenditure data been available for the series on religious bodies, a component of group XI in table 30. However, this series has been revised upward considerably because of revision of the payroll estimates used as an extrapolator. These revisions, in turn, mainly reflected the incorporation of employment data from the 1950 Census of Population. (See section on Wages and salaries.)

9. NEW CONSTRUCTION

The estimates of construction activity (see table 31) have been prepared jointly by the Bureau of Labor Statistics and the Commerce Department Building Materials and Construction Division. These estimates differ from the totals used in the gross national product only because the latter include petroleum and gas well drilling (in private construction) and exclude work relief (from public construction). The value of work relief construction appears in gross national product as government expenditures for payrolls, purchases of materials, etc.

New private construction is an independent element in the statistical determination of gross private domestic investment. New public construction

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is a component of government purchases of goods and services, which, however, are estimated as a total independently of the construction series. (See the section on Government receipts and expenditures.)

New construction represents the value of progress made during the given year in the production of fixed works and structures. The value of progress made, or "work put in place," is defined as equivalent to the value of labor and materials used plus overhead costs and profits accrued on operations during the given period. It includes the installed value of equipment generally considered an integral part of a structure and commonly included in the construction contract price.

Exhibit 1.—*Components of New Construction Activity, Classified by Principal Data Source, 1950*

Data source and class of construction	Private		Public	
	Millions of dollars	Percent	Millions of dollars	Percent
Direct reports of work done or paid for	**3,330**	**15**	**4,249**	**61**
Public utility	3,330			
Highway			2,272	
Military facilities			177	
Public residential building			345	
Public nonresidential building (Federal and Federal-aid)			541	
Other types of public construction (Federal and Federal-aid)			914	
Contract awards	**4,064**	**18**	**2,751**	**39**
Private nonresidential, except farm and public utility	3,777			
Private residential, except farm—nonhousekeeping	175			
"All other private"	112			
Public nonresidential building (State and local)			1,843	
Other types of public construction (State and local)			908	
Building permits	**10,605**	**46**		
Private residential, except farm—new dwellings in permit-issuing areas [1] and additions and alterations	10,605			
Other sources	**4,734**	**21**		
Private residential, except farm—new dwellings in nonpermit-issuing areas [1]	1,820			
Farm	1,635			
Oil and gas well drilling	1,279			
Total	**22,733**	**100**	**7,000**	**100**

1. Breakdown of new dwellings between permit-issuing and non-permit-issuing areas is rough; based on unpublished data.

Fixed works and structures include not only dwellings and other buildings but also dams, bridges, roads, canals, and the like. Certain types of works, such as mine tunnels and farm ditches, which might be classified as construction, are not included. They are probably unimportant quantitatively, and a substantial portion of them is likely to be charged to current expense. Hence it is believed that their omission from gross national product does not result in any appreciable discrepancy in the national income and product accounts. Also, the estimates of private residential nonfarm construction exclude certain "speculative" profits, because these are regarded as reflecting sales rather than construction activity. These profits should be part of the new construction component of gross national product; they are omitted because there is no satisfactory way of estimating them.

The factual content of the present notes is largely limited to a summary of descriptions published in the Building Materials and Construction Division's May 1953 Statistical Supplement to *Construction and Building Materials* and in the Bureau of Labor Statistics bulletin on *Techniques for Preparing Major BLS Statistical Series*, revised. No attempt is made to indicate differences between the estimating methods underlying back-year values and the methods currently in use; only the latter are described below. Although the basic sources and methods have been the same throughout the period since 1929, a number of important improvements have been made. It should be noted, however, that most of them did not cast light on back-year movements in the series affected. Estimates for the more recent period, discussed in these notes, are therefore generally somewhat better founded than those for earlier years.

Modern techniques of systematic reporting and sampling are difficult to apply to the direct statistical measurement of construction activity. Many of the producers that should be covered are hard to identify. Much construction work is done by firms only intermittently attached to the industry; many construction firms have no fixed and readily recognizable place of business; and any firm in any industry may undertake force account projects. (The several past censuses of construction, it may be noted, omitted by intent the substantial volume of force account construction.) The alternative of covering the purchasers of construction work is generally subject to the same sort of difficulties.

This problem of identifying the units to be covered affects both the enumerative and the sampling approaches to data collection. In particular, it makes enumeration expensive. Sampling, the theoretical validity of which rests on the homogeneity and continuity of the universe sampled, must deal here with large, unstandardized, nonrepeating projects, many arising out of a special local need. Under these circumstances, estimation relies heavily on indirect evidence of construction activity, as is explained below, and is subject to considerable uncertainty as to coverage, valuation, and timing.

Summary of sources

The construction estimates are developed from several different types of statistical sources and methods. These may be summarized very briefly as follows.

From certain special classes of buyers, regular current reports are received on the actual progress of, or expenditure for, their construction work. In general, Federal Government and Federally-aided projects are covered by current reports on progress, and construction done by or for public utility companies is regularly reported from accounting records.

Other nonfarm nonresidential construction is generally estimated from monthly data on value of contract awards.

Other nonfarm residential building is estimated chiefly from monthly reports of building permits issued.

For some types of construction, the foregoing kinds of information are inadequate or unavailable, and estimates must be made from a variety of data of varying appropriateness and reliability. A small part of nonfarm residential construction, all farm construction, and oil and gas well drilling are included in this miscellaneous category.

The relative importance of these various sources and methods in deriving the new construction estimates is illustrated in *Exhibit 1*. Each component of new construction (as given in tables 2, 3, 5, and 24 of the May 1953 Statistical Supplement to *Construction and Building Materials*) is here classified according to the principal type of source material used in estimating its value.

The four classes of source materials distinguished in *Exhibit 1* may be compared briefly with one another in terms of coverage, quality of value data, and the indication given as to timing of the construction work done.

Direct reports of work done or paid for are obtained through formal reporting systems involving the regular and sometimes mandatory cooperation of parties to the construction contracts. Coverage of work done by or for the categories of purchasers included in these systems is generally excellent. The value information reported, being taken on a fairly standardized basis from accounting records appropriate to the purpose, is also quite satisfactory. Finally, the reported timing of contract construction work is based largely on engineering inspections made to check contractors' claims for progress payments, and therefore accords very closely with the conceptual requirements of the estimates.

Contract award reports (which take into account subsequent cancellations) provide reasonably good value information for projects covered, particularly in periods when escalator clauses or other similar arrangements are not important. As will be seen, however, the coverage of these data is far from complete, and an estimate for the noncovered areas must be made. Furthermore, there is a varying time lag between the reported date of a contract award and the start of actual construction, and there is further variation in the rate of progress after the start. The allocation of contract values to the particular time periods during which the work is presumed to have been done is based on past activity patterns and cannot be precise.

Building permit data share with the contract award reports the disadvantage

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of not indicating the time period during which the work is done and undergo a similar timing adjustment in the course of deriving the estimates. The valuations entered on building permit applications are generally less reliable than are values to which the parties are committed by contract. An adjustment for undervaluation, and an allowance for lapsed permits are made on the basis of sample studies. The coverage of the permit data is very high in the areas where building permits are required.

The miscellaneous sources used in estimating the remainder of construction activity vary widely in quality. In general, they yield results less reliable than those derived by the use of the other three types of source materials.

Estimates Based on Direct Reports of Work Done or Paid For

Direct reports are the chief basis of components accounting in 1950 for 15 percent of estimated private construction and 61 percent of estimated public construction. *Exhibit 2* shows the components estimated wholly or in large part from materials of this sort. They consist primarily of projects in which the Federal Government is involved—as a contracting party, as a source of aid funds, or through agencies which regulate the purchaser's industry. However, private corporations and trade associations also perform an important service in data collection, as is indicated by the list of reporting systems included in the exhibit.

The estimates for privately owned public utilities generally involve only minor problems with respect to coverage, valuation, and timing. Totals from annual reports by railroads, electric utilities, oil companies, and members of the Bell Telephone System are adjusted to reflect construction by or for small concerns which do not report. The values reported for petroleum pipe lines and electric and gas utilities include some expenditures for the purchase of existing facilities or producers' durable goods; statistical adjustments are made to eliminate these. With respect to timing, the annual reports for public utilities are somewhat less appropriate for these estimates than are the progress reports upon which most of the other values shown in *Exhibit 2* are based. However, there is no reason to expect any important timing discrepancy on an annual basis.

For the most recent year, financial data on construction outlays are generally not yet available for public utilities except the large railroad systems. Preliminary estimates are based mainly on the utility companies' previously announced plans for construction and checked against current sample series on plant and equipment expenditures, such as the quarterly Commerce-Securities and Exchange Commission estimates. Construction plans are ascertained from reports compiled either by trade sources or by the same agencies which later tabulate the financial data.

More than one-half of all public construction covered by reports of work done or paid for consists of road-building. Monthly estimates of the value of work accomplished under the Federal-aid highway program are prepared from reports of the Bureau of Public Roads showing State "earnings," which are based primarily on reports by engineers of the progress made on individual projects. The Bureau of Public Roads also compiles annual reports of highway construction on Federal lands. State, county, and municipal highway, road, and street construction outside the Federal-aid program is estimated mainly from special financial reports submitted annually through State highway departments to the Bureau of Public Roads.

For military facilities, the expenditures reported represent the volume of all construction, regardless of type, at Federal military installations. The relatively small amounts of military construction by the States (armories, rifle ranges, and the like) are included with other public construction categories according to type of construction. The data for the two major construction agencies of the Department of Defense—the Office of the Chief of Engineers and the Bureau of Yards and Docks—are based on monthly progress reports for all construction projects by service engineers.

Public housing construction progress reports are gathered for Federal and Federal-aid housing by the Public Housing Administration and are prepared for locally financed projects in New York City by the local Housing Authority. The remainder of public residential construction is based on local government estimates of the cost, duration, and starting date of projects reported to regional offices of the Bureau of Labor Statistics. In 1950 the preponderant share of the public residential building estimates was based upon direct reports and they are therefore classified under this heading. For some other years their classification under "other sources" (see below) would have been more appropriate.

Direct Federal construction of housing as carried on during the depression, defense, and war periods under the Lanham Act was estimated from progress reports by the Public Housing Administration on the number and cost of units built. Construction of low-rent units and slum clearance expenditures by State and local agencies with Federal loans and grants under the Housing Act of 1949 are estimated from progress reports made available by the Public Housing Administration. Estimates of the value of work accomplished on the locally financed New York City projects have been based on the progress reports used to determine payments to contractors.

Of the 1950 total value of public nonresidential building, about one-fourth was Federal or Federally aided; all but a small part of this was covered by progress reports.

In hospital and institutional construction, a major item under this heading, two large programs are involved: that of the Veterans Administration and the National Hospital Program. Estimates of the value of veterans hospital building are based on monthly progress reports supplied to the Office of the Chief of Engineers and to the Veterans Administration by project engineers in the field. The National Hospital Program is one of Federal aid. Estimates of the value of work done under this program are prepared from progress reports on individual projects submitted to the Hospital Facilities Division of the Public Health Service by State agencies administering the program. The rest of public hospital construction, not aided by the Federal Government (included in the total shown in *Exhibit 2*, since its value is not published separately), is evaluated by applying activity patterns to contract award values compiled from F. W. Dodge Corp. reports (see below) and other sources. The value of other construction included in public nonresidential building, consisting chiefly of work done for the Public Buildings Administration, is estimated from progress reports of the supervising agency.

Exhibit 2.—*Components of New Construction Activity Estimated Chiefly from Direct Reports of Work Done or Paid For, 1950*

Component	Reporting agency	Millions of dollars
Private construction		**3,330**
Public utility:		
Electric light and power	Federal Power Commission	1,268
Manufactured and natural gas	American Gas Association	1,102
Telephone	American Telephone & Telegraph Co.	435
Railroad	Interstate Commerce Commission, Association of American Railroads.	315
Petroleum pipe-line	Interstate Commerce Commission	165
Local transit	American Transit Association	40
Telegraph	Western Union Telegraph Co	5
Public Construction		**4,249**
Highway, by source of funds:		
Federal	Bureau of Public Roads	46
Federal-aid	do	397
State and local	Bureau of Public Roads (through State highway departments).	1,829
Military facilities [1]	Department of Defense	177
Public residential building [1]	Public Housing Administration; New York City Housing Authority.	345
Public nonresidential building (Federal and Federal-aid).	Federal agencies responsible; Bureau of the Budget.	541
Other types of public construction (Federal and Federal-aid). [1]	Federal agencies responsible; Bureau of the Budget.	914

1. Public residential construction by the Department of Defense is included under "Military facilities." Housing at the sites of reclamation and flood control projects is included in the "conservation and development" category among "Other types of public construction."

A minor part of the total shown under public nonresidential building in *Exhibit 2* represents construction for the National Advisory Committee for Aeronautics, the Bureau of Prisons, and similar agencies which engage in construction only occasionally or on a small scale. These agencies usually do not have sufficiently large construction staffs to warrant setting up regular progress reporting systems. Estimates for them are made by applying activity patterns to contract award data from the agencies, supplemented by annual statistics from the *Budget of the United States Government*.

The "Other types of public construction" distinguished in *Exhibit 2* consist largely of outlays to conserve, develop, or control the Nation's water resources. The bulk of these expenditures is estimated from monthly progress reports by Government engineers on projects of the Bureau of Recla-

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mation and the Civil Works Division of the Office of the Chief of Engineers. The Tennessee Valley Authority also provides monthly summaries of actual cost of its construction activities. The small balance of conservation and development work included in *Exhibit 2* is carried on by the International Boundary and Water Commission and similar agencies, and is evaluated from annual fiscal data shown in the *Budget*. Civil airport construction activity is estimated primarily from monthly progress reports to the Civil Aeronautics Administration; and Federal construction of a few other nonconservation items of minor size is approximated from *Budget* data.

Estimates Based on Contract Awards

Monthly reports of the value of contracts awarded are used to evaluate construction projects which collectively account for 18 percent of the private construction and 39 percent of the public construction included in the 1950 gross national product. (See *Exhibit 1*.)

The chief source of data on contract awards (including information on subsequent cancellations) is the F. W. Dodge Corp., whose local correspondents keep informed of new projects through personal contacts in the construction and related industries, press reports, permit-issuing offices, and a variety of other sources. Values of projects thus located are generally ascertained directly from the contracting parties. It is obviously difficult to avoid the omission of a considerable amount of construction activity when data are gathered in this way. The system is considerably more effective than the difficulty of the task would suggest, however. Its relatively good coverage is due to the long experience of the Dodge organization, which initiated this work in 1901, and to financial support from contractors and suppliers who keep in touch with their markets through such information.

To derive estimates of construction work done, the Building Materials and Construction Division adjusts the contract awards data for coverage and timing.

The first adjustment of coverage is required because the F. W. Dodge Corp. data apply only to the 37 States east of the Rocky Mountains. Western State figures comparable to the Dodge tabulations are estimated chiefly from building permit information and reports on construction contract awards appearing in various trade journals.

A further coverage adjustment is applied to the national totals so obtained, because neither the Dodge materials nor those available for the West purport to cover all construction projects in the categories estimated from contract awards. For private construction in each of these categories, a raising ratio is computed by use of estimates based on the 1939 Census of Construction and trade sources. Allowances for undercoverage of public construction are based on extensive correspondence with State and local government officials.

After these adjustments, the data represent estimates of the value of construction work of each type for which contracts have been let during the month. Some projects undoubtedly are started within the same month in which contracts are awarded; others will not be started until 2 or 3 months later. In the absence of definite information on the patterns of these delays, it is more or less arbitrarily assumed that their average is one month; the estimated value of contracts let in the given month (excluding those subsequently cancelled) is accordingly taken to measure the total value of projects which will be started in the following month.

Most construction projects take several months to complete after they are started. Through surveys of thousands of actual projects, the Building Materials and Construction Division of the Department of Commerce has established typical activity patterns for various types and sizes of projects, showing percentages of value "put in place" in successive months. These patterns are used to translate the value of starts into construction activity.

Modifications of these patterns were made during the war years from data collected by the War Production Board, and also during the immediate postwar years, when materials shortages delayed construction, on the basis of data collected by the Commerce Department for the Civilian Production Administration. The patterns are subjected to constant revision as additional information becomes available and on the basis of judgment gained through experience over a decade of investigation.

A final adjustment in the resulting estimates of work put in place is made to eliminate offices, warehouses, and other buildings constructed by public utilities, all of which are classified as public utility construction.

Estimates Based on Building Permits

Building permits are the most important data source for private nonfarm residential construction. This category of construction is estimated in four parts: construction of dwelling (housekeeping) units in areas in which building permits are required; construction of dwelling units in other areas; construction of nonhousekeeping units; and additions and alterations. The following tabulation illustrates the relative importance of each of these parts.

Exhibit 3.—*Components of Private Nonfarm Residential Construction, 1950*

Item	Millions of dollars	Percent
Dwelling units built under permit [1]	9,705	77
Other dwelling units [1]	1,820	15
Nonhousekeeping units	175	1
Additions and alterations	900	7
Total	**12,600**	**100**

1. Breakdown of the total of these items is rough; based on unpublished data.

Estimates of the third item are based upon the contract awards data which have already been discussed. Estimates of the second item are based upon procedures explained below. Those of the first and fourth items are based upon information on building permits, and will be described next.

Nonfarm dwelling units built under permit

Most nonfarm residential construction is carried on under building permits. The permit-issuing officers of the responsible local governments compile totals for number of dwellings and estimated value from the records of permits issued, and they report these totals to the Bureau of Labor Statistics on a monthly questionnaire form.

Coverage of permit-issuing localities is not far from complete—about 90 percent of all such localities report each month. To allow for the remainder, the individual localities are first cross-classified into cells according to type of jurisdiction, location, urbanization, and population size. A raising ratio for each urban cell is then computed by dividing the number of localities reporting for the month into the total number of localities in the cell. For each rural nonfarm cell, the raising ratio is computed from 1940 population census figures, as the ratio of dwellings in all localities to dwellings in localities reporting.

Reported values raised by these ratios are next adjusted to allow for permits lapsing, and then for the understatement of ultimate construction values which is generally characteristic of estimates entered on building permits. Periodic field studies are made by the Bureau of Labor Statistics to determine the appropriate percentage allowance for each of these factors.

The timing adjustments next applied—of the same general nature as those of the contract awards data—utilize activity patterns based upon Bureau of Labor Statistics investigations. Specifically to be noted is that the estimates of the lags which occur between the issuance of permits and the start of the projects are based upon Bureau of Labor Statistics field studies instead of the summary assumption used in the case of the contract awards data.

Additions and alterations to nonfarm dwellings

Most local jurisdictions with building-permit systems require permits not only for new structures but also for additions and alterations to existing structures. However, compliance with such regulations is much less complete in the case of additions and alterations, particularly in rural nonfarm areas. Special problems are therefore met in translating the permit data on additions and alterations into estimates of the value of work done. For the urban United States, the procedure is substantially the same as for new dwelling units except that no specific adjustment is made for lapsed permits. The resulting estimates of value of work in place are then expanded to cover rural nonfarm activity, using relationships between rural nonfarm and urban construction of new units. Studies of family expenditures—notably the Consumer Purchases Study of 1935–36—provide the basis for a final adjustment which allows both for understatement of value in permit applications and for undercoverage of projects.

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Estimates Based on Other Sources

Nonfarm dwelling units not built under permit

As is suggested by *Exhibit 3*, a significant fraction of residential construction occurs in rural nonfarm areas where no building permit is required. Representatives of the Bureau of Labor Statistics cover a sample (currently, nonpermit-issuing parts of 96 counties) of such areas, and report numbers of units started as well as prevailing average construction costs. Reported numbers are raised to full coverage by a method similar to that applied to building permit data for rural nonfarm areas and multiplied by average construction cost. The results are then distributed forward over succeeding months by normal activity patterns.

Farm construction

Annual estimates of construction on farms are prepared by the Agricultural Economics Division of the Agricultural Marketing Service, Department of Agriculture, and described in *Agricultural Estimating and Reporting Services* (Washington, December 1949). They are based chiefly on data from sample surveys of construction expenditures of farm operators in 1934–37, 1939, 1946, and 1949. Estimates for other years are made by interpolation and extrapolation, based in part on inferences from data on farm electric lighting systems, windmills, silos, etc., reported in the annual *Farm Machines and Equipment* reports of the Census Bureau. The bulk of the dollar amounts involved, however, for other than benchmark years represents approximations based on changes in indices of farm construction costs and in indicators such as estimated consumption of lumber, sales of building materials in rural areas, and nonfarm residential construction. The Commerce Department's farm construction series represents the expenditure series of the Agricultural Economics Division adjusted to exclude estimated expenditures for building repairs.

Oil and gas well drilling

Oil and gas well drilling is not classified as new construction in the classification system employed by the Building Materials and Construction Division of the Department of Commerce, which prepares the estimates, but is included as such in gross national product. All costs of drilling are covered, including the cost of casings (but not the cost of installed production equipment).

Estimates for the base year 1939 were derived for each State from data gathered in the 1939 Census of Mineral Industries and compilations of reports to trade publications. These estimates have been projected from 1939 by using figures on the number of wells completed, as reported in trade sources, multiplied by the average cost per well. The latter is determined by adjusting the 1939 average cost in each State to take approximate account of changes in labor costs and efficiency, material costs, proportion of wildcat ventures, and average depth of wells.

Characteristics of Revisions

New data and methodological or conceptual changes have necessitated occasional major revisions in the estimates of certain components of construction. For the most part, these revisions have not been of such a nature as to cast light on the degree of reliability attained in the currently published series. There is evidence, however, that some of the components of new private construction may be somewhat understated.

10. PRODUCERS' DURABLE EQUIPMENT

The estimates of producers' durable equipment shown in table 32, Part V represent statistical revisions for the entire period since 1929. These reflect the incorporation of new data, mainly from the postwar censuses of manufactures and business. Also, in accordance with 1947 Census of Manufactures practice, the Standard Industrial Classification of 1945 was adopted as the basis of commodity classification. (See *Exhibit 1*.) Use of new basic data and a different classification scheme entailed a reworking of the estimates back to 1929. In the course of this, the opportunity was taken to review all of the earlier estimates and to introduce a number of improvements in methodology.

Exhibit 1.—*Commodity Classification of Producers' Durable Equipment*

Product group	Content in terms of the Standard Industrial Classification [1]
Furniture and fixtures	25
Cutlery and hand tools	3421–25
Fabricated metal products (except cutlery and hand tools)	34
Engines and turbines	351
Tractors	3521
Agricultural machinery (except tractors)	3522
Construction machinery	3531
Mining and oil-field machinery	3531, 3532
Metalworking machinery	354
Special-industry machinery n. e. c.	355
General industrial machinery	356, 3591
Office and store machines	357
Service-industry and household machines	358
Electrical machinery	36
Trucks, busses, and trailers	371
Passenger cars	371
Aircraft	3721
Ships and boats	373
Railroad equipment	374
Instruments	38
Miscellaneous equipment	(2)

1. This column refers to code numbers of groups listed in the 1945 Standard Industrial Classification for Manufactures (Office of Statistical Standards, Bureau of the Budget).
2. Includes producers' share of the following: Miscellaneous manufactures (Group 39); Motorcycles (Group 37511); Transportation equipment, n. e. c. (Group 3799); Motor vehicle heaters (no code); Textile mill products (Group 22); Miscellaneous fabricated textile products (Group 239); Lumber and wood products, except furniture (Group 24); Saddlery, harness, and whips (Group 3192); and Stone, clay, and glass products (Group 32).

The commodity flow method, summarized in the section on Personal consumption expenditures for commodities, is the principal one used in estimating producers' purchases of durable equipment. It accounted for 66 percent of the total in 1939 and 88 percent in 1947. (See *Exhibit 2*.)

For the 1929–39 period and for 1947, the availability of requisite data, mainly from the manufactures and trade censuses, made it possible to carry out the method in detail. The numerous estimating steps entailed segregating finished producers' durables from total manufacturing output and then tracing their flow and measuring their distributive costs so as to arrive at the final costs to purchasers. (See *Exhibits 3 and 4*.)

For years since 1940—except 1947—lack of industrial census materials has prevented a detailed application of the commodity flow method. For the period 1942 through the first half of 1946, the method was used in an abridged form to establish "secondary" benchmarks, based mainly on information, arising out of production-control programs, on the commodity breakdown of manufacturers' sales in the metal fabricating industries. Government purchases and exports were eliminated from the sales data, and imports were added. It was not possible, however, to trace the flow of manufacturers' domestic sales of finished equipment through the various distributive channels. Adjustment for inventory change was ignored and transportation allowances, wholesalers' markups, and retailers' markups were added to manufacturers' domestic sales by application of percentages obtained by straight-line interpolation of those computed from the 1939 and 1947 benchmarks.

Similar "secondary" benchmarks were made possible for the period 1950–52 by commodity data on manufacturers' shipments collected by the Bureau of the Census in its annual sample Survey of Manufactures. Government purchases and exports were deducted from manufacturers' sales, and adjustment was made for inventory change. Estimates for other steps in the procedure were based, for the most part, on relationships derived from the 1947 benchmark.

Estimates for the commodity flow segment of producers' durables for the remaining periods—1940–41, the second half of 1946, and 1948–49—were also prepared within the framework of the commodity flow method. With

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some variation among these periods, the method accounted separately for manufacturers' commodity sales, government purchases, transportation allowances, exports, imports, inventory changes, and wholesalers' and retailers' markups. The estimates for these periods are to be distinguished from the "secondary" benchmarks in that it was necessary to rely upon interpolations to derive manufacturers' commodity sales as well as the other major elements of the commodity flow buildup.

As described in the section on consumer commodities, the commodity flow portion of personal consumption expenditures was estimated for the years 1940–46 and 1948–53 by interpolating and extrapolating the 1939 and 1947 commodity group estimates very largely on the basis of sales of retail stores. This was feasible because a very high proportion of consumer commodities is purchased at retail (and purchases by nonconsumers do not bulk large in the retail sales totals).

For the producers' durables groups, however, the procedure of utilizing a single series for interpolation or extrapolation would not be valid. These goods are purchased in large volume both from manufacturers and wholesalers. Also, substantial quantities of durable equipment are channeled through manufacturing and wholesale trade for government use and export, and these (particularly government purchases) have fluctuated widely in relative importance. Continuation of the commodity flow approach for non-censal periods was necessary to provide the basis for separate measurement of these major elements.

For a few of the producers' durable groups, as shown in *Exhibit 2*, it has been found preferable to prepare estimates by methods other than the commodity flow. The largest such group is business passenger cars, which formed 17 percent of the 1939 total and 11 percent of the 1947 total. The general method used for this group consists of multiplying the estimated number of units purchased by producers by an appropriate average price. A similar procedure was used to estimate truck purchases for all years except 1947, 1951 (second half), and 1952—for which benchmark values were computed by the commodity flow method.

Expenditure data reported by the Interstate Commerce Commission were the basic source for estimating producers' outlays on railroad and transit equipment prior to adoption of the commodity flow method in 1947. The ships and boats series, of minor quantitative importance, was estimated by the commodity flow method in the 1929–38 period. For subsequent years, it has been derived mainly from 1939 and 1947 Census of Manufactures data and various information provided by the Maritime Administration and the Bureau of Customs.

Considerations regarding reliability

In the section describing the sources and methods of estimating consumption expenditures for commodities, the conclusion is reached that the Census-based benchmark totals for the large commodity flow segment of consumer commodities are "not markedly in error." Analysis of the essential differences in the application of this method to the consumer and the producer durables series indicates that even higher reliability may be attached to the latter. Two points, amplified later, are of main relevance.

First, the problem of allocation was less in the producer durable series. In larger degree than in the case of consumer commodities, manufacturers' sales of finished producer durables (apart from the special problem of government purchases) could be derived from detailed product data in the Census of Manufactures through (a) selection of items in their entirety or (b) allocation of "mixed" items having relatively little other use. In general, estimation and judgment—and hence possible error—are involved to a greater extent in allocation than in the selection of finished items.

Secondly, and more important, the successive estimating adjustments to manufacturers' sales required by the commodity flow method, as illustrated in *Exhibits 3* and *4*, were relatively smaller for producers' durable equipment than for consumption commodities.

As would be expected, commodity flow estimates of producers' durables other than for 1929–39 and 1947 are of lesser reliability. Nonetheless, the availability of substantial amounts of requisite data (particularly on manufacturers' sales) and the satisfactory record with regard to revisions, as set forth later, warrant the conclusion that the totals for these non-benchmark periods are generally adequate.

The estimates for 1940 and 1941 are least firmly based. For these years, it was necessary to interpolate manufacturers' commodity sales by industry sales data, which have significant limitations in such use, and statistical information on government purchases was sparse. In addition, the 1940–41 estimates are affected by weaknesses in the 1942 secondary benchmarks.

The secondary benchmarks prepared for 1942–46 are subject to error mainly from two sources: (1) elimination of parts and other unfinished products from sales at the manufacturers' level and (2) the deduction of government purchases, which it is believed may err in the direction of being somewhat too large. For most of the commodity groups, purchases of durable equipment by government during the war exceeded those by business and were difficult to estimate. The quality of source materials for the 1942–46 period varied, the data for 1944 being most adequate. The estimates for this period are believed, in general, to be considerably more reliable than those for 1940 and 1941, but less reliable than those for 1947 or 1950–52.

The estimates for 1948 and 1949 (as well as for the second half of 1946) represent interpolations carried out within the commodity flow framework. They benefit materially from the high quality of the benchmarks for proximate years, and may be regarded as generally satisfactory.

The 1950–52 secondary benchmarks, which rest principally on the Census Bureau's special annual surveys of manufacturing, are subject to sampling variability at the manufacturers' sales level—although for most producer durable groups this is small—and to errors stemming from the use of 1947 relationships to determine the major elements of distributive costs. Government purchases were of increased relative importance in this period, particularly in 1951 and 1952, but the available data on such purchases are believed to be reasonably accurate.

Exhibit 2.—*Producers' Durable Equipment, 1939 and 1947*

	1939		1947	
	Millions of dollars	Percent	Millions of dollars	Percent
Estimated by commodity flow method	2,749	66	14,542	88
Estimated by other methods:				
Trucks, busses, and trailers	489	12		
Passenger cars	715	17	1,889	11
Ships and boats	57	1	236	1
Railroad equipment	170	4		
Total producers' durable equipment	4,180	100	16,667	100

Concerning the commodity groups based on methods other than the commodity flow, it is to be noted that the largest one—business passenger cars—depends on an allocation between consumers and business which is based on limited information. However, errors in this allocation do not affect the gross national product total. The accuracy of the estimates for trucks and busses is impaired by the necessity of making several sizable adjustments on the basis of partial information.

The series on railroad and transit equipment is regarded as relatively accurate. The same generalization applies to the ships and boats series for 1929–39 and 1947—for which Census of Manufactures data furnished the principal basis of estimation—but the figures for other years are interpolations and extrapolations derived from not very satisfactory information.

A rough check on the postwar estimates of producers' durable equipment is possible through comparison with the results of the New Plant and Equipment Survey conducted jointly by the Office of Business Economics and the Securities and Exchange Commission. This series differs in definition from the producers' durable estimates (it is confined to nonagricultural industries, includes plant as well as equipment, but excludes purchases of equipment charged to current expense, to mention the major differences), and adjustments to secure comparability cannot be made in a fully satisfactory way. However, to the extent that comparisons are possible, they have been broadly reassuring for most of the postwar period.

The 1953 estimate of producers' durable equipment is preliminary. Pending the availability of the Census Bureau's Annual Survey of Manufactures, it has been based on an overall extrapolation technique utilizing New Plant and Equipment Survey results in conjunction with a variety of information for a few important commodities.

The balance of this section describes the estimates of producers' durable

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equipment prepared by the commodity flow approach—separately for 1929–39, 1947, 1940–46, and 1948–52—and by the other methods.

Commodity Flow Estimates, 1929–39

As already noted, the commodity flow method was used to derive estimates for the 1929–39 period for producer durable groups comprising 66 percent of the 1939 total. The method was employed extensively for this period also in the estimation of personal consumption expenditures for commodities (yielding 84 percent of the 1939 total), and was explained at some length in the section describing that series.

The application of the method in the estimation of producer durables and consumer commodities was substantially similar, so that no attempt has been made here to repeat the description in the earlier section. However, there were several particular aspects in which the methodology differed. Further, individual steps in the estimating procedure varied widely in relative importance between the two series and have marked bearing on their statistical reliability. These two types of differences may be summarized by reference to *Exhibit 3*, which outlines for 1939 the individual steps in the derivation of total producers' durables estimated by the commodity flow method.

Distribution of finished and mixed manufactured commodities, before deduction of government purchases of durable equipment.—(Line 1.) As noted in the section on consumer commodities, producers' items are defined as durable equipment for multiple use in production and with an average life of one year or longer. Even if the latter criterion were changed to as much as three years, it may be added, the statistical measure of producers' durables would be affected only slightly.

From product detail presented in the biennial Census of Manufactures, it was possible to select and assign in their entirety commodities which comprised 56 percent of the 1939 total (line 2) of manufacturers' production of finished producers' durables (before deduction of government purchases). Seven percent represented allocation from the combined group of finished commodities having appreciable use both by producers and consumers. The remaining 37 percent was derived from allocations of the "mixed" category. This category included commodities which could not be classified directly as wholly finished or unfinished. They belonged in part to the unfinished category and in part to the producer durable and/or consumer commodity categories, and required allocation among them.

The foregoing percentages were sharply affected by revision work undertaken for the 1954 edition of the NATIONAL INCOME supplement. In the earlier series shown in the 1951 edition, direct selection and assignment of values reported in the Census of Manufactures accounted for 84 percent of the 1939 factory value of producer durables (before the government deduction). Reduction of this figure to 56 percent stemmed from revisions of assignments and allocations based mainly on detailed product relationships developed for the 1947 benchmark study. In large degree, it reflected the fact that small allocations were made for many commodities which previously had been assigned wholly to producers' durables or to one of the other categories.

The changes in classification appreciably improved the estimates of manufacturers' output for producer durables of the type customarily charged to current expense, rather than amortized through depreciation allowances. On the basis of the greater product detail in the 1947 Census of Manufactures and additional research into product uses, many such items formerly regarded as producers' durable equipment were reclassified wholly or in part as intermediate products. In the segment of producers' durables represented by products commonly charged to current expense—such as miscellaneous types of small equipment—the problem of classification as between parts and finished equipment is at best difficult. Apart from this fringe segment—that is, for the preponderant part (well over 90 percent) comprised of items capitalized by business—the classification changes (mainly a general resort to more allocation) were a refinement which sharpened the accuracy of individual commodity groups but had little effect on the total.

Earlier, the generalization was made that, because of the greater emphasis on estimation and judgment, allocation from "mixed" groups tends to involve more error than does the direct selection of finished items. When the producer durable and consumer commodity series are assessed from this standpoint, comparison of the percentages of manufacturers' value derived from "mixed" groups—37 and 43 percent, respectively—may be somewhat misleading. It should be supplemented by the consideration that to a larger extent the producer-durable percentage was based on product values for which the allocation—and hence possible error—was relatively small.

There were two related statistical differences between the producer durable and consumer commodity estimates with respect to the classification of finished and mixed manufactured commodities.

(1) In the allocation of consumer commodities primary use was made of information on the distribution of sales by class of purchaser given in the Census of the Distribution of Manufacturers' Sales. Data reported under the designation of "Sales to industrial, commercial, professional, and institutional users" were taken to indicate the unfinished part. This could not be done in the case of producers' durables since finished producers' durables as well as unfinished commodities are included in sales to these user groups. It was necessary, therefore, to allocate the mixed category for producer durables on the basis of various types of specific commodity information, with some resort to judgment and outside expert advice.

(2) Unlike the procedure that could be followed in the consumer commodity estimates, where the government deduction was made jointly with all other nonconsumer elements except exports, this deduction was carried out as a subsequent, separate step. Since the available data for making the adjustment related to government purchases, the deduction was made after manufacturers' sales had been derived from manufacturers' production by adjusting for changes in inventories.

Deduction of government purchases of durable equipment.—(Line 5.) Apart from the fact that *Exhibit 3* refers only to commodities estimated by the commodity flow method, it is to be noted that line 4 is not a complete measure of government purchases of durable equipment. Rather, it is a special-purpose measure which, in general, is restricted in scope to business-type items.

Comprehensive information on government purchases of durable equipment was lacking. Federal purchases were estimated by drawing on a number of different sources, which generally pertained to one or more of the years 1937–39 only, and required adjustment for differences in definition or timing. For earlier years, it was frequently necessary to employ indirect methods, which for the most part were not satisfactory. Such methods were necessary for estimating State and local purchases in all years of the period.

The annual (1929–39) information on Federal aircraft purchases supplied by the Departments of the Navy and the Air Force was quantitatively the most important source of data on government purchases of durable equipment Aircraft purchases alone accounted for two-fifths of the estimated government total and considerably enhanced its accuracy.

The source most generally used in estimating Federal purchases of other items was the tabulations by the Bureau of Labor Statistics of orders under the Walsh-Healey Act, available on a quarterly basis beginning with 1937. These tabulations excluded orders classified as secret or confidential or amounting to less than $10,000. No adjustment for this incompleteness of scope was attempted. The reported data were always shifted ahead, generally by one quarter, to time them more nearly with actual deliveries. It frequently was necessary to estimate, and deduct, the amount of parts and other unfinished products included in the Walsh-Healey data, and also to adjust for differences in commodity definitions underlying these data and the producer durable series.

For a number of the commodity groups, data on Federal purchases were available for 1938 from the report of the Temporary National Economic Committee on *Study of Government Purchasing*. These data, too, generally required adjustment for unfinished products or for differences in commodity definition.

Data on Federal purchases of durable equipment furnished by the Treasury Procurement Division could be utilized for a few of the commodity groups. For two groups—electrical apparatus and equipment and office machinery—data obtained for part of the period from several large manufacturing concerns formed the basis for estimating Federal purchases.

The estimates of government purchases of durable equipment for the 1929–39 period are probably conservative. Walsh-Healey data, as mentioned, are not complete, and State and local purchases were estimated for only those commodity groups in which such purchases were presumed to be of appreciable magnitude.

In this period, however, government purchases were not large. Even an error of 20 percent—which seems unlikely, particularly in view of the relative

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accuracy of the aircraft item—would have affected the 1939 estimate of manufacturers' sales of finished producers' durables (line 6, *Exhibit 3*) by only 2 percent.

The estimated deduction for government purchases was negligible or less than 5 percent of manufacturers' sales before this deduction (line 4) in special industry machinery, mining machinery, general industrial machinery, metalworking machinery, agricultural machinery, tractors, fabricated metal products and instruments. It exceeded 15 percent only in construction machinery and aircraft.

Exhibit 3.—*Derivation of Total Producers' Purchases of Durable Equipment Estimated by the Commodity Flow Method, 1939*

[Millions of dollars]

1. Distribution of finished and mixed manufactured commodities, before deduction of government purchases of durable equipment	25,978
a. Finished	12,327
1. Producers' durables	1,714
2. Consumer commodities	9,188
3. Combined allocated to	1,425
a. Producers' durables	206
b. Consumer commodities	1,219
b. Mixed, allocated to	13,651
1. Producers' durables	1,112
2. Consumer commodities	8,210
3. Unfinished	4,329
2. Manufacturers' production of finished producers' durables, before deduction of government purchases [1a(1)+1a(3a)+1b(1)]	3,032
3. Subtract: Change in manufacturers' inventories	−23
4. Equals: Manufacturers' sales of finished producers' durables, before deduction of government purchases	3,055
5 Subtract: Government purchases of durable equipment	265
6. Equals: Manufacturers' sales of finished producers' durables	2,790
7. Add: Transportation charges	59
8. Equals: Manufacturers' sales inclusive of transportation charges, distributed to	2,849
a. Exports	499
b. Wholesalers	1,114
c. Retailers	168
d. Businesses and nonprofit institutions, for own use	1,068
9. Imports	17
10. Total purchases by wholesalers [8b+9]	1,131
11. Subtract: Change in wholesalers' inventories	6
12. Equals: Cost of goods sold by wholesalers	1,125
13. Add: Wholesalers' markups	249
14. Equals: Wholesalers' sales, distributed to	1,374
a. Retailers	267
b. Businesses and nonprofit institutions, for own use	1,107
15. Total purchases by retailers [8c+14a]	435
16. Subtract: Change in retailers' inventories	7
17. Equals: Cost of goods sold by retailers	428
18. Add: Retailers' markups	146
19. Equals: Retailers' sales	574
20. Producers' purchases of durable equipment estimated by the commodity flow method [8d+14b+19]	2,749

Other steps of procedure.—Manufacturers' sales of finished producers' durables (line 6) account for all producers' sales of finished durable equipment estimated by the commodity flow method; there are no nonmanufactured producer durables. In the derivation of consumer commodities by this method, the value of nonmanufactured foods (agricultural and fishery products) had to be accounted for and added to manufacturers' sales.

It has been noted that the problem of commodity allocation was less for producers' durable equipment than for consumer goods. Of further relevance in gauging the comparative reliability of the producers' durable series is that the estimates in it which had to be made to convert producers' value to final market value were relatively small. The central fact here is that only a comparatively small volume of producers' durables flows through the retail channel, whereas retailers handle the large bulk of all commodities purchased by consumers. In 1939, manufacturers' sales of finished durable equipment were virtually the same as the final value of producers' durables. In broad outline, the deduction of manufacturers' sales flowing into exports was approximately offset by the additions for wholesalers' and retailers' markups on commodities flowing through trade channels. Only these three adjustments were of any quantitative importance; even unexpectedly large errors in them would not have had substantial effect on the final total.

Two further, minor differences in the application of the commodity flow method to producer durables and consumer commodities in the 1929–39 period may be noted.

First, in the consumer commodity series exports were eliminated partly at the producer level and partly at the wholesale level. In the producers' durable estimates, exports were eliminated in their entirety at the producer level. They were deducted (in step 8a) as part of the distribution of manufacturers' sales, inclusive of transportation charges.

The second difference is that the consumer commodity estimates, but not the producer durable estimates, required a final adjustment for the addition of general retail sales taxes.

Commodity Flow Estimates, 1947

About nine-tenths of the 1947 total value of producers' durable equipment was estimated by the commodity flow procedure. For the producer durable series, the 1947 statistical basis for this procedure was an improvement over that for the 1929–39 period. The principal factors were the greater extent of product detail furnished by the 1947 Census of Manufactures and the availability from specific commodity studies of more information on product uses. These factors facilitated and strengthened the process of selecting and allocating individual product items to arrive at manufacturers' sales of finished producer durables. As in the 1929–39 period, the adjustments necessary to convert manufacturers' sales to final market value did not bulk large in the procedure and were virtually offsetting.

Lack of data on distribution of manufacturers' sales and on retailers' operating expenses which had been provided in previous censuses handicapped the producer durable estimates comparatively little. As discussed earlier, the sales distribution data cannot be employed in these estimates for the allocation of "mixed" commodities in the classification process. Further, distributors' markups—for which both the sales distribution and retail operating expense data would have proved useful in the 1947 work—are relatively small elements of the producers' durable totals.

The following description of the 1947 commodity flow estimates of producers' durable equipment is geared to *Exhibit 4.* Like the description just given for 1929–39, it does not repeat numerous aspects of the basic commodity flow method already covered in the section on Personal consumption expenditures for commodities.

Classification of manufactured products

In the classification of manufactured product items, stricter criteria with respect to commodity allocation were employed for producer durables for 1947 than in the 1929–39 estimates published in earlier national income reports. In those estimates, simple assignments had been the general rule; and possible allocations of commodities involving durable equipment use in either very large degree or very minor degree were passed over. While reflecting importantly a lack of more detailed information on product composition and use, this procedure rested on the general assumption that the inclusions and exclusions entailed by such resort to direct selection and assignment would tend to offset.

In the commodity flow benchmark estimates for 1947, greater use of small allocations was facilitated, and indicated, by the finer product detail in the 1947 census—about 6,100 separate products as compared with about 4,000 in the 1939 census—and by the extensive amount of specific commodity information that was available from both public and private sources. Assignment and allocations made by the National Income Division staff were checked and often modified on the basis of special commodity studies and the advice of outside experts. The most important such check was furnished by the Division of Interindustry Economics of the Bureau of Labor Statistics, which for a study of similar nature drew not only on published information but also on data obtained from special inquiries and other unpublished sources. For the producer durables work, an important instance of the latter was a sample survey undertaken by the Bureau of the Census on the types of items included as "materials" (in contrast to plant and equipment) on reports to the 1947 Census of Manufactures.

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As already noted, relationships developed from the more intensive 1947 classification process were used for review and revision of the manufacturers' sales estimates for 1929–39 (as well as for other, "secondary benchmark" periods). By this revision, the 1939 proportion of manufacturers' sales of finished producers' durables (before deduction of government purchases) obtained through allocations from the combined or mixed categories was increased from 16 percent to 44 percent. Although, it may be added, the corresponding figure for 1947 is only 30 percent, the reduction from the revised 1939 percentage resulted largely from the inclusion of railroad equipment and trucks in the 1947 commodity flow table.

From the commodity analysis summarized in line 1 of *Exhibit 4*, manufacturers' sales of finished producers' durables (before deduction of government purchases) were obtained by summing three of the listed categories. These include producers' durables (1) assigned directly as finished, (2) allocated from the combined category of finished consumer and producer durable goods, and (3) allocated from "mixed" commodities belonging in part to the unfinished category.

The detailed commodity figures were next combined into broad categories as listed in table 32, Part V. Further steps in the commodity flow procedure—from the elimination of government purchases shown in line 3 through the derivation of the final purchase value in line 16—were carried out in terms of the broad commodity groupings.

Government purchases of durable equipment

The estimates of Federal and State and local government purchases of producers' durables utilized in the 1947 commodity flow work were prepared largely by the Division of Interindustry Economics of the Bureau of Labor Statistics. Since they were based for the most part on reported expenditure data and constituted (for all commodity groups combined) only a 3 percent adjustment of manufacturers' sales, it is very improbable that error in the government-purchase estimates was the source of any appreciable inaccuracy in the producer durable benchmarks.

In deriving Federal Government purchases, which formed about half of the total government purchases for which an estimate was required, the Bureau of Labor Statistics obtained detailed expenditure data, by commodities, for the Army (including Air Force), Navy, Post Office, War Assets Administration, Bureau of Public Debt, Bureau of Engraving and Printing, and Government corporations (in total). In addition, a single control total of expenditures for all other civilian agencies combined was furnished by the Treasury Department. This was distributed by commodities according to the pattern shown by a sample of five agencies: Justice Department, Public Health Service, Bureau of Old-Age and Survivors Insurance, Patent Office, and Food and Drug Administration.

For a few commodities, where adjudged more reliable, estimates of Federal Government purchases based on tabulations of contracts awarded under the Walsh-Healey Act were substituted by the Bureau of Labor Statistics for those derived from the agency expenditure data. The series were also checked with BLS industry analysts, and modified in a few cases on the basis of their independent estimates relating to Government purchases of durable equipment.

In deriving the series on State and local government outlays for durable equipment, the Bureau of Labor Statistics first prepared separate estimates for States, cities, counties, and townships, towns, and special districts according to a five-way functional breakdown: highways, hospitals, schools (primary and secondary), higher education, and "all other." Equipment expenditures under these five functions were next summarized for all State and local governments and allocated to the various commodity groups. In the data sources utilized, noted below, the commodity breakdowns either were available along with the totals by types of governmental unit and function or could be estimated satisfactorily from collateral information.

The estimates of equipment expenditures for highway purposes, which comprised about three-fourths of the State and local aggregate for 1947, were based on data from the Bureau of Public Roads. The necessary data for hospitals were compiled from directories of the American Hospital Association. The Office of Education—both through its regular reports and special compilations of unpublished data—was the principal source of the estimates relating to primary and secondary schools and to higher education. Basic data for the estimates in the "all other" category of functions were taken from reports by the Bureau of the Census on State, city, and county government finances, as well as the decennial census publication on *Government Finances in the United States: 1942*. The most recent equipment data for counties referred to 1946; they were moved forward to 1947 by data for cities. Equipment purchases by townships, towns, and special districts were available only for 1942; they were extrapolated to 1947, separately for broad functions, by means of estimates for counties.

Exhibit 4.—*Derivation of Total Producers' Purchases of Durable Equipment Estimated by the Commodity Flow Method, 1947*

[Millions of dollars]

1. Distribution of finished and mixed manufactured commodities, before deduction of government purchases of durable equipment	81,993
a. Finished	42,840
1. Producers' durables	10,076
2. Consumer commodities	29,053
3. Combined, allocated to	3,711
a. Producers' durables	734
b. Consumer commodities	2,977
b. Mixed, allocated to	39,153
1. Producers' durables	3,657
2. Consumer commodities	18,494
3. Unfinished	17,002
2. Manufacturers' sales of finished producers' durables, before deduction of government purchases [1a(1)+1a(3a)+1b(1)]	14,467
3. Subtract: Government purchases of durable equipment	451
4. Equals: Manufacturers' sales of finished producers' durables	14,016
5. Add: Federal manufacturers' excise taxes	137
6. Add: Transportation charges	339
7. Add: Imports	46
8. Subtract: Changes in wholesalers' inventories	139
9. Add: Wholesalers' markups	1,437
10. Subtract: Exports	2,154
11. Equals: Sales to retailers and final users	13,682
a. Manufacturers' and wholesalers' sales to final users (11–11b)	10,385
b. Retailers' purchases	3,297
12. Subtract from retailers' purchases: Change in retailers' inventories	144
13. Equals: Cost of goods sold by retailers	3,153
14. Add: Retailers' markups	1,004
15. Equals: Retailers' sales	4,157
16. Producers' purchases of durable equipment estimated by the commodity flow method (11a+15)	14,542

For most of the commodity groups the estimates of government equipment purchases required allocation between finished and unfinished products. This was done (for Federal and State and local government purchases combined) on the basis of the proportions used to allocate factory sales.

Other steps in the procedure

Deduction of government purchases of durable equipment yielded manufacturers' sales of finished producers' durables, as shown in line 4 of *Exhibit 4*. Up to this stage, the commodity flow procedure for producer durables differed from that for consumer commodities in respect to (1) the elimination of government purchases as a subsequent, separate step instead of in the classification of Census of Manufactures data, (2) the omission of any adjustment for manufacturers' inventory changes (all data relating to durable equipment were reported on a shipments, or sales, basis in the 1947 Census of Manufactures), and (3) the omission of any allowance for production outside of manufacturing since there are no nonmanufactured types of producer durable commodities. Line 4 of the exhibit, therefore, corresponds directly to line 6 of the 1947 commodity flow exhibit for personal consumption commodities.

With the exception that inventory adjustments were, in general, required for the biennial 1929–39 benchmarks, the 1947 procedure for deriving manufacturers' sales of finished producers' durables was generally the same as in the earlier work. Thereafter, the procedure—like that for consumer commodities—required modification principally because of the unavailability of

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1947 census data on the distributions of manufacturers' sales. These data, together with corresponding distributions for wholesalers, had been used in the basic commodity flow method for measuring the volume of producer durables moving from manufacturers through wholesalers, and then through retailers. In essence, they provided the basis for (1) immediately segregating manufacturers' direct sales of finished durable equipment to final users (businesses and nonprofit institutions), (2) applying wholesalers' markups to goods sold by manufacturers to wholesalers and then sold directly to final users, (3) applying cumulative wholesalers' and retailers' markups to goods sold by manufacturers to wholesalers and then sold by them to retailers, and (4) adding retailers' markups to sales made directly by manufacturers to retailers.

In the 1947 method, omission of sales distributions from the manufacturing census required foregoing the commodity flow method for wholesaling, since data were lacking for estimating the amounts of finished durable equipment purchased by wholesalers. Instead, as in the parallel case of consumer goods, the resort was to estimate total wholesalers' markups (and inventory changes) for each commodity and then to determine the amount allocable to finished producer durables. On the basis of this innovation, and given the inability to segregate manufacturers' direct sales to final users, a combined total consisting of sales to final users and to retailers was derived. (*Exhibit 4*, line 11.) The latter sales were then estimated directly as the sum of retailers' purchases from (1) manufacturers (by reliance on 1939 sales distribution patterns) and (2) wholesalers (largely as a byproduct of the substitute procedure for deriving wholesalers' markups). Through this estimation of retailers' purchases it was thus possible to (1) continue the commodity flow approach for retailing and (2) obtain as a residual manufacturers' and wholesalers' sales of finished durable equipment to final users.

By comparison of the 1939 and 1947 commodity flow exhibits, it can be seen that the modifications of method were basically similar for producers' durables and consumer commodities. For both series, necessary abandonment of the commodity flow approach to wholesaling and the estimation of wholesalers' markups (and inventory changes) through a special substitute procedure yielded a composite total of sales to (1) retailers and (2) final users. And for both series, direct estimation of one of these elements permitted the commodity flow approach (as modified) to be carried through to completion. A point of specific note is that the element of direct estimation—retailers' purchases in the case of producer durables and producers' direct sales to final users in the case of consumer commodities—was chosen because it was very much the smaller. The alternative of deriving it as a residual between the total and a direct estimate for the larger element would have been a weaker procedure.

There follows, with reference to *Exhibit 4*, a brief outline of the various steps entailed in converting manufacturers' sales to the final value of producers' purchases of durable equipment estimated by the commodity flow method.

Addition of excise taxes, transportation charges, and imports.—It may be seen that the first three adjustments of manufacturers' sales of finished producers' durables consisted of the addition of Federal manufacturers' excise taxes, transportation charges, and imports. For these three estimates—all of minor magnitude—procedures were similar to those already described for consumer commodities. It may be noted, however, that the computations of transportation charges were not based solely on Interstate Commerce Commission data; for three of the commodity groups (Electrical machinery, Trucks and buses, and Railroad equipment) estimates obtained from the Bureau of Labor Statistics took account of means of transport other than rail. Also, the estimates of imports relied mostly on allocation (on the basis of the producer-durable share of manufacturers' sales of the same products), rather than on a selective matching of import data against final product data, as was done for the consumer commodity estimates.

Subtraction of wholesalers' inventory changes.—Ratios of inventory change to sales were computed for a detailed list of wholesale commodities by extrapolating beginning-year inventories as shown in the 1948 Census back to the beginning of 1947 on the basis of Office of Business Economics data for merchant wholesalers, modified (as in the consumption commodity estimates) to include manufacturers' sales branches. The ratios of inventory change to sales were converted into ratios of inventory change to markups, and these were applied to wholesalers' aggregate markups (derived in the step below) to obtain aggregate inventory changes by wholesale commodity groups. The wholesale commodity estimates were next arranged according to the classification used in the producer durable series, and the producers' share (as distinct from the consumer and intermediate) was allocated by proportions computed for wholesalers' aggregate markups.

Except for this final step of allocation, the 1947 estimates of wholesalers' inventory changes were prepared by the Bureau of Labor Statistics.

Addition of wholesalers' markups.—Basic to this step in the 1947 method was the estimation of wholesalers' margins by wholesale commodity groups. This was a four-step procedure—performed by the Bureau of Labor Statistics—which has been described in the section on consumption expenditures for commodities. The fifth step in the BLS analysis of wholesaling, which broke down the total margins by customer classes, could not be employed for the producer durable series to indicate the proportion of the total that was allocable to finished commodities. (This was chiefly because the "industrial users" category included sales of parts and other unfinished products as well as finished equipment for the manufacturers' own use.) Instead, after the wholesale commodity margins had been arranged according to the producer durable classification, they were allocated by the National Income Division to the producer and other (consumer and unfinished) categories chiefly on the basis of the original allocations used for manufacturers' sales.

Subtraction of exports.—Export commodity data were obtained from the Census Bureau's detailed tabulations. The same allocation factors generally were applied to each specific commodity as had been applied to manufacturers' sales.

Distribution of sales to retailers and final users.—At this point, the 1947 commodity flow procedure for producers' durables arrived at the composite total of sales to retailers and final users discussed above. Sales to retailers ("Retailers' purchases") were estimated separately, and sales to final users thereby became available as a residual estimate. Unlike retailers' purchases, these were at final market value and required no further adjustment.

Retailers' purchases, as noted, were estimated as the sum of purchases from manufacturers and from wholesalers. In the estimation of the former, it was assumed that the same proportion of a given type of producers' durable equipment was sold by manufacturers to retailers in 1947 as had been shown for 1939 by the sales distributions data in the Census of Manufactures. Manufacturers' sales to retailers thus computed were converted to retailers' purchases by adding excise taxes, where applicable, and a transportation allowance. Retailers' purchases from wholesalers were derived from the BLS study (noted above) that formed the basis of the estimates of wholesalers' markups. In this study, step 5 obtained breakdowns of wholesalers' sales (by wholesale commodity groups) according to customer classes. The amounts of wholesalers' sales to retailers for the various wholesale commodity groups were arranged according to the producer durable classification, and then were allocated to the producer durable and other categories by use of the same allocations that had been employed at the manufacturers' sales level. This procedure was thus directly analogous to that followed for wholesalers' markups.

Subtraction of retailers' inventory changes.—The amount of retailers' inventory change to be subtracted from retailers' purchases so as to derive the cost of goods sold by retailers was estimated by (1) computing ratios of inventory changes to retailers' purchases by line of trade and (2) applying these ratios for relevant lines of trade to the various producers' durable groups. Paralleling the procedure for consumer commodities, inventory change-sales ratios based on Office of Business Economics data were converted for this purpose to inventory change-purchase ratios.

Addition of retailers' markups.—The cost of goods sold for the various producer-durable commodity groups was multiplied by markup rates computed for 1948 by weighting selected subsamples of Internal Revenue Service returns by Census of Business sales data, and then extrapolated from 1948 to 1947 by means of Internal Revenue and trade association data. In this instance, too, the procedure was closely similar to that described for personal consumption commodities.

Producers' purchases of durable equipment estimated by the commodity flow method.—Addition of retailers' markups to the cost of goods sold by retailers yielded retailers' sales of finished producers' durables. (Line 15.) There remained only to combine retailers' sales and manufacturers' and wholesalers' sales (line 11a) in order to obtain the final total of producers' durable equipment estimated by the commodity flow method. (Line 16.)

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Commodity Flow Estimates, 1940–46

As noted in the introductory remarks, a modified commodity flow method was followed in estimating producers' durable equipment for 1940–46 for those groups to which this method was applied in detail for the 1929–39 period. In terms of the basic step of estimating manufacturers' sales, the figures for 1942–46 may be characterized as "secondary" benchmarks and those for 1940–41 as interpolations.

The same commodity flow steps, except for omission of the adjustments for inventory change, were followed in deriving estimates for 1940–46 as for the earlier period. Because of the nature (or lack) of available source materials, however, the methods, described briefly below, were different.

Derivation of manufacturers' sales

For most of the producer durable groups, comprehensive and detailed commodity sales estimates (before deduction of government purchases and exports) could be derived for the years 1942–45. The primary source was the reports submitted on Form WPB–732 by the largest private and government-owned plants engaged in fabricating or assembling metal products beyond the primary stages. These reports—made quarterly from the fourth quarter of 1943 through the second quarter of 1945 and then monthly through the second quarter of 1946—were collected and tabulated by the Bureau of the Census for the War Production Board, and published in the Census *Facts for Industry* releases. The "732" tabulations accounted for an estimated 90 percent of sales in the metal-products industries covered. These were raised to full coverage on the basis of similar commodity information for the first quarter of 1945 compiled by the Census Bureau for the Smaller War Plants Corporation.

The detailed commodity data derived from the "732" reports as supplemented by the Smaller War Plants Corporation data, were extrapolated from the fourth quarter of 1943 back through the third quarter of 1942 on the basis of unpublished commodity sales figures collected and compiled by the Census Bureau for the War Production Board. These compilations covered about 3,100 large metal-products plants accounting for four-fifths of all fabricated metal products in the first quarter of 1945.

The individual commodity data were then extended from the third quarter of 1942 through the first quarter of that year by less detailed commodity data compiled from an earlier and smaller Census-War Production Board sample.

The number of individual commodity items which could be derived from the "732" and related data was substantially less than that given in the Census of Manufactures. The necessary product assignments and allocations were made almost entirely on the basis of relationships developed for 1947, although in some instances the availability of specific information from either Government or private sources permitted a modification of the postwar ratios. Apart from failing to account for changed composition of the commodity groups between the war and postwar periods, the general use of 1947 relationships in the classification of manufacturers' sales may have resulted in some understatement of the allowance for parts and other unfinished products (and an overstatement of finished commodity sales) because of their probably more widespread use during the war.

Estimates of manufacturers' sales of producers' durables (before deduction of government purchases and exports) were obtained for 1940 and 1941 by interpolation between the 1939 and 1942 estimates on a commodity group basis. For this purpose, commodity data were almost wholly lacking.

As much information as possible was gathered from specifically relevant sources. For example, the mining machinery series was interpolated by an index based on capitalization of the Oklahoma tax on sales of oil field equipment and of the California tax on sales of oil well and refining supplies. As part basis for interpolation of the metal working machinery series, sample figures on machine tool sales were obtained from the War Production Board. For tractors, comprehensive sales data were available from the Bureau of the Census. However, it was also necessary to make considerable use of less direct indicators, such as industry payroll and sales data, chiefly the annual corporate sales tabulations of the Internal Revenue Service.

Subtraction of government purchases

For the period under review (except 1940 and 1941), estimates of government purchases of producers' durable equipment were made for four broad categories—Federal military agency purchases, Federal civilian agency purchases, Federal Government purchases for Government-owned defense plants, and State and local government purchases. Federal military purchases were computed for the years 1942–45 as it was believed that such purchases during 1946 were negligible.

Navy Department purchases of selected items of equipment were estimated largely on the basis of unpublished data on contracts awarded by fiscal years. As a rough allowance for the lag between contract awards and deliveries, these data were treated as deliveries during the calendar year in which the fiscal year ended. For the most part, the data used to derive Army purchases for the years 1942–45 (exclusive of Government defense plants) were those available on a calendar-year deliveries basis in *Statistical Review, World War II, A Summary of ASF Activities*, Statistics Branch, Control Division, Hq., A. S. F., War Department. For both the Navy and Army, the producer-durable share of total purchases for a given type of commodity was derived either by the application of producer-total ratios observed in manufacturers' sales allocations or by the selection or omission of items in their entirety.

For some commodity groups, the largest of which was office and store machines, the Navy and Army data were not available in sufficient product detail to use as the basis for estimating military agency purchases. Instead, the estimates were derived from "claimant agency" data shown in Census-War Production Board *Facts for Industry* reports. However, these data, which recorded the value of products allocable to military claimants, were not strictly appropriate for the purpose. It is believed that they might also have covered to some extent products allocable to final users (such as privately owned manufacturing plants engaged in war output).

Federal purchases of equipment for Government defense plants were estimated in the aggregate for the entire period 1942-45 from data furnished in *Report on Government Owned Industrial Plants As Of September 30, 1947*, War Assets Administration. This aggregate was distributed by years on the basis of the equipment value of Federally-financed facilities put in place, as shown by the Census-Civilian Production Administration report on *Facilities Expansion, July 1940–June 1945*. It was then necessary to distribute the total for each of the years 1942–45 among the producer durable commodity groups. This was done mainly on the basis of the claimant agency data noted above—after, however, they had been adjusted (largely on the basis of the Army and Navy tabulations) to exclude estimated amounts allocable to military agencies as distinct from Government-owned defense plants.

The methodology underlying the 1942–45 estimates of equipment purchases by Federal civilian agencies and by State and local governments is described below under "Commodity Flow Estimates, 1948–52."

Chiefly because of weaknesses centering in the estimates of Federal equipment outlays for Government defense plants, the government-purchase deductions for the years 1942–45 may be somewhat too large, and the breakdowns by commodity groups are clearly subject to considerable error. This limitation of the government-purchase totals, however, may be viewed in conjunction with the probable overstatement of the manufacturers' sales estimates (as noted above) because of inadequate elimination of parts and other unfinished products. The two biases, though not at all necessarily of similar magnitude, would tend to offset.

For the years 1940 and 1941, the principal source of data for estimation of government purchases of producers' durable equipment was the Census-CPA report on *Facilities Expansion, July 1940–June 1945*. From this report, ratios of non-Federally financed equipment put in place to total equipment put in place were calculated for industries considered to be the main purchasers of the commodoties in each major producer durable group. These ratios were used to interpolate between ratios for 1939 and 1942 of private domestic sales to total manufacturers' sales (before deduction of government purchases and exports), and the ratios so derived for 1940 and 1941 were applied to total manufacturers' sales for those years. In this process, explicit allowances for State and local government purchases were made for some commodity groups in order to avoid evident bias.

The facility equipment data were not very appropriate for this type of use. The matching of equipment values classified by industry of purchaser with producers' durable equipment purchased was necessarily quite rough.

Other adjustments

As in the census-year benchmark estimates, the export adjustments for 1942–46 and the import adjustments for 1940–46 were based on detailed

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commodity tabulations of the Bureau of the Census. To them were applied the same producer-total ratios as used in deriving manufacturers' sales. For 1940 and 1941, exports were covered in the step eliminating government purchases.

For each of the producer durable groups, transportation charges, wholesalers' markups, and retailers' markups were estimated for the years 1940–46 by applying percentages obtained by straight-line interpolation of the percentages which each of these several elements constituted of manufacturers' sales of finished producers' durables in the benchmark years 1939 and 1947.

Commodity Flow Estimates, 1948–52

For the commodity flow portion of the producers' durable series, the method for 1948–52 entailed the following series of estimates: (1) derivation of manufacturers' sales (prior to the government deduction) for the major commodity groups, (2) addition of Federal manufacturers' excise taxes, (3) deduction of government purchases, (4) addition of transportation charges, (5) deduction of exports, (6) addition of imports, (7) subtraction of changes in wholesalers' and retailers' inventories, and (8) addition of wholesalers' and retailers' markups.

Derivation of manufacturers' sales

The Census Bureau's annual Survey of Manufactures provided the basis of the estimates of manufacturers' sales (before deduction of government purchases) for the years 1950–52. Covering all large establishments and a representative sample of smaller establishments, the survey collected data on manufacturers' shipments (sales) which, with respect to producers' durable equipment, were available in satisfactory detail and showed generally small sampling variation. In the task of classifying the census product data, the assignments and allocations used were largely carried over from the 1947 benchmark study.

For the various producer durable groups, the commodity sales estimates for 1948 and 1949 largely represent interpolations of the 1947 and 1950 benchmarks on the basis of industry sales data from the manufac urers' sales series of the Office of Business Economics—derived from a sample of reporting companies which currently account for about 45 percent of total manufacturing sales. Exceptions to this general procedure were afforded by construction machinery and aircraft, for which groups Census current reports on manufacturers' commodity sales were available. In addition, the 1948–49 interpolations for cutlery and hand tools and railroad equipment were made directly in terms of final cost to purchasers, not manufacturers' sales. Sales of hardware stores from the Census Bureau's monthly retail trade sample were used for the cutlery and hand tools group; Interstate Commerce Commission data on equipment purchases of Class I railroads, for the railroad equipment group.

Use of industry data on which to base the movement of commodity sales has drawbacks. The data include indeterminate amounts of unfinished and consumer products; and they are also inappropriate for any particular group to the extent of including secondary products classified in other producer durable groups and of omitting products in that group included in the sales of manufacturing industries other than the one used for an index.

Deduction of government purchases

In the derivation of Federal military agency purchases of producers' durable equipment for the years 1948–51, estimates for 1947 and for the latter half of 1951 were used as benchmarks. The 1947 estimates, as already described, were based on detailed expenditure data reported by the Army (including Air Force) and Navy. The second-half 1951 figures were made from quarterly data reported by the National Production Authority on the basis of tabulations by the Bureau of the Census from a sample of approximately 8,000 of the largest plants engaged in fabricating or assembling metal products. The plants included in the sample had produced approximately 90 percent of the products of these industries in 1947.

For the reporting plants, the NPA data for the third and fourth quarters of 1951 showed for each commodity (in the same detail as the Census Annual Survey) both total sales and those having military rating symbols. Only total sales, however, were available for the first and second quarters. To obtain estimated purchases by Federal agencies for the third and fourth quarters, military-rated sales were raised to full coverage by the relationship of total sales for the year reported in the Census Annual Survey to those shown in the NPA reports. This procedure probably erred somewhat in the direction of overstating Government purchases for items which could be used either as a facility or as a component, since some purchases of this type by private firms were accorded military ratings. In line with the usual procedure, the share of total purchases allocable to the producers' durable category was estimated from proportions applied in the allocation of sales at the manufacturing level.

For the period between 1947 and the third quarter of 1951, estimates of Federal military agency purchases were obtained through interpolation by a series based on Navy contracts awarded and Army obligations incurred. These data, available in considerable commodity detail, were moved forward six months so as to make them reflect more nearly the period of actual deliveries.

Purchases by Federal military agencies during 1952 also were based very largely on the NPA data. However, for one important group—metalworking machinery—the military rating treatment by NPA differed from that for other commodities. It included many purchases by private firms and, therefore, could not be used to derive purchases by Federal military agencies. For this commodity group, military purchases during 1952 were estimated at the same proportion of manufacturers' total sales as obtained for the last quarter of 1951.

For purchases of producers' durable equipment by Federal civilian agencies, benchmark estimates were prepared for 1951 from information collected by the Bureau of Labor Statistics from the individual agencies. These estimates closely paralleled the ones that were made for the 1947 benchmark study. Figures for 1948–50 were obtained by interpolation on the basis of the National Income Division series (appropriately adjusted) on Federal purchases of goods and services for nonwar purposes. The same series—available only in total and not in a commodity breakdown—was used to obtain estimates for 1942–46 and 1952 through extrapolation of the 1947 and 1951 benchmarks.

With respect to the State and local government series, the 1947 benchmark figures were extrapolated to other years of the 1942–52 period by estimates of equipment outlays by types of governmental unit and function, based on data from governmental finance reports of the Bureau of the Census. To derive these estimates, reported data on total capital outlays for equipment for each type of unit were broken down by broad functional categories according to Census data on total capital outlays (covering land and buildings as well as equipment).

Other adjustments

Following the deduction of government purchases to arrive at manufacturers' sales of finished durable equipment by commodity groups, the first adjustment made in the 1948–52 estimates consisted of the addition of Federal manufacturers' excise taxes. For this relatively small item, concentrated largely in the truck series, data were readily available from Internal Revenue reports. Transportation charges were next added to the commodity group estimates of manufacturers' sales. For this element, resort was mainly to the application of 1947 percentages, although for some groups the figures based on these percentages were modified after a summary check into the annual changes indicated by ICC data on freight revenue.

The export and import adjustments of the various producer durable groups for 1948–52 were made on the same basis as for the prior period. Detailed product tabulations of the Bureau of the Census were grouped into producer durable categories and then allocated on the basis of proportions utilized in the classification of manufacturers' sales.

Adjustments for changes in wholesalers' and retailers' inventories—generally of negligible importance—were based mainly on the inventory series for trade maintained by the Office of Business Economics. Inventory changes computed for the benchmark year 1947 for major commodity groups were projected by the OBE relevant line-of-trade figures.

The addition of wholesalers' and retailers' markups to manufacturers' sales after 1947 was made through application of 1947 relationships.

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Other Methods

Business motor vehicles

The passenger car estimates have been discussed in the section on Personal consumption expenditures for commodities. They consist of the business share of the combined consumer-business total of new car purchases and gross margins on used car sales. The percentage allocation between consumers and business is based on limited information for the 1934–37 period and has been held constant except for modifications in the World War II period to take account of the probable effects of rationing.

The estimation of producers' purchases of trucks, truck trailers, and busses has varied during the period. For the years 1929–41, the method was essentially one of multiplying number of units by an estimated average price. For 1947, the second half of 1951, and 1952, the commodity flow method was used. Estimates for other years of the period after 1941 represent interpolations on the basis of a series obtained by multiplying number of units by average price.

For the 1929–41 period, the number of trucks and busses purchased by producers at retail was derived by deducting estimated government purchases from comprehensive totals reported annually by the Automobile Manufacturers Association in *Automobile Facts and Figures*. The number of units purchased by producers directly from manufacturers was taken as 20 percent of the number purchased at retail. This was a rough estimate based on data in the 1929, 1935, and 1939 Census of the Distribution of Manufacturers' Sales covering sales of trucks, busses, passenger cars, bodies, parts, and accessories.

The number of trucks and busses purchased directly from manufacturers was multiplied by an annual average factory price as computed from data in *Automobile Facts and Figures* and raised to cover transportation charges. The latter were estimated on the basis of information provided by the Office of Price Administration. Producers' purchases at retail were multiplied by this average price series after it had been further increased to allow for dealers' markups, computed from data on passenger cars published in *Automobile Facts and Figures*.

The estimated total value of trucks and busses purchased by final users both directly and at retail was adjusted to include bodies sold separately from chassis.

Purchases of truck trailers were estimated separately and added. The value of truck trailers produced, benchmarked on Census of Manufactures data for 1935, 1937, and 1939, was adjusted to exclude exports and government purchases and to include transportation charges. A markup allowance was added to the estimated portion of the total sold through dealers.

The methods employed for making the prewar estimates were not suitable for the years 1942–45. The price series used in the 1929–41 estimates were greatly affected during the war by the large volume of high priced military vehicles. Also, the methods of estimating government purchases would not have been satisfactory for the war period, when such purchases were of substantial magnitude.

Data on the numbers of heavy, medium, and light trucks and busses shipped to civilian domestic users—the approximate measure desired—were supplied for the years 1942–45 by the Office of Defense Transportation. Separately for the three size classes of vehicles, numbers shipped were multiplied by price series representing special estimates for 1939 extrapolated to 1942 by indexes of the Bureau of Labor Statistics and to 1945 by unpublished data of the Agricultural Marketing Service. The weights used were for 1939 in order to exclude the effects of war-period military purchases.

The Office of Defense Transportation also provided figures on the number of truck trailers shipped for civilian domestic use during the years 1942–45. These totals were multiplied by an average 1939 factory value extrapolated to 1942 and then to 1945 by the series for light trucks (noted above) used in estimating new truck purchases.

Dealers' gross margins on sales of used vehicles, assumed to be reflected in the average price data used for the 1929–41 estimates, were explicitly added to the series beginning with the 1942 estimates. For the years 1942–45, such margins were taken as 15 percent of estimated purchases of new trucks and busses.

For the interpolating series, the 1946 and 1947 estimates involved, first, derivation of the total factory value of domestic sales of trucks and motor coaches, on the basis of data of the Automobile Manufacturers Association on the number of units sold and average factory value. The Census Bureau reported data on factory sales of truck trailers. These series were converted to final purchase values by adding the same percentage allowances for transportation costs and dealers' markups as used for 1941, deducting estimated government purchases, and adding 10 percent (again largely arbitrary) of the final value of new trucks and busses for dealers' margins on sales of used vehicles.

The next step was the computation of a series to interpolate between 1947 and the third quarter of 1951. Beginning with that quarter, the availability of NPA Government-purchase data (as noted above) again made the application of the commodity flow method feasible.

This interpolating series consisted of (1) the value of trucks and busses, derived as the product of estimated average price and the sum of new truck registrations and domestic shipments of motor coaches adjusted to exclude civilian government purchases and (2) the value of truck trailer shipments, based on current Census reports. For the period 1947–49, average prices used for the truck and bus series were computed from Automobile Manufacturers Association data on the total factory value of sales and number of units sold, with adjustment to exclude exports as reported by the Bureau of the Census. To forestall the possibility that shipments of military vehicles might again make the price series based on Automobile Manufacturers Association data inapplicable to private purchases, a different method of estimating average price was adopted for 1950 and 1951. The 1949 average price of trucks and busses was extended to the third quarter of 1951 by a quarterly series computed in somewhat indirect manner. A constant dollar series was first obtained by multiplying new registrations for each of six size classes (from the R. L. Polk Co.) by a rough estimate of average price for 1948. The quarterly totals of the six classes were converted to current dollars by means of the Bureau of Labor Statistics index of wholesale prices of trucks, and the current dollar totals were then divided by total new registrations.

Railroad and transit equipment

The most important component of this group, equipment expenditures of class I railroads, was obtained from the Bureau of Railway Economics of the Association of American Railroads for the prewar and war periods and from the Interstate Commerce Commission for 1946. This series was raised (about 6 percent) to allow for the estimated expenditures of class II and class III railroads. Other components of the group total include (1) equipment expenditures of transit corporations for electric cars and trolley coaches, data for which have been published annually by the American Transit Association in its *Transit Fact Book;* (2) expenditures for Pullman Corporation cars, as published in *Statistics of Railways* by the Interstate Commerce Commission: and (3) the value of tank car purchases (not included in the railroad equipment figures), estimated by multiplying the number of tank cars as reported by the American Railway Car Institute by the average value of tank cars as published annually in *Statistics of Railways*.

As covered earlier, this series was transferred to the commodity flow category of producers' durable equipment beginning with 1947.

Ships and boats

For the years 1929–38, business purchases of ships and boats were derived by the commodity flow method. The estimates since 1939, which are subject to significant limitations, have been prepared as the sum of separate series for subsidized ships, ships completed under private contract, and boats.

The Maritime Adiminstration has provided data on sales of subsidized merchant vessels of 2,000 tons or more. Valuation is at cost to the purchaser, exclusive of the Government subsidy. In order to match the timing of entries in the government account, no attempt has been made to convert sales to value of work in place.

The Maritime Administration also has provided lists of merchant vessels completed under private contract. These have been valued at figures given by the same source for comparable vessels, either subsidized or Government purchased, and for recent years with the aid of specific price data furnished by the National Federation of American Shipping. In addition, for the post-World War II period allowance has been made for the capitalized cost of repairing ships and converting them to peacetime use. This was done largely

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on the basis of information reported in the *Marine Engineering and Shipping Review*.

The estimates for smaller craft—covering private business purchases of motor vessels and barges, lighters, and other unrigged boats—represented about three-fifths of the ships and boats total (excluding conversion cost) in 1947. The series is benchmarked on Census of Manufactures data for 1939 (value of work done) and for 1947 (value of deliveries), adjusted to exclude exports and Government expenditures on vessels built in private ship yards. The figures for 1940–46 and 1948–52 are interpolations and extrapolations based on a series representing annual tonnages of private vessels under 2,000 tons documented for commercial use (after elimination of the estimated tonnage of used vessels documented) as published by the Bureau of Customs, adjusted for price changes by the Maritime Administration index of construction costs.

Nature of Recent Revisions

As mentioned in the introduction to this section, the series on producers' purchases of durable equipment shown in table 32 of Part V represent a revision of previous estimates for the entire period since 1929. Important data not previously available were incorporated into the estimates, a number of changes in procedure were made, and the Standard Industrial Classification (1945) was adopted as the basis for the producer durable commodity groupings. As a general result, the new estimates are believed to constitute a significant improvement over those published in previous editions of the NATIONAL INCOME supplement.

Exhibit 5.—*Comparison of New and Superseded Series for Private Purchases of Producers' Durable Equipment, 1929–52*

[Billions of dollars]

Year	New series			Superseded series		
	Total	Capital outlays charged to current expense	Excluding charges to current expense	Total [1]	Capital outlays charged to current expense	Excluding charges to current expense
1929	5.8	0.3	5.6	6.4	0.6	5.8
1930	4.5	.2	4.2	4.9	.5	4.4
1931	2.8	.2	2.7	3.2	.4	2.8
1932	1.6	.1	1.5	1.8	.3	1.5
1933	1.6	.1	1.5	1.8	.3	1.5
1934	2.3	.2	2.1	2.5	.3	2.2
1935	3.1	.2	2.9	3.4	.4	3.0
1936	4.2	.2	4.0	4.5	.5	4.0
1937	5.1	.2	4.9	5.4	.5	4.9
1938	3.6	.2	3.5	4.0	.4	3.5
1939	4.2	.2	4.0	4.6	.5	4.0
1940	5.5	.3	5.2	6.1	.7	5.4
1941	6.9	.4	6.6	7.7	.8	6.8
1942	4.3	.3	4.1	4.9	.6	4.3
1943	4.0	.4	3.7	4.1	.5	3.6
1944	5.4	.5	5.0	5.7	.6	5.2
1945	7.7	.5	7.2	7.5	.7	6.8
1946	10.7	.7	10.0	12.3	1.4	10.9
1947	16.7	.8	15.8	17.1	1.6	15.5
1948	19.1	.9	18.2	19.9	1.9	18.0
1949	17.8	.8	17.1	18.7	1.7	17.0
1950	21.1	.9	20.2	22.3	2.1	20.2
1951	23.2	1.1	22.1	24.6	2.5	22.1
1952	23.3	1.0	22.3	25.4	2.8	22.6

1. As published in the National Income Number (table 2) of the July 1953 SURVEY OF CURRENT BUSINESS.

Statistical sources from which new data were obtained for the producers' durable series consisted mainly of the 1947 Census of Manufactures, the 1948 Census of Business, the Census Bureau's annual (sample) surveys of manufacturers for 1950–52, tabulations of Government purchases of producers' equipment for military purposes during World War II, and reports of the National Production Authority containing Government purchase data for 1951–52. In addition, it was possible through the availability of specific commodity studies and the cooperation of specialists, both Government and private, to improve the assignments and allocations of data on manufacturers' sales of individual products.

Incorporation of this new information, it may be noted, has permitted publication of a commodity breakdown of producers' durable equipment for 1946 and subsequent years, as well as for the prior period. Until this revision work, the basic statistical data were not suitable for extension of the commodity groups on a satisfactory basis after 1945.

Exhibit 5 presents a comparison of the new and previous estimates of producers' durable equipment for the years 1929-52. It will be seen that for a number of years the revisions were appreciable. In very large degree they occurred in the segment of the series comprised of products customarily charged by business to current expense, instead of amortized through depreciation allowances. As indicated earlier, this "fringe" segment of producers' durables is difficult to measure.

For the large bulk of the producers' durable total comprised of items normally capitalized by business, the statistical revisions were, on the whole, rather small. They reflected, of course, a tendency for changes in the underlying data to be offsetting. For example, the estimates of manufacturers' sales of finished producers' durables for 1942–45 were revised downward considerably, but this change was substantially counterbalanced in the final estimates by the marked reduction that was made in the subtraction for government purchases. Also, although the revisions (in the capitalized segment) are not relatively large for the total, they represent varying and partially compensating changes in the commodity groups.

11. CHANGE IN BUSINESS INVENTORIES

This section deals with the change in nonfarm business inventories and the inventory valuation adjustment. Farm inventories are covered in the section on the Income of unincorporated enterprises.

The basic sources of the nonfarm inventory estimates are reported accounting data on the value of inventories. These data have a high degree of coverage. Internal Revenue Service tabulations from annual corporation tax returns alone account for about four-fifths of the estimated value of nonfarm inventories. Periodic data on the value of noncorporate inventories are available from Internal Revenue Service and Census Bureau compilations.

The adequacy of the inventory estimates included in national income statistics is, however, less than might be suggested by the coverage of the book value data and the reliability of the basic sources from which they are drawn. The extension of reported values to full coverage introduces some uncertainty into the estimates, but their main source of error stems from the fact that the accounting methods underlying the reported data are divergent and inappropriate for national income purposes. Inventory calculation at the level of the individual business firm is a complex problem, and existing accounting methods vary widely both with respect to the scope of the cost elements (especially overhead costs) included in the inventory account and with respect to the costing procedures used to charge goods to cost of sales and to inventories, respectively.

The scope-of-cost limitation of the basic data reported by business is accepted in estimating the inventory components of national income and product. However, a uniform and appropriate costing procedure is substituted for the divergent procedures used by business firms (such as first-in, first-out and last-in, first-out). This results in a measure, for inclusion in the gross national product, of the physical volume change in inventories valued at average prices during the period. The excess of this measure over the book-value change in inventories represents the "inventory valuation adjustment." This adjustment is added to the business-income components of national income and secures measures of earnings from current production consistent with the treatment of inventories in the gross national product.

This adjustment of the reported book value data is a quite difficult procedure, involving the revaluation of the entire volume of nonfarm business inventories given only limited knowledge of the prices reflected in them.

Also important is that the estimates of inventory change included in national income and product are calculated as the difference between large and usually volatile inventory totals at two points of time. Even small errors in the data on total inventories can lead to large relative errors in the estimates of inventory change.

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Finally, it should be noted that the comprehensive accounting data on inventories become available only after a lag of several years. Current estimates must be based upon less satisfactory sources.

General Estimating Procedure

The procedure for deriving the current value of the physical change in nonfarm business inventories and the associated inventory valuation adjustment is carried out separately by detailed industry groups. The limitations already noted of the all-industry estimates of the inventory valuation adjustment attach to the individual industry estimates to an even greater degree.

The general procedure of estimation involves six principal steps, as summarized below.

(1) Reported book values of year-end inventories are raised to complete coverage.

(2) Estimates of the portion of total book value that is reported on a last-in, first-out (LIFO) basis are deducted from the totals and separately processed. This step is necessary because the valuation procedure underlying LIFO inventories requires an adjustment procedure which differs from that applicable to the remainder of business inventories.

(3) The estimates of book value of non-LIFO inventories are converted to a constant price basis by means of price deflation procedures.

(4) The change in these inventories at constant prices is obtained by subtracting beginning from ending inventories at constant prices.

(5) The current value of the physical change in inventories is obtained by multiplying the change in inventories at constant prices by the ratio of current prices to the constant price base.

(6) The inventory valuation adjustment is obtained by subtracting the change in the book value of inventories from the current value of the physical change in inventories.

Step (5) yields the inventory component (other than LIFO) of gross national product. The result of step (6) constitutes the corresponding adjustment to corporate and noncorporate enterprise incomes, which are calculated initially on the basis of the inventory accounting methods underlying reported inventory data.

Exhibit 1.—*Derivation of Change in Business Inventories and Inventory Valuation Adjustment for the Corporate Sector of the Apparel Manufacturing Industry, 1950*

Item	Value data in millions of dollars	
	1949	1950
1. Book value of year-end inventories	1,012	1,501
3. (a) Index of cost valuation (1947=100)	95.1	110.2
(b) Index of market valuation (1947=100)	95.2	114.4
(c) Year-end inventories in 1947 dollars (line 1 divided by line 3a or 3b, whichever is lower)	1,064	1,362
4. Change in inventories in 1947 dollars (from line 3c)		298
5. (a) Index of current valuation (1947=100)		100.2
(b) Change in inventories in current dollars (line 4 times line 5a)		299
6. (a) Change in book value of inventories (from line 1)		489
(b) Inventory valuation adjustment (line 5b minus line 6a)		−190

The estimating procedure is illustrated in *Exhibit 1* by actual data for a single industry. Calculations of a similar nature are made for mining, construction, transportation, communications and public utilities, wholesale trade, retail trade, and for about 20 industries in manufacturing. In the alcoholic beverages and tobacco manufacturing industries, however, direct quantity data instead of deflation procedures are used to estimate changes in inventories.

To simplify the exhibit, an industry was selected in which LIFO inventories are negligible, and consequently step (2) is omitted. Also, the exhibit is confined to the corporate sector of the industry. Similar calculations are made for the noncorporate sector of each industry listed above for which book value estimates are available. As will be seen, the derivation of book values differs for the two sectors. However, the data and methods used in the revaluation of these book values are the same within each industry.

The following comments deal with those steps of the estimating procedure which need amplification.

Step 1: The book value aggregates

Sources and methods of estimating the book values differ for the corporate and noncorporate sectors, and as between past periods and the recent years for which final information is not yet available.

The final source of data on the book value of corporate inventories is *Statistics of Income—Part 2*, the annual compilation of corporate income tax returns published by the Internal Revenue Service. The reported totals are raised on the basis of cost of goods sold (by about 1 percent) to take account of corporations not reporting balance sheet data. Since corporations account for about four-fifths of nonfarm inventory holdings, a substantial portion of the estimates of the total book value of nonfarm inventories rests upon a source considered to have a high degree of reliability.

Exhibit 2.—*Estimated Book Value of Total Corporate and Noncorporate Inventories and Industrial Breakdown of Noncorporate Inventories, End of 1950*

Item	Millions of dollars	Percent
Total, all industries	**69,343**	**100.0**
Corporate	**55,101**	**79.5**
Noncorporate	**14,242**	**20.5**
Mining	159	.2
Contract construction	630	.9
Manufacturing	1,238	1.8
Wholesale and retail trade	11,801	17.0
Wholesale trade	2,189	3.2
Retail trade	9,612	13.9
Services	414	.6

As can be seen from *Exhibit 2*, the bulk of estimated noncorporate inventories is in wholesale and retail trade. Estimates are also made for mining, contract construction, manufacturing, and services. Data on noncorporate inventories in finance, insurance, and real estate; transportation; and communications and public utilities are lacking. The amounts involved must be insignificant and are not included in the estimates.

The main sources of the noncorporate inventory estimates for trade were the Censuses of Wholesale and Retail Trade for 1929, 1933, 1935, 1939, and 1948 and Internal Revenue Service tabulations for 1939 from the income tax returns of sole proprietorships and partnerships. The procedures for estimating noncorporate inventories in trade vary considerably according to the nature of the available information. For some years census data on total inventories are available which can be accepted as benchmarks. For non-Census years prior to 1939 the procedure involves the multiplication of noncorporate sales series derived in the estimation of noncorporate business income by inventory-sales ratios. These ratios are benchmarked on tax return and industrial census data for unincorporated business. Corresponding corporate inventory-sales ratios are used widely for interpolation and extrapolation of the noncorporate ratios. Since 1939 the interpolation and extrapolation of census benchmark estimates of noncorporate trade inventories for 1939 and 1948 have been based on the movement of the noncorporate components implicit in the published wholesale and retail inventory estimates of the Office of Business Economics.

A diversity of procedures is followed for estimating noncorporate inventories in industries other than trade. As can be seen from *Exhibit 2*, the amounts involved are very small.

As already noted, the final sources for estimating the book value of inventories, both corporate and noncorporate, become available only with a considerable lag. Prior to the receipt of this information, inventory book values are extrapolated on the basis of interim data. The extrapolation for the large manufacturing sector—accounting for 50 percent of the nonfarm total at the end of 1950—is based upon the *Industry Survey* of the Office of Business Economics. Reports of inventory holdings tabulated in connection

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with this survey cover more than one-half of the estimated total and are weighted by industry group and asset size class.

The extrapolation of wholesale inventories (15 percent of the nonfarm total) is on the basis of the Office of Business Economics series on wholesale inventories. This is derived mainly from a sample of inventories of merchant wholesalers reporting to the Bureau of the Census, together with Department of Agriculture data on warehouse-stocks of selected farm products. These two sources cover about one-tenth of total stocks, and the data tabulated are weighted by kind of business.

The extrapolation of retail trade inventories (one-fourth of the 1950 nonfarm total) is on the basis of the Office of Business Economics series on retail inventories. This in turn rests upon Census Bureau estimates of total year-end inventories in retail trade built up from a complete count of large multi-unit organizations and geographic area samples of all other stores.

Other nonfarm inventories are extrapolated into the current period mainly by data collected by the Securities and Exchange Commission for its reports on *Working Capital of United States Corporations*.

Step 2: Adjustment for LIFO inventories

Estimates of LIFO inventories are deducted from total book values and separately processed because the revaluation procedure for non-LIFO inventories is not applicable to them.

The estimates of LIFO inventories in manufacturing are based primarily on two special questionnaires, the first for 1947 and the second for 1951, which were submitted to manufacturing corporations in connection with the *Industry Survey* of the Office of Business Economics. (For a summary of the results of the 1951 LIFO survey, see "LIFO Inventories and National Income Accounting", SURVEY OF CURRENT BUSINESS, May 1953.) Additional information on the relative importance of LIFO inventories in 1947 was found in a study of the LIFO method by J. Keith Butters and Powell Niland. (*Effects of Taxation—Inventory Accounting and Policies*, Graduate School of Business Administration, Harvard University, 1949.) Ratios of LIFO to total inventories derived from these inquiries were applied to total corporate inventories by industry and asset size class to estimate total LIFO inventories in manufacturing. Information from Moody's *Manual of Industrial Securities* is used to extrapolate these ratios and also to derive similar ratios for department stores, the only other industrial sector in which LIFO inventories appear to be important. Noncorporate LIFO inventories are neglected throughout. The concentration of the LIFO method among larger firms indicates that the omission is insignificant.

The Internal Revenue Service has recently completed a special tabulation for 1950 wherein reported year-end corporate inventories in each major industry are classified into seven separate categories according to the inventory accounting method used by the reporting firm. The returns can be readily regrouped into three categories, viz., firms using only the LIFO method, firms using LIFO as well as other valuation methods, and firms not using the LIFO method. Since the inventory data for firms using LIFO as well as other methods are not broken down into separate LIFO and non-LIFO shares, it is possible to obtain only upper and lower limits within which the correct LIFO ratio falls. The final tabulation is planned for release in 1954; preliminary results are generally consistent with the sample-based LIFO ratios used in estimating net inventory change.

The estimated value of LIFO inventories currently represents roughly one-tenth of the total book value of nonfarm inventories. In some individual industries the proportion is much higher.

To the extent that the physical volume of inventories increases, changes in the book values of LIFO inventories already reflect changes in the physical volume expressed at current prices and no adjustment of these book values to national income definitions is needed. To the extent that physical volumes decrease, changes in LIFO book values reflect these decreases in prior-period prices and a conversion to current prices is made. The price data used in each industry are the same as those described below. To date, price adjustments for declines in LIFO inventories have been negligible.

Gaps in the basic information may cause sizable errors in the estimates of the change in LIFO inventories. However, in view of the fact that LIFO inventories are a small fraction of the total, the possible error introduced into the overall figures is much less significant.

Step 3: Conversion of non-LIFO inventories to constant prices

Separate composite price indexes are constructed to deflate the book values of total non-LIFO inventories in each industry. For this purpose it is necessary, first, to select commodity price indexes that are representative of the commodities included in inventories; second, to weight these price indexes in accordance with the relative importance in the book value of inventories of the commodities which they represent; and, third, to determine the periods to which the unit prices reflected in the book value data pertain, so that the price indexes to be used for deflating the book values can be related to these same periods.

Construction of composite price indexes

The selection and weighting of the price series used in the construction of the composite price indexes was for the most part an interrelated operation, based upon the estimated commodity composition of inventories in each industry.

The estimates of the commodity composition of inventories in manufacturing were built up mainly from the 1939 and 1947 Censuses of Manufactures tabulations of inventories held by industry. Similar estimates for trade were derived from the 1939 and 1948 Censuses of Wholesale and Retail Trade, which showed the distribution of inventories by kind of business. In most instances, the type of inventory commodity involved could be identified on the basis of the census designation of the industry or kind of business holding the inventory. The full industry and kind-of-business detail given in the censuses, together with the further breakdown of manufacturing inventories into finished products and materials, supplies, etc., was utilized in estimating the commodity composition of inventories. More summary methods were used in instances in which price information was lacking to match the full detail of the commodity breakdown.

Other sources consulted for this purpose included the Census of Manufactures tabulations of materials consumed in selected industries; materials-consumed data published by private industrial research groups; material requirements studies of the War Production Board; financial reports of certain large corporations in the iron and steel industry giving information on the commodity composition of their inventories; Internal Revenue Service data on industrial inventory holdings included in the "Source Book" underlying *Statistics of Income—Part 2;* and sales and value-of-product data, when more pertinent information was not available.

With few exceptions the monthly price series used in the construction of the composite price indexes were taken from the wholesale price index of the Bureau of Labor Statistics. The BLS index, prior to its revision in 1952, consisted of approximately 900 separately coded commodity price series combined into 49 subgroups, 10 major groups, and 5 economic groups. The revised wholesale price index includes over twice as many individual commodity price series as the earlier index as well as a greater number of major group and subgroup composites. In addition, over 200 product class indexes have been developed to represent groups of related commodities with generally similar price movements. The new index, on a 1947–49 = 100 base, is available in full detail for the period beginning January 1947, and was incorporated into the estimation of net inventory change and inventory valuation adjustment beginning in 1948.

For several reasons, BLS subgroup and product class indexes were used most frequently in the construction of the composite price indexes. It was not possible, in general, to estimate the commodity composition of inventories in a detail sufficient to calculate weights for individual price series. Also, in the cases in which the available price information did not match the estimated commodity composition of inventories it was thought that the use of group rather than individual price series would tend to give the better representation of inventory price movements.

Two other considerations favored the use of subgroup and product class indexes. Because of specification changes, the elimination of existing series, and the introduction of new ones, it is frequently difficult to maintain the continuity of the individual commodity price series. Also, in many instances the portions of the inventories which could be related to individual commodity price series were too fragmentary, from the point of view of the total industry group, to warrant separate treatment.

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Further limitations of the composite price indexes may be noted. The price series underlying them do not take full account of quality change and of divergences between quoted prices and prices actually charged in market transactions. In addition to these shortcomings generally encountered in price deflation, two others appear in connection with the deflation of inventories because the price series (1) do not consistently measure the prices of purchased inventories at the transaction stage at which they are acquired by the inventory holder and (2) do not measure directly the costs that are reflected in the valuation of goods-in-process and finished product inventories.

With respect to the weighting system employed, it should be noted that it is not strictly appropriate for the purpose at hand. Prior to 1948, fixed weights based on the relative commodity composition of inventories in 1939 are used to combine price index series selected from the unrevised Bureau of Labor Statistics wholesale price index into a composite inventory deflator for each industry. Starting at year end 1947 a new set of fixed weights, based on the distribution of year-end inventories in the 1947 Census of Manufactures and of beginning inventories in the 1948 Censuses of Wholesale and Retail Trade, is used to combine the price index series selected from the revised BLS wholesale price index. Ideally, a system of shifting weights reflecting the changing annual commodity composition of inventories should have been used in constructing the inventory deflators, but this could not be done for lack of information. However, inventory deflators for the various industries calculated on the basis of 1939 and of 1947 weights were in general very similar. This suggests that the error introduced by using fixed weights over a long period is not likely to be significant. Revisions in the estimates of the inventory valuation adjustment for years since 1948 are mainly due to the adoption of more comprehensive price data from the revised wholesale price index rather than to weight changes.

Synchronization of composite price indexes with year-end book values

To take account of the widespread practice of valuing inventories at the lower of "cost" or "market," separate deflating indexes are constructed to represent each of these valuations at the year-end, and the lower of the two is used to deflate year-end inventories. Indexes of market valuation are derived by averaging the composite price indexes for December and the following January in order to approximate year-end prices. Market indexes are not calculated for the transportation, communications, and public utilities industries, where inventories consist largely of purchased materials customarily valued on a straight cost basis.

The construction of indexes of cost valuation is difficult. The particular accounting method used by business firms to charge goods out of inventory to cost of sales determines the period whose prices are reflected in the year-end inventories valued on a cost basis. The construction of the cost valuation indexes applicable to year-end inventories is adapted in the first instance to the first-in, first-out (FIFO) method, which is the basis of valuation of the bulk of non-LIFO inventories. Owing to the lack of information, no separate procedure is developed for other methods of inventory accounting except LIFO—such as the specific identification and average cost methods—which underlie some of the book value data. It is believed that the implicit allowance for them described below gives generally satisfactory results.

The prices reflected in year-end inventories valued on a FIFO–cost basis are the prices of a period immediately preceding the year end, the length of which depends on the rate of turnover of inventories. The period for which the composite monthly price indexes for each industry had to be averaged in order to reflect the cost prices implicit in year-end inventories was based on the estimated inventory "turnover period" in the industry. Initial calculations of turnover periods for industries other than trade through the year 1947 were made by dividing year-end inventories in each industry into the total cost of goods sold, as reported in *Statistics of Income—Part 2* for 1939, and then dividing the resulting turnover rate into 12, the number of calendar months. Starting with the deflation of year-end 1947 inventories, these turnover period calculations were based upon 1947 *Statistics of Income.*

The turnover periods so calculated were then lengthened for three reasons: first, to take account of non-FIFO inventories (other than LIFO), whose general effect is to extend the length of the prior periods whose prices are reflected in year-end inventories; second, to give effect to the lapse of time between the purchase and delivery dates of inventory goods; and third, to allow for the fact that the use of a single turnover rate for each industry, instead of separate rates for inventories having a different turnover, overweights inventories that have a relatively quick turnover. These three factors cannot be accurately measured, but they were believed to be of sufficient importance to warrant increasing by 50 percent the turnover periods as initially calculated.

The calculation of inventory turnover periods for trade was based upon the 1939 and 1948 Censuses of Wholesale and Retail Trade. Separate calculations were made by kind of business. Census data were used because they covered noncorporate establishments, which are of particular importance in trade, as well as corporations. Since the cost of goods sold was not reported in these censuses, sales had to be used as the numerator of the turnover rates. This tends to understate the turnover period, since sales include a gross profit margin whereas inventories are valued at cost. To offset this bias, as well as the three factors already mentioned, the turnover periods initially calculated were increased by 75 percent.

The cost valuation indexes applicable to year-end inventories were obtained by averaging the composite price indexes for a number of months prior to the year-end equal to the estimated turnover periods.

In addition to the uncertainties that have already become apparent, it may be noted that the calculations involve the assumptions that for the years for which estimates of turnover periods were made the size of year-end inventories was an approximation to the average of the inventory holdings during the year, and also that the turnover periods estimated on the basis of 1939 and 1947–48 data are applicable to the entire periods 1929–47 and 1948 to date, respectively. With respect to the latter assumption, experimentation with alternative turnover periods has indicated that even considerable modification in their assumed length does not in general greatly affect the statistical result.

Step 5: Conversion of deflated change to current prices

The indexes used to convert the deflated value change of inventories to current prices represent the annual average of the monthly composite price indexes already described. Thus, to recapitulate, the same composite price-index series are used for computing the "market," "cost," and "current" indexes. The three differ only with respect to the time period to which they refer—that is, to the span over which the monthly price indexes are averaged.

Characteristics of Revisions

The annual inventory estimates published each July are based upon preliminary data for at least the two most recent years. Under the present schedule, the Internal Revenue Service corporate income tax return tabulations, on which the book value of corporate inventories is based, are not available for the two latest years. Revisions may affect earlier years also, mainly because the noncorporate book value estimates are based on less regular benchmarks. Introduction of new benchmarks, such as periodic industrial census tabulations, may change prior year estimates through the substitution of interpolation for previous extrapolation procedures.

Revisions of the inventory change estimates for recent years occasioned by the incorporation of comprehensive data are sometimes quite sizable. As noted earlier, even small percentage revisions in the book value aggregates can cause substantial revisions in the increments computed from them.

Revisions are usually much larger in the "change in business inventories" item than in the "inventory valuation adjustment." Revisions in the latter typically are not large. The bulk of revisions in the underlying book value estimates is generally reflected in the change in business inventories rather than in the inventory valuation adjustment. Also, the price information used to revalue business inventories becomes available fairly promptly, and subsequent routine revisions of it are usually minor.

The smallness of the revisions in the inventory valuation adjustment should not be taken to mean that this item, or the underlying revaluation of book values, is firmly based. Quite to the contrary, as already has been emphasized, this is the most difficult step in the estimating procedure. The absence of major revisions in these estimates signifies only that the final sources of price information do not differ significantly from the preliminary information on which the estimates are initially based.

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12. NET FOREIGN INVESTMENT

The net foreign investment component of gross national product measures the net export balance on goods and services (less the net outflow of gifts), which is necessarily financed by international investment. It is taken from the official balance of payments of the United States, where it appears as the "Balance on goods and services and unilateral transfers."[1] Accordingly, the statistical sources and methods discussed below are those of the Balance of Payments Division of the Office of Business Economics. The balance of payments of the United States is published quarterly in the *Survey of Current Business*, and in occasional bulletins, the latest of which is *The Balance of Payments of the United States, 1949–51*, a supplement to the *Survey of Current Business* (Washington, United States Government Printing Office, 1952). A more detailed description of the methods of estimating the international transactions of the United States appears in that volume.

These methods also produce an alternative estimate of net foreign investment in terms of the change in international assets and liabilities. Usually there is a statistical discrepancy (labeled "errors and omissions" in the balance-of-payments statement) between the two estimates. As has been noted, it is the former estimate which is included as a component of gross national product, although for most years it cannot be assumed to be more exact than the one based on changes in assets and liabilities.

Official estimates of the United States balance of payments have been prepared for all years beginning with 1919. Over this period, the sources and methods underlying the estimates have changed significantly. This section is devoted primarily to a description of the current methodology.

A substantial increase in the accuracy of the estimates, especially in the last decade, has stemmed from the inauguration of new techniques and data sources discussed below. In spite of the improvement of the data, it should be recognized that net foreign investment is subject to possibly large percentage errors of estimation because it is calculated as the difference between gross outflows and gross inflows which are usually large in relation to the net balance.

The following discussion deals in turn with net factor payments to the United States and with net purchases from the United States (including gifts), which together compose the "Balance on goods and services and unilateral transfers". The balance is obtained as gross receipts of the United States less gross payments by the United States. In the following discussion, the gross receipts and payments are described separately, with no further reference to the fact that they are differenced to obtain the net entries for net foreign investment.

The balance on goods and services and unilateral transfers reflects all current transactions of the United States with the rest of the world. Hence, a large number of the flows differenced to obtain net foreign investment also become explicit elements (with appropriate sign) of various other components of national income and national product. Thus, net factor incomes received from abroad become elements of the wages and salaries, interest, and corporate profit components of national income and personal income, and net purchases made abroad (including gifts) become elements of personal consumption expenditures for commodities and services and of government purchases of goods and services. The estimation of these elements is described below. However, only in the sections dealing with the national income and product components in which they are included are they explicitly identified as constituting such elements. For instance, net interest received from abroad is described in the present section under the heading Net payments of factor income, but the fact that this item is included in the interest component of national income and personal income is stated explicitly only in the section on Interest.

1. An adjustment is made for geographical coverage, since United States territories and possessions are considered part of the United States for balance-of-payments purposes but are included with the rest of the world for national income purposes. (Statistically, the adjustment was confined to 1941–46 when its quantitative importance called for a rough order-of-magnitude calculation in spite of the absence of solid data.) It should be noted also that in the official balance-of-payments statement account is taken of unilateral transfers in kind, which are ignored in table 11, Part V of this report. Exclusion of these transfers affects debits and credits equally, and does not alter the net balance of transactions. Other differences between table 11 and the balance-of-payments statement are matters of classification and will come to note as the derivation of the entries in table 11 is described.

Net Payments of Factor Income to the United States

Factor income transactions consist of wage and salary receipts and the international flows of property income. The latter represent interest, dividends, and branch profits. Undistributed profits of foreign subsidiaries are not included. All property incomes are measured net of taxes levied by the paying country.

Wages and salaries

This item (included in "private miscellaneous services" in the official balance-of-payments classification) represents wages and salaries received by United States residents in this country from (1) foreign governments and (2) international organizations. Component (1) is estimated from fragmentary information supplied by certain foreign missions. Component (2) is reported by the international organizations.

It will be noted that, from the standpoint of the definitional framework set out in Part II of this report, this series is incomplete because it does not segregate the net wages and salaries of "border workers." (It does not include the wages and salaries of United States residents whose place of work is abroad, and it does not deduct payments by United States employers to foreign residents working in the United States.) Statistical information for making this segregation is lacking.

Interest

United States receipts of interest from abroad are estimated in four parts.

(1) Interest from foreign branches and affiliates (including subsidiaries) of American corporations is estimated from a 1950 benchmark provided by the Commerce Department's census of American direct investments abroad (*Foreign Investments of the United States*, a supplement to the *Survey of Current Business*, Washington, United States Government Printing Office, 1953). This benchmark figure is extrapolated and linked to a previous benchmark based on the Treasury Department's 1942 Census of American-Owned Assets in Foreign Countries (Form TFR 500) on the basis of quarterly sample company reports, supplemented by information taken from income tax returns, annual reports to the Securities and Exchange Commission (Form 10K), and annual corporate reports to stockholders. Currently the quarterly sample reports cover about 350 companies accounting for around 75 percent of total direct investment; about 90 percent of total investment income (interest, dividends, and branch profits) earned from foreign branches and affiliates is actually reported in one or more of the sources used for extrapolation of the 1950 benchmark.

(2) Interest received by the United States Government is reported by the recipient agencies.

(3) Interest on foreign dollar bonds is estimated chiefly from regular questionnaire surveys of the debtors' fiscal and paying agents in the United States, corrected for basic coverage by reference to holdings disclosed in the 1942 Treasury Census.

(4) Other foreign interest received by the United States is calculated by applying average bond yields, as reported from the principal issuing countries, to holdings series benchmarked on the 1942 Treasury Census and extrapolated by reference to foreign bond purchases and sales reported on Foreign Exchange Forms S–1/3. These statistics of purchases and sales, it should be noted, do not distinguish the bonds by country of debtor or by currency in which payable. The extrapolation, therefore, is a relatively rough process. However, the series appears reasonable when checked against official estimates for Canada, which accounts for most of the receipts in this category.

United States payments of interest are estimated as the sum of (1) interest subject to withholding tax, and (2) interest not subject to withholding tax.

(1) Interest subject to withholding tax paid by the United States to foreigners is reported to the Internal Revenue Service on withholding tax return forms 1012 and 1013, for corporate and Federal bonds, and Form 1042, for other obligations. Special tabulations from these returns are made available to the Office of Business Economics. Net income payments by fiduciaries are allocated somewhat arbitrarily between interest and dividends. The tax return data are not available in time for use in the estimate for the latest year, which is therefore made by extrapolation with reference to reported changes in foreign holdings.

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(2) Interest not subject to withholding tax—about 60 percent of the total in 1950—represents largely payments on foreign government holdings of United States Federal Government long- and short-term issues, and to a much smaller extent payments on foreign holdings of State and municipal government bonds and payments to certain countries which are exempt from withholding taxes by international treaties. It is estimated in the main by applying average-yield series to amounts of foreign holdings. Foreign government holdings of long-term Federal issues are benchmarked on the Treasury's 1941 Census of Foreign-Owned Assets in the United States, and extrapolated by reference to estimates of annual changes in such holdings, based for recent years on reported transactions and certain data on amounts held in custody in the United States. Data on foreign government holdings of short-term Federal issues are obtained from monthly Treasury reports.

Dividends

United States receipts of dividends are estimated using sources and methods analogous to those applied in estimating components (1) and (4) of interest receipts. United States dividend payments to the rest of the world are estimated in general like taxable interest payments. For the latest year, payments by subsidiaries of foreign corporations are extrapolated by reported payments of about 115 sample foreign-controlled enterprises, and other payments are extrapolated by the product of appropriate sample dividend rates times estimated holdings.

Branch profits

The sources and methods used in estimating the inflow of branch profits are the same as those for interest received from foreign branches and affiliates. The outflow of branch profits is estimated from special tabulations from tax returns (Form 1120) on which such profits must be reported to the Internal Revenue Service. Pending the availability of the tax return data, preliminary estimates are made by extrapolation using data from the sample of 115 foreign-controlled enterprises mentioned above.

Net Purchases from the United States

It is convenient to discuss sales and purchases by the United States in terms of the components distinguished in the official balance-of-payments statement—merchandise trade, transportation, travel, etc. The method of separating transactions of United States business, government, and persons, in the manner of table 11, will be indicated in the discussion of each of the components. In table 11 sales include cash gifts received, and purchases include cash donations made. In the balance-of-payments statement these unilateral transfers are shown separately. The exclusion of unilateral transfers in kind from table 11 has been noted.

Merchandise trade accounts for the vast bulk of the transactions summarized under the heading of net purchases. The estimates represent chiefly exports and imports shown on declaration forms filed with the Collectors of Customs and tabulated by the Foreign Trade Division of the Census Bureau, and transactions carried out and reported by agencies of the Federal Government. The major limitation on the accuracy of these estimates is the likelihood that the stated values may differ in some cases from the actual prices paid for the goods.

Transportation service receipts and payments consist largely of ocean freight charges and port expenditures of ocean carriers and are estimated mainly on the basis of questionnaires filed by the operators with the Office of Business Economics.

Travel receipts and payments are estimated from expenditure averages based on questionnaire returns from travelers, multiplied by the adjusted numbers of such travelers reported (in most cases) by the United States Immigration and Naturalization Service.

The major components of the Miscellaneous services category are government payments (reported to the Office of Business Economics by the agencies), film rentals (benchmarked on the Commerce Department Census), and insurance charges (estimated from annual questionnaires filed with the Office of Business Economics). Unilateral transfers by private parties are estimated chiefly from data provided by forwarding banks, the Post Office Department, and charitable institutions; government transfers are reported to the Office of Business Economics by the Federal agencies involved.

Merchandise

United States business receipts from merchandise exports are estimated as follows.

(1) The chief data sources are the official tabulations of United States exports; these, together with the corresponding tabulations of imports, are described in some detail in *Foreign Commerce and Navigation of the United States* for the calendar year 1946. Merchandise trade is valued f. a. s. ("free alongside ship") port of shipment.

(2) Recorded merchandise exports, including reexports, are adjusted to eliminate certain components not giving rise to business-sector claims on the rest of the world: shipments abroad by general government and persons; business exports known not to represent merchandise sales—for example, motion picture films shipped abroad for rental and the movement of United States-owned grain to Canada for storage; and exports to the Panama Canal Zone. The data for most of these adjustments are taken directly from the export statistics; the government shipments to be excluded, however, are evaluated from the records of the responsible Federal agencies.

(3) To the residual are added several items not covered which do give rise to business-sector claims: sales by government enterprises from their stocks abroad, as reported by these enterprises; exports of silver, which the Census Bureau reports separately from merchandise exports; and the increase in official gold holdings less net purchases of gold from abroad.

United States business purchases from foreigners are estimated from the statistics of general imports, with adjustments analogous to those described above. Adjustments have also been made for a few known instances of differences between declared import valuations and the actual dollar payments made to foreigners.

United States general government purchases from and sales to foreigners are estimated from reports filed by the government agencies involved. Such important items as United States Government sales of surplus and other property located abroad, and purchases for the use of the Armed Forces stationed abroad, not shown in the trade statistics, are included.

It may be noted that all of the large wartime and postwar purchases of foreign raw materials by the United States have been classified as business-sector purchases, since the public purchasing agencies were government enterprises rather than executive departments or other administrative agencies of general government.

Purchases of foreign merchandise by United States persons except when traveling abroad are generally made through business middlemen, and are covered by the estimates of purchases by United States business described above. United States persons' shipments to foreigners consist almost entirely of gifts and, like foreign-aid shipments of government-procured items, are excluded as unilateral transfers in kind giving rise to no claims for payment.

It is difficult to make any categorical statement about the reliability of the foreign trade statistics. For exports and for nondutiable or specific duty imports, where the Customs Service does not have a pecuniary interest in securing a correct valuation, it is probably safe to say that some instances of incorrect valuation go undetected, although certain checks are made. The reported values theoretically include inland freight and other services performed in the country of export; one of the likeliest sources of error is the omission of some of these service costs in valuing United States exports. Imports subject to ad valorem duties are frequently assessable (and entered in the statistics) at values which may differ from the prices actually paid. Again, in the case of imports from foreign branches or subsidiaries, there are possibly differences between the values entered for customs purposes and the prices at which the articles are taken up on the domestic companies' books for income tax purposes. On balance, it is not clear whether the net effect of all the possible sources of error would be to overstate or to understate net exports.

Transportation

International transportation transactions involving the United States are treated as United States business-sector transactions, except that passenger fare payments to foreign carriers are allocated between the business and personal sectors. This allocation is described below under Travel.

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Ocean freight

Ocean freight revenues of United States ship-operators from abroad consist of freight on United States exports and on shipments between foreign ports. (Freight on United States imports carried by United States lines is classified as a domestic transaction, being defined as paid by the importer because the value placed on merchandise trade includes no allowance for ocean transportation cost.)

United States ocean freight revenues from foreigners are now estimated from financial statements filed by the carriers with the United States Maritime Administration or from data furnished directly to the Office of Business Economics.

For 1945 and earlier years, estimates of revenues from the carriage of United States exports have been based on Census Bureau or Maritime Administration data on tonnages of various commodities or commodity groups carried by American ships to various destinations abroad, multiplied by appropriate freight rates. The rates used have been taken chiefly from rate schedules of the various steamship conferences filed with the Maritime Administration. Benchmark revenues were derived in this way for 1940 and 1944 and interpolated and extrapolated by tonnage totals with allowance for changes in general freight rates and in the commodity composition of the trade.

Revenue received for carrying freight between foreign ports in years prior to 1946 has been estimated as a percentage (varying up to around 5 percent, and based on rather fragmentary information) of the combined revenues from carriage of United States exports and imports. Freight on imports has been estimated for this purpose by methods similar to those described above for freight on exports.

Payments to foreign ship-operators consist of freight charges for the carriage of United States imports. For 1951 and later years the estimates are based on a compulsory questionnaire to foreign ship-operators. Estimates for years back to 1946, which were reconciled with the questionnaire-based series in 1951, were derived separately by type of service (liner, tramp, and tanker) by multiplying Census Bureau data on total tonnage carried by foreign ship-operators by estimates of average freight rates per ton, based largely on industry information. For earlier years the estimates were derived by much the same methods and types of data as were used prior to 1946 in estimating American carriers' revenue from freight on exports.

Ocean passenger traffic

Passenger revenues of United States carriers consist of receipts from foreigners traveling to and from the United States. United States payments for ocean passage are those made by United States residents to foreign carriers.

Average fares plus shipboard outlays per passenger are ascertained through systematic sampling of passengers, and are multiplied by estimates of numbers based on United States Immigration and Naturalization Service records of arrivals and departures.

Expenditure information is secured from United States residents returning and from nonresidents departing, as described below in connection with the travel account. Since fares and shipboard expenses vary widely according to type of accommodation and route and purpose of travel, etc., the averages are weighted to take account of such variations, the relative importance of each category being estimated from Immigration Service records and passenger manifests supplied by carriers.

The Immigration and Naturalization Service records the number of arrivals and departures, classified by residence of traveler and also by flag of carrier. However, the data must be adjusted somewhat to fit exactly the categories appropriate for balance-of-payments estimation. These adjustments are summarized below under Travel.

Port service

For 1951 and later years United States port receipt estimates are based on the questionnaire to foreign ship-operators mentioned in connection with the ocean freight estimates. These were extrapolated back to 1946 by estimates made separately for cargo liners, passenger liners, tramps, and tankers. For cargo liners, Census Bureau export and import totals carried by foreign cargo liners were multiplied by average port expenditures per ton. The averages for 1951 were pieced together largely from industry information and for earlier years were adjusted for changes in stevedoring rates, a major determinant of total port expenditures. The estimates for passenger liners and tramps were derived as the product of the number of voyages times expenditure per voyage. The number of voyages was based on Census Bureau data on arrivals and departures and tonnage carried, and average expenditures per voyage on Maritime Administration operating cost data and various port cost studies. The 1951 benchmark for tankers was derived from the questionnaire and extrapolated back to 1946 by reference to Census Bureau data on export and import tonnages carried by foreign tanker operators.

Prior to 1946, United States port receipts from foreign vessels were estimated as fixed percentages of the vessels' gross revenues from the carriage of United States trade, the sources and methods for which are indicated above. Ratios were based on fragmentary information from foreign lines.

For 1948 and later years foreign port expenditures of United States operators have been derived from the carriers' financial statements filed with the Maritime Commission and data supplied by questionnaires to the Office of Business Economics. These estimates have been carried back to 1946 on the basis of Census Bureau data on the volume of cargo carried by United States operators in those years. For years prior to 1946 foreign port expenditures were calculated in a manner similar to United States port receipts in those years. Ratios of port expenditures to gross earnings (for cells cross-classified by type of cargo and whether direct or wayport trade) were based on the carriers' financial statements and on supplementary details supplied by some of the largest American dry cargo operators.

Air traffic

Receipts and payments on account of air traffic include freight, passenger, and port cost components generally analogous to those described above for ocean shipping. Data supplied by the major United States international airlines to the Office of Business Economics supplemented by financial reports filed with the Civil Aeronautics Board provide the essential information for the estimates of United States carriers' receipts and payments for 1949 and later years. The estimates for 1946–8 have been derived from the financial statements filed with the Civil Aeronautics Board. These cover United States and foreign operations combined, and have been adjusted to exclude domestic transactions on the basis of the data available for 1949 and later years.

Estimates of receipts for years prior to 1946 were calculated from tonnages of freight (benchmarked on official trade statistics for certain years), numbers of passengers (based on the Immigration Service records), and published rates. Expenditures abroad were estimated from the financial reports filed with the Civil Aeronautics Board and information supplied by the industry.

Beginning with 1951 payments and receipts of foreign airlines are based on a compulsory questionnaire. The receipt series has been carried back to 1946 by allowing for changes in the numbers of passengers carried by foreign airlines and scheduled flight arrivals in the United States. Payments by foreign airlines are small. Earlier years were derived by methods similar to those used for United States lines.

No estimates for air transportation were made prior to 1940.

Rail traffic

Rail traffic receipts by the United States from the rest of the world consist of (1) freight earnings of United States railroads operating in Canada and (2) freight on foreign merchandise carried in transit through the United States. Component (1) represents freight on United States exports and intra-Canadian shipments. It is evaluated from information furnished by the railroad companies to the Office of Business Economics. Component (2) arises largely from Canadian and Mexican export and import trade with countries other than the United States. It is estimated by applying general average freight rates to data on the weight or value of such shipments. The rate averages used are compiled by the Interstate Commerce Commission. The shipments data are derived from official trade statistics recorded by the Dominion of Canada and, for Mexican trade, from the official trade statistics of the United States.

Rail traffic payments by the United States comprise operating expenses in Canada of the United States railroads operating in that country, as well as payments to Canadian railroads for hauling United States freight in transit through Canada. The item of operating expenses, like the corresponding revenue considered under (1) above, is reported directly by the carriers. A rough allowance for Canadian railroad freight revenues from the United States is based on railroad enterprise data reported to the Canadian Government.

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Other transportation

Ship charter transactions between United States and foreign shipping lines are evaluated on the basis of financial statements filed by the United States lines with the Maritime Administration and reports to the Office of Business Economics. The estimates for Great Lakes shipping represent freight revenues and expenditures only; passenger fares on the Lakes are included with travel receipts and payments, which are described below. Average freight rates on the principal commodities, furnished by the Lake Carriers' Association of Cleveland, are multiplied by commodity tonnage data taken from statistics of the Census Bureau. Foreign mail earnings accruing to United States air carriers are determined from data reported by the carriers to the Civil Aeronautics Board, and estimates of ocean mail receipts are benchmarked on data reported to the Maritime Administration. The revenues of United States pipeline companies for transporting Canadian petroleum products in transit are obtained from reports to the Interstate Commerce Commission. Receipts and payments for the interchange of railroad freight cars between United States and Canadian and Mexican railroads are calculated from the number of cars exchanged as reported to the Association of American Railroads multiplied by a standard rental rate.

Travel

Inbound and outbound ocean and airplane fares and expenditures on board ship have been considered above under the heading of transportation. All other payments made by nonresidents in connection with travel in the United States, or made by United States residents in connection with travel abroad, are included under the heading of travel.

All foreign visitors' travel expenses in the United States are considered to be foreign purchases from United States business enterprises. American travel expenditures abroad, as well as the passage payments discussed above under Transportation, are allocated between business and personal outlays. For overseas travel, this allocation has been based on occasional sample studies of passport applications (on which the purpose of travel is stated). Information as to the purpose of travel to Canada or Mexico is obtained from the expenditure questionnaires.

The basic estimating formula, as in the case of passenger transportation, involves the multiplication of numbers of travelers by sample-based average expenditures per traveler. For these calculations, data on foreign visitors are cross-classified into cells by purpose of visit and country of last permanent residence, while data on United States travelers abroad are cross-classified according to means of transportation and region of the world visited. Further stratification is used where it is appropriate and feasible, as illustrated above in the discussion of ocean passenger transportation. Numbers of travelers are derived in general by adjusting data from immigration and emigration records. Expenditure averages are computed from questionnaires completed and returned by travelers upon or after completion of their trips. For estimating purposes, foreign travel is divided into three major segments: overseas, Canadian, and Mexican. Each of these will be considered in turn.

Overseas

Overseas travel by United States residents accounted for 44 percent of United States payments for travel in 1950, and United States travel by visitors from overseas accounted for 40 percent of United States receipts under this heading.

Basic data on numbers of travelers from the records of the United States Immigration and Naturalization Service are adjusted to exclude travel between the United States and Mexico and Canada (other than travel through Canada en route between the United States and overseas areas). In addition, the data for citizens' travel are adjusted to exclude estimated travel by government employees and by residents working abroad for foreign employers or for foreign branches or subsidiaries of American firms; and the alien resident travel data are adjusted to reflect the *de facto* breakdown between temporary visits and migration. Immigrants are considered United States residents from the time of their admission into this country, while emigrants are treated as United States residents until they are admitted into a foreign country.

The data from which average expenditures of United States travelers are calculated are received by mail from a sample of returning residents, to whom questionnaires are distributed by mail or through Immigration Service officers at the port of entry. The possibility of bias due to failure of some travelers to complete and return their questionnaires was checked in 1948 and 1949, by comparing questionnaire results with conceptually comparable results obtained from interviews with a random sample of residents arriving at the Port of New York; this check disclosed no statistically significant bias in the results of the questionnaire sampling. However, expenditures do vary widely among individual travelers, and the possibility of significant sampling error must therefore be recognized when conclusions are drawn from the travel estimates

Average expenditures of overseas visitors to the United States are likewise estimated from questionnaire data. Alien visitors receive questionnaire mailing cards (printed in English, Spanish, and French) from inspectors of the Immigration and Naturalization Service at the time of their arrival in the United States. They are asked to complete and mail the questionnaires shortly before their departure from this country.

Canada

Travel in the United States by Canadian residents accounted for about one-half of United States receipts from foreign travelers in 1950. The estimates are made by the Dominion Government, using methods similar to those described above in connection with overseas travel of United States residents.

United States residents' average expenditures for travel in Canada are determined from sample questionnaire data gathered by the United States Department of Commerce from United States residents returning from Canada by rail, boat, plane, or long-distance bus, and sample questionnaire data gathered by the Dominion Government from visitors entering by other means of transportation, chiefly automobiles. The data on numbers of travelers, which are collected by the Canadian authorities, are adjusted in several respects. In particular, a deduction is made for passengers in direct transit through Canada from one point in the United States to another.

Mexico

The Bank of Mexico and the Office of Business Economics cooperate in estimating the expenditures of travelers between the United States and Mexico. Border travel and travel to the interior of each country are estimated separately. Border travel payments by the United States are made partly in pesos, partly in dollars which subsequently return to this country via nonbanking channels, and partly in dollars subsequently deposited with United States banks by their Mexican correspondents and others. Current data on the third type of transaction are raised to full coverage by use of ratios derived from a 1945 survey of banks, exchange dealers, businessmen, and customs officials in border towns. Border travel receipts by the United States are estimated by parallel methods.

United States receipts from Mexicans traveling to the interior of this country are estimated from questionnaire data. Each Mexican resident legally entering the United States for a stay of more than 24 hours or for a destination beyond the border area is handed a questionnaire by the United States immigration inspector, to be filled in shortly before the Mexican resident leaves this country. The number of questionnaires distributed provides a basis for estimating the number of persons entering, and average expenditures are calculated from the completed questionnaires returned.

Data on the number of United States citizens traveling to the interior of Mexico are collected by the Mexican Government. Average expenditures per traveler in recent years have been determined largely on the basis of occasional questionnaire sample surveys by the Mexican Government or by the Bank of Mexico.

Miscellaneous services

Estimates of the miscellaneous service transactions to which the United States Government is a party are based on information supplied to the Office of Business Economics by the responsible Federal agencies. These transactions include (1) purchases and sales by the Department of Defense and other administrative agencies, (2) purchases and sales by the Post Office Department and other government enterprises classified, for national income purposes, in the business sector of the United States economy, and (3) personal expenditures of military and civilian employees of the United States Government abroad, which are treated as sales to United States persons. Purchases under (1) include certain items not obviously classifiable under this head: real

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property bought abroad for government use, and expenditures connected with official travel, as well as United States current payments to international organizations (such as the United Nations) of a character other than purely humanitarian. Item (3) is derived from the total reported disbursements to employees in foreign countries by deducting such employees' personal remittances through Army Post Offices and Army Finance Offices, their cash purchases of war bonds, and net proceeds of Army Post Exchanges and Navy Ship Stores.

Miscellaneous service receipts and payments not involving the United States Government are estimated from a variety of materials. They include: (1) Insurance; (2) royalties, home office expenses and related items; (3) motion-picture rentals; (4) electric power transactions; (5) international communication charges; and (6) foreign representation in the United States. Except for the labor cost element in (6) which has been discussed above under the heading of factor income, all of these are treated as purchases from or sales to United States business.

(1) Insurance receipts by the United States consist chiefly of reinsurance claims paid by foreign companies, and payments consist chiefly of premiums for such reinsurance. The estimates are based on an annual questionnaire survey of United States companies which provides virtually complete coverage.

(2) United States receipts of royalties and related items are benchmarked for 1950 on the Commerce Department's census of American direct investments abroad, and extended to other years on the basis of questionnaire returns showing United States companies' receipts from their foreign branches and subsidiaries. Royalties from independent licencees in most foreign countries are necessarily omitted, in the absence of data on these. United States payments of royalties and related items to foreign countries are estimated from tax return and questionnaire data by methods generally analogous to those described above for taxable interest.

(3) Motion-picture rentals received by United States companies are estimated by reference to the benchmarks provided by the 1950 Commerce Department census and the 1942 Treasury Census of American-Owned Assets in Foreign Countries, which are linked and extrapolated chiefly by questionnaire data from the companies.

(4) United States exports and imports of electric power are reported annually to the Federal Power Commission by United States electric utility corporations.

(5) International cable, radio and telephone companies furnish the Office of Business Economics with data on their receipts and payments.

(6) The item of foreign representation covers the administrative expenditures of foreign governments and international organizations in the United States. Disbursements for real property are included. The estimates for foreign governments are based on rather inadequate sample information, as is indicated above. The figures for international organizations, which since 1945 have made up an important part of the total, are derived from published fiscal reports or obtained directly from the fiscal officers of these organizations.

Unilateral transfers

Cash gifts to foreign countries by United States persons and the United States Government are included in table 11 of Part V with sales by the rest of the world to persons and government respectively.

Personal remittances from the United States (included in table 11 of Part V in sales to United States persons) are estimated on the basis of reports from a very large proportion of the banks and other institutions handling such remittances. The bank-reported figures are expanded by use of ratios based on Treasury experience with wartime Foreign Funds Control, and added to totals for postal money order business reported by the Post Office Department. Since no allowance is made for currency sent out through the mails, or remittances in the form of personal checks or other domestic instruments which may be cashed abroad, the estimates may well be too low. On the other hand, some of the postal money orders and some of the transactions reported by the banks as personal remittances may actually represent commercial payments.

During the war and postwar years, deductions from the wages of imported alien workers for remittance to their banks or relatives at home have also been included, using data or estimates from the Departments of Agriculture and Labor and other agencies.

Institutional remittances, which are also treated as sales to the personal sector of the United States economy, are estimated chiefly from replies to an annual questionnaire, response to which has been substantially complete in recent years.

Foreign purchases from United States persons as shown in table 11 include personal remittances from abroad. These are estimated from data on post office money orders from each foreign area, by use of raising ratios based on the proportion of money orders in total remittances sent to that area.

Unilateral cash transfers from the United States Government to foreign countries are entered in table 11 as sales to the government; transfers to the United States Government from abroad, as purchases from the government. Both are determined from the official records of the Federal agencies involved. Such transfers to abroad include United States contributions to international organizations of a purely humanitarian character and pensions and claim payments to nonresidents of the United States, as well as disbursements under foreign aid programs. The transfers from abroad include cash lend-lease settlements and special currency supplied to United States Government agencies by occupied countries without cost to the United States Treasury.

13. GOVERNMENT RECEIPTS AND EXPENDITURES

The annual estimates of the government receipt and expenditure components of the income and product flow are based primarily upon budgetary statistics of the various governmental entities in the United States. The availability of such statistics permits a generally high standard of reliability of the estimates. (See tables 8 and 9 in Part V for a presentation of them in the form of a comprehensive statement of government receipts and expenditures.) However, accuracy is impaired to some extent by two broad limitations of the basic budgetary data. They are incomplete for most years with respect to governmental units covered; and they are inadequate for all years—from the standpoint of national income accounting—with respect to types of transactions identified. Appreciable possibilities of error are inherent in the techniques employed to overcome these shortcomings.

Even in the case of the Federal Government, where financial reporting of most (but not all) activities is channeled through a central set of accounts maintained by the Treasury, the adaptation of budgetary data to the conceptual mold of the national income statistics presents numerous problems requiring the use of corollary information not susceptible to precise integration with the basic Treasury accounts.

For the 48 State governments, a somewhat less uniform, but still substantially complete, budgetary record is available for most years since 1929 from the compilations of the Governments Division of the Bureau of the Census. Modifications to fit the data into the national income framework are necessary in all years, however, and alternative sources and methods are required for the interval 1933–36, when the Census reports on State finances were suspended.

The Census Bureau also provides summary financial statistics with respect to the more than 100,000 units of local government. Comprehensive summary records for all levels of local government are available from the decennial censuses of government (1932 and 1942), and from a survey for 1952 in which cities with populations over 25,000 were completely enumerated and other local government units sampled. (*Summary of Governmental Finances in 1952.*) Only for cities with populations of 100,000 or more, however, are data available annually throughout the period since 1929 (although the lower size limit extends to 25,000 for years since 1942 and to 30,000 prior to 1932). County finance data are available for the period 1943–46, and for years since 1945 the Census Bureau has been publishing a report covering all local government revenues. But, with these exceptions, there are no compilations for the smaller cities, counties, school districts, or other minor local units except for 1932, 1942, and 1952.

In view of the incompleteness of the basic data, the entire range of local estimates for the intercensal years prior to 1942 is subject to the hazards of broad interpolation and extrapolation procedures, described below, which rely in part on supplementary information regarding the movements of major components of local government receipts and expenditures. For years subsequent to 1942, available Census reports are fully utilized insofar as they

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provide coverage, but for all years except 1952 there remain several gaps to be filled by extrapolations or interpolations based upon supplementary information or upon assumed analogies to trends in the units for which annual tabulations are available. In terms of dollar aggregates, the types of governments for which these improvisations are necessary [in all years after 1942 (except 1952) for expenditures, but only in 1943 and 1944 for receipts] account for well under half of the State and local totals and for a relatively inconsequential share of the grand totals for all levels of government.

Adjustments for classification and timing

With regard to the Federal Government, to State governments except in the period 1933–36, to all local governments in decennial census years and 1952, and to certain types of local units or phases of local operations since 1942, the development of appropriate estimates for inclusion in the national income accounts is essentially a matter of classification and timing.

The classification problems are twofold. In the first place, since what is desired is in the nature of a consolidated current operating account, it is necessary to distinguish and exclude all government loans and other financial investments, repayments thereof, borrowing and debt retirement, and purchases or sales of land and existing depreciable assets, as well as certain charges and credits which represent mere intragovernmental transfers. Large amounts of receipts and expenditures in these categories are included in the basic budgetary statistics (especially for the Federal Government), but are not germane to the present United States national income accounts. It should be noted that the process of consolidation involves, besides the exclusion of intragovernmental transfers, the combination with the basic budgetary accounts of transactions of certain government trust and other funds not ordinarily reported as an integral part thereof.

Secondly, revenues and outlays must be subdivided among the receipt and expenditure classifications employed for national income purposes. Primary subdivision in each case is in terms of four major categories cutting to a large extent across the usual budgetary classifications. These are, for receipts: direct personal tax and nontax receipts, direct taxes on corporate income, indirect business tax and nontax accruals, and contributions for social insurance; and, for expenditures: purchases of goods and services, transfer payments, net interest paid, and subsidies less the current surplus of government enterprises.

In this phase of the classification, certain budgetary items are shifted, with appropriate change of algebraic sign, from the receipt to the expenditure side of the account (*or vice versa*). For example, interest income, operating revenues of government enterprises, and certain general government sales are netted out of various classes of expenditure, rather than recorded as receipts. Conversely, tax refunds, which formerly were reported by the Federal Treasury as budgetary expenditures, are netted out of tax receipts in the national income series.

To a considerable extent, both phases of classification can be accomplished by reference to detailed components of the basic budgetary statistics. The latter, however, are inadequate at many points. With regard to receipts, the principal difficulty is that of distinguishing, among classes of revenue which are homogeneous for budgetary purposes, the respective amounts paid by businesses and by individuals as such. In connection with expenditures, trouble arises mainly because of the fact that budgetary statistics are almost invariably compiled on a functional or organizational basis, without utilizable object classification. For these and related reasons, many pertinent details must be gleaned from secondary sources—usually specialized individual agency records—which are not always fully compatible with the basic overall accounting records. While a degree of error is undoubtedly introduced through this necessary reliance upon unintegrated source materials, the resultant impairment of accuracy is not believed, generally speaking, to be serious.

The timing problems involved in adapting standard budgetary data to national income purposes arise chiefly from the necessity of articulating government transactions with corresponding payments and receipts recorded for other sectors of the economy. Since the budgetary accounts are very largely on a cash basis, they must be modified whenever this record diverges widely from accrual records of the same transactions maintained by private business. Similarly, foreign transactions of the Government must be adjusted in some instances to conform to the timing reflected in the United States balance of international payments, and certain other budgetary charges have to be synchronized with corresponding components of the personal sector account.

With reference to receipts, the most important divergences of accrual from cash timing appear in connection with business taxes—especially those on corporate profits. On the expenditure side of the account, analogous divergences have arisen from the lag between deliveries of goods to the Federal Government and Treasury checks in payment therefor, from Federal Government advances and prepayments on purchases, and from retroactive renegotiation of war contracts. These and other less significant reasons for modification of budgetary timing are discussed more fully later in this section.

A minor, but pervasive, timing problem is that of converting fiscal year data to a calendar year basis. For nearly all of the States, utilizable budgetary statistics are available only in terms of fiscal years, and calendar year estimates must be derived by interpolations of varying reliability. The same situation exists with respect to some detailed components of the Federal account. Except in the case of unusually spasmodic transactions, however, the errors resulting from even the crudest conversions of fiscal year data can scarcely be significant, and they tend, moreover, to cancel out over fairly short intervals. In many instances, relevant information (e. g., on the movement of a tax base or of a correlated expenditure series) is available to guide the interpolations; but in others, the expedient of allocations yielding smooth progressions is employed.

The dates upon which the fiscal years of local governments end are extremely diverse, and no attempt is made, either in the basic Census reports or in the national income estimates, to adjust them to a uniform basis. Since the average of these fiscal year-ends is closer to December 31 than to June 30, the data are treated as if they covered calendar years. In general, the latter correspond to the nominal years of the Census reports, but the 1932 decennial census data, which differed in time reference from subsequent Census compilations, are allocated to calendar 1931.

More specific discussions of the estimates of government receipts and expenditures follow.

Government Receipts

For the Federal Government, complete accounting records covering all the relevant receipts except corporate profits tax accruals in the two most recent years are readily available. With that one exception (discussed in the section on Corporate profits), difficulties arise only with respect to minor problems of classification.

For State governments, the Census financial reports (*State Finances* and predecessors) provide the basic data for all years except 1933–36, when the Census reports were suspended. For this interval, chief reliance was placed upon *Tax Yields*, a publication of the Tax Institute of the University of Pennsylvania, compiled mainly from questionnaires sent to State tax officials.

With respect to local governments, there is a rather sharp dichotomy between the estimates for years prior to 1942 and those for subsequent years.

For the former period, the basic Census reports are extremely fragmentary, being confined in most years other than that of the decennial census to cities with populations of 100,000 or over. The only comprehensive coverage of local revenues in these intercensal years is provided by the estimates of the National Industrial Conference Board, which are based upon the available Census material, reports of tax commissions or similar agencies, correspondence with public officials, samples obtained by questionnaires, and a miscellany of other sources. While the National Industrial Conference Board data are not presented in suitable detail for national income purposes, they can be used in conjunction with the decennial census breakdowns to establish generally adequate interpolations from 1932 through 1941, as well as extrapolations back to 1929.

Since 1945, the Census Bureau has undertaken comprehensive annual estimates of local revenues, based upon complete reporting for cities over 25,000, upon local tax data obtained from State agencies, and upon sampling of numerous minor local units. Inasmuch as Census reports for 1943 and 1944 covered all counties, as well as cities having populations over 25,000, the only serious gaps in the data since 1942 are for cities under 25,000, school districts, special districts, and certain types of townships in the years 1943 and 1944. These gaps are readily filled through interpolations guided by trends in the smaller of the reported cities. The classification of aggregate local

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revenues as estimated by the Census Bureau for recent years still derives in part from detailed breakdowns available only in the 1942 decennial census and the 1952 survey; but the provision of control totals through sampling of minor types of governmental units now precludes any likelihood of serious error in the national income estimates of government receipts (except perhaps for the latest year, before the Census figures are compiled).

While the State and local estimates (and particularly the latter) are much less certain than the Federal, they are believed to be adequate in general, both as to level and as to movement.

Personal tax and nontax payments

By far the preponderant element of personal taxes for the last decade has been the Federal individual income tax. The monthly collections reports of the Internal Revenue Service provide a direct record of these levies with the desired timing, except that the withholding tax component must be shifted back one quarter in order to reflect it as paid by individuals rather than as deposited by employers with the Treasury. Beginning with January 1951 the Internal Revenue Service series combines collections of individual income taxes with employment taxes collected under the Federal old-age and survivors insurance program. To derive personal taxes these employment taxes are eliminated on the basis of the data sources discussed in section 2.

Federal estate and gift taxes are recorded directly as reported by the Internal Revenue Service in its monthly collections statistics, as were the dividends tax and a proportion of the automobile use tax (representing the estimated share paid by individuals in a nonbusiness capacity) when operative. Personal nontax payments to the Federal Government, which include fines, penalties, forfeitures, and a variety of incidental charges, are based upon detailed analyses of miscellaneous receipts of the Treasury and of minor trust fund receipts, as reported in the annual *Budget of the United States Government;* fiscal year data on these items are converted to calendar year estimates by interpolations yielding smooth progressions.

Personal tax refunds—netted out of receipts in the national income accounts at the time of refund—are based essentially on the *Daily Treasury Statement*. The latter reports them only in combination with other types of refunds (mostly of corporate profits taxes), but the availability of detailed fiscal year breakdowns in *Annual Reports* of the Commissioner of Internal Revenue, in conjunction with the distinctive timing pattern for the preponderant individual income tax component, permits reasonably accurate estimates for all calendar years. For recent years, quarterly administrative records of the Internal Revenue Service have virtually eliminated all uncertainty from these estimates.

State and local personal tax and nontax receipts are based primarily upon detailed analysis of available Census and other data on governmental finances. Difficulties in allocating given types of revenue as between persons and businesses, however, are frequently solved by reference to available corollary information; for example, Bureau of Public Roads statistics on registrations by type of vehicle are employed in allocating motor vehicle license taxes. Such corollary data are also employed in some cases as extrapolators in estimating yields for recent periods in advance of Census tabulations.

With respect to local governments, the necessity for sweeping interpolations—based upon National Industrial Conference Board data—of the pre-1942 revenue estimates has already been mentioned. The respective personal and business shares of several broad revenue categories so interpolated are based throughout the period upon allocations derived from decennial census breakdowns. Such allocations are also applied, although in somewhat greater detail, to local revenue estimates for years after 1942.

Corporate profits tax accruals

These estimates are described in the section on Corporate profits.

Indirect business tax and nontax accruals

For the Federal Government, these consist primarily of excise taxes, collections of which are reported by the Internal Revenue Service on a monthly basis prior to June 30, 1953, when quarterly reporting for all but alcoholic beverages, tobacco and a few other miscellaneous excise taxes was instituted. An approximate conversion of Internal Revenue Service figures to an accrual basis is accomplished by shifting back by one month all excise tax collections except those on alcoholic beverages and tobacco (where revenue stamps must be purchased and applied before sale); the recent provision for quarterly filing makes it necessary to estimate the monthly pattern of the collections. Customs duties, as reported in the *Daily Treasury Statement* are similarly shifted, while collections of the capital stock tax (as reported by the Internal Revenue Service) were moved back by 6 months during the period when it was effective. Federal indirect business nontaxes are based upon the same detailed analysis of Treasury miscellaneous receipts and minor trust fund receipts from which the personal nontax estimates are drawn. The classification here may be somewhat inexact, since exhaustive investigation of the dozens of petty items involved is not feasible; and the timing is somewhat arbitrary, since basic data are readily available only for fiscal years. Nevertheless, the general order of magnitude of the estimates is not believed to be seriously in doubt.

Refunds of indirect business taxes are netted out of the latter at the estimated time of initial overpayment, in accordance with the net accrual concept underlying the series. These refunds are derived as part of the more general refund analysis described above in connection with personal taxes.

The basic Census reports, supplemented primarily by *Tax Yields* statistics for the years 1933–36, provide substantially full coverage of State indirect business taxes.

The major sales taxes which account for the bulk of State revenues are readily distinguishable, and involve no serious classification problems. In principle, these taxes should be recorded on an accrual basis for present purposes. Prior to 1942, however, the distinction between accruals and collections is ignored as inconsequential, and calendar year estimates represent simply two-year moving averages of fiscal year collections. For later years, partial cognizance is taken of the accrual principle through interpolation of calendar year estimates from fiscal-year collections totals by reference to independent series indicating the movement of the respective tax bases. The retail sales estimates of the Office of Business Economics (or appropriate components thereof) are used for this purpose with respect to general, gasoline, and liquor sales taxes, as well as for extrapolating them beyond the latest period reported by Census. Monthly data from the Internal Revenue Service on tax-paid withdrawals of tobacco products from registered factories or bonded warehouses are similarly utilized in connection with State sales taxes on tobacco.

Estimates of other State taxes and nontaxes are somewhat less satisfactorily founded. Some of them involve more or less dubious allocations as between persons and businesses, and most of them are arbitrarily timed (within the fixed fiscal-year totals) to yield smooth progressions. These circumstances, however, are not believed to preclude a generally satisfactory degree of reliability in the published estimates, since errors in the detailed calculations are likely to be at least partially offsetting.

The local indirect business tax estimates are still less solidly based. They are subject to the hazards arising from fragmentary reporting by the Census Bureau prior to 1945 (except in decennial census years) and from possible sampling error thereafter with respect to all local units except cities over 25,000. Particularly to be noted is the somewhat dubious nature of estimates for intercensal years prior to 1942, when they hinge in large measure upon the local revenue data compiled by the National Industrial Conference Board, which are not sufficiently detailed for this usage.

The classification of local revenues as between business and persons depends to a considerable extent upon the use of ratios derivable only from the detailed decennial census breakdowns and the 1952 survey, or upon assumptions about changes in such ratios. These classification problems, however, are minimized by the predominance in the local revenue structure of real property taxes, all of which are allocable to the indirect business category because of the treatment of home ownership as a business.

This predominance of property taxes has a special bearing upon the reliability of the local indirect business tax estimates for the most recent year (published before the Census reports become available). Since no current economic series closely correlated with property tax yields is known, the latest estimate usually represents merely a judgmental extension of the previous trend, with rough allowance for the volume of new construction and the prevalence of rate revisions.

Contributions for social insurance

These estimates are discussed in the section on Contributions for social insurance and other labor income.

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Federal grants-in-aid

These do not appear in the consolidated Government account, but become an element of Federal expenditures and of State and local receipts if the accounts are segregated. The series is described in general terms below, in connection with the derivation of estimates of Federal purchases, and its components are listed in a footnote to table 8 in Part V.

Government Expenditures

The derivation of government expenditure data for the national income accounts centers upon the estimation of government purchases of goods and services. The method, in general, is to start with budgetary totals drawn from broad fiscal reports, then to make various additions to and deductions from these totals so as to achieve as residuals the desired purchases series. The alternative method of building up such a series item by item would be much more informative; but it is not statistically feasible, owing to the absence of satisfactory comprehensive sources of basic data classified by object of expenditure.

With purchases of goods and services established, other outlays within the national income framework—transfer payments, interest, grants-in-aid (for the separate Federal account), and subsidies (less the current surplus of government enterprises)—are added to complete the government expenditure account. In the main, these additions represent restoration (not necessarily with the same timing) of many of the budgetary items deducted in estimating purchases. They also include, however, certain outlays from nonbudgetary funds consolidated with the budgetary accounts for national income purposes.

The general approach sketched above is employed in deriving Federal expenditures throughout the period of the estimates, and is applied to State expenditures in all years except 1933–36, and except also in the most recent year (when Census tabulations are not yet available). These gaps are filled mainly by interpolations (discussed more fully below) based upon independent statistics covering major types of outlay.

With respect to local governments, the general method is fully applicable only to decennial census years and 1952. Estimates for all other years before 1942 represent interpolations or extrapolations similar to those utilized for State expenditures from 1933 through 1936. The *City Finances* data available for those years are discarded, since they cannot readily be integrated with estimates based on interpolating series covering all local units (although not all types of expenditure). Subsequent to 1942, available Census data on local expenditures are utilized, but for local units other than cities with populations of 25,000 or over (and also counties, prior to 1947) the estimates represent interpolations and extrapolations benchmarked on the 1942 census and the 1952 survey.

Purchases of goods and services—Federal

Exhibit 1 summarizes the derivation of estimates of Federal purchases for selected years. Attention may be called to the fact that the magnitude of the items entering the derivation varies widely from year to year, depending to a considerable extent upon the changing content of the initial budgetary expenditures. A brief description of sources and methods may conveniently be given in the form of annotations to this exhibit.

1. *Total budgetary expenditures.*—At least three major Federal fiscal reports—the annual *Budget* document, the Treasury's *Combined Statement of Receipts, Expenditures, and Balances*, and the *Daily Statement of the United States Treasury*—might be considered in choosing a point of departure for the estimates of Federal purchases. These three documents represent essentially the same accounting record (varying, from an overall standpoint, only because of slightly divergent closing dates), but differ widely with regard to the type and arrangement of details reported. Although the *Daily Treasury Statement* is the least informative of the three in many respects, it is the only one available on other than a fiscal year basis, and has accordingly been adopted as the basic source of initial summary totals.

2. *Transfers to trust accounts* are reported directly in the *Daily Statement*, and do not have to be estimated. Some of them are purely bookkeeping transfers, to be eliminated from budgetary expenditures in the process of consolidating the various Treasury accounts, while others, although viewed as substantive expenditures, are given a different timing for national income purposes (see note to line 13, below).

3. *Tax refunds*, which are netted out of tax receipts in the national income accounts, must be eliminated from budgetary expenditures in those years when they were so classified by the Treasury. The *Daily Statement* provides a record of the amounts refunded.

4. *General government loans, investments, and capital transfers* are compiled partly from the *Daily Statement* itself (where separately identifiable in that document) and partly from the *Budget* document and from reports of individual lending agencies. In the two latter cases, the estimates doubtless diverge to some extent from the amounts implicit in the initial budgetary expenditure totals, but close approximation can usually be assured. Loans and investments of government enterprises are not included under the present heading, being treated separately in line 11.

5. *Purchases of land and existing capital assets* are estimated for some years on the basis of title clearance records of the Department of Justice, and for other years on the basis of obligations (not expenditure) data provided by the annual *Budget* document. In neither case do the estimates represent more than a rough order of magnitude (relatively small) for government acquisitions of goods neither currently produced nor coming out of business inventories or imports.

6. *Budgetary transfer payments*, except for certain veterans' benefits, are not distinguishable in the *Daily Statement* from other outlays of the agencies involved. From administrative records of these agencies, however, most items under this heading can be ascertained with only minor timing discrepancies; in a few instances of reliance upon the *Budget* document, proportionately larger timing errors are probably present.

Exhibit 1.—*Summary Derivation of Federal Government Purchases of Goods and Services, Selected Calendar Years*

[Millions of dollars]

Item	1943	1945	1950
1. Total budgetary expenditures, as reported in *Daily Treasury Statement*	88,084	90,552	38,255
Less:			
2. Transfers to trust accounts	474	1,787	950
3. Tax refunds	74	2,133	----------
4. General government loans, investments, and capital transfers	31	−5	308
5. Purchases of land and existing capital assets	87	74	50
6. Budgetary transfer payments	590	2,674	4,640
7. Grants-in-aid to State and local governments	942	870	2,339
8. Interest payments (other than by government enterprises)	2,194	4,107	5,700
9. Subsidies (other than those paid by government enterprises)	667	338	357
10. Overpayments established by renegotiation of war contracts	3,853	771	----------
11. Budgetary expenditures relating to government enterprises	1,149	759	1,504
Plus:			
12. Capital formation of government enterprises	2,987	−686	−635
13. Government contributions for social insurance	128	1,434	312
14. Change in net payables to private business	800	−1,100	95
15. Miscellaneous other adjustments	−74	262	214
16. Equals: Federal government purchases of goods and services (gross)	81,864	76,954	22,393
17. Less: Government sales	641	2,158	255
18. Equals: Federal government purchases of goods and services (net)	81,223	74,796	22,138

7. *Grants-in-aid to State and local governments* are firmly founded, for fiscal years, upon special tabulations appearing in *Annual Reports* of the Secretary of the Treasury or in the *Budget*. The calendar year timing of some of the largest grants (e. g., for Social Security and for highways) is specified either precisely or within very narrow limits (where reported in combination with relatively small associated administrative expenses) by the *Daily Statement*. Arbitrary interpolation is employed, however, in connection with a number of minor grant programs for which relevant monthly or quarterly data are not readily available.

8. *Interest payments*, except for trivial amounts not associated with the public debt, are precisely reported in the *Daily Statement*.

9. *Subsidies* paid by general government agencies consist chiefly of soil conservation and other similar payments to farmers, which are reported monthly

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by the Agricultural Economics Division of the Agricultural Marketing Service on a basis not likely to diverge significantly from corresponding charges implicit in the *Daily Statement*. With respect to several small nonfarm subsidy programs, estimates are derived through interpolation of obligations data given in the *Budget*. It should be noted that all of the major wartime subsidies were paid by government enterprises, and hence are treated in line 11, rather than here.

10. *Overpayments established by renegotiation of war contracts* are deducted from budgetary expenditures in order to bring government purchases into line with related data on corporate profits and business sales, which are computed, for purposes of national income measurement, with retroactive allowance for renegotiation of war contracts. The estimates of gross recoveries from renegotiation, timed as of the dates of initial overpayments, are based upon data compiled by the War Contracts Price Adjustment Board.

11. *Budgetary expenditures relating to government enterprises* represent a combination of contributions by the general government to the capital of the enterprises and expenditures by the enterprises themselves (to the extent included in the budgetary totals). Most components of this series are reported directly in the *Daily Statement*, but several important segments are drawn, with varying degrees of precision, either from annual financial reports of individual government enterprises or from the *Budget* document.

With the present adjustment designed to eliminate all budgetary charges relating to government enterprises, there is then substituted (in line 12, below) an estimate of such of their transactions as are relevant to the measurement of government purchases of goods and services.

12. *Capital formation of government enterprises* consists of the gross acquisition of newly produced fixed assets by these agencies, plus the net change in their inventories. Both components are based largely upon the business-type financial statements maintained by most government enterprises. In cases where such statements are lacking, the gap is filled somewhat less satisfactorily, through resort to relevant budgetary or administrative data.

In combination, the two adjustments listed in lines 11 and 12 have these principal effects: (1) To exclude from government purchases, in accordance with national income concepts, the lending and subsidy activities of government enterprises, as well as their net current operating expenses; and (2) to convert the record of their purchases of fixed assets and inventories (net) to an accrual basis.

13. *Government contributions for social insurance*, which are viewed as supplementary compensation of government employees, are equivalent to the shares of Federal civilian employee retirement funds and veterans' life insurance funds in transfers to trust accounts (line 2, above), except that the timing is modified and a deduction is made for a portion of the retirement fund contribution ascribable to covered government enterprise employees. (See section on Supplements to wages and salaries.) The latter item is allocated as an operating expense of the enterprises in the calculation of their current surplus.

14. *Change in net payables to private business*, an adjustment aimed at articulating the record of government purchases with that of corresponding business sales, represents the net increase in Federal Government accounts payable to business, less the net increase in outstanding advances and prepayments by the Federal Government. Both sets of data are taken from Securities and Exchange Commission surveys of working capital of United States corporations, and are available only for the years 1940 through 1946 and from the end of 1950 to date. The adjustment is ignored for other years, as is the failure of the data to cover noncorporate businesses.

15. *Miscellaneous other adjustments* embrace a wide variety of items. In general, they relate either to special characteristics of Treasury accounting practices or to the maintenance of consistency with other segments of the national income accounts. For example, certain sizable payments to United States personnel in Germany and Japan after World War II were made in the form of "military payments certificates." These were expensed by the Treasury on the basis of the issuance of the certificates to disbursing officers, but it is the timing (substantially different) of payments by the latter to employees which is relevant for present purposes. Or again, acquisitions of silver are debited by the Treasury directly to the general fund, rather than charged to budgetary expenditures; accordingly, an explicit addition to the latter is required to include silver in government purchases.

The requisite data for items under the present heading are drawn from diverse sources, including the *Daily Statement*, the *Budget* document, the United States balance-of-payments statistics, and individual agency records.

17. *Government sales*, which include all sales by general government agencies except those of fixed assets to domestic business, are estimated in two groups. Domestic sales are derived from the detailed breakdowns of miscellaneous receipts given in the *Budget* document, except for the peak years of World War II surplus property disposal, when data compiled by the War Assets Administration are the primary source. Because of classification difficulties, the reliability of these estimates is relatively low. Foreign sales, which include cash unilateral receipts from abroad, are taken directly from the official balance-of-payments statistics, thus assuring proper integration of the accounts regardless of accuracy in an absolute sense (although this, too, is probably much higher than in the case of domestic sales).

Purchases of goods and services—State and local

The method of estimating State and local government purchases parallels, in years of full coverage by the Census Bureau, that employed for the Federal Government. Again, budgetary statistics constitute the foundation of the estimates and numerous adjustments in the direction of national income classification are required.

While these adjustments are less complex with respect to types of transactions covered, the derivation is in other ways more difficult because of the several types of governmental units to be dealt with and because of the necessity for rather tenuous statistical improvisations to fill in the gaps for intercensal periods.

For segments of the estimates depending directly upon the basic Census data (involving all non-Federal governmental units in decennial census years and 1952, States in most other years, cities of 25,000 or more since 1942, and counties from 1943 through 1946), the principal items to be excluded from total governmental expenditures as reported by the Census Bureau are debt service charges, intergovernmental transfers of various types, and transfer payments. The adjustment for government enterprises (to effect the inclusion of only their capital outlays in government purchases) has varied depending on the treatment of government enterprise transactions in the basic Census reports. This is also true of a few other outlays from nonbudgetary funds. Data for most of the necessary adjustments are obtained from the same Census tabulations (or from unpublished details thereof) from which the control totals are drawn.

In interpolating or extrapolating from benchmark totals (as well as in establishing, since 1942, the calendar year timing of series reported only by fiscal years), chief reliance has been placed upon the government payroll estimates of the National Income Division and upon the public construction estimates of the Building Materials and Construction Division of the Department of Commerce. Such outlays account in most years for about 75 percent of all State and local purchases.

Interpolations (or extrapolations) geared chiefly to these series (or components of them) are employed in estimating purchases for the following types of governmental units: States for the years 1933–36 (and for the most recent year, before compilation of the Census data); all local units during the interval between the 1932 and 1942 Censuses and prior to the former (as well as for the most recent year); counties for years after 1946 (except 1952); and cities with populations under 25,000, townships, towns, school districts, and special districts for years after 1942 (except 1952).

In the pre-1942 interpolations, it is assumed that, except for new construction and a few other items, all purchases followed trends between the benchmark years (and back to 1929 in the case of local governments) corresponding to those of the respective State and local payroll series. With the estimates of payrolls and of purchases related to them, there are then combined the estimates of construction and other expenditures not assumed to have been so related. Among the latter, by far the most important were various types of purchases under programs supervised by the Federal Emergency Relief Administration. Estimates of these purchases are based upon the *Final Statistical Report of the Federal Emergency Relief Administration: 1942*, with due allowance for nonpurchase items there included.

Interpolations of local purchases for 1943–51 are undertaken separately for several groups of unreported governmental units, utilizing in each case the most nearly appropriate detailed components of the available payroll and construction series.

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Breakdowns of government purchases

In table 9 of Part V, government purchases are subdivided into compensation of employees, new construction, and other purchases from business (with a further distinction, for the Federal Government only, between net purchases from abroad and those from domestic business). The data used in effecting these breakdowns are to a considerable degree independent of those from which the estimates of total purchases of goods and services are derived.

The employee compensation figures—which cover only general government employees, since government enterprise payrolls are treated not as government purchases, but as operating expenses of the enterprises—are described in the section on Wages and salaries. The estimates of new public construction are those published by the Building Materials and Construction Division, except for the exclusion of work relief construction. (See section on New construction.) Net purchases from abroad, which include cash gifts of the Government to (and from) foreign countries, are taken from the official United States balance-of-payments statistics, as described in the section on Net foreign investment.

Deduction of the three series discussed in the foregoing paragraph from estimated total government purchases gives other purchases from business as a residual. Although clearly defined in principle, this item is peculiarly subject to statistical imperfections, owing to its absorption of whatever errors or inconsistencies may be present in the other series. In particular it should be noted that inasmuch as force-account construction payrolls are included both in compensation of employees and in new construction, "other purchases from business" are understated by the amount of these payrolls. Fragmentary data available indicate that the understatement for State and local governments is less than 10 percent.

In table 2 of Part V, a different breakdown of Federal Government purchases—between national security and other activities—is given for the years 1939–53. For the 1939–46 period, the national security purchases series conforms in general to the *Daily Treasury Statement* classification of general and special account expenditures between war and nonwar activities. It includes also that part of the capital formation of government enterprises attributable to their war activities and Government contributions to the National Service Life Insurance Fund. For 1947–53, national security purchases are based on the "major national security programs" classification in the *Budget of the United States Government for the Fiscal Year Ending June 30, 1954*, p. 1090. Government contributions to the National Service Life Insurance Fund are added (in the national defense component of national security expenditures).

The series for 1939–46 and 1947 to date are broadly comparable. In the latter period, inventory goods initially purchased by government enterprises are reflected in national security purchases when transferred for use in connection with the national security program, rather than when acquired by the government enterprise, as in the 1939–46 series. Since government enterprise capital formation related to national security has been confined to inventory goods (as distinct from fixed capital formation) since 1947, the difference in the treatment of government enterprise capital formation is merely a matter of timing.

The national defense part of the national security total is based on the following *Budget* components of major national security programs: military services, the military assistance portion of international security and foreign relations, civil defense, development and control of atomic energy, promotion of defense production and economic stabilization, and promotion of merchant marine (before 1950). The "other national security" part is based on the *Budget* components: international security and foreign relations (other than military assistance), and promotion of merchant marine (after 1949).

Transfer payments

The derivation of these figures, for all levels of government, is described in the section on Transfer payments. It should be noted that the totals carried under this heading substantially exceed the amounts of transfer payments deducted from budgetary expenditures in estimating purchases, since transfer payments charged against nonbudgetary trust funds (and in two cases against the Federal public debt accounts) are included.

Net interest paid by government

This series is explained in the section on Interest.

Subsidies less current surplus of government enterprises

This item consists of the Federal general government subsidies described in the discussion of *Exhibit 1* above, plus the operating deficit or minus the operating surplus of both Federal and State and local government enterprises.

For the Federal Government, the enterprise surplus is based primarily upon the business-type profit and loss statements of Federal corporations, modified to exclude capital gains or losses, interest income or expense (which is consolidated with general government interest), and depreciation charges (which are not recognized for national income purposes in connection with government-owned assets), and to include as an expense an allocated share of the government contribution to employee retirement funds. For a few Federal enterprises not actually organized as corporations, it is necessary to construct business-type financial statements from available budgetary data.

It may be noted that direct subsidies paid by government corporations are included as operating expenses in their profit and loss statements. The combination of operating deficits of enterprises with direct subsidies thus has the merit of statistical expediency, in addition to its more basic purpose of achieving parallel treatment for all subsidy programs, whether accomplished through direct payments or through the deliberate incurrence of losses on purchase and sale operations.

The State and local enterprise surplus is calculated (with similar modifications) from the summary operating statements of public service enterprises compiled by the Census Bureau as a supplementary feature of its *Government Finances* series. Since the census tabulations cover some types of enterprises only in decennial census years (and in 1952), the estimates for other periods represent interpolations or extrapolations based upon the most relevant data available.

For a list of Federal Government enterprises and major types of State and local enterprises, see footnotes to the table on industrial classification in the Introduction to this Part.

Federal grants-in-aid to State and local governments

See discussion of "Government receipts" above.

Characteristics of Revisions

Federal Government

Nearly all of the basic data underlying the Federal Government estimates become available within a few weeks or months after the close of any calendar year. The only important exception is in the case of corporate profits tax accruals, which for the two most recent years are extrapolated from the latest *Statistics of Income* year, as explained in the section on Corporate profits.

For a number of minor items, such as nontax revenues and numerous detailed elements in the derivation of Federal purchases, reliance upon the *Budget* document and other fiscal year reports has the effect of leaving the figures for the latter half of the latest calendar year on a tentative basis at the time full annual estimates are first prepared. By and large, however, the revisions eventually arising from substitution of more definitive data in these areas tend to be trivial.

State governments

The Census reports from which State government receipts and expenditures are chiefly derived are ordinarily available for a fiscal year ending (for most States) on June 30 of the latest calendar year covered by the national income estimates. Only for the latter half of that year, therefore, are the estimates completely dependent upon extrapolating procedures. Moreover, the proportions of expenditures covered by currently available payroll and construction series, and of receipts fairly closely correlated with current retail sales data, are such as to insure against errors of large magnitude.

Local governments

It is at the local level that divergences between preliminary and final results are potentially widest, since comprehensive information is available

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only for the decennial census years and for 1952. In this connection it should be noted, however, that the results of the 1952 survey confirmed the preliminary estimates for 1952 so closely that no significant revisions were required in them. This experience enhances confidence in the estimates for the years 1943–51, as well as in the extrapolation procedures used to move forward from the 1952 benchmark. Because of delays in reporting, the latest year's figures must be prepared without benefit of any of the basic Census compilations. This is perhaps more hazardous in the case of receipts than in that of expenditures, since current payroll and construction data provide a guide for the latter, while no current economic indicator closely correlated with the preponderant property tax component of local revenues is known to exist.

14. TRANSFER PAYMENTS

Accurate information on nearly all types of government transfer payments has been available for years since 1933 from the fiscal records of agencies administering the payments or from such summary sources as the *Daily Treasury Statement* and *Budget of the United States Government*. For years prior to 1933, the State and local series are not so precise and the government totals for this period are accordingly less accurate.

Business transfer payments, on the other hand, are comprised largely of items for which statistical sources are weak. Considerable estimation is necessary to derive approximate orders of magnitude. Business transfers constituted only 6 percent of total transfers in 1950, but as much as 40 percent in 1929. Transfer payments in 1929, however, comprised only 2 percent of total personal income, as compared with 5–7 percent in recent years.

Government Transfer Payments

Federal Government

Except for several components of the "Other" category, as shown in table 36 in Part V of this report, requisite data on Federal transfer payments have been available from government sources. The data have required but little adjustment for use by the National Income Division. In some instances, data were reported for fiscal years and had to be converted to a calendar year basis; in others, payments to nonresidents of the continental United States had to be eliminated from available totals. In several component series, minor adjustments for timing discrepancies were required.

Reported, direct data have not been available for several items included in the "Other" grouping. This is true of the series on profits of ships' service stores for years prior to 1948. Magnitudes for these years were obtained by extrapolating the 1948 figure by strength of the naval forces. The series on Federal payments to nonprofit institutions may not, because of unavailability of data, be quite complete. Also, a few types of such payments must be derived by indirect methods. An example is furnished by payments to nonprofit educational institutions under veterans' training programs. Such payments are estimated by making an allocation of data on total expenditures, as reported by the Veterans Administration, to nonprofit schools, State and local government schools, and commercial schools. This is based on two types of periodic data for the several types of schools: Enrollment of veterans (from the Veterans Administration) and average tuition costs (from the Office of Education and the President's Committee on Higher Education).

State and local government

For components forming in recent years over four-fifths of State and local transfer payments, data based on the fiscal records of disbursing agencies are available for years since 1933. The amounts of direct relief (special types of public assistance and general assistance) and of cash sickness compensation are provided by the Department of Health, Education, and Welfare from reports made to it by State government agencies. The figures on bonuses to veterans of World War II are secured directly from the individual States making such disbursements.

State and local direct relief for the years 1929–32 was estimated by the National Income Division from the available partial data contained in the following publications: *Summary of Relief and Federal Work Program Statistics, 1933–40*, by T. E. Whiting and T. J. Woofter; and *Trends in Different Types of Public and Private Relief in Urban Areas, 1929–35*, by E. A. Winslow. The estimates, at best, are approximate orders of magnitude.

The remaining types of State and local government transfers—pensions, veterans' aid, payments for the care of foster children in private family homes, and payments to nonprofit institutions—have required estimation for the entire period since 1929.

Estimates of State and local government pension payments for years subsequent to 1935 have been prepared by the Department of Health, Education, and Welfare by procedures described in section 2 in connection with employer contributions to State and local employee retirement systems. The total for 1936 from this source was extended back to 1929 by an extrapolating series utilizing available data (converted to a calendar year basis) on State and local pension payments. Data for States were reported for the fiscal years 1929–31 and 1937 in the Census Bureau's *Financial Statistics of States* and obtained for intervening years by straight-line interpolation. Data for local units were derived by extrapolating the 1941 value given in the Census Bureau's publication on *Retirement Systems for State and Local Government Employees: 1941* by pension payments in cities of 100,000 and over, as provided in the annual Census reports on *Financial Statistics of Cities*.

State and local government aid to veterans (not including State bonuses to World War II veterans) has been estimated largely from data reported by the Census Bureau in its Government financial statistics series. Consisting in large part of pensions paid in the Southern States to veterans of the Confederacy, the item amounted to $24 million in 1929 and $11 million in 1950.

The small amount of payments by State and local governments for the care of foster children in private homes has been estimated from periodic data of the Bureau of the Census, the Children's Bureau of the Department of Health, Education, and Welfare, and a few State welfare departments on the number of children cared for, and from data of the Children's Bureau on the average cost of foster home boarding in 10 urban areas in 1938, extrapolated to other years by the Bureau of Labor Statistics Consumer Price Index.

Estimates of State and local government contributions to nonprofit institutions are derived by multiplying total contributions to such institutions (by individuals, corporations, and governments, as estimated from scattered, piecemeal data) by the estimated proportion of total receipts of nonprofit institutions obtained from State and local governments. This proportion is based on studies for a group of urban areas for 1938, 1940, and 1942 made by the Children's Bureau.

Business Transfer Payments

The only component of business transfer payments for which direct information is available is corporate gifts to nonprofit institutions. The estimates of the other components—consumer bad debts, personal injury payments by business other than to employees, unrecovered thefts from business of cash and capital assets, and cash prizes—must be derived from indirect and partial data.

Data on corporate gifts to nonprofit institutions (forming 30 percent of total business transfers in 1950) have been reported by the Internal Revenue Service, beginning with 1936, in its *Statistics of Income* tabulations of corporate income tax returns. Pending the availability of reported data, the latest Internal Revenue figure is held constant for the two most recent years of the published series. To obtain estimates for 1929–35, the 1936 figure was extrapolated by corporate gifts to social and welfare agencies, derived from rather fragmentary sample information.

Consumer bad debts (39 percent of business transfer payments in 1950) are estimated through an allocation of total bad debts (consumer and intrabusiness) by industry, as reported in Internal Revenue tabulations of corporate and noncorporate income tax statistics. This allocation is a twofold one: (1) elimination, by assumption, of those industries in which consumer bad debts do not arise (or are very small), and (2) apportionment of the remaining total

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of bad debts, by industry, between consumers and business on the basis of sales, with sales to consumers being approximated from groupings of the personal consumption expenditure estimates, and business sales being derived as the difference between reported total sales and estimated consumer sales.

As in the case of corporate gifts to nonprofit institutions, the most recent estimate is held constant pending receipt of data from the Internal Revenue Service. For the numerous years for which noncorporate bad debt data were not available from Internal Revenue tabulations, estimates were made by industry by extrapolating the noncorporate ratio of bad debts to sales by the similar corporate ratio, and then applying the resulting ratios to estimated noncorporate sales.

Personal injury payments by business to persons other than employees ($227 million in 1950) are estimated as the sum of automobile liability payments for personal injury, payments by railroads, and miscellaneous liability payments.

The procedure of deriving automobile liability payments is to allocate total losses paid on automobile policies (reported by the Spectator Company) between business and individuals, and then to allocate estimated business losses between personal injury and property damage. The first allocation (30 percent to business in all years except 1942–45, when it was 50 percent) is the same as the one used in the apportionment of consumer and business expenditures for gasoline and oil. As described in the consumer expenditure notes, it is "thinly based". The basis for the second allocation was provided by the American Management Association's Insurance Series, *Compulsory Automobile Insurance* (No. 24). The 80 percent allocation of business losses to personal injury payments derived for 1935 has been held constant over the whole period of the estimates.

Railroad personal injury payments to persons other than employees represent total payments to all persons, as reported by the Interstate Commerce Commission, minus the estimated amount of employees' benefit compensation (see section 2 of this Part). Miscellaneous liability payments—with virtually no data as a basis—are entered at $10 million each year.

Unrecovered thefts from business of cash and capital assets are estimated from data on the value of currency and goods stolen and recovered contained in the annual publication *Uniform Crime Reports of the United States* of the Federal Bureau of Investigation. The business allocation is made on the basis of data on thefts by place of commission.

The figures on cash prizes included in the published data represent a token estimate of $25 million annually.

15. PERSONAL SAVING

Personal saving (as shown in table 3) is obtained by subtracting personal consumption expenditures from disposable personal income. As the difference of these much larger totals, it is subject to large percentage errors in level as well as in movement, and it is necessary, therefore, to check the series for reasonableness against other estimates. There are two other regularly available series that can be used for comparison.

One of these also is a residual estimate, which can be derived within the framework of the national income accounts, by deducting from investment the various types of nonpersonal saving and the government surplus. This alternative estimate equals "personal saving" (obtained as the difference between disposable income and consumption) plus the "statistical discrepancy", as can be seen from table 5, Part V. It is not possible to say which of the two residual estimates is likely to be more reliable. However, they are to a considerable extent statistically independent, and close correspondence between them—in other words, a small statistical discrepancy—constitutes strong, although by no means conclusive, evidence of their validity.

Another estimate of personal saving is provided by the Securities and Exchange Commission through direct estimates of changes of the assets and liabilities of persons. This estimate is published in table 6, Part V of this report. It may be noted that data deficiencies make the direct estimate of personal saving a hazardous procedure also. However, the availability of a series which is to a very large extent statistically independent of the two residual estimates of personal saving provides a useful check.

The three estimates of personal saving are shown and compared in the concluding section of table 6.

16. CAPITAL CONSUMPTION ALLOWANCES

The bulk of capital consumption allowances in the national income and product tables represents charges for the depreciation, including obsolescence, of business fixed capital and for accidental damage to such capital, deducted in arriving at business net income. An insignificant amount represents the depreciation of fixed assets held by nonprofit institutions. Depletion is not included.

In general, the valuation of these charges reflects the type of accounting practices pursued under Internal Revenue Service regulations. Estimates of farm depreciation are an exception to this rule. The Agricultural Economics Division of the Agricultural Marketing Service, Department of Agriculture, the source of the farm income estimates, measures depreciation on the basis of replacement cost rather than original cost.

Exhibit 1.—*Capital Consumption Allowances, 1950*

Item	Millions of dollars	Percent
Depreciation:		
Depreciation charges	18,042	87.9
Corporate business	7,904	38.5
Noncorporate business:		
Nonfarm, except real estate industry	3,210	15.6
Farms	3,797	18.5
Real estate industry	2,852	13.9
Institutional	279	1.4
Capital outlays charged to current expense	1,858	9.1
Oil and gas well drilling	920	4.5
Producers' durable equipment	938	4.6
Accidental damage to fixed capital	616	3.0
Total	20,516	100.0

About two-fifths of total capital consumption allowances are taken directly from corporate accounting records for all but the two most recent years. With the improvement in coverage of income tax return data for partnerships and sole proprietorships, and with more frequent tabulation of such data, it has become possible to derive noncorporate components making up an additional one-sixth of the total from these materials. The remainder of the allowances is estimated on the basis of a variety of sources and methods, and some of them are subject to a wide margin of error.

Exhibit 1 gives a breakdown of capital consumption allowances in which segments based on distinct types of estimating methods are listed separately.

Depreciation Charges

Estimates under this heading comprise almost 90 percent of all capital consumption allowances in 1950.

Corporate business

More than two-fifths of all depreciation is on corporate property and is reported annually by the corporations. Federal income tax returns are the chief source of data. The totals compiled from the tax returns are increased by the addition of depreciation charged by Federal Reserve Banks, which is reported to the Federal Reserve Board.

A variation in the use of the tax return data was necessary in wartime, because of legislation affecting the length of useful life to be assumed in calculating depreciation of certain capital assets for tax purposes. The assets

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involved were facilities acquired after 1939 which had been certified to be necessary in the interest of national defense. Taxpayers were allowed, until the end of the war, to amortize their investments in such facilities over an assumed useful life of 60 months. Such emergency amortization allowances were reported in the tax return tabulations, and were included with depreciation for national income purposes.

However, subsequent legislation modified the assumption as to useful life, by permitting the taxpayers to recompute their amortization charges on such facilities retroactively in such a way that the cost of the facilities would all be charged off by September 30, 1945. Estimates of additional amortization charges are based upon Internal Revenue Service tabulations of tax refunds resulting from the retroactive recomputation of amortization charges.

Pending the availability of tax return data for the latest two years, preliminary estimates of corporate depreciation are prepared by using data from various other sources as extrapolators. The main sources are the Federal Trade Commission—Securities and Exchange Commission figures for depreciation and depletion combined reported in the *Quarterly Financial Report* for manufacturing corporations; combined depreciation and depletion totals for large corporations in selected industries, compiled by the Federal Reserve Board from financial returns and used generally for nonmanufacturing other than public utilities and banks; Interstate Commerce Commission figures on depreciation charges for class I railroads, interstate motor carriers, and oil pipeline companies; and similar compilations by the Federal Communications Commission, the Federal Power Commission, the Civil Aeronautics Board, and the Federal Deposit Insurance Corporation for the industries reporting to these agencies.

Noncorporate nonfarm business, except real estate industry

Estimates of noncorporate depreciation in industries other than farming and real estate are prepared separately for forestry and fisheries, mining, contract construction, manufacturing, wholesale trade, retail trade, finance and insurance, transportation, communications and public utilities, and services. Depreciation reported in Internal Revenue Service tabulations of sole proprietorships and partnerships for 1945 was raised to include depreciation charges of firms not reporting to the Internal Revenue Service, on the basis of the relationship of the gross receipts of reporting firms to total gross receipts, for industries for which estimates of total gross receipts were available. (See the section on the Income of unincorporated enterprise.) Estimates for other years were derived by multiplying gross receipts (or income originating) by ratios of depreciation to gross receipts (or income originating). For 1939 and 1947 these ratios were obtained by extrapolating the 1945 ratio by corresponding ratios for partnerships, based on Internal Revenue Service tabulations of partnership returns for 1939, 1945, and 1947. For other years they were obtained by interpolating and extrapolating the 1939, 1945, and 1947 ratios for sole proprietorships and partnerships by corresponding ratios for corporations.

In the absence of information on depreciation for nonprofit organizations serving business, depreciation was assumed to bear the same relationship to operating receipts for these organizations as for partnerships or corporations in industries carrying on similar operations. Total operating receipts of nonprofit organizations serving business were estimated chiefly from informational returns filed by such organizations with the Internal Revenue Service in 1943. The coverage of this source is known to have been incomplete in some categories; the amounts involved are generally small, however, and data for expanding them are generally not available. Extrapolation of the benchmark depreciation estimates have generally been accomplished for each industry or group of industries by use of the noncorporate depreciation series for that industry or group.

The estimates for mutual savings banks and savings and loan associations represent minor exceptions to the general procedure just outlined. In these cases, annual compilations from financial reports to Government regulatory agencies provide asset values and indicate the applicable depreciation rates.

Farms

The estimates of depreciation on all farm property are prepared by the Agricultural Economics Division, by methods outlined in the discussion of Income of unincorporated enterprises. *Exhibit 1* shows under this heading only the portion chargeable to farm property owned by persons living on farms, which accounts for about two-fifths of all noncorporate depreciation. The portion chargeable to farm property owned by landlords living off farms is classified for national income purposes in the real estate industry. The farm estimates, unlike the other depreciation figures, represent depreciation of estimated stocks of capital valued at current prices rather than at original cost.

Noncorporate real estate industry

In addition to the farm property component mentioned above, the item of noncorporate real estate depreciation shown in *Exhibit 1* covers nonfarm real estate owned by persons and nonfarm property of unincorporated real estate firms. The first of these estimates is described in the section on Rental income of persons. The second is benchmarked on depreciation reported to the Internal Revenue Service for 1945 by partnerships and sole proprietorships classified in the real estate industry. This benchmark is extrapolated by depreciation on personal holdings of tenant occupied property.

Institutional depreciation

The minor item of institutional depreciation charges relates to nonprofit organizations furnishing services primarily to individuals—nonprofit hospitals, nonprofit schools, religious organizations, and a variety of other organizations such as social and welfare agencies, fraternal societies, charitable organizations, labor unions, foundations and funds, civic leagues, and social and athletic clubs. The total is derived by summing component estimates, and is included in the amounts shown in Part V of this report under the heading of depreciation allowances by private business.

The largest components are for nonprofit hospitals, nonprofit schools, and religious organizations. In each of these cases, depreciation rates are applied to estimates of the value of depreciable property. The depreciation rates for hospital buildings and equipment were estimates for the Committee on the Costs of Medical Care. (C. R. Rorem, *The Public Investment in Hospitals*, University of Chicago Press, 1930). That for buildings was applied also to the value of educational buildings, and the hospital building and equipment depreciation rates were modified downward for application to religious buildings and educational institution equipment, respectively. The value estimates were based, for hospital buildings and equipment, on data from the Committee on the Costs of Medical Care for 1929, the 1935 Census of Hospitals, and American Hospital Association figures relating to 1944, 1946, 1950–52; for buildings and equipment of educational institutions, on reports compiled in the Biennial Survey of Education; and for religious edifices, on the 1926 and 1936 Censuses of Religious Bodies, extrapolated by cumulatively adding annual estimates of new religious construction and deducting estimated depreciation charges. Values for each group for the other years were obtained by straight-line interpolation and extrapolation.

Estimates for the other types of nonprofit institutions were generally based on informational returns filed for 1943 with the Internal Revenue Service. These returns indicated the nonprofit organizations' gross receipts from business, which were multiplied by the ratios of depreciation charges to gross receipts reported by partnerships in industries carrying on similar operations. In general, the resulting totals were extrapolated by the combined estimates of depreciation described in the preceding paragraph.

Capital Outlays Charged to Current Expense

Business purchases of certain types of capital goods, instead of being amortized through depreciation allowances in the purchasers' books, are customarily charged off as current expense. The estimated amounts of such purchases are included in capital consumption in lieu of an allowance for depreciation on these types of capital equipment. This treatment is consistent with the inclusion in the gross private domestic investment component of gross national product of producers' durable equipment irrespective of the manner of accounting for its purchase.

The estimates of capital outlays charged to current expense are prepared in two sections: drilling and development costs of oil and gas wells, which are included in the new construction component of gross private domestic

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investment; and purchases of producers' durable goods charged to current account, of which hand tools are an important example.

Oil and gas well drilling

It is believed that, except for the cost of casings, expenditures for oil and gas well drilling are charged to current expense for tax purposes by almost all companies. These expenditures are described in the section on New construction.

Producers' durable equipment

Business accounting practice with respect to charges for tools and similar items of small unit cost varies from item to item and from firm to firm. Data on the actual distribution of charges between current and capital account are not available. It may be supposed, however, that most firms charge most such items to current account. The estimates should be considered merely as rough approximations.

Exhibit 2.—*Producers' Durable Equipment Charged to Current Expense, by Major Commodity Group, at Purchasers' Values, 1950*

Major group of producers' durable equipment	Total value of products	Value of products charged to current expense	
	Millions of dollars	*Millions of dollars*	*Percent of group total*
Total	2,430	938	
Cutlery and hand tools	375	375	100
Other fabricated metal products	463	151	33
Metalworking machinery	875	129	15
Miscellaneous	717	283	39

In general, the estimating procedure has been to select from the detailed commodity groups given in the Census of Manufactures those producers' durable goods which appear likely, from a general knowledge of accepted accounting practice, to be charged to current expense. The value of manufacturers' shipments of such items was first obtained for all years for which this information is available. In general, shipments were converted into estimates of the value of producers' purchases by multiplying them by the ratio of the value of purchases to shipments applicable to the capitalized portion of producers' durable equipment in the same major product group. (See section on Producers' durable equipment.) Estimates for years for which shipment data were not available were made by interpolating and extrapolating by the value of the capitalized portion of producers' purchases in the same major product group. For cutlery and hand tools the detailed commodity flow procedure was used. Estimates for this group for years prior to World War II for which shipment data were not available were interpolated by relevant payroll data; subsequent interpolations were made on the basis of sales by retail hardware stores.

Exhibit 2 shows the estimates of producers' durable equipment charged to current expense for 1950.

Accidental Damage to Fixed Capital

The estimates of accidental damage represent the value of fixed capital of private business lost annually due to fire, natural events, and other accidents not provided for by depreciation allowances. The coverage of this series corresponds generally to that of gross private domestic investment, particularly in its exclusion of public works and government and consumer durables. Since the investment series is net of loss due to accidental damage to inventories and also excludes repair work, inventory losses and reparable damage are excluded from the estimates of accidental damage.

Losses by fire account for about 60 percent of the total. The estimates are based chiefly on loss reports to insurance companies tabulated by the National Board of Fire Underwriters and the National Fire Protection Association, with an addition for losses not covered by insurance. Forest fire losses are estimated from damage reports filed by State Foresters and local representatives of the United States Forest Service.

The value of business motor vehicles destroyed by accident is estimated mainly from State and city police reports compiled by the National Safety Council; the value of ship losses, from mandatory reports by marine carriers to the United States Coast Guard and the United States Maritime Administration; and losses (excluding crop losses) from tornadoes, windstorms, and floods, from damage investigation reports by field offices of the Weather Bureau. Accident investigation reports to the Interstate Commerce Commission and to the Civil Aeronautics Administration and the Civil Aeronautics Board have been used in estimating the value of damage to railway equipment and the value of business aircraft destroyed.

In most of these cases, the accuracy of the estimates is impaired by the necessity either of adjusting reported values to exclude reparable or nonbusiness losses or of multiplying reported physical unit losses by value averages from other sources to obtain the final aggregates.

Characteristics of Revisions

Estimates of corporate depreciation are based on interim data for the two most recent years, and have been subject to substantial revisions as corporate income tax tabulations became available. Revisions in some of the nonfarm business components of noncorporate depreciation have been even larger, percentagewise, reflecting heavier reliance upon extrapolation procedures as well as a lack of appropriate extrapolating series. Revisions in farm depreciation were also substantial in some years.

In the present edition of the *National Income* supplement significant long-term revisions were made in noncorporate depreciation and in capital outlays charged to current expense. Depreciation on noncorporate nonfarm property except real estate was raised. This revision reflects mainly an adjustment of the entire time series to the 1945 *Statistics of Income* benchmark described earlier. The allocation of depreciation between farms and real estate was reviewed and a larger share assigned to farms on the basis of revised estimates of the ownership of farm equipment on farms owned by landlords classified in the real estate industry. Depreciation for the real estate industry was reduced, in addition, as a result of the new estimating methods described in the section on the Rental income of persons. A downward revision was made in the estimates of producers' durable equipment charged to current expense. Much of it was due to the reclassification as intermediate products of items formerly regarded as producers' durable equipment charged to current expense, on the basis of product detail shown in the 1947 Census of Manufactures. These items were correspondingly excluded from purchases of producers' durable equipment.

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PART IV

Gross National Product in Constant Dollars, 1929-53

In times of changing prices many uses of national product statistics require the separation of the price and volume factors underlying the current dollar estimates. For some purposes, the current dollar data cease to be relevant, as in studies of real output and of productivity. For others, they need to be supplemented by constant dollar data, as in analyses of inflationary and deflationary processes.

This part of the report describes the annual estimates of gross national product in constant dollars for the period 1929–53, together with the implicit price deflators obtained by dividing the current dollar by the constant dollar estimates. (See tables 40 and 41, Part V.) These estimates—apart from the fact that they are geared to the revisions of the current dollar data—differ from the previously published ones chiefly because they express gross national product in terms of prices of the year 1947 instead of 1939. In addition, the estimates incorporate new price data—mainly information that has become available in connection with the revisions of the Bureau of Labor Statistics Wholesale and Consumer Price Indexes. Moreover, the results of the postwar industrial censuses have been taken into account in determining weights for combining price indexes, as explained below. Opportunity was also taken to make other improvements in methodology.

Characteristics of Constant-Dollar National Product

The constant dollar data have the same scope as the current-dollar gross national product described in earlier parts of this report. Moreover, the two magnitudes are closely related in statistical estimation. In general, the constant dollar series are derived by dividing the current dollar estimates, in as fine a product breakdown as possible, by appropriate price indexes based on 1947 as 100, in order to eliminate from the current dollar estimates all price change as compared with 1947. The statistical sources and methods used in this price deflation procedure are explained below. Certain major features of the deflated dollar data will be summarized first. In this connection reference will be made to the general characteristics of volume series based upon the direct measurement of physical units, with which the deflated gross national product is likely to be compared.

Comprehensive measure of real output

The constant-dollar gross national product is a comprehensive measure of the real volume of national production, including not only the manufacturing industries, but also the extractive industries, construction, distribution, services, and government. Although estimates of production—usually based on direct volume measurement—are available for a large number of industries, gaps in our information about others have made it impossible so far to build up a production measure for the economy as a whole via such individual industry calculations. The constant-dollar gross national product fills the demand for such a measure. However, given the present statistical sources, only a very limited breakdown of the constant-dollar gross national product by sectors of production is possible. In more detailed types of analysis this series will have to be supplemented by the individual industry measures now available.

Output measure free of duplication

A significant characteristic of the measurement of production in the gross product framework is that—in conformity with the definition of gross national product—the implied measure of output for each industry of the business sector is the output of that industry less its purchases of intermediate products. In most other measurements of production by industries, no such deduction for intermediate purchases is made. Output totals obtained by aggregating such industry measures will tend to overstate increases of output (and understate decreases) to the extent that the ratio of intermediate products to the total increases, and understate increases of output (and overstate decreases) to the extent that the ratio of intermediate products declines. The gross product measurement of real output is free from this imperfection.

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Partial measurement of quality improvements

In common with all other measures of the volume of production, constant-dollar gross national product cannot take full account of changes in the quality of products (as distinct from shifts among products of different quality; see below). The price indexes by the use of which constant-dollar gross national product is derived from the current dollar figures are sometimes adjusted to take account of quality and related changes in the products whose prices they measure. But quality change cannot, in general, be reduced to quantitative terms. In practice, the price indexes and the constant-dollar gross national product do not reflect part of the secular quality improvement and of the emergence of superior products—factors which are characteristic of our economy.

Short-run fluctuations in output overstated

Another point relevant to the interpretation of the measures here presented is that they overstate somewhat short-run fluctuations in output, because available price information understates effective short-run fluctuations in prices. The major factors in this connection are an incomplete accounting of short-run changes in premiums, discounts, and bargain sales. It may be noted that direct measurement of volumes is not subject to this imperfection.

Incomplete reflection of quality change may also be a factor working in the same direction, for instance, during extreme sellers' markets associated with short supplies and inflationary demands. This shortcoming is common to both deflation and direct volume measurements.

Output valued at constant market prices

In conformity with the definition of current-dollar gross national product, output is expressed at constant market prices. The alternative of expressing output at constant factor prices (that is, at market prices less indirect business taxes plus subsidies) was not used.

In regard to the practical reasons for this choice, the quantitative difference in movement between the two measures of output, arising only from the difference in weights attached to the individual products, would be negligible inasmuch as indirect business taxes and subsidies are not of sufficient importance in the United States price structure to give rise to a significant difference in the results. The market price concept afforded a simpler and more accurate basis of statistical measurement, particularly in view of the degree of detail in which the results were desired. Available information with respect to individual goods and services refers to market prices, and the detailed allocation of indirect taxes and subsidies that would be necessary to arrive at their factor prices is a complex statistical problem that cannot be solved accurately.

Quality and industrial shifts reflected in output

The consistent valuation of output at constant prices by deflation procedures yields a series having two important characteristics.

If a shift occurs from a product of lower quality to a product of higher quality—relative quality being measured by relative price—the constant-dollar gross national product will register an increase. This is so because current values will have increased and there is no change in the prices which are used to deflate them. An opposite quality shift will have the opposite effect. In ordinary market conditions, this would seem to be a proper way of measuring real production.

Direct measures of physical volume should behave similarly, in principle. But in practice they do so only to the extent that separate volume series are maintained for products of different qualities and that these separate volume series are given differential weights in proportion to their relative values in the base period. The allowance that can be made for quality differentials in direct volume measurement is usually quite limited.

Another consequence of the systematic valuation of each component of gross national product at constant prices is that shifts of workers from industries in which gross product per unit of labor input is relatively low (high) to industries in which it is higher (lower) will lead to an increase (decrease) in the overall measure of production even if no increase (decrease) in productivity occurs within the individual industries. This characteristic of constant-dollar gross national product should particularly be kept in mind in studies of productivity. Some measures of productivity are constructed to exclude the effects of such industry shifts in order to isolate the effects of technical changes as distinct from economic factors.

Choice of 1947 market prices

Market prices of the year 1947 were used to value output. The choice of a particular set of prices as a basis of valuation is a matter of concern only to the extent that it influences the relative importance of the components of gross national product and the relative movements of the aggregates. Unless the various physical quantities or their relative prices all change in the same proportion, the use of prices of different years as the basis of valuation will result in different percentage movements of the composite series, and no unique measure of the change in real output is possible.

While theoretical considerations indicate that under these circumstances comprehensive output comparisons call for calculations in terms of the prices of each year to which the comparisons refer, the vast additional labor involved in constructing the full array of output series did not seem warranted. Various tests indicated that choice of market prices prevailing in other years as the basis of valuation would not, in general, have greatly affected the relative movements and proportions of gross national product and its major components. (Government purchases are a significant exception to this statement, as will be noted later.)

However, these tests also suggested that the choice of recent year prices tends to reduce somewhat the indicated long-term growth in gross national product. The reason for this is that the products whose output expands most tend to be the ones that decline in relative price. Hence, they receive a smaller weight in the total if recent year market prices are used to value output.

The reason for adopting a valuation of gross national product in terms of postwar prices was that they reflect current economic conditions more closely than prewar prices and that consequently

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estimates based on them are more useful for many practical purposes. The particular year 1947 was a convenient choice, because it is the most recent year for which detailed census information on expenditures, necessary to construct composite price indexes, was available.

It should be emphasized, however, that to the very considerable extent that the relative movements and composition of the constant-dollar gross national product series are unaffected by the choice of the particular set of constant prices in which they are expressed, that choice is really a matter of indifference. For it is only relative magnitudes that matter. The absolute dollar values have no significance in themselves.

Statistical Sources and Methods

As already stated, the general statistical procedure for obtaining constant-dollar gross national product is to divide the current dollar estimates, in as fine a product detail as possible, by appropriate price indexes based on 1947 as 100, in order to eliminate from the current dollar estimates all price change as compared with 1947.

In most cases the information on prices is available in greater detail than the annual current dollar estimates. For instance, personal consumption expenditures for shoes and other footwear cannot be further broken down for all years in the current dollar estimates; but price indexes are available separately for an extensive list of footwear items. In situations such as these, the full information on prices is utilized by combining the various indexes into composites and by dividing the current dollar series by them.

The weights given to the various indexes were based upon their relative importance in terms of expenditures for the products which they represented, as approximated on the basis of detailed information contained in industrial censuses. In principle, weights based on 1939 census information were used for 1939 and earlier years, and weights based on 1947 and 1948 census information for 1947 and later years. Weights for intervening years were obtained by straight-line interpolation. Simpler methods (constant weights for the entire period, for instance) were adopted, however, whenever inspection of the price and expenditure data indicated that such short-cuts would not impair the results.

It will be noted that from the standpoint of deriving data in terms of 1947 prices neither fixed weights nor weights obtained by interpolation are strictly appropriate. Ideally, shifting weights, reflecting the actual expenditure patterns of the years for which current values are to be expressed in terms of 1947 prices, should be used. However, as has just been noted, this detail on current dollar expenditure patterns is lacking. The constant dollar estimates for the various components that were deflated by composite price indexes will be in error to the extent that price movements of the items comprising these components are disparate and current quantity expenditure patterns depart from the one used for weighting the individual price series.

Conclusive tests of the magnitude of the error cannot be made. They would require exactly the type of information for lack of which the statistical procedure being judged was adopted. However, the error is likely, in general, to be negligible. This is suggested, in the first place, by the fact that there were relatively few important instances in which price indexes combined on the basis of 1939 census information differed significantly in movement from those combined on the basis of 1947–48 census information. A similar conclusion was suggested also by certain additional tests.

These tests were applied to series for which in all years the product detail of the current dollar estimates matched that of the price indexes. Deflated estimates derived by the correct procedure—in which separately deflated components are combined without committing a weighting error—were compared with estimates obtained by deflating the sum of the components by composite price indexes based on fixed weights.

Such comparisons showed that differences were small even when the fixed weighting procedure was applied to fairly broad segments, and that they tended to become even smaller as the segment was narrowed. If this tendency carries through to the still narrower segments for which there is actual resort to price indexes with fixed weights, the resulting error must be unimportant.

In the following sections the major statistical sources and methods used in deriving the constant dollar components of gross national product are outlined.

Personal consumption

The general procedure for deriving constant-dollar personal consumption expenditures for goods and services was to divide the current dollar estimates, in a detail considerably finer than that of the published annual estimates, by price series that are components of the Consumer Price Index of the Bureau of Labor Statistics and of the series on Prices Paid by Farmers of the Agricultural Marketing Service, U. S. Department of Agriculture.

These two sets of prices were combined to give representation to prices paid by both urban and rural purchasers. It should be noted, however, that the prices reflected in the Bureau of Labor Statistics Consumer Price Index are those paid by moderate income families in large cities. Prices paid by other urban groups—families living in small cities and in towns, and families in low and in high income brackets, for instance—are not included.

Any differences in movement between these prices and those covered by the indexes lead to error in the deflation of the current dollar estimates of personal consumption by means of the indexes. To the extent, however, that differences in cost of living changes for various groups are due merely to different consumption patterns—while the prices of similar goods and services are the same—no errors, of course, are introduced.

For the years 1942–47 an adjustment was made to the published price indexes for the fact that they did not take account of the full price increase that took place during and immediately after World War II. The basic study in which the techniques for making these adjustments were first developed is the "Report of the Technical Committee Appointed by the Chairman of the President's Committee on the Cost of Living, June 15, 1944".

For the types of commodities and services for which Bureau of Labor Statistics and Agricultural Marketing Service retail price series are not available, a wide variety of sources was used.

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These included special retail price indexes computed by other agencies; price indexes constructed by utilizing published price data, such as mail-order catalogues, or by adjusting information on costs to a price basis by allowing for changes in profit margins; Bureau of Labor Statistics wholesale price information; and physical volume data, in instances in which this direct approach was superior to the price deflation approach.

Investment

The deflated series on private new construction represents largely the constant dollar estimates of construction prepared by the Building Materials and Construction Division of the Department of Commerce. These estimates—a regularly published series—are obtained by dividing the components of the current dollar estimates of new construction by a detailed list of construction cost indexes, prepared by private and other government agencies. These indexes are derived, in general, by pricing fixed lists of construction materials and labor.

Since the current dollar estimates of new construction are in terms of selling prices, their deflation by means of these indexes is not strictly appropriate. Their movement will vary from that of selling prices if there are changes in productivity and in profit margins.

It was not found possible to make an adjustment for productivity changes. However, a rough adjustment for changing profit margins was introduced. There is strong evidence that in the construction industry changes in profit margins and in productivity are inversely correlated during the business cycle. Hence the errors due to the neglect of profit margins and of productivity are additive, and adjustment for only one of these factors will make the indexes a closer approximation of changes in selling prices.

Bureau of Labor Statistics wholesale price indexes and Interstate Commerce Commission price indexes were the major data used for deflating producers' purchases of durable equipment, in a product detail which went somewhat beyond that in which the current dollar estimates are published for the years 1929–52. Further breakdowns were estimated, for deflation purposes, in instances in which there were indications that the alternative procedure of dividing broader current dollar components by fixed-weighted composite price indexes might yield significantly erroneous results.

Whenever composite price indexes were used, the weights for combining their components were as far as possible based on product values derived mainly from the Census of Manufactures, in a manner which has already been explained. For price series used for products for which values were not enumerated separately in the censuses, and for composite price indexes that could not be broken down further, the weights underlying the Bureau of Labor Statistics and Interstate Commerce Commission composites were accepted. The information from these two agencies was supplemented by price indexes compiled by other agencies or constructed from mail-order catalogues and other published sources of price data.

The deflated estimates of net change in nonfarm business inventories were derived in the process of estimating the inventory component of the current-dollar gross national product series. This process consisted of converting year-end book values of inventories into a series expressed in constant dollars; taking the difference of these results; and multiplying the increments by the ratio of current prices to base year prices. The required constant dollar series was available directly from the second step.

Bureau of Labor Statistics wholesale price indexes were the principal source of price information used for deflation of the book value inventory data. In general, the inventories of each industry listed in the annual industrial breakdown of the national income were deflated separately. Total inventories for each industry were deflated by composites of price indexes appropriate to the industry. The indexes were weighted, as far as possible, by the relative importance of the principal types of inventory goods represented by the indexes. The inventory data used for weights were derived mainly from the 1939 and 1947–48 industrial censuses. With a few exceptions, the composite price indexes based on the two sets of weights were closely similar, so that no particular problem was encountered in constructing consistent composite price indexes covering the entire period. In instances in which relative inventory weights could not be ascertained, weights (based on sales) used by the Bureau of Labor Statistics in constructing the wholesale price index were employed.

Year-end book values of inventories reflect the prices prevailing at various points of time. The exact time pattern reflected depends on the methods of inventory accounting used and on the rate of turnover of goods. Accordingly, the price indexes had to be appropriately lagged before being used to deflate the year-end book value of inventories. These lags were estimated on the basis of available sample information on the methods of inventory accounting in the various industries and of turnover ratios computed from Census and Internal Revenue Service information for 1939 and 1947–48. (For a more detailed discussion of some of the aspects of inventory deflation, see Part III, section on Change in business inventories.)

In estimating the net change in farm inventories, quantity data furnished by the Agricultural Marketing Service on year-end stocks of crops and livestock were utilized. (See Part III, notes on Income of unincorporated enterprises.) The net changes in these physical stocks were valued at prices prevailing at the end of 1947.

The net foreign investment component of gross national product was deflated by separately adjusting for price change the receipts and payments items in the current balance of payments, whose difference net foreign investment represents. The alternative procedure of deflating the net balance directly was not used.

The deflators for merchandise exports and imports are the indexes of unit value prepared by the Bureau of Foreign Commerce of the Department of Commerce. The weighting procedures used in deriving these indexes are not strictly appropriate for purposes of expressing merchandise exports and imports in terms of 1947 dollars, but tests indicated that theoretically superior weighting procedures would not yield significantly different overall results.

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Statistical information for deflating the remaining items in the current balance of payments is deficient. Moreover, problems that do not even admit of a clear-cut theoretical solution are involved.

Government purchases

The deflation of government purchases of goods and services was particularly difficult because information on the product breakdown of government purchases, as well as on the prices paid by government, is deficient. The task of deflating government purchases for World War II was further complicated by the fact that munitions of changing types and quality were acquired by the Federal Government in large amounts.

For purposes of deflation the current dollar breakdown of Federal Government purchases as published on an annual basis was supplemented by further detail in each of the categories listed—compensation of employees, net purchases from business, and net purchases from abroad. Compensation of employees was divided into military (officers and enlisted men separately), civilian except work relief, and work relief compensation. Construction was subdivided in the considerable detail in which the Building Materials and Construction Division estimates are available.

Other purchases from business were divided further by segregating net purchases of silver; the net change in the inventories of government enterprises; munitions expenditures, for years in which their size was significant; and rough groupings of the remaining purchases into the object classes used in the Federal budget. Within each of these object classes a fixed pattern of expenditures—the one prevailing in 1938—was assumed for all years for want of better information. Net purchases from abroad were also broken down further.

In general, the deflated Federal employee compensation items are an extrapolation of the base year figures by man-hours wherever possible and by employment when man-hours were not available or appropriate, as for military service. It may be noted that this series and the corresponding one for State and local government measure the gross product originating in government, as shown in table 40.

Deflated estimates of Federal construction represent the Building Materials and Construction Division data, with the allowance for changing profit margins noted in the discussion of private construction. The volume of silver purchases was based on direct quantity data. The net change in the inventories of Federal Government enterprises was estimated for the Commodity Credit Corporation from quantity data, which were valued at 1947 prices, and for other enterprises by less satisfactory procedures involving the deflation of book values by price-index composites.

Munitions expenditures were deflated for the war years by a special index of munitions prices based on series compiled by the Defense Department. This index was extended backward, and forward to 1950, on the basis of price series that seemed most appropriate—selected mainly from those used for the deflation of producers' purchases of durable equipment. For 1951–53, price series based upon contract prices paid by the Defense Department were used for munitions items for which such information was available.

This method of deflating munitions expenditures appears to be the most satisfactory. Its severe limitations must, however, be noted. The price information relating to munitions is deficient, largely owing to the fact that there are insurmountable obstacles to the compilation of adequate time series on prices (or quantities) in this area which is characterized by extreme product change. Accordingly, the measurement of the phyiscal volume of munitions must necessarily be less satisfactory than that of other components of national product.

Moreover, munitions prices appear to have declined substantially relative to other prices, mainly during World War II. Since munitions production moved very differently from other output and accounted for a large proportion of total output, the movement of total deflated gross national product during World War II is materially affected by the choice of the constant price base. The fact that relative rates of pay of military officers and enlisted men have changed substantially as compared with the prewar period also makes the movement of deflated gross national product during the war depend significantly on the choice of the constant price base. This situation with respect to World War II is in contrast to the finding noted earlier that the choice of the constant price base has, in general, little effect on the relative movement shown by measures of real national output.

The remaining types of Federal purchases from business were deflated by matching them with price series that appeared most nearly representative—largely selected from Bureau of Labor Statistics wholesale price data. The deflation of net purchases from abroad is subject to limitations similar to those noted for net foreign investment.

The general procedure for deflating State and local government purchases of goods and services was similar to that adopted for Federal Government purchases. Changes in the employee compensation component of deflated purchases reflect the movement of employment. Deflated construction represents Building Materials and Construction Division data, adjusted for changing profit margins. An estimate available for 1947 of the distribution of other purchases from business was applied in all years for lack of further information; and the current breakdown so obtained was deflated by price series that seemed most nearly applicable, selected chiefly from Bureau of Labor Statistics wholesale price data.

Summary tables

Table 40, Part V, summarizes the results of the deflation procedure which has been described. The "implicit price deflators" presented in table 41 are obtained by dividing the current dollar expenditure estimates (as shown in table 2) by the corresponding constant dollar series shown in table 40.

In the price indexes so derived, price relatives receive shifting

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weights in proportion to expenditures incurred each year for the goods and services which they represent. This is in contrast to the more usual type of price index in which weights are based on constant expenditure patterns.

The latter type of price index can be interpreted as tracing the change in the total value of an identical list of physical goods and services over the period of time specified. The implicit deflators cannot be so interpreted. They trace the change in the value of the physical goods and services of any given year as compared with their value in the base year 1947. In comparisons not involving 1947, the movement of the implicit deflators cannot be taken as a pure measure of the price change because it is affected by changes in product composition as well. A related point to be noted is that it is not strictly correct to obtain constant dollar series in prices of a year other than 1947 by use of deflators obtained by shifting the base of the deflators given in table 41. However, for many practical purposes both of these qualifications of the implicit price deflators may be neglected.

The implicit deflators for the change in business inventories, for total gross private domestic investment, and net foreign investment are not shown. In the case of inventory change, the current dollar totals often include components of opposite algebraic sign. In the case of net foreign investment, such components are always present, since it is the difference between current receipts and payments in the balance of payments. Even small movements of prices, provided that they affect the positive and negative components dissimilarly, may cause large changes in the ratios of the current dollar to the constant dollar series, and disqualify these ratios from serving as indicators of price movement. Since in some years the change in business inventories constitutes a significant part of total gross private domestic investment, the implicit price deflator for this aggregate is subject to similar deficiencies.

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PART V

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National Income and Product Accounts, 1953

Table I.—*National Income and Product Account, 1953*

[Millions of dollars]

Compensation of employees:		Personal consumption expenditures	230, 080
Wage and salaries	197, 980	Gross private domestic investment	51, 408
Supplements	11, 081	Net foreign investment	−1, 866
Income of unincorporated enterprises and inventory valuation adjustment	38, 444	Government purchases of goods and services	85, 235
Rental income of persons	10, 596		
Corporate profits and inventory valuation adjustment:			
Corporate profits before tax:			
Corporate profits tax liability	21, 144		
Corporate profits after tax:			
Dividends	9, 365		
Undistributed profits	8, 921		
Inventory valuation adjustment	−964		
Net interest	8, 435		
National income [1]	*305, 002*		
Indirect business tax and nontax liability	30, 037		
Business transfer payments	1, 016		
Statistical discrepancy	1, 047		
Less: Subsidies minus current surplus of government enterprises	−529		
Charges against net national product [2]	*337, 631*		
Capital consumption allowances	27, 226		
CHARGES AGAINST GROSS NATIONAL PRODUCT [2]	364, 857	GROSS NATIONAL PRODUCT [3]	364, 857

1. Data for other years in table 1. 2. Data for other years in table 4. 3. Data for other years in table 2.

Table II.—*Consolidated Business Income and Product Account, 1953* [1]

[Millions of dollars]

Compensation of employees:		Consolidated net sales:	
Wages and salaries:		To consumers	217, 075
Disbursements	160, 117	To government	50, 311
Excess of accruals over disbursements	0	To business on capital account	49, 914
Supplements:		To abroad	2, 231
Employer contributions for social insurance	3, 717	Change in inventories	1, 494
Other labor income	5, 890		
Income of unincorporated enterprises and inventory valuation adjustment	38, 444		
Rental income of persons	10, 596		
Corporate profits and inventory valuation adjustment:			
Corporate profits before tax:			
Corporate profits tax liability	21, 144		
Corporate profits after tax:			
Dividends	8, 959		
Undistributed profits	8, 180		
Inventory valuation adjustment	−964		
Net interest	5, 087		
Income originating	*261, 170*		
Indirect business tax and nontax liability	30, 037		
Business transfer payments	1, 016		
Statistical discrepancy	1, 047		
Less: Subsidies minus current surplus of government enterprises	−529		
Charges against net product	*293, 799*		
Capital consumption allowances	27, 226		
CHARGES AGAINST BUSINESS GROSS PRODUCT	321, 025	BUSINESS GROSS PRODUCT	321, 025

1. Data for other years in table 7.

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Table III.—*Personal Income and Expenditure Account, 1953*

[Millions of dollars]

Personal consumption expenditures:		Wage and salary disbursements:	
Purchases of direct services:		Business [2]	160, 117
Compensation of employees:		Government [1]	30, 174
Wages and salaries paid	7, 745	Households and institutions [1]	7, 745
Supplements paid:		Rest of the world [1]	20
Employer contributions for social insurance	64	Other labor income:	
Other labor income	71	Business [2]	5, 890
Interest paid	3, 015	Government [1]	375
Income originating in and net and gross product of households and institutions [1]	*10, 895*	Households and institutions [1]	71
Net purchases from business [2]	217, 075	Income of unincorporated enterprises and inventory valuation adjustment [2]	38, 444
Net purchases from abroad [3]	2, 110	Rental income of persons [2]	10, 596
Personal tax and nontax payments [4]	35, 967	Dividends [4]	9, 365
Personal saving [4]	20, 019	Personal interest income [4]	13, 475
		Government transfer payments [5]	12, 785
		Business transfer payments [5]	1, 016
		Less: Personal contributions for social insurance [6]	4, 007
PERSONAL OUTLAY AND SAVING [4]	286, 066	PERSONAL INCOME [4]	286, 066

1. Data for other years in table 12.
2. Data for other years in table 7.
3. Data for other years in table 11.
4. Data for other years in table 3.
5. Data for other years in table 36.
6. Data for other years in table 35.

Table IV.—*Consolidated Government Receipts and Expenditures Account, 1953* [1]

[Millions of dollars]

Purchases of goods and services:		Personal tax and nontax receipts	35, 967
Purchases of direct services:		Corporate profits tax accruals	21, 144
Compensation of employees:		Indirect business tax and nontax accruals	30, 037
Wages and salaries:		Contributions for social insurance:	
Disbursements [2]	30, 174	Personal contributions [3]	4, 007
Excess of accruals over disbursements [2]	−76	Employer contributions:	
Supplements:		Business [4]	3, 717
Employer contributions for social insurance [2]	964	Government [2]	964
Other labor income [2]	375	Households and institutions [2]	64
Income originating and net and gross product	*31, 437*	Deficit (+) or surplus (−) on income and product transactions [5]	6, 631
Net purchases from business	50, 311		
Net purchases from abroad	3, 487		
Transfer payments	12, 785		
Net interest paid	5, 040		
Subsidies minus current surplus of government enterprises	−529		
GOVERNMENT EXPENDITURES	102, 531	GOVERNMENT RECEIPTS AND DEFICIT	102, 531

1. Data for other years in tables 8 and 9 except where otherwise noted.
2. Data for other years in table 12.
3. Data for other years in table 35.
4. Data for other years in table 7.
5. Data for other years in table 5.

Table V.—*Rest of the World Account, 1953* [1]

[Millions of dollars]

Net payments of factor income to the United States:		Net disinvestment in the United States	−1, 866
Wages and salaries	20		
Interest	333		
Dividends	406		
Branch profits	741		
Income originating and net and gross product	*1, 500*		
Net purchases from the United States:			
From business	2, 231		
From government	−3, 487		
From persons	−2, 110		
NET CURRENT PAYMENTS TO THE UNITED STATES	−1, 866	NET DISINVESTMENT IN THE UNITED STATES	−1, 866

1. Data for other years in table 11.

Table VI.—*Gross Saving and Investment Account, 1953* [1]

[Millions of dollars]

Business purchases on capital account [2]	49, 914	Excess of wage accruals over disbursements (business) [2]	0
Change in business inventories [2]	1, 494	Excess of wage accruals over disbursements (government) [3]	−76
Net disinvestment in the United States by rest of world	−1, 866	Undistributed corporate profits (domestic) [2]	8, 180
		Corporate inventory valuation adjustment	−964
		Capital consumption allowances by private business [2]	27, 226
		Government surplus (+) or deficit (−) on income and product transactions	−6, 631
		Foreign branch profits (net) [4]	741
		Personal saving	20, 019
		Statistical discrepancy	1, 047
GROSS INVESTMENT	49, 542	GROSS SAVING AND STATISTICAL DISCREPANCY	49, 542

1. Data for other years in table 5 except as noted.
2. Data for other years in table 7.
3. Data for other years in table 12.
4. Data for other years in table 11.

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Table 1.—*National Income by Distributive Shares, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**National income**	**87,814**	**75,729**	**59,708**	**42,547**	**40,159**	**48,959**	**57,057**	**64,911**	**73,618**	**67,581**
2	**Compensation of employees**	**51,085**	**46,844**	**39,740**	**31,054**	**29,539**	**34,295**	**37,340**	**42,910**	**47,934**	**44,994**
3	Wages and salaries	50,423	46,187	39,119	30,477	28,997	33,705	36,690	41,920	46,107	42,976
4	Private	45,485	41,033	33,861	25,511	23,855	27,629	30,189	34,054	38,614	34,752
5	Military	308	311	304	292	267	268	303	334	354	365
6	Government civilian [1]	4,630	4,843	4,954	4,674	4,875	5,808	6,198	7,532	7,139	7,859
7	Supplements to wages and salaries	662	657	621	577	542	590	650	900	1,827	2,018
8	Employer contributions for social insurance	101	106	111	126	133	147	171	418	1,234	1,423
9	Other labor income	561	551	510	451	409	443	479	572	593	595
10	**Income of unincorporated enterprises and inventory valuation adjustment**	**14,759**	**11,540**	**8,734**	**5,316**	**5,599**	**7,010**	**10,387**	**10,482**	**12,691**	**11,128**
11	Business and professional	8,791	7,410	5,581	3,384	3,166	4,564	5,351	6,530	7,073	6,793
12	Income of unincorporated enterprises	8,649	6,655	4,970	3,089	3,691	4,618	5,401	6,650	7,102	6,572
13	Inventory valuation adjustment	142	755	611	295	−525	−54	−50	−120	−29	221
14	Farm	5,968	4,130	3,153	1,932	2,433	2,446	5,036	3,952	5,618	4,335
15	**Rental income of persons**	**5,425**	**4,778**	**3,761**	**2,713**	**1,971**	**1,694**	**1,661**	**1,776**	**2,081**	**2,560**
16	**Corporate profits and inventory valuation adjustment**	**10,100**	**6,582**	**1,634**	**−1,970**	**−1,992**	**1,091**	**2,918**	**5,002**	**6,204**	**4,263**
17	Corporate profits before tax	9,628	3,322	−780	−3,017	151	1,716	3,145	5,740	6,235	3,300
18	Corporate profits tax liability	1,369	842	498	385	521	744	951	1,409	1,502	1,029
19	Corporate profits after tax	8,259	2,480	−1,278	−3,402	−370	972	2,194	4,331	4,733	2,271
20	Dividends	5,813	5,490	4,088	2,565	2,056	2,587	2,863	4,548	4,685	3,187
21	Undistributed profits	2,446	−3,010	−5,366	−5,967	−2,426	−1,615	−669	−217	48	−916
22	Inventory valuation adjustment	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963
23	**Net interest**	**6,445**	**5,985**	**5,839**	**5,434**	**5,042**	**4,869**	**4,751**	**4,741**	**4,708**	**4,636**

1. Includes also the pay of employees of government enterprises and of permanent United States residents employed in the United States by foreign governments and international organizations.

Table 2.—*Gross National Product or Expenditure, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Gross national product**	**104,436**	**91,105**	**76,271**	**58,466**	**55,964**	**64,975**	**72,502**	**82,743**	**90,780**	**85,227**
2	**Personal consumption expenditures**	**78,952**	**70,968**	**61,333**	**49,306**	**46,392**	**51,894**	**56,289**	**62,616**	**67,259**	**64,641**
3	Durable goods	9,212	7,155	5,485	3,646	3,469	4,213	5,111	6,304	6,925	5,686
4	Nondurable goods	37,677	34,010	28,946	22,758	22,251	26,656	29,319	32,836	35,185	33,985
5	Services	32,063	29,803	26,902	22,902	20,672	21,025	21,859	23,476	25,149	24,970
6	**Gross private domestic investment**	**16,231**	**10,265**	**5,523**	**913**	**1,391**	**2,888**	**6,277**	**8,404**	**11,747**	**6,661**
7	New construction	8,707	6,183	3,968	1,876	1,431	1,709	2,299	3,281	4,403	3,960
8	Residential nonfarm	3,625	2,075	1,565	630	470	625	1,010	1,565	1,875	1,990
9	Other	5,082	4,108	2,403	1,246	961	1,084	1,289	1,716	2,528	1,970
10	Producers' durable equipment	5,850	4,465	2,839	1,593	1,589	2,304	3,066	4,169	5,095	3,644
11	Change in business inventories	1,674	−383	−1,284	−2,556	−1,629	−1,125	912	954	2,249	−943
12	Nonfarm	1,836	−83	−1,608	−2,590	−1,370	195	376	2,066	1,726	−1,046
13	Farm	−162	−300	324	34	−259	−1,320	536	−1,112	523	103
14	**Net foreign investment**	**771**	**690**	**197**	**169**	**150**	**429**	**−54**	**−93**	**62**	**1,109**
15	**Government purchases of goods and services**	**8,482**	**9,182**	**9,218**	**8,078**	**8,031**	**9,764**	**9,990**	**11,816**	**11,712**	**12,816**
16	Federal	1,311	1,410	1,537	1,480	2,018	2,991	2,931	4,815	4,552	5,280
17	National security										
18	National defense	1,344	1,432	1,549	1,484	2,022	2,997	2,935	4,818	4,557	5,286
19	Other national security										
20	Other										
21	Less: Government sales	33	22	12	4	4	6	4	3	5	6
22	State and local	7,171	7,772	7,681	6,598	6,013	6,773	7,059	7,001	7,160	7,536

1. Breakdown into "National defense" and "Other national security" not available.

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Table 1.—*National Income by Distributive Shares, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
72,753	**81,634**	**104,710**	**137,694**	**170,310**	**182,639**	**181,248**	**179,577**	**197,168**	**221,641**	**216,193**	**239,956**	**277,041**	**290,959**	**305,002**	1
48,108	**52,129**	**64,789**	**85,271**	**109,587**	**121,286**	**123,181**	**117,697**	**128,757**	**140,927**	**140,858**	**154,325**	**180,420**	**195,423**	**209,061**	2
45,941	49,818	62,086	82,109	105,828	116,823	117,577	111,836	122,858	135,172	134,334	146,526	170,881	185,039	197,980	3
37,742	41,395	51,894	66,123	79,197	83,843	82,664	91,241	105,512	116,424	113,873	124,297	142,050	152,222	164,503	4
388	563	1,866	6,168	14,133	20,033	21,819	7,818	4,067	3,970	4,248	4,999	8,684	10,465	10,207	5
7,811	7,860	8,326	9,818	12,498	12,947	13,094	12,777	13,279	14,778	16,213	17,230	20,147	22,352	23,270	6
2,167	2,311	2,703	3,162	3,759	4,463	5,604	5,861	5,899	5,755	6,524	7,799	9,539	10,384	11,081	7
1,540	1,624	1,983	2,302	2,677	2,937	3,805	3,970	3,565	3,042	3,503	3,976	4,753	4,874	4,745	8
627	687	720	860	1,082	1,526	1,799	1,891	2,334	2,713	3,021	3,823	4,786	5,510	6,336	9
11,610	**13,010**	**17,401**	**23,907**	**28,187**	**29,565**	**30,835**	**35,265**	**34,433**	**38,389**	**34,149**	**36,140**	**40,809**	**39,918**	**38,444**	10
7,293	8,442	10,897	13,899	16,823	18,040	19,011	21,321	19,948	21,649	21,431	22,855	24,791	25,727	26,215	11
7,459	8,487	11,512	14,266	16,979	18,109	19,117	23,026	21,419	22,061	20,963	23,989	25,135	25,519	26,410	12
−166	−45	−615	−367	−156	−69	−106	−1,705	−1,471	−412	468	−1,134	−314	208	−195	13
4,317	4,568	6,504	10,008	11,364	11,525	11,824	13,944	14,485	16,740	12,718	13,285	16,018	14,191	12,229	14
2,742	**2,885**	**3,465**	**4,547**	**5,097**	**5,413**	**5,634**	**6,208**	**6,510**	**7,198**	**7,874**	**8,473**	**9,129**	**10,021**	**10,596**	15
5,689	**9,120**	**14,511**	**19,678**	**23,781**	**23,033**	**18,413**	**17,288**	**23,626**	**30,619**	**28,141**	**35,106**	**39,913**	**38,155**	**38,466**	16
6,403	9,320	16,982	20,882	24,554	23,320	18,977	22,551	29,525	32,769	26,198	39,970	41,173	37,174	39,430	17
1,441	2,834	7,610	11,415	14,074	12,949	10,689	9,111	11,283	12,510	10,411	17,829	22,476	19,965	21,144	18
4,962	6,486	9,372	9,467	10,480	10,371	8,288	13,440	18,242	20,259	15,787	22,141	18,697	17,209	18,286	19
3,788	4,043	4,458	4,289	4,484	4,673	4,691	5,784	6,521	7,248	7,458	9,207	9,090	9,128	9,365	20
1,174	2,443	4,914	5,178	5,996	5,698	3,597	7,656	11,721	13,011	8,329	12,934	9,607	8,081	8,921	21
−714	−200	−2,471	−1,204	−773	−287	−564	−5,263	−5,899	−2,150	1,943	−4,864	−1,260	981	−964	22
4,604	**4,490**	**4,544**	**4,291**	**3,658**	**3,342**	**3,185**	**3,119**	**3,842**	**4,508**	**5,171**	**5,912**	**6,770**	**7,442**	**8,435**	23

Table 2.—*Gross National Product or Expenditure, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
91,095	**100,618**	**125,822**	**159,133**	**192,513**	**211,393**	**213,558**	**209,246**	**232,228**	**257,325**	**257,301**	**285,067**	**328,232**	**346,095**	**364,857**	1
67,578	**71,881**	**81,875**	**89,748**	**100,541**	**109,833**	**121,699**	**146,617**	**164,973**	**177,609**	**180,598**	**194,026**	**208,342**	**218,424**	**230,080**	2
6,670	7,771	9,659	6,968	6,605	6,764	8,105	15,892	20,593	22,214	23,573	28,608	27,148	26,815	29,749	3
35,131	37,215	43,208	51,324	59,259	65,368	73,222	84,501	93,077	98,741	96,879	100,386	111,054	116,012	118,925	4
25,777	26,895	29,008	31,456	34,677	37,701	40,372	46,224	51,303	56,654	60,146	65,032	70,140	75,597	81,406	5
9,309	**13,155**	**18,072**	**9,875**	**5,600**	**7,130**	**10,430**	**27,125**	**29,705**	**41,176**	**32,549**	**51,219**	**56,864**	**50,655**	**51,408**	6
4,757	5,452	6,629	3,721	2,326	2,712	3,833	10,291	14,029	17,904	17,453	22,733	23,332	23,723	25,536	7
2,680	2,985	3,510	1,715	885	815	1,100	4,015	6,310	8,580	8,267	12,600	10,973	11,100	11,930	8
2,077	2,467	3,119	2,006	1,441	1,897	2,733	6,276	7,719	9,324	9,186	10,133	12,359	12,623	13,606	9
4,180	5,531	6,942	4,343	4,027	5,438	7,654	10,733	16,667	19,110	17,833	21.135	23,177	23,307	24,378	10
372	2,172	4,501	1,811	−753	−1,020	−1,057	6,101	−991	4,162	−2,737	7,351	10,355	3,625	1,494	11
316	1,902	4,049	652	−577	−575	−595	6,350	1,298	3,026	−1,862	6,428	8,951	2,971	2,169	12
56	270	452	1,159	−176	−445	−462	−249	−2,289	1,136	−875	923	1,404	654	−675	13
888	**1,509**	**1,124**	**−207**	**−2,245**	**−2,099**	**−1,438**	**4,586**	**8,942**	**1,956**	**534**	**−2,201**	**227**	**−164**	**−1,866**	14
13,320	**14,073**	**24,751**	**59,717**	**88,617**	**96,529**	**82,867**	**30,918**	**28,608**	**36,584**	**43,620**	**42,023**	**62,799**	**77,180**	**85,235**	15
5,157	6,170	16,923	52,027	81,223	89,006	74,796	20,934	15,776	21,019	25,445	22,138	40,995	53,951	60,105	16
[1] 1,258	[1] 2,223	[1] 13,794	[1] 49,567	[1] 80,384	[1] 88,615	[1] 75,923	[1] 21,188	13,349	15,984	19,288	18,511	37,260	48,501	52,022	17
								12,254	11,578	13,570	14,257	33,864	46,086	49,993	18
								1,095	4,406	5,718	4,254	3,396	2,415	2,029	19
3,908	3,956	3,173	2,664	1,480	1,552	1,031	2,469	3,751	5,570	6,570	3,882	4,154	5,805	8,485	20
9	9	44	204	641	1,161	2,158	2,723	1,324	535	413	255	419	355	402	21
8,163	**7,903**	**7,828**	**7,690**	**7,394**	**7,523**	**8,071**	**9,984**	**12,832**	**15,565**	**18,175**	**19,885**	**21,804**	**23,229**	**25,130**	22

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Table 3.—*Personal Income and Disposition of Income, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Personal income**	85,763	76,881	65,698	50,115	47,208	53,575	60,210	68,480	73,921	68,554
2	Wage and salary disbursements	50,423	46,187	39,119	30,477	28,997	33,705	36,690	41,920	46,107	42,976
3	Other labor income	561	551	510	451	409	443	479	572	593	595
4	Proprietors' and rental income	20,184	16,318	12,495	8,029	7,570	8,704	12,048	12,258	14,772	13,688
5	Dividends	5,813	5,490	4,088	2,565	2,056	2,587	2,863	4,548	4,685	3,187
6	Personal interest income	7,428	6,949	6,923	6,575	6,212	6,099	5,892	5,842	5,912	5,828
7	Transfer payments	1,496	1,533	2,714	2,170	2,116	2,194	2,400	3,520	2,418	2,834
8	Less: Personal contributions for social insurance	142	147	151	152	152	157	162	180	566	554
9	Less: Personal tax and nontax payments	2,643	2,507	1,858	1,455	1,464	1,595	1,888	2,258	2,921	2,862
10	Federal	1,263	1,134	607	331	474	595	827	1,130	1,723	1,635
11	State and local	1,380	1,373	1,251	1,124	990	1,000	1,061	1,128	1,198	1,227
12	**Equals: Disposable personal income**	83,120	74,374	63,840	48,660	45,744	51,980	58,322	66,222	71,000	65,692
13	**Less: Personal consumption expenditures**	78,952	70,968	61,333	49,306	46,392	51,894	56,289	62,616	67,259	64,641
14	**Equals: Personal saving**	4,168	3,406	2,507	−646	−648	86	2,033	3,606	3,741	1,051

Table 4.—*Relation of Gross National Product, National Income, and Personal Income, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Gross national product**	104,436	91,105	76,271	58,466	55,964	64,975	72,502	82,743	90,780	85,227
2	Less: Capital consumption allowances	8,617	8,541	8,166	7,615	7,161	7,112	7,235	7,496	7,746	7,783
3	Depreciation charges	7,698	7,737	7,552	7,038	6,661	6,598	6,665	6,700	6,910	6,939
4	Accidental damage to fixed capital	413	389	351	329	275	237	236	381	304	387
5	Capital outlays charged to current expense	506	415	263	248	225	277	334	415	532	457
6	**Equals: Net national product**	95,819	82,564	68,105	50,851	48,803	57,863	65,267	75,247	83,034	77,444
7	Plus: Subsidies minus current surplus of government enterprises	−147	−123	−49	−45	18	283	403	39	60	176
8	Less: Indirect business tax and nontax liability	7,003	7,155	6,859	6,768	7,055	7,815	8,190	8,663	9,157	9,154
9	Business transfer payments	587	534	649	737	659	641	594	594	567	429
10	Statistical discrepancy	268	−977	840	754	948	731	−171	1,118	−248	456
11	**Equals: National income**	87,814	75,729	59,708	42,547	40,159	48,959	57,057	64,911	73,618	67,581
12	Less: Undistributed corporate profits	2,446	−3,010	−5,366	−5,967	−2,426	−1,615	−669	−217	48	−916
13	Corporate profits tax liability	1,369	842	498	385	521	744	951	1,409	1,502	1,029
14	Corporate inventory valuation adjustment	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963
15	Contributions for social insurance	243	253	262	278	285	304	333	598	1,800	1,977
16	Excess of wage accruals over disbursements	0	0	0	0	0	0	0	0	0	0
17	Plus: Net interest paid by government	983	964	1,084	1,141	1,170	1,230	1,141	1,101	1,204	1,192
18	Government transfer payments	909	999	2,065	1,433	1,457	1,553	1,806	2,926	1,851	2,405
19	Business transfer payments	587	534	649	737	659	641	594	594	567	429
20	**Equals: Personal income**	85,763	76,881	65,698	50,115	47,208	53,575	60,210	68,480	73,921	68,554

Table 5.—*Sources and Uses of Gross Saving, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Gross private saving**	15,703	12,197	7,721	2,049	1,944	4,958	8,372	10,147	11,504	8,881
2	Personal saving	4,168	3,406	2,507	−646	−648	86	2,033	3,606	3,741	1,051
3	Undistributed corporate profits	2,446	−3,010	−5,366	−5,967	−2,426	−1,615	−669	−217	48	−916
4	Corporate inventory valuation adjustment	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963
5	Business depreciation charges	7,698	7,737	7,552	7,038	6,661	6,598	6,665	6,700	6,910	6,939
6	Accidental damage to fixed business capital	413	389	351	329	275	237	236	381	304	387
7	Capital outlays charged to current expense	506	415	263	248	225	277	334	415	532	457
8	Excess of wage accruals over disbursements	0	0	0	0	0	0	0	0	0	0
9	**Government surplus on income and product transactions**	1,031	−265	−2,841	−1,721	−1,351	−2,372	−1,978	−2,954	553	−1,567
10	Federal	1,159	281	−2,136	−1,480	−1,316	−2,853	−2,563	−3,477	−186	−1,971
11	State and local	−128	−546	−705	−241	−35	481	585	523	739	404
12	**Gross investment**	17,002	10,955	5,720	1,082	1,541	3,317	6,223	8,311	11,809	7,770
13	Gross private domestic investment	16,231	10,265	5,523	913	1,391	2,888	6,277	8,404	11,747	6,661
14	Net foreign investment	771	690	197	169	150	429	−54	−93	62	1,109
15	**Statistical discrepancy**	268	−977	840	754	948	731	−171	1,118	−248	456

1. In principle gross private saving plus government surplus on income and product transactions equals gross investment. Because of estimating errors, it differs from it by the amount of the statistical discrepancy.

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Table 3.—*Personal Income and Disposition of Income, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
72,884	**78,680**	**96,275**	**123,497**	**151,392**	**165,696**	**171,222**	**177,990**	**190,522**	**208,743**	**206,818**	**227,050**	**255,340**	**271,242**	**286,066**	1
45,941	49,818	62,086	82,109	105,619	117,016	117,563	111,866	122,843	135,142	134,379	146,526	170,776	185,068	198,056	2
627	687	720	860	1,082	1,526	1,799	1,891	2,334	2,713	3,021	3,823	4,786	5,510	6,336	3
14,352	15,895	20,866	28,454	33,284	34,978	36,469	41,473	40,943	45,587	42,023	44,613	49,938	49,939	49,040	4
3,788	4,043	4,458	4,289	4,484	4,673	4,691	5,784	6,521	7,248	7,458	9,207	9,090	9,128	9,365	5
5,809	5,781	5,833	5,808	5,798	6,151	6,868	7,576	8,212	8,950	9,768	10,628	11,592	12,318	13,475	6
2,963	3,114	3,113	3,143	2,964	3,588	6,165	11,411	11,787	11,281	12,403	15,147	12,575	13,090	13,801	7
596	658	801	1,166	1,839	2,236	2,333	2,011	2,118	2,178	2,234	2,894	3,417	3,811	4,007	8
2,440	2,604	3,293	5,981	17,845	18,935	20,867	18,808	21,506	21,142	18,661	20,920	29,271	34,373	35,967	9
1,235	1,364	2,016	4,668	16,517	17,536	19,379	17,162	19,650	18,997	16,194	18,179	26,278	31,143	32,484	10
1,205	1,240	1,277	1,313	1,328	1,399	1,488	1,646	1,856	2,145	2,467	2,741	2,993	3,230	3,483	11
70,444	**76,076**	**92,982**	**117,516**	**133,547**	**146,761**	**150,355**	**159,182**	**169,016**	**187,601**	**188,157**	**206,130**	**226,069**	**236,869**	**250,099**	12
67,578	**71,881**	**81,875**	**89,748**	**100,541**	**109,833**	**121,699**	**146,617**	**164,973**	**177,609**	**180,598**	**194,026**	**208,342**	**218,424**	**230,080**	13
2,866	**4,195**	**11,107**	**27,768**	**33,006**	**36,928**	**28,656**	**12,565**	**4,043**	**9,992**	**7,559**	**12,104**	**17,727**	**18,445**	**20,019**	14

Table 4.—*Relation of Gross National Product, National Income, and Personal Income, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
91,095	**100,618**	**125,822**	**159,133**	**192,513**	**211,393**	**213,558**	**209,246**	**232,228**	**257,325**	**257,301**	**285,067**	**328,232**	**346,095**	**364,857**	1
7,838	8,148	9,041	10,155	10,866	12,007	12,549	11,666	14,118	16,494	18,431	20,516	23,469	25,304	27,226	2
7,121	7,316	8,078	9,162	9,854	10,793	11,246	10,013	12,150	14,290	16,380	18,042	20,344	22,456	24,170	3
222	246	273	484	399	360	381	407	567	574	518	616	909	677	808	4
495	586	690	509	613	854	922	1,246	1,401	1,630	1,533	1,858	2,216	2,171	2,248	5
83,257	**92,470**	**116,781**	**148,978**	**181,647**	**199,386**	**201,009**	**197,580**	**218,110**	**240,831**	**238,870**	**264,551**	**304,763**	**320,791**	**337,631**	6
485	420	102	150	183	652	760	835	−227	−171	−181	204	187	−229	−529	7
9,365	10,021	11,296	11,769	12,735	14,127	15,522	17,349	18,658	20,390	21,644	23,741	25,637	28,049	30,037	8
451	431	502	495	505	506	532	557	674	739	781	843	985	999	1,016	9
1,173	804	375	−830	−1,720	2,766	4,467	932	1,383	−2,110	71	215	1,287	555	1,047	10
72,753	**81,634**	**104,710**	**137,694**	**170,310**	**182,639**	**181,248**	**179,577**	**197,168**	**221,641**	**216,193**	**239,956**	**277,041**	**290,959**	**305,002**	11
1,174	2,443	4,914	5,178	5,996	5,698	3,597	7,656	11,721	13,011	8,329	12,934	9,607	8,081	8,921	12
1,441	2,834	7,610	11,415	14,074	12,949	10,689	9,111	11,283	12,510	10,411	17,829	22,476	19,965	21,144	13
−714	−200	−2,471	−1,204	−773	−287	−564	−5,263	−5,899	−2,150	1,943	−4,864	−1,260	981	−964	14
2,136	2,282	2,784	3,468	4,516	5,173	6,138	5,981	5,683	5,220	5,737	6,870	8,170	8,685	8,752	15
0	0	0	0	209	−193	14	−30	15	30	−45	0	105	−29	−76	16
1,205	1,291	1,289	1,517	2,140	2,809	3,683	4,457	4,370	4,442	4,597	4,716	4,822	4,876	5,040	17
2,512	2,683	2,611	2,648	2,459	3,082	5,633	10,854	11,113	10,542	11,622	14,304	11,590	12,091	12,785	18
451	431	502	495	505	506	532	557	674	739	781	843	985	999	1,016	19
72,884	**78,680**	**96,275**	**123,497**	**151,392**	**165,696**	**171,222**	**177,990**	**190,522**	**208,743**	**206,818**	**227,050**	**255,340**	**271,242**	**286,066**	20

Table 5.—*Sources and Uses of Gross Saving, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
11,164	**14,586**	**22,591**	**41,897**	**49,304**	**54,153**	**44,252**	**26,594**	**23,998**	**37,377**	**36,217**	**40,690**	**49,648**	**52,782**	**55,126**	1
2,866	4,195	11,107	27,768	33,006	36,928	28,656	12,565	4,043	9,992	7,559	12,104	17,727	18,445	20,019	2
1,174	2,443	4,914	5,178	5,996	5,698	3,597	7,656	11,721	13,011	8,329	12,934	9,607	8,081	8,921	3
−714	−200	−2,471	−1,204	−773	−287	−564	−5,263	−5,899	−2,150	1,943	−4,864	−1,260	981	−964	4
7,121	7,316	8,078	9,162	9,854	10,793	11,246	10,013	12,150	14,290	16,380	18,042	20,344	22,456	24,170	5
222	246	273	484	399	360	381	407	567	574	518	616	909	677	808	6
495	586	690	509	613	854	922	1,246	1,401	1,630	1,533	1,858	2,216	2,171	2,248	7
0	0	0	0	209	−193	14	−30	15	30	−45	0	105	−29	−76	8
−2,140	**−726**	**−3,770**	**−31,399**	**−44,229**	**−51,888**	**−39,727**	**4,185**	**13,266**	**7,865**	**−3,205**	**8,113**	**6,156**	**−2,846**	**−6,631**	9
−2,234	−1,448	−5,119	−33,198	−46,714	−54,577	−42,331	2,161	12,222	7,957	−2,398	9,229	6,517	−2,863	−6,831	10
94	722	1,349	1,799	2,485	2,689	2,604	2,024	1,044	−92	−807	−1,116	−361	17	200	11
10,197	**14,664**	**19,196**	**9,668**	**3,355**	**5,031**	**8,992**	**31,711**	**38,647**	**43,132**	**33,083**	**49,018**	**57,091**	**50,491**	**49,542**	12
9,309	13,155	18,072	9,875	5,600	7,130	10,430	27,125	29,705	41,176	32,549	51,219	56,864	50,655	51,408	13
888	1,509	1,124	−207	−2,245	−2,099	−1,438	4,586	8,942	1,956	534	−2,201	227	−164	−1,866	14
1,173	**804**	**375**	**−830**	**−1,720**	**2,766**	**4,467**	**932**	**1,383**	**−2,110**	**71**	**215**	**1,287**	**555**	**1,047**	15

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Table 6.—*Securities and Exchange Commission Estimates of Personal Saving and Comparison with Department of Commerce Estimates of Personal Saving, 1933–39*

[Billions of dollars]

Line		1933	1934	1935	1936	1937	1938	1939
1	**Personal saving in forms other than changes in equity in real property and unincorporated enterprises** [1] [2]	**−1.11**	**2.86**	**1.33**	**3.66**	**2.63**	**2.36**	**3.45**
2	Currency and bank deposits	−1.28	1.80	2.46	3.63	.43	.40	3.00
3	Currency	.16	−.10	.23	.52	.20	.04	.45
4	Demand deposits	1.21	.24	1.03	2.04	−.48	.38	1.91
5	Time and savings deposits	−2.65	1.66	1.20	1.07	.71	−.01	.64
6	Savings and loan associations	−.58	−.29	−.20	−.06	−.11	.00	.04
7	Private insurance [3]	.57	1.33	1.55	1.67	1.76	1.54	1.72
8	Securities [4]	.07	.42	−1.67	−.32	1.10	−.22	−.53
9	United States savings bonds [5]			.13	.28	.42	.41	.66
10	Other U. S. Government [4]	.63	1.12	−.54	.61	.74	−.57	−.60
11	State and local government	−.67	−.79	−.12	−.47	−.05	−.23	−.23
12	Corporate and other	.11	.09	−1.14	−.75	−.01	.17	−.36
13	Less: Increase in debt not elsewhere classified [6]	−.10	.40	.82	1.27	.55	−.64	.78
14	**Increase in equity in nonfarm residences and in real property of nonprofit institutions** [7]	**−.85**	**−1.91**	**−.87**	**−.20**	**.10**	**.13**	**.77**
15	Nonfarm dwellings	.09	.19	.54	1.27	1.63	1.83	2.79
16	New construction by nonprofit institutions	.08	.08	.09	.14	.19	.22	.22
17	Less: Increase in mortgage debt to corporations and financial intermediaries.	−.62	.55	−.13	−.09	.01	.16	.50
18	Depreciation [8]	1.64	1.63	1.63	1.70	1.71	1.76	1.74
19	**Increase in equity in nonfarm unincorporated enterprises** [7] [9]	**−.62**	**1.64**	**1.38**	**1.92**	**1.04**	**−1.64**	**.28**
20	Increase in inventories	−.50	.01	.16	.48	.21	−.13	.07
21	New construction and producers' durable equipment	.70	.94	1.26	1.68	2.03	1.36	1.68
22	Less: Increase in bank and insurance company debt	.31	−.18	−.30	−.27	−.19	.12	.18
23	Increase in net payables to other corporations	−.32	−1.38	−.56	−.44	.42	1.79	.34
24	Depreciation [8]	.83	.87	.90	.95	.97	.96	.95
25	**Increase in equity in farm enterprises** [7]	**−.58**	**−2.18**	**−.19**	**−1.40**	**.28**	**−.44**	**−.46**
26	Increase in inventories	−.26	−1.32	.54	−1.11	.52	.10	.06
27	New construction and producers' durable equipment [10]	.18	.32	.51	.68	.84	.68	.73
28	Net purchases of farms from corporations and financial institutions	−.19	−.14	−.08	−.08	.03	.01	.00
29	Less: Increase in mortgage debt to corporations and financial intermediaries.	−.26	.47	.06	−.07	−.08	−.09	−.13
30	Increase in other debt to corporations and financial intermediaries [11]	−.26	−.30	.19	−.04	.10	.20	.26
31	Depreciation [8]	.84	.87	.91	1.00	1.09	1.12	1.12
32	**Personal saving, SEC** (lines (1)+(14)+(19)+(25))	**−3.16**	**.41**	**1.65**	**3.98**	**4.05**	**.41**	**4.04**
33	**Personal saving, Commerce** (from table 3) [12]	**−.65**	**.09**	**2.03**	**3.61**	**3.74**	**1.05**	**2.87**
34	Difference between lines (32) and (33)	−2.51	.32	−.38	.37	.31	−.64	1.17
35	Statistical discrepancy in the national income and product accounts (from table 4).	.95	.73	−.17	1.12	−.25	.46	1.17
36	**Alternative estimate of personal saving, Commerce** (lines (33)+(35)) [13]	**.30**	**.82**	**1.86**	**4.73**	**3.49**	**1.51**	**4.04**
37	Difference between lines (32) and (36)	−3.46	−.41	−.21	−.75	.56	−1.10	.00

1. SEC liquid saving less changes in government insurance and pension reserves and Armed Forces leave bonds (both of which are ascribed to the government sector), and less liquidation of mortgage debt (treated separately below).

Annual amounts, in billions of dollars, of changes in government insurance and pension reserves are as follows: 1933, $0.11; 1934, $0.16; 1935, $0.24; 1936, $0.55; 1937, $1.37; 1938, $1.09; 1939, $1.30; 1940, $1.30; 1941, $1.86; 1942, $2.55; 1943, $3.92; 1944, $4.96; 1945, $5.14; 1946, $3.55; 1947, $3.49; 1948, $3.57; 1949, $2.34; 1950, $1.09; 1951, $4.21; 1952, $4.38; 1953, $3.20. Annual amounts, in billions of dollars, of Armed Forces leave bonds are as follows: 1946, $0.60; 1947, $0.16; 1948, −$0.30; 1949, −$0.12; 1950, −$0.10; 1951, −$0.15; 1952, −$0.04; 1953, −$0.02.

2. Includes changes in assets of unincorporated business of the types specified.

3. Excludes government pension and insurance reserves. See footnote 1.

4. Excludes Armed Forces leave bonds. See footnote 1.

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Table 6.—*Securities and Exchange Commission Estimates of Personal Saving and Comparison with Department of Commerce Estimates of Personal Saving, 1940–53*

[Billions of dollars]

1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
3.79	**9.47**	**26.84**	**34.41**	**36.39**	**32.46**	**13.19**	**7.48**	**4.33**	**4.50**	**7.98**	**14.26**	**15.46**	**16.86**	1
2.88	4.80	10.95	16.18	17.55	19.06	10.56	2.01	−1.84	−1.46	3.62	5.95	7.10	4.72	2
.77	2.18	4.12	4.72	4.55	2.96	.10	−.43	−.46	−.79	−.05	.77	1.12	.59	3
1.46	2.58	6.07	7.12	5.89	7.27	5.16	.24	−2.20	−1.54	3.23	3.22	1.73	−.10	4
.65	.04	.76	4.34	7.11	8.82	5.31	2.19	.82	.86	.44	1.96	4.25	4.23	5
.20	.36	.26	.55	.81	1.06	1.18	1.20	1.21	1.51	1.51	2.10	3.07	3.68	6
1.85	2.14	2.49	2.85	3.21	3.46	3.42	3.64	3.75	3.71	3.92	4.05	4.91	5.08	7
−.17	2.83	10.25	13.83	14.96	9.36	.29	3.35	3.52	3.14	2.14	2.70	4.23	6.21	8
.86	2.75	7.98	11.14	11.80	6.85	.90	1.78	2.13	1.53	.55	−.41	.32	.30	9
−.35	.72	2.39	3.00	3.94	3.64	−1.04	.31	−1.22	.02	−.46	−.49	−.67	1.06	10
−.46	−.28	−.22	−.12	−.05	−.20	−.21	.42	1.09	.61	.68	.42	.86	1.82	11
−.22	−.36	.09	−.20	−.73	−.92	.65	.84	1.52	.98	1.36	3.18	3.72	3.03	12
.97	.66	−2.89	−1.01	.14	.48	2.28	2.73	2.31	2.40	3.22	.54	3.85	2.83	13
.72	**1.21**	**−.03**	**−.44**	**−.88**	**−1.00**	**−1.52**	**−.46**	**1.56**	**1.81**	**2.76**	**1.98**	**2.13**	**2.15**	14
3.15	3.67	1.90	1.13	.98	1.09	3.73	5.66	7.61	7.04	11.33	10.15	10.31	10.91	15
.21	.24	.11	.03	.07	.12	.41	.51	.85	1.09	1.29	1.38	1.27	1.38	16
.84	.82	.09	−.38	−.06	.20	3.60	4.46	4.61	3.87	7.15	6.53	6.26	6.66	17
1.80	1.87	1.95	1.98	1.99	2.01	2.06	2.16	2.30	2.46	2.72	3.02	3.20	3.48	18
.73	**.20**	**2.10**	**.17**	**.41**	**−.73**	**−.20**	**.08**	**.99**	**1.02**	**−1.90**	**2.39**	**.36**	**3.79**	19
.32	.73	.18	−.12	.50	.43	.38	.06	.97	−.23	1.50	.87	.19	.55	20
2.04	2.55	1.16	.78	.96	2.05	4.19	5.69	5.10	5.75	7.42	7.10	6.79	7.99	21
.07	.64	−.14	−.35	−.12	.78	1.91	2.06	.51	2.02	4.57	.66	.75	.80	22
.54	1.28	−2.00	−.62	−.30	.92	1.10	1.24	1.82	−.84	2.61	.81	1.34	−.76	23
1.02	1.16	1.37	1.45	1.47	1.51	1.76	2.37	2.75	3.32	3.63	4.11	4.53	4.71	24
−.11	**.25**	**1.08**	**−.43**	**−.78**	**−1.20**	**−1.24**	**−2.68**	**.94**	**−1.20**	**−.16**	**.12**	**−.37**	**−1.61**	25
.27	.45	1.16	−.18	−.45	−.46	−.25	−2.29	1.14	−.88	.92	1.40	.65	−.68	26
.83	1.14	.94	.84	1.01	1.00	1.59	3.02	3.88	4.00	4.23	4.67	4.57	4.11	27
.10	.18	.17	.18	.11	.08	.05	.02							28
−.03	−.06	−.31	−.48	−.36	−.25	−.02	.11	.08	.19	.30	.28	.33	.28	29
.21	.29	−.01	.04	−.10	.03	.45	.60	.70	.41	.81	.96	.30	−.38	30
1.13	1.29	1.51	1.71	1.91	2.04	2.20	2.71	3.30	3.72	4.20	4.71	4.96	5.15	31
5.13	**11.13**	**29.99**	**33.71**	**35.14**	**29.53**	**10.23**	**4.42**	**7.82**	**6.13**	**8.68**	**18.75**	**17.59**	**21.20**	32
4.20	**11.11**	**27.77**	**33.01**	**36.93**	**28.66**	**12.57**	**4.04**	**9.99**	**7.56**	**12.10**	**17.73**	**18.44**	**20.02**	33
.93	.02	2.22	.70	−1.79	.87	−2.34	.38	−2.17	−1.43	−3.42	1.02	−.86	1.18	34
.80	**.38**	**−.83**	**−1.72**	**2.77**	**4.47**	**.93**	**1.38**	**−2.11**	**.07**	**.22**	**1.29**	**.56**	**1.05**	35
5.00	**11.49**	**26.94**	**31.29**	**39.70**	**33.13**	**13.50**	**5.42**	**7.88**	**7.63**	**12.32**	**19.01**	**19.00**	**21.07**	36
.13	−.36	3.05	2.42	−4.56	−3.60	−3.27	−1.00	−.06	−1.50	−3.63	−.26	−1.41	.13	37

5. Includes increase in redemption value of outstanding bonds.
6. Consists of changes in consumer debts to corporate business.
7. Represents changes in specified assets and liabilities only.
8. Includes accidental damage to fixed property.
9. Includes increase in equity of individuals in nonfarm nonresidential real property.
10. Includes farm dwellings.
11. Excludes consumer debt, which is included in line 13.
12. Equals disposable personal income less personal consumption expenditures.
13. Equals gross investment less government surplus and less gross private saving other than personal saving as given in table 5.

Source: Securities and Exchange Commission.

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Table 7.—*Consolidated Business Income and Product, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Business gross product**	94,801	82,190	68,027	51,135	48,708	56,713	63,698	72,397	80,494	74,286
2	Consolidated net sales	93,127	82,573	69,311	53,691	50,337	57,838	62,786	71,443	78,245	75,229
3	To consumers	73,500	66,440	57,575	46,258	43,703	49,076	53,331	59,298	63,555	61,185
4	To government	4,077	4,566	4,480	3,573	3,287	4,147	3,989	4,485	4,716	5,126
5	To business on capital account	14,557	10,648	6,807	3,469	3,020	4,013	5,365	7,450	9,498	7,604
6	To abroad	993	919	449	391	327	602	101	210	476	1,314
7	Change in inventories	1,674	−383	−1,284	−2,556	−1,629	−1,125	912	954	2,249	−943
8	**Charges against business gross product**	94,801	82,190	68,027	51,135	48,708	56,713	63,698	72,397	80,494	74,286
9	**Income originating in business**	78,179	66,814	51,464	35,216	32,903	40,697	48,253	54,565	63,332	56,640
10	Compensation of employees	43,886	39,646	32,803	24,737	23,166	26,914	29,511	33,599	38,759	35,215
11	Wages and salaries	43,377	39,149	32,348	24,342	22,805	26,516	29,078	32,843	37,203	33,486
12	Disbursements	43,377	39,149	32,348	24,342	22,805	26,516	29,078	32,843	37,203	33,486
13	Excess of wage accruals over disbursements	0	0	0	0	0	0	0	0	0	0
14	Supplements to wages and salaries	509	497	455	395	361	398	433	756	1,556	1,729
15	Employer contributions for social insurance	12	13	13	13	13	16	24	261	1,050	1,226
16	Other labor income	497	484	442	382	348	382	409	495	506	503
17	Income of unincorporated enterprises and inventory valuation adjustment.	14,759	11,540	8,734	5,316	5,599	7,010	10,387	10,482	12,691	11,128
18	Business and professional	8,791	7,410	5,581	3,384	3,166	4,564	5,351	6,530	7,073	6,793
19	Income of unincorporated enterprises	8,649	6,655	4,970	3,089	3,691	4,618	5,401	6,650	7,102	6,572
20	Inventory valuation adjustment	142	755	611	295	−525	−54	−50	−120	−29	221
21	Farm	5,968	4,130	3,153	1,932	2,433	2,446	5,036	3,952	5,618	4,335
22	Rental income of persons	5,425	4,778	3,761	2,713	1,971	1,694	1,661	1,776	2,081	2,560
23	Corporate profits and inventory valuation adjustment	9,868	6,445	1,638	−1,936	−1,990	1,031	2,759	4,898	6,082	4,016
24	Corporate profits before tax	9,396	3,185	−776	−2,983	153	1,656	2,986	5,636	6,113	3,053
25	Corporate profits tax liability	1,369	842	498	385	521	744	951	1,409	1,502	1,029
26	Corporate profits after tax	8,027	2,343	−1,274	−3,368	−368	912	2,035	4,227	4,611	2,024
27	Dividends	5,724	5,464	4,125	2,609	2,078	2,579	2,803	4,556	4,674	2,970
28	Undistributed profits	2,303	−3,121	−5,399	−5,977	−2,446	−1,667	−768	−329	−63	−946
29	Inventory valuation adjustment	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963
30	Net interest	4,241	4,405	4,528	4,386	4,157	4,048	3,935	3,810	3,719	3,721
31	**Adjustments to business net product**	8,005	6,835	8,397	8,304	8,644	8,904	8,210	10,336	9,416	9,863
32	Indirect business tax and nontax liability	7,003	7,155	6,859	6,768	7,055	7,815	8,190	8,663	9,157	9,154
33	Business transfer payments	587	534	649	737	659	641	594	594	567	429
34	Statistical discrepancy	268	−977	840	754	948	731	−171	1,118	−248	456
35	Less: Subsidies minus current surplus of government enterprises	−147	−123	−49	−45	18	283	403	39	60	176
36	**Capital consumption allowances**	8,617	8,541	8,166	7,615	7,161	7,112	7,235	7,496	7,746	7,783

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Table 7.—*Consolidated Business Income and Product, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
80,090	**89,132**	**112,485**	**139,936**	**162,767**	**174,525**	**173,363**	**182,814**	**208,626**	**232,051**	**229,518**	**254,689**	**290,334**	**303,882**	**321,025**	1
79,718	86,960	107,984	138,125	163,520	175,545	174,420	176,713	209,617	227,889	232,255	247,338	279,979	300,257	319,531	2
64,001	68,148	77,925	85,597	96,013	104,401	115,634	140,651	157,994	169,643	171,895	184,340	197,712	206,803	217,075	3
5,657	6,211	15,006	43,406	61,644	63,416	46,768	11,000	11,998	17,018	20,429	17,828	32,377	43,172	50,311	4
8,937	10,983	13,571	8,064	6,353	8,150	11,487	21,024	30,696	37,014	35,286	43,868	46,509	47,030	49,914	5
1,123	1,618	1,482	1,058	−490	−422	531	4,038	8,929	4,214	4,645	1,302	3,381	3,252	2,231	6
372	2,172	4,501	1,811	−753	−1,020	−1,057	6,101	−991	4,162	−2,737	7,351	10,355	3,625	1,494	7
80,090	**89,132**	**112,485**	**139,936**	**162,767**	**174,525**	**173,363**	**182,814**	**208,626**	**232,051**	**229,518**	**254,689**	**290,334**	**303,882**	**321,025**	8
61,748	**70,148**	**91,373**	**118,497**	**140,564**	**145,771**	**141,053**	**153,145**	**173,566**	**196,367**	**188,410**	**209,578**	**239,143**	**248,746**	**261,170**	9
38,231	41,913	52,835	67,225	80,771	85,367	83,897	92,537	107,008	118,023	115,691	127,151	146,235	157,090	169,724	10
36,376	39,932	50,431	64,401	77,416	81,636	80,137	88,676	102,390	113,180	110,582	120,565	138,103	148,274	160,117	11
36,376	39,932	50,431	64,401	77,207	81,829	80,123	88,706	102,375	113,150	110,627	120,565	138,042	148,335	160,117	12
0	0	0	0	209	−193	14	−30	15	30	−45	0	61	−61	0	13
1,855	1,981	2,404	2,824	3,355	3,731	3,760	3,861	4,618	4,843	5,109	6,586	8,132	8,816	9,607	14
1,332	1,405	1,749	2,017	2,338	2,318	2,132	2,114	2,482	2,397	2,416	3,146	3,727	3,707	3,717	15
523	576	655	807	1,017	1,413	1,628	1,747	2,136	2,446	2,693	3,440	4,405	5,109	5,890	16
11,610	13,010	17,401	23,907	28,187	29,565	30,835	35,265	34,433	38,389	34,149	36,140	40,809	39,918	38,444	17
7,293	8,442	10,897	13,899	16,823	18,040	19,011	21,321	19,948	21,649	21,431	22,855	24,791	25,727	26,215	18
7,459	8,487	11,512	14,266	16,979	18,109	19,117	23,026	21,419	22,061	20,963	23,989	25,135	25,519	26,410	19
−166	−45	−615	−367	−156	−69	−106	−1,705	−1,471	−412	468	−1,134	−344	208	−195	20
4,317	4,568	6,504	10,008	11,364	11,525	11,824	13,944	14,485	16,740	12,718	13,285	16,018	14,191	12,229	21
2,742	2,885	3,465	4,547	5,097	5,413	5,634	6,208	6,510	7,198	7,874	8,473	9,129	10,021	10,596	22
5,505	8,886	14,280	19,453	23,543	22,740	18,185	16,863	22,937	29,783	27,309	34,106	38,698	37,034	37,319	23
6,219	9,086	16,751	20,657	24,316	23,027	18,749	22,126	28,836	31,933	25,366	38,970	39,958	36,053	38,283	24
1,441	2,834	7,610	11,415	14,074	12,949	10,689	9,111	11,283	12,510	10,411	17,829	22,476	19,965	21,144	25
4,778	6,252	9,141	9,242	10,242	10,078	8,060	13,015	17,553	19,423	14,955	21,141	17,482	16,088	17,139	26
3,651	3,894	4,349	4,182	4,347	4,570	4,616	5,655	6,300	6,994	7,153	8,781	8,672	8,826	8,959	27
1,127	2,358	4,792	5,060	5,895	5,508	3,444	7,360	11,253	12,429	7,802	12,360	8,810	7,262	8,180	28
−714	−200	−2,471	−1,204	−773	−287	−564	−5,263	−5,899	−2,150	1,943	−4,864	−1,260	981	−964	29
3,660	3,454	3,392	3,365	2,966	2,686	2,502	2,272	2,678	2,974	3,387	3,708	4,272	4,683	5,087	30
10,504	**10,836**	**12,071**	**11,284**	**11,337**	**16,747**	**19,761**	**18,003**	**20,942**	**19,190**	**22,677**	**24,595**	**27,722**	**29,832**	**32,629**	31
9,365	10,021	11,296	11,769	12,735	14,127	15,522	17,349	18,658	20,390	21,644	23,741	25,637	28,049	30,037	32
451	431	502	495	505	506	532	557	674	739	781	843	985	999	1,016	33
1,173	804	375	−830	−1,720	2,766	4,467	932	1,383	−2,110	71	215	1,287	555	1,047	34
485	420	102	150	183	652	760	835	−227	−171	−181	204	187	−229	−529	35
7,838	**8,148**	**9,041**	**10,155**	**10,866**	**12,007**	**12,549**	**11,666**	**14,118**	**16,494**	**18,431**	**20,516**	**23,469**	**25,304**	**27,226**	36

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Table 8.—*Government Receipts, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Total receipts** [2]	11,258	10,757	9,477	8,886	9,325	10,458	11,362	12,928	15,380	15,022
2	**Federal**	3,804	3,047	2,047	1,708	2,670	3,541	3,964	5,024	7,039	6,480
3	Personal tax and nontax receipts before refunds	1,323	1,183	643	366	495	609	842	1,143	1,742	1,654
4	Income taxes [3]	1,238	1,093	567	320	375	452	580	740	1,319	1,244
5	Estate and gift taxes	61	61	56	30	69	129	248	386	402	390
6	Other taxes [4]					35	15				
7	Nontaxes [5]	24	29	20	16	16	13	14	17	21	20
8	Less: Tax refunds	60	49	36	35	21	14	15	13	19	19
9	Equals: Personal tax and nontax receipts	1,263	1,134	607	331	474	595	827	1,130	1,723	1,635
10	Corporate profits tax accruals	1,224	744	423	328	462	644	820	1,252	1,337	895
11	Indirect business tax and nontax accruals before refunds	1,219	1,067	912	937	1,658	2,270	2,235	2,273	2,425	2,238
12	Excise taxes	564	537	490	635	1,246	1,833	1,730	1,693	1,775	1,709
13	Liquor	13	11	10	7	138	375	459	569	587	565
14	Tobacco	449	446	425	387	409	452	478	536	563	567
15	Other	102	80	55	241	699	1,006	793	588	625	577
16	Customs duties	599	474	373	259	296	308	371	403	469	357
17	Capital stock tax					80	92	95	138	139	127
18	Nontaxes [6]	56	56	49	43	36	37	39	39	42	45
19	Less: Tax refunds	26	22	18	13	39	89	54	22	19	22
20	Equals: Indirect business tax and nontax accruals	1,193	1,045	894	924	1,619	2,181	2,181	2,251	2,406	2,216
21	Contributions for social insurance	124	124	123	125	115	121	136	391	1,573	1,734
22	**State and local**	7,571	7,835	7,743	7,312	7,157	8,550	9,104	8,628	9,105	9,320
23	Personal tax and nontax receipts	1,380	1,373	1,251	1,124	990	1,000	1,061	1,128	1,198	1,227
24	Income taxes	139	110	74	64	67	87	121	167	204	208
25	Death and gift taxes	165	182	168	137	110	97	109	116	129	137
26	Motor vehicle licenses [7]	187	183	171	158	152	153	163	176	183	181
27	Property taxes [8]	148	154	149	144	129	126	129	130	134	137
28	Other taxes [9]	47	49	47	48	47	52	60	64	69	75
29	Nontaxes [10]	694	695	642	573	485	485	479	475	479	489
30	Corporate profits tax accruals	145	98	75	57	59	100	131	157	165	134
31	Indirect business tax and nontax accruals	5,810	6,110	5,965	5,844	5,436	5,634	6,009	6,412	6,751	6,938
32	Sales taxes	439	525	571	578	669	934	1,156	1,396	1,518	1,583
33	State [11]	414	500	545	552	641	904	1,096	1,306	1,417	1,463
34	General	(15)	(15)	7	10	61	228	300	398	440	449
35	Gasoline	414	500	524	522	526	563	620	690	748	782
36	Liquor	(15)	(15)	1	4	34	89	141	169	174	175
37	Tobacco	(15)	(15)	13	16	20	24	35	49	55	57
38	Local	25	25	26	26	28	30	60	90	101	120
39	Motor vehicle licenses [7]	153	154	148	137	133	140	153	166	170	178
40	Property taxes [8]	4,543	4,727	4,539	4,424	3,962	3,907	4,023	4,058	4,162	4,277
41	Other taxes [12]	467	488	475	452	424	406	417	529	621	612
42	Nontaxes [13]	208	216	232	253	248	247	260	263	280	288
43	Contributions for social insurance	119	129	139	153	170	183	197	207	227	243
44	Federal grants-in-aid [14]	117	125	313	134	502	1,633	1,706	724	764	778

1. Includes transactions of social insurance funds, which can be separated by use of the data furnished in table 10. For an explanation of the treatment of government enterprises, see Part II. For a list of these enterprises, see footnotes to the table on industrial classification in the Introduction to Part III.
2. Federal grants-in-aid to State and local governments are reflected in Federal expenditures and in State and local receipts and expenditures. Total Government receipts and expenditures have been adjusted to eliminate this duplication.
3. Consists of individual income tax and victory tax.
4. Consists of dividends tax and automobile use tax.
5. Consists mainly of charges for government products and services not accounted for under government enterprises; of fines and penalties; and of donations. Includes also the excess of receipts over expenditures derived from the services of enemy prisoners of war to private contractors. Receipts from the sale of surplus property are not included.
6. Consists mainly of charges for government products and services not accounted for under government enterprises, including rents and royalties; and of fines and penalties. Receipts from the sale of surplus property are not included.
7. State only. State drivers' licenses are included in personal motor vehicle license receipts.
8. Property taxes levied on houses of owner-occupants are classified as indirect business taxes.
9. Consists of poll taxes and miscellaneous licenses and permits.

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Table 8.—*Government Receipts, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
15,382	17,741	24,983	32,633	49,170	51,184	53,216	51,249	57,130	59,262	56,453	69,360	85,554	91,072	95,900	1
6,721	8,641	15,420	22,943	39,258	41,008	42,495	39,200	43,311	43,438	39,095	50,177	64,491	68,204	71,228	2
1,260	1,393	2,044	4,696	16,540	17,880	20,710	18,815	21,323	20,783	18,562	19,888	28,078	33,279	35,084	3
874	1,036	1,622	4,062	15,923	17,133	19,848	17,987	20,446	19,825	17,751	19,167	27,247	32,357	34,095	4
371	341	401	471	461	565	663	734	830	900	754	659	751	850	922	5
			121	77	74	81	1								6
15	16	21	42	79	108	118	93	47	58	57	62	80	72	67	7
25	29	28	28	23	344	1,331	1,653	1,673	1,786	2,368	1,709	1,800	2,136	2,600	8
1,235	1,364	2,016	4,668	16,517	17,536	19,379	17,162	19,650	18,997	16,194	18,179	26,278	31,143	32,484	9
1,285	2,635	7,333	11,065	13,616	12,484	10,234	8,649	10,679	11,840	9,806	17,059	21,598	19,144	20,281	10
2,347	2,662	3,593	4,073	4,979	6,226	7,180	7,975	7,943	8,173	8,230	9,099	9,598	10,534	11,124	11
1,826	2,122	2,817	3,364	4,076	5,257	6,214	7,267	7,297	7,501	7,561	8,252	8,677	9,580	10,100	12
602	721	928	1,215	1,454	2,083	2,370	2,691	2,330	2,177	2,204	2,419	2,459	2,726	2,820	13
593	645	748	859	990	925	1,034	1,219	1,267	1,312	1,320	1,348	1,447	1,663	1,614	14
631	756	1,141	1,290	1,632	2,249	2,810	3,357	3,700	4,012	4,037	4,485	4,771	5,191	5,666	15
344	327	439	313	410	378	397	503	436	410	381	549	591	582	609	16
133	167	282	329	381	372	353									17
44	46	55	67	112	219	216	205	210	262	288	298	330	372	415	18
25	35	26	24	35	55	52	79	69	83	72	67	68	68	76	19
2,322	2,627	3,567	4,049	4,944	6,171	7,128	7,896	7,874	8,090	8,158	9,032	9,530	10,466	11,048	20
1,879	2,015	2,504	3,161	4,181	4,817	5,754	5,493	5,108	4,511	4,937	5,907	7,085	7,451	7,415	21
9,649	9,957	10,370	10,578	10,854	11,123	11,591	13,157	15,557	17,810	19,586	21,522	23,541	25,503	27,489	22
1,205	1,240	1,277	1,313	1,328	1,399	1,488	1,646	1,856	2,145	2,467	2,741	2,993	3,230	3,483	23
201	232	258	291	330	366	402	409	488	570	718	776	910	1,007	1,061	24
122	115	116	111	111	125	141	153	177	183	175	182	209	219	234	25
190	210	219	198	183	178	182	199	226	253	288	326	373	400	433	26
137	140	142	142	145	147	149	155	171	189	211	227	245	266	288	27
78	65	64	67	67	71	72	86	101	115	130	141	149	168	185	28
477	478	478	504	492	512	542	644	693	835	945	1,089	1,107	1,170	1,282	29
156	199	277	350	458	465	455	462	604	670	605	770	878	821	863	30
7,043	7,394	7,729	7,720	7,791	7,956	8,394	9,453	10,784	12,300	13,486	14,709	16,107	17,583	18,989	31
1,653	1,835	2,073	2,033	1,965	2,002	2,266	2,899	3,508	4,115	4,333	4,801	5,366	5,857	6,186	32
1,542	1,705	1,942	1,900	1,831	1,866	2,110	2,716	3,202	3,715	3,882	4,317	4,815	5,230	5,472	33
465	533	621	642	700	751	806	1,051	1,330	1,584	1,609	1,828	2,118	2,353	2,463	34
815	865	958	855	704	681	777	1,020	1,176	1,318	1,451	1,625	1,791	1,973	2,060	35
184	205	241	266	276	281	359	427	407	439	418	442	462	446	493	36
78	102	122	137	151	153	168	218	289	374	404	422	444	458	456	37
111	130	131	133	134	136	156	183	306	400	451	484	551	627	714	38
182	200	213	212	212	215	231	271	324	368	412	460	517	566	615	39
4,285	4,407	4,449	4,397	4,494	4,565	4,642	4,836	5,346	5,938	6,642	7,143	7,696	8,385	9,126	40
638	656	691	760	806	847	908	1,037	1,158	1,347	1,500	1,635	1,785	1,993	2,217	41
285	296	303	318	314	327	347	410	448	532	599	670	743	782	845	42
257	267	280	307	335	356	384	488	575	709	800	963	1,085	1,234	1,337	43
988	857	807	888	942	947	870	1,108	1,738	1,986	2,228	2,339	2,478	2,635	2,817	44

10. Consists of charges for government products and services not accounted for under government enterprises (such as tuition fees and public hospital fees); fines and penalties; donations; and special assessments for outlay paid by unincorporated business, including homeowners.

11. Minor State sales taxes not specified below are included in "Other taxes."

12. Consists of gross receipts taxes, franchise taxes, licenses, permits, severance taxes, documentary and stock transfer taxes, and minor State sales taxes.

13. Consists mainly of charges for government products and services not accounted for under government enterprises, including rents and royalties; of fines and penalties; special assessments for operation; and donations.

14. Includes shared receipts as well as grants-in-aid. The latter consist of highway grants, education grants (agricultural research and education, vocational education, and rehabilitation, war training and research programs, and veterans' postwar training programs), public assistance grants (mainly categorical assistance under the Social Security program), grants for the administration of the Unemployment Compensation program and of the U. S. Employment Service, Public Health grants, grants made by the Bureau of Community Facilities of the Federal Works Agency to war-congested communities, the Federal contribution to the District of Columbia, grants made by the Federal Emergency Relief Administration and the Public Works Administration, and miscellaneous other grants.

15. Small amounts included in "Other taxes."

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Table 9.—*Government Expenditures, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Total expenditures** [2]	**10,227**	**11,022**	**12,318**	**10,607**	**10,676**	**12,830**	**13,340**	**15,882**	**14,827**	**16,589**
2	**Federal**	**2,645**	**2,766**	**4,183**	**3,188**	**3,986**	**6,394**	**6,527**	**8,501**	**7,225**	**8,451**
3	Purchases of goods and services	1,311	1,410	1,537	1,480	2,018	2,991	2,931	4,815	4,552	5,280
4	Compensation of employees	879	915	921	880	1,164	1,694	1,768	3,570	3,013	3,505
5	Net purchases from business	362	424	536	540	805	1,258	1,108	1,180	1,445	1,711
6	New construction [3]	155	209	271	333	346	426	473	509	540	489
7	Other	207	215	265	207	459	832	635	671	905	1,222
8	Less: Domestic sales of surplus consumption goods										
9	Net purchases from abroad	70	71	80	60	49	39	55	65	94	64
10	Purchases from abroad	103	93	92	64	53	45	59	68	99	70
11	Less: Sales to abroad	33	22	12	4	4	6	4	3	5	6
12	Transfer payments	691	735	1,716	931	698	600	634	2,064	828	1,196
13	Grants-in-aid to State and local governments [4]	117	125	313	134	502	1,633	1,706	724	764	778
14	Net interest paid	441	380	444	479	517	590	526	485	616	619
15	Interest paid	733	684	679	718	845	1,016	1,025	1,062	1,240	1,158
16	Less: Interest received	292	304	235	239	328	426	499	577	624	539
17	Subsidies less current surplus of government enterprises [5]	85	116	173	164	251	580	730	413	465	578
18	**State and local**	**7,699**	**8,381**	**8,448**	**7,553**	**7,192**	**8,069**	**8,519**	**8,105**	**8,366**	**8,916**
19	Purchases of goods and services	7,171	7,772	7,681	6,598	6,013	6,773	7,059	7,001	7,160	7,536
20	Compensation of employees	3,456	3,630	3,737	3,565	3,531	3,884	4,178	3,696	3,889	4,121
21	Purchases from business	3,715	4,142	3,944	3,033	2,482	2,889	2,881	3,305	3,271	3,415
22	New construction [3]	2,331	2,649	2,388	1,529	1,032	1,186	1,122	1,744	1,607	1,622
23	Other	1,384	1,493	1,556	1,504	1,450	1,703	1,759	1,561	1,664	1,793
24	Transfer payments	218	264	349	502	759	953	1,172	862	1,023	1,209
25	Net interest paid	542	584	640	662	653	640	615	616	588	573
26	Interest paid	773	829	842	856	844	833	806	806	779	762
27	Less: Interest received	231	245	202	194	191	193	191	190	191	189
28	Less: Current surplus of government enterprises	232	239	222	209	233	297	327	374	405	402

1. See footnote 1 to table 8. 2. See footnote 2 to table 8.
3. For 1933–43, the sum of Federal and State and local new construction is smaller than New public construction shown in table 31, because work relief construction, as estimated by the National Income Division, has been excluded. The value of work relief construction is reflected in compensation of employees and "Other purchases from business."
4. See footnote 14 to table 8.

Table 10.—*Social Insurance Funds, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
	Federal										
1	Contributions for social insurance	124	124	123	125	115	121	136	391	1,573	1,734
2	Employee contributions	95	96	96	95	89	92	92	104	480	458
3	Employer contributions	29	28	27	30	26	29	44	287	1,093	1,276
4	Government and government enterprises	29	28	27	30	26	26	37	47	66	79
5	Private						3	7	240	1,027	1,197
6	Self-employed persons' contributions										
7	Less: Transferred to general government						3	7	52	133	138
8	Equals: Retained by social insurance funds	124	124	123	125	115	118	129	339	1,440	1,596
9	Plus: Investment income	21	26	26	19	25	25	26	37	154	94
10	Equals: Net receipts	145	150	149	144	140	143	155	376	1,594	1,690
11	Less: Benefit payments	44	51	60	72	82	94	93	95	142	606
12	Equals: Surplus (+) or deficit (−)	101	99	89	72	58	49	62	281	1,452	1,084
	State and Local										
13	Contributions for social insurance	119	129	139	153	170	183	197	207	227	243
14	Employees	47	51	55	57	63	65	70	76	86	96
15	Employer (government and government enterprises) [2]	72	78	84	96	107	118	127	131	141	147
16	Less: Transferred to general government	1	1	1	1	2	2	2	2	2	3
17	Equals: Retained by social insurance funds	118	128	138	152	168	181	195	205	225	240
18	Plus: Investment income	16	19	21	24	28	31	35	39	43	48
19	Equals: Net receipts	134	147	159	176	196	212	230	244	268	288
20	Less: Benefit payments	72	78	86	95	110	119	127	137	144	151
21	Equals: Surplus (+) or deficit (−)	62	69	73	81	86	93	103	107	124	137

1. For a listing of social insurance funds and for detail on employer and employee contributions, and benefit payments, see tables 34, 35, and 36.

2. Includes contributions by private employers to State cash sickness compensation funds as follows, in millions of dollars: 1949, $2; 1950, $7; 1951, $2; 1952, $2; 1953, $3.

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Table 9.—*Government Expenditures, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
17,522	**18,467**	**28,753**	**64,032**	**93,399**	**103,072**	**92,943**	**47,064**	**43,864**	**51,397**	**59,658**	**61,247**	**79,398**	**93,918**	**102,531**	1
8,955	**10,089**	**20,539**	**56,141**	**85,972**	**95,585**	**84,826**	**37,039**	**31,089**	**35,481**	**41,493**	**40,948**	**57,974**	**71,067**	**78,059**	2
5,157	6,170	16,923	52,027	81,223	89,006	74,796	20,934	15,776	21,019	25,445	22,138	40,995	53,951	60,105	3
3,414	3,489	5,027	10,645	20,899	27,250	29,786	14,545	9,343	8,872	9,926	10,649	16,164	18,708	18,132	4
1,679	2,597	11,566	40,189	58,913	60,831	44,067	7,193	6,486	9,955	11,676	8,067	21,642	32,208	38,486	5
543	965	3,596	9,309	5,608	2,505	1,737	931	951	1,187	1,488	1,625	2,982	4,186	4,153	6
1,140	1,638	7,977	30,896	53,372	58,535	42,752	6,978	5,828	8,911	10,271	6,488	18,721	28,086	34,403	7
4	6	7	16	67	209	422	716	293	143	83	46	61	64	70	8
64	84	330	1,193	1,411	925	943	−804	−53	2,192	3,843	3,422	3,189	3,035	3,487	9
69	87	367	1,381	1,985	1,877	2,679	1,203	978	2,584	4,173	3,631	3,547	3,326	3,819	10
5	3	37	188	574	952	1,736	2,007	1,031	392	330	209	358	291	332	11
1,240	1,421	1,369	1,419	1,239	1,841	4,310	9,214	8,887	7,652	8,754	10,884	8,663	8,940	9,660	12
988	857	807	888	942	947	870	1,108	1,738	1,986	2,228	2,339	2,478	2,635	2,817	13
643	726	774	1,038	1,707	2,420	3,334	4,164	4,117	4,179	4,327	4,431	4,558	4,589	4,732	14
1,189	1,298	1,379	1,726	2,481	3,262	4,335	5,217	5,230	5,354	5,611	5,804	5,996	6,290	6,633	15
546	572	605	688	774	842	1,001	1,053	1,113	1,175	1,284	1,373	1,438	1,701	1,901	16
927	915	666	769	861	1,371	1,516	1,619	571	645	739	1,156	1,280	952	745	17
9,555	**9,235**	**9,021**	**8,779**	**8,369**	**8,434**	**8,987**	**11,133**	**14,513**	**17,902**	**20,393**	**22,638**	**23,902**	**25,486**	**27,289**	18
8,163	7,903	7,828	7,690	7,394	7,523	8,071	9,984	12,832	15,565	18,175	19,885	21,804	23,229	25,130	19
4,185	4,289	4,388	4,473	4,663	4,938	5,370	6,177	7,320	8,502	9,422	10,124	11,069	12,265	13,305	20
3,978	3,614	3,440	3,217	2,731	2,585	2,701	3,807	5,512	7,063	8,753	9,761	10,735	10,964	11,825	21
2,129	1,733	1,424	1,066	681	568	661	1,431	2,482	3,638	4,917	5,375	6,436	6,715	7,226	22
1,849	1,881	2,016	2,151	2,050	2,017	2,040	2,376	3,030	3,425	3,836	4,386	4,299	4,249	4,599	23
1,272	1,262	1,242	1,229	1,220	1,241	1,323	1,640	2,226	2,890	2,868	3,420	2,927	3,151	3,125	24
562	565	515	479	433	389	349	293	253	263	270	285	264	287	308	25
752	761	709	681	660	633	599	555	521	550	585	624	656	733	808	26
190	196	194	202	227	244	250	262	268	287	315	339	392	446	500	27
442	495	564	619	678	719	756	784	798	816	920	952	1,093	1,181	1,274	28

5. Subsidies reflected consist of government payments to farmers, payments for the exportation and diversion of surplus agricultural commodities, shipping and housing subsidies, the wartime subsidy programs administered mainly by the Commodity Credit Corporation and the Reconstruction Finance Corporation, and subsidy payments to air carriers.

Table 10.—*Social Insurance Funds, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
1,879	2,015	2,504	3,161	4,181	4,817	5,754	5,493	5,108	4,511	4,937	5,907	7,085	7,451	7,415	1
491	546	686	1,044	1,706	2,092	2,174	1,773	1,833	1,829	1,856	2,448	2,904	3,032	3,153	2
1,388	1,469	1,818	2,117	2,475	2,725	3,580	3,720	3,275	2,682	3,081	3,459	4,181	4,212	4,042	3
86	95	104	138	174	447	1,495	1,654	840	342	732	396	486	547	334	4
1,302	1,374	1,714	1,979	2,301	2,278	2,085	2,066	2,435	2,340	2,349	3,063	3,695	3,665	3,708	5
													207	220	6
160	147	186	172	212	182	196	244	114	175	226	338	388	305	317	7
1,719	1,868	2,318	2,989	3,969	4,635	5,558	5,249	4,994	4,336	4,711	5,569	6,697	7,146	7,098	8
122	152	183	224	279	365	492	608	667	756	853	884	887	1,008	1,118	9
1,841	2,020	2,501	3,213	4,248	5,000	6,050	5,857	5,661	5,092	5,564	6,453	7,584	8,154	8,216	10
696	835	707	747	538	655	1,322	2,348	2,123	2,226	3,492	6,100	4,352	4,791	5,607	11
1,145	1,185	1,794	2,466	3,710	4,345	4,728	3,509	3,538	2,866	2,072	353	3,232	3,363	2,609	12
257	267	280	307	335	356	384	488	575	709	800	963	1,085	1,234	1,337	13
105	112	115	122	133	144	159	238	285	349	378	446	513	572	634	14
152	155	165	185	202	212	225	250	290	360	422	517	572	662	703	15
3	3	3	4	4	4	5	6	7	11	16	17	17	18	19	16
254	264	277	303	331	352	379	482	568	698	784	946	1,068	1,216	1,318	17
53	59	66	69	74	78	82	86	91	101	122	142	168	199	220	18
307	323	343	372	405	430	461	568	659	799	906	1,088	1,236	1,415	1,538	19
157	163	175	194	213	223	240	260	297	326	356	398	466	542	610	20
150	160	168	178	192	207	221	308	362	473	550	690	770	873	928	21

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Table 11.—*Transactions of the Rest of the World With the United States, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Net current payments to the United States**	771	690	197	169	150	429	−54	−93	62	1,109
2	Net payments of factor income	810	746	547	393	323	303	367	300	283	386
3	Wages and salaries	1	1	1	1	1	1	1	1	1	1
4	Interest	577	608	550	426	324	242	207	195	160	138
5	Dividends	89	26	−37	−44	−22	8	60	−8	11	217
6	Branch profits	143	111	33	10	20	52	99	112	111	30
7	Net purchases from the United States	−39	−56	−350	−224	−173	126	−421	−393	−221	723
8	Net purchases from United States business	993	919	449	391	327	602	101	210	476	1,314
9	Purchases from United States business	5,902	4,408	2,870	1,942	1,960	2,532	2,740	2,966	3,971	3,747
10	Sales to United States business	4,909	3,489	2,421	1,551	1,633	1,930	2,639	2,756	3,495	2,433
11	Net purchases from U. S. Government	−70	−71	−80	−60	−49	−39	−55	−65	−94	−64
12	Purchases from U. S. Government	33	22	12	4	4	6	4	3	5	6
13	Sales to U. S. Government	103	93	92	64	53	45	59	68	99	70
14	Net purchases from United States persons	−962	−904	−719	−555	−451	−437	−467	−538	−603	−527
15	Purchases from United States persons	51	43	28	17	17	19	20	22	28	37
16	Sales to United States persons	1,013	947	747	572	468	456	487	560	631	564
17	**Net capital movement to the United States**	−771	−690	−197	−169	−150	−429	54	93	−62	−1,109
18	Long-term	−240	−221	215	257	77	200	436	777	521	97
19	Short-term	−4	−479	−637	−446	−419	222	1,072	431	356	344
20	Change in gold stock	−143	−310	133	−53	131	−1,266	−1,822	−1,272	−1,364	−1,799
21	Errors and omissions	−384	320	92	73	61	415	368	157	425	249
22	Adjustment for United States territories and possessions										

1. See Part III, section on Net foreign investment.

Table 12.—*National Income by Legal Form of Organization, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**National income** [1]	87,814	75,729	59,708	42,547	40,159	48,959	57,057	64,911	73,618	67,581
2	**Income originating in business, total**	78,179	66,814	51,464	35,216	32,903	40,697	48,253	54,565	63,332	56,640
3	Corporate business	45,224	38,490	28,328	18,426	17,345	23,380	27,017	32,273	37,587	32,256
4	Compensation of employees	33,739	30,303	24,888	18,603	17,620	20,642	22,632	25,818	30,042	26,758
5	Wages and salaries	33,307	29,886	24,508	18,274	17,318	20,305	22,266	25,185	28,754	25,348
6	Compensation of corporate officers	3,337	3,139	2,698	2,133	1,995	2,173	2,345	2,713	2,809	2,591
7	Other wages and salaries	29,970	26,747	21,810	16,141	15,323	18,132	19,921	22,472	25,945	22,757
8	Supplements to wages and salaries	432	417	380	329	302	337	366	633	1,288	1,410
9	Corporate profits and inventory valuation adjustment	9,868	6,445	1,638	−1,936	−1,990	1,031	2,759	4,898	6,082	4,016
10	Corporate profits before tax	9,396	3,185	−776	−2,983	153	1,656	2,986	5,636	6,113	3,053
11	Corporate profits tax liability	1,369	842	498	385	521	744	951	1,409	1,502	1,029
12	Corporate profits after tax	8,027	2,343	−1,274	−3,368	−368	912	2,035	4,227	4,611	2,024
13	Inventory valuation adjustment	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963
14	Net interest	1,617	1,742	1,802	1,759	1,715	1,707	1,626	1,557	1,463	1,482
15	Sole proprietorships and partnerships	23,941	20,052	15,912	10,838	10,564	12,515	16,330	17,155	20,175	18,359
16	Compensation of employees	8,596	7,794	6,425	4,821	4,351	4,966	5,449	6,233	7,062	6,776
17	Wages and salaries	8,533	7,729	6,365	4,770	4,307	4,920	5,401	6,141	6,847	6,523
18	Supplements to wages and salaries	63	65	60	51	44	46	48	92	215	253
19	Income of unincorporated enterprises and inventory valuation adjustment.	14,713	11,499	8,710	5,303	5,585	6,996	10,365	10,448	12,649	11,097
20	Business and professional	8,745	7,369	5,557	3,371	3,152	4,550	5,329	6,496	7,031	6,762
21	Income of unincorporated enterprises	8,603	6,614	4,946	3,076	3,677	4,604	5,379	6,616	7,060	6,541
22	Inventory valuation adjustment	142	755	611	295	−525	−54	−50	−120	−29	221
23	Farm	5,968	4,130	3,153	1,932	2,433	2,446	5,036	3,952	5,618	4,335
24	Net interest [3]	632	759	777	714	628	553	516	474	464	486
25	Other private business [4]	8,256	7,501	6,456	5,247	4,363	4,109	4,128	4,295	4,700	5,127
26	Compensation of employees	793	778	722	608	564	613	652	706	785	783
27	Wages and salaries	792	777	721	607	563	612	651	699	764	755
28	Supplements to wages and salaries	1	1	1	1	1	1	1	7	21	28
29	Income of unincorporated enterprises—business and professional [5]	46	41	24	13	14	14	22	34	42	31
30	Rental income of persons	5,425	4,778	3,761	2,713	1,971	1,694	1,661	1,776	2,081	2,560
31	Net interest	1,992	1,904	1,949	1,913	1,814	1,788	1,793	1,779	1,792	1,753
32	Government enterprises	758	771	768	705	631	693	778	842	870	898
33	Compensation of employees	758	771	768	705	631	693	778	842	870	898
34	Wages and salaries	745	757	754	691	617	679	760	818	838	860
35	Supplements to wages and salaries	13	14	14	14	14	14	18	24	32	38
36	**Income originating in general government**	4,335	4,545	4,658	4,445	4,695	5,578	5,946	7,266	6,902	7,626
37	Compensation of employees	4,335	4,545	4,658	4,445	4,695	5,578	5,946	7,236	6,902	7,626
38	Wages and salaries	4,192	4,396	4,503	4,274	4,524	5,396	5,740	7,047	6,654	7,363
39	Supplements to wages and salaries	143	149	155	171	171	182	206	219	248	263
40	Employer contributions for social insurance	89	93	98	113	120	131	147	155	176	189
41	Other labor income	54	56	57	58	51	51	59	64	72	74
42	**Income originating in households and institutions** [6]	4,490	3,624	3,039	2,493	2,238	2,381	2,491	2,780	3,101	2,929
43	Compensation of employees	2,863	2,652	2,278	1,871	1,677	1,802	1,882	2,044	2,272	2,152
44	Wages and salaries	2,853	2,641	2,267	1,860	1,667	1,792	1,871	2,029	2,249	2,126
45	Supplements to wages and salaries	10	11	11	11	10	10	11	15	23	26
46	Employer contributions for social insurance	0	0	0	0	0	0	0	2	8	8
47	Other labor income	10	11	11	11	10	10	11	13	15	18
48	Net interest [7]	1,627	972	761	622	561	579	609	736	829	777
49	**Income originating in the rest of the world**	810	746	547	393	323	303	367	300	283	386
50	Wages and salaries [8]	1	1	1	1	1	1	1	1	1	1
51	Corporate profits after tax [9]	232	137	−4	−34	−2	60	159	104	122	247
52	Net interest	577	608	550	426	324	242	207	195	160	138

1. The national income is classified by distributive shares in table 1, and income originating in business is classified by distributive shares in table 7.
2. Data not available.
3. This series is net only of imputed interest received, and of cash interest received by firms engaged in lending as a principal activity; cash interest received by other proprietors is considered to be received in the proprietors' personal capacity.
4. Includes all mutual financial institutions; producers' and consumers' cooperatives; nonprofit organizations, such as trade associations, furnishing services to business; individually owned property including owner-occupied homes; and miscellaneous forms of business organization.
5. Estimated patronage refunds and stock dividends paid by farmers' cooperatives.

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Table 11.—*Transactions of the Rest of the World With the United States, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
888	**1,509**	**1,124**	**−207**	**−2,245**	**−2,099**	**−1,438**	**4,586**	**8,942**	**1,956**	**534**	**−2,201**	**227**	**−164**	**−1,866**	1
313	357	363	365	367	423	369	577	874	1,076	1,078	1,266	1,547	1,463	1,500	2
2	3	6	10	14	12	11	17	17	16	16	18	20	25	20	3
127	120	126	130	115	118	130	135	168	224	230	248	312	317	333	4
137	149	109	107	137	103	75	129	221	254	305	426	418	302	406	5
47	85	122	118	101	190	153	296	468	582	527	574	797	819	741	6
575	1,152	761	−572	−2,612	−2,522	−1,807	4,009	8,068	880	−544	−3,467	−1,320	−1,627	−3,366	7
1,123	1,618	1,482	1,058	−490	−422	531	4,038	8,929	4,214	4,645	1,302	3,381	3,252	2,231	8
3,886	4,785	5,378	4,209	3,433	3,877	4,944	9,682	15,640	12,575	12,366	11,383	15,773	15,429	14,473	9
2,763	3,167	3,896	3,151	3,923	4,299	4,413	5,644	6,711	8,361	7,721	10,081	12,392	12,177	12,242	10
−64	−84	−330	−1,193	−1,411	−925	−943	804	53	−2,192	−3,843	−3,422	−3,189	−3,035	−3,487	11
5	3	37	188	574	952	1,736	2,007	1,031	392	330	209	358	291	332	12
69	87	367	1,381	1,985	1,877	2,679	1,203	978	2,584	4,173	3,631	3,547	3,326	3,819	13
−484	−382	−391	−437	−711	−1,175	−1,395	−833	−914	−1,142	−1,346	−1,347	−1,512	−1,844	−2,110	14
36	59	43	40	45	45	94	28	55	51	42	30	30	32	35	15
520	441	434	477	756	1,220	1,489	861	969	1,193	1,388	1,377	1,542	1,876	2,145	16
−888	**−1,509**	**−1,124**	**207**	**2,245**	**2,099**	**1,438**	**−4,586**	**−8,942**	**−1,956**	**−534**	**2,201**	**−227**	**164**	**1,866**	17
27	−73	−642	−159	−147	21	−1,399	−3,712	−7,752	−2,074	−1,100	−241	−1,595	−1,039	−650	18
1,470	1,530	−389	67	1,225	356	1,915	−705	61	495	−32	726	949	1,073	1,159	19
−3,174	−4,243	−719	23	757	1,350	548	−623	−2,162	−1,530	−164	1,743	−53	−379	1,163	20
789	1,277	476	−8	34	−37	8	204	911	1,152	762	−27	472	509	194	21
		150	284	376	409	366	250								22

Table 12.—*National Income by Legal Form of Organization, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
72,753	**81,634**	**104,710**	**137,694**	**170,310**	**182,639**	**181,248**	**179,577**	**197,168**	**221,641**	**216,193**	**239,956**	**277,041**	**290,959**	**305,002**	1
61,748	**70,148**	**91,373**	**118,497**	**140,564**	**145,771**	**141,053**	**153,145**	**173,566**	**196,367**	**188,410**	**209,578**	**239,143**	**248,746**	**261,170**	2
36,185	42,436	56,437	72,904	88,087	90,110	82,414	86,302	104,710	120,263	115,425	131,612	151,362	157,799	168,539	3
29,290	32,326	41,051	52,293	63,595	66,525	63,485	68,969	81,168	89,910	87,421	96,881	111,940	120,079	130,513	4
27,771	30,695	39,070	49,965	60,761	63,346	60,316	65,748	77,254	85,810	83,112	91,301	104,978	112,500	122,164	5
2,697	2,950	3,472	3,691	3,745	3,759	4,118	5,143	6,026	6,733	6,743	7,607	8,122	[2]	[2]	6
25,074	27,745	35,598	46,274	57,016	59,587	56,198	60,605	71,228	79,077	76,369	83,694	96,856	[2]	[2]	7
1,519	1,631	1,981	2,328	2,834	3,179	3,169	3,221	3,914	4,100	4,309	5,580	6,962	7,579	8,349	8
5,505	8,886	14,280	19,453	23,543	22,740	18,185	16,863	22,937	29,783	27,309	34,106	38,698	37,034	37,319	9
6,219	9,086	16,751	20,657	24,316	23,027	18,749	22,126	28,836	31,933	25,366	38,970	39,958	36,053	38,233	10
1,441	2,834	7,610	11,415	14,074	12,949	10,689	9,111	11,283	12,510	10,411	17,829	22,476	19,965	21,144	11
4,778	6,252	9,141	9,242	10,242	10,078	8,060	13,015	17,553	19,423	14,955	21,141	17,482	16,088	17,139	12
−714	−200	−2,471	−1,204	−773	−287	−564	−5,263	−5,899	−2,150	1,943	−4,864	−1,260	981	−964	13
1,390	1,224	1,106	1,158	949	845	744	470	605	570	695	625	724	686	707	14
19,285	21,230	27,632	37,005	43,045	45,938	48,629	55,655	56,919	62,789	58,518	62,203	70,569	71,913	72,409	15
7,203	7,757	9,783	12,732	14,648	16,204	17,640	20,303	22,326	24,105	23,964	25,651	29,193	31,322	33,245	16
6,936	7,477	9,434	12,311	14,203	15,733	17,136	19,757	21,718	23,472	23,287	24,797	28,188	30,269	32,140	17
267	280	349	421	445	471	504	546	608	633	677	854	1,005	1,053	1,105	18
11,580	12,973	17,341	23,811	28,038	29,424	30,713	35,085	34,244	38,235	34,040	35,980	40,679	39,767	38,293	19
7,263	8,405	10,837	13,803	16,674	17,899	18,889	21,141	19,759	21,495	21,322	22,695	24,661	25,576	26,064	20
7,429	8,450	11,452	14,170	16,830	17,968	18,995	22,846	21,230	21,907	20,854	23,829	25,005	25,368	26,259	21
−166	−45	−615	−367	−156	−69	−106	−1,705	−1,471	−412	468	−1,134	−344	208	−195	22
4,317	4,568	6,504	10,008	11,364	11,525	11,824	13,944	14,485	16,740	12,718	13,285	16,018	14,191	12,229	23
502	500	508	462	359	310	276	267	349	449	514	572	697	824	871	24
5,354	5,498	6,219	7,374	7,957	8,195	8,402	9,318	9,981	11,031	11,936	13,087	14,253	15,667	16,791	25
814	846	916	986	1,053	1,110	1,164	1,395	1,558	1,724	1,775	1,943	2,143	2,322	2,535	26
785	817	887	958	1,025	1,080	1,135	1,363	1,524	1,685	1,733	1,887	2,070	2,242	2,454	27
29	29	29	28	28	30	29	32	34	39	42	56	73	80	81	28
30	37	60	96	149	141	122	180	189	154	109	160	130	151	151	29
2,742	2,885	3,465	4,547	5,097	5,413	5,634	6,208	6,510	7,198	7,874	8,473	9,129	10,021	10,596	30
1,768	1,730	1,778	1,745	1,658	1,531	1,482	1,535	1,724	1,955	2,178	2,511	2,851	3,173	3,509	31
924	984	1,085	1,214	1,475	1,528	1,608	1,870	1,956	2,284	2,531	2,676	2,959	3,367	3,431	32
924	984	1,085	1,214	1,475	1,528	1,608	1,870	1,956	2,284	2,531	2,676	2,959	3,367	3,431	33
884	943	1,040	1,167	1,427	1,477	1,550	1,808	1,894	2,213	2,450	2,580	2,867	3,263	3,359	34
40	41	45	47	48	51	58	62	62	71	81	96	92	104	72	35
7,599	**7,778**	**9,415**	**15,118**	**25,562**	**32,188**	**35,156**	**20,722**	**16,663**	**17,374**	**19,348**	**20,773**	**27,233**	**30,973**	**31,437**	36
7,599	7,778	9,415	15,118	25,562	32,188	35,156	20,722	16,663	17,374	19,348	20,773	27,233	30,973	31,437	37
7,313	7,477	9,146	14,809	25,190	31,491	33,352	18,770	15,435	16,519	17,995	19,631	[10] 25,944	[10] 29,529	[10] 30,098	38
286	301	269	309	372	697	1,804	1,952	1,228	855	1,353	1,142	1,289	1,444	1,339	39
199	210	225	277	329	609	1,663	1,843	1,069	632	1,072	812	966	1,105	964	40
87	91	44	32	43	88	141	109	159	223	281	330	323	339	375	41
3,093	**3,351**	**3,559**	**3,714**	**3,817**	**4,257**	**4,670**	**5,133**	**6,065**	**6,824**	**7,357**	**8,339**	**9,118**	**9,777**	**10,895**	42
2,276	2,435	2,533	2,918	3,240	3,719	4,117	4,421	5,069	5,514	5,803	6,383	6,932	7,335	7,880	43
2,250	2,406	2,503	2,889	3,208	3,684	4,077	4,373	5,016	5,457	5,741	6,312	6,814	7,211	7,745	44
26	29	30	29	32	35	40	48	53	57	62	71	118	124	135	45
9	9	9	8	10	10	10	13	14	13	15	18	60	62	64	46
17	20	21	21	22	25	30	35	39	44	47	53	58	62	71	47
817	916	1,026	796	577	538	553	712	996	1,310	1,554	1,956	2,186	2,442	3,015	48
313	**357**	**363**	**365**	**367**	**423**	**369**	**577**	**874**	**1,076**	**1,078**	**1,266**	**1,547**	**1,463**	**1,500**	49
2	3	6	10	14	12	11	17	17	16	16	18	20	25	20	50
184	234	231	225	238	293	228	425	689	836	832	1,000	1,215	1,121	1,147	51
127	120	126	130	115	118	130	135	168	224	230	248	312	317	333	52

6. Includes private households; and religious organizations, social and athletic clubs, labor organizations, nonprofit schools and hospitals, charitable and welfare organizations, and all other nonprofit organizations furnishing services to individuals.

7. This series measures gross interest paid; it is termed "net interest" only because it is a component of that distributive share.

8. Pay of permanent United States residents employed in the United States by foreign governments and international organizations.

9. Measures net inflow from abroad of dividends and branch profits; the net inflow from abroad of undistributed profits and corporate profits tax liability is excluded from this line and from the national income aggregate.

10. Includes excess of accruals over disbursements, in millions of dollars, as follows: 1951, $44; 1952, $32; 1953, −$76.

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Table 13.—*National Income by Industrial Origin, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	**87,814**	**75,729**	**59,708**	**42,547**	**40,159**	**48,959**	**57,057**	**64,911**	**73,618**	**67,581**
2	**Agriculture, forestry, and fisheries**	**8,278**	**6,226**	**4,895**	**3,332**	**3,713**	**3,723**	**6,411**	**5,405**	**7,214**	**5,907**
3	Farms	8,083	6,044	4,727	3,199	3,590	3,603	6,268	5,266	7,029	5,741
4	Agricultural services, forestry, and fisheries	195	182	168	133	123	120	143	139	185	166
5	**Mining**	**2,048**	**1,628**	**969**	**673**	**647**	**1,158**	**1,211**	**1,520**	**1,912**	**1,470**
6	Metal mining	466	275	106	20	38	123	166	263	452	271
7	Anthracite mining	284	282	229	151	130	172	139	146	137	114
8	Bituminous and other soft-coal mining	649	531	374	241	257	417	446	535	600	458
9	Crude petroleum and natural gas	447	348	150	211	181	376	378	461	581	523
10	Nonmetallic mining and quarrying	202	192	110	50	41	70	82	115	142	104
11	**Contract construction**	**3,808**	**3,179**	**2,203**	**1,056**	**755**	**1,066**	**1,297**	**1,983**	**2,078**	**1,993**
12	**Manufacturing**	**21,888**	**18,232**	**12,419**	**7,207**	**7,562**	**10,905**	**13,265**	**16,182**	**19,305**	**15,006**
13	Food and kindred products	2,135	2,394	1,860	1,409	1,331	1,599	1,873	2,076	2,401	2,252
14	Tobacco manufactures	256	299	322	312	142	146	203	134	196	223
15	Textile-mill products	1,796	1,405	1,148	714	699	1,102	1,201	1,361	1,601	1,094
16	Apparel and other finished fabric products	1,262	1,003	808	498	542	784	850	973	992	917
17	Lumber and furniture products [2]	1,528	1,122	653	329	305	547	669	891	1,072	852
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	852	615	281	118	123	264	328	449	564	430
21	Furniture and finished lumber products	676	507	372	211	182	283	341	442	508	422
22	Paper and allied products	562	504	388	270	290	418	461	505	565	573
23	Printing, publishing, and allied industries	1,589	1,501	1,220	883	793	928	1,042	1,171	1,253	1,137
24	Chemicals and allied products [2]	1,129	1,036	830	561	621	726	806	961	1,167	1,007
25	Products of petroleum and coal [2]	917	809	309	121	76	120	208	317	542	491
26	Rubber products	355	274	232	113	102	134	213	214	292	204
27	Leather and leather products	602	491	390	305	271	413	376	424	461	403
28	Stone, clay, and glass products	799	613	439	123	208	330	409	576	653	503
29	Metals, metal products, and miscellaneous [3]	4,323	3,347	1,861	768	1,031	1,781	2,345	3,084	3,806	2,479
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	2,970	2,217	1,110	410	684	1,086	1,478	2,069	2,597	1,600
35	Nonferrous metals and their products	757	634	412	196	153	381	461	557	699	438
36	Miscellaneous manufacturing	596	496	339	162	194	314	406	458	510	441
37	Machinery, except electrical [2]	1,890	1,481	753	299	424	733	1,014	1,398	1,760	1,247
38	Electrical machinery [2]	1,045	824	503	245	276	376	526	710	912	661
39	Transportation equipment, except automobiles	315	288	142	89	69	119	139	232	332	263
40	Automobiles and automobile equipment	1,385	841	561	168	382	649	930	1,155	1,300	700
41	**Wholesale and retail trade**	**13,358**	**12,229**	**9,743**	**6,354**	**5,485**	**8,056**	**9,200**	**10,590**	**12,212**	**11,943**
42	Wholesale trade	4,222	4,053	3,181	2,158	1,781	2,476	2,919	3,234	3,926	3,779
43	Retail trade and automobile services	9,136	8,176	6,562	4,196	3,704	5,580	6,281	7,356	8,286	8,164
44	**Finance, insurance, and real estate**	**12,693**	**10,592**	**8,646**	**6,753**	**5,745**	**5,633**	**5,933**	**6,580**	**7,237**	**7,676**
45	Banking	1,957	1,480	985	733	495	541	665	778	895	846
46	Security and commodity brokers, dealers and exchanges	655	144	70	98	260	215	183	279	243	159
47	Finance, n. e. c.	200	6	−28	−63	0	19	77	140	151	220
48	Insurance carriers	888	808	718	576	571	650	720	801	906	922
49	Insurance agents and combination offices	421	402	366	328	289	315	330	347	386	383
50	Real estate	8,572	7,752	6,535	5,081	4,130	3,893	3,958	4,235	4,656	5,146
51	**Transportation**	**6,636**	**5,604**	**4,369**	**3,210**	**3,036**	**3,415**	**3,700**	**4,277**	**4,634**	**4,052**
52	Railroads	4,597	3,766	2,828	1,979	1,866	2,062	2,250	2,635	2,808	2,370
53	Local and highway passenger transportation	825	766	633	512	450	485	478	535	546	499
54	Local railways and buslines										
55	Highway passenger transportation, n. e. c.										
56	Highway freight transportation and warehousing	560	533	481	418	416	466	526	587	654	658
57	Water transportation	266	216	173	127	153	178	200	243	293	206
58	Air transportation (common carriers)	−3	−10	4	10	10	8	14	22	26	30
59	Pipeline transportation	129	105	81	56	47	103	106	107	130	120
60	Services allied to transportation	262	228	169	108	94	113	126	148	177	169
61	**Communications and public utilities**	**2,864**	**2,790**	**2,628**	**2,286**	**2,000**	**2,198**	**2,280**	**2,487**	**2,725**	**2,717**
62	Telephone, telegraph, and related services	1,125	1,097	991	794	691	741	777	842	925	947
63	Radio broadcasting and television	28	9	16	21	14	32	38	53	66	65
64	Utilities: electric and gas	1,631	1,608	1,563	1,410	1,237	1,359	1,401	1,528	1,668	1,642
65	Local utilities and public services, n. e. c.	80	76	58	61	58	66	64	64	66	63
66	**Services**	**10,338**	**9,187**	**7,863**	**6,133**	**5,567**	**6,231**	**6,669**	**7,479**	**8,246**	**7,907**
67	Hotels and other lodging places	599	543	442	305	271	341	371	413	471	456
68	Personal services	1,279	1,203	1,030	800	695	782	857	958	1,110	1,024
69	Private households	3,253	2,363	1,815	1,362	1,199	1,336	1,428	1,662	1,930	1,718
70	Commercial and trade schools and employment agencies	40	38	31	22	20	23	29	32	39	34
71	Business services, n. e. c.	561	559	445	356	330	424	473	574	607	599
72	Miscellaneous repair services and hand trades	312	301	273	224	191	203	218	230	247	259
73	Motion pictures	440	438	361	194	210	283	329	391	437	426
74	Amusement and recreation, except motion pictures	381	337	269	178	154	197	211	253	305	266
75	Medical and other health services	1,536	1,476	1,306	1,037	948	1,036	1,115	1,253	1,323	1,330
76	Legal services	689	683	701	591	561	600	624	647	680	666
77	Engineering and other professional services, n. e. c.	206	184	152	102	98	113	121	144	156	164
78	Educational services, n. e. c.	402	413	412	393	363	361	365	376	394	409
79	Nonprofit membership organizations, n. e. c.	640	649	626	569	527	532	528	546	547	556
80	**Government and government enterprises**	**5,093**	**5,316**	**5,426**	**5,150**	**5,326**	**6,271**	**6,724**	**8,108**	**7,772**	**8,524**
81	Federal—general government	879	915	921	880	1,164	1,694	1,768	3,570	3,013	3,505
82	Civilian, except work relief										
83	Military										
84	Work relief										
85	Federal—government enterprises	581	584	582	544	485	540	614	662	675	698
86	State and local—general government	3,456	3,630	3,737	3,565	3,531	3,884	4,178	3,696	3,889	4,121
87	Public education										
88	Nonschool, except work relief										
89	Work relief										
90	State and local—government enterprises	177	187	186	161	146	153	164	180	195	200
91	**Rest of the world**	**810**	**746**	**547**	**393**	**323**	**303**	**367**	**300**	**283**	**386**

1. National income originating in each industry is the sum of factor costs incurred by the industry in production. Hence, it is the net value added to production by the industry, measured at factor costs. In the business sector of the economy, except government enterprises, it is equal to the excess of the market value of the industry's product and the subsidies it receives over the sum of the following costs: purchases of goods and services from other enterprises, indirect business tax and nontax liability, business transfer payments, and capital consumption charges. In the other sectors of the economy (government, personal, and rest-of-the-world) and also in government enterprises, this value added in production (as measured in the present series) can be described only as factor costs incurred. "National income originating" is a more net concept of value-added than that used by the Bureau of the Census in compiling the Census of Manufactures. "Value added by manufacture" was obtained in the 1947 Census of Manufactures by deducting from the value of products only "the cost of materials, supplies, containers, fuel, purchased electric energy, and contract work." National income by industrial origin is obtained statistically by aggregating the data

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Table 13.—*National Income by Industrial Origin, 1939–53* [1]

[Millions of dollars

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
72,753	**81,634**	**104,710**	**137,694**	**170,310**	**182,639**	**181,248**	**179,577**	**197,168**	**221,641**	**216,193**	**239,956**	**277,041**	**290,959**	**305,002**	1
5,933	**6,247**	**8,470**	**12,403**	**14,143**	**14,483**	**14,889**	**17,344**	**18,244**	**20,815**	**16,646**	**17,232**	**20,285**	**18,653**	**16,821**	2
5,761	6,073	8,269	12,148	13,864	14,152	14,526	16,927	17,777	20,290	16,117	16,673	19,648	17,955	16,102	3
172	174	201	255	279	331	363	417	467	525	529	559	637	698	719	4
1,582	**1,868**	**2,299**	**2,571**	**2,741**	**2,891**	**2,717**	**2,970**	**4,191**	**5,246**	**4,355**	**4,998**	**5,551**	**5,320**	**5,507**	5
343	440	504	581	498	403	334	302	515	640	513	693	815	836	932	6
126	138	165	192	213	239	219	283	300	342	259	277	276	249	183	7
501	621	805	989	1,133	1,263	1,195	1,242	1,815	2,087	1,460	1,701	1,809	1,544	1,493	8
482	518	620	556	646	757	741	839	1,178	1,729	1,670	1,816	2,062	2,081	2,250	9
130	151	205	253	251	229	228	304	383	448	453	511	589	610	649	10
2,323	**2,569**	**4,195**	**6,471**	**5,460**	**4,135**	**4,280**	**6,477**	**8,401**	**10,305**	**10,369**	**11,461**	**13,551**	**14,518**	**15,199**	11
17,925	**22,336**	**33,027**	**45,343**	**58,149**	**60,124**	**52,008**	**48,479**	**58,717**	**66,630**	**62,757**	**74,235**	**87,734**	**89,831**	**97,323**	12
2,269	2,462	2,737	3,693	4,395	4,951	5,010	5,539	5,803	6,646	6,508	6,753	6,999	7,629	8,057	13
297	260	220	185	189	283	236	326	364	399	512	512	525	572	615	14
1,261	1,509	2,067	2,852	3,014	2,965	3,015	4,005	4,657	5,163	4,139	4,551	5,176	4,541	4,366	15
1,028	1,138	1,463	1,928	2,418	2,705	2,914	3,355	3,383	3,500	3,331	3,424	3,702	3,849	3,998	16
1,001	1,154	1,691	1,973	2,089	2,170	2,133	2,811	3,455	[3] 3,831	3,349	4,187	4,631	4,368	4,353	17
									2,639	2,189	2,795	3,118	2,839	2,765	18
									1,192	1,160	1,392	1,513	1,529	1,588	19
494	591	907	1,090	1,138	1,142	1,080	1,448	1,938							20
507	563	784	883	951	1,028	1,053	1,363	1,517							21
556	665	1,030	1,124	1,257	1,348	1,341	1,696	2,208	2,340	2,162	2,685	3,355	3,144	3,338	22
1,213	1,254	1,363	1,434	1,739	2,029	2,234	2,697	3,055	3,286	3,426	3,620	3,870	4,070	4,389	23
1,202	1,488	1,940	2,774	3,349	3,350	3,221	3,271	3,763	[3] 4,278	4,308	5,103	6,146	6,109	6,481	24
434	639	826	1,152	1,459	1,326	1,244	1,510	2,209	[3] 3,306	2,527	2,889	3,620	3,217	3,426	25
278	321	489	594	898	1,019	928	1,082	1,124	1,066	954	1,045	1,626	1,738	1,730	26
424	461	617	778	859	884	925	1,082	1,114	1,249	1,111	1,132	1,346	1,363	1,385	27
663	760	1,070	1,171	1,192	1,134	1,146	1,561	1,852	2,133	2,076	2,631	3,004	2,827	3,037	28
3,377	4,502	7,165	9,593	12,589	12,598	10,679	8,851	11,094	[3] 13,009	11,965	15,370	18,809	18,207	21,082	29
									5,896	5,387	7,112	8,995	7,900	9,404	30
									4,387	3,986	5,085	6,178	6,504	7,451	31
									1,016	995	1,242	1,585	1,767	1,960	32
									1,710	1,597	1,931	2,051	2,036	2,267	33
2,267	3,078	5,076	6,895	9,068	9,045	7,389	5,531	7,566							34
591	790	1,200	1,491	1,945	1,934	1,686	1,753	1,912							35
519	634	889	1,207	1,576	1,619	1,604	1,567	1,616							36
1,490	2,179	3,844	5,395	5,917	5,807	5,084	4,717	6,192	[3] 6,889	6,198	7,247	9,796	10,585	10,598	37
852	1,134	1,893	2,474	3,347	3,708	3,051	2,376	3,398	[3] 3,628	3,456	4,404	5,450	6,184	6,985	38
396	810	2,262	6,214	12,105	12,446	7,730	1,691	1,524	1,867	1,918	2,051	3,349	4,945	5,785	39
1,184	1,600	2,350	2,009	1,333	1,401	1,117	1,909	3,522	4,040	4,817	6,631	6,330	6,483	7,698	40
12,453	**14,337**	**17,254**	**20,312**	**23,831**	**25,745**	**27,997**	**34,417**	**37,341**	**41,522**	**40,504**	**43,449**	**47,880**	**50,938**	**52,350**	41
3,830	4,463	5,228	6,195	6,911	7,640	8,242	10,393	11,651	13,049	12,299	13,694	15,922	16,781	17,138	42
8,623	9,874	12,026	14,117	16,920	18,105	19,755	24,024	25,690	28,473	28,205	29,755	31,958	34,157	35,212	43
7,920	**8,208**	**9,172**	**10,649**	**11,569**	**12,197**	**12,830**	**14,479**	**15,250**	**17,355**	**18,890**	**20,671**	**22,407**	**24,434**	**26,384**	44
882	981	1,097	1,188	1,410	1,661	1,829	2,167	2,159	2,406	2,568	2,893	3,310	3,711	4,123	45
165	139	109	78	173	178	315	283	132	184	180	355	350	259	235	46
168	192	225	364	283	273	272	333	403	540	697	801	985	1,114	1,222	47
926	893	918	1,021	1,101	1,087	1,077	1,183	1,403	1,869	2,260	2,250	2,199	2,370	2,639	48
390	405	444	468	488	529	568	750	852	933	949	1,057	1,147	1,226	1,329	49
5,389	5,598	6,379	7,530	8,114	8,469	8,769	9,763	10,301	11,423	12,236	13,315	14,416	15,754	16,836	50
4,642	**5,040**	**6,300**	**8,598**	**10,784**	**11,245**	**10,536**	**10,245**	**11,498**	**12,644**	**11,969**	**13,266**	**14,884**	**15,618**	**16,008**	51
2,737	2,944	3,778	5,568	6,971	6,899	6,009	5,466	6,294	7,104	6,369	7,109	7,792	7,980	7,789	52
515	526	582	904	1,218	1,293	1,306	1,412	1,393	1,378	1,351	1,336	1,432	1,460	1,510	53
															54
															55
739	815	1,021	1,183	1,308	1,354	1,390	1,699	1,993	2,272	2,377	2,780	3,128	3,456	3,851	56
280	336	432	425	595	857	989	823	814	810	750	746	966	998	1,052	57
44	57	77	113	151	175	192	217	243	306	349	432	540	638	690	58
131	131	145	117	129	145	131	126	151	192	202	255	281	308	319	59
196	231	265	288	412	522	519	502	610	582	571	608	745	778	797	60
2,863	**3,056**	**3 324**	**3,669**	**3,934**	**4,062**	**4,244**	**4,792**	**5,114**	**5,894**	**6,566**	**7,172**	**8,256**	**9,206**	**10,195**	61
1,005	1,025	1,135	1,367	1,547	1,652	1,751	1,973	2,077	2,462	2,672	2,958	3,333	3,696	4,118	62
76	91	106	109	139	175	186	203	226	253	263	314	388	433	481	63
1,717	1,872	2,011	2,121	2,169	2,152	2,218	2,523	2,709	3,065	3,512	3,779	4,399	4,923	5,430	64
65	68	72	72	79	83	89	93	102	114	119	121	136	154	166	65
8,276	**8,854**	**9,806**	**10,981**	**12,295**	**13,618**	**14,614**	**17,205**	**18,919**	**20,496**	**21,180**	**22,757**	**24,754**	**26,638**	**28,847**	66
481	530	584	674	877	983	1,085	1,322	1,287	1,328	1,287	1,309	1,380	1,491	1,561	67
1,049	1,150	1,286	1,548	1,893	2,012	2,121	2,552	2,634	2,765	2,807	2,861	3,012	3,138	3,291	68
1,866	2,056	2,188	2,201	2,107	2,360	2,635	2,766	3,272	3,617	3,885	4,539	4,941	5,217	5,981	69
34	34	57	112	159	134	72	89	114	135	151	169	166	160	153	70
638	666	779	826	915	1,055	1,179	1,471	1,634	1,847	1,864	2,034	2,324	2,619	2,923	71
261	261	350	419	610	701	703	843	938	965	933	971	1,110	1,261	1,350	72
434	449	513	652	830	883	930	1,133	1,054	921	898	844	857	837	835	73
288	310	368	388	436	507	613	810	794	824	787	792	848	889	958	74
1,381	1,463	1,575	1,806	1,988	2,341	2,459	3,024	3,544	3,910	4,147	4,496	4,935	5,387	5,802	75
692	719	763	793	814	874	930	954	1,033	1,180	1,231	1,317	1,373	1,417	1,499	76
181	193	264	385	344	320	335	454	560	665	662	727	930	1,135	1,240	77
415	424	439	461	503	532	569	660	813	981	1,075	1,135	1,174	1,245	1,299	78
556	599	640	716	819	916	983	1,127	1,242	1,358	1,453	1,563	1,704	1,842	1,955	79
8,523	**8,762**	**10,500**	**16,332**	**27,037**	**33,716**	**36,764**	**22,592**	**18,619**	**19,658**	**21,879**	**23,449**	**30,192**	**34,340**	**34,868**	80
3,414	3,489	5,027	10,645	20,899	27,250	29,786	14,545	9,343	8,872	9,926	10,649	16,164	18,708	18,132	81
															82
															83
															84
719	746	808	918	1,139	1,188	1,248	1,448	1,440	1,627	1,806	1,897	2,081	2,357	2,331	85
4,185	4,289	4,388	4,473	4,663	4,938	5,370	6,177	7,320	8,502	9,422	10,124	11,069	12,265	13,305	86
															87
															88
															89
205	238	277	296	336	340	360	422	516	657	725	779	878	1,010	1,100	90
313	**357**	**363**	**365**	**367**	**423**	**369**	**577**	**874**	**1,076**	**1,078**	**1,266**	**1,547**	**1,463**	**1,500**	91

presented in tables 14 and 18 and the industry detail underlying tables 17, 23, and 24 together with the rental income of persons (shown in table 12 and classified in the real estate industry.) Footnotes to these tables are, therefore, relevant also to table 13.

2. For certain manufacturing industries, the 1929–47 values shown are not comparable with those given for 1948 and subsequent years. The discontinuities stem from changes in the industrial classification system on which the tabulations of basic data are prepared. See Introduction to Part III and notes to tables 15 and 18. Of the industry series principally involved here, five have been terminated in 1947, the others are indicated by footnotes.

3. See note 2. Estimates of 1948 national income comparable to those shown for 1947 in the specified industries are as follows: Lumber and furniture products, $3,954 million; Chemicals and allied products, $4,427 million; Products of petroleum and coal, $3,290 million; Metals, metal products and miscellaneous, $12,546 million; Machinery, except electrical, $7,011; and Electrical machinery, $3,693 million.

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Table 14.—*Compensation of Employees, by Industry, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	51,085	46,844	39,740	31,054	29,539	34,295	37,340	42 910	47,934	44,994
2	**Agriculture, forestry, and fisheries**	1,406	1,290	1,011	747	687	748	859	950	1,105	1,083
3	Farms	1,291	1,180	907	663	612	675	773	867	992	981
4	Agricultural services, forestry, and fisheries	115	110	104	84	75	73	86	83	113	102
5	**Mining**	1,539	1,349	1,011	698	700	927	985	1,162	1,368	1,170
6	Metal mining	204	169	104	54	53	69	89	130	206	148
7	Anthracite mining	265	256	208	153	134	162	143	142	141	123
8	Bituminous and other soft-coal mining	618	515	387	266	284	394	430	515	573	462
9	Crude petroleum and natural gas	326	298	228	172	182	245	262	296	351	356
10	Nonmetallic mining and quarrying	126	111	84	53	47	57	61	79	97	81
11	**Contract construction**	2,540	2,142	1,529	863	639	788	920	1,350	1,463	1,348
12	**Manufacturing**	16,243	13,991	10,933	7,783	7,921	9,746	10,961	12,672	15,186	12,493
13	Food and kindred products	1,586	1,540	1,346	1,115	1,149	1,344	1,411	1,532	1,731	1,644
14	Tobacco manufactures	143	131	109	85	74	84	84	90	101	98
15	Textile-mill products	1,465	1,207	1,072	774	903	1,012	1,117	1,178	1,303	1,061
16	Apparel and other finished fabric products	1,055	916	784	561	572	693	783	850	895	843
17	Lumber and furniture products [2]	1,330	1,038	698	434	456	533	632	783	923	788
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	713	547	309	179	201	255	303	384	459	393
21	Furniture and finished lumber products	617	491	389	255	255	278	329	399	464	395
22	Paper and allied products	435	417	355	277	283	337	362	403	476	432
23	Printing, publishing, and allied industries	1,243	1,248	1,071	843	722	813	872	958	1,076	1,026
24	Chemicals and allied products [2]	671	629	536	420	428	502	532	584	701	653
25	Products of petroleum and coal [2]	248	248	200	166	156	181	204	219	265	272
26	Rubber products	283	224	169	133	142	178	184	213	243	194
27	Leather and leather products	494	420	366	293	305	354	369	381	423	377
28	Stone, clay, and glass products	627	533	390	243	231	290	334	410	506	428
29	Metals, metal products, and miscellaneous [2]	3,141	2,643	1,880	1,164	1,248	1,622	1,939	2,432	3,081	2,233
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	2,147	1,820	1,230	736	821	1,089	1,314	1,703	2,196	1,494
35	Nonferrous metals and their products	544	421	326	207	207	267	321	383	484	377
36	Miscellaneous manufacturing	450	402	324	221	220	266	304	346	401	362
37	Machinery, except electrical [2]	1,408	1,185	783	497	500	685	832	1,050	1,391	1,009
38	Electrical machinery [2]	868	720	491	290	306	413	466	582	778	569
39	Transportation equipment, except automobiles	264	256	168	118	94	134	146	209	286	235
40	Automobiles and automobile equipment	982	636	515	370	352	571	694	798	1,007	631
41	**Wholesale and retail trade**	9,374	8,766	7,634	5,956	5,331	6,159	6,683	7,341	8,442	8,340
42	Wholesale trade	3,397	3,220	2,757	2,152	1,895	2,192	2,382	2,597	2,984	3,000
43	Retail trade and automobile services	5,977	5,546	4,877	3,804	3,436	3,967	4,301	4,744	5,458	5,340
44	**Finance, insurance, and real estate**	2,989	2,808	2,527	2,145	1,939	2,031	2,111	2,313	2,524	2,460
45	Banking	784	739	670	582	499	516	524	542	574	586
46	Security and commodity brokers, dealers and exchanges	408	321	267	235	245	234	206	252	260	197
47	Finance, n. e. c	257	247	223	198	178	184	201	233	256	234
48	Insurance carriers	821	828	777	648	579	604	645	689	758	769
49	Insurance agents and combination offices	240	232	210	187	166	180	190	206	224	228
50	Real estate	479	441	380	295	272	313	345	391	452	446
51	**Transportation**	4,813	4,332	3,622	2,736	2,537	2,766	2,961	3,357	3,762	3,380
52	Railroads	3,303	2,926	2,407	1,752	1,628	1,782	1,894	2,154	2,377	2,100
53	Local and highway passenger transportation	661	621	541	435	373	389	405	435	471	450
54	Local railways and buslines	482	453	402	329	283	296	307	326	349	327
55	Highway passenger transportation, n. e. c	179	168	139	106	90	93	98	109	122	123
56	Highway freight transportation and warehousing	333	322	295	263	258	286	327	366	426	416
57	Water transportation	215	195	168	137	144	154	162	198	238	180
58	Air transportation (common carriers)	5	9	13	14	14	14	17	22	28	31
59	Pipeline transportation	48	42	38	29	29	34	36	40	49	46
60	Services allied to transportation	248	217	160	106	91	107	120	142	173	157
61	**Communications and public utilities**	1,549	1,572	1,437	1,217	1,090	1,170	1,231	1,346	1,525	1,549
62	Telephone, telegraph, and related services	756	754	674	565	499	529	542	587	668	684
63	Radio broadcasting and television	10	15	21	24	21	25	27	34	45	49
64	Utilities: electric and gas	751	771	712	602	547	591	636	697	785	790
65	Local utilities and public services, n. e. c	32	32	30	26	23	25	26	28	27	26
66	**Services**	5,538	5,277	4,609	3,758	3,368	3,688	3,904	4,310	4,786	4,646
67	Hotels and other lodging places	427	409	343	258	219	272	289	318	363	368
68	Personal services	755	730	646	526	459	500	529	584	652	634
69	Private households	1,718	1,485	1,148	836	733	851	912	1,017	1,190	1,026
70	Commercial and trade schools and employment agencies	34	33	27	19	16	18	22	26	31	29
71	Business services, n. e. c	359	371	311	262	243	294	326	392	414	412
72	Miscellaneous repair services and hand trades	108	106	98	83	73	76	81	84	91	95
73	Motion pictures	310	313	307	241	227	253	282	317	360	346
74	Amusement and recreation, except motion pictures	323	299	256	191	161	176	180	205	239	216
75	Medical and other health services	398	406	386	346	317	324	349	388	433	468
76	Legal services	124	131	132	126	118	116	121	126	135	138
77	Engineering and other professional services, n. e. c	81	75	55	36	34	37	40	51	57	65
78	Educational services, n. e. c	296	307	311	303	281	279	284	295	312	330
79	Nonprofit membership organizations, n. e. c	605	612	589	531	487	492	489	507	509	519
80	**Government and government enterprises**	5,093	5,316	5,426	5,150	5,326	6,271	6,724	8,108	7,772	8,524
81	Federal—general government	879	915	921	880	1,164	1,694	1,768	3,570	3,013	3,505
82	Civilian, except work relief										
83	Military										
84	Work relief										
85	Federal—government enterprises	581	584	582	544	435	540	614	662	675	698
86	State and local—general government	3,456	3,630	3,737	3,565	3,531	3,884	4,178	3,696	3,889	4,121
87	Public education										
88	Nonschool, except work relief										
89	Work relief										
90	State and local—government enterprises	177	187	186	161	146	153	164	180	195	200
91	**Rest of the world**	1	1	1	1	1	1	1	1	1	1
92	**Addendum: All private industries**	45,991	41,527	34,313	25,903	24,212	28,023	30,615	34,801	40,161	36,469

1. Compensation of employees is the sum of wages and salaries (table 15) and supplements to wages and salaries (table 16). Footnotes to tables 15 and 16 are, therefore, relevant also to table 14.

parable to those shown for 1947 in the specified industries are as follows: Lumber and furniture products, $3,043 million; Chemicals and allied products, $2,602 million; Products of petroleum and coal, $1,125 million; Metals, metal products, and miscellaneous, $9,733 million; Machinery,

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Table 14.—*Compensation of Employees, by Industry, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
48,108	**52,129**	**64,789**	**85,271**	**109,587**	**121,286**	**123,181**	**117,697**	**128,757**	**140,927**	**140,858**	**154 325**	**180,420**	**195,423**	**209,061**	1
1,097	**1,141**	**1,375**	**1,797**	**2,206**	**2,412**	**2,523**	**2,801**	**3,097**	**3,333**	**3,157**	**3,043**	**3,288**	**3,393**	**3,457**	2
992	1,035	1,257	1,645	2,042	2,218	2,315	2,563	2,829	3,040	2,867	2,735	2,943	3,019	3,074	3
105	106	118	152	164	194	208	238	268	293	290	308	345	374	383	4
1,204	**1,360**	**1,621**	**1,855**	**2,072**	**2,285**	**2,261**	**2,470**	**3,070**	**3,543**	**3,127**	**3,440**	**3,910**	**3,966**	**4,074**	5
168	203	246	287	324	277	240	242	309	353	339	368	448	502	560	6
130	124	143	165	187	209	203	248	262	293	238	254	260	246	198	7
480	570	712	858	957	1,091	1,056	1,111	1,463	1,652	1,277	1,465	1,619	1,432	1,403	8
335	357	383	374	425	538	595	651	775	953	975	1,023	1,195	1,368	1,461	9
91	106	137	171	179	170	167	218	261	292	298	330	388	418	452	10
1,650	**1,821**	**3,074**	**4,925**	**4,120**	**3,037**	**3,107**	**4,621**	**6,108**	**7,409**	**7,257**	**8,311**	**10,287**	**11,173**	**11,637**	11
14,321	**16,397**	**22,775**	**32,248**	**42,658**	**44,960**	**40,182**	**38,178**	**44,537**	**48,604**	**46,124**	**52,535**	**62,373**	**67,528**	**75,052**	12
1,707	1,790	2,018	2,392	2,764	3,106	3,269	3,750	4,282	4,560	4,629	4,908	5,423	5,699	6,048	13
102	108	119	125	152	165	179	197	207	215	226	236	272	289	304	14
1,224	1,261	1,673	2,001	2,137	2,127	2,199	2,803	3,219	3,663	3,278	3,744	3,881	3,756	3,788	15
967	980	1,261	1,497	1,786	1,965	2,078	2,555	2,744	2,993	2,891	3,118	3,263	3,400	3,619	16
890	981	1,284	1,496	1,648	1,710	1,715	2,192	2,767	[2] 2,950	2,680	3,229	3,597	3,670	3,740	17
									1,948	1,724	2,060	2,364	2,362	2,352	18
									1,002	956	1,169	1,233	1,308	1,388	19
432	489	654	795	882	910	884	1,090	1,395							20
458	492	630	701	766	800	831	1,102	1,372							21
468	515	652	731	849	920	976	1,187	1,408	1,572	1,541	1,780	2,045	2,134	2,368	22
1,037	1,044	1,119	1,134	1,225	1,353	1,526	1,981	2,344	2,607	2,752	2,928	3,143	3,371	3,644	23
702	849	1,150	1,731	2,118	2,172	2,210	2,672	2,394	[2] 2,533	2,505	2,752	3,321	3,613	4,041	24
280	326	388	477	576	705	773	822	991	[2] 1,154	1,186	1,214	1,453	1,585	1,702	25
236	258	351	414	575	670	662	778	866	844	778	918	1,089	1,189	1,292	26
405	401	530	607	648	674	727	905	978	1,010	971	1,047	1,062	1,147	1,190	27
494	542	710	808	875	880	899	1,180	1,402	1,593	1,530	1,765	2,108	2,097	2,293	28
2,781	3,376	4,805	6,706	9,360	9,682	8,614	7,477	8,923	[2] 10,034	9,187	11,055	13,459	14,469	16,734	29
									4,393	3,931	4,864	6,030	6,057	6,937	30
									3,473	3,210	3,827	4,699	5,421	6,393	31
									828	794	931	1,193	1,366	1,546	32
									1,340	1,252	1,433	1,567	1,625	1,858	33
1,907	2,334	3,347	4,724	6,817	7,089	6,090	4,704	5,942							34
453	547	780	1,066	1,360	1,393	1,304	1,412	1,491							35
421	495	678	916	1,183	1,200	1,220	1,361	1,490							36
1,167	1,505	2,435	3,712	4,319	4,356	4,069	4,142	5,941	[2] 5,499	4,781	5,379	7,262	8,045	8,605	37
673	808	1,224	1,805	2,479	2,834	2,544	2,352	2,859	[2] 2,949	2,678	3,177	4,048	4,698	5,519	38
324	555	1,518	4,899	10,146	10,545	6,797	1,846	1,674	1,771	1,726	1,753	2,982	4,283	5,072	39
864	1,098	1,538	1,713	1,001	1,096	945	1,939	2,438	2,687	2,785	3,532	3,965	4,083	5,093	40
8,729	**9,374**	**10,773**	**11,349**	**12,289**	**13,426**	**15,166**	**20,195**	**23,622**	**26,053**	**26,434**	**28,330**	**31,123**	**32,947**	**35,055**	41
3,141	3,358	3,935	4,182	4,366	4,755	5,307	6,901	8,248	9,159	9,131	9,869	11,077	11,753	12,603	42
5,588	6,016	6,838	7,167	7,923	8,671	9,859	13,294	15,374	16,894	17,303	18,461	20,046	21,194	22,452	43
2,522	**2,599**	**2,752**	**2,864**	**3,013**	**3,166**	**3,436**	**4,307**	**4,722**	**5,295**	**5,554**	**6,159**	**6,762**	**7,314**	**7,955**	44
600	622	654	710	765	829	903	1,086	1,227	1,350	1,432	1,545	1,739	1,914	2,102	45
180	170	158	131	154	167	228	286	237	246	240	312	338	336	346	46
232	245	271	270	251	243	247	314	361	413	457	498	576	656	725	47
797	820	870	910	942	968	1,033	1,296	1,481	1,676	1,823	2,003	2,191	2,416	2,676	48
232	231	245	266	284	298	324	430	467	535	566	643	700	747	809	49
481	511	554	577	617	661	701	895	949	1,075	1,036	1,158	1,218	1,245	1,297	50
3,644	**3,866**	**4,520**	**5,596**	**6,956**	**7,989**	**8,388**	**9,016**	**9,664**	**10,248**	**9,875**	**10,430**	**11,978**	**12,521**	**13,042**	51
2,240	2,373	2,803	3,532	4,264	4,713	4,758	5,144	5,446	5,777	5,387	5,596	6,425	6,465	6,442	52
455	441	472	609	785	880	958	1,125	1,195	1,174	1,166	1,148	1,211	1,249	1,276	53
327	301	300	353	433	477	511	571	605	553	561	548	568	575	585	54
128	140	172	256	352	403	447	554	590	621	605	600	643	674	691	55
465	524	643	771	883	965	1,053	1,255	1,459	1,670	1,758	2,083	2,399	2,659	3,006	56
224	240	274	314	487	760	902	701	636	665	599	589	712	774	855	57
36	45	57	80	118	135	160	246	286	309	325	349	423	520	583	58
44	46	51	58	69	82	87	93	111	132	130	124	143	160	164	59
180	197	220	232	350	454	470	452	531	521	510	541	665	694	716	60
1,576	**1,657**	**1,806**	**1,903**	**2,024**	**2,166**	**2,410**	**3,067**	**3,563**	**4,119**	**4,376**	**4,619**	**5,111**	**5,636**	**6,154**	61
695	720	807	890	1,006	1,083	1,227	1,615	1,816	2,096	2,188	2,239	2,465	2,730	2,985	62
55	62	71	76	87	105	122	147	173	206	227	258	302	335	371	63
798	845	897	904	898	942	1,021	1,259	1,522	1,760	1,902	2,060	2,277	2,496	2,716	64
28	30	31	33	33	36	40	46	52	57	59	62	67	75	82	65
4,840	**5,149**	**5,587**	**6,392**	**7,198**	**8,117**	**8,933**	**10,433**	**11,738**	**12,649**	**13,059**	**13,991**	**15,376**	**16,580**	**17,747**	66
376	402	430	459	541	631	695	849	912	955	960	980	1,044	1,109	1,160	67
638	712	799	925	1,078	1,182	1,311	1,632	1,750	1,819	1,822	1,880	1,997	2,093	2,184	68
1,132	1,221	1,240	1,480	1,600	1,890	2,145	2,123	2,350	2,384	2,415	2,671	2,846	2,871	3,065	69
28	28	46	91	133	102	59	69	92	110	125	139	133	126	118	70
433	443	491	507	554	652	753	961	1,104	1,258	1,284	1,403	1,599	1,806	2,011	71
97	94	125	148	214	243	245	308	358	369	357	367	466	531	553	72
353	353	386	425	477	531	573	702	718	681	684	681	705	721	711	73
230	246	270	281	291	337	384	523	565	610	609	622	648	683	731	74
478	513	558	641	744	845	932	1,134	1,410	1,610	1,753	1,960	2,303	2,600	2,903	75
142	144	151	150	149	159	169	184	209	230	248	266	297	328	362	76
75	80	123	214	199	197	221	275	334	408	410	437	610	790	869	77
337	348	362	389	433	465	494	578	727	890	977	1,034	1,068	1,127	1,174	78
521	565	606	682	785	883	952	1,095	1,209	1,325	1,415	1,521	1,660	1,795	1,906	79
8,523	**8,762**	**10,500**	**16,332**	**27,037**	**33,716**	**36,764**	**22,592**	**18,619**	**19,658**	**21,879**	**23,449**	**30,192**	**34,340**	**34,868**	80
3,414	3,489	5,027	10,645	20,899	27,250	29,786	14,545	9,343	8,872	9,926	10,649	16,164	18,708	18,132	81
															82
															83
															84
719	746	808	918	1,139	1,188	1,248	1,448	1,440	1,627	1,806	1,897	2,081	2,357	2,331	85
4,185	4,289	4,388	4,473	4,663	4,938	5,370	6,177	7,320	8,502	9,422	10,124	11,069	12,265	13,305	86
															87
															88
															89
205	238	277	296	336	340	360	422	516	657	725	779	878	1,010	1,100	90
2	**3**	**6**	**10**	**14**	**12**	**11**	**17**	**17**	**16**	**16**	**18**	**20**	**25**	**20**	91
39,583	**43,364**	**54,283**	**68,929**	**82,536**	**87,558**	**86,406**	**95,088**	**110,121**	**121,253**	**118,963**	**130,858**	**150,208**	**161,058**	**174,173**	92

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Table 15.—*Wages and Salaries, by Industry, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	50,423	46,187	39,119	30,477	28,997	33,705	36,690	41,920	46,107	42,976
2	**Agriculture, forestry, and fisheries**	1,401	1,285	1,006	742	683	744	855	946	1,039	1,077
3	Farms	1,287	1,176	903	659	609	672	770	864	988	977
4	Agricultural services, forestry, and fisheries	114	109	103	83	74	72	85	82	111	100
5	**Mining**	1,515	1,327	993	683	686	911	969	1,133	1,305	1,101
6	Metal mining	200	166	102	53	52	68	88	127	194	138
7	Anthracite mining	261	252	205	151	132	159	140	138	136	117
8	Bituminous and other soft-coal mining	609	506	380	259	279	388	424	504	550	437
9	Crude petroleum and natural gas	321	293	223	168	177	240	257	287	333	333
10	Nonmetallic mining and quarrying	124	110	83	52	46	56	60	77	92	76
11	**Contract construction**	2,484	2,085	1,477	823	611	759	889	1,300	1,383	1,259
12	**Manufacturing**	16,092	13,850	10,810	7,678	7,827	9,643	10,829	12,410	14,571	11,837
13	Food and kindred products	1,565	1,519	1,326	1,096	1,131	1,325	1,386	1,492	1,652	1,552
14	Tobacco manufactures	142	131	109	85	74	84	84	89	98	94
15	Textile-mill products	1,458	1,200	1,065	768	896	1,006	1,108	1,159	1,255	1,011
16	Apparel and other finished fabric products	1,051	913	781	558	569	690	780	840	864	806
17	Lumber and furniture products [1]	1,319	1,028	690	428	450	527	625	769	889	751
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	708	542	306	177	199	253	300	378	442	374
21	Furniture and finished lumber products	611	486	384	251	251	274	325	391	447	377
22	Paper and allied products	430	412	351	273	279	332	357	394	456	409
23	Printing, publishing, and allied industries	1,236	1,241	1,065	837	718	809	866	943	1,040	981
24	Chemicals and allied products [1]	664	621	529	413	421	495	525	572	672	621
25	Products of petroleum and coal [1]	236	238	190	157	149	174	192	202	242	244
26	Rubber products	281	222	167	131	141	176	182	209	235	185
27	Leather and leather products	491	418	363	291	304	351	367	375	407	359
28	Stone, clay, and glass products	618	526	384	238	227	285	329	400	483	404
29	Metals, metal products, and miscellaneous [1]	3,105	2,608	1,852	1,142	1,228	1,599	1,909	2,376	2,948	2,097
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	2,117	1,791	1,208	717	804	1,069	1,290	1,659	2,095	1,394
35	Nonferrous metals and their products	541	418	323	206	206	266	318	377	467	359
36	Miscellaneous manufacturing	447	399	321	219	218	264	301	340	386	344
37	Machinery, except electrical [1]	1,396	1,173	774	489	494	679	822	1,029	1,339	960
38	Electrical machinery [1]	859	713	485	286	302	409	461	569	745	539
39	Transportation equipment, except automobiles	262	254	167	117	93	133	145	205	276	224
40	Automobiles and automobile equipment	979	633	512	369	351	569	691	787	970	600
41	**Wholesale and retail trade**	9,319	8,711	7,584	5,911	5,290	6,119	6,631	7,234	8,175	8,009
42	Wholesale trade	3,379	3,204	2,742	2,138	1,883	2,180	2,366	2,560	2,888	2,878
43	Retail trade and automobile services	5,940	5,507	4,842	3,773	3,407	3,939	4,265	4,674	5,287	5,131
44	**Finance, insurance, and real estate**	2,918	2,742	2,467	2,092	1,896	1,988	2,058	2,236	2,406	2,323
45	Banking	758	716	649	565	485	502	507	522	547	555
46	Security and commodity brokers, dealers and exchanges	406	319	265	234	244	233	205	250	253	191
47	Finance, n. e. c.	242	234	212	186	170	176	190	215	233	208
48	Insurance carriers	812	819	768	639	572	597	635	671	728	731
49	Insurance agents and combination offices	237	229	208	185	164	178	188	203	217	220
50	Real estate	463	425	365	283	261	302	333	375	428	418
51	**Transportation**	4,719	4,237	3,531	2,656	2,455	2,660	2,884	3,237	3,549	3,179
52	Railroads	3,226	2,849	2,334	1,688	1,560	1,689	1,831	2,058	2,219	1,962
53	Local and highway passenger transportation	655	614	534	429	368	385	400	427	453	428
54	Local railways and buslines	482	452	401	328	283	296	306	323	338	313
55	Highway passenger transportation, n. e. c.	173	162	133	101	85	89	94	104	115	115
56	Highway freight transportation and warehousing	327	316	289	257	252	280	321	356	407	393
57	Water transportation	213	193	166	135	143	153	161	195	232	174
58	Air transportation (common carriers)	5	9	13	14	14	14	17	22	26	29
59	Pipeline transportation	48	42	38	29	29	34	36	40	47	45
60	Services allied to transportation	245	214	157	104	89	105	118	139	165	148
61	**Communications and public utilities**	1,520	1,543	1,408	1,191	1,059	1,139	1,193	1,294	1,438	1,443
62	Telephone, telegraph, and related services	740	739	659	550	477	507	518	558	625	632
63	Radio broadcasting and television	10	15	21	24	21	25	27	34	42	46
64	Utilities: electric and gas	739	758	699	592	539	583	623	675	745	740
65	Local utilities and public services, n. e. c.	31	31	29	25	22	24	25	27	26	25
66	**Services**	5,517	5,253	4,585	3,735	3,348	3,666	3,881	4,264	4,688	4,524
67	Hotels and other lodging places	425	407	341	256	217	270	287	313	351	353
68	Personal services	752	727	643	523	456	497	526	576	633	611
69	Private households	1,716	1,483	1,146	835	732	850	911	1,016	1,187	1,023
70	Commercial and trade schools and employment agencies	33	32	26	18	15	17	21	25	29	27
71	Business services, n. e. c.	357	369	309	260	243	294	324	385	401	395
72	Miscellaneous repair services and hand trades	107	104	96	82	72	75	80	83	88	90
73	Motion pictures	308	311	305	239	225	249	230	311	349	332
74	Amusement and recreation, except motion pictures	322	298	255	190	160	175	179	202	231	207
75	Medical and other health services	397	405	385	345	316	323	348	387	430	464
76	Legal services	124	131	132	126	118	116	121	126	133	135
77	Engineering and other professional services, n. e. c.	81	75	55	36	34	37	40	51	55	63
78	Educational services, n. e. c.	294	303	307	298	277	275	279	288	304	318
79	Nonprofit membership organizations, n. e. c.	601	608	585	527	483	488	485	501	497	506
80	**Government and government enterprises**	4,937	5,153	5,257	4,965	5,141	6,075	6,500	7,865	7,492	8,223
81	Federal—general government	824	859	865	821	1,115	1,645	1,704	3,496	2,921	3,404
82	Civilian, except work relief [3]	516	548	561	529	492	613	790	988	929	929
83	Military [4]	308	311	304	292	267	288	303	334	354	365
84	Work relief	0	0	0	0	356	764	611	2,174	1,638	2,110
85	Federal—government enterprises	569	572	570	532	473	528	598	641	646	663
86	State and local—general government	3,368	3,537	3,638	3,453	3,409	3,751	4,036	3,551	3,733	3,959
87	Public education	1,563	1,615	1,639	1,552	1,409	1,370	1,438	1,507	1,593	1,681
88	Nonschool, except work relief	1,805	1,918	1,953	1,809	1,659	1,701	1,807	1,970	2,092	2,270
89	Work relief	0	4	46	92	341	680	791	74	48	8
90	State and local—government enterprises	176	185	184	159	144	151	162	177	192	197
91	**Rest of the world** [5]	1	1	1	1	1	1	1	1	1	1
92	**Addendum: All private industries**	45,485	41,033	33,861	25,511	23,855	27,629	30,189	34,054	38,614	34,752

1. For certain manufacturing industries, the 1929–47 values shown are not comparable with those given for 1948 and subsequent years. The discontinuities stem from changes in the industrial classification basis on which the underlying social insurance payroll tabulations are prepared (see Introduction to Part III). Of the series principally involved here, five have been terminated in 1947; the others are indicated by footnotes.

2. See note 1. Estimates of 1948 wages and salaries approximately comparable to those shown for 1947 in the specified industries are as follows: Lumber and furniture products, $2,942 million; Chemicals and allied products, $2,450 million; Products of petroleum and coal,

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Table 15.—*Wages and Salaries, by Industry, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
45,941	**49,818**	**62,086**	**82,109**	**105,828**	**116,823**	**117,577**	**111,836**	**122,858**	**135,172**	**134,334**	**146,526**	**170,881**	**185,039**	**197,980**	1
1,090	**1,134**	**1,369**	**1,790**	**2,199**	**2,403**	**2,512**	**2,787**	**3,082**	**3,317**	**3,140**	**3,024**	**3,258**	**3,363**	**3,428**	2
988	1,031	1,254	1,642	2,039	2,213	2,308	2,553	2,819	3,029	2,855	2,724	2,920	2,996	3,052	3
102	103	115	148	160	190	204	234	263	288	285	300	338	367	376	4
1,137	**1,287**	**1,540**	**1,769**	**1,983**	**2,197**	**2,173**	**2,368**	**2,920**	**3,340**	**2,931**	**3,158**	**3,584**	**3,642**	**3,727**	5
156	190	232	270	308	263	227	232	297	336	323	346	418	468	522	6
124	118	135	156	178	202	196	237	250	277	223	233	237	224	183	7
456	542	678	823	918	1,052	1,020	1,065	1,378	1,529	1,166	1,291	1,425	1,255	1,209	8
315	336	363	355	407	515	569	623	742	914	929	969	1,131	1,292	1,379	9
86	101	132	165	172	165	161	211	253	284	290	319	373	403	434	10
1,546	**1,709**	**2,900**	**4,670**	**3,919**	**2,888**	**2,951**	**4,412**	**5,834**	**7,093**	**6,939**	**7,913**	**9,785**	**10,653**	**11,102**	11
13,585	**15,584**	**21,714**	**30,922**	**40,883**	**42,913**	**38,229**	**36,476**	**42,500**	**46,459**	**43,860**	**49,393**	**58,232**	**62,918**	**69,799**	12
1,612	1,694	1,918	2,285	2,639	2,946	3,105	3,578	4,083	4,359	4,414	4,654	5,119	5,373	5,701	13
98	104	115	119	146	158	171	185	195	202	211	219	252	267	279	14
1,167	1,206	1,603	1,923	2,055	2,046	2,113	2,700	3,103	3,530	3,151	3,569	3,686	3,569	3,595	15
926	938	1,209	1,436	1,711	1,876	1,984	2,448	2,625	2,869	2,759	2,952	3,076	3,202	3,403	16
849	937	1,225	1,435	1,580	1,642	1,647	2,111	2,668	[2] 2,848	2,585	3,100	3,445	3,519	3,589	17
									1,879	1,663	1,977	2,268	2,269	2,261	18
									969	922	1,123	1,177	1,250	1,328	19
412	467	625	763	846	874	848	1,048	1,346							20
437	470	600	672	734	768	799	1,063	1,322							21
444	490	622	703	816	879	932	1,138	1,347	1,502	1,464	1,684	1,919	1,999	2,214	22
991	1,002	1,076	1,094	1,186	1,307	1,466	1,912	2,263	2,523	2,657	2,816	3,010	3,228	3,492	23
667	808	1,098	1,662	2,026	2,060	2,072	1,949	2,255	[2] 2,352	2,332	2,551	3,048	3,300	3,675	24
250	295	355	441	522	600	641	697	823	[2] 985	985	1,027	1,162	1,243	1,327	25
226	247	336	400	555	645	637	749	833	813	749	868	1,012	1,102	1,197	26
386	382	507	583	622	650	702	876	939	973	933	1,000	1,012	1,093	1,132	27
466	514	673	772	836	839	857	1,128	1,344	1,530	1,465	1,678	1,988	1,977	2,160	28
2,622	3,182	4,554	6,384	8,939	9,233	8,208	7,164	8,564	[2] 9,640	8,757	10,298	12,493	13,411	15,497	29
									4,224	3,744	4,444	5,486	5,515	6,309	30
									3,341	3,065	3,617	4,407	5,082	5,991	31
									786	747	872	1,113	1,273	1,437	32
									1,289	1,201	1,365	1,487	1,541	1,760	33
1,739	2,187	3,156	4,475	6,488	6,740	5,784	4,502	5,706							34
432	523	748	1,028	1,311	1,340	1,250	1,353	1,431							35
401	472	650	881	1,140	1,153	1,174	1,309	1,427							36
1,111	1,436	2,331	3,585	4,162	4,180	3,900	3,987	4,821	[2] 5,291	4,579	5,114	6,854	7,578	8,103	37
637	768	1,165	1,731	2,367	2,673	2,390	2,215	2,672	[2] 2,759	2,488	2,945	3,721	4,303	5,042	38
310	531	1,458	4,713	9,753	10,121	6,490	1,762	1,611	1,693	1,650	1,670	2,840	4,072	4,837	39
823	1,050	1,469	1,656	968	1,058	914	1,877	2,354	2,590	2,681	3,248	3,595	3,682	4,556	40
8,386	**9,020**	**10,384**	**10,971**	**11,893**	**12,971**	**14,665**	**19,560**	**22,871**	**25,298**	**25,629**	**27,322**	**29,982**	**31,761**	**33,822**	41
3,015	3,228	3,793	4,042	4,232	4,604	5,138	6,691	7,999	8,907	8,870	9,534	10,675	11,330	12,157	42
5,371	5,792	6,591	6,929	7,661	8,367	9,527	12,869	14,872	16,391	16,759	17,788	19,307	20,431	21,665	43
2,379	**2,453**	**2,598**	**2,713**	**2,835**	**2,988**	**3,269**	**4,097**	**4,502**	**5,031**	**5,251**	**5,806**	**6,358**	**6,882**	**7,492**	44
567	581	611	660	700	758	826	991	1,124	1,237	1,304	1,403	1,567	1,733	1,899	45
174	165	152	126	150	163	222	277	231	238	232	300	325	323	331	46
206	222	246	247	224	219	236	302	348	389	425	475	541	619	686	47
756	781	831	875	903	933	1,006	1,261	1,445	1,627	1,766	1,923	2,112	2,327	2,587	48
224	223	237	259	275	289	314	418	453	518	546	616	674	718	780	49
452	481	521	546	583	626	665	848	901	1,022	978	1,089	1,139	1,162	1,209	50
3,429	**3,639**	**4,255**	**5,261**	**6,559**	**7,547**	**7,913**	**8,509**	**9,022**	**9,684**	**9,305**	**9,811**	**11,260**	**11,761**	**12,270**	51
2,091	2,211	2,609	3,291	3,966	4,386	4,414	4,778	4,962	5,382	5,000	5,202	5,977	6,000	5,985	52
433	421	451	585	757	848	919	1,081	1,150	1,130	1,117	1,096	1,149	1,183	1,209	53
313	289	289	341	421	464	495	554	587	538	544	530	547	552	564	54
120	132	162	244	336	384	424	527	563	592	573	566	602	631	645	55
441	498	613	738	848	926	1,013	1,211	1,412	1,617	1,698	2,001	2,303	2,555	2,896	56
218	234	267	292	471	743	885	683	611	637	574	556	669	730	807	57
34	43	55	77	113	130	150	232	271	293	306	323	391	479	535	58
43	45	50	57	68	79	81	88	105	123	121	116	131	145	147	59
169	187	210	221	336	435	451	436	511	502	489	517	640	669	691	60
1,469	**1,543**	**1,681**	**1,778**	**1,886**	**1,994**	**2,209**	**2,824**	**3,286**	**3,809**	**4,036**	**4,214**	**4,649**	**5,121**	**5,591**	61
643	660	735	813	920	989	1,123	1,479	1,661	1,924	2,000	2,023	2,227	2,474	2,712	62
52	59	67	72	82	100	116	143	167	199	219	249	295	328	363	63
747	795	849	861	852	871	932	1,157	1,407	1,631	1,759	1,882	2,063	2,247	2,439	64
27	29	30	32	32	34	38	45	51	55	58	60	64	72	77	65
4,721	**5,026**	**5,453**	**6,249**	**7,040**	**7,942**	**8,743**	**10,208**	**11,495**	**12,393**	**12,782**	**13,656**	**14 942**	**16,121**	**17,272**	66
361	387	414	443	523	611	672	822	887	928	932	946	1,004	1,067	1,120	67
617	689	772	897	1,046	1,148	1,275	1,589	1,707	1,775	1,775	1,822	1,932	2,031	2,122	68
1,129	1,218	1,237	1,477	1,598	1,887	2,142	2,120	2,348	2,382	2,412	2,668	2,833	2,858	3,051	69
26	26	44	87	126	95	54	63	90	107	120	133	130	123	116	70
415	425	474	489	534	628	723	927	1,061	1,213	1,231	1,338	1,524	1,722	1,918	71
93	90	121	142	206	235	236	296	345	356	343	351	446	508	532	72
339	339	371	410	459	509	552	679	694	655	658	653	673	689	678	73
221	238	261	271	282	326	372	509	551	594	593	603	628	664	711	74
474	509	554	636	738	839	926	1,125	1,397	1,597	1,737	1,972	2,271	2,564	2,864	75
139	142	148	147	148	157	167	181	205	226	244	260	291	322	355	76
73	78	119	207	193	191	215	269	325	397	401	427	589	761	844	77
327	336	349	379	423	456	484	564	712	874	959	1,010	1,032	1,089	1,134	78
507	549	589	664	764	860	925	1,064	1,173	1,289	1,377	1,473	1,589	1,723	1,827	79
8,197	**8,420**	**10,186**	**15,976**	**26,617**	**32,968**	**34,902**	**20,578**	**17,329**	**18,732**	**20,445**	**22,211**	**28,811**	**32,792**	**33,457**	80
3,295	3,358	4,939	10,536	20,744	26,779	28,223	12,858	8,420	8,392	9,008	10,031	15,461	17,977	17,548	81
1,032	1,216	1,860	3,788	6,561	6,746	6,404	5,040	4,353	4,422	4,760	5,032	6,777	7,512	7,341	82
388	563	1,866	6,168	14,133	20,033	21,819	7,818	4,067	3,970	4,248	4,999	8,684	10,465	10,207	83
1,875	1,579	1,213	580	50											84
682	708	766	875	1,095	1,141	1,194	1,391	1,384	1,563	1,734	1,812	2,001	2,271	2,278	85
4,018	4,119	4,207	4,273	4,446	4,712	5,129	5,912	7,015	8,127	8,987	9,600	10,483	11,552	12,550	86
1,717	1,772	1,826	1,883	1,973	2,104	2,303	2,584	3,084	3,599	3,983	4,292	4,740	5,251	5,748	87
2,291	2,337	2,375	2,388	2,473	2,608	2,826	3,328	3,931	4,528	5,004	5,308	5,743	6,301	6,802	88
10	10	6	2	0											89
202	235	274	292	332	336	356	417	510	650	716	768	866	992	1,081	90
2	**3**	**6**	**10**	**14**	**12**	**11**	**17**	**17**	**16**	**16**	**18**	**20**	**25**	**20**	91
37,742	**41,395**	**51,894**	**66,123**	**79,197**	**83,843**	**82,664**	**91,241**	**105,512**	**116,424**	**113,873**	**124,297**	**142,050**	**152,222**	**164,503**	92

$957 million; Metals, metal products, and miscellaneous, $9,343 million; Machinery, except electrical, $5,359 million; and Electrical machinery, $2,804 million.

3. Includes pay of United States citizens but not of foreigners employed abroad by the United States Government.

4. The pay of personnel stationed abroad is included, but that of personnel recruited from the territories is excluded.

5. Pay of permanent United States residents employed in the United States by foreign governments and international organizations.

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Table 16.—*Supplements to Wages and Salaries, by Industry Division, 1929–38* [1]

Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	**662**	**657**	**621**	**577**	**542**	**590**	**650**	**990**	**1,827**	**2,018**
2	Agriculture, forestry, and fisheries	5	5	5	5	4	4	4	4	6	6
3	Mining	24	22	18	15	14	16	16	29	63	69
4	Contract construction	56	57	52	40	28	29	31	50	80	89
5	Manufacturing	151	141	123	105	94	103	132	262	615	656
6	Wholesale and retail trade	55	55	50	45	41	40	52	107	267	331
7	Finance, insurance, and real estate	71	66	60	53	43	43	53	77	118	137
8	Transportation	94	95	91	80	82	106	77	120	213	201
9	Communications and public utilities	29	29	29	26	31	31	38	52	87	106
10	Services	21	24	24	23	20	22	23	46	98	122
11	Government and government enterprises	156	163	169	185	185	196	224	243	280	301
12	Addendum: All private industries	506	494	452	392	357	394	426	747	1,547	1,717

1. Data showing supplements to wages and salaries by type are presented in table 34. The "Rest of the world" is omitted from table 16 because supplements are estimated at less than $500,000 for all years.

Table 17.—*Income of Unincorporated Enterprises, by Industry Division, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total** [2]	**14,617**	**10,785**	**8,123**	**5,021**	**6,124**	**7,064**	**10,437**	**10,602**	**12,720**	**10,907**
2	Agriculture, forestry, and fisheries	6,033	4,194	3,212	1,979	2,476	2,489	5,087	4,002	5,684	4,304
3	Mining	54	28	−15	8	6	33	37	56	74	48
4	Contract construction	1,127	865	608	237	191	304	376	607	581	611
5	Manufacturing	565	292	120	18	201	240	299	404	367	268
6	Wholesale and retail trade	2,867	1,947	1,257	527	1,103	1,658	2,051	2,627	2,904	2,652
7	Finance, insurance, and real estate	762	450	294	223	313	250	305	356	357	316
8	Transportation	220	209	184	159	154	172	195	216	231	229
9	Communications and public utilities	9	9	7	3	1	3	3	4	7	7
10	Services	2,980	2,791	2,456	1,867	1,679	1,915	2,084	2,330	2,515	2,382

1. "Income of unincorporated enterprises" measures the net income of sole proprietorships and partnerships except that the series for trade includes estimated patronage refunds and stock dividends paid by farmers' cooperatives (shown separately in table 12). "Income of unincorporated enterprises" excludes the inventory valuation adjustment which is shown by industry division in table 23.

2. Exhibit 2, section 3, of Part III, provides a breakdown of the industry division totals for the years 1929, 1939, 1945, and 1949.

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Table 16.—*Supplements to Wages and Salaries, by Industry Division, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
2,167	2,311	2,703	3,162	3,759	4,463	5,604	5,861	5,899	5,755	6,524	7,799	9,539	10,384	11,081	1
7	7	6	7	7	9	11	14	15	16	17	19	30	30	29	2
67	73	81	86	89	88	88	102	150	203	196	282	326	324	347	3
104	112	174	255	201	149	156	209	274	316	318	398	502	520	535	4
736	813	1,061	1,326	1,775	2,047	1,953	1,702	2,037	2,145	2,264	3,142	4,141	4,610	5,253	5
343	354	389	378	396	455	501	635	751	755	805	1,008	1,141	1,186	1,233	6
143	146	154	151	178	178	167	210	220	264	303	353	404	432	463	7
215	227	265	335	397	442	475	507	642	564	570	619	718	760	772	8
107	114	125	125	138	172	201	243	277	310	340	405	462	515	563	9
119	123	134	143	158	175	190	225	243	256	277	335	434	459	475	10
326	342	314	356	420	748	1,862	2,014	1,290	926	1,434	1,238	1,381	1,548	1,411	11
1,841	1,969	2,389	2,806	3,339	3,715	3,742	3,847	4,609	4,829	5,090	6,561	8,158	8,836	9,670	12

Table 17.—*Income of Unincorporated Enterprises, by Industry Division, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
11,776	13,055	18,016	24,274	28,343	29,634	30,941	36,970	35,904	38,801	33,681	37,274	41,153	39,710	38,639	1
4,378	4,633	6,578	10,105	11,473	11,656	11,972	14,115	14,678	16,965	12,953	13,532	16,305	14,509	12,560	2
61	59	88	122	160	145	108	143	244	335	243	213	219	197	207	3
646	689	958	1,241	1,112	986	1,088	1,720	2,119	2,397	2,541	2,739	2,714	2,824	2,984	4
400	515	985	1,434	1,878	2,195	2,361	2,279	1,626	1,394	1,238	1,728	1,578	1,306	1,172	5
3,193	3,863	5,675	7,098	8,749	9,201	9,676	12,070	10,437	10,379	9,281	11,156	12,005	12,091	12,391	6
346	365	401	431	534	598	757	818	720	798	775	996	1,021	1,007	1,079	7
249	285	358	415	476	463	426	486	553	576	602	607	688	741	798	8
7	7	10	12	15	19	23	24	26	28	29	29	29	30	30	9
2,496	2,639	2,963	3,416	3,946	4,371	4,530	5,315	5,501	5,929	6,019	6,274	6,594	7,005	7,418	10

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Table 18.—*Corporate Income Before Federal and State Income and Excess Profits Taxes, by Industry, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total** [2]	9,628	3,322	−780	−3,017	151	1,716	3,145	5,740	6,235	3,300
2	**Agriculture, forestry, and fisheries**	6	−46	−73	−71	−32	−33	6	16	3	−12
3	Farms	2	−44	−68	−64	−29	−29	8	16	4	−10
4	Agricultural services, forestry, and fisheries	4	−2	−5	−7	−3	−4	−2	0	−1	−2
5	**Mining**	417	90	−135	−94	−22	162	161	287	436	205
6	Metal mining	251	40	−36	−51	15	52	78	134	239	114
7	Anthracite mining	11	14	8	−12	−7	0	−11	−4	−13	−18
8	Bituminous and other soft-coal mining	13	−12	−28	−34	−29	12	4	8	12	−17
9	Crude petroleum and natural gas	87	7	−86	12	2	90	74	117	161	109
10	Nonmetallic mining and quarrying	55	41	7	−9	−3	8	16	32	37	17
11	**Contract construction**	119	93	1	−87	−51	−27	0	28	42	27
12	**Manufacturing**	4,848	1,636	−305	−1,296	818	1,349	2,128	3,554	3,651	1,557
13	Food and kindred products	478	379	204	91	342	402	401	523	348	360
14	Tobacco manufactures	140	155	159	167	65	112	111	129	127	130
15	Textile-mill products	150	−203	−161	−177	157	33	76	190	103	−17
16	Apparel and other finished fabric products	41	−33	−60	−73	17	14	20	46	16	3
17	Lumber and furniture products [3]	125	−67	−161	−183	−44	−28	13	78	99	18
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	86	−29	−101	−106	−25	−20	6	42	67	7
21	Furniture and finished lumber products	39	−38	−60	−77	−19	−8	7	36	32	11
22	Paper and allied products	109	52	−6	−56	32	68	74	106	127	47
23	Printing, publishing, and allied industries	242	151	70	−15	39	74	113	149	132	79
24	Chemicals and allied products [3]	418	280	188	99	222	278	298	396	389	298
25	Products of petroleum and coal [3]	594	198	−146	−6	17	−38	23	162	278	77
26	Rubber products	16	−51	−20	−34	6	5	21	46	29	19
27	Leather and leather products	48	−19	−27	−35	39	25	45	40	22	8
28	Stone, clay and glass products	145	56	−25	−84	−6	37	67	150	146	65
29	Metals, metal products, and miscellaneous [3]	1,122	289	−276	−519	−57	184	369	640	780	109
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	804	226	−223	−382	−108	28	145	349	482	12
35	Nonferrous metals and their products	210	46	−19	−58	52	110	136	186	195	45
36	Miscellaneous manufacturing	108	17	−34	−79	−1	46	88	105	103	52
37	Machinery, except electrical [3]	494	178	−69	−209	−36	108	191	352	450	196
38	Electrical machinery [3]	203	88	15	−40	−15	−16	63	135	170	81
39	Transportation equipment, except automobiles	60	22	−31	−30	−22	−8	−7	23	62	20
40	Automobiles and automobile equipment	463	161	41	−192	62	99	250	389	373	64
41	**Wholesale and retail trade**	759	−14	−415	−724	84	409	533	922	821	398
42	Wholesale trade	312	−35	−175	−242	94	217	252	432	362	142
43	Retail trade and automobile services	447	21	−240	−482	−10	192	281	490	459	256
44	**Finance, insurance, and real estate**	1,157	195	−303	−655	−673	−578	−314	23	250	288
45	Banking	691	408	127	−6	−58	−3	145	242	336	289
46	Security and commodity brokers, dealers and exchanges	142	−140	−110	−60	−38	−8	−68	−46	−55	−48
47	Finance, n. e. c.	26	−167	−219	−236	−242	−292	−212	−158	−108	−103
48	Insurance carriers	194	88	45	22	64	107	122	130	160	181
49	Insurance agents and combination offices	29	21	19	18	13	16	15	16	17	16
50	Real estate	75	−15	−165	−393	−412	−398	−316	−161	−100	−47
51	**Transportation**	1,037	435	−96	−328	−241	−164	−91	96	59	−180
52	Railroads	809	298	−147	−328	−275	−256	−176	−33	−62	−255
53	Local and highway passenger transportation	55	47	6	−7	4	0	−24	7	−19	−49
54	Highway freight transportation and warehousing	35	20	11	−4	4	12	12	16	14	29
55	Water transportation	50	17	0	−15	4	16	29	38	47	17
56	Air transportation (common carriers)	−6	−19	−9	−2	−2	−6	−3	0	−2	−1
57	Pipeline transportation	86	68	41	30	24	68	69	66	80	72
58	Services allied to transportation	8	4	2	−2	0	2	2	2	1	7
59	**Communications and public utilities**	908	715	586	456	380	556	558	665	788	723
60	Telephone, telegraph, and related services	308	266	239	158	131	148	174	196	208	204
61	Radio broadcasting and television	20	−5	−4	−2	−6	7	11	18	20	15
62	Utilities: electric and gas	554	436	349	299	249	385	359	438	544	491
63	Local utilities and public services, n. e. c.	26	18	2	1	6	16	14	13	16	13
64	**Services**	145	81	−36	−184	−110	−18	5	45	63	47
65	Hotels and other lodging places	0	−18	−29	−44	−34	−30	−26	−22	−18	−27
66	Personal services	22	10	0	−18	−6	0	4	7	10	4
67	Business services, n. e. c.	48	38	12	−3	−1	18	18	26	29	28
68	Miscellaneous repair services and hand trades	4	3	0	−1	−1	1	1	2	2	1
69	Motion pictures	59	51	2	−83	−40	2	13	29	33	39
70	Amusement and recreation, except motion pictures	3	−8	−19	−29	−23	−9	−5	2	5	2
71	Engineering and other professional services, n. e. c.	9	5	−2	−6	−5	0	0	1	2	0
72	**Rest of the world**	232	137	−4	−34	−2	60	159	104	122	247

1. A complete reconciliation of the all-industry totals for these income series with Internal Revenue Service figures for "Compiled net profit" is presented in table 38. Depletion charges are not deducted in arriving at corporate income for national income purposes. This has an important bearing on the data for the mining industries.

2. Industries in which there are no corporations organized for profit, or in which corporate profits before tax are estimated at less than $500,000 in all years, are omitted from this table.

3. For certain manufacturing industries, the 1929–47 values shown are not comparable with those given for 1948 and subsequent years. The discontinuities stem from changes in the

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Table 18.—*Corporate Income Before Federal and State Income and Excess Profits Taxes, by Industry, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
6,403	**9,320**	**16,982**	**20,882**	**24,554**	**23,320**	**18,977**	**22,551**	**29,525**	**32,769**	**26,198**	**39,970**	**41,173**	**37,174**	**39,430**	1
3	**15**	**52**	**73**	**104**	**96**	**93**	**135**	**145**	**138**	**99**	**157**	**95**	**76**	**74**	2
4	18	50	71	102	94	89	131	143	135	99	157	94	----	----	3
−1	−3	2	2	2	2	4	4	2	3	0	0	1	----	----	4
296	**418**	**587**	**578**	**500**	**452**	**347**	**438**	**953**	**1,430**	**925**	**1,374**	**1,418**	**1,154**	**1,254**	5
177	233	266	293	176	128	99	92	234	309	167	341	383	----	----	6
−12	7	15	18	17	23	12	33	34	45	16	21	12	----	----	7
8	37	75	102	138	142	112	112	310	387	140	208	156	----	----	8
90	103	170	98	115	111	74	121	269	555	477	642	691	----	----	9
33	38	61	67	54	48	50	80	106	134	125	162	176	----	----	10
32	**70**	**185**	**306**	**234**	**120**	**89**	**211**	**377**	**566**	**514**	**541**	**533**	**485**	**550**	11
3,637	**5,508**	**10,820**	**12,410**	**14,231**	**13,234**	**9,933**	**11,402**	**16,529**	**18,102**	**14,140**	**23,280**	**24,512**	**20,402**	**21,798**	12
538	565	879	1,244	1,512	1,521	1,438	2,033	1,850	1,540	1,494	1,815	1,599	----	----	13
136	153	173	188	191	169	142	173	194	246	266	294	301	----	----	14
171	216	610	850	825	781	727	1,406	1,544	1,524	664	1,237	979	----	----	15
38	48	134	214	255	257	249	494	451	282	156	282	159	----	----	16
93	166	348	352	325	321	246	496	794	[4] 717	410	900	736	----	----	17
----	----	----	----	----	----	----	----	----	544	283	660	525	----	----	18
----	----	----	----	----	----	----	----	----	173	127	240	211	----	----	19
43	95	200	211	187	163	112	263	518	----	----	----	----	----	----	20
50	71	148	141	138	158	134	233	276	----	----	----	----	----	----	21
110	196	390	365	398	407	340	563	927	785	541	989	1,331	----	----	22
125	156	190	239	464	584	593	648	615	564	507	562	605	----	----	23
513	643	1,015	1,067	1,194	1,139	980	1,416	1,708	[4] 1,575	1,549	2,625	2,823	----	----	24
196	277	530	640	870	601	437	796	1,434	[4] 2,260	1,231	1,726	2,183	----	----	25
61	63	153	180	289	293	243	306	204	218	135	399	491	----	----	26
40	40	99	139	156	144	139	234	219	134	90	160	112	----	----	27
157	204	353	342	290	230	214	363	449	533	502	842	870	----	----	28
556	976	2,229	2,660	2,926	2,533	1,706	1,606	2,702	[4] 3,315	2,404	4,425	5,267	----	----	29
----	----	----	----	----	----	----	----	----	1,748	1,317	2,437	3,030	----	----	30
----	----	----	----	----	----	----	----	----	1,046	691	1,263	1,442	----	----	31
----	----	----	----	----	----	----	----	----	197	162	293	397	----	----	32
----	----	----	----	----	----	----	----	----	324	234	432	398	----	----	33
314	642	1,624	2,047	2,128	1,815	1,199	1,019	1,912	----	----	----	----	----	----	34
150	218	376	360	482	416	259	365	552	----	----	----	----	----	----	35
92	116	229	253	316	302	248	222	238	----	----	----	----	----	----	36
320	672	1,392	1,596	1,463	1,275	849	685	1,460	[4] 1,712	1,302	1,994	2,617	----	----	37
183	336	697	691	840	844	517	134	769	[4] 855	674	1,387	1,496	----	----	38
75	267	761	1,307	1,905	1,837	949	−39	−12	223	194	364	436	----	----	39
325	530	867	336	328	298	164	88	1,221	1,619	2,021	3,279	2,507	----	----	40
830	**1,124**	**2,162**	**2,607**	**3,128**	**3,279**	**3,420**	**5,550**	**6,082**	**5,768**	**3,833**	**6,276**	**5,446**	**5,199**	**5,156**	41
355	495	1,018	1,102	1,257	1,290	1,304	2,438	2,694	2,383	1,480	2,860	2,735	----	----	42
475	629	1,144	1,505	1,871	1,989	2,116	3,112	3,388	3,385	2,353	3,416	2,711	----	----	43
331	**490**	**676**	**878**	**1,151**	**1,393**	**1,490**	**1,630**	**1,593**	**2,224**	**2,574**	**2,662**	**2,800**	**3,170**	**3,572**	44
337	437	541	522	702	903	1,032	1,201	1,023	1,275	1,331	1,499	1,804	----	----	45
−41	−45	−39	−31	−22	−25	−34	−38	−47	−60	−50	−38	−52	----	----	46
−109	−40	−28	105	55	38	42	68	102	166	221	376	450	----	----	47
163	94	62	130	179	158	91	−50	7	273	533	350	106	----	----	48
17	25	34	29	24	26	23	38	55	65	55	66	72	----	----	49
−36	19	106	123	213	293	336	411	453	505	484	409	420	----	----	50
157	**335**	**907**	**2,096**	**2,895**	**2,360**	**1,330**	**526**	**1,156**	**1,649**	**1,101**	**1,996**	**1,961**	**1,989**	**1,849**	51
−14	82	517	1,597	2,300	1,798	890	107	724	1,173	648	1,308	1,138	----	----	52
−30	8	30	184	286	253	203	151	60	70	43	56	86	----	----	53
45	30	51	67	64	59	41	90	119	160	147	227	187	----	----	54
50	89	154	105	98	88	78	120	173	134	134	144	240	----	----	55
8	12	20	34	34	41	34	−24	−40	0	19	86	119	----	----	56
86	84	93	58	60	63	45	39	50	62	65	125	130	----	----	57
12	30	42	51	53	58	39	43	70	50	45	50	61	----	----	58
861	**1,021**	**1,173**	**1,372**	**1,530**	**1,533**	**1,472**	**1,507**	**1,353**	**1,486**	**1,674**	**2,189**	**2,635**	**3,015**	**3,417**	59
254	262	285	416	480	511	470	324	224	284	348	614	745	----	----	60
20	28	34	31	51	69	63	56	53	42	32	51	80	----	----	61
572	713	834	906	975	929	917	1,106	1,050	1,133	1,268	1,497	1,774	----	----	62
15	18	20	19	24	24	22	21	26	27	26	27	36	----	----	63
72	**105**	**189**	**337**	**543**	**560**	**575**	**727**	**648**	**570**	**506**	**495**	**558**	**563**	**613**	64
−19	−9	2	34	95	96	107	121	112	112	92	89	92	----	----	65
9	14	23	39	50	59	54	65	71	62	61	56	60	----	----	66
34	33	53	52	68	77	84	110	127	143	135	163	192	----	----	67
1	2	7	11	12	13	6	6	12	13	9	12	19	----	----	68
41	52	78	155	253	247	239	309	232	148	136	102	94	----	----	69
4	9	18	18	34	42	71	90	62	58	43	41	55	----	----	70
2	4	8	28	31	26	14	26	32	34	30	32	46	----	----	71
184	**234**	**231**	**225**	**238**	**293**	**228**	**425**	**689**	**836**	**832**	**1,000**	**1,215**	**1,121**	**1,147**	72

industrial classification basis on which the underlying corporate tax return data are reported. (See the Introduction to Part III.) Of the series principally involved here, 5 have been terminated in 1947; the others are indicated by footnotes.

4. See note 3. Estimates for 1948 income before tax approximately comparable to those shown for 1947 in the specified industries are as follows: Lumber and furniture products, $743 million; Chemicals and allied products, $1,628 million; Products of petroleum and coal, $2,272 million; Metals, metal products, and miscellaneous, $3,137 million; Machinery, except electrical, $1,730 million; and Electrical machinery, $875 million.

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Table 19.—*Federal and State Corporate Income and Excess Profits Tax Liability, by Industry, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total** [1]	**1,369**	**842**	**498**	**385**	**521**	**744**	**951**	**1,409**	**1,502**	**1,029**
2	**Agriculture, forestry, and fisheries**	**6**	**3**	**1**	**1**	**2**	**4**	**6**	**9**	**8**	**5**
3	Farms	5	3	1	1	2	4	6	9	7	5
4	Agricultural services, forestry, and fisheries	1	0	0	0	0	0	0	0	1	0
5	**Mining**	**47**	**20**	**6**	**8**	**10**	**23**	**23**	**40**	**62**	**35**
6	Metal mining	23	3	1	1	3	7	9	17	36	17
7	Anthracite mining	2	2	1	0	1	1	0	1	0	0
8	Bituminous and other soft-coal mining	5	3	1	1	1	4	4	4	4	2
9	Crude petroleum and natural gas	10	7	0	4	3	8	7	13	16	12
10	Nonmetallic mining and quarrying	7	5	3	2	2	3	3	5	6	4
11	**Contract construction**	**19**	**18**	**9**	**4**	**4**	**5**	**9**	**13**	**16**	**13**
12	**Manufacturing**	**618**	**373**	**206**	**132**	**255**	**329**	**484**	**720**	**768**	**447**
13	Food and kindred products	61	60	48	32	62	71	121	105	82	86
14	Tobacco manufactures	17	21	22	26	12	17	18	22	22	25
15	Textile-mill products	31	10	7	5	31	20	25	44	33	16
16	Apparel and other finished fabric products	8	3	2	2	6	6	6	10	6	6
17	Lumber and furniture products [2]	17	5	2	1	4	5	7	17	18	11
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	9	3	0	0	1	2	3	7	10	4
21	Furniture and finished lumber products	8	2	2	1	3	3	4	10	8	7
22	Paper and allied products	16	10	6	3	9	15	17	24	28	14
23	Printing, publishing, and allied industries	33	24	17	11	13	21	25	34	33	24
24	Chemicals and allied products [2]	53	42	31	24	38	48	53	77	76	63
25	Products of petroleum and coal [2]	54	28	3	5	8	4	6	22	36	16
26	Rubber products	7	2	2	0	2	2	5	10	6	5
27	Leather and leather products	10	5	4	3	8	7	9	9	6	5
28	Stone, clay, and glass products	20	13	6	2	6	11	16	30	31	17
29	Metals, metal products, and miscellaneous [2]	141	63	19	12	24	49	76	133	168	54
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	97	40	5	3	7	18	35	73	103	28
35	Nonferrous metals and their products	25	11	6	5	10	19	23	36	42	12
36	Miscellaneous manufacturing	19	12	8	4	7	12	18	24	23	14
37	Machinery, except electrical [2]	63	36	13	5	10	26	38	73	101	45
38	Electrical machinery [2]	29	16	3	1	2	4	12	27	34	18
39	Transportation equipment, except automobiles	9	6	1	1	1	2	2	7	14	10
40	Automobiles and automobile equipment	49	29	20	−1	19	21	48	76	74	32
41	**Wholesale and retail trade**	**124**	**77**	**58**	**41**	**78**	**120**	**137**	**208**	**201**	**138**
42	Wholesale trade	52	29	17	15	34	60	64	98	88	52
43	Retail trade and automobile services	72	48	41	26	44	60	73	110	113	86
44	**Finance, insurance, and real estate**	**282**	**151**	**82**	**68**	**57**	**97**	**125**	**196**	**192**	**154**
45	Banking	66	34	11	5	3	5	8	19	14	15
46	Security and commodity brokers, dealers and exchanges	41	9	2	2	4	3	7	11	2	2
47	Finance, n. e. c.	70	27	10	9	12	31	47	97	100	66
48	Insurance carriers	38	28	22	21	12	21	23	22	24	30
49	Insurance agents and combination offices	5	4	3	3	2	3	3	3	3	4
50	Real estate	62	49	34	28	24	34	37	44	49	37
51	**Transportation**	**135**	**73**	**34**	**27**	**27**	**49**	**52**	**72**	**76**	**59**
52	Railroads	105	52	18	13	12	20	21	35	36	22
53	Local and highway passenger transportation	6	5	4	4	4	6	6	8	6	6
54	Highway freight transportation and warehousing	4	3	2	2	2	3	3	3	3	5
55	Water transportation	7	5	3	2	3	7	8	10	13	7
56	Air transportation (common carriers)	0	0	0	1	1	0	0	0	1	1
57	Pipeline transportation	9	6	5	3	3	10	11	13	14	13
58	Services allied to transportation	4	2	2	2	2	3	3	3	3	5
59	**Communications and public utilities**	**110**	**103**	**91**	**95**	**79**	**101**	**98**	**124**	**148**	**149**
60	Telephone, telegraph, and related services	37	35	32	29	22	26	28	37	40	45
61	Radio broadcasting and television	2	0	1	1	0	1	2	3	4	3
62	Utilities: electric and gas	68	65	56	63	55	71	65	81	101	98
63	Local utilities and public services, n. e. c.	3	3	2	2	2	3	3	3	3	3
64	**Services**	**28**	**24**	**11**	**9**	**9**	**16**	**17**	**27**	**31**	**29**
65	Hotels and other lodging places	2	1	1	1	0	1	1	1	2	2
66	Personal services	2	2	1	1	1	1	1	2	2	3
67	Business services, n. e. c.	9	7	3	3	3	6	6	8	9	8
68	Miscellaneous repair services and hand trades	1	1	0	0	0	0	0	1	1	0
69	Motion pictures	10	9	4	3	3	4	5	10	10	11
70	Amusement and recreation, except motion pictures	2	2	1	0	1	2	2	3	4	3
71	Engineering and other professional services, n. e. c.	2	2	1	1	1	2	2	2	3	2

1. See table 18, footnote 2.
2. Estimates for 1948–53 not strictly comparable with earlier years. See table 18, footnote 3.

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Table 19.—*Federal and State Corporate Income and Excess Profits Tax Liability, by Industry, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
1,441	2,834	7,610	11,415	14,074	12,949	10,689	9,111	11,283	12,510	10,411	17,829	22,476	19,965	21 144	1
7	10	23	39	62	56	61	62	67	69	59	89	84	74	72	2
6	9	22	37	59	54	58	59	64	66	57	84	80	----	----	3
1	1	1	2	3	2	3	3	3	3	2	5	4	----	----	4
43	74	150	199	159	128	108	117	269	399	252	413	498	356	405	5
23	42	75	106	55	34	25	23	67	86	46	103	139	----	----	6
0	1	2	4	4	6	4	9	10	14	5	3	5	----	----	7
3	8	21	36	51	49	38	31	93	120	46	74	58	----	----	8
12	14	30	21	26	18	19	28	65	134	113	170	225	----	----	9
5	9	22	32	23	21	22	26	34	45	42	63	71	----	----	10
14	26	88	192	155	74	59	86	141	221	212	254	304	275	327	11
741	1,727	5,244	7,301	8,667	7,776	5,903	4,744	6,474	7,066	5,729	10,905	14,252	11,499	12,204	12
112	147	329	647	888	901	841	819	756	660	630	838	899	----	----	13
26	40	69	93	100	86	65	69	79	98	105	139	175	----	----	14
40	64	266	526	528	493	456	576	615	611	294	566	553	----	----	15
10	14	54	122	153	152	141	192	173	126	86	132	108	----	----	16
19	43	140	186	179	169	128	195	302	[2] 280	171	396	369	----	----	17
----	----	----	----	----	----	----	----	----	207	113	282	244	----	----	18
----	----	----	----	----	----	----	----	----	73	58	114	125	----	----	19
7	22	77	108	100	80	54	102	192	----	----	----	----	----	----	20
12	21	63	78	79	89	74	93	110	----	----	----	----	----	----	21
24	59	183	210	242	247	203	226	365	313	226	468	813	----	----	22
29	46	76	124	268	352	369	255	246	228	208	259	334	----	----	23
102	204	498	603	702	683	584	571	684	[2] 637	637	1,302	1,746	----	----	24
20	50	141	214	293	130	91	203	390	[2] 622	293	514	854	----	----	25
12	16	69	84	201	200	167	127	85	91	58	195	314	----	----	26
9	12	35	78	93	82	80	94	88	60	44	72	74	----	----	27
31	63	170	209	181	138	122	142	178	213	201	408	504	----	----	28
117	318	1,158	1,680	1,838	1,505	1,032	677	1,052	[1] 1,325	1,012	2,133	3,114	----	----	29
----	----	----	----	----	----	----	----	----	676	527	1,178	1,802	----	----	30
----	----	----	----	----	----	----	----	----	423	301	604	836	----	----	31
----	----	----	----	----	----	----	----	----	83	71	144	248	----	----	32
----	----	----	----	----	----	----	----	----	143	113	207	228	----	----	33
68	204	851	1,302	1,351	1,103	750	429	741	----	----	----	----	----	----	34
29	76	199	222	284	236	138	142	205	----	----	----	----	----	----	35
20	38	108	156	203	166	144	106	106	----	----	----	----	----	----	36
66	235	744	1,038	972	808	543	342	600	[2] 695	556	948	1,604	----	----	37
36	116	392	450	560	526	353	118	323	[2] 356	286	692	954	----	----	38
20	104	452	833	1,274	1,135	607	64	64	100	89	169	263	----	----	39
68	196	468	204	195	169	121	74	474	651	833	1,674	1,574	----	----	40
195	329	926	1,446	1,812	1,888	1,960	2,121	2,302	2,244	1,592	2,698	2,882	2,725	2,679	41
81	142	451	623	745	733	733	949	1,039	946	639	1,251	1,475	----	----	42
114	187	475	823	1,067	1,155	1,227	1,172	1,263	1,298	953	1,447	1,407	----	----	43
149	212	336	401	445	509	674	743	715	988	1,178	1,391	1,702	2,009	2,283	44
17	25	57	64	128	220	321	346	316	455	526	641	857	----	----	45
2	4	3	2	9	7	18	13	6	5	8	12	10	----	----	46
62	101	159	118	74	73	88	106	111	141	151	242	315	----	----	47
26	22	27	104	119	80	67	45	34	101	209	154	116	----	----	48
4	7	12	15	12	12	11	13	19	30	25	34	42	----	----	49
38	53	78	98	103	117	169	220	229	256	259	308	362	----	----	50
89	151	330	988	1,685	1,415	812	347	526	686	478	896	1,057	1,063	964	51
39	63	149	705	1,348	1,106	560	151	313	471	276	568	609	----	----	52
7	10	22	104	171	159	127	69	47	37	28	33	48	----	----	53
7	9	19	35	35	31	25	34	44	62	60	98	99	----	----	54
12	33	80	72	58	50	43	52	74	65	61	75	130	----	----	55
2	4	9	16	16	8	13	6	1	4	10	41	67	----	----	56
16	23	33	26	27	29	20	16	19	26	24	57	72	----	----	57
6	9	18	30	30	32	24	19	28	21	19	24	32	----	----	58
172	261	432	669	781	800	790	594	531	589	681	945	1,367	1,613	1,821	59
54	68	110	231	274	303	290	141	93	127	160	275	402	----	----	60
4	8	15	17	31	44	40	24	22	18	15	24	45	----	----	61
111	180	300	413	465	442	450	420	406	433	495	635	901	----	----	62
3	5	7	8	11	11	10	9	10	11	11	11	19	----	----	63
31	44	81	180	308	303	322	297	258	248	230	238	330	351	389	64
3	4	8	22	48	48	55	49	45	47	40	42	52	----	----	65
3	5	9	18	24	26	24	23	26	23	24	24	31	----	----	66
8	12	19	26	34	39	45	44	49	58	58	75	108	----	----	67
1	1	3	6	8	8	3	2	4	5	5	6	10	----	----	68
11	14	26	77	149	138	139	128	91	73	63	51	62	----	----	69
3	5	10	12	23	28	44	38	27	27	25	24	37	----	----	70
2	3	6	19	22	16	12	13	16	15	15	16	30	----	----	71

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Table 20.—*Corporate Income After Federal and State Income and Excess Profits Taxes, by Industry, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total** [2]	8,259	2,480	−1,278	−3,402	−370	972	2,194	4,331	4,733	2,271
2	**Agriculture, forestry, and fisheries**	0	−49	−74	−72	−34	−37	0	7	−5	−17
3	Farms	−3	−47	−69	−65	−31	−33	2	7	−3	−15
4	Agricultural services, forestry, and fisheries	3	−2	−5	−7	−3	−4	−2	0	−2	−2
5	**Mining**	370	70	−141	−102	−32	139	138	247	374	170
6	Metal mining	228	37	−37	−52	12	45	69	117	203	97
7	Anthracite mining	9	12	7	−12	−8	−1	−11	−5	−13	−18
8	Bituminous and other soft-coal mining	8	−15	−29	−35	−30	8	0	4	8	−19
9	Crude petroleum and natural gas	77	0	−86	8	−1	82	67	104	145	97
10	Nonmetallic mining and quarrying	48	36	4	−11	−5	5	13	27	31	13
11	**Contract construction**	100	75	−8	−91	−55	−32	−9	15	26	14
12	**Manufacturing**	4,230	1,263	−511	−1,428	563	1,020	1,644	2,834	2,883	1,110
13	Food and kindred products	417	319	156	61	280	331	280	418	266	274
14	Tobacco manufactures	123	134	137	141	53	95	93	107	105	105
15	Textile-mill products	119	−213	−168	−182	126	13	51	146	70	−33
16	Apparel and other finished fabric products	33	−36	−62	−75	11	8	14	36	10	−3
17	Lumber and furniture products [3]	108	−72	−163	−184	−48	−33	6	61	81	7
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	77	−32	−101	−106	−26	−22	3	35	57	3
21	Furniture and finished lumber products	31	−40	−62	−78	−22	−11	3	26	24	4
22	Paper and allied products	93	42	−12	−59	23	53	57	82	99	33
23	Printing, publishing and allied industries	209	127	53	−26	26	53	88	115	99	55
24	Chemicals and allied products [3]	365	238	157	75	184	230	245	319	313	235
25	Products of petroleum and coal [3]	540	170	−149	−11	9	−42	17	140	242	61
26	Rubber products	9	−53	−22	−34	4	3	16	36	23	14
27	Leather and leather products	38	−24	−31	−38	31	18	36	31	16	3
28	Stone, clay, and glass products	125	43	−31	−86	−12	26	51	120	115	48
29	Metals, metal products, and miscellaneous [3]	981	226	−295	−531	−81	135	293	507	612	55
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	707	186	−228	−385	−115	10	110	276	379	−16
35	Nonferrous metals and their products	185	35	−25	−63	42	91	113	150	153	33
36	Miscellaneous manufacturing	89	5	−42	−83	−8	34	70	81	80	38
37	Machinery, except electrical [3]	431	142	−82	−214	−46	82	153	279	349	151
38	Electrical machinery [3]	174	72	12	−41	−17	−20	51	108	136	63
39	Transportation equipment, except automobiles	51	16	−32	−31	−23	−10	−9	16	48	10
40	Automobiles and automobile equipment	414	132	21	−193	43	78	202	313	299	32
41	**Wholesale and retail trade**	635	−91	−473	−765	6	289	396	714	620	260
42	Wholesale trade	260	−64	−192	−257	60	157	188	334	274	90
43	Retail trade and automobile services	375	−27	−281	−508	−54	132	208	380	346	170
44	**Finance, insurance, and real estate**	875	44	−385	−723	−730	−675	−439	−173	58	134
45	Banking	625	374	116	−11	−61	−8	137	223	322	274
46	Security and commodity brokers, dealers and exchanges	101	−149	−112	−62	−42	−11	−75	−57	−57	−50
47	Finance, n. e. c.	−44	−194	−229	−245	−254	−323	−259	−255	−208	−169
48	Insurance carriers	156	60	23	1	52	86	99	108	136	151
49	Insurance agents and combination offices	24	17	16	15	11	13	12	13	14	12
50	Real estate	13	−64	−199	−421	−436	−432	−353	−205	−149	−84
51	**Transportation**	902	362	−130	−355	−268	−213	−143	24	−17	−239
52	Railroads	704	246	−165	−341	−287	−276	−197	−68	−98	−277
53	Local and highway passenger transportation	49	42	2	−11	0	−6	−30	−1	−25	−55
54	Highway freight transportation and warehousing	31	17	9	−6	2	9	9	13	11	24
55	Water transportation	43	12	−3	−17	1	9	21	28	34	10
56	Air transportation (common carriers)	−6	−19	−9	−3	−3	−6	−3	0	−3	−2
57	Pipeline transportation	77	62	36	27	21	58	58	53	66	59
58	Services allied to transportation	4	2	0	−4	−2	−1	−1	−1	−2	2
59	**Communications and public utilities**	798	612	495	361	301	455	460	541	640	574
60	Telephone, telegraph, and related services	271	231	207	129	109	122	146	159	168	159
61	Radio broadcasting and television	18	−5	−5	−3	−6	6	9	15	16	12
62	Utilities: electric and gas	486	371	293	236	194	314	294	357	443	393
63	Local utilities and public services, n. e. c.	23	15	0	−1	4	13	11	10	13	10
64	**Services**	117	57	−47	−193	−119	−34	−12	18	32	18
65	Hotels and other lodging places	−2	−19	−30	−45	−34	−31	−27	−23	−20	−29
66	Personal services	20	8	−1	−19	−7	−1	3	5	8	1
67	Business services, n. e. c.	39	31	9	−6	−4	12	12	18	20	2(
68	Miscellaneous repair services and hand trades	3	2	0	−1	−1	1	1	1	1	1
69	Motion pictures	49	42	−2	−86	−43	−2	8	19	23	28
70	Amusement and recreation, except motion pictures	1	−10	−20	−29	−24	−11	−7	−1	1	−1
71	Engineering and other professional services, n. e. c.	7	3	−3	−7	−6	−2	−2	−1	−1	−2
72	**Rest of the world**	232	137	−4	−34	−2	60	159	104	122	247

1. See table 18, footnote 1. 2. See table 18, footnote 2. 3. Estimates for 1948–53 not strictly comparable with earlier years. See table 18, footnote 3.

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Table 20.—*Corporate Income After Federal and State Income and Excess Profits Taxes, by Industry, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
4,962	6,486	9,372	9,467	10,480	10,371	8,288	13,440	18,242	20,259	15,787	22,141	18,697	17,209	18,286	1
−4	5	29	34	42	40	32	73	78	69	40	68	11	2	2	2
−2	9	28	34	43	40	31	72	79	69	42	73	14	----	----	3
−2	−4	1	0	−1	0	1	1	−1	0	−2	−5	−3	----	----	4
253	344	437	379	341	324	239	321	684	1,031	673	861	920	798	849	5
154	191	191	187	121	94	74	69	167	223	121	238	244	----	----	6
−12	6	13	14	13	17	8	24	24	31	11	18	7	----	----	7
5	29	54	66	87	93	74	81	217	267	94	134	98	----	----	8
78	89	140	77	89	93	55	93	204	421	364	472	466	----	----	9
28	29	39	35	31	27	28	54	72	89	83	99	105	----	----	10
18	44	97	114	79	46	30	125	236	345	302	287	229	210	223	11
2,896	3,781	5,576	5,109	5,564	5,458	4,030	6,658	10,055	11,036	8,411	12,375	10,260	8,903	9,594	12
426	418	550	597	624	620	597	1,214	1,094	880	864	977	700	----	----	13
110	113	104	95	91	83	77	104	115	148	161	155	126	----	----	14
131	152	344	324	297	288	271	830	929	913	370	671	426	----	----	15
28	34	80	92	102	105	108	302	278	156	70	150	51	----	----	16
74	123	208	166	146	152	118	301	492	[3] 457	239	504	367	----	----	17
----	----	----	----	----	----	----	----	----	337	170	378	281	----	----	18
----	----	----	----	----	----	----	----	----	100	69	126	86	----	----	19
36	73	123	103	87	83	58	161	326	----	----	----	----	----	----	20
38	50	85	63	59	69	60	140	166	----	----	----	----	----	----	21
86	137	207	155	156	160	137	337	562	472	315	521	518	----	----	22
96	110	114	115	196	232	224	393	369	336	299	303	271	----	----	23
411	439	517	464	492	456	396	845	1,024	[3] 938	912	1,523	1,077	----	----	24
176	227	389	426	577	471	346	593	1,044	[3] 1,638	938	1,212	1,329	----	----	25
49	47	84	96	88	93	76	179	119	127	77	204	177	----	----	26
31	28	64	61	63	62	59	140	131	74	46	88	38	----	----	27
126	141	183	133	109	92	92	221	271	320	301	434	366	----	----	28
439	658	1,071	980	1,088	1,028	674	929	1,650	[3] 1,990	1,392	2,292	2,153	----	----	29
----	----	----	----	----	----	----	----	----	1,072	790	1,259	1,228	----	----	30
----	----	----	----	----	----	----	----	----	623	390	659	606	----	----	31
----	----	----	----	----	----	----	----	----	114	91	149	149	----	----	32
----	----	----	----	----	----	----	----	----	181	121	225	170	----	----	33
246	438	773	745	777	712	449	590	1,171	----	----	----	----	----	----	34
121	142	177	138	198	180	121	223	347	----	----	----	----	----	----	35
72	78	121	97	113	136	104	116	132	----	----	----	----	----	----	36
254	437	648	558	491	467	306	343	860	[3] 1,017	746	1,046	1,013	----	----	37
147	220	305	241	280	318	164	16	446	[3] 499	388	695	542	----	----	38
55	163	309	474	631	702	342	−103	−76	123	105	195	173	----	----	39
257	334	399	132	133	129	43	14	747	968	1,188	1,605	933	----	----	40
635	795	1,236	1,161	1,316	1,391	1,460	3,429	3,780	3,524	2,241	3,578	2,564	2,474	2,477	41
274	353	567	479	512	557	571	1,489	1,655	1,437	841	1,609	1,260	----	----	42
361	442	669	682	804	834	889	1,940	2,125	2,087	1,400	1,969	1,304	----	----	43
182	278	340	477	706	884	816	887	878	1,236	1,396	1,271	1,098	1,161	1,289	44
320	412	484	458	574	683	711	855	707	820	805	858	947	----	----	45
−43	−49	−42	−33	−31	−32	−52	−51	−53	−65	−58	−50	−62	----	----	46
−171	−141	−187	−13	−19	−35	−46	−38	−9	25	70	134	135	----	----	47
137	72	35	26	60	78	24	−95	−27	172	324	196	−10	----	----	48
13	18	22	14	12	14	12	25	36	35	30	32	30	----	----	49
−74	−34	28	25	110	176	167	191	224	249	225	101	58	----	----	50
68	184	577	1,108	1,210	945	518	179	630	963	623	1,100	904	926	885	51
−53	19	368	892	952	692	330	−44	411	702	372	740	529	----	----	52
−37	−2	8	80	115	94	76	82	13	33	15	23	38	----	----	53
38	21	32	32	29	28	16	56	75	98	87	129	88	----	----	54
38	56	74	33	40	38	35	68	99	69	73	69	110	----	----	55
6	8	11	18	18	33	21	−30	−41	−4	9	45	52	----	----	56
70	61	60	32	33	34	25	23	31	36	41	68	58	----	----	57
6	21	24	21	23	26	15	24	42	29	26	26	29	----	----	58
685	700	741	703	749	733	682	913	822	897	993	1,244	1,268	1,402	1,596	59
200	194	175	185	206	208	180	183	131	157	188	339	343	----	----	60
16	20	19	14	20	25	23	32	31	24	17	27	35	----	----	61
461	533	534	493	510	487	467	686	644	700	773	862	873	----	----	62
12	13	15	11	13	13	12	12	16	16	15	16	17	----	----	63
41	61	108	157	235	257	253	430	390	322	276	257	228	212	224	64
−22	−13	−6	12	47	48	52	72	67	65	52	47	40	----	----	65
6	9	14	21	26	33	30	42	45	39	37	32	29	----	----	66
26	21	34	26	34	38	39	66	78	85	77	88	84	----	----	67
0	1	4	5	4	5	3	4	8	8	4	6	9	----	----	68
30	38	52	78	104	109	100	181	141	75	73	51	32	----	----	69
1	4	8	6	11	14	27	52	35	31	18	17	18	----	----	70
0	1	2	9	9	10	2	13	16	19	15	16	16	----	----	71
184	234	231	225	238	293	228	425	689	836	832	1,000	1,215	1,121	1,147	72

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Table 21.—*Net Corporate Dividend Payments, by Industry, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total** [1]	5,813	5,490	4,088	2,565	2,056	2,587	2,863	4,548	4,685	3,187
2	**Agriculture, forestry, and fisheries**	14	8	15	7	0	17	19	36	29	11
3	Farms	9	4	13	6	−1	16	17	34	27	10
4	Agricultural services, forestry, and fisheries	5	4	2	1	1	1	2	2	2	1
5	**Mining**	338	230	120	72	65	174	148	192	257	167
6	Metal mining	194	92	38	11	13	31	41	79	128	65
7	Anthracite mining	16	13	9	6	1	3	3	3	1	1
8	Bituminous and other soft-coal mining	27	24	16	7	4	28	11	16	12	7
9	Crude petroleum and natural gas	69	79	37	36	38	98	73	70	91	79
10	Nonmetallic mining and quarrying	32	22	20	12	9	14	20	24	25	15
11	**Contract construction**	60	67	40	19	19	15	21	36	42	21
12	**Manufacturing**	2,647	2,539	1,862	1,102	991	1,186	1,516	2,332	2,358	1,211
13	Food and kindred products	305	328	263	198	190	242	247	337	296	254
14	Tobacco manufactures	83	95	99	92	86	90	80	99	99	91
15	Textile-mill products	142	103	79	46	50	81	77	121	120	44
16	Apparel and other finished fabric products	36	26	18	9	8	11	15	27	22	14
17	Lumber and furniture products [2]	101	68	33	16	14	32	34	57	63	34
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	69	46	20	8	9	24	23	35	40	15
21	Furniture and finished lumber products	32	22	13	8	5	8	11	22	23	19
22	Paper and allied products	56	51	36	20	27	39	46	61	75	39
23	Printing, publishing, and allied industries	132	127	95	59	35	66	72	104	93	63
24	Chemicals and allied products [2]	217	269	196	169	174	156	264	249	257	172
25	Products of petroleum and coal [2]	254	320	258	109	119	7	38	192	147	67
26	Rubber products	29	26	20	13	6	−1	7	31	27	12
27	Leather and leather products	37	38	28	20	19	21	22	28	28	19
28	Stone, clay, and glass products	83	73	53	27	22	39	50	95	101	45
29	Metals, metal products, and miscellaneous [2]	541	476	289	152	103	200	345	389	448	144
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	360	331	181	82	37	101	225	201	260	84
35	Nonferrous metals and their products	106	79	58	42	40	67	60	124	122	29
36	Miscellaneous manufacturing	75	66	50	28	26	32	60	64	66	31
37	Machinery, except electrical [2]	256	214	137	70	47	81	105	182	220	140
38	Electrical machinery [2]	90	81	65	22	24	22	12	82	111	59
39	Transportation equipment, except automobiles	40	39	25	10	3	26	25	23	38	12
40	Automobiles and automobile equipment	245	205	168	70	64	74	77	255	213	2
41	**Wholesale and retail trade**	537	474	376	210	173	328	419	646	607	347
42	Wholesale trade	193	177	134	71	61	160	194	270	200	111
43	Retail trade and automobile services	344	297	242	139	112	168	225	376	347	236
44	**Finance, insurance, and real estate**	835	625	510	310	145	−26	−318	307	323	307
45	Banking	410	389	334	246	134	166	170	168	173	181
46	Security and commodity brokers, dealers and exchanges	5	6	5	5	4	5	6	21	1	7
47	Finance, n. e. c.	0	−81	−91	−90	−94	−351	−689	−81	−74	−59
48	Insurance carriers	64	56	56	24	18	18	31	17	16	37
49	Insurance agents and combination offices	16	15	16	8	7	8	10	9	10	11
50	Real estate	340	240	190	117	76	128	154	173	197	130
51	**Transportation**	571	581	378	177	124	233	320	287	287	174
52	Railroads	303	353	219	26	20	78	73	119	125	45
53	Local and highway passenger transportation	115	79	66	64	55	50	56	35	31	16
54	Highway freight transportation and warehousing	12	11	8	8	7	7	8	9	9	11
55	Water transportation	29	30	20	12	8	24	56	40	41	20
56	Air transportation (common carriers)	0	0	0	0	0	3	3	3	2	1
57	Pipeline transportation	92	90	49	53	23	59	112	66	64	64
58	Services allied to transportation	20	18	16	14	11	12	12	15	15	17
59	**Communications and public utilities**	634	861	772	677	540	618	644	649	692	671
60	Telephone, telegraph, and related services	167	201	217	192	190	187	191	174	179	187
61	Radio broadcasting and television	4	6	5	1	1	3	8	11	12	9
62	Utilities: electric and gas	449	601	526	471	333	411	428	446	485	459
63	Local utilities and public services, n. e. c.	14	53	24	13	16	17	17	18	16	16
64	**Services**	88	79	52	35	21	34	34	71	79	61
65	Hotels and other lodging places	6	4	2	1	0	1	1	2	2	3
66	Personal services	11	7	5	3	2	2	3	5	5	6
67	Business services, n. e. c.	37	24	13	16	11	17	16	25	29	21
68	Miscellaneous repair services and hand trades	3	2	1	1	0	1	1	1	1	1
69	Motion pictures	17	33	26	10	5	7	6	26	28	21
70	Amusement and recreation, except motion pictures	11	8	4	2	1	3	4	8	9	6
71	Engineering and other professional services, n. e. c.	3	1	1	2	2	3	3	4	5	3
72	**Rest of the world**	89	26	−37	−44	−22	8	60	−8	11	217

1. See table 18, footnote 2.
2. Estimates for 1948–53 not strictly comparable with earlier years. See table 18, footnote 3.

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Table 21.—*Net Corporate Dividend Payments, by Industry, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
3,788	4,043	4,458	4,289	4,484	4,673	4,691	5,784	6,521	7,248	7,458	9,207	9,090	9,128	9,365	1
15	19	22	22	27	24	14	28	52	54	53	60	70	51	30	2
13	17	19	20	23	22	13	23	50	52	51	57	67	----	----	3
2	2	3	2	4	2	1	5	2	2	2	3	3	----	----	4
175	238	265	237	175	157	138	177	260	361	338	455	503	544	531	5
94	109	107	145	70	61	44	53	84	117	92	131	142	----	----	6
0	3	4	7	6	7	6	13	10	9	8	5	1	----	----	7
9	15	16	21	23	23	26	28	37	60	51	53	46	----	----	8
54	92	116	44	57	48	45	60	98	141	154	224	272	----	----	9
18	19	22	20	19	18	17	23	31	34	33	42	42	----	----	10
22	22	27	25	23	21	18	30	36	56	62	68	61	64	72	11
1,741	1,930	2,271	2,139	2,271	2,397	2,421	2,856	3,414	3,736	3,939	4,836	4,581	4,568	4,620	12
272	268	295	282	304	301	313	405	439	419	402	430	445	----	----	13
89	85	90	67	63	68	62	69	75	86	90	92	91	----	----	14
67	73	104	100	106	111	110	200	237	267	201	232	224	----	----	15
18	19	23	21	27	27	25	52	49	55	43	46	35	----	----	16
49	61	79	67	62	60	60	80	109	[2] 121	104	141	129	----	----	17
----	----	----	----	----	----	----	----	----	89	74	100	97	----	----	18
----	----	----	----	----	----	----	----	----	32	30	41	32	----	----	19
24	35	51	43	38	35	38	44	62	----	----	----	----	----	----	20
25	26	28	24	24	25	22	36	47	----	----	----	----	----	----	21
48	58	83	65	71	67	70	96	136	154	130	170	200	----	----	22
74	73	70	63	78	93	88	123	123	132	123	123	112	----	----	23
251	254	260	237	262	271	298	360	401	[2] 398	450	576	539	----	----	24
79	82	104	245	236	274	255	291	375	[2] 416	521	478	552	----	----	25
22	16	25	19	29	33	35	44	35	29	37	40	35	----	----	26
22	21	27	25	27	27	26	34	43	40	37	37	34	----	----	27
80	84	95	62	62	52	58	85	97	111	124	156	149	----	----	28
243	261	359	372	392	426	425	432	552	[2] 628	616	810	781	----	----	29
----	----	----	----	----	----	----	----	----	314	311	455	428	----	----	30
----	----	----	----	----	----	----	----	----	194	186	218	220	----	----	31
----	----	----	----	----	----	----	----	----	52	57	69	66	----	----	32
----	----	----	----	----	----	----	----	----	68	62	68	67	----	----	33
145	171	246	275	273	295	287	278	370	----	----	----	----	----	----	34
56	52	62	60	81	92	90	97	129	----	----	----	----	----	----	35
42	38	51	37	38	39	48	57	53	----	----	----	----	----	----	36
154	200	238	211	188	189	182	230	299	[2] 348	332	400	400	----	----	37
96	132	131	88	120	109	122	125	162	[2] 177	186	253	255	----	----	38
32	64	84	172	213	259	269	83	72	85	85	94	94	----	----	39
145	179	204	43	31	30	23	147	210	270	458	758	506	----	----	40
425	432	501	447	485	490	499	816	867	949	853	1,002	946	907	830	41
155	149	200	169	174	179	176	300	332	374	324	401	382	----	----	42
270	283	301	278	311	311	323	516	535	575	529	601	564	----	----	43
301	243	245	426	436	483	522	631	570	643	656	825	815	859	886	44
191	209	216	203	218	243	263	290	310	327	348	401	412	----	----	45
4	13	7	0	−4	−1	−2	6	−1	0	−1	−2	−3	----	----	46
−86	−173	−174	69	33	58	84	103	45	74	40	135	187	----	----	47
43	35	23	25	49	30	30	27	11	23	47	57	4	----	----	48
11	13	14	9	10	9	8	10	14	20	17	23	21	----	----	49
138	146	159	120	130	144	139	195	191	199	205	211	194	----	----	50
228	259	271	233	257	292	292	285	246	312	271	366	393	413	429	51
77	114	83	131	150	189	203	167	127	197	154	199	250	----	----	52
15	19	23	22	29	29	29	49	35	33	30	29	33	----	----	53
14	12	13	16	12	12	11	15	16	19	21	27	23	----	----	54
32	43	51	28	23	24	21	24	37	34	32	37	40	----	----	55
0	1	3	4	8	6	5	3	4	4	4	10	15	----	----	56
69	50	78	17	19	17	10	15	15	13	18	51	21	----	----	57
21	20	20	15	16	15	13	12	12	12	12	13	11	----	----	58
683	685	675	591	592	624	623	687	714	741	831	1,032	1,151	1,282	1,427	59
174	175	174	185	171	181	189	192	180	181	201	253	294	----	----	60
11	12	14	9	12	12	10	14	14	12	8	18	10	----	----	61
483	483	472	386	400	421	414	470	510	539	611	748	835	----	----	62
15	15	15	11	9	10	10	11	10	9	11	13	12	----	----	63
61	66	72	62	81	82	89	145	141	142	150	137	152	138	134	64
5	5	6	6	9	9	10	18	16	20	17	20	18	----	----	65
7	7	7	7	8	10	10	13	12	13	14	14	11	----	----	66
22	25	23	15	18	19	20	26	29	31	37	37	37	----	----	67
1	1	1	0	1	1	1	1	1	1	1	2	3	----	----	68
15	18	24	26	35	33	35	64	61	55	59	40	57	----	----	69
6	6	8	4	5	6	10	18	16	15	15	16	17	----	----	70
5	4	3	4	5	4	3	5	6	7	7	8	9	----	----	71
137	149	109	107	137	103	75	129	221	254	305	426	418	302	406	72

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Table 22.—*Undistributed Corporate Income, by Industry, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total** [1]	2,446	−3,010	−5,366	−5,967	−2,426	−1,615	−669	−217	48	−916
2	**Agriculture, forestry, and fisheries**	−14	−57	−89	−79	−34	−54	−19	−29	−34	−28
3	Farms	−12	−51	−82	−71	−30	−49	−15	−27	−30	−25
4	Agricultural services, forestry, and fisheries	−2	−6	−7	−8	−4	−5	−4	−2	−4	−3
5	**Mining**	32	−160	−261	−174	−97	−35	−10	55	117	3
6	Metal mining	34	−55	−75	−63	−1	14	28	38	75	32
7	Anthracite mining	−7	−1	−2	−18	−9	−4	−14	−8	−14	−19
8	Bituminous and other soft-coal mining	−19	−39	−45	−42	−34	−20	−11	−12	−4	−26
9	Crude petroleum and natural gas	8	−79	−123	−28	−39	−16	−6	34	54	18
10	Nonmetallic mining and quarrying	16	14	−16	−23	−14	−9	−7	3	6	−2
11	**Contract construction**	40	8	−48	−110	−74	−47	−30	−21	−16	−7
12	**Manufacturing**	1,583	−1,276	−2,373	−2,530	−428	−166	128	502	525	−101
13	Food and kindred products	112	−9	−107	−137	90	89	33	81	−30	20
14	Tobacco manufactures	40	39	38	49	−33	5	13	8	6	14
15	Textile-mill products	−23	−316	−247	−228	76	−68	−26	25	−50	−77
16	Apparel and other finished fabric products	−3	−62	−80	−84	3	−3	−1	9	−12	−17
17	Lumber and furniture products [2]	7	−140	−196	−200	−62	−65	−28	4	18	−27
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	8	−78	−121	−114	−35	−46	−20	0	17	−12
21	Furniture and finished lumber products	−1	−62	−75	−86	−27	−19	−8	4	1	−15
22	Paper and allied products	37	−9	−48	−79	−4	14	11	21	24	−6
23	Printing, publishing, and allied industries	77	0	−42	−85	−9	−13	16	11	6	−8
24	Chemicals and allied products [2]	148	−31	−39	−94	10	74	−19	70	56	63
25	Products of petroleum and coal [2]	286	−150	−407	−120	−110	−49	−21	−52	95	−6
26	Rubber products	−20	−79	−42	−47	−2	4	9	5	−4	2
27	Leather and leather products	1	−62	−59	−58	12	−3	14	3	−12	−16
28	Stone, clay, and glass products	42	−30	−84	−113	−34	−13	1	25	14	3
29	Metals, metal products, and miscellaneous [2]	440	−250	−584	−683	−184	−65	−52	118	164	−89
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	347	−145	−409	−467	−152	−91	−115	75	119	−100
35	Nonferrous metals and their products	79	−44	−83	−105	2	24	53	26	31	4
36	Miscellaneous manufacturing	14	−61	−92	−111	−34	2	10	17	14	7
37	Machinery, except electrical [2]	175	−72	−219	−284	−93	1	48	97	129	11
38	Electrical machinery [2]	84	−9	−53	−63	−41	−42	39	26	25	4
39	Transportation equipment, except automobiles	11	−23	−57	−41	−26	−36	−34	−7	10	−2
40	Automobiles and automobile equipment	169	−73	−147	−263	−21	4	125	58	86	30
41	**Wholesale and retail trade**	98	−565	−849	−975	−167	−39	−23	68	13	−87
42	Wholesale trade	67	−241	−326	−328	−1	−3	−6	64	14	−21
43	Retail trade and automobile services	31	−324	−523	−647	−166	−36	−17	4	−1	−66
44	**Finance, insurance, and real estate**	40	−581	−895	−1,033	−875	−649	−121	−480	−265	−173
45	Banking	215	−15	−218	−257	−195	−174	−33	55	149	93
46	Security and commodity brokers, dealers and exchanges	96	−155	−117	−67	−46	−16	−81	−78	−58	−57
47	Finance, n. e. c.	−44	−113	−138	−155	−160	28	430	−174	−134	−110
48	Insurance carriers	92	4	−33	−23	34	68	68	91	120	114
49	Insurance agents and combination offices	8	3	0	7	4	5	2	4	4	1
50	Real estate	−327	−305	−389	−538	−512	−560	−507	−378	−346	−214
51	**Transportation**	331	−219	−508	−532	−392	−446	−463	−263	−304	−413
52	Railroads	401	−107	−384	−367	−307	−354	−270	−187	−223	−322
53	Local and highway passenger transportation	−66	−37	−64	−75	−55	−56	−86	−36	−56	−71
54	Highway freight transportation and warehousing	19	6	1	−14	−5	2	1	4	2	13
55	Water transportation	14	−18	−23	−29	−7	−15	−35	−12	−7	−10
56	Air transportation (common carriers)	−6	−19	−9	−3	−3	−9	−6	−3	−5	−3
57	Pipeline transportation	−15	−28	−13	−26	−2	−1	−54	−13	2	−5
58	Services allied to transportation	−16	−16	−16	−18	−13	−13	−13	−16	−17	−15
59	**Communications and public utilities**	164	−249	−277	−316	−239	−163	−184	−108	−52	−97
60	Telephone, telegraph, and related services	104	30	−10	−63	−81	−65	−45	−15	−11	−28
61	Radio broadcasting and television	14	−11	−10	−4	−7	3	1	4	4	3
62	Utilities: electric and gas	37	−230	−233	−235	−139	−97	−134	−89	−42	−66
63	Local utilities and public services, n. e. c.	9	−38	−24	−14	−12	−4	−6	−8	−3	−6
64	**Services**	29	−22	−99	−228	−140	−68	−46	−53	−47	−43
65	Hotels and other lodging places	−8	−23	−32	−46	−34	−32	−28	−25	−22	−32
66	Personal services	9	1	−6	−22	−9	−3	0	0	3	−5
67	Business services, n. e. c.	2	7	−4	−22	−15	−5	−4	−7	−9	−1
68	Miscellaneous repair services and hand trades	0	0	−1	−2	−1	0	0	0	0	0
69	Motion pictures	32	9	−28	−96	−48	−9	2	−7	−5	7
70	Amusement and recreation, except motion pictures	−10	−18	−24	−31	−25	−14	−11	−9	−8	−7
71	Engineering and other professional services, n. e. c.	4	2	−4	−9	−8	−5	−5	−5	−6	−5
72	**Rest of the world**	143	111	33	10	20	52	99	112	111	30

1. See table 18, footnote 2. 2. Estimates for 1948–53 not strictly comparable with earlier years. See table 18, footnote 3.

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Table 22.—*Undistributed Corporate Income, by Industry, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
1,174	2,443	4,914	5,178	5,996	5,698	3,597	7,656	11,721	13,011	8,329	12,934	9,607	8,081	8,921	1
−19	−14	7	12	15	16	18	45	26	15	−13	8	−59	−49	−28	2
−15	−8	9	14	20	18	18	49	29	17	−9	16	−53	----	----	3
−4	−6	−2	−2	−5	−2	0	−4	−3	−2	−4	−8	−6	----	----	4
78	106	172	142	166	167	101	144	424	670	335	506	417	254	318	5
60	82	84	42	51	33	30	16	83	106	29	107	102	----	----	6
−12	3	9	7	7	10	2	11	14	22	3	13	6	----	----	7
−4	14	38	45	64	70	48	53	180	207	43	81	52	----	----	8
24	−3	24	33	32	45	10	33	106	280	210	248	194	----	----	9
10	10	17	15	12	9	11	31	41	55	50	57	63	----	----	10
−4	22	70	89	56	25	12	95	200	289	240	219	168	146	151	11
1,155	1,851	3,305	2,970	3,293	3,061	1,609	3,802	6,641	7,300	4,472	7,539	5,679	4,335	4,974	12
154	150	255	315	320	319	284	809	655	461	462	547	255	----	----	13
21	28	14	28	28	15	15	35	40	62	71	63	35	----	----	14
64	79	240	224	191	177	161	630	692	646	169	439	202	----	----	15
10	15	57	71	75	78	83	250	229	101	27	104	16	----	----	16
25	62	129	99	84	92	58	221	383	[2] 316	135	363	238	----	----	17
----	----	----	----	----	----	----	----	----	248	96	278	184	----	----	18
----	----	----	----	----	----	----	----	----	68	39	85	54	----	----	19
12	38	72	60	49	48	20	117	264	----	----	----	----	----	----	20
13	24	57	39	35	44	38	104	119	----	----	----	----	----	----	21
38	79	124	90	85	93	67	241	426	318	185	351	318	----	----	22
22	37	44	52	118	139	136	270	246	204	176	180	159	----	----	23
160	185	257	227	230	185	98	485	623	[2] 540	462	747	538	----	----	24
97	145	285	181	341	197	91	302	669	[2] 1,222	417	734	777	----	----	25
27	31	59	77	59	60	41	135	84	98	40	164	142	----	----	26
9	7	37	36	36	35	33	106	88	34	9	51	4	----	----	27
46	57	88	71	47	40	34	136	174	209	177	278	217	----	----	28
196	397	712	608	696	602	249	497	1,098	[2] 1,362	776	1,482	1,372	----	----	29
----	----	----	----	----	----	----	----	----	758	479	804	800	----	----	30
----	----	----	----	----	----	----	----	----	429	204	441	386	----	----	31
----	----	----	----	----	----	----	----	----	62	34	80	83	----	----	32
----	----	----	----	----	----	----	----	----	113	59	157	103	----	----	33
101	267	527	470	504	417	162	312	801	----	----	----	----	----	----	34
65	90	115	78	117	88	31	126	218	----	----	----	----	----	----	35
30	40	70	60	75	97	56	59	79	----	----	----	----	----	----	36
100	237	410	347	303	278	124	113	561	[2] 669	414	646	613	----	----	37
51	88	174	153	160	209	42	−109	284	[2] 322	202	442	287	----	----	38
23	99	225	302	418	443	73	−186	−148	38	20	101	79	----	----	39
112	155	195	89	102	99	20	−133	537	698	730	847	427	----	----	40
210	363	735	714	831	901	961	2,613	2,913	2,575	1,388	2,576	1,618	1,567	1,647	41
119	204	367	310	338	378	395	1,189	1,323	1,063	517	1,208	878	----	----	42
91	159	368	404	493	523	566	1,424	1,590	1,512	871	1,368	740	----	----	43
−119	35	95	51	270	401	294	256	308	593	740	446	283	302	403	44
129	203	268	255	356	440	448	565	397	493	457	457	535	----	----	45
−47	−62	−49	−33	−27	−31	−50	−57	−52	−65	−57	−48	−59	----	----	46
−85	32	−13	−82	−52	−93	−130	−141	−54	−49	30	−1	−52	----	----	47
94	37	12	1	11	48	−6	−122	−38	149	277	139	−14	----	----	48
2	5	8	5	2	5	4	15	22	15	13	9	9	----	----	49
−212	−180	−131	−95	−20	32	28	−4	33	50	20	−110	−136	----	----	50
−160	−75	306	875	953	653	226	−106	384	651	352	734	511	513	456	51
−130	−95	285	761	802	503	127	−211	284	505	218	541	279	----	----	52
−52	−21	−15	58	86	65	47	33	−22	0	−15	−6	5	----	----	53
24	9	19	16	17	16	5	41	59	79	66	102	65	----	----	54
6	13	23	5	17	14	14	44	62	35	41	32	70	----	----	55
6	7	8	14	10	27	16	−33	−45	−8	5	35	37	----	----	56
1	11	−18	15	14	17	15	8	16	23	23	17	37	----	----	57
−15	1	4	6	7	11	2	12	30	17	14	13	18	----	----	58
6	75	66	112	157	109	59	226	108	156	162	212	117	120	169	59
26	19	1	0	35	27	−9	−9	−49	−24	−13	86	49	----	----	60
5	8	5	5	8	13	13	18	17	12	9	9	25	----	----	61
−22	50	62	107	110	66	53	216	134	161	162	114	38	----	----	62
−3	−2	−2	0	4	3	2	1	6	7	4	3	5	----	----	63
−20	−5	36	95	154	175	164	285	249	180	126	120	76	74	90	64
−27	−18	−12	6	38	39	42	54	51	45	35	27	22	----	----	65
−1	2	7	14	18	23	20	29	33	26	23	18	18	----	----	66
4	−4	11	11	16	19	19	40	49	54	40	51	47	----	----	67
−1	0	3	5	3	4	2	3	7	7	3	4	6	----	----	68
15	20	28	52	69	76	65	117	80	20	14	11	−25	----	----	69
−5	−2	0	2	6	8	17	34	19	16	3	1	1	----	----	70
−5	−3	−1	5	4	6	−1	8	10	12	8	8	7	----	----	71
47	85	122	118	101	190	153	296	468	582	527	574	797	819	741	72

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Table 23.—*Inventory Valuation Adjustment, by Industry Division, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	614	4,015	3,025	1,342	−2,668	−679	−277	−858	−60	1,184
2	**A. Corporations, total**	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963
3	Mining	5	122	64	23	−67	−4	−9	−16	0	11
4	Contract construction	3	30	23	11	−22	0	−1	−3	−7	4
5	Manufacturing	301	2,215	1,585	655	−1,340	−457	−161	−478	−11	619
6	Wholesale and retail trade	152	804	663	318	−627	−143	−48	−226	34	309
7	Transportation	7	53	46	24	−52	−12	−5	−9	−28	11
8	Communications and public utilities	4	36	33	16	−35	−9	−3	−6	−19	9
9	**B. Unincorporated enterprises, total**	142	755	611	295	−525	−54	−50	−120	−29	221
10	Mining	1	14	6	2	−4	−1	−1	−1	0	1
11	Contract construction	3	22	18	9	−17	0	−1	−3	−5	3
12	Manufacturing	12	85	60	36	−66	−5	−7	−13	15	18
13	Wholesale and retail trade	126	634	527	248	−438	−48	−41	−103	−39	199

1. The inventory valuation adjustment has been estimated only in those industrial divisions in which inventories are an important income-determining factor.

Table 24.—*Net Interest, by Industry Division, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	6,445	5,985	5,839	5,434	5,042	4,869	4,751	4,741	4,708	4,636
2	Agriculture, forestry, and fisheries	833	788	745	677	582	519	459	437	422	442
3	Mining	32	25	38	36	34	41	38	32	34	35
4	Contract construction	16	27	24	23	15	1	3	4	4	0
5	Manufacturing	−81	13	26	11	28	32	45	43	97	51
6	Wholesale and retail trade	80	92	77	29	32	21	22	29	50	45
7	Finance, insurance, and real estate	2,360	2,361	2,367	2,327	2,195	2,236	2,170	2,112	2,025	2,052
8	Transportation	559	575	613	619	638	653	640	617	610	612
9	Communications and public utilities	394	458	565	594	564	478	491	478	424	429
10	Services	1,675	1,038	834	692	630	646	676	794	882	832
11	Rest of the world	577	608	550	426	324	242	207	195	160	138

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Table 23.—*Inventory Valuation Adjustment, by Industry Division, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
−880	−245	−3,086	−1,571	−929	−356	−670	−6,968	−7,370	−2,562	2,411	−5,998	−1,604	1,189	−1,159	1
−714	−200	−2,471	−1,204	−773	−287	−564	−5,263	−5,899	−2,150	1,943	−4,864	−1,260	981	−964	2
−12	1	−17	−3	−3	−3	−4	−75	−70	−61	31	−49	−9	−10	−35	3
−4	−6	−14	−3	−4	−5	−3	−39	−109	−42	24	−72	−12	−3	−8	4
−471	−135	−1,511	−726	−552	−206	−413	−3,041	−3,737	−1,440	1,194	−3,082	−662	643	−620	5
−219	−37	−879	−455	−190	−55	−111	−1,881	−1,628	−366	567	−1,450	−470	370	−235	6
−5	−14	−30	−10	−14	−12	−22	−144	−213	−151	59	−100	−78	2	−46	7
−3	−9	−20	−7	−10	−6	−11	−83	−142	−90	68	−111	−29	−21	−20	8
−166	−45	−615	−367	−156	−69	−106	−1,705	−1,471	−412	468	−1,134	−344	208	−195	9
−1	0	−2	0	−1	0	−1	−13	−14	−13	7	−12	−2	−3	−9	10
−3	−7	−12	−4	−4	−3	−3	−40	−109	−41	24	−72	−12	−3	−8	11
−28	−4	−73	−45	−27	−15	−22	−221	−225	−36	56	−149	−4	22	−5	12
−134	−34	−528	−318	−124	−51	−80	−1,431	−1,123	−322	381	−901	−326	192	−173	13

Table 24.—*Net Interest, by Industry Division, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
4,604	4,490	4,544	4,291	3,658	3,342	3,185	3,119	3,842	4,508	5,171	5,912	6,770	7,442	8,435	1
455	458	465	428	360	319	301	293	324	379	437	500	597	675	730	2
34	30	22	19	13	12	6	7	8	12	22	32	15	16	16	3
2	2	4	6	2	0	2	4	15	16	9	14	41	42	44	4
66	55	31	22	−39	−44	−33	−118	−13	6	5	−77	−63	−70	−74	5
54	47	51	31	−21	−55	−74	−86	−49	10	8	38	102	139	156	6
1,979	1,869	1,878	1,929	1,774	1,627	1,513	1,516	1,705	1,840	2,113	2,381	2,695	2,922	3,182	7
597	568	545	501	471	445	414	361	338	322	332	333	335	365	365	8
422	380	355	389	375	350	350	277	314	351	419	446	510	546	614	9
868	961	1,067	836	608	570	576	730	1,032	1,348	1,596	1,997	2,226	2,490	3,069	10
127	120	126	130	115	118	130	135	168	224	230	248	312	317	333	11

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Table 25.—*Number of Full-Time Equivalent Employees, by Industry 1929–38* [1]

[Data in thousands]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	35,896	33,769	30,690	27,215	27,681	30,905	32,263	35,413	36,662	34,945
2	**Agriculture, forestry, and fisheries**	3,530	3,312	3,225	3,004	2,973	2,968	2,990	3,085	3,054	2,922
3	Farms	3,403	3,190	3,103	2,894	2,865	2,862	2,878	2,981	2,924	2,807
4	Agricultural services, forestry, and fisheries	127	122	122	110	108	106	112	104	130	115
5	**Mining**	993	932	813	672	693	822	840	897	955	859
6	Metal mining	124	107	79	50	50	60	71	92	119	95
7	Anthracite mining	151	144	128	104	92	106	99	98	98	89
8	Bituminous and other soft coal mining	471	452	418	358	373	431	443	457	470	416
9	Crude petroleum and natural gas	159	148	118	105	124	163	165	180	192	192
10	Nonmetallic mining and quarrying	88	81	70	55	54	62	62	70	76	67
11	**Contract construction**	1,484	1,366	1,198	907	703	806	866	1,104	1,082	1,055
12	**Manufacturing**	10,428	9,309	7,865	6,678	7,204	8,364	8,904	9,645	10,591	9,131
13	Food and kindred products	1,041	1,020	914	841	939	1,085	1,106	1,157	1,223	1,166
14	Tobacco manufactures	145	133	120	108	102	112	108	109	111	108
15	Textile-mill products	1,262	1,095	1,025	907	1,081	1,139	1,196	1,218	1,283	1,092
16	Apparel and other finished fabric products	772	722	672	593	632	699	768	829	843	807
17	Lumber and furniture products [2]	1,041	840	624	486	549	609	689	779	857	740
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	604	469	303	225	270	320	360	415	459	398
21	Furniture and finished lumber products	437	371	321	261	279	289	329	364	398	342
22	Paper and allied products	284	277	250	226	244	280	289	300	325	301
23	Printing, publishing, and allied industries	615	617	548	481	449	492	510	554	604	578
24	Chemicals and allied products [2]	397	377	329	291	321	369	379	393	431	383
25	Products of petroleum and coal [2]	128	125	105	97	99	115	121	124	132	131
26	Rubber products	176	142	120	110	124	141	134	142	154	127
27	Leather and leather products	370	344	315	300	320	345	352	359	375	353
28	Stone, clay, and glass products	397	345	277	204	212	262	281	317	356	310
29	Metals, metal products, and miscellaneous [2]	1,827	1,621	1,298	1,040	1,118	1,358	1,487	1,686	1,914	1,552
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	1,217	1,092	857	687	749	917	996	1,147	1,317	1,026
35	Nonferrous metals and their products	325	269	222	175	182	220	249	277	313	256
36	Miscellaneous manufacturing	285	260	219	178	187	221	242	262	284	270
37	Machinery, except electrical [2]	764	671	509	373	392	505	577	664	791	626
38	Electrical machinery [2]	519	430	332	242	251	319	338	385	461	353
39	Transportation equipment, except automobiles	150	147	105	80	71	101	105	137	171	141
40	Automobiles and automobile equipment	540	403	352	299	300	433	464	492	580	363
41	**Wholesale and retail trade**	5,846	5,551	5,074	4,496	4,472	4,982	5,186	5,584	6,046	5,923
42	Wholesale trade	1,631	1,571	1,418	1,279	1,275	1,406	1,443	1,550	1,706	1,707
43	Retail trade and automobile services	4,215	3,980	3,656	3,217	3,197	3,576	3,743	4,034	4,340	4,216
44	**Finance, insurance, and real estate**	1,415	1,390	1,328	1,266	1,219	1,242	1,261	1,305	1,346	1,342
45	Banking	385	375	345	311	281	284	277	276	285	286
46	Security and commodity brokers, dealers and exchanges	128	103	88	80	89	83	74	85	83	68
47	Finance, n. e. c.	130	128	120	114	108	106	108	114	116	102
48	Insurance carriers	358	368	361	355	341	348	364	368	383	396
49	Insurance agents and combination offices	120	122	119	117	112	113	112	114	115	117
50	Real estate	294	294	295	289	288	308	326	348	364	373
51	**Transportation**	2,873	2,632	2,280	1,934	1,841	1,910	1,933	2,046	2,159	1,897
52	Railroads	1,845	1,659	1,405	1,155	1,084	1,122	1,113	1,194	1,251	1,061
53	Local and highway passenger transportation	410	387	356	323	302	294	294	298	301	280
54	Local railways and buslines	280	263	239	214	199	201	202	204	207	187
55	Highway passenger transportation, n. e. c.	130	124	117	109	103	93	92	94	94	93
56	Highway freight transportation and warehousing	252	249	235	218	215	232	254	268	289	270
57	Water transportation	167	159	144	130	135	145	148	142	151	134
58	Air transportation (common carriers)	2	4	5	6	6	6	8	10	12	13
59	Pipeline transportation	25	24	21	17	20	22	23	25	26	23
60	Services allied to transportation	172	150	114	85	79	89	93	109	129	116
61	**Communications and public utilities**	1,031	1,031	930	828	784	799	803	850	898	862
62	Telephone, telegraph, and related services	534	524	459	412	383	379	376	393	422	400
63	Radio broadcasting and television	4	6	8	9	8	11	13	15	18	18
64	Utilities: electric and gas	465	473	437	384	371	386	392	418	437	423
65	Local utilities and public services, n. e. c.	28	28	26	23	22	23	22	24	21	21
66	**Services**	5,112	4,928	4,547	4,068	3,919	4,280	4,448	4,748	5,000	4,800
67	Hotels and other lodging places	387	371	331	282	266	313	327	349	373	373
68	Personal services	617	606	566	525	513	549	575	613	647	616
69	Private households	2,348	2,193	1,962	1,680	1,592	1,797	1,878	2,008	2,128	1,942
70	Commercial and trade schools and employment agencies	20	18	16	12	11	12	15	17	19	18
71	Business services, n. e. c.	157	153	137	141	147	172	172	201	204	208
72	Miscellaneous repair services and hand trades	59	58	57	56	56	56	56	57	57	58
73	Motion pictures	142	143	140	122	119	135	148	164	177	171
74	Amusement and recreation, except motion pictures	253	235	205	156	135	147	150	164	182	163
75	Medical and other health services	429	434	419	399	390	403	420	455	491	516
76	Legal services	90	94	99	100	101	100	104	105	108	112
77	Engineering and other professional services, n. e. c.	35	37	29	21	21	23	25	29	31	33
78	Educational services, n. e. c. [4]	224	228	232	233	233	234	240	244	251	259
79	Nonprofit membership organizations, n. e. c.	351	358	354	341	335	339	338	342	332	331
80	**Government and government enterprises**	3,184	3,318	3,399	3,361	3,872	4,731	5,031	6,148	5,530	6,153
81	Federal—general government	528	571	553	541	916	1,394	1,440	3,145	2,457	2,963
82	Civilian, except work relief [5]	267	310	296	290	294	357	449	521	517	507
83	Military [6]	261	261	257	251	249	250	263	290	313	326
84	Work relief [7]	0	0	0	0	373	787	728	2,334	1,627	2,130
85	Federal—government enterprises	299	300	298	297	300	323	336	343	349	366
86	State and local—general government	2,247	2,331	2,431	2,419	2,557	2,909	3,145	2,541	2,599	2,698
87	Public education [4]	1,082	1,110	1,120	1,109	1,084	1,083	1,112	1,134	1,165	1,196
88	Nonschool, except work relief	1,165	1,217	1,267	1,223	1,174	1,223	1,268	1,352	1,401	1,496
89	Work relief	0	4	44	87	299	603	765	55	33	6
90	State and local—government enterprises	110	116	117	104	99	105	110	119	125	126
91	**Rest of the world** [8]	0	0	1	1	1	1	1	1	1	1
92	**Addendum: All private industries**	32,712	30,451	27,290	23,853	23,808	26,173	27,231	29,264	31,131	28,791

1. Full-time equivalent employment measures man-years of full-time employment of wage and salary earners and its equivalent in work performed by part-time workers. Full-time employment is defined simply in terms of the number of hours which is customary at a particular time and place. For a full explanation of the concept, see *Survey of Current Business*, [illegible] parable with those given for 1948 and subsequent years. The discontinuities stem from changes in the industrial classification basis on which the underlying social insurance employment tabulations are prepared. (See the Introduction to Part III.) Of the series principally involved here, five have been terminated in 1947; the others are indicated by footnotes.

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Table 25.—*Number of Full-Time Equivalent Employees, by Industry, 1939–53* [1]

[Data in thousands]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
36,339	**38,336**	**43,022**	**48,045**	**54,239**	**55,421**	**53,713**	**47,466**	**47,453**	**48,401**	**47,134**	**48,705**	**52,623**	**53,971**	**55,151**	1
2,831	**2,781**	**2,751**	**2,660**	**2,535**	**2,340**	2,229	2,309	**2,392**	**2,466**	**2,381**	**2,220**	**2,124**	**2,064**	**2,074**	2
2,727	2,679	2,652	2,555	2,436	2,231	2,119	2,189	2,267	2,337	2,252	2,090	1,988	1,921	1,935	3
104	102	99	105	99	109	110	120	125	129	129	130	136	143	139	4
832	**927**	**975**	**985**	**917**	**879**	**829**	**871**	**938**	**986**	**914**	**916**	**921**	**895**	**854**	5
103	118	131	132	132	107	89	88	99	101	95	97	102	103	107	6
88	91	92	89	84	80	73	82	80	81	77	75	70	64	54	7
381	439	452	480	434	415	388	391	429	452	398	395	372	332	288	8
187	196	204	183	177	198	206	221	235	255	248	251	273	289	297	9
73	83	96	101	90	79	73	89	95	97	96	98	104	107	108	10
1,219	**1,285**	**1,774**	**2,131**	**1,566**	**1,110**	**1,135**	**1,739**	**2,062**	**2,274**	**2,148**	**2,359**	**2,620**	**2,649**	**2,616**	11
9,967	**10,882**	**13,137**	**15,284**	**17,402**	**17,050**	**15,186**	**14,493**	**15,215**	**15,285**	**14,183**	**14,969**	**16,122**	**16,411**	**17,230**	12
1,175	1,223	1,303	1,385	1,405	1,441	1,431	1,500	1,530	1,528	1,509	1,517	1,548	1,545	1,551	13
107	104	103	96	102	100	102	104	100	99	101	97	103	103	103	14
1,215	1,223	1,383	1,388	1,321	1,217	1,163	1,313	1,327	1,366	1,229	1,292	1,272	1,195	1,188	15
903	918	1,043	1,079	1,073	1,049	1,021	1,117	1,128	1,175	1,157	1,183	1,190	1,207	1,239	16
815	906	1,069	1,077	1,006	965	926	1,064	1,210	[3] 1,187	1,057	1,171	1,209	1,153	1,132	17
									838	732	798	846	789	760	18
									349	325	373	363	364	372	19
431	500	609	633	585	559	524	578	659							20
384	406	460	444	421	406	402	486	552							21
314	336	378	380	393	390	394	449	464	470	453	484	510	503	531	22
577	568	581	555	550	550	569	668	705	721	727	741	752	765	790	23
414	469	580	780	849	790	776	705	723	[3] 692	659	677	748	768	806	24
135	151	168	183	186	197	207	219	228	[3] 243	236	238	251	251	255	25
146	156	189	189	224	239	234	265	270	254	232	245	265	267	279	26
372	367	410	403	375	355	356	411	406	403	388	393	379	382	385	27
343	369	433	436	413	386	381	474	503	523	487	518	553	534	546	28
1,739	2,001	2,473	2,889	3,492	3,413	3,018	2,704	2,882	[3] 2,971	2,664	2,920	3,200	3,244	3,541	29
									1,231	1,090	1,192	1,318	1,253	1,339	30
									1,029	922	1,024	1,134	1,227	1,373	31
									249	227	247	286	307	330	32
									462	425	457	462	457	499	33
1,155	1,331	1,641	1,960	2,460	2,424	2,072	1,670	1,863							34
284	328	410	461	508	492	457	498	482							35
300	342	422	468	524	497	489	536	537							36
661	792	1,087	1,363	1,457	1,405	1,331	1,393	1,549	[3] 1,541	1,317	1,362	1,621	1,697	1,727	37
398	455	607	757	960	1,037	925	847	929	[3] 875	765	874	1,002	1,087	1,220	38
186	301	675	1,749	3,271	3,175	2,044	593	512	471	459	447	668	911	1,016	39
467	543	655	575	325	341	308	667	749	766	743	810	851	799	921	40
6,165	**6,526**	**7,027**	**6,823**	**6,678**	**6,667**	**6,938**	**8,226**	**8,688**	**8,934**	**8,840**	**9,005**	**9,296**	**9,514**	**9,729**	41
1,776	1,840	1,952	1,857	1,752	1,771	1,868	2,215	2,408	2,498	2,451	2,487	2,580	2,645	2,723	42
4,389	4,686	5,075	4,966	4,926	4,896	5,070	6,011	6,280	6,436	6,389	6,518	6,716	6,869	7,006	43
1,376	**1,422**	**1,462**	**1,439**	**1,389**	**1,364**	**1,393**	**1,594**	**1,643**	**1,707**	**1,724**	**1,790**	**1,856**	**1,916**	**1,992**	44
288	296	309	319	328	336	343	374	393	407	411	420	447	474	500	45
62	58	50	41	38	39	42	53	49	48	46	49	53	53	54	46
98	105	113	105	86	78	81	94	102	106	112	122	129	141	151	47
414	425	435	428	406	392	404	475	514	551	573	594	615	638	671	48
119	118	120	121	118	115	118	143	146	154	157	166	173	177	183	49
395	420	435	425	413	404	405	455	439	441	425	439	439	433	433	50
1,990	**2,072**	**2,257**	**2,410**	**2,631**	**2,817**	**2,894**	**2,886**	**2,869**	**2,815**	**2,617**	**2,652**	**2,792**	**2,765**	**2,763**	51
1,114	1,160	1,285	1,429	1,534	1,616	1,628	1,564	1,543	1,503	1,349	1,373	1,433	1,382	1,358	52
276	270	271	294	332	345	354	402	406	385	374	354	350	345	340	53
184	170	161	169	184	188	189	203	198	171	166	157	151	144	141	54
92	100	110	125	148	157	165	199	208	214	208	197	199	201	199	55
290	321	376	397	395	390	398	440	461	482	479	525	566	584	615	56
140	142	144	107	139	205	247	200	163	159	139	126	140	140	134	57
15	19	24	34	46	47	53	82	83	80	79	79	90	103	110	58
22	23	24	25	25	26	25	27	28	30	29	27	28	29	28	59
133	137	133	124	160	188	189	171	185	176	168	168	185	182	178	60
868	**898**	**952**	**944**	**909**	**887**	**911**	**1,100**	**1,177**	**1,269**	**1,280**	**1,269**	**1,308**	**1,347**	**1,386**	61
402	410	450	474	490	486	500	613	643	693	688	667	692	719	744	62
21	23	26	27	28	30	33	36	41	47	49	53	57	59	62	63
423	443	454	422	373	353	359	429	470	506	520	527	536	545	556	64
22	22	22	21	18	18	19	22	23	23	23	22	23	24	24	65
4,957	**5,274**	**5,347**	**5,518**	**5,226**	**5,165**	**5,181**	**5,452**	**5,732**	**5,867**	**5,900**	**6,152**	**6,327**	**6,375**	**6,517**	66
377	388	404	404	412	420	417	462	461	457	445	440	447	453	460	67
597	661	718	750	756	731	746	857	863	847	824	815	823	821	821	68
2,075	2,200	2,057	2,092	1,739	1,655	1,632	1,503	1,605	1,590	1,606	1,768	1,785	1,695	1,717	69
17	16	24	40	50	35	21	25	31	34	37	39	38	35	31	70
220	225	241	236	229	243	264	324	351	376	372	387	412	444	474	71
58	57	64	66	78	81	84	107	116	113	106	102	116	124	123	72
172	174	184	193	204	214	215	228	229	225	226	224	220	216	209	73
173	186	202	204	193	196	197	233	235	242	238	235	231	229	233	74
522	549	580	614	655	665	661	701	767	818	850	923	1,005	1,071	1,144	75
116	116	117	111	104	95	90	103	104	108	110	113	119	123	128	76
37	41	53	78	63	59	66	82	93	106	102	104	130	157	167	77
265	271	276	282	288	292	295	313	337	400	431	441	435	432	432	78
328	390	427	448	455	479	493	514	540	551	553	561	566	575	578	79
6,133	**6,267**	**7,337**	**9,846**	**14,979**	**17,137**	**17,012**	**8,791**	**6,732**	**6,793**	**7,142**	**7,368**	**9,252**	**10,029**	**9,985**	80
2,898	2,980	3,984	6,457	11,573	13,885	13,722	5,276	3,015	2,864	3,020	3,130	4,918	5,528	5,334	81
560	642	944	1,702	2,497	2,520	2,420	1,842	1,416	1,396	1,416	1,436	1,794	1,890	1,789	82
342	549	1,676	4,154	9,029	11,365	11,302	3,434	1,599	1,468	1,604	1,694	3,124	3,638	3,545	83
1,996	1,789	1,364	601	47											84
375	389	431	522	616	481	495	526	483	505	528	516	527	555	543	85
2,732	2,752	2,764	2,714	2,635	2,622	2,647	2,828	3,053	3,209	3,369	3,484	3,557	3,677	3,830	86
1,224	1,235	1,249	1,245	1,227	1,216	1,224	1,276	1,364	1,418	1,491	1,536	1,581	1,657	1,734	87
1,497	1,506	1,509	1,467	1,408	1,406	1,423	1,552	1,689	1,791	1,878	1,948	1,976	2,020	2,096	88
11	11	6	2												89
128	146	158	153	155	149	148	161	181	215	225	238	250	269	278	90
1	**2**	**3**	**5**	**7**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**6**	**5**	91
30,205	**32,067**	**35,682**	**38,194**	**39,253**	**38,279**	**36,696**	**38,670**	**40,716**	**41,603**	**39,987**	**41,332**	**43,366**	**43,936**	**45,161**	92

Chemicals and allied products, 723; Products of petroleum and coal, 235; Metals, metal products, and miscellaneous, 2,873; Machinery, except electrical, 1,562; and Electrical machinery, 889.

4. School teachers are considered to be employed during vacation periods.

5. Includes United States citizens, but not foreigners, employed abroad by the U. S. Gov-

7. Because of the exceptional character of work relief employment, full-time equivalent employment has been computed for all years by use of a 40-hour week as a measure of full-time employment.

8. Represents the estimated number of permanent United States residents employed in the

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Table 26.—*Average Number of Full-Time and Part-Time Employees, by Industry 1929–38* [1]

[Data in thousands]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	37,636	35,521	32,649	29,368	30,872	34,170	35,499	38,507	39,597	38,203
2	**Agriculture, forestry, and fisheries**	3,556	3,337	3,252	3,028	2,995	2,986	3,013	3,106	3,083	2,949
3	Farms	3,403	3,190	3,103	2,894	2,865	2,862	2,878	2,981	2,924	2,807
4	Agricultural services, forestry, and fisheries	153	147	149	134	130	124	135	125	159	142
5	**Mining**	993	932	813	672	693	822	840	897	955	859
6	Metal mining	124	107	79	50	50	60	71	92	119	95
7	Anthracite mining	151	144	128	104	92	106	99	98	98	89
8	Bituminous and other soft-coal mining	471	452	418	358	373	431	443	457	470	416
9	Crude petroleum and natural gas	159	148	118	105	124	163	165	180	192	192
10	Nonmetallic mining and quarrying	88	81	70	55	54	62	62	70	76	67
11	**Contract construction**	1,484	1,366	1,198	907	703	806	866	1,104	1,082	1,055
12	**Manufacturing**	10,428	9,309	7,895	6,678	7,204	8,364	8,904	9,645	10,591	9,131
13	Food and kindred products	1,041	1,020	914	841	939	1,085	1,106	1,157	1,223	1,166
14	Tobacco manufactures	145	133	120	108	102	112	108	109	111	108
15	Textile-mill products	1,262	1,095	1,025	907	1,081	1,139	1,196	1,218	1,263	1,092
16	Apparel and other finished fabric products	772	722	672	593	632	699	768	829	843	807
17	Lumber and furniture products [2]	1,041	840	624	486	549	609	689	779	857	740
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	604	469	303	225	270	320	360	415	459	398
21	Furniture and finished lumber products	437	371	321	261	279	289	329	364	398	342
22	Paper and allied products	284	277	250	226	244	280	289	300	325	301
23	Printing, publishing, and allied industries	615	617	548	481	449	492	510	554	604	578
24	Chemicals and allied products [2]	397	377	329	291	321	369	379	393	431	383
25	Products of petroleum and coal [2]	128	125	105	97	99	115	121	124	132	131
26	Rubber products	176	142	120	110	124	141	134	142	154	127
27	Leather and leather products	370	344	315	300	320	345	352	359	375	353
28	Stone, clay, and glass products	397	345	277	204	212	262	281	317	356	310
29	Metals, metal products, and miscellaneous [2]	1,827	1,621	1,298	1,040	1,118	1,358	1,487	1,686	1,914	1,552
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	1,217	1,092	857	687	749	917	996	1,147	1,317	1,026
35	Nonferrous metals and their products	325	269	222	175	182	220	249	277	313	256
36	Miscellaneous manufacturing	285	260	219	178	187	221	242	262	284	270
37	Machinery, except electrical [2]	764	671	509	373	392	505	577	664	791	626
38	Electrical machinery [2]	519	430	332	242	251	319	338	385	461	353
39	Transportation equipment, except automobiles	150	147	105	80	71	101	105	137	171	141
40	Automobiles and automobile equipment	540	403	352	299	300	433	464	492	580	363
41	**Wholesale and retail trade**	6,441	6,162	5,678	5,068	5,076	5,567	5,707	6,155	6,674	6,547
42	Wholesale trade	1,757	1,693	1,530	1,380	1,377	1,492	1,507	1,612	1,770	1,767
43	Retail trade and automobile services	4,684	4,469	4,148	3,688	3,699	4,075	4,200	4,543	4,904	4,780
44	**Finance, insurance, and real estate**	1,520	1,491	1,423	1,358	1,309	1,332	1,352	1,401	1,445	1,436
45	Banking	387	377	347	313	281	286	279	278	287	288
46	Security and commodity brokers, dealers and exchanges	156	126	107	97	109	101	89	103	101	82
47	Finance, n. e. c.	153	151	143	135	128	126	129	135	138	122
48	Insurance carriers	367	376	369	363	348	355	372	376	392	405
49	Insurance agents and combination offices	145	148	144	142	136	137	136	138	139	142
50	Real estate	312	313	313	308	307	327	347	371	388	397
51	**Transportation**	2,958	2,711	2,352	1,998	1,899	1,974	2,004	2,121	2,240	1,973
52	Railroads	1,845	1,659	1,405	1,155	1,084	1,122	1,113	1,194	1,251	1,061
53	Local and highway passenger transportation	413	389	359	326	303	295	296	300	303	281
54	Local railways and buslines	280	263	239	214	199	201	202	204	207	187
55	Highway passenger transportation, n. e. c.	133	126	120	112	104	94	94	96	96	94
56	Highway freight transportation and warehousing	303	299	282	263	258	278	305	322	346	324
57	Water transportation	176	167	152	137	141	152	155	149	158	141
58	Air transportation (common carriers)	2	4	5	6	6	6	8	10	12	13
59	Pipeline transportation	25	24	21	17	20	22	23	25	26	23
60	Services allied to transportation	194	169	128	94	87	99	104	121	144	130
61	**Communications and public utilities**	1,031	1,031	930	828	785	800	804	852	900	864
62	Telephone, telegraph, and related services	534	524	459	412	383	379	376	393	422	400
63	Radio broadcasting and television	4	6	8	9	9	12	14	17	20	20
64	Utilities: electric and gas	465	473	437	384	371	386	392	418	437	423
65	Local utilities and public services, n. e. c.	28	28	26	23	22	23	22	24	21	21
66	**Services**	5,677	5,472	5,049	4,534	4,374	4,766	4,936	5,267	5,538	5,310
67	Hotels and other lodging places	398	384	344	296	281	331	346	370	397	398
68	Personal services	661	649	607	564	553	590	618	658	694	661
69	Private households [3]	2,619	2,446	2,188	1,874	1,776	2,004	2,095	2,240	2,374	2,166
70	Commercial and trade schools and employment agencies	24	22	18	15	14	15	17	20	22	21
71	Business services, n. e. c.	189	185	164	169	176	207	207	241	246	249
72	Miscellaneous repair services and hand trades	76	74	73	72	72	72	72	72	73	73
73	Motion pictures	158	160	156	135	133	147	159	178	193	187
74	Amusement and recreation, except motion pictures	313	290	261	205	183	193	190	205	224	201
75	Medical and other health services [4]	429	434	419	399	390	403	420	455	491	516
76	Legal services	98	103	108	109	110	109	113	114	118	122
77	Engineering and other professional services, n. e. c.	35	37	29	21	21	23	25	29	31	33
78	Educational services, n. e. c. [4 5]	224	228	232	233	233	234	240	244	251	259
79	Nonprofit membership organizations, n. e. c.	453	460	450	442	432	438	434	441	424	424
80	**Government and government enterprises**	3,548	3,710	4,058	4,296	5,833	6,752	7,072	7,958	7,088	8,078
81	Federal—general government	528	571	553	541	1,014	1,747	1,702	4,464	3,537	4,405
82	Civilian, except work relief [6]	267	310	296	290	294	357	449	521	517	507
83	Military [7]	261	261	257	251	249	250	263	290	313	326
84	Work relief	0	0	0	0	471	1,140	990	3,653	2,707	3,572
85	Federal—government enterprises	337	339	336	333	335	359	374	381	387	404
86	State and local—general government	2,562	2,673	3,039	3,304	4,370	4,526	4,870	2,978	3,024	3,129
87	Public education [5]	1,120	1,150	1,160	1,148	1,122	1,122	1,152	1,174	1,206	1,239
88	Nonschool, except work relief	1,442	1,503	1,580	1,564	1,524	1,570	1,621	1,713	1,762	1,871
89	Work relief		20	299	592	1,724	1,834	2,097	91	56	19
90	State and local—government enterprises	121	127	130	118	114	120	126	135	140	140
91	**Rest of the world** [8]	0	0	1	1	1	1	1	1	1	1
92	**Addendum: All private industries**	34,088	31,811	28,590	25,071	25,038	27,417	28,426	30,548	32,508	30,124

1. This series measures the average number of full-time and part-time jobs filled during the year by wage and salary earners. The difference between the data shown in table 25 and table 26 is explained in the *Survey of Current Business*, June 1945, pp. 17–18.

2. See notes 2 and 3, table 25.

3. Data represent the number of persons employed; the number of full-time and part-time jobs is much larger.

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Table 26.—*Average Number of Full-Time and Part-Time Employees, by Industry 1939–53* [1]

[Data in thousands]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
39,469	**41,253**	**45,831**	**50,282**	**56,086**	**57,344**	**55,683**	**49,642**	**49,713**	**50,707**	**49,443**	**51,110**	**55,024**	**56,397**	**57,593**	1
2,859	**2,809**	**2,779**	**2,692**	**2,563**	**2,372**	**2,259**	**2,343**	**2,427**	**2,504**	**2,417**	**2,256**	**2,164**	**2,107**	**2,118**	2
2,727	2,679	2,652	2,555	2,436	2,231	2,119	2,189	2,267	2,337	2,252	2,090	1,988	1,921	1,935	3
132	130	127	137	127	141	140	154	160	167	165	166	176	186	183	4
832	**927**	**975**	**985**	**917**	**879**	**829**	**871**	**938**	**986**	**914**	**916**	**921**	**895**	**854**	5
103	118	131	132	132	107	89	88	99	101	95	97	102	103	107	6
88	91	92	89	84	80	73	82	80	81	77	75	70	64	54	7
381	439	452	480	434	415	388	391	429	452	398	395	372	332	288	8
187	196	204	183	177	198	206	221	235	255	248	251	273	289	297	9
73	83	96	101	90	79	73	89	95	97	96	98	104	107	108	10
1,219	**1,285**	**1,774**	**2,131**	**1,566**	**1,110**	**1,135**	**1,739**	**2,062**	**2,274**	**2,148**	**2,359**	**2,620**	**2,649**	**2,616**	11
9,967	**10,882**	**13,137**	**15,284**	**17,402**	**17,050**	**15,186**	**14,493**	**15,215**	**15,285**	**14,184**	**14,969**	**16,122**	**16,411**	**17,230**	12
1,175	1,223	1,303	1,385	1,405	1,441	1,431	1,500	1,530	1,528	1,509	1,517	1,548	1,545	1,551	13
107	104	103	96	102	100	102	104	100	99	101	97	103	103	103	14
1,215	1,223	1,383	1,388	1,321	1,217	1,163	1,313	1,327	1,366	1,229	1,292	1,272	1,195	1,188	15
903	918	1,043	1,079	1,073	1,049	1,021	1,117	1,128	1,175	1,157	1,183	1,190	1,207	1,239	16
815	906	1,069	1,077	1,006	965	926	1,064	1,210	[2] 1,187	1,057	1,171	1,209	1,153	1,132	17
									838	732	798	846	789	766	18
									349	325	373	363	364	372	19
431	500	609	633	585	559	524	578	658							20
384	406	460	444	421	406	402	486	552							21
314	336	378	380	393	390	394	449	464	470	453	484	510	503	531	22
577	568	581	555	550	550	569	668	705	721	727	741	752	765	790	23
414	469	580	780	849	790	776	705	723	[2] 692	659	677	748	768	806	24
135	151	168	183	186	197	207	219	228	[2] 243	236	238	251	251	255	25
146	156	189	189	224	239	234	265	270	254	232	245	265	267	279	26
372	367	410	403	375	355	356	411	406	403	388	393	379	382	385	27
343	369	433	436	413	386	381	474	503	523	487	518	553	534	546	28
1,739	2,001	2,473	2,889	3,492	3,413	3,018	2,704	2,882	[2] 2,971	2,664	2,920	3,200	3,244	3,541	29
									1,231	1,090	1,192	1,318	1,253	1,339	30
									1,029	922	1,024	1,134	1,227	1,373	31
									249	227	247	286	307	330	32
									462	425	457	462	457	499	33
1,155	1,331	1,641	1,960	2,460	2,424	2,072	1,670	1,863							34
284	328	410	461	508	492	457	498	482							35
300	342	422	468	524	497	489	536	537							36
661	792	1,087	1,363	1,457	1,405	1,331	1,393	1,549	[2] 1,541	1,317	1,362	1,621	1,697	1,727	37
398	455	607	757	960	1,037	925	847	929	[2] 875	765	874	1,002	1,087	1,220	38
186	301	675	1,749	3,271	3,175	2,044	593	512	471	460	447	668	911	1,016	39
467	543	655	575	325	341	308	667	749	766	743	810	851	799	921	40
6,825	**7,220**	**7,768**	**7,539**	**7,378**	**7,357**	**7,644**	**9,055**	**9,546**	**9,804**	**9,703**	**9,884**	**10,203**	**10,442**	**10,666**	41
1,833	1,899	2,014	1,916	1,808	1,828	1,927	2,286	2,485	2,578	2,529	2,565	2,662	2,729	2,800	42
4,992	5,321	5,754	5,623	5,570	5,529	5,717	6,769	7,061	7,226	7,174	7,319	7,541	7,713	7,866	43
1,470	**1,518**	**1,559**	**1,531**	**1,475**	**1,447**	**1,477**	**1,692**	**1,746**	**1,813**	**1,831**	**1,903**	**1,973**	**2,037**	**2,116**	44
290	298	311	321	330	338	345	376	395	410	414	423	450	477	503	45
76	71	61	50	47	47	52	64	61	58	56	60	64	65	65	46
117	124	135	125	101	92	95	112	121	127	133	146	154	169	180	47
423	435	445	437	415	401	413	484	525	564	586	607	629	652	686	48
144	143	144	145	142	138	142	172	177	185	190	199	208	214	221	49
420	447	463	453	440	431	430	484	467	469	452	468	468	460	461	50
2,073	**2,164**	**2,357**	**2,512**	**2,741**	**2,932**	**3,012**	**3,009**	**2,996**	**2,943**	**2,744**	**2,787**	**2,937**	**2,915**	**2,917**	51
1,114	1,160	1,285	1,429	1,534	1,616	1,628	1,564	1,543	1,503	1,349	1,373	1,433	1,382	1,358	52
277	272	273	296	335	348	357	406	410	388	377	357	353	348	343	53
184	170	161	169	184	188	189	203	198	171	166	157	151	144	141	54
93	102	112	127	151	160	168	203	212	217	211	200	202	204	202	55
347	385	451	477	474	469	477	528	553	578	575	629	678	701	737	56
148	150	151	112	146	216	260	210	171	167	146	133	147	147	141	57
15	19	24	34	46	47	53	82	83	80	79	79	90	103	110	58
22	23	24	25	25	26	25	27	28	30	29	27	28	29	28	59
150	155	149	139	181	210	212	192	208	197	189	189	208	205	200	60
870	**900**	**954**	**946**	**911**	**890**	**914**	**1,104**	**1,181**	**1,273**	**1,285**	**1,274**	**1,313**	**1,353**	**1,393**	61
402	410	450	474	490	486	500	613	643	693	688	667	692	719	744	62
23	25	28	29	30	33	36	40	45	51	54	58	62	65	69	63
423	443	454	422	373	353	359	429	470	506	520	527	536	545	556	64
22	22	22	21	18	18	19	22	23	23	23	22	23	24	24	65
5,497	**5,813**	**5,907**	**6,108**	**5,770**	**5,712**	**5,727**	**6,007**	**6,307**	**6,441**	**6,480**	**6,781**	**6,960**	**6,992**	**7,142**	66
405	416	433	433	440	448	445	491	489	484	471	467	474	480	488	67
642	709	769	802	808	779	795	912	915	899	873	863	872	871	870	68
2,315	2,454	2,312	2,369	1,984	1,904	1,892	1,756	1,891	1,888	1,923	2,134	2,155	2,046	2,073	69
21	19	28	48	60	43	25	30	37	41	44	47	46	42	38	70
265	265	281	272	260	273	292	354	380	401	397	412	440	473	506	71
74	72	79	82	95	100	102	130	139	134	126	128	138	147	146	72
191	192	204	215	226	237	238	253	253	249	250	248	245	239	232	73
215	230	250	253	238	242	244	289	291	298	295	291	285	284	287	74
522	549	580	614	655	665	661	701	767	818	850	923	1,005	1,071	1,144	75
126	126	128	122	114	105	100	114	116	121	123	127	133	138	144	76
37	41	53	78	63	59	66	82	93	106	102	104	130	157	167	77
265	271	276	282	288	292	296	313	337	400	431	441	435	432	432	78
419	469	514	538	539	565	571	582	599	602	595	596	602	612	615	79
7,856	**7,733**	**8,618**	**10,549**	**15,356**	**17,590**	**17,495**	**9,324**	**7,290**	**7,379**	**7,732**	**7,976**	**9,806**	**10,590**	**10,536**	80
4,118	3,983	4,812	6,765	11,611	13,885	13,722	5,276	3,015	2,864	3,020	3,130	4,918	5,528	5,334	81
560	642	944	1,702	2,497	2,520	2,420	1,842	1,416	1,396	1,416	1,436	1,794	1,890	1,789	82
342	549	1,676	4,154	9,029	11,365	11,302	3,434	1,599	1,468	1,604	1,694	3,124	3,638	3,545	83
3,216	2,792	2,192	909	85											84
412	425	452	487	544	520	536	572	528	553	579	565	577	606	594	85
3,183	3,164	3,182	3,126	3,028	3,019	3,071	3,297	3,547	3,726	3,888	4,023	4,045	4,171	4,315	86
1,267	1,254	1,319	1,327	1,319	1,319	1,337	1,414	1,517	1,579	1,660	1,718	1,768	1,853	1,947	87
1,877	1,872	1,846	1,794	1,709	1,700	1,734	1,883	2,030	2,147	2,228	2,305	2,277	2,318	2,368	88
39	38	17	5												89
143	161	172	171	173	166	166	179	200	236	245	258	266	285	293	90
1	**2**	**3**	**5**	**7**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**6**	**5**	91
31,612	**33,518**	**37,210**	**39,728**	**40,723**	**39,749**	**38,183**	**40,313**	**42,418**	**43,323**	**41,706**	**43,129**	**45,213**	**45,801**	**47,052**	92

4. Series measures full-time equivalent employment; full-time and part-time employment not available.
5. See note 4, table 25.
6. See note 5, table 25.
7. See note 6, table 25.
8. See note 8, table 25.

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Table 27.—*Average Annual Earnings per Full-Time Employee, by Industry, 1929–38* [1]

[Dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	1,405	1,368	1,275	1,120	1,048	1,091	1,137	1,184	1,258	1,230
2	**Agriculture, forestry, and fisheries**	397	388	312	247	230	251	286	307	360	369
3	Farms	378	369	291	228	213	235	268	290	338	348
4	Agricultural services, forestry, and fisheries	898	893	844	755	685	679	759	788	854	870
5	**Mining**	1,526	1,424	1,221	1,016	990	1,108	1,154	1,263	1,366	1,282
6	Metal mining	1,613	1,551	1,291	1,060	1,040	1,133	1,239	1,380	1,630	1,453
7	Anthracite mining	1,728	1,750	1,602	1,452	1,435	1,500	1,414	1,408	1,388	1,315
8	Bituminous and other soft-coal mining	1,293	1,119	909	723	748	900	957	1,103	1,170	1,050
9	Crude petroleum and natural gas	2,019	1,980	1,890	1,600	1,427	1,472	1,558	1,594	1,734	1,734
10	Nonmetallic mining and quarrying	1,409	1,358	1,186	945	852	903	968	1,100	1,211	1,134
11	**Contract construction**	1,674	1,526	1,233	907	869	942	1,027	1,178	1,278	1,193
12	**Manufacturing**	1,543	1,488	1,369	1,150	1,086	1,153	1,216	1,287	1,376	1,296
13	Food and kindred products	1,503	1,489	1,451	1,303	1,204	1,221	1,253	1,290	1,351	1,331
14	Tobacco manufactures	979	985	908	787	725	750	778	817	883	870
15	Textile-mill products	1,155	1,096	1,039	847	829	883	926	952	994	926
16	Apparel and other finished fabric products	1,361	1,265	1,162	941	900	987	1,016	1,013	1,025	999
17	Lumber and furniture products [2]	1,267	1,224	1,106	881	820	865	907	987	1,037	1,015
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	1,172	1,156	1,010	787	737	791	833	911	963	940
21	Furniture and finished lumber products	1,398	1,310	1,196	962	900	948	988	1,074	1,123	1,102
22	Paper and allied products	1,514	1,487	1,404	1,208	1,143	1,186	1,235	1,313	1,403	1,359
23	Printing, publishing, and allied industries	2,010	2,011	1,943	1,740	1,599	1,644	1,698	1,702	1,722	1,697
24	Chemicals and allied products [2]	1,673	1,647	1,608	1,419	1,312	1,341	1,385	1,455	1,559	1,621
25	Products of petroleum and coal [2]	1,844	1,904	1,810	1,619	1,505	1,513	1,587	1,629	1,833	1,863
26	Rubber products	1,597	1,563	1,392	1,191	1,137	1,248	1,358	1,472	1,526	1,457
27	Leather and leather products	1,327	1,215	1,152	970	950	1,017	1,043	1,045	1,085	1,017
28	Stone, clay, and glass products	1,557	1,525	1,386	1,167	1,071	1,088	1,171	1,262	1,357	1,303
29	Metals, metal products, and miscellaneous [2]	1,700	1,609	1,427	1,098	1,098	1,177	1,284	1,409	1,540	1,351
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	1,740	1,640	1,410	1,044	1,073	1,166	1,295	1,446	1,591	1,359
35	Nonferrous metals and their products	1,665	1,554	1,455	1,177	1,132	1,209	1,277	1,361	1,492	1,402
36	Miscellaneous manufacturing	1,568	1,535	1,466	1,230	1,166	1,195	1,244	1,298	1,359	1,274
37	Machinery, except electrical [2]	1,827	1,748	1,521	1,311	1,260	1,345	1,425	1,550	1,693	1,534
38	Electrical machinery [2]	1,655	1,658	1,461	1,182	1,203	1,282	1,364	1,478	1,616	1,527
39	Transportation equipment, except automobiles	1,747	1,728	1,590	1,463	1,310	1,317	1,381	1,496	1,614	1,589
40	Automobiles and automobile equipment	1,813	1,571	1,455	1,234	1,170	1,314	1,489	1,600	1,672	1,653
41	**Wholesale and retail trade**	1,594	1,569	1,495	1,315	1,183	1,228	1,279	1,295	1,352	1,352
42	Wholesale trade	2,072	2,039	1,934	1,672	1,477	1,550	1,640	1,652	1,693	1,686
43	Retail trade and automobile services	1,409	1,384	1,324	1,173	1,066	1,102	1,139	1,159	1,218	1,217
44	**Finance, insurance, and real estate**	2,062	1,973	1,858	1,652	1,555	1,601	1,632	1,713	1,788	1,731
45	Banking	1,969	1,909	1,881	1,817	1,726	1,768	1,830	1,891	1,919	1,941
46	Security and commodity brokers, dealers, and exchanges	3,172	3,097	3,011	2,925	2,742	2,807	2,770	2,941	3,048	2,809
47	Finance, n. e. c.	1,862	1,828	1,767	1,632	1,574	1,660	1,759	1,886	2,009	2,039
48	Insurance carriers	2,268	2,226	2,127	1,800	1,677	1,716	1,745	1,823	1,901	1,846
49	Insurance agents and combination offices	1,975	1,877	1,748	1,581	1,464	1,575	1,679	1,781	1,887	1,880
50	Real estate	1,575	1,446	1,237	979	906	981	1,021	1,078	1,176	1,121
51	**Transportation**	1,643	1,610	1,549	1,373	1,334	1,393	1,492	1,582	1,644	1,676
52	Railroads	1,749	1,717	1,661	1,461	1,439	1,505	1,645	1,724	1,774	1,849
53	Local and highway passenger transportation	1,598	1,587	1,500	1,328	1,219	1,310	1,361	1,433	1,505	1,529
54	Local railways and buslines	1,721	1,719	1,678	1,533	1,422	1,473	1,515	1,583	1,633	1,674
55	Highway passenger transportation, n. e. c.	1,331	1,306	1,137	927	825	957	1,022	1,106	1,223	1,236
56	Highway freight transportation and warehousing	1,298	1,269	1,230	1,179	1,172	1,207	1,264	1,328	1,408	1,456
57	Water transportation	1,275	1,214	1,153	1,038	1,059	1,055	1,088	1,373	1,536	1,299
58	Air transportation (common carriers)	2,624	2,424	2,381	2,346	2,227	2,201	2,195	2,243	2,257	2,269
59	Pipeline transportation	1,927	1,802	1,794	1,691	1,443	1,521	1,575	1,609	1,822	1,909
60	Services allied to transportation	1,424	1,427	1,377	1,224	1,127	1,180	1,269	1,275	1,279	1,276
61	**Communications and public utilities**	1,474	1,497	1,514	1,438	1,351	1,426	1,486	1,522	1,601	1,674
62	Telephone, telegraph, and related services	1,386	1,410	1,436	1,335	1,245	1,338	1,378	1,420	1,481	1,580
63	Radio broadcasting and television	2,513	2,624	2,732	2,740	2,510	2,198	2,089	2,223	2,361	2,497
64	Utilities: electric and gas	1,589	1,603	1,600	1,542	1,453	1,510	1,589	1,615	1,705	1,749
65	Local utilities and public services, n. e. c.	1,116	1,124	1,122	1,081	1,021	1,061	1,116	1,135	1,197	1,228
66	**Services**	1,079	1,066	1,008	918	854	857	873	898	938	942
67	Hotels and other lodging places	1,098	1,097	1,030	908	816	863	878	897	941	946
68	Personal services	1,219	1,200	1,136	996	889	905	915	940	978	992
69	Private households	731	676	584	497	460	473	485	506	558	527
70	Commercial and trade schools and employment agencies	1,650	1,778	1,625	1,500	1,364	1,417	1,400	1,471	1,526	1,500
71	Business services, n. e. c.	2,274	2,412	2,255	1,844	1,653	1,709	1,884	1,915	1,966	1,899
72	Miscellaneous repair services and hand trades	1,814	1,793	1,684	1,464	1,286	1,339	1,429	1,456	1,544	1,552
73	Motion pictures	2,169	2,175	2,179	1,959	1,891	1,844	1,892	1,896	1,972	1,942
74	Amusement and recreation, except motion pictures	1,273	1,268	1,244	1,218	1,185	1,190	1,193	1,232	1,269	1,270
75	Medical and other health services	925	933	919	865	810	801	829	851	876	899
76	Legal services	1,378	1,394	1,333	1,260	1,168	1,160	1,163	1,200	1,231	1,205
77	Engineering and other professional services, n. e. c.	2,314	2,027	1,897	1,714	1,619	1,609	1,600	1,759	1,774	1,909
78	Educational services, n. e. c.	1,312	1,329	1,323	1,279	1,189	1,175	1,162	1,180	1,211	1,228
79	Nonprofit membership organizations, n. e. c.	1,712	1,698	1,653	1,545	1,442	1,440	1,435	1,465	1,497	1,529
80	**Government and government enterprises**	1,551	1,553	1,547	1,477	1,328	1,284	1,292	1,279	1,355	1,336
81	Federal—general government	1,561	1,504	1,564	1,518	1,217	1,180	1,183	1,112	1,189	1,149
82	Civilian, except work relief	1,933	1,768	1,895	1,824	1,673	1,717	1,759	1,896	1,797	1,832
83	Military	1,180	1,192	1,183	1,163	1,072	1,072	1,152	1,152	1,131	1,120
84	Work relief	0	0	0	0	954	971	839	931	1,007	991
85	Federal—government enterprises	1,903	1,907	1,913	1,791	1,577	1,635	1,780	1,869	1,851	1,811
86	State and local—general government	1,499	1,517	1,497	1,427	1,333	1,289	1,283	1,397	1,436	1,467
87	Public education	1,445	1,455	1,463	1,399	1,300	1,265	1,293	1,329	1,367	1,406
88	Nonschool, except work relief	1,549	1,576	1,541	1,479	1,413	1,391	1,425	1,457	1,493	1,517
89	Work relief	0	1,000	1,045	1,057	1,140	1,128	1,035	1,345	1,454	1,333
90	State and local—government enterprises	1,600	1,595	1,573	1,529	1,455	1,438	1,473	1,487	1,536	1,563
91	**Rest of the world**	2,000	1,900	1,900	1,800	1,700	1,800	1,800	1,900	1,900	1,900
92	**Addendum: All private industries**	1,390	1,348	1,241	1,070	1,002	1,056	1,109	1,164	1,240	1,207

1. Average annual earnings per full-time employee are obtained by dividing wages and salaries, as given in table 15, by the number of full-time equivalent employees, as given in table 25. Footnotes to tables 15 and 25 are, therefore, relevant also to table 27. For a full explanation of the concept of "average annual earnings per full-time employee", see *Survey of Current Business*, June 1945, pp. 17–18.

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Table 27.—*Average Annual Earnings per Full-Time Employee, by Industry, 1939–53* [1]

[Dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
1,264	**1,300**	**1,443**	**1,709**	**1,951**	**2,108**	**2,189**	**2,356**	**2,589**	**2,793**	**2,850**	**3,008**	**3,247**	**3,428**	**3,590**	1
385	**408**	**498**	**673**	**867**	**1,027**	**1,127**	**1,207**	**1,288**	**1,345**	**1,319**	**1,362**	**1,534**	**1,629**	**1,653**	2
362	385	473	643	837	992	1,089	1,166	1,243	1,296	1,268	1,303	1,469	1,560	1,577	3
981	1,010	1,162	1,410	1,616	1,743	1,855	1,950	2,104	2,233	2,209	2,308	2,485	2,566	2,705	4
1,367	**1,388**	**1,579**	**1,796**	**2,162**	**2,499**	**2,621**	**2,719**	**3,113**	**3,387**	**3,207**	**3,448**	**3,891**	**4,069**	**4,364**	5
1,515	1,610	1,771	2,045	2,333	2,458	2,551	2,636	3,000	3,327	3,400	3,567	4,098	4,544	4,879	6
1,409	1,297	1,467	1,753	2,119	2,525	2,685	2,890	3,125	3,420	2,896	3,107	3,386	3,500	3,389	7
1,197	1,235	1,500	1,715	2,115	2,535	2,629	2,724	3,212	3,383	2,930	3,268	3,831	3,780	4,198	8
1,684	1,714	1,779	1,940	2,299	2,601	2,762	2,819	3,157	3,584	3,746	3,861	4,143	4,471	4,643	9
1,178	1,217	1,375	1,634	1,911	2,089	2,205	2,371	2,663	2,928	3,021	3,255	3,587	3,766	4,019	10
1,268	**1,330**	**1,635**	**2,191**	**2,503**	**2,602**	**2,600**	**2,537**	**2,829**	**3,119**	**3,230**	**3,354**	**3,735**	**4,022**	**4,244**	11
1,363	**1,432**	**1,653**	**2,023**	**2,349**	**2,517**	**2,517**	**2,517**	**2,793**	**3,040**	**3,092**	**3,360**	**3,612**	**3,834**	**4,051**	12
1,372	1,385	1,472	1,650	1,878	2,044	2,170	2,385	2,669	2,853	2,925	3,068	3,307	3,478	3,676	13
916	1,000	1,117	1,240	1,431	1,580	1,676	1,779	1,950	2,040	2,089	2,258	2,447	2,592	2,709	14
960	986	1,159	1,385	1,556	1,681	1,817	2,056	2,338	2,584	2,564	2,762	2,898	2,987	3,026	15
1,025	1,022	1,159	1,331	1,595	1,788	1,943	2,192	2,327	2,442	2,385	2,495	2,585	2,653	2,747	16
1,042	1,034	1,146	1,332	1,571	1,702	1,779	1,984	2,205	[2] 2,399	2,446	2,647	2,849	3,052	3,170	17
									2,242	2,272	2,477	2,681	2,876	2,975	18
									2,777	2,837	3,011	3,242	3,434	3,570	19
956	934	1,026	1,205	1,446	1,564	1,618	1,813	2,046							20
1,138	1,158	1,304	1,514	1,743	1,892	1,988	2,187	2,395							21
1,414	1,458	1,646	1,850	2,076	2,254	2,365	2,535	2,903	3,196	3,232	3,479	3,763	3,974	4,169	22
1,718	1,764	1,852	1,971	2,156	2,376	2,576	2,862	3,210	3,499	3,655	3,800	4,003	4,220	4,420	23
1,611	1,723	1,893	2,131	2,386	2,608	2,670	2,765	3,119	[2] 3,399	3,539	3,768	4,075	4,297	4,560	24
1,852	1,954	2,113	2,410	2,806	3,046	3,097	3,183	3,610	[2] 4,054	4,174	4,315	4,629	4,952	5,204	25
1,548	1,583	1,778	2,116	2,478	2,699	2,722	2,826	3,085	3,200	3,228	3,543	3,819	4,127	4,290	26
1,038	1,041	1,236	1,447	1,659	1,831	1,972	2,131	2,313	2,414	2,405	2,545	2,670	2,861	2,940	27
1,359	1,393	1,554	1,771	2,024	2,174	2,249	2,380	2,672	2,925	3,008	3,239	3,595	3,702	3,956	28
1,508	1,590	1,841	2,210	2,560	2,705	2,720	2,649	2,972	[2] 3,245	3,287	3,527	3,904	4,134	4,376	29
									3,431	3,435	3,728	4,162	4,401	4,712	30
									3,247	3,324	3,532	3,886	4,142	4,363	31
									3,157	3,291	3,530	3,892	4,147	4,355	32
									2,790	2,826	2,987	3,219	3,372	3,527	33
1,549	1,643	1,923	2,283	2,637	2,781	2,792	2,696	3,063							34
1,521	1,594	1,824	2,230	2,581	2,724	2,735	2,717	2,969							35
1,337	1,380	1,540	1,882	2,176	2,320	2,401	2,442	2,657							36
1,681	1,813	2,144	2,630	2,857	2,975	2,930	2,862	3,112	[2] 3,433	3,477	3,755	4,228	4,466	4,692	37
1,601	1,688	1,919	2,287	2,466	2,578	2,584	2,615	2,876	[2] 3,153	3,25	3,370	3,714	3,959	4,133	38
1,667	1,764	2,160	2,695	2,982	3,188	3,175	2,971	3,146	3,594	3,59	3,736	4,251	4,470	4,761	39
1,762	1,934	2,243	2,880	2,978	3,103	2,968	2,814	3,143	3,381	3,608	4,010	4,224	4,608	4,947	40
1,360	**1,382**	**1,478**	**1,608**	**1,781**	**1,946**	**2,114**	**2,378**	**2,632**	**2,832**	**2,899**	**3,034**	**3,225**	**3,338**	**3,476**	41
1,698	1,754	1,943	2,177	2,416	2,600	2,751	3,021	3,322	3,566	3,619	3,834	4,138	4,284	4,465	42
1,224	1,236	1,299	1,395	1,555	1,709	1,879	2,141	2,368	2,547	2,623	2,729	2,875	2,974	3,092	43
1,729	**1,725**	**1,777**	**1,885**	**2,041**	**2,191**	**2,347**	**2,570**	**2,740**	**2,947**	**3,046**	**3,244**	**3,426**	**3,592**	**3,761**	44
1,969	1,963	1,977	2,069	2,134	2,256	2,408	2,650	2,860	3,039	3,173	3,340	3,506	3,656	3,798	45
2,806	2,845	3,040	3,073	3,947	4,179	5,286	5,226	4,714	4,958	5,043	6,122	6,132	6,094	6,130	46
2,102	2,114	2,177	2,352	2,605	2,808	2,914	3,213	3,412	3,670	3,795	3,893	4,194	4,390	4,543	47
1,826	1,838	1,910	2,044	2,224	2,380	2,490	2,655	2,811	2,953	3,082	3,237	3,434	3,647	3,855	48
1,882	1,890	1,975	2,140	2,331	2,513	2,661	2,923	3,103	3,364	3,478	3,711	3,896	4,056	4,262	49
1,144	1,145	1,198	1,285	1,412	1,550	1,642	1,864	2,052	2,317	2,301	2,481	2,595	2,684	2,792	50
1,723	**1,756**	**1,885**	**2,183**	**2,493**	**2,679**	**2,734**	**2,948**	**3,145**	**3,440**	**3,556**	**3,699**	**4,033**	**4,254**	**4,441**	51
1,877	1,906	2,030	2,303	2,585	2,714	2,711	3,055	3,216	3,581	3,706	3,789	4,171	4,342	4,407	52
1,569	1,559	1,664	1,990	2,280	2,458	2,596	2,689	2,833	2,935	2,987	3,096	3,283	3,429	3,556	53
1,701	1,700	1,795	2,018	2,288	2,468	2,619	2,729	2,965	3,146	3,277	3,376	3,623	3,833	4,000	54
1,304	1,320	1,473	1,952	2,270	2,446	2,570	2,648	2,707	2,766	2,755	2,873	3,025	3,139	3,241	55
1,521	1,551	1,630	1,859	2,147	2,374	2,545	2,752	3,063	3,355	3,545	3,811	4,069	4,375	4,709	56
1,557	1,648	1,854	2,729	3,388	3,624	3,583	3,415	3,748	4,006	4,129	4,413	4,779	5,214	6,022	57
2,328	2,239	2,258	2,265	2,457	2,766	2,830	2,829	3,265	3,662	3,873	4,089	4,344	4,650	4,864	58
1,930	1,928	2,099	2,280	2,720	3,038	3,240	3,259	3,750	4,100	4,172	4,296	4,679	5,000	5,250	59
1,271	1,365	1,579	1,782	2,100	2,314	2,386	2,550	2,762	2,852	2,911	3,077	3,459	3,676	3,882	60
1,692	**1,718**	**1,766**	**1,883**	**2,075**	**2,248**	**2,425**	**2,567**	**2,792**	**3,002**	**3,153**	**3,321**	**3,554**	**3,802**	**4,034**	61
1,600	1,610	1,633	1,715	1,878	2,035	2,246	2,413	2,583	2,776	2,907	3,033	3,218	3,441	3,645	62
2,427	2,554	2,581	2,667	2,929	3,333	3,515	3,972	4,073	4,234	4,469	4,698	5,175	5,559	5,855	63
1,766	1,795	1,870	2,040	2,284	2,467	2,596	2,697	2,994	3,223	3,383	3,571	3,849	4,123	4,387	64
1,240	1,286	1,344	1,544	1,715	1,855	1,951	2,040	2,230	2,380	2,519	2,606	2,776	2,988	3,191	65
952	**953**	**1,020**	**1,132**	**1,347**	**1,538**	**1,688**	**1,872**	**2,005**	**2,112**	**2,166**	**2,220**	**2,362**	**2,529**	**2,650**	66
958	997	1,025	1,097	1,269	1,455	1,612	1,779	1,924	2,031	2,094	2,150	2,246	2,355	2,435	67
1,034	1,042	1,075	1,196	1,384	1,570	1,709	1,854	1,978	2,096	2,154	2,236	2,348	2,474	2,585	68
544	554	601	706	919	1,140	1,312	1,411	1,463	1,498	1,502	1,509	1,587	1,686	1,777	69
1,529	1,625	1,833	2,175	2,520	2,714	2,571	2,520	2,903	3,147	3,243	3,410	3,421	3,514	3,742	70
1,886	1,889	1,967	2,072	2,332	2,584	2,739	2,861	3,023	3,226	3,309	3,457	3,699	3,878	4,046	71
1,603	1,579	1,891	2,152	2,641	2,901	2,810	2,766	2,974	3,150	3,236	3,441	3,845	4,097	4,325	72
1,971	1,948	2,016	2,124	2,250	2,379	2,567	2,978	3,031	2,911	2,912	2,915	3,059	3,190	3,244	73
1,277	1,280	1,292	1,328	1,461	1,663	1,888	2,185	2,345	2,455	2,492	2,566	2,719	2,900	3,052	74
908	927	955	1,036	1,127	1,262	1,401	1,605	1,821	1,952	2,044	2,137	2,260	2,394	2,503	75
1,198	1,224	1,265	1,324	1,423	1,653	1,856	1,757	1,971	2,093	2,218	2,301	2,445	2,618	2,773	76
1,973	1,902	2,245	2,654	3,063	3,237	3,258	3,280	3,495	3,745	3,931	4,106	4,531	4,847	5,054	77
1,234	1,240	1,264	1,344	1,469	1,562	1,641	1,802	2,113	2,185	2,225	2,290	2,372	2,521	2,625	78
1,546	1,408	1,379	1,482	1,679	1,795	1,876	2,070	2,172	2,339	2,490	2,626	2,807	2,997	3,161	79
1,337	**1,344**	**1,388**	**1,623**	**1,777**	**1,924**	**2,052**	**2,341**	**2,574**	**2,758**	**2,863**	**3,015**	**3,114**	**3,270**	**3,351**	80
1,137	1,127	1,240	1,632	1,792	1,929	2,057	2,437	2,793	2,930	2,983	3,205	3,144	3,252	3,290	81
1,843	1,894	1,970	2,226	2,628	2,677	2,646	2,736	3,074	3,168	3,362	3,504	3,778	3,975	4,103	82
1,135	1,026	1,113	1,485	1,565	1,763	1,931	2,277	2,543	2,704	2,648	2,951	2,780	2,877	2,879	83
939	883	889	965	1,064											84
1,819	1,820	1,777	1,676	1,778	2,372	2,412	2,644	2,865	3,095	3,284	3,512	3,797	4,092	4,195	85
1,471	1,497	1,522	1,574	1,687	1,797	1,938	2,091	2,298	2,533	2,668	2,755	2,947	3,142	3,277	86
1,403	1,435	1,462	1,512	1,608	1,730	1,822	2,025	2,261	2,538	2,671	2,794	2,998	3,169	3,315	87
1,530	1,552	1,574	1,628	1,756	1,855	1,986	2,144	2,327	2,528	2,665	2,725	2,906	3,119	3,245	88
909	909	1,000	1,000												89
1,578	1,610	1,734	1,908	2,142	2,255	2,405	2,590	2,818	3,023	3,182	3,227	3,464	3,688	3,888	90
2,000	**2,000**	**2,000**	**2,100**	**2,100**	**2,200**	**2,400**	**3,400**	**3,400**	**3,200**	**3,200**	**3,600**	**4,000**	**4,167**	**4,000**	91
1,250	**1,291**	**1,454**	**1,731**	**2,018**	**2,190**	**2,253**	**2,359**	**2,591**	**2,798**	**2,848**	**3,007**	**3,276**	**3,465**	**3,643**	92

2. See note 1, table 15 and note 2, table 25. Estimates of 1948 average annual earnings approximately comparable to those shown for 1947 in the specified industries are as follows: Lumber and furniture products, $2,411; Chemicals and allied products, $3,389; Products of petroleum and coal, $4,072; Metals, metal products and miscellaneous, $3,252; Machinery, except electrical, $3,431; and Electrical machinery, $3,154.

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Table 28.—*Number of Persons Engaged in Production, by Industry, 1929–38*[1]

[Data in thousands]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total**	46,216	44,080	41,042	37,565	38,052	41,398	42,908	45,960	47,157	45,283
2	**Agriculture, forestry, and fisheries**	9,205	8,983	8,998	8,862	8,925	9,009	9,140	9,050	8,864	8,543
3	Farms	8,969	8,756	8,766	8,654	8,722	8,816	8,929	8,852	8,615	8,318
4	Agricultural services, forestry, and fisheries	236	227	232	208	203	193	211	198	249	225
5	**Mining**	1,017	956	839	701	724	857	876	934	993	897
6	Metal mining	130	113	86	59	60	72	84	105	132	108
7	Anthracite mining	151	144	128	105	94	108	101	100	100	91
8	Bituminous and other softcoal mining	476	457	424	364	379	438	450	464	478	424
9	Crude petroleum and natural gas	168	157	127	114	133	173	175	190	202	202
10	Nonmetallic mining and quarrying	92	85	74	59	58	66	66	75	81	72
11	**Contract construction**	2,306	2,183	1,983	1,644	1,383	1,460	1,514	1,763	1,738	1,686
12	**Manufacturing**	10,556	9,418	7,983	6,746	7,273	8,441	8,983	9,732	10,686	9,229
13	Food and kindred products	1,078	1,053	941	863	961	1,108	1,127	1,182	1,254	1,198
14	Tobacco manufactures	147	134	121	109	103	113	109	110	112	109
15	Textile-mill products	1,264	1,097	1,027	908	1,083	1,141	1,198	1,220	1,265	1,094
16	Apparel and other finished fabric products	793	740	687	604	642	710	779	841	855	820
17	Lumber and furniture products[2]	1,062	855	633	493	556	618	700	791	869	752
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	620	480	309	229	274	326	367	423	467	406
21	Furniture and finished lumber products	442	375	324	264	282	292	333	368	402	346
22	Paper and allied products	285	278	251	227	245	281	290	301	326	302
23	Printing, publishing, and allied industries	630	632	561	492	460	504	523	568	619	594
24	Chemicals and allied products[2]	401	380	332	293	323	372	382	396	434	386
25	Products of petroleum and coal[2]	128	125	105	97	99	115	121	124	132	131
26	Rubber products	176	142	120	110	124	141	134	142	154	127
27	Leather and leather products	372	346	317	301	321	346	353	360	377	355
28	Stone, clay, and glass products	402	349	280	206	214	264	283	320	359	313
29	Metals, metal products, and miscellaneous[2]	1,839	1,631	1,306	1,046	1,124	1,366	1,496	1,695	1,923	1,561
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	1,219	1,094	859	688	750	919	998	1,149	1,319	1,028
35	Nonferrous metals and their products	330	273	225	177	184	223	252	280	316	259
36	Miscellaneous manufacturing	290	264	222	181	190	224	246	266	288	274
37	Machinery, except electrical[2]	769	676	513	376	396	509	581	668	795	630
38	Electrical machinery[2]	519	430	332	242	251	319	338	385	461	353
39	Transportation equipment, except automobiles	150	147	105	80	71	101	105	137	171	141
40	Automobiles and automobile equipment	541	403	352	299	300	433	464	492	580	363
41	**Wholesale and retail trade**	7,821	7,524	7,040	6,453	6,431	6,961	7,180	7,639	8,162	8,075
42	Wholesale trade	1,744	1,685	1,533	1,395	1,393	1,530	1,572	1,690	1,857	1,857
43	Retail trade and automobile services	6,077	5,839	5,507	5,058	5,038	5,431	5,608	5,949	6,305	6,218
44	**Finance, insurance, and real estate**	1,575	1,551	1,488	1,423	1,373	1,401	1,425	1,475	1,520	1,520
45	Banking	386	376	346	312	282	285	278	277	286	287
46	Security and commodity brokers, dealers and exchanges	143	118	103	95	104	98	89	100	98	83
47	Finance, n. e. c.	137	135	127	121	115	113	115	121	123	109
48	Insurance carriers	358	368	361	355	341	348	364	368	383	396
49	Insurance agents and combination offices	183	186	182	179	171	172	171	174	175	179
50	Real estate	368	368	369	361	360	385	408	435	455	466
51	**Transportation**	3,034	2,795	2,444	2,100	2,008	2,077	2,102	2,218	2,333	2,073
52	Railroads	1,845	1,659	1,405	1,155	1,084	1,122	1,113	1,194	1,251	1,061
53	Local and highway passenger transportation	438	414	382	348	326	316	315	319	322	300
54	Local railways and buslines	280	263	239	214	199	201	202	204	207	187
55	Highway passenger transportation, n. e. c.	158	151	143	134	127	115	113	115	115	113
56	Highway freight transportation and warehousing	381	381	369	355	354	373	397	414	437	421
57	Water transportation	168	160	145	131	136	146	150	144	153	136
58	Air transportation (common carriers)	2	4	5	6	6	6	8	10	12	13
59	Pipeline transportation	25	24	21	17	20	22	23	25	26	23
60	Services allied to transportation	175	153	117	88	82	92	96	112	132	119
61	**Communications and public utilities**	1,034	1,034	933	831	787	802	806	853	901	865
62	Telephone, telegraph, and related services	535	525	460	413	384	380	377	394	423	401
63	Radio broadcasting and television	4	6	8	9	8	11	13	15	18	18
64	Utilities: electric and gas	465	473	437	384	371	386	392	418	437	423
65	Local utilities and public services, n. e. c.	30	30	28	25	24	25	24	26	23	23
66	**Services**	6,484	6,318	5,934	5,443	5,275	5,658	5,850	6,167	6,429	6,241
67	Hotels and other lodging places	518	504	465	417	403	453	469	494	520	522
68	Personal services	1,008	996	941	886	860	910	950	994	1,034	1,008
69	Private households	2,348	2,193	1,962	1,680	1,592	1,797	1,878	2,008	2,128	1,942
70	Commercial and trade schools and employment agencies	24	22	20	15	14	15	18	20	22	21
71	Business services, n. e. c.	209	207	192	198	204	231	233	265	269	276
72	Miscellaneous repair services and hand trades	264	281	299	315	312	309	311	311	311	314
73	Motion pictures	153	153	147	128	124	141	155	171	184	178
74	Amusement and recreation, except motion pictures	295	277	248	200	180	193	197	212	230	212
75	Medical and other health services	750	749	725	691	679	695	711	750	785	807
76	Legal services	194	202	212	214	217	216	223	225	230	236
77	Engineering and other professional services, n. e. c.	83	85	77	69	69	72	74	78	80	82
78	Educational services, n. e. c.	287	291	292	289	286	287	293	297	304	312
79	Nonprofit membership organizations, n. e. c.	351	358	354	341	335	339	338	342	332	331
80	**Government and government enterprises**	3,184	3,318	3,399	3,361	3,872	4,731	5,031	6,148	5,530	6,153
81	Federal—general government	528	571	553	541	916	1,394	1,440	3,145	2,457	2,963
82	Civilian, except work relief	267	310	296	290	294	357	449	521	517	507
83	Military	261	261	257	251	249	250	263	290	313	326
84	Work relief	0	0	0	0	373	787	728	2,334	1,627	2,130
85	Federal—government enterprises	299	300	298	297	300	323	336	343	349	366
86	State and local—general government	2,247	2,331	2,431	2,419	2,557	2,909	3,145	2,541	2,599	2,698
87	Public education	1,082	1,110	1,120	1,109	1,084	1,083	1,112	1,134	1,165	1,196
88	Nonschool, except work relief	1,165	1,217	1,267	1,223	1,174	1,223	1,268	1,352	1,401	1,496
89	Work relief	0	4	44	87	299	603	765	55	33	6
90	State and local—government enterprises	110	116	117	104	99	105	110	119	125	126
91	**Rest of the world**	0	0	1	1	1	1	1	1	.1	1
92	**Addendum: All private industries**	43,032	40,762	37,642	34,203	34,179	36,666	37,876	39,831	41,626	39,129

1. This series measures man-years of full-time employment by persons working for wages or salaries (as shown in table 25) and by active proprietors of unincorporated enterprises devoting the major portion of their time to the business. "Persons engaged" falls short of total man-years of full-time employment because of the exclusion from the data of unpaid family workers. This exclusion is due to unresolved difficulties in their definition and measurement.

2. For certain manufacturing industries, the 1929–47 data shown are not comparable with those given for 1948 and subsequent years. The discontinuities stem from changes in the industrial classification system in the source data underlying the estimates. (See the Introduction to Part III.) Of the series principally involved here, 5 have been terminated in 1947, the others are indicated by footnotes.

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Table 28.—*Number of Persons Engaged in Production, by Industry, 1939–53* [1]

[Data in thousands]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
46,605	**48,486**	**53,112**	**57,992**	**63,670**	**64,694**	**63,062**	**57,379**	**57,652**	**58,586**	**57,165**	**58,685**	**62,270**	**63,485**	**64,512**	1
8,273	**8,044**	**7,937**	**7,775**	**7,568**	**7,310**	**7,126**	**7,085**	**7,042**	**6,988**	**6,769**	**6,477**	**6,080**	**5,946**	**5,826**	2
8,058	7,832	7,730	7,558	7,364	7,084	6,899	6,838	6,785	6 724	6,508	6,214	5,804	5,656	5,540	3
215	212	207	217	204	226	227	247	257	264	261	263	276	290	286	4
870	**965**	**1,015**	**1,021**	**949**	**905**	**855**	**901**	**973**	**1,024**	**949**	**952**	**958**	**931**	**889**	5
116	131	144	141	138	111	93	93	104	107	100	101	106	107	110	6
90	93	94	91	85	81	74	83	82	84	79	78	73	66	56	7
389	447	461	487	439	419	392	397	437	462	408	406	382	342	297	8
197	206	216	197	193	213	220	235	250	269	261	264	287	303	312	9
78	88	100	105	94	81	76	93	100	102	101	103	110	113	114	10
1,864	**1,941**	**2,449**	**2,859**	**2,172**	**1,646**	**1,700**	**2,551**	**3,007**	**3,258**	**3,112**	**3,370**	**3,667**	**3,697**	**3,632**	11
10,086	**11,009**	**13,274**	**15,430**	**17,556**	**17,218**	**15,360**	**14,681**	**15,406**	**15,468**	**14,369**	**15,154**	**16,310**	**16,598**	**17,414**	12
1,211	1,258	1,341	1,424	1,442	1,479	1,458	1,534	1,562	1,559	1,542	1,550	1,581	1,578	1,583	13
108	105	103	97	103	101	103	105	101	100	102	98	104	104	104	14
1,217	1,226	1,386	1,392	1,325	1,222	1,169	1,318	1,331	1,370	1,233	1,296	1,276	1,199	1,192	15
920	936	1,062	1,099	1,097	1,078	1,054	1,149	1,157	1,203	1,185	1,211	1,217	1,233	1,264	16
830	923	1,088	1,095	1,026	986	948	1,092	1,246	[2] 1,222	1,091	1,205	1,246	1,190	1,167	17
									867	760	826	877	820	789	18
									355	331	379	369	370	378	19
441	511	620	644	597	571	537	596	684							20
389	412	468	451	429	415	411	496	562							21
315	337	379	381	395	392	396	450	465	471	454	485	511	504	532	22
595	586	599	573	567	568	588	689	728	744	750	764	776	789	814	23
417	473	584	785	854	795	781	710	727	[3] 696	663	681	752	772	810	24
135	151	168	183	186	197	207	219	228	[3] 243	236	238	251	252	256	25
146	156	189	189	225	241	236	266	271	254	232	245	265	267	279	26
374	369	412	405	378	358	360	415	410	406	391	396	382	385	388	27
347	373	437	441	418	391	387	483	513	533	497	528	563	543	555	28
1,752	2,016	2,490	2,907	3,511	3,435	3,045	2,732	2,910	[4] 2,997	2,692	2,947	3,226	3,270	3,568	29
									1,234	1,093	1,194	1,320	1,255	1,341	30
									1,040	934	1,036	1,146	1,239	1,385	31
									251	229	248	287	308	331	32
									472	436	469	473	468	511	33
1,159	1,335	1,646	1,965	2,465	2,430	2,079	1,678	1,871							34
288	333	415	467	515	500	466	507	491							35
305	348	429	475	531	505	500	547	548							36
666	798	1,096	1,375	1,469	1,418	1,346	1,407	1,563	[3] 1,554	1,330	1,375	1,635	1,711	1,741	37
399	456	608	758	961	1,038	927	849	931	[3] 877	767	876	1,004	1,089	1,222	38
186	302	676	1,750	3,273	3,177	2,046	595	513	472	460	448	669	912	1,017	39
468	544	656	576	326	342	309	668	750	767	744	811	852	800	922	40
8,382	**8,783**	**9,262**	**8,957**	**8,560**	**8,534**	**8,914**	**10,392**	**11,001**	**11,310**	**11,244**	**11,428**	**11,658**	**11,816**	**12,051**	41
1,942	2,015	2,136	2,041	1,912	1,936	2,052	2,419	2,625	2,712	2,669	2,709	2,802	2,867	2,945	42
6,440	6,768	7,126	6,916	6,648	6,598	6,862	7,973	8,376	8,598	8,575	8,719	8,856	8,949	9,106	43
1,560	**1,611**	**1,647**	**1,636**	**1,575**	**1,561**	**1,602**	**1,813**	**1,866**	**1,927**	**1,934**	**1,999**	**2,069**	**2,134**	**2,213**	44
289	297	310	320	329	337	344	375	394	408	412	421	448	475	501	45
77	73	64	54	50	50	52	66	61	61	59	62	66	67	68	46
105	113	122	114	93	85	88	102	111	116	122	133	141	154	165	47
414	425	435	428	406	392	404	475	514	551	573	594	615	638	671	48
181	180	182	181	172	166	171	204	210	220	224	236	242	247	257	49
494	523	534	539	525	531	543	591	576	571	544	553	557	553	551	50
2,169	**2,256**	**2,447**	**2,586**	**2,789**	**2,960**	**3,018**	**3,039**	**3,045**	**3,000**	**2,803**	**2,842**	**2,985**	**2,960**	**2,958**	51
1,114	1,160	1,285	1,429	1,534	1,616	1,628	1,564	1,543	1,503	1,349	1,373	1,433	1,382	1,358	52
296	293	293	314	355	372	381	435	442	421	409	386	332	378	373	53
184	170	161	169	184	188	189	203	198	171	166	157	151	144	141	54
112	123	132	145	171	184	192	232	244	250	243	229	231	234	232	55
444	477	539	549	525	498	487	552	592	622	621	672	716	735	766	56
142	144	146	109	141	208	250	203	166	162	142	130	144	144	138	57
15	19	24	34	46	47	53	82	83	80	79	79	90	103	110	58
22	23	24	25	25	26	25	27	28	30	29	27	28	29	28	59
136	140	136	126	163	193	194	176	191	182	174	175	192	189	185	60
871	**901**	**957**	**951**	**917**	**896**	**921**	**1,111**	**1,190**	**1,281**	**1,293**	**1,282**	**1,321**	**1,360**	**1,399**	61
403	411	451	476	492	488	502	616	646	695	690	669	694	721	746	62
21	23	27	28	29	31	34	36	42	48	51	55	59	61	64	63
423	443	454	422	373	353	359	429	470	506	520	527	536	545	556	64
24	24	25	25	23	24	26	30	32	32	32	31	32	33	33	65
6,396	**6,707**	**6,784**	**6,926**	**6,598**	**6,522**	**6,549**	**7,010**	**7,385**	**7,532**	**7,545**	**7,808**	**7,965**	**8,008**	**8,140**	66
526	538	557	561	573	584	584	632	636	637	629	629	632	634	636	67
996	1,050	1,095	1,115	1,090	1,053	1,073	1,210	1,243	1,235	1,211	1,203	1,188	1,171	1,161	68
2,075	2,200	2,057	2,092	1,739	1,655	1,632	1,503	1,605	1,590	1,606	1,768	1,785	1,695	1,717	69
20	19	29	47	58	41	26	30	36	39	43	45	44	41	37	70
290	296	314	310	305	320	343	418	455	487	484	497	522	556	586	71
300	293	320	328	378	394	399	504	535	512	477	474	498	516	513	72
179	181	191	200	211	221	222	236	237	235	236	235	231	227	220	73
223	240	256	255	234	232	232	275	284	293	289	289	235	284	288	74
813	841	861	878	894	895	892	983	1,071	1,127	1,163	1,238	1,319	1,386	1,465	75
242	244	245	228	211	200	195	210	212	216	219	222	228	232	238	76
86	91	103	129	110	104	112	131	144	160	155	157	183	210	220	77
318	324	329	335	340	344	346	364	387	450	480	490	484	481	481	78
328	390	427	448	455	479	493	514	540	551	553	561	566	575	578	79
6,133	**6,267**	**7,337**	**9,846**	**14,979**	**17,137**	**17,012**	**8,791**	**6,732**	**6,793**	**7,142**	**7,368**	**9,252**	**10,029**	**9,985**	80
2,898	2,980	3,984	6,457	11,573	13,885	13,722	5,276	3,015	2,864	3,020	3,130	4,918	5,528	5,334	81
560	642	944	1,702	2,497	2,520	2,420	1,842	1,416	1,396	1,416	1,436	1,794	1,890	1,789	82
342	549	1,676	4,154	9,029	11,365	11,302	3,434	1,599	1,468	1,604	1,694	3,124	3,638	3,545	83
1,996	1,789	1,364	601	47											84
375	389	431	522	616	481	495	526	483	505	528	516	527	555	543	85
2,732	2,752	2,764	2,714	2,635	2,622	2,647	2,828	3,053	3,209	3,369	3,484	3,557	3,677	3,830	86
1,224	1,235	1,249	1,245	1,227	1,216	1,224	1,276	1,364	1,418	1,491	1,536	1,581	1,657	1,734	87
1,497	1,506	1,509	1,467	1,408	1,406	1,423	1,552	1,689	1,791	1,878	1,948	1,976	2,020	2,096	88
11	11	6	2												89
128	146	158	153	155	149	148	161	181	215	225	238	250	269	278	90
1	**2**	**3**	**5**	**7**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**6**	**5**	91
40,471	**42,217**	**45,772**	**48,141**	**48,684**	**47,552**	**46,045**	**48,583**	**50,915**	**51,788**	**50,018**	**51,312**	**53,013**	**53,450**	**54,522**	92

3. See note 2. Estimates for 1948 of persons engaged in production comparable to those shown in the specified industries are as follows (in thousands): Lumber and furniture products, 1,256; Chemicals and allied products, 727; Products of petroleum and coal, 235; Metals, metal products, and miscellaneous, 2,898; Machinery, except electrical, 1,575; and Electrical machinery, 891.

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Table 29.—*Corporate Sales, by Industry, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**All industries, total** [2]	138,640	118,294	92,365	69,185	73,027	89,553	101,953	119,462	128,884	108,551
2	**Agriculture, forestry, and fisheries**	731	522	413	319	338	469	509	628	677	571
3	Farms	657	468	380	302	314	444	477	585	628	522
4	Agricultural services, forestry, and fisheries	74	54	33	17	24	25	32	43	49	49
5	**Mining**	3,700	2,707	2,052	1,511	1,817	2,293	2,413	2,836	3,295	2,594
6	Metal mining	1,157	728	448	238	375	375	504	671	939	598
7	Anthracite mining	300	293	327	252	251	258	225	241	209	197
8	Bituminous and other soft-coal mining	937	828	591	442	491	684	729	845	889	685
9	Crude petroleum and natural gas	871	470	408	397	515	759	730	806	969	895
10	Nonmetallic mining and quarrying	435	388	278	182	185	217	225	273	289	219
11	**Contract construction**	2,802	2,789	2,035	1,290	962	1,110	1,334	1,793	2,208	1,926
12	**Manufacturing**	70,305	58,484	42,759	30,995	34,303	40,131	46,782	55,959	61,459	50,031
13	Food and kindred products	13,279	11,822	9,212	7,142	7,744	9,266	10,491	11,895	12,542	11,615
14	Tobacco manufactures	1,254	1,151	1,167	1,025	927	1,046	1,089	1,200	1,283	1,291
15	Textile-mill products	5,565	4,179	3,383	2,456	3,074	3,402	3,915	4,445	4,471	3,210
16	Apparel and other finished fabric products	2,553	2,144	1,836	1,366	1,516	1,784	1,926	2,266	2,234	2,114
17	Lumber and furniture products [3]	2,793	1,984	1,334	835	983	1,094	1,325	1,761	1,945	1,769
18	Lumber and wood products, except furniture										
19	Furniture and fixtures										
20	Lumber and timber basic products	1,485	1,052	622	380	456	504	637	830	968	740
21	Furniture and finished lumber products	1,308	932	712	455	527	590	688	931	977	1,029
22	Paper and allied products	1,732	1,515	1,221	966	1,126	1,285	1,459	1,687	1,846	1,512
23	Printing, publishing, and allied industries	2,777	2,562	2,213	1,727	1,594	1,804	1,963	2,165	2,363	2,163
24	Chemicals and allied products [3]	4,025	4,878	2,770	2,170	2,251	2,726	3,119	3,783	4,088	3,657
25	Products of petroleum and coal [3]	5,665	5,708	4,131	3,951	3,794	3,620	3,952	4,419	5,086	4,956
26	Rubber products	1,355	1,042	771	595	665	682	730	903	1,039	852
27	Leather and leather products	1,715	1,368	1,092	828	974	1,022	1,153	1,270	1,319	1,130
28	Stone, clay, and glass products	1,619	1,380	1,013	651	701	819	989	1,345	1,502	1,206
29	Metals, metal products, and miscellaneous [3]	12,951	9,452	6,358	3,803	4,658	5,762	6,951	8,941	10,580	6,416
30	Primary metal industries										
31	Fabricated metal products, including ordnance										
32	Instruments										
33	Miscellaneous manufacturing										
34	Iron and steel and their products, including ordnance	8,254	5,856	3,716	1,986	2,574	3,170	3,952	5,462	6,518	4,282
35	Nonferrous metals and their products	2,664	1,984	1,378	940	1,169	1,585	1,797	2,230	2,693	1,240
36	Miscellaneous manufacturing	2,033	1,612	1,264	877	915	1,007	1,202	1,249	1,369	894
37	Machinery, except electrical [3]	4,531	3,498	2,295	1,342	1,458	1,898	2,419	3,358	4,144	3,006
38	Electrical machinery [3]	1,689	1,327	913	532	536	764	923	1,263	1,554	1,565
39	Transportation equipment, except automobiles	711	605	319	195	168	295	322	555	824	624
40	Automobiles and automobile equipment	6,091	3,869	2,731	1,411	2,134	2,862	4,056	4,703	4,639	2,945
41	**Wholesale and retail trade**	43,108	36,897	30,242	22,903	23,978	32,813	37,417	43,145	45,383	38,575
42	Wholesale trade	20,747	17,621	13,787	10,398	11,166	17,731	20,479	23,771	24,391	19,577
43	Retail trade and automobile services	22,361	19,276	16,455	12,505	12,812	15,082	16,938	19,374	20,992	18,998
44	**Transportation**	9,688	8,453	6,985	5,525	5,470	6,139	6,453	7,319	7,683	6,682
45	Railroads	6,933	5,840	4,737	3,584	3,520	3,702	3,853	4,511	4,630	4,138
46	Local and highway passenger transportation	1,112	1,041	880	787	731	930	948	1,001	1,009	802
47	Highway freight transportation and warehousing	613	628	559	461	497	548	619	692	786	653
48	Water transportation	476	408	339	308	350	559	599	627	703	586
49	Air transportation (common carriers)	34	44	67	61	59	32	44	52	63	65
50	Pipeline transportation	350	318	248	196	175	216	219	244	275	257
51	Services allied to transportation	170	174	155	128	138	152	171	192	217	181
52	**Communications and public utilities**	4,994	5,232	5,067	4,485	4,222	4,251	4,491	4,782	5,037	4,937
53	Telephone, telegraph, and related services	1,856	1,851	1,660	1,376	1,229	1,112	1,172	1,266	1,337	1,336
54	Radio broadcasting and television	172	125	130	96	92	79	95	116	123	123
55	Utilities: electric and gas	2,851	3,136	3,129	2,873	2,770	2,947	3,111	3,283	3,458	3,360
56	Local utilities and public services, n. e. c.	115	120	148	140	131	113	113	117	119	118
57	**Services**	3,312	3,210	2,812	2,157	1,937	2,347	2,554	3,000	3,142	3,235
58	Hotels and other lodging places	679	601	489	367	321	390	455	521	573	544
59	Personal services	672	643	557	449	394	442	491	549	614	606
60	Business services, n. e. c.	666	641	520	414	387	504	550	657	676	688
61	Miscellaneous repair services and hand trades	63	61	50	39	36	48	52	62	64	61
62	Motion pictures	749	824	836	611	546	642	654	797	765	887
63	Amusement and recreation, except motion pictures	255	221	182	135	120	148	164	189	218	196
64	Engineering and other professional services, n. e. c.	228	219	178	142	133	173	188	225	232	253

1. The general sources used in making these estimates are discussed in Part III, section on Corporate profits.

2. Industries in which there are no corporations organized for profit, or in which corporate sales are estimated at less than $500,000 in all years, are omitted from this table. The industrial division of Finance, insurance, and real estate is excluded from the table because the presentation of sales data for these industries would be misleading in view of the large part of their receipts which is in the form of property income.

3. For certain manufacturing industries, the 1929-47 values shown are not comparable with

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Table 29.—*Corporate Sales, by Industry, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
120,789	**135,248**	**176,181**	**202,777**	**233,435**	**246,737**	**239,512**	**270,898**	**347,801**	**388,744**	**370,079**	**431,858**	**488,445**	**498,694**	**523,496**	1
577	**608**	**712**	**768**	**826**	**879**	**931**	**1,208**	**1,595**	**1,784**	**1,825**	**1,986**	**2,323**	**2,464**	**2,664**	2
528	566	663	727	787	841	885	1,150	1,527	1,715	1,769	1,910	2,234	----	----	3
49	42	49	41	39	38	46	58	68	69	56	76	89	----	----	4
2,731	**3,114**	**3,723**	**3,865**	**3,579**	**3,875**	**3,789**	**4,123**	**5,809**	**7,595**	**6,565**	**8,258**	**9,316**	**9,232**	**9,507**	5
798	973	1,095	1,260	818	744	712	641	968	1,216	927	1,250	1,503	----	----	6
194	222	256	303	323	378	354	440	498	559	409	476	485	----	----	7
784	920	1,167	1,271	1,417	1,573	1,509	1,580	2,245	2,641	1,875	2,356	2,484	----	----	8
704	727	851	636	648	821	857	995	1,498	2,436	2,602	3,314	3,838	----	----	9
251	272	354	395	373	359	357	467	600	743	752	862	1,006	----	----	10
2,208	**2,473**	**3,452**	**4,643**	**4,219**	**3,101**	**2,869**	**4,220**	**6,929**	**9,228**	**9,740**	**11,358**	**14,010**	**14,200**	**15,500**	11
57,159	**65,755**	**92,023**	**116,278**	**141,930**	**150,960**	**138,725**	**136,906**	**177,777**	**197,122**	**184,476**	**216,817**	**251,227**	**256,662**	**272,782**	12
11,877	12,372	15,767	20,602	22,373	23,806	23,951	28,321	35,705	36,635	35,087	37,359	42,657	----	----	13
1,319	1,415	1,581	1,800	2,101	2,148	2,243	2,640	2,869	3,029	3,114	3,208	3,395	----	----	14
3,869	4,207	6,068	7,616	8,011	7,718	7,690	10,257	11,631	12,304	10,691	13,030	14,264	----	----	15
2,342	2,509	3,379	3,961	4,115	3,957	4,001	6,737	7,779	8,353	7,749	8,296	8,874	----	----	16
2,129	2,460	3,302	3,591	3,595	3,606	3,428	4,804	6,540	[3] 6,841	6,164	8,245	8,760	----	----	17
----	----	----	----	----	----	----	----	----	4,413	3,893	5,233	5,535	----	----	18
----	----	----	----	----	----	----	----	----	2,428	2,271	3,012	3,225	----	----	19
905	1,071	1,505	1,710	1,659	1,608	1,423	2,033	3,114	----	----	----	----	----	----	20
1,224	1,389	1,797	1,881	1,936	1,998	2,005	2,771	3,426	----	----	----	----	----	----	21
1,747	2,023	2,791	2,877	3,268	3,473	3,565	4,353	5,690	5,920	5,372	6,853	8,293	----	----	22
2,220	2,369	2,577	2,663	3,096	3,449	3,804	4,792	5,672	6,152	6,315	6,670	7,333	----	----	23
4,251	4,764	6,437	7,205	8,612	9,822	9,834	10,737	13,487	[3] 13,972	13,050	16,104	18,055	----	----	24
5,254	5,523	6,659	7,478	8,500	9,853	10,007	10,374	14,792	[3] 19,411	17,560	19,281	23,481	----	----	25
1,069	1,153	1,689	1,883	2,906	3,332	3,366	3,127	3,420	3,323	3,022	3,980	4,851	----	----	26
1,236	1,287	1,780	2,112	2,165	2,150	2,201	2,845	3,298	3,137	2,901	3,174	3,448	----	----	27
1,486	1,682	2,283	2,298	2,352	2,290	2,322	2,938	3,633	4,079	3,927	4,981	5,689	----	----	28
8,619	10,692	16,262	21,472	27,409	27,995	25,209	20,926	27,420	[3] 33,165	29,398	37,030	44,082	----	----	29
----	----	----	----	----	----	----	----	----	16,835	14,473	18,654	22,604	----	----	30
----	----	----	----	----	----	----	----	----	9,577	8,635	11,059	12,907	----	----	31
----	----	----	----	----	----	----	----	----	1,909	1,829	2,300	3,041	----	----	32
----	----	----	----	----	----	----	----	----	4,844	4,461	5,017	5,530	----	----	33
5,974	7,549	11,756	16,333	20,534	20,837	18,495	13,717	18,778	----	----	----	----	----	----	34
1,617	1,988	2,882	3,157	4,286	4,379	3,969	4,315	5,337	----	----	----	----	----	----	35
1,028	1,155	1,624	1,982	2,589	2,779	2,745	2,894	3,305	----	----	----	----	----	----	36
3,463	4,568	7,222	9,437	10,732	11,012	9,801	9,117	13,145	[3] 14,858	13,451	15,653	20,452	----	----	37
1,844	2,462	3,747	5,022	6,585	8,012	7,070	5,488	8,214	[3] 8,703	8,095	10,457	12,223	----	----	38
857	1,568	3,924	12,271	22,322	24,622	17,141	2,855	2,999	3,722	3,804	3,996	5,944	----	----	39
3,577	4,701	6,555	3,990	3,788	3,715	3,092	6,595	11,483	13,518	14,776	18,590	19,426	----	----	40
42,262	**46,638**	**57,081**	**55,184**	**57,616**	**61,023**	**65,905**	**95,736**	**122,185**	**136,199**	**130,983**	**153,587**	**166,751**	**168,783**	**172,905**	41
21,314	23,532	29,707	29,026	30,306	32,311	34,746	51,408	65,237	72,776	67,197	81,608	90,869	----	----	42
20,948	23,106	27,374	26,158	27,310	28,712	31,159	44,328	56,948	63,423	63,786	71,979	75,882	----	----	43
7,364	**7,769**	**9,526**	**11,527**	**13,661**	**14,307**	**14,052**	**13,786**	**16,717**	**18,371**	**17,164**	**18,805**	**21,326**	**22,041**	**22,885**	44
4,632	4,722	5,840	7,887	9,610	10,045	9,699	8,612	9,567	10,626	9,342	10,200	11,240	----	----	45
791	772	857	1,132	1,406	1,454	1,485	1,556	1,579	1,585	1,596	1,503	1,612	----	----	46
728	793	1,006	1,061	1,160	1,188	1,232	1,542	1,999	2,450	2,677	3,408	3,855	----	----	47
664	832	1,047	729	680	726	670	921	2,073	2,018	1,830	1,677	2,165	----	----	48
88	151	187	191	223	263	327	516	662	781	835	957	1,199	----	----	49
260	293	318	236	243	252	219	190	260	335	339	474	538	----	----	50
201	226	271	291	339	379	420	449	577	576	545	586	717	----	----	51
5,161	**5,352**	**5,806**	**6,259**	**6,775**	**7,310**	**7,658**	**8,118**	**8,985**	**10,157**	**10,859**	**12,282**	**13,787**	**15,139**	**16,626**	52
1,401	1,364	1,495	1,841	2,064	2,210	2,400	2,583	2,772	3,204	3,496	3,915	4,366	----	----	53
136	161	181	182	234	307	327	343	383	412	442	545	692	----	----	54
3,505	3,708	4,007	4,132	4,368	4,687	4,818	5,058	5,676	6,371	6,735	7,631	8,507	----	----	55
119	119	123	104	109	106	113	134	154	170	186	191	222	----	----	56
3,327	**3,539**	**3,858**	**4,253**	**4,829**	**5,282**	**5,583**	**6,801**	**7,804**	**8,288**	**8,467**	**8,765**	**9,705**	**10,173**	**10,627**	57
565	603	665	715	896	966	1,035	1,232	1,341	1,409	1,383	1,373	1,461	----	----	58
622	653	724	803	858	903	950	1,151	1,366	1,472	1,491	1,528	1,689	----	----	59
728	789	849	812	911	1,045	1,169	1,461	1,751	1,961	2,136	2,395	2,798	----	----	60
62	61	98	128	148	157	122	130	213	246	266	297	408	----	----	61
883	949	1,004	1,149	1,327	1,483	1,574	1,823	1,942	1,913	1,857	1,826	1,804	----	----	62
212	232	267	266	264	308	378	574	609	644	652	627	663	----	----	63
255	252	251	380	425	420	355	429	582	643	682	719	882	----	----	64

those given for 1948 and subsequent years. The discontinuities stem from changes in the industrial classification basis on which the underlying corporate tax return data are reported. (See the Introduction to Part III.) Of the series principally involved here, five have been terminated in 1947. For the others, 1948 values approximately comparable to those shown for 1947 are as follows: Lumber and furniture products, $7,228 million; Chemicals and allied products, $14,413 million; Products of petroleum and coal, $19,495 million; Metals, metal products, and miscellaneous, $30,998 million; Machinery, except electrical, $14,994 million; Electrical machinery, $8,918 million.

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Table 30.—*Personal Consumption Expenditures, by Type of Product, 1929–38**

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**I. Food [1] and tobacco**	21,230	19,414	16,220	12,704	12,757	15,549	17,621	19,955	21,552	20,585
2	1. Food purchased for off-premise consumption (n. d. c.)	14,777	13,500	10,833	8,203	8,626	10,757	12,150	13,929	14,792	14,082
3	2. Purchased meals and beverages [2] (n. d. c.)	2,911	2,788	2,541	2,102	1,816	2,248	2,610	2,985	3,528	3,392
4	3. Food furnished government (including military) and commercial employees (n. d. c.).	257	245	198	160	155	185	214	236	271	247
5	4. Food produced and consumed on farms (n. d. c.)	1,590	1,431	1,159	917	927	992	1,213	1,270	1,288	1,167
6	5. Tobacco products (n. d. c.)	1,695	1,450	1,489	1,322	1,233	1,367	1,434	1,535	1,673	1,697
7	**II. Clothing, accessories, and jewelry**	11,193	9,713	8,217	6,042	5,438	6,562	7,010	7,661	8,092	7,991
8	1. Shoes and other footwear (n. d. c.)	1,675	1,375	1,207	1,022	887	1,072	1,031	1,145	1,279	1,257
9	2. Shoe cleaning and repair (s.)	164	141	114	100	98	102	106	113	122	118
10	3. Clothing and accessories except footwear [3]	7,682	6,659	5,713	4,022	3,731	4,585	4,982	5,403	5,546	5,495
11	a. Women's and children's (n. d. c.)	4,662	4,100	3,528	2,446	2,254	2,801	3,080	3,226	3,277	3,337
12	b. Men's and boys' (n. d. c.)	3,020	2,559	2,185	1,576	1,477	1,784	1,902	2,177	2,269	2,158
13	4. Standard clothing issued to military personnel (n. d. c.)	12	11	9	10	11	7	9	12	13	14
14	5. Cleaning, dyeing, pressing, alteration, storage, and repair of garments including furs (in shops) not elsewhere classified (s).	473	420	352	252	230	265	302	339	383	391
15	6. Laundering in establishments (s.)	475	458	392	310	252	262	272	304	323	308
16	7. Jewelry and watches (d. c.)	560	513	328	252	172	198	233	265	333	323
17	8. Other [4] (s.)	152	136	102	74	57	71	75	80	93	85
18	**III. Personal care**	1,116	1,039	979	817	660	760	802	864	961	951
19	1. Toilet articles and preparations (n. d. c.)	591	515	504	420	320	377	374	395	428	442
20	2. Barbershops, beauty parlors, and baths (s.)	525	524	475	397	340	383	428	469	533	509
21	**IV. Housing**	11,446	11,015	10,270	9,002	7,880	7,577	7,640	7,938	8,436	8,813
22	1. Owner-occupied nonfarm dwellings—space-rental value [5] (s.)	5,868	5,552	5,101	4,416	3,844	3,643	3,646	3,759	3,950	4,104
23	2. Tenant-occupied nonfarm dwellings (including lodging houses)—space rent [5] (s.).	4,500	4,397	4,200	3,753	3,296	3,158	3,199	3,365	3,639	3,870
24	3. Rental value of farm houses (s.)	829	830	754	655	587	615	621	620	636	622
25	4. Other [6] (s.)	249	236	215	178	153	161	174	194	211	217
26	**V. Household operation**	10,735	9,585	8,425	6,779	6,466	7,209	7,737	8,821	9,525	8,865
27	1. Furniture (d. c.)	1,201	937	796	509	462	514	666	848	923	827
28	2. Kitchen and other household appliances [7] (d. c.)	768	671	565	344	408	518	614	733	845	711
29	3. China, glassware, tableware, and utensils (d. c.)	628	442	429	406	364	404	407	456	515	472
30	4. Other durable house furnishings [8] (d. c.)	1,148	937	783	562	472	573	617	827	885	800
31	5. Semidurable house furnishings [9] (n. d. c.)	717	570	497	374	391	449	478	591	639	568
32	6. Cleaning and polishing preparations, and miscellaneous household supplies and paper products (n. d. c.)	485	471	419	328	332	386	403	449	488	485
33	7. Stationery and writing supplies (n. d. c.)	143	133	103	71	69	87	101	112	131	129
34	8. Household utilities	3,044	3,058	2,844	2,615	2,561	2,729	2,792	2,979	3,042	2,971
35	a. Electricity (s.)	616	660	674	662	645	671	697	726	766	810
36	b. Gas (s.)	542	560	556	537	495	494	503	516	528	523
37	c. Water (s.)	278	296	296	278	269	301	311	326	331	327
38	d. Other fuel and ice (n. d. c.)	1,608	1,542	1,318	1,138	1,152	1,263	1,281	1,411	1,417	1,311
39	9. Telephone, telegraph, cable, and wireless (s.)	569	577	554	482	436	443	472	511	542	542
40	10. Domestic service (s.)	1,716	1,483	1,146	835	732	850	911	1,016	1,187	1,023
41	11. Other [10] (s.)	316	306	289	253	239	256	276	299	328	337
42	**VI. Medical care and death expenses**	3,544	3,382	3,029	2,542	2,370	2,581	2,728	2,978	3,180	3,172
43	1. Drug preparations and sundries (n. d. c.)	604	568	517	449	427	468	474	509	558	578
44	2. Ophthalmic products and orthopedic appliances (d. c.)	131	133	117	93	92	124	131	140	165	157
45	3. Physicians (s.)	959	924	819	661	617	678	731	820	854	833
46	4. Dentists (s.)	482	463	408	312	276	295	302	331	350	356
47	5. Other professional services [11] (s.)	250	233	201	154	138	145	151	165	168	163
48	6. Privately controlled hospitals and sanitariums [12] (s.)	403	404	395	386	363	369	406	422	454	467
49	7. Medical care and hospitalization insurance [13] (s.)	108	110	92	72	70	85	93	106	123	134
50	8. Funeral and burial expenses (s.)	607	547	480	415	387	417	440	485	508	484
51	**VII. Personal business**	5,086	4,035	3,497	2,986	2,912	2,927	3,119	3,391	3,663	3,472
52	1. Brokerage charges and interest, and investment counseling (s.)	1,707	759	418	269	372	227	228	296	281	195
53	2. Bank service charges, trust services, and safe-deposit box rental (s.).	76	79	80	78	79	92	104	116	126	130
54	3. Services furnished without payment by financial intermediaries except insurance companies (s.).	1,278	1,141	1,017	872	757	793	792	843	876	818
55	4. Expense of handling life insurance [14] (s.)	874	901	884	853	846	875	974	981	1,025	1,001
56	5. Legal services (s.)	402	397	410	348	334	359	371	383	402	392
57	6. Interest on personal debt (s.)	584	614	566	481	435	452	501	612	703	669
58	7. Other [15] (s.)	165	144	122	85	89	129	149	160	250	267
59	**VIII. Transportation**	7,612	6,147	5,003	3,981	3,987	4,596	5,281	6,131	6,517	5,633
60	1. User-operated transportation	5,960	4,662	3,747	2,935	3,035	3,584	4,217	4,956	5,288	4,453
61	a. New cars and net purchases of used cars (d. c.)	2,588	1,642	1,144	635	779	1,024	1,508	1,921	1,988	1,228
62	b. Tires, tubes, accessories, and parts (d. c.)	648	523	433	314	280	346	368	402	433	398
63	c. Automobile repair, greasing, washing, parking, storage, and rental (s.).	776	624	509	385	392	445	457	520	543	517
64	d. Gasoline and oil (n. d. c.)	1,814	1,749	1,540	1,476	1,466	1,640	1,743	1,945	2,143	2,145
65	e. Bridge, tunnel, ferry, and road tolls (s.)	40	43	45	43	42	43	42	44	44	41
66	f. Automobile insurance premiums less claims paid (s.)	94	81	76	82	76	86	99	124	137	124
67	2. Purchased local transportation	1,117	1,053	921	786	720	761	790	845	871	842
68	a. Street and electric railway and local bus (s.)	820	772	705	624	578	605	626	674	684	660
69	b. Taxicab (s.)	220	208	152	109	96	111	119	127	145	141
70	c. Railway (commutation) (s.)	77	73	64	53	46	45	45	44	42	41
71	3. Purchased intercity transportation	535	432	335	260	232	251	274	330	358	338
72	a. Railway (excluding commutation) and sleeping and parlor car (s.).	413	333	247	170	154	169	173	210	232	209
73	b. Intercity bus (s.)	52	53	50	48	46	44	62	74	80	89
74	c. Airline (s.)	3	2	2	3	3	4	6	8	8	8
75	d. Other [16] (s.)	67	44	36	39	29	34	33	38	38	32
76	**IX. Recreation**	4,331	3,990	3,302	2,442	2,202	2,441	2,630	3,020	3,381	3,241
77	1. Books and maps (d. c.)	309	264	253	153	152	165	183	208	243	221
78	2. Magazines, newspapers, and sheet music (n. d. c.)	538	512	479	428	419	441	456	490	518	514
79	3. Nondurable toys and sport supplies [17] (n. d. c.)	336	281	266	207	181	200	216	242	269	268
80	4. Wheel goods, durable toys, sport equipment, boats, and pleasure aircraft [17] (d. c.).	219	172	159	110	93	118	136	171	210	210
81	5. Radio and television receivers, records, and musical instruments (d. c.).	1,012	921	478	268	195	229	248	333	385	339
82	6. Radio and television repair (s.)	26	27	24	19	14	17	21	21	23	25
83	7. Flowers, seeds, and potted plants (n. d. c.)	221	190	134	89	90	116	130	159	186	176
84	8. Admissions to specified spectator amusements	913	892	854	631	573	625	672	759	818	816
85	a. Motion picture theaters (s.)	720	732	719	527	482	518	556	626	676	663
86	b. Legitimate theaters and opera, and entertainments of nonprofit institutions (except athletics) (s.)	127	95	78	57	41	42	44	50	53	58
87	c. Spectator sports [18] (s.)	66	65	57	47	50	65	72	83	89	95
88	9. Clubs and fraternal organizations except insurance [19] (s.)	302	294	277	242	208	199	197	198	203	200
89	10. Commercial participant amusements [20] (s.)	207	203	175	132	121	135	141	165	194	164
90	11. Pari-mutuel net receipts (s.)	8	7	6	4	6	19	26	29	38	44

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Table 30.—*Personal Consumption Expenditures, by Type of Product, 1939–53**

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
20,931	**22,223**	**25,741**	**31,168**	**36,353**	**40,133**	**44,573**	**52,264**	**58,040**	**61,441**	**60,737**	**63,250**	**71,236**	**75,065**	**77,154**	1
14,163	14,954	17,089	20,328	22,586	24,503	26,689	33,332	38,677	41,671	41,513	43,760	49,376	52,175	53,915	2
3,633	3,974	4,738	5,865	7,392	8,472	10,063	11,709	11,939	12,036	11,830	12,019	13,246	13,811	14,161	3
254	278	470	933	1,677	2,398	2,753	1,349	1,023	1,082	1,070	1,175	1,772	1,940	1,831	4
1,114	1,134	1,336	1,661	2,021	2,043	2,096	2,396	2,532	2,505	2,072	1,895	2,141	2,047	1,937	5
1,767	1,883	2,108	2,381	2,677	2,717	2,972	3,478	3,869	4,147	4,252	4,401	4,701	5,092	5,310	6
8,406	**8,857**	**10,521**	**13,082**	**16,026**	**17,512**	**19,706**	**22,215**	**22,952**	**23,878**	**22,676**	**22,705**	**24,240**	**24,803**	**24,604**	7
1,226	1,265	1,446	1,793	1,872	1,958	2,263	2,781	2,955	2,988	2,928	3,052	3,274	3,285	3,362	8
114	124	142	153	223	218	210	241	227	216	205	201	211	207	204	9
5,893	6,153	7,132	8,537	10,486	11,647	13,109	15,097	15,610	16,450	15,371	15,154	16,086	16,588	16,269	10
3,607	3,766	4,348	5,341	6,940	7,838	8,796	9,728	9,963	10,736	9,929	9,655	10,275	10,675	10,603	11
2,286	2,387	2,784	3,196	3.546	3,809	4,313	5,369	5,647	5,714	5,442	5,499	5,811	5,913	5,666	12
16	32	219	657	1,031	1,041	1,087	364	229	191	213	274	418	259	197	13
397	423	492	571	716	809	936	1,198	1,349	1,434	1,444	1,466	1,565	1,639	1,703	14
312	340	397	466	523	561	600	715	796	837	842	854	870	902	939	15
355	414	562	743	968	1,050	1,243	1,506	1,463	1,435	1,360	1,385	1,477	1,561	1,560	16
93	106	131	162	207	228	258	313	323	327	313	319	339	362	370	17
1,004	**1,036**	**1,162**	**1,354**	**1,616**	**1,834**	**1,982**	**2,086**	**2,253**	**2,286**	**2,259**	**2,355**	**2,488**	**2,573**	**2,641**	18
486	507	607	728	874	992	1,087	1,109	1,245	1,256	1,233	1,306	1,393	1,434	1,466	19
518	529	555	626	742	842	895	977	1,008	1,030	1,026	1,049	1,095	1,139	1,175	20
9,018	**9,327**	**10,046**	**10,820**	**11,333**	**11,885**	**12,407**	**13,609**	**15,436**	**17,548**	**19,439**	**21,356**	**23,367**	**25,631**	**27,710**	21
4,179	4,310	4,706	5,192	5,588	6,060	6,492	7,343	8,471	9,776	10,962	12,195	13,430	14,818	16,194	22
3.994	4,154	4,438	4,692	4,737	4,729	4,596	4,759	5,113	5,745	6,422	7,062	7,595	8,311	8,898	23
620	625	646	684	727	791	980	1,103	1,316	1,421	1,445	1,448	1,616	1,715	1,751	24
225	238	256	252	281	305	339	404	536	606	610	651	726	787	867	25
9,624	**10,479**	**11,951**	**12,727**	**13,110**	**14,032**	**15,530**	**20,023**	**23,878**	**25,617**	**24,642**	**27,414**	**28,592**	**28,877**	**30,070**	26
949	1,060	1,320	1,285	1,242	1,314	1,559	2,248	2,552	2,758	2,664	3,040	3,122	3,229	3,294	27
774	881	1,158	809	291	171	362	1,811	3,179	3,344	2,928	3,590	3,406	3,354	3,488	28
475	510	623	658	612	643	800	1,263	1,348	1,405	1,324	1,395	1,439	1,380	1,398	29
908	991	1,214	1,266	1,369	1,398	1,519	2,194	2,453	2,548	2,315	2,533	2,623	2,433	2,420	30
681	749	913	1,119	1,330	1,481	1,545	2,039	2,135	2,267	2,178	2,402	2,472	2,406	2,461	31
508	544	607	704	756	776	722	924	1,523	1,556	1,478	1,555	1,659	1,550	1,613	32
149	162	191	230	287	353	410	426	440	445	450	450	469	503	538	33
3,128	3,391	3,582	3,875	4,079	4,242	4.507	4,872	5,611	6,299	6.124	6,741	7,209	7,500	7,830	34
849	910	965	1,017	1,045	1,125	1,194	1,270	1,406	1,564	1,746	1,955	2,192	2,426	2,692	35
538	573	575	623	648	667	705	754	862	958	1,031	1,177	1,335	1,457	1,550	36
343	359	368	384	391	407	419	433	464	491	512	554	593	651	715	37
1,398	1,549	1,674	1,851	1,995	2,043	2,189	2,415	2,879	3,286	2,835	3,055	3,089	2,966	2,873	38
576	615	695	825	973	1,077	1,189	1,312	1,383	1,617	1.761	1,966	2,182	2,410	2,640	39
1,129	1,218	1,237	1,477	1,598	1,887	2,142	2,120	2,348	2,382	2,412	2,668	2,833	2,858	3,051	40
347	358	411	479	573	690	775	814	906	996	1,008	1,074	1,178	1,254	1,337	41
3,347	**3,533**	**3,852**	**4,312**	**4,832**	**5,383**	**5,756**	**6,893**	**7,685**	**8,307**	**8,660**	**9,257**	**9,843**	**10,486**	**11,169**	42
612	635	725	848	1,014	1,072	1,138	1,271	1,313	1,358	1,350	1,406	1,516	1,569	1,615	43
172	186	227	258	307	333	349	396	400	427	448	479	532	561	577	44
866	913	957	1,048	1,092	1,321	1,370	1,720	2,020	2,203	2,312	2,435	2,528	2,676	2,815	45
386	419	459	505	539	573	620	772	784	833	857	869	888	906	943	46
167	173	179	196	206	245	266	338	390	423	448	476	498	532	562	47
492	527	555	649	752	846	925	1,163	1,397	1,591	1,730	1,975	2,167	2,398	2,602	48
153	165	196	231	279	315	374	444	513	550	557	636	651	740	887	49
499	515	554	577	643	678	714	789	868	922	958	981	1,063	1,104	1,168	50
3,548	**3,646**	**3,894**	**3,743**	**3,831**	**4,141**	**4,431**	**4,993**	**5,707**	**6,574**	**7,113**	**8,181**	**8,726**	**9,403**	**10,620**	51
183	151	131	105	207	215	317	320	244	291	256	459	446	375	403	52
135	142	151	159	176	196	207	234	260	293	314	341	367	387	413	53
817	792	852	904	948	1,186	1,325	1,499	1,532	1,710	1,880	2,028	2,198	2,524	2,839	54
1,014	1,029	1,040	1,025	1,074	1,106	1,090	1,292	1,549	1,684	1,779	2,035	2,058	2,210	2,428	55
407	423	450	475	493	541	590	609	668	799	857	889	935	962	1,004	56
709	815	930	706	486	445	457	618	904	1,210	1,444	1,820	2,030	2,274	2,817	57
283	294	340	369	447	452	445	421	550	587	583	609	692	671	716	58
6,365	**7,143**	**8,438**	**5,529**	**5,539**	**5,848**	**6,845**	**12,066**	**15,390**	**17,525**	**20,053**	**23,225**	**22,828**	**23,392**	**26,821**	59
5,128	5,872	7,031	3,581	2,859	3,045	3,992	9,004	12,316	14,313	16,939	20,182	19,586	20,054	23,461	60
1,679	2,217	2,706	415	410	322	357	2,436	4,587	5,646	7,768	10,078	8,693	8,315	10,696	61
484	530	673	303	366	449	652	1,492	1,674	1,671	1,707	2,275	2,166	2,263	2,416	62
596	647	772	594	558	695	957	1,717	1,975	2,152	2,108	2,138	2,418	2,563	2,727	63
2,181	2,273	2,649	2,090	1,339	1,384	1,809	3,034	3,630	4,294	4,741	5,042	5,542	6,006	6,619	64
46	50	58	43	31	35	42	65	69	74	80	87	97	119	129	65
142	155	173	136	155	160	175	260	381	476	535	562	670	788	874	66
878	907	978	1,294	1,646	1,726	1,746	1,951	2,007	2,115	2,086	2,075	2,128	2,170	2,171	67
684	714	760	980	1,237	1,299	1,316	1,334	1,326	1,418	1,421	1,388	1,413	1,440	1,423	68
153	153	177	261	353	370	372	554	614	621	586	608	632	641	655	69
41	40	41	53	56	57	58	63	67	76	79	79	83	89	93	70
359	364	429	654	1,034	1,077	1,107	1,111	1,067	1,097	1,028	968	1,114	1,168	1,189	71
216	214	234	364	664	677	676	627	589	603	517	446	500	513	500	72
98	101	137	241	315	336	339	341	321	324	325	315	343	342	331	73
12	18	23	23	24	33	55	106	120	134	152	177	243	287	330	74
33	31	35	26	31	31	37	37	37	36	34	30	28	26	28	75
3,452	**3,761**	**4,239**	**4,677**	**4,961**	**5,422**	**6,139**	**8,621**	**9,352**	**9,603**	**9,801**	**10,768**	**10,961**	**11,368**	**11,892**	76
226	234	255	291	366	450	520	594	536	513	490	476	495	504	531	77
554	589	636	703	838	880	965	1,099	1,243	1,360	1,434	1,470	1,528	1,616	1,708	78
285	306	362	404	393	459	553	843	910	948	924	999	1,080	1,164	1,209	79
228	254	314	306	271	323	400	809	972	1,010	906	978	1,040	1,115	1,193	80
420	494	607	634	403	311	344	1,143	1,429	1,457	1,663	2,379	2,155	2,100	2,176	81
28	32	36	46	60	72	88	115	140	174	213	324	420	476	533	82
191	201	229	241	274	327	378	447	475	484	506	527	587	641	684	83
821	904	995	1,204	1,455	1,563	1,714	2,066	2,004	1,920	1,885	1,792	1,739	1,687	1,660	84
659	735	809	1,022	1,275	1,341	1,450	1,692	1,594	1,506	1,468	1,394	1,338	1,284	1,252	85
64	71	79	92	118	142	148	174	188	182	179	177	183	181	185	86
98	98	107	90	62	80	116	200	222	232	238	221	218	222	223	87
199	203	203	205	217	236	281	359	399	439	460	470	487	511	530	88
183	197	210	213	215	241	284	379	415	437	457	467	482	512	539	89
41	55	65	69	79	131	153	241	255	257	247	239	263	327	377	90
276	292	327	361	390	429	459	526	574	604	616	647	685	715	752	91

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Table 30.—*Personal Consumption Expenditures, by Type of Product, 1929-38**—Continued

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
92	**X. Private education and research**	664	683	665	571	481	483	507	546	600	619
93	1. Higher education [22] (s.)	219	242	251	227	205	213	228	242	249	256
94	2. Elementary and secondary schools [22] (s.)	162	170	185	158	121	121	122	140	174	192
95	3. Other [23] (s.)	283	271	229	186	155	149	157	164	177	171
96	**XI. Religious and welfare activities** [24] (s.)	1,196	1,209	1,125	973	872	870	862	899	900	923
97	**XII. Foreign travel and remittances—net**	799	756	601	467	367	339	352	412	452	376
98	1. Foreign travel by United States residents (s.)	632	611	445	334	258	276	303	368	433	379
99	2. Expenditures abroad by United States Government personnel (military and civilian) (n. d. c.).	21	20	20	20	18	16	20	18	18	18
100	3. Personal cash remittances to foreign countries less personal cash remittances to the United States by foreigners (s.).	288	257	234	182	161	132	135	148	141	114
101	4. Less: expenditures in the United States by foreigners (s.)	142	132	98	69	70	85	106	122	140	135
102	**Total personal consumption expenditures**	78,952	70,968	61,333	49,306	46,392	51,894	56,289	62,616	67,259	64,641
103	**Durable commodities (d. c.)**	9,212	7,155	5,485	3,646	3,469	4,213	5,111	6,304	6,925	5,686
104	**Nondurable commodities (n. d. c.)**	37,677	34,010	28,946	22,758	22,251	26,656	29,319	32,836	35,185	33,985
105	**Services (s.)**	32,063	29,803	26,902	22,902	20,672	21,025	21,859	23,476	25,149	24,970

*Consumer durable commodities are designated (d. c.), nondurable commodities (n. d. c.), and services (s.) following group titles.

1. Expenditures for food (items 1–4) include consumer expenditures for alcoholic beverages of the following amounts in millions of dollars: 1933, $665; 1934, $2,000; 1935, $2,555; 1936, $3,175; 1937, $3,465; 1938, $3,270; 1939, $3,420; 1940, $3,600; 1941, $4,185; 1942, $5,080; 1943, $5,840; 1944, $6,775; 1945, $7,485; 1946, $8,360; 1947, $8,620; 1948, $7,930; 1949, $7,730; 1950, $7,880; 1951, $8,200; 1952, $8,725; and 1953, $8,865. Expenditures for food (items 1–4) excluding alcoholic beverages are as follows in millions of dollars: 1929, $19,535; 1930, $17,964; 1931, $14,731; 1932, $11,382; 1933 $10,859; 1934, $12,182; 1935, $13,632; 1936, $15,245; 1937, $16,414; 1938, $15,618; 1939, $15,744; 1940, $16,740; 1941, $19,448; 1942, $23,707; 1943, $27,836; 1944, $30,641; 1945, $34,116; 1946, $40,426; 1947, $45,551; 1948, $49,364; 1949, $48,755; 1950, $50,969; 1951, $58,335; 1952, $61,248; and 1953, $62,979.

2. Comprises purchases of meals and beverages from retail, service, and amusement establishments, hotels, dining and buffet cars, schools, school fraternities, institutions, clubs, and industrial lunchrooms, and also tips.

3. Includes luggage.

4. Comprises watch, clock, and jewelry repairs, dressmakers and seamstresses not in shops, costume and dress suit rental, and miscellaneous personal services related to clothing.

5. Space rent covers heating and plumbing facilities, water heaters, lighting fixtures, kitchen cabinets, linoleum, storm windows and doors, window screens, screen doors, and window blinds or shades, but excludes other furnishings, equipment, and related services——furniture, stoves and ranges, refrigerators, repairs of furniture and appliances, fuel, electricity, etc.

6. Comprises transient hotels, tourist cabins, clubs, schools, and institutions.

7. Includes refrigerators, cooking ranges, dish washers, laundry equipment, heating stoves, air conditioners, sewing machines, vacuum cleaners, and other small electric appliances.

8. The principal house furnishings included are floor coverings, bedding, picture frames, mirrors, art products, portable lamps, and clocks. Also includes writing equipment, technical equipment such as microscopes, drafting, and surveying instruments, and hand, power, and garden tools.

9. Consists mainly of textile house furnishings (except those specified in group V–4) including piece goods allocated to house furnishings use. Among other products covered are lamp shades, brooms, and brushes.

10. Comprises maintenance services for appliances and house furnishings, moving and warehouse expenses, postage and express charges, premiums for fire and theft insurance on personal property less claims paid, and miscellaneous household operation services.

11. Comprises services of osteopathic physicians, chiropractors, chiropodists and podiatrists, private duty trained nurses, and miscellaneous curative and healing professions.

12. Comprises current expenditures (including depreciation) of nonprofit hospitals and sanitariums and payments by patients to proprietary hospitals and sanitariums.

Table 31.—*New Construction Activity, by Type, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Total new construction activity**	10,793	8,741	6,427	3,538	2,879	3,720	4,232	6,497	6,999	6,980
2	**New private construction activity**	8,307	5,883	3,768	1,676	1,231	1,509	1,999	2,981	3,903	3,560
3	Residential building (excluding farm)	3,625	2,075	1,565	630	470	625	1,010	1,565	1,875	1,990
4	New dwelling units	3,040	1,570	1,320	485	290	380	710	1,210	1,475	1,620
5	Additions and alterations	340	305	175	105	145	200	250	295	320	295
6	Nonhousekeeping units	245	200	70	40	35	45	50	60	80	75
7	Nonresidential building (excluding farm) [2]	2,694	2,003	1,099	502	406	456	472	713	1,085	764
8	Industrial buildings [3]	949	532	221	74	176	191	158	266	492	232
9	Warehouses, office and loft buildings [3]	619	596	276	117	44	66	75	111	137	95
10	Stores, restaurants, and garages [3]	516	297	178	106	86	107	136	179	250	190
11	Other nonresidential buildings	610	578	424	205	100	92	103	157	206	247
12	Religious	147	135	87	45	22	21	28	34	44	51
13	Educational	120	118	100	53	15	14	17	40	42	40
14	Hospital and institutional	104	109	71	34	10	9	10	17	31	35
15	Social and recreational	173	148	123	60	34	33	34	54	73	97
16	Miscellaneous	66	68	43	13	19	15	14	12	16	24
17	Public utility	1,578	1,527	946	467	261	326	363	518	705	605
18	Railroads	510	521	292	139	94	128	116	149	199	119
19	Telephone and telegraph	354	333	166	87	45	47	52	67	102	92
20	Other public utility [4]	714	673	488	241	122	151	195	302	404	394
21	Farm construction	307	193	97	37	49	66	126	161	207	171
22	Residential	147	107	59	24	29	36	61	76	100	79
23	Nonresidential	160	86	38	13	20	30	65	85	107	92
24	All other private [5]	103	85	61	40	45	36	28	24	31	30
25	**New public construction activity**	2,486	2,858	2,659	1,862	1,648	2,211	2,233	3,516	3,096	3,420
26	Residential building						1	9	61	93	35
27	Nonresidential building	659	660	612	415	230	363	328	701	550	672
28	Industrial					2	11	2	4	2	12
29	Educational	389	364	285	130	52	148	153	366	253	311
30	Hospital and institutional	101	118	110	83	49	51	38	74	73	97
31	Other nonresidential building [6]	169	178	217	202	127	153	135	257	222	252
32	Military facilities	19	29	40	34	36	47	37	29	37	62
33	Highway	1,266	1,516	1,355	958	847	1,000	845	1,362	1,226	1,421
34	Sewer and water	253	343	270	156	95	173	175	342	311	355
35	Miscellaneous public service enterprises	151	157	209	135	65	55	71	167	134	137
36	Conservation and development	115	137	156	150	359	518	700	658	605	551
37	All other public [7]	23	16	17	14	16	54	68	196	140	187
38	**Petroleum and natural gas well drilling**	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)

1. These construction data are published by the Building Materials and Construction Division of the Department of Commerce. For an explanation of the differences between the series shown in this table and the new construction series in the other tables of this report, see the first paragraph of section 9 on New construction in Part III.

2. Excludes nonresidential building by privately owned public utilities.

3. Public industrial and commercial building not segregable from private construction, 1929–32; amount believed negligible.

4. Consists of local transit, petroleum pipeline, electric light and power (including construction with Rural Electrification Administration funds), and manufactured and natural gas.

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Table 30.—*Personal Consumption Expenditures, by Type of Product, 1939–53*—Continued*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
628	641	762	813	957	972	974	1,162	1,411	1,589	1,789	1,959	2,139	2,319	2,476	92
267	280	288	312	366	404	415	501	649	715	787	822	876	935	999	93
195	198	208	221	239	266	299	350	420	495	584	681	758	812	853	94
166	163	206	280	352	302	260	311	342	379	418	456	505	572	624	95
938	1,012	1,060	1,207	1,428	1,667	1,735	1,915	2,032	2,256	2,294	2,463	2,607	2,855	2,964	96
317	223	269	316	555	1,004	1,621	770	837	985	1,135	1,093	1,315	1,652	1,959	97
333	172	189	128	143	175	267	450	597	696	828	893	889	1,044	1,144	98
20	27	77	251	417	822	1,394	388	450	417	501	444	705	960	1,157	99
108	129	97	59	135	176	163	234	169	216	195	187	197	208	229	100
144	105	94	122	140	169	203	302	379	344	389	431	476	560	571	101
67,578	71,881	81,875	89,748	100,541	109,853	121,699	146,617	164,973	177,609	180,598	194,026	208,342	218,424	230,080	102
6,670	7,771	9,659	6,968	6,605	6,764	8,105	15,892	20,593	22,214	23,573	28,608	27,148	26,815	29,749	103
35,131	37,215	43,208	51,324	59,259	65,368	73,222	84,501	93,077	98,741	96,879	100,386	111,054	116,012	118,925	104
25,777	26,895	29,008	31,456	34,677	37,701	40,372	46,224	51,303	56 654	60,146	65,032	70,140	75,597	81,406	105

13. Premiums less claims: accident and health insurance, mutual accident and sick benefit associations, and group hospitalization associations. Also covers administrative and medical expenses of group health associations and student fees for medical care.
14. Comprises total operating expenses of life insurance companies and fraternal and assessment associations, excluding payments to policyholders and expenses allocated to accident and health insurance.
15. Comprises total payments to labor unions minus cash benefits, employment agency fees, employees' payments to professional associations, miners' expenditures (for explosives, lamps, and smithing), money order fees, classified advertisements, net purchases from pawnbrokers and miscellaneous second-hand stores, and other personal business services.
16. Comprises baggage charges and coastal and inland waterway and ferry foot passenger fares.
17. Groups IX–3 and IX–4 include games, toys, sporting, athletic, and photographic goods, and related products. These commodities are divided roughly between the two groups on the basis of durability.
18. Comprises professional baseball, football, and hockey, horse and dog race tracks, college football, and other amateur spectator sports.
19. Comprises gross receipts less cash benefits of fraternal, patriotic, and women's organizations except insurance; and dues and fees of athletic, social, and luncheon clubs, and school fraternities.
20. Comprises billiard parlors, bowling alleys, dancing, riding, shooting, skating, and swimming places, amusement devices and parks, daily fee golf course greens fees, golf instruction, club rental, and caddy fees, sightseeing buses and guides, and private flying operations.
21. Comprises photo developing and printing, photographic studies, collectors' net acquisitions of stamps and coins, hunting dog purchase and training, sports guide service, veterinary service, purchase of pets, camp fees, nonvending coin machine receipts minus payoff, and other commercial amusements.
22. The estimates represent current expenditures (including depreciation) net of receipts accounted for separately in consumer expenditures, such as receipts from meals, rooms, and entertainments.
23. Comprises fees paid to commercial, business, trade, and correspondence schools; fees for musical, dancing, and other instruction except athletics; and current expenditures (including depreciation) of foundations for education and research.
24. Comprises religious bodies, social welfare and foreign relief agencies, political organizations, museums and libraries, and foundations (except foundation expenditures for education and research). The estimates represent current expenditures (including depreciation but excluding relief payments within the United States), and are net of receipts accounted for separately in consumer expenditures, such as receipts from meals, rooms, and entertainments.

Table 31.—*New Construction Activity, by Type, 1939–53* [1]

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
8,198	8,682	11,957	14,075	8,301	5,259	5,633	12,000	16,689	21,678	22,789	28,454	31,182	33,008	35,256	1
4,389	5,054	6,206	3,415	1,979	2,186	3,235	9,638	13,256	16,853	16,384	21,454	21,764	22,107	23,877	2
2,680	2,985	3,510	1,715	885	815	1,100	4,015	6,310	8,580	8,267	12,600	10,973	11,100	11,930	3
2,270	2,560	3,040	1,440	710	570	720	3,300	5,450	7,500	7,257	11,525	9,849	9,870	10,555	4
320	335	375	225	160	220	340	570	735	925	825	900	934	1,015	1,108	5
90	90	95	50	15	25	40	145	125	155	185	175	190	185	267	6
786	1,025	1,482	635	233	351	1,020	3,341	3,142	3,621	3,228	3,777	5,152	5,014	5,680	7
254	442	801	346	156	208	642	1,689	1,702	1,397	972	1,062	2,117	2,320	2,229	8
81	91	123	62	14	17	56	331	237	352	321	402	544	515	739	9
211	257	286	93	19	39	147	801	619	901	706	886	827	622	1,052	10
240	235	272	134	44	87	175	520	584	971	1,229	1,427	1,664	1,557	1,660	11
48	59	62	31	6	11	26	76	126	251	360	409	452	399	472	12
39	50	58	24	6	11	31	123	174	253	269	294	345	351	426	13
31	33	46	29	11	26	37	85	110	126	202	344	419	394	317	14
100	67	72	30	7	17	27	125	99	224	262	247	164	125	163	15
22	26	34	20	14	22	54	111	75	117	136	133	284	288	282	16
683	771	872	786	570	725	827	1,374	2,338	3,043	3,323	3,330	3,729	4,003	4,416	17
137	167	187	197	211	247	264	258	318	379	352	315	399	438	442	18
93	122	179	155	61	83	117	305	510	713	533	440	487	570	615	19
453	482	506	434	298	395	446	811	1,510	1,951	2,438	2,575	2,843	2,995	3,359	20
212	240	310	260	284	283	267	856	1,397	1,544	1,488	1,635	1,846	1,905	1,731	21
106	145	182	135	121	108	100	409	683	738	695	763	863	890	809	22
106	95	128	125	163	175	167	447	714	806	793	872	983	1,015	922	23
28	33	32	19	7	12	21	52	69	65	78	112	64	85	120	24
3,809	3,628	5,751	10,660	6,322	3,073	2,398	2,362	3,433	4,825	6,405	7,000	9,418	10,901	11,379	25
65	200	430	545	739	211	80	374	200	156	359	345	595	654	556	26
970	615	1,646	3,685	2,010	1,361	937	354	599	1,301	2,068	2,384	3,497	4,136	4,352	27
23	164	1,280	3,437	1,870	1,230	755	113	96	196	177	224	974	1,684	1,771	28
468	156	158	128	63	41	59	101	287	618	934	1,133	1,513	1,619	1,728	29
127	54	42	35	44	58	85	85	85	223	477	496	528	473	353	30
352	241	166	85	33	32	38	55	131	264	480	531	482	360	500	31
125	385	1,620	5,016	2,550	837	690	188	204	158	137	177	887	1,388	1,307	32
1,381	1,302	1,066	734	446	362	398	895	1,451	1,774	2,131	2,272	2,518	2,820	3,165	33
371	338	252	169	107	79	97	194	351	535	619	659	775	790	861	34
136	131	141	85	49	46	55	99	164	185	203	185	213	193	201	35
570	528	500	357	285	163	130	240	394	629	793	881	853	854	830	36
191	129	96	69	136	14	11	18	70	87	95	97	80	66	107	37
368	398	423	306	347	526	598	653	773	1,051	1,069	1,279	1,568	1,616	1,659	38

5. Consists of sewer and water, roads, bridges, and miscellaneous nonstructural items such as parks and playgrounds.
6. Consists of public administration, social and recreational, commercial, and miscellaneous nonresidential.
7. Includes publicly owned parks and playgrounds, memorials, etc. Includes petroleum
8. Estimates for this item by the Building Materials and Construction Division for the years 1929–38 are not available. Rough approximations, in billions of dollars, are as follows: 1929, $0.4; 1930, $0.3; 1931, $0.2; 1932, $0.2; 1933, $0.2; 1934, $0.2; 1935, $0.3; 1936, $0.3; 1937, $0.5; 1938, $0.4.

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Table 32.—*Private Purchases of Producers' Durable Equipment, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Total producers' durable equipment**	5,850	4,465	2,839	1,593	1,589	2,304	3,066	4,169	5,095	3,644
2	Furniture and fixtures	361	292	193	113	98	141	154	181	236	197
3	Cutlery and hand tools	94	73	49	32	35	46	54	63	77	60
4	Fabricated metal products (except cutlery and hand tools)	190	160	114	81	76	101	106	122	153	120
5	Engines and turbines	54	45	26	12	10	17	25	43	64	44
6	Tractors	186	174	112	56	30	69	131	208	270	204
7	Agricultural machinery (except tractors)	265	252	114	62	49	71	136	176	229	229
8	Construction machinery	90	71	41	7	7	17	31	54	72	62
9	Mining and oilfield machinery	143	87	41	30	33	51	77	117	119	79
10	Metalworking machinery	270	171	101	41	45	86	147	220	301	172
11	Special-industry machinery, n. e. c.	407	288	210	133	151	186	227	309	368	276
12	General industrial machinery	440	314	225	134	130	173	240	335	400	292
13	Office and store machines	201	144	104	73	72	88	115	140	172	143
14	Service-industry and household machines	186	147	117	65	61	74	92	134	168	127
15	Electrical machinery	443	339	230	108	80	132	193	246	396	263
16	Trucks, buses, and trailers	590	423	291	155	186	307	388	508	523	360
17	Passenger cars	1,105	701	488	271	331	436	643	822	849	524
18	Aircraft	41	17	9	1	8	15	8	7	19	15
19	Ships and boats	75	109	83	18	12	21	9	57	65	122
20	Railroad equipment	374	374	82	45	22	101	97	196	356	142
21	Instruments	81	69	51	34	29	32	41	51	75	57
22	Miscellaneous equipment	254	215	158	122	124	140	152	180	183	156

Table 33.—*Net Change in Business Inventories, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Net change in business inventories, total**	1,674	−383	−1,284	−2,556	−1,629	−1,125	912	954	2,249	−943
2	Farm	−162	−300	324	34	−259	−1,320	536	−1,112	523	103
3	Nonfarm	1,836	−83	−1,608	−2,590	−1,370	195	376	2,066	1,726	−1,046
4	**Net change in nonfarm inventories**	1,836	−83	−1,608	−2,590	−1,370	195	376	2,066	1,726	−1,046
5	Corporate	1,558	191	−1,149	−1,816	−871	182	217	1,589	1,520	−920
6	Noncorporate	278	−274	−459	−774	−499	13	159	477	206	−126
7	Change in book value	1,222	−4,098	−4,633	−3,932	1,298	874	653	2,924	1,786	−2,230
8	Corporate	1,086	−3,069	−3,583	−2,863	1,272	807	444	2,327	1,551	−1,883
9	Noncorporate	136	−1,029	−1,070	−1,069	26	67	209	597	235	−347
10	Inventory valuation adjustment	614	4,015	3,025	1,342	−2,668	−679	−277	−858	−60	1,184
11	Corporate	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963
12	Noncorporate	142	755	611	295	−525	−54	−50	−120	−29	221
13	**Net change in nonfarm inventories by industrial group**	1,836	−83	−1,608	−2,590	−1,370	195	376	2,066	1,726	−1,046
14	Manufacturing	911	747	−594	−1,155	−578	136	213	1,095	1,344	−631
15	Change in book value	598	−1,553	−2,239	−1,846	828	598	381	1,586	1,340	−1,268
16	Inventory valuation adjustment	313	2,300	1,645	691	−1,406	−462	−168	−491	4	637
17	Wholesale trade	31	54	−413	−175	−89	66	1	286	210	−198
18	Change in book value	−74	−527	−832	−358	268	226	9	487	70	−403
19	Inventory valuation adjustment	105	581	419	183	−357	−160	−8	−201	140	205
20	Retail trade	250	−457	−316	−695	−488	−48	297	668	53	−164
21	Change in book value	77	−1,314	−1,087	−1,078	220	−17	378	796	198	−467
22	Inventory valuation adjustment	173	857	771	383	−708	−31	−81	−128	−145	303
23	All other	644	−427	−285	−565	−215	41	−135	17	119	−53
24	Change in book value	621	−704	−475	−650	−18	67	−115	55	178	−92
25	Inventory valuation adjustment	23	277	190	85	−197	−26	−20	−38	−59	39

Table 34.—*Supplements to Wages and Salaries, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Total supplements to wages and salaries**	662	657	621	577	542	590	650	990	1,827	2,018
2	**Employer contributions for social insurance**	101	106	111	126	133	147	171	418	1,234	1,423
3	Old-age and survivors insurance									288	261
4	State unemployment insurance						3	7	159	588	780
5	Federal unemployment tax								81	89	102
6	Railroad retirement insurance									62	54
7	Railroad unemployment insurance										
8	Federal civilian employee retirement systems	21	21	22	22	22	22	32	45	63	77
9	State and local employee retirement systems	72	78	84	96	107	118	127	131	141	147
10	Cash sickness compensation funds										
11	Government life insurance	8	7	5	8	4	4	5	2	3	2
12	**Other labor income**	561	551	510	451	409	443	479	572	593	595
13	Compensation for injuries	278	278	246	207	180	188	201	228	263	253
14	Employer contributions to private pension and welfare funds	169	160	158	148	140	166	180	238	218	228
15	Pay of military reservists	34	36	37	37	31	31	38	42	45	48
16	Other[1]	80	77	69	59	58	58	60	64	67	66

1 Consists of directors' fees, jury and witness fees, compensation of prison inmates, Government payments to enemy prisoners of war, marriage fees to justices of the peace, and merchant

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Table 32.—*Private Purchases of Producers' Durable Equipment, 1939–52*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	Line
4,180	**5,531**	**6,942**	**4,343**	**4,027**	**5,438**	**7,654**	**10,733**	**16,667**	**19,110**	**17,833**	**21,135**	**23,177**	**23,307**	**1**
210	252	332	248	200	213	287	500	690	639	551	704	878	855	2
70	99	147	97	128	181	161	353	348	373	341	375	433	381	3
144	151	166	144	191	238	298	317	506	510	414	463	533	505	4
54	62	56	26	47	91	193	52	148	215	198	255	280	268	5
195	240	341	189	84	303	324	298	544	757	854	913	1,096	976	6
183	209	309	280	180	349	414	351	676	985	1,075	1,077	1,210	1,161	7
57	80	88	74	66	38	273	323	408	503	343	511	576	640	8
90	119	215	117	112	164	293	301	352	567	485	544	735	792	9
240	531	744	701	699	606	704	779	834	776	610	875	1,107	1,393	10
297	335	356	297	232	360	529	837	1,340	1,453	1,189	1,403	1,667	1,574	11
322	344	367	249	290	504	738	863	1,170	1,300	1,069	1,162	1,531	1,585	12
149	173	215	167	119	174	229	443	588	648	565	634	663	750	13
143	162	179	150	174	245	345	456	873	1,276	891	941	834	926	14
328	493	549	359	325	672	776	1,129	2,061	1,968	1,730	2,104	2,597	2,865	15
489	562	737	126	140	343	901	1,376	2,283	2,613	2,138	2,861	2,825	2,629	16
715	948	1,158	251	253	167	172	995	1,889	2,316	3,269	4,237	3,613	3,399	17
23	39	35	6	0	0	12	156	145	75	103	63	86	167	18
57	133	185	197	232	130	195	174	236	123	108	111	168	192	19
170	313	408	394	268	346	331	359	631	1,004	1,030	796	1,075	935	20
71	61	59	32	67	69	179	226	335	355	315	389	517	588	21
173	225	296	239	220	245	300	445	610	654	555	717	753	726	22

Table 33.—*Net Change in Business Inventories, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
372	**2,172**	**4,501**	**1,811**	**−753**	**−1,020**	**−1,057**	**6,101**	**−991**	**4,162**	**−2,737**	**7,351**	**10,355**	**3,625**	**1,494**	**1**
56	270	452	1,159	−176	−445	−462	−249	−2,289	1,136	−875	923	1,404	654	−675	2
316	1,902	4,049	652	−577	−575	−595	6,350	1,298	3,026	−1,862	6,428	8,951	2,971	2,169	3
316	**1,902**	**4,049**	**652**	**−577**	**−575**	**−595**	**6,350**	**1,298**	**3,026**	**−1,862**	**6,428**	**8,951**	**2,971**	**2,169**	**4**
251	1,586	3,318	470	−458	−1,070	−1,027	5,967	1,240	2,055	−1,635	4,924	8,080	2,781	1,621	5
65	316	731	182	−119	495	432	383	58	971	−227	1,504	871	190	548	6
1,196	2,147	7,135	2,223	352	−219	75	13,318	8,668	5,588	−4,273	12,426	10,555	1,782	3,328	7
965	1,786	5,789	1,674	315	−783	−463	11,230	7,139	4,205	−3,578	9,788	9,340	1,800	2,585	8
231	361	1,346	549	37	564	538	2,088	1,529	1,383	−695	2,638	1,215	−18	743	9
−880	−245	−3,086	−1,571	−929	−356	−670	−6,968	−7,370	−2,562	2,411	−5,998	−1,604	1,189	−1,159	10
−714	−200	−2,471	−1,204	−773	−287	−564	−5,263	−5,899	−2,150	1,943	−4,864	−1,260	981	−964	11
−166	−45	−615	−367	−156	−69	−106	−1,705	−1,471	−412	468	−1,134	−344	208	−195	12
316	**1,902**	**4,049**	**652**	**−577**	**−575**	**−595**	**6,350**	**1,298**	**3,026**	**−1,862**	**6,428**	**8,951**	**2,971**	**2,169**	**13**
214	1,218	2,567	1,553	244	−814	−1,556	2,901	450	1,274	−1,494	2,265	7,400	2,024	1,699	14
713	1,357	4,151	2,324	823	−593	−1,121	6,163	4,412	2,750	−2,744	5,496	8,066	1,359	2,324	15
−499	−139	−1,584	−771	−579	−221	−435	−3,262	−3,962	−1,476	1,250	−3,231	−666	665	−625	16
77	183	221	−554	−234	202	560	815	−21	566	4	1,356	308	721	451	17
236	173	846	−279	−66	233	665	2,081	1,084	706	−401	2,458	604	391	594	18
−159	10	−625	−275	−168	−31	−105	−1,266	−1,105	−140	405	−1,102	−296	330	−143	19
97	482	851	−411	−462	−58	272	2,048	603	1,229	−147	2,404	336	187	−1	20
291	563	1,633	87	−316	17	358	4,094	2,249	1,777	−690	3,653	836	−45	264	21
−194	−81	−782	−498	−146	−75	−86	−2,046	−1,646	−548	543	−1,249	−500	232	−265	22
−72	19	410	64	−125	95	129	586	266	−43	−225	403	907	39	20	23
−44	54	505	91	−89	124	173	980	923	355	−438	819	1,049	77	146	24
−28	−35	−95	−27	−36	−29	−44	−394	−657	−398	213	−416	−142	−38	−126	25

Table 34.—*Supplements to Wages and Salaries, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
2,167	**2,311**	**2,703**	**3,162**	**3,759**	**4,463**	**5,604**	**5,861**	**5,899**	**5,755**	**6,524**	**7,799**	**9,539**	**10,384**	**11,081**	**1**
1,540	**1,624**	**1,983**	**2,302**	**2,677**	**2,937**	**3,805**	**3,970**	**3,565**	**3,042**	**3,503**	**3,976**	**4,753**	**4,874**	**4,745**	**2**
291	329	419	532	625	648	630	687	780	839	816	1,308	1,660	1,785	1,890	3
815	813	1,011	1,089	1,246	1,177	1,011	893	1,029	965	1,010	1,217	1,465	1,350	1,288	4
105	98	124	161	183	184	174	184	212	228	223	232	263	265	275	5
58	67	80	98	129	140	140	163	271	283	277	282	307	319	313	6
33	67	80	99	118	129	130	139	143	25	23	24	26	25	25	7
84	93	102	109	147	192	227	241	241	244	273	316	316	330	184	8
152	155	165	185	202	212	225	250	290	360	420	510	570	660	700	9
									0	2	7	2	2	3	10
2	2	2	29	27	255	1,268	1,413	599	98	459	80	144	138	67	11
627	**687**	**720**	**860**	**1,082**	**1,526**	**1,799**	**1,891**	**2,334**	**2,713**	**3,021**	**3,823**	**4,786**	**5,510**	**6,336**	**12**
255	278	318	367	403	443	478	495	560	614	643	676	804	895	944	13
248	282	314	401	586	948	1,132	1,231	1,555	1,810	2,024	2,743	3,582	4,195	4,927	14
58	61	14	3	2	1	5	27	125	188	244	284	273	283	315	15
66	66	74	89	91	134	184	138	94	101	110	120	127	137	150	16

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Table 35.—*Personal Contributions for Social Insurance, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Total personal contributions for social insurance**	142	147	151	152	152	157	162	180	566	554
2	**Employee contributions**	142	147	151	152	152	157	162	180	566	554
3	Old-age and survivors insurance									288	261
4	State unemployment insurance								9	32	44
5	Railroad retirement insurance									62	54
6	Federal civilian employee retirement systems	29	30	31	32	30	30	32	34	37	39
7	State and local employee retirement systems	47	51	55	57	63	65	70	76	86	96
8	Cash sickness compensation funds										
9	Government life insurance	66	66	65	63	59	62	60	61	61	60
10	**Self-employed persons' contributions**										
11	Old-age and survivors insurance										

Table 36.—*Transfer Payments, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Total transfer payments**	1,496	1,533	2,714	2,170	2,116	2,194	2,400	3,520	2,418	2,834
2	**Federal Government**	691	735	1,716	931	698	600	634	2,064	828	1,196
3	Benefits from social insurance funds	44	51	60	72	82	94	93	95	142	606
4	Old-age and survivors insurance benefits									1	10
5	State unemployment insurance benefits									2	393
6	Railroad retirement insurance benefits								1	40	98
7	Railroad unemployment insurance benefits										
8	Federal civilian pensions	18	22	27	32	42	52	57	60	63	65
9	Government life insurance benefits	26	29	33	40	40	42	36	34	36	40
10	Direct relief [1]							2	20	36	23
11	Military pension, disability, and retirement payments	443	468	548	571	456	382	418	433	434	446
12	Adjusted compensation benefits [2]	93	106	996	170	58	28	29	1,430	134	59
13	Mustering-out payments to discharged servicemen and terminal-leave benefits.										
14	Readjustment, self-employment, and subsistence allowances to veterans.										
15	Other [3]	111	110	112	118	102	96	92	86	82	62
16	**State and local government**	218	264	349	502	759	953	1,172	862	1,023	1,209
17	Benefits from social insurance funds	72	78	86	95	110	119	127	137	144	151
18	Government pensions	72	78	86	95	110	119	127	137	144	151
19	Cash sickness compensation										
20	Direct relief	71	105	176	317	558	745	954	635	787	965
21	Special types of public assistance	71	105	176	317	72	80	115	218	397	509
22	General assistance					486	665	839	417	390	456
23	Other [4]	75	81	87	90	91	89	91	90	92	93
24	**Business**	587	534	649	737	659	641	594	594	567	429
25	Corporate gifts to nonprofit institutions	32	35	40	31	27	27	28	30	33	27
26	Consumer bad debts	452	390	497	598	530	508	458	461	428	296
27	Other [5]	103	109	112	108	102	106	108	103	106	106

1. Consists of Farm Security Administration grants and the value of free stamps issued under the surplus food and cotton stamp programs.

2. Covers benefits under the World War Veterans Adjusted Compensation Act of May 19, 1924, as amended, and under the Adjusted Compensation Payment Act of Jan. 27, 1936. For the period 1929 through May 1936 this series represents very largely net loans to veterans on the security of their adjusted service certificates from the U. S. Government Life Insurance Fund and the Adjusted Service Certificate Fund; for the period since June 1936 it consists almost entirely of cash redemptions by veterans of their adjusted service bonds. Additionally, the series includes (1) payments to beneficiaries on certificates matured by death of veterans; (2) "adjusted service dependent pay", which comprises cash payments (negligible in amount) to veterans and their beneficiaries where, under certain circumstances, no certificates were issued; (3) payments to veterans in settlement of adjusted service certificates not

Table 37.—*Monetary and Imputed Interest, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Net interest (component of national income)**	6,445	5,985	5,839	5,434	5,042	4,869	4,751	4,741	4,708	4,636
2	Originating in private business	4,241	4,405	4,528	4,386	4,157	4,048	3,935	3,810	3,719	3,721
3	Monetary interest paid	9,720	8,909	8,346	7,635	6,743	6,450	6,161	5,909	5,833	5,633
4	Imputed interest paid	3,311	3,053	2,810	2,594	2,361	2,399	2,374	2,497	2,583	2,560
5	Less: Monetary interest received	7,709	6,658	5,898	5,179	4,377	4,262	4,079	4,055	4,143	3,918
6	Less: Imputed interest received	1,081	899	730	664	570	539	521	541	554	554
7	Originating in households and institutions	1,627	972	761	622	561	579	609	736	829	777
8	Monetary interest paid	1,627	972	761	622	561	579	609	736	829	777
9	Originating in rest of the world	577	608	550	426	324	242	207	195	160	138
10	Monetary interest received from abroad	711	701	612	458	349	265	231	221	191	170
11	Less: Monetary interest paid to abroad	134	93	62	32	25	23	24	26	31	32
12	**Personal interest income (component of personal income)**	7,428	6,949	6,923	6,575	6,212	6,099	5,892	5,842	5,912	5,828
13	Net interest (component of national income)	6,445	5,985	5,839	5,434	5,042	4,869	4,751	4,741	4,708	4,636
14	Net interest paid by government	983	964	1,084	1,141	1,170	1,230	1,141	1,101	1,204	1,192
15	Monetary interest paid	1,506	1,513	1,521	1,574	1,689	1,849	1,831	1,868	2,019	1,920
16	Less: Monetary interest received	523	549	437	433	519	619	690	767	815	728

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Table 35.—*Personal Contributions for Social Insurance, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
596	**658**	**801**	**1,166**	**1,839**	**2,236**	**2,333**	**2,011**	**2,118**	**2,178**	**2,234**	**2,894**	**3,417**	**3,811**	**4,007**	1
596	**658**	**801**	**1,166**	**1,839**	**2,236**	**2,333**	**2,011**	**2,118**	**2,178**	**2,234**	**2,894**	**3,417**	**3,604**	**3,787**	2
291	329	419	532	625	648	630	687	780	839	816	1,308	1,660	1,785	1,890	3
41	44	56	74	88	90	79	44	33	18	11	13	13	14	14	4
58	67	80	98	129	140	140	163	271	283	277	282	307	319	313	5
42	50	66	159	257	282	295	232	246	275	350	371	391	425	427	6
105	112	115	120	128	139	155	190	230	280	330	395	465	520	580	7
			2	5	5	4	48	55	69	48	51	48	52	54	8
59	56	65	181	607	932	1,030	617	503	414	402	474	533	489	509	9
													207	**220**	10
													207	220	11

Table 36.—*Transfer Payments, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
2,963	**3,114**	**3,113**	**3,143**	**2,954**	**3,588**	**6,165**	**11,411**	**11,787**	**11,281**	**12,403**	**15,147**	**12,575**	**13,090**	**13,801**	1
1,240	**1,421**	**1,369**	**1,419**	**1,239**	**1,841**	**4,310**	**9,214**	**8,887**	**7,652**	**8,754**	**10,884**	**8,663**	**8,940**	**9,660**	2
696	835	707	747	538	655	1,322	2,348	2,123	2,226	3,492	6,100	4,352	4,791	5,607	3
14	35	88	130	165	209	273	378	463	552	664	954	1,872	2,178	2,979	4
429	518	344	344	80	62	446	1,094	775	790	1,730	1,367	837	992	954	5
110	118	124	128	132	137	146	159	212	283	320	337	345	476	515	6
6	16	14	6	1	1	2	40	39	28	103	60	20	42	46	7
68	73	78	83	93	130	183	349	282	220	242	273	288	328	395	8
69	75	59	56	67	116	272	328	352	353	433	3,109	990	775	718	9
															10
22	63	137	108	9											
462	476	474	476	491	649	1,013	1,693	2,181	2,297	2,402	2,478	2,431	2,553	2,720	11
36	28	19	10	6	7	189	18	6	3	2	2	1	0	1	12
					230	1,404	2,131	1,577	431	167	116	153	455	352	13
					5	142	2,780	2,605	2,284	2,280	1,708	1,222	652	499	14
24	19	32	78	195	295	240	244	395	411	411	480	504	489	481	15
1,272	**1,262**	**1,242**	**1,229**	**1,220**	**1,241**	**1,323**	**1,640**	**2,226**	**2,890**	**2,868**	**3,420**	**2,927**	**3,151**	**3,125**	16
157	163	175	194	213	223	240	260	297	326	356	398	466	542	610	17
157	163	175	194	210	218	235	255	275	300	325	360	430	500	560	18
				3	5	5	5	22	26	31	38	36	42	50	19
1,024	1,013	985	956	929	939	986	1,177	1,478	1,727	2,169	2,345	2,267	2,297	2,357	20
566	630	718	778	818	850	900	1,057	1,314	1,529	1,889	2,055	2,075	2,129	2,207	21
458	383	267	178	111	89	86	120	164	198	280	290	192	168	150	22
91	86	82	79	78	79	97	203	451	837	343	677	194	312	158	23
451	**431**	**502**	**455**	**505**	**506**	**532**	**557**	**674**	**739**	**781**	**843**	**985**	**999**	**1,016**	24
31	38	58	98	159	234	266	214	241	239	223	253	343	343	343	25
316	287	332	283	246	165	150	193	258	298	353	328	328	328	328	26
104	106	112	114	100	107	116	150	175	202	205	262	314	328	345	27

covered by issuance of bonds; and (4) payments to veterans holding certificates to maturity.

3. Consists of military and naval insurance payments, payments to nonprofit institutions, profits of military post exchanges and navy exchanges and ships' stores, payments under the Panama Canal Construction Annuity Act, enemy alien and civilian war assistance, payments to United States military and civilian prisoners of war, and Atomic Energy Commission fellowships.

4. Consists of veterans' aid and bonuses, payments for the care of foster children in private family homes, and payments to nonprofit institutions.

5. Consists of cash prizes, unrecovered thefts from business of cash and capital assets, and personal-injury payments from business other than to employees.

Table 37.—*Monetary and Imputed Interest, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
4,604	**4,490**	**4,544**	**4,291**	**3,658**	**3,342**	**3,185**	**3,119**	**3,842**	**4,508**	**5,171**	**5,912**	**6,770**	**7,442**	**8,435**	1
3,660	3,454	3,392	3,365	2,966	2,686	2,502	2,272	2,678	2,974	3,387	3,708	4,272	4,683	5,087	2
5,591	5,426	5,430	5,264	4,946	4,774	4,803	4,920	5,573	6,267	6,924	7,622	8,753	9,823	10,874	3
2,606	2,694	2,821	2,996	3,178	3,450	3,757	4,181	4,502	4,970	5,397	5,870	6,520	7,217	8,026	4
3,979	4,052	4,199	4,213	4,387	4,788	5,266	5,848	6,233	6,987	7,568	8,299	9,298	10,478	11,717	5
558	614	660	682	771	750	792	981	1,164	1,276	1,366	1,485	1,703	1,879	2,096	6
817	916	1,026	796	577	538	553	712	996	1,310	1,554	1,956	2,186	2,442	3,015	7
817	916	1,026	796	577	538	553	712	996	1,310	1,554	1,956	2,186	2,442	3,015	8
127	120	126	130	115	118	130	135	168	224	230	248	312	317	333	9
158	152	152	155	145	149	168	179	224	269	277	301	384	406	447	10
31	32	26	25	30	31	38	44	56	45	47	53	72	89	114	11
5,809	**5,781**	**5,833**	**5,808**	**5,798**	**6,151**	**6,868**	**7,576**	**8,212**	**8,950**	**9,768**	**10,628**	**11,592**	**12,318**	**13,475**	12
4,604	4,490	4,544	4,291	3,658	3,342	3,185	3,119	3,842	4,508	5,171	5,912	6,770	7,442	8,435	13
1,205	1,291	1,289	1,517	2,140	2,809	3,683	4,457	4,370	4,442	4,597	4,716	4,822	4,876	5,040	14
1,941	2,059	2,088	2,407	3,141	3,895	4,934	5,772	5,751	5,904	6,196	6,428	6,652	7,023	7,441	15
736	768	799	890	1,001	1,086	1,251	1,315	1,381	1,462	1,599	1,712	1,830	2,147	2,401	16

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Table 38.—*Reconciliation of Department of Commerce Estimates of Corporate Profits with Internal Revenue Service Tabulations, 1929–38* [1]

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Compiled net profits, IRS** [2]	11,870	4,649	−777	−3,829	−930	2,970	5,423	7,771	7,830	4,131
2	Plus depletion, IRS	559	463	268	246	246	312	349	437	524	437
3	Plus net capital loss, IRS	500	935	1,702	1,705	1,686	298	239	142	164	75
4	Plus net loss, sales of property other than capital assets, IRS										152
5	Less net capital gain, IRS	1,316	646	299	142	262	243	470	581	305	207
6	Less net gain, sales of property other than capital assets, IRS										95
7	Less domestic dividends received, IRS	2,593	2,571	1,969	1,260	1,026	2,217	3,014	2,676	2,682	1,791
8	Less foreign dividends received, IRS	237	189	92	43	54	101	163	193	209	312
9	Plus "rest of the world" adjustment, Commerce	65	3	−56	−56	−32	−2	44	−32	−13	195
10	Plus profits disclosed by audit, Commerce	664	609	408	341	421	553	531	640	667	476
11	Less profits of mutual life insurance companies, based on IRS	123	110	96	104	17	33	7	12	−19	−30
12	Less profits of mutual nonlife insurance companies, IRS [3]	−69	−86	−62	−49	−59	−81	−88	−96	−79	−79
13	Less foreign income tax on branch profits, Commerce	13	11	6	2	6	10	12	14	13	5
14	Plus State income taxes, Commerce	145	98	75	57	59	100	131	157	165	134
15	Plus profits of Federal Reserve banks, Federal Reserve Board	38	6	0	21	7	8	6	5	9	1
16	Less gross renegotiation refunds, IRS										
17	Less emergency amortization acceleration, Commerce										
18	**Profits before taxes, Department of Commerce**	9,628	3,322	−780	−3,017	151	1,716	3,145	5,740	6,235	3,300
19	Less Federal income taxes, IRS	1,193	712	399	286	423	596	[4] 779	1,192	1,276	860
20	Less State income taxes, Commerce	145	98	75	57	59	100	131	157	165	134
21	Less taxes resulting from audit, Commerce	62	61	43	47	58	76	73	96	100	77
22	Plus tax refunds resulting from renegotiation, IRS										
23	Plus tax refunds resulting from emergency amortization acceleration, Commerce.										
24	Less income taxes, Federal Reserve banks, Federal Reserve Board	4			2						
25	Plus taxes paid by mutual life insurance companies, based on IRS										
26	Plus taxes paid by mutual nonlife insurance companies, IRS [3]										
27	Less excess profits tax, Vinson Act, Commerce										1
28	Plus foreign income tax on dividend income, Commerce	22	18	13	5	13	18	20	22	26	38
29	Plus foreign income tax on branch profits, Commerce	13	11	6	2	6	10	12	14	13	5
30	Plus carry-back tax refund, Commerce										
31	**Profits after taxes, Department of Commerce**	8,259	2,480	−1,278	−3,402	−370	972	2,194	4,331	4,733	2,271

1. For a discussion of this table see Part III, section on corporate profits.
2. IRS—Internal Revenue Service.
3. Adjusted to include the same audit results included for this industry in the audit adjustment above.

Table 39.—*Major Items of Personal Income and Personal Consumption Expenditures in Kind, 1929–38*

[Millions of dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Personal income and consumption expenditures in kind**	4,645	4,167	3,534	2,773	2,208	2,099	2,152	2,334	2,601	2,695
2	Food furnished government (including military) and commercial employees.	257	245	198	160	155	185	214	236	271	247
3	Standard clothing issued to military personnel	12	11	9	10	11	7	9	12	13	14
4	Meals furnished domestic servants and nurses	278	247	182	130	119	150	168	181	199	169
5	Net rent of owner-occupied farm and nonfarm dwellings	2,722	2,426	2,040	1,523	1,095	893	895	984	1,157	1,360
6	Services furnished without payment by financial intermediaries except insurance companies.	1,278	1,141	1,017	872	757	793	792	843	876	818
7	Employees' lodging	98	97	88	78	71	71	74	78	85	87
8	**Personal income and consumption expenditures partially in kind** [1]	1,704	1,540	1,255	1,010	1,024	1,090	1,317	1,373	1,394	1,266
9	Food produced and consumed on farms	1,590	1,431	1,159	917	927	992	1,213	1,270	1,288	1,167
10	Fuel produced and consumed on farms	114	109	96	93	97	98	104	103	106	99
11	**Personal consumption expenditures in kind not included in personal income**	2,095	2,136	2,106	2,033	1,925	1,954	1,976	1,971	1,997	2,012
12	Depreciation of owner-occupied farm and nonfarm dwellings	892	899	883	869	874	892	896	906	919	920
13	Taxes on owner-occupied farm and nonfarm dwellings	1,024	1,059	1,047	990	876	887	904	887	898	909
14	Institutional depreciation	179	178	176	174	175	175	176	178	180	183

[1] These items are presented at their gross value because data on costs are not available separately from costs of farm output sold on the market. Only the net income derived from production of these items represents income in kind; only the net income derived from, and the depreciation and taxes incurred in, their production represent personal consumption

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Table 38.—*Reconciliation of Department of Commerce Estimates of Corporate Profits with Internal Revenue Service Tabulations, 1939–51*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	Line
7,178	9,348	16,675	23,389	28,126	26,547	21,346	25,399	31,615	34,588	28,387	42,831	43,800	1
438	475	544	578	644	712	693	799	1,210	1,711	1,476	1,709	2,079	2
65	703	1,006											3
186	336	297	486	584	504	464	240	325	239	227	223	284	4
212	188	163	179	294	428	923	1,211	925	849	723	1,129	1,423	5
115	178	185	131	130	140	183	298	323	364	389	539	467	6
1,906	2,021	2,235	1,344	1,334	1,429	1,418	1,713	1,882	2,194	2,162	2,460	2,377	7
250	245	183	156	134	145	134	254	341	382	452	644	630	8
114	137	99	98	130	96	17	122	198	213	231	376	381	9
609	566	676	724	776	453	359	243	410	502	487	556	600	10
−41	−57	−59	1,030	1,056	1,118	1,205	1,229	1,309	1,411	1,551	1,654	1,862	11
−98	−131	−156	12	14	16	18	19	21	24	32	38	44	12
8	14	23	26	24	43	48	83	129	162	145	226	345	13
156	199	277	350	458	465	455	462	604	670	605	770	878	14
9	14	8	14	26	55	94	93	93	232	239	195	299	15
			1,783	2,893	1,478	522							16
		26	173	311	715								17
6,403	9,320	16,982	[4] 20,882	24,554	23,320	18,977	22,551	29,525	32,769	26,198	39,970	41,173	18
1,232	2,549	7,168	12,256	15,926	14,884	10,795	8,875	10,982	11,920	9,817	17,317	22,082	19
156	199	277	350	458	465	455	462	604	670	605	770	878	20
97	145	284	426	527	287	291	65	126	170	161	207	308	21
			1,316	2,141	1,106	395							22
		17	124	221	495								23
								75	167	193	197	255	24
										34	59	100	25
			6	6	6	8	9	10	12	13	16	28	26
2	1												27
38	46	40	42	56	50	48	79	101	116	125	241	274	28
8	14	23	26	24	43	48	83	129	162	145	226	345	29
		39	103	389	987	353	120	264	127	48	120	300	30
4,962	6,486	9,372	[5] 9,467	10,480	10,371	8,288	13,440	18,242	20,259	15,787	22,141	18,697	31

4. Includes Department of Commerce estimate of $44 million for unjust enrichment tax.

5. Includes Department of Commerce estimates of $77 million for war losses.

Table 39.—*Major Items of Personal Income and Personal Consumption Expenditures in Kind, 1939–53*

[Millions of dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
2,788	2,856	3,519	4,879	6,351	7,621	8,376	6,231	5,707	6,258	6,991	7,737	9,054	9,889	10,426	1
254	278	470	933	1,677	2,398	2,753	1,349	1,023	1,082	1,070	1,175	1,772	1,940	1,831	2
16	32	219	657	1,031	1,041	1,087	364	229	191	213	274	418	259	197	3
178	188	192	229	213	200	201	214	277	298	289	323	361	350	349	4
1,433	1,475	1,692	2,057	2,375	2,679	2,884	2,685	2,521	2,843	3,400	3,789	4,143	4,643	5,025	5
817	792	852	904	948	1,186	1,325	1,499	1,532	1,710	1,880	2,028	2,198	2,524	2,839	6
90	91	94	99	107	117	126	120	125	134	139	148	162	173	185	7
1,224	1,239	1,442	1,772	2,140	2,169	2,218	2,528	2,666	2,635	2,189	2,007	2,243	2,145	2,037	8
1,114	1,134	1,336	1,661	2,021	2,043	2,096	2,396	2,532	2,505	2,072	1,895	2,141	2,047	1,937	9
110	105	106	111	119	126	122	132	134	130	117	112	102	98	100	10
1,999	2,055	2,132	2,244	2,388	2,543	2,709	2,947	3,356	3,784	4,273	4,754	5,389	5,991	6,634	11
933	960	1,015	1,088	1,169	1,256	1,345	1,463	1,646	1,804	1,923	2,105	2,335	2,535	2,757	12
882	909	926	960	1,019	1,084	1,158	1,275	1,493	1,754	2,100	2,370	2,750	3,123	3,519	13
184	186	191	196	200	203	206	209	217	226	250	279	304	333	358	14

expenditure in kind. On a cash income basis the current expenses incurred in their production, other than depreciation and taxes, would become personal consumption expenditures instead of business expenses, the taxes would become personal taxes instead of business taxes, and the depreciation would not appear.

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Table 40.—*Gross National Product or Expenditure in Constant Dollars, 1929–38* [1]

[Billions of 1947 dollars]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Gross national product**	149.3	135.2	126.6	107.6	103.7	113.4	127.8	142.5	153.5	145.9
2	**Personal consumption expenditures**	107.3	100.9	98.0	88.9	86.6	91.5	97.3	107.6	111.5	109.8
3	Durable goods	13.0	10.5	9.1	6.9	6.7	7.6	9.4	11.6	12.2	10.0
4	Nondurable goods	58.1	55.2	55.0	50.7	49.2	52.5	55.4	61.8	63.8	64.9
5	Services	36.2	35.2	33.9	31.4	30.8	31.4	32.5	34.3	35.5	34.9
6	**Gross private domestic investment**	26.8	17.9	12.0	3.3	2.1	4.3	13.6	15.2	22.5	12.1
7	New construction	16.1	11.8	8.3	4.6	3.5	3.9	5.2	7.3	8.7	7.8
8	Residential nonfarm	6.9	4.0	3.4	1.7	1.3	1.5	2.5	3.6	3.9	4.0
9	Other	9.3	7.8	5.0	2.9	2.3	2.4	2.7	3.7	4.8	3.8
10	Producers' durable equipment	8.5	6.8	4.6	2.7	2.9	3.9	5.2	7.1	8.1	5.6
11	Change in business inventories	2.1	−.7	−.9	−4.1	−4.2	−3.5	3.2	.9	5.7	−1.2
12	Nonfarm	2.6	−.2	−3.0	−5.1	−3.0	.3	.7	3.7	3.0	−1.8
13	Farm	−.4	−.6	2.1	1.1	−1.3	−3.9	2.6	−2.8	2.8	.6
14	**Net foreign investment**	1.6	1.2	.6	.3	.1	.5	−.5	−.7	−.2	1.9
15	**Government purchases of goods and services**	13.6	15.1	15.9	15.1	14.9	17.2	17.4	20.3	19.7	22.1
16	Federal	2.3	2.7	2.9	3.0	4.3	5.7	5.4	8.3	7.8	9.6
17	State and local	11.2	12.5	13.0	12.1	10.6	11.6	11.9	12.0	11.8	12.5
18	**Gross government product** [2]	7.0	7.4	7.5	7.4	8.1	9.5	10.2	12.2	11.3	12.3
19	**Other gross product** [3]	142.3	127.8	119.1	100.3	95.6	103.9	117.6	130.3	142.1	133.6

1. Detail will not necessarily add to totals because of rounding.
2. Compensation of general government employees.
3. Gross national product less compensation of general government employees; i. e., gross product accruing from domestic business, households, and institutions, and from the rest of the world.

Table 41.—*Implicit Price Deflators for Gross National Product by Major Segments, 1929–38*

[Index numbers, 1947=100]

Line		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
1	**Gross national product**	70.0	67.4	60.3	54.3	54.0	57.3	56.7	58.1	59.2	58.4
2	**Personal consumption expenditures**	73.6	70.3	62.6	55.4	53.6	56.7	57.8	58.2	60.3	58.9
3	Durable goods	70.7	67.9	60.6	53.0	52.0	55.4	54.5	54.5	56.9	57.0
4	Nondurable goods	64.8	61.6	52.6	44.9	45.3	50.8	52.9	53.2	55.1	52.3
5	Services	88.6	84.8	79.3	73.0	67.2	66.9	67.2	68.4	70.8	71.6
6	**Gross private domestic investment**										
7	New construction	53.9	52.2	47.7	40.8	40.6	43.4	44.2	45.0	50.4	50.7
8	Residential nonfarm	52.6	51.3	46.7	37.7	37.5	41.7	41.1	43.2	47.6	49.2
9	Other	54.9	52.6	48.4	42.5	42.4	44.4	47.0	46.8	52.8	52.3
10	Producers' durable equipment	68.5	65.8	62.3	58.8	55.7	59.3	59.1	59.0	63.3	65.4
11	Change in business inventories										
12	**Net foreign investment**										
13	**Government purchases of goods and services**	62.4	60.7	57.9	53.4	54.0	56.7	57.5	58.3	59.6	57.9
14	Federal	56.0	52.8	53.2	48.9	47.3	52.9	53.8	58.3	58.0	55.1
15	State and local	63.8	62.4	58.9	54.5	56.7	58.6	59.2	58.4	60.6	60.1
16	**Gross government product** [1]	61.5	61.3	62.0	60.5	58.3	58.7	58.3	59.7	61.0	61.8
17	**Other gross product** [2]	70.4	67.7	60.2	53.9	53.6	57.2	56.6	57.9	59.0	58.1

1. Compensation of general government employees.
2. Gross national product less compensation of general government employees; i. e., gross product accruing from domestic business, households, and institutions, and from the rest of the world.

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Table 40.—*Gross National Product or Expenditure in Constant Dollars, 1939–53* [1]

[Billions of 1947 dollars]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
157.5	171.6	198.2	223.6	248.9	268.2	263.1	233.8	232.2	243.9	241.5	264.7	282.9	294.2	306.6	1
116.3	122.5	130.9	128.1	131.4	135.9	145.2	162.4	165.0	168.0	172.3	182.8	183.6	189.2	196.7	2
11.8	13.5	15.6	10.1	8.7	7.9	8.9	17.2	20.6	21.3	22.4	27.2	24.2	23.8	26.5	3
68.5	71.6	76.4	78.0	80.8	84.3	90.6	95.4	93.1	93.3	94.7	97.2	99.0	102.4	105.2	4
36.0	37.4	38.9	40.1	42.0	43.7	45.6	49.8	51.3	53.5	55.2	58.4	60.4	63.0	65.0	5
16.8	22.8	28.9	14.7	7.4	9.2	13.0	32.4	29.7	38.8	28.1	45.3	45.2	39.9	39.3	6
9.4	10.6	11.8	6.0	3.4	3.6	5.0	12.3	14.0	16.1	15.8	20.0	19.0	18.9	19.9	7
5.4	5.8	6.2	2.9	1.4	1.1	1.4	4.8	6.3	7.7	7.6	11.1	9.0	8.9	9.4	8
4.0	4.8	5.6	3.2	2.0	2.5	3.6	7.5	7.7	8.4	8.2	8.9	10.0	10.0	10.5	9
6.5	8.4	9.8	5.7	5.2	6.9	9.7	12.3	16.7	17.7	15.7	18.3	18.4	18.3	18.8	10
.8	3.9	7.3	3.0	−1.2	−1.3	−1.6	7.8	−1.0	5.1	−3.5	7.0	7.8	2.8	.6	11
.5	3.1	6.0	.6	−.8	−.8	−.7	7.7	1.3	2.8	−1.7	6.0	7.1	2.4	1.7	12
.3	.8	1.2	2.4	−.3	−.6	−.9	.0	−2.3	2.3	−1.8	1.0	.6	.4	−1.1	13
1.6	2.2	1.1	−1.1	−4.1	−4.0	−2.9	5.0	8.9	2.1	.8	−1.1	2.3	1.6	−.3	14
22.8	24.1	37.3	81.8	114.2	127.1	107.8	34.0	28.6	34.9	40.3	37.7	51.8	63.5	70.8	15
9.0	11.0	25.1	70.8	104.3	117.4	97.9	22.7	15.8	20.8	24.3	20.5	34.2	45.7	52.1	16
13.8	13.0	12.2	11.0	9.9	9.7	9.9	11.2	12.8	14.0	16.0	17.3	17.5	17.8	13.7	17
12.4	13.0	16.5	24.8	39.9	46.2	45.1	22.6	16.7	16.6	17.4	18.1	23.0	24.9	24.7	18
145.0	158.6	181.7	198.7	209.0	222.0	218.0	211.2	215.6	227.3	224.0	246.6	259.9	269.3	281.9	19

Table 41.—*Implicit Price Deflators for Gross National Product by Major Segments, 1939–53*

[Index numbers, 1947=100]

1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Line
57.9	58.6	63.5	71.2	77.3	78.8	81.2	89.5	100.0	105.5	106.6	107.7	116.0	117.6	119.0	1
58.1	58.7	62.6	70.0	76.5	80.8	83.8	90.3	100.0	105.7	104.8	106.2	113.5	115.5	117.0	2
56.5	57.4	61.9	69.2	76.2	85.6	90.6	92.2	100.0	104.3	105.1	105.1	112.0	112.6	112.2	3
51.3	52.0	56.6	65.8	73.4	77.6	80.8	88.6	100.0	105.9	102.3	103.3	112.2	113.3	113.1	4
71.6	72.0	74.5	78.5	82.7	86.3	88.5	92.9	100.0	105.9	108.9	111.4	116.1	120.0	125.2	5
															6
50.6	51.7	56.0	61.6	69.2	74.7	76.8	83.3	100.0	111.4	110.7	113.9	122.8	125.5	128.3	7
49.9	51.5	56.3	59.9	65.2	71.6	77.0	83.4	100.0	112.0	109.2	113.8	121.6	124.6	126.8	8
51.5	51.9	55.6	63.1	71.9	76.1	76.8	83.3	100.0	110.9	112.0	113.9	123.9	126.4	129.7	9
64.0	66.0	70.6	76.4	77.2	78.3	79.3	87.4	100.0	108.1	113.3	115.7	125.7	127.5	130.0	10
															11
															12
58.3	58.5	66.3	73.0	77.6	76.0	76.9	91.0	100.0	104.9	108.2	111.3	121.3	121.6	120.3	13
57.3	55.9	67.3	73.4	77.9	75.8	76.4	92.2	100.0	100.8	104.6	108.0	119.9	118.0	115.4	14
59.0	60.7	64.3	70.0	74.8	77.8	81.8	88.8	100.0	110.8	113.6	115.3	124.3	130.7	134.2	15
61.2	59.9	57.2	60.9	64.1	69.7	77.9	91.9	100.0	104.5	111.0	115.0	118.3	124.4	127.5	16
57.6	58.5	64.1	72.5	79.9	80.7	81.8	89.2	100.0	105.6	106.2	107.2	115.8	117.0	118.3	17

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Table 42.—*National Income by Distributive Shares, Quarterly, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**National income**	17.4	17.7	18.1	19.5	72.8	18.9	19.9	20.2	22.6	81.6
2	**Compensation of employees**	11.6	11.9	11.9	12.7	48.1	12.3	12.8	12.9	14.1	52.1
3	Wages and salaries	11.1	11.4	11.4	12.1	45.9	11.8	12.2	12.4	13.5	49.8
4	Private	8.9	9.2	9.6	10.1	37.7	9.7	10.0	10.5	11.2	41.4
5	Military	.1	.1	.1	.1	.4	.1	.1	.1	.2	.6
6	Government civilian	2.1	2.1	1.7	2.0	7.8	2.0	2.0	1.7	2.1	7.9
7	Supplements to wages and salaries	.5	.5	.6	.6	2.2	.6	.6	.6	.6	2.3
8	**Proprietors' and rental income** [1]	3.6	3.5	3.5	3.8	14.4	3.8	3.8	3.9	4.3	15.9
9	Business and professional	1.8	1.8	1.8	1.9	7.3	2.0	2.1	2.1	2.3	8.4
10	Farm	1.1	1.0	1.0	1.2	4.3	1.1	1.1	1.1	1.3	4.6
11	Rental income of persons	.7	.7	.7	.7	2.7	.7	.7	.7	.8	2.9
12	**Corporate profits and inventory valuation adjustment**	1.0	1.2	1.5	1.9	5.7	1.6	2.2	2.2	3.0	9.1
13	Corporate profits before tax	.9	1.3	1.6	2.6	6.4	1.7	2.1	2.2	3.3	9.3
14	Corporate profits tax liability	.2	.3	.4	.6	1.4	.5	.6	.7	1.0	2.8
15	Corporate profits after tax	.7	1.0	1.2	2.0	5.0	1.2	1.5	1.5	2.3	6.5
16	Inventory valuation adjustment	.1	−.1	−.1	−.7	−.7	−.1	.1	.0	−.2	−.2
17	**Net interest**	1.2	1.2	1.2	1.1	4.6	1.1	1.1	1.1	1.1	4.5
18	**Addendum: Compensation of general government employees**	2.0	2.0	1.7	1.9	7.6	2.0	2.0	1.7	2.1	7.8

1. Includes noncorporate inventory valuation adjustment.

Table 42.—*National Income by Distributive Shares, Quarterly, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**National income**	44.8	45.8	45.6	46.5	182.6	47.0	47.4	44.2	42.7	181.2
2	**Compensation of employees**	29.3	30.1	30.6	31.4	121.3	31.5	31.8	30.7	29.2	123.2
3	Wages and salaries	28.2	28.9	29.4	30.2	116.8	30.1	30.4	29.3	27.8	117.6
4	Private	20.4	20.7	21.2	21.5	83.8	21.2	21.3	20.4	19.7	82.7
5	Military	4.5	4.9	5.2	5.4	20.0	5.6	5.7	5.8	4.8	21.8
6	Government civilian	3.3	3.3	3.0	3.4	12.9	3.3	3.3	3.1	3.3	13.1
7	Supplements to wages and salaries	1.1	1.1	1.1	1.1	4.5	1.3	1.4	1.4	1.4	5.6
8	**Proprietors' and rental income** [1]	8.8	8.9	8.6	8.7	35.0	9.2	9.1	9.0	9.2	36.5
9	Business and professional	4.4	4.5	4.6	4.6	18.0	4.7	4.8	4.7	4.8	19.0
10	Farm	3.0	3.1	2.6	2.8	11.5	3.1	3.0	2.8	3.0	11.8
11	Rental income of persons	1.3	1.4	1.3	1.4	5.4	1.4	1.4	1.4	1.4	5.6
12	**Corporate profits and inventory valuation adjustment**	5.9	6.0	5.6	5.6	23.0	5.5	5.6	3.7	3.5	18.4
13	Corporate profits before tax	5.9	6.1	5.7	5.6	23.3	5.6	5.8	3.9	3.7	19.0
14	Corporate profits tax liability	3.3	3.4	3.1	3.1	12.9	3.2	3.3	2.2	2.1	10.7
15	Corporate profits after tax	2.6	2.7	2.5	2.5	10.4	2.5	2.5	1.7	1.6	8.3
16	Inventory valuation adjustment	−.1	−.1	.0	−.1	−.3	−.1	−.1	−.1	−.2	−.6
17	**Net interest**	.8	.8	.8	.8	3.3	.8	.8	.8	.8	3.2
18	**Addendum: Compensation of general government employees**	7.5	8.0	8.1	8.6	32.2	8.9	9.1	9.0	8.2	35.2

1. Includes noncorporate inventory valuation adjustment.

Table 42.—*National Income by Distributive Shares, Quarterly, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**National income**	53.7	54.2	54.1	54.2	216.2	53.3	58.1	62.7	65.9	240.0
2	**Compensation of employees**	34.9	35.1	35.2	35.7	140.9	35.2	37.3	39.7	42.1	154.3
3	Wages and salaries	33.3	33.4	33.6	34.1	134.3	33.3	35.3	37.7	40.2	146.5
4	Private	28.2	28.3	28.7	28.7	113.9	27.9	30.0	32.5	33.9	124.3
5	Military	1.0	1.0	1.1	1.1	4.2	1.1	1.1	1.2	1.6	5.0
6	Government civilian	4.1	4.1	3.8	4.3	16.2	4.3	4.3	4.0	4.7	17.2
7	Supplements to wages and salaries	1.6	1.7	1.7	1.6	6.5	1.9	2.0	2.0	1.9	7.8
8	**Proprietors' and rental income** [1]	11.0	10.6	10.3	10.0	42.0	10.6	10.9	11.4	11.7	44.6
9	Business and professional	5.4	5.4	5.3	5.3	21.4	5.4	5.6	5.9	5.9	22.9
10	Farm	3.7	3.3	3.0	2.7	12.7	3.1	3.2	3.3	3.6	13.3
11	Rental income of persons	1.9	2.0	2.0	2.0	7.9	2.1	2.1	2.1	2.2	8.5
12	**Corporate profits and inventory valuation adjustment**	6.6	7.3	7.2	7.1	28.1	6.1	8.4	10.2	10.5	35.1
13	Corporate profits before tax	6.4	6.2	6.6	7.0	26.2	6.4	8.8	11.9	12.8	40.0
14	Corporate profits tax liability	2.5	2.5	2.6	2.8	10.4	2.9	3.9	5.3	5.7	17.8
15	Corporate profits after tax	3.8	3.8	4.0	4.2	15.8	3.5	4.9	6.6	7.1	22.1
16	Inventory valuation adjustment	.3	1.0	.5	.1	1.9	−.3	−.5	−1.8	−2.3	−4.9
17	**Net interest**	1.2	1.3	1.3	1.4	5.2	1.4	1.5	1.5	1.5	5.9
18	**Addendum: Compensation of general government employees**	4.8	4.8	4.6	5.1	19.3	5.1	5.0	4.9	5.8	20.8

1. Includes noncorporate inventory valuation adjustment.

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Table 42.—*National Income by Distributive Shares, Quarterly, 1941–1943*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
22.9	**25.6**	**27.2**	**29.1**	**104.7**	**29.5**	**32.9**	**36.1**	**39.2**	**137.7**	**40.4**	**42.5**	**43.1**	**44.3**	**170.3**	1
14.4	**15.8**	**16.7**	**17.9**	**64.8**	**18.4**	**20.3**	**22.2**	**24.3**	**85.3**	**25.6**	**27.1**	**27.8**	**29.1**	**109.6**	2
13.8	15.1	16.0	17.2	62.1	17.7	19.6	21.4	23.5	82.1	24.7	26.2	26.8	28.1	105.8	3
11.4	12.5	13.6	14.4	51.9	14.6	15.9	17.3	18.3	66.1	18.5	19.6	20.3	20.8	79.2	4
.3	.4	.5	.6	1.9	.8	1.2	1.8	2.4	6.2	3.1	3.3	3.7	4.1	14.1	5
2.1	2.1	1.9	2.2	8.3	2.3	2.5	2.3	2.8	9.8	3.1	3.2	2.9	3.3	12.5	6
.6	.7	.7	.7	2.7	.7	.8	.8	.8	3.2	.9	.9	1.0	1.0	3.8	7
4.7	**5.0**	**5.5**	**5.7**	**20.9**	**6.2**	**6.8**	**7.5**	**8.0**	**28.5**	**8.2**	**8.3**	**8.3**	**8.4**	**33.3**	8
2.5	2.6	2.9	2.9	10.9	3.1	3.3	3.6	3.9	13.9	4.1	4.1	4.3	4.3	16.8	9
1.4	1.6	1.7	1.8	6.5	2.0	2.4	2.7	2.9	10.0	2.9	2.9	2.8	2.8	11.4	10
.8	.8	.9	.9	3.5	1.0	1.1	1.2	1.2	4.5	1.2	1.3	1.3	1.3	5.1	11
2.7	**3.7**	**3.8**	**4.3**	**14.5**	**3.8**	**4.6**	**5.4**	**5.9**	**19.7**	**5.6**	**6.1**	**6.1**	**5.9**	**23.8**	12
3.0	4.2	4.8	5.0	17.0	4.5	5.0	5.4	6.0	20.9	5.9	6.4	6.2	6.1	24.6	13
1.3	1.9	2.1	2.2	7.6	2.4	2.8	3.0	3.3	11.4	3.4	3.6	3.6	3.5	14.1	14
1.7	2.3	2.6	2.8	9.4	2.0	2.3	2.5	2.7	9.5	2.5	2.7	2.7	2.6	10.5	15
−.3	−.5	−.9	−.7	−2.5	−.7	−.4	−.1	−.1	−1.2	−.3	−.2	−.1	−.2	−.8	16
1.1	**1.1**	**1.1**	**1.1**	**4.5**	**1.1**	**1.1**	**1.0**	**1.0**	**4.3**	**1.0**	**.9**	**.9**	**.9**	**3.7**	17
2.2	**2.4**	**2.2**	**2.6**	**9.4**	**2.9**	**3.4**	**3.8**	**4.9**	**15.1**	**5.9**	**6.3**	**6.3**	**7.1**	**25.6**	18

Table 42.—*National Income by Distributive Shares, Quarterly, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
41.3	**43.8**	**45.9**	**48.6**	**179.6**	**46.9**	**48.1**	**49.5**	**52.7**	**197.2**	**51.9**	**55.1**	**56.6**	**58.1**	**221.6**	1
27.8	**28.8**	**30.0**	**31.1**	**117.7**	**30.9**	**31.6**	**32.4**	**33.9**	**128.8**	**33.4**	**34.6**	**36.2**	**36.7**	**140.9**	2
26.3	27.3	28.5	29.7	111.8	29.3	30.0	31.0	32.5	122.9	32.0	33.1	34.7	35.3	135.2	3
20.1	22.2	24.1	24.9	91.2	24.8	25.7	27.1	28.0	105.5	27.5	28.5	30.2	30.2	116.4	4
3.1	1.9	1.5	1.3	7.8	1.2	1.0	.9	1.0	4.1	1.0	1.0	1.0	1.0	4.0	5
3.1	3.2	3.0	3.4	12.8	3.3	3.4	3.0	3.6	13.3	3.6	3.6	3.5	4.1	14.8	6
1.5	1.5	1.4	1.4	5.9	1.6	1.6	1.4	1.3	5.9	1.4	1.5	1.5	1.4	5.8	7
9.8	**10.2**	**10.7**	**10.8**	**41.5**	**10.5**	**9.7**	**10.0**	**10.7**	**40.9**	**10.9**	**11.7**	**11.5**	**11.5**	**45.6**	8
5.2	5.4	5.5	5.2	21.3	5.0	4.9	4.9	5.1	19.9	5.3	5.4	5.5	5.4	21.6	9
3.1	3.2	3.7	3.9	13.9	3.8	3.2	3.5	3.9	14.5	3.8	4.5	4.3	4.1	16.7	10
1.5	1.5	1.6	1.6	6.2	1.6	1.6	1.6	1.7	6.5	1.7	1.8	1.9	1.9	7.2	11
2.9	**4.0**	**4.5**	**5.9**	**17.3**	**4.7**	**5.8**	**6.0**	**7.1**	**23.6**	**6.5**	**7.7**	**7.7**	**8.7**	**30.6**	12
3.2	4.7	6.5	8.1	22.6	7.3	6.8	7.1	8.3	29.5	7.4	8.1	8.6	8.7	32.8	13
1.3	1.9	2.6	3.3	9.1	2.8	2.6	2.7	3.2	11.3	2.8	3.1	3.3	3.3	12.5	14
1.9	2.8	3.9	4.8	13.4	4.5	4.2	4.4	5.2	18.2	4.6	5.0	5.3	5.4	20.3	15
−.3	−.7	−2.0	−2.2	−5.3	−2.5	−1.0	−1.1	−1.2	−5.9	−.9	−.4	−.9	.0	−2.2	16
.7	**.8**	**.8**	**.8**	**3.1**	**.9**	**.9**	**1.0**	**1.0**	**3.8**	**1.1**	**1.1**	**1.1**	**1.2**	**4.5**	17
6.4	**5.2**	**4.5**	**4.7**	**20.7**	**4.4**	**4.3**	**3.7**	**4.2**	**16.7**	**4.2**	**4.3**	**4.1**	**4.7**	**17.4**	18

Table 42.—*National Income by Distributive Shares, Quarterly, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
65.9	**68.9**	**69.9**	**72.4**	**277.0**	**70.2**	**71.8**	**72.9**	**76.0**	**291.0**	**75.4**	**77.2**	**76.9**	**75.6**	**305.0**	1
42.8	**44.6**	**45.8**	**47.2**	**180.4**	**46.9**	**47.8**	**49.1**	**51.6**	**195.4**	**50.9**	**52.2**	**52.9**	**53.1**	**209.1**	2
40.4	42.1	43.4	44.9	170.9	44.3	45.1	46.5	49.1	185.0	48.0	49.4	50.1	50.5	198.0	3
33.7	35.1	36.2	37.0	142.1	36.2	36.9	38.5	40.6	152.2	39.6	40.9	42.1	41.9	164.5	4
1.9	2.1	2.3	2.4	8.7	2.5	2.6	2.7	2.6	10.5	2.6	2.6	2.6	2.5	10.2	5
4.8	4.9	4.9	5.5	20.1	5.6	5.5	5.3	5.9	22.4	5.8	5.8	5.5	6.1	23.3	6
2.4	2.5	2.4	2.3	9.5	2.6	2.7	2.6	2.5	10.4	2.9	2.9	2.7	2.6	11.1	7
12.3	**12.3**	**12.4**	**12.8**	**49.9**	**12.4**	**12.5**	**12.6**	**12.5**	**49.9**	**12.6**	**12.2**	**12.0**	**12.3**	**49.0**	8
6.3	6.2	6.1	6.2	24.8	6.3	6.4	6.4	6.6	25.7	6.6	6.6	6.5	6.5	26.2	9
3.8	3.9	4.0	4.2	16.0	3.7	3.6	3.6	3.3	14.2	3.3	3.0	2.8	3.1	12.2	10
2.2	2.2	2.3	2.4	9.1	2.4	2.5	2.6	2.6	10.0	2.6	2.6	2.6	2.7	10.6	11
9.2	**10.2**	**9.9**	**10.6**	**39.9**	**9.1**	**9.7**	**9.3**	**10.0**	**38.2**	**10.0**	**10.6**	**9.9**	**8.0**	**38.5**	12
11.3	10.4	9.3	10.2	41.2	9.1	9.2	9.1	9.8	37.2	10.2	10.9	10.5	7.8	39.4	13
6.2	5.7	5.1	5.6	22.5	4.9	4.9	4.9	5.2	20.0	5.5	5.8	5.7	4.2	21.1	14
5.1	4.7	4.2	4.6	18.7	4.2	4.3	4.2	4.5	17.2	4.7	5.0	4.9	3.6	18.3	15
−2.1	−.2	.6	.4	−1.3	.0	.5	.2	.3	1.0	−.2	−.2	−.7	.2	−1.0	16
1.6	**1.7**	**1.7**	**1.8**	**6.8**	**1.8**	**1.8**	**1.9**	**1.9**	**7.4**	**2.0**	**2.1**	**2.2**	**2.2**	**8.4**	17
6.3	**6.7**	**6.8**	**7.4**	**27.2**	**7.7**	**7.8**	**7.5**	**8.0**	**31.0**	**7.9**	**8.0**	**7.5**	**8.0**	**31.4**	18

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Table 43.—*National Income by Distributive Shares, Seasonally Adjusted Quarterly Totals at Annual Rates, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**National income**	71.3	70.9	72.9	75.8	72.8	77.6	79.4	81.5	87.7	81.6
2	**Compensation of employees**	47.0	47.4	48.2	49.7	48.1	50.1	50.8	52.4	55.1	52.1
3	Wages and salaries	45.0	45.3	46.0	47.4	45.9	47.9	48.5	50.1	52.7	49.8
4	Private	36.6	36.9	38.0	39.4	37.7	39.6	40.2	41.8	43.9	41.4
5	Military	.4	.4	.4	.4	.4	.5	.5	.5	.7	.6
6	Government civilian	8.1	8.0	7.6	7.6	7.8	7.8	7.8	7.8	8.0	7.9
7	Supplements to wages and salaries	2.0	2.1	2.2	2.3	2.2	2.2	2.3	2.3	2.5	2.3
8	**Proprietors' and rental income** [1]	14.3	13.9	14.2	15.0	14.4	15.2	15.3	15.8	17.3	15.9
9	Business and professional	7.2	7.1	7.3	7.6	7.3	7.9	8.3	8.5	9.2	8.4
10	Farm	4.3	4.1	4.2	4.6	4.3	4.5	4.2	4.4	5.1	4.6
11	Rental income of persons	2.7	2.7	2.7	2.8	2.7	2.8	2.8	2.9	3.0	2.9
12	**Corporate profits and inventory valuation adjustment**	5.4	5.0	6.0	6.4	5.7	7.8	8.8	8.9	10.9	9.1
13	Corporate profits before tax	5.0	5.2	6.3	9.1	6.4	8.1	8.3	8.9	11.8	9.3
14	Corporate profits tax liability	1.1	1.2	1.4	2.0	1.4	2.5	2.5	2.7	3.6	2.8
15	Corporate profits after tax	3.8	4.0	4.9	7.1	5.0	5.7	5.7	6.2	8.2	6.5
16	Inventory valuation adjustment	.4	−.3	−.3	−2.7	−.7	−.4	.5	.1	−1.0	−.2
17	**Net interest**	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5
18	**Addendum: Compensation of general government employees**	7.8	7.8	7.4	7.4	7.6	7.7	7.7	7.6	8.1	7.8

1. Includes noncorporate inventory valuation adjustment.

Table 43.—*National Income by Distributive Shares, Seasonally Adjusted Quarterly Totals at Annual Rates, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**National income**	180.6	182.5	182.5	184.7	182.6	189.9	189.2	177.6	168.2	181.2
2	**Compensation of employees**	118.3	120.0	122.4	124.4	121.3	127.5	127.0	122.9	115.3	123.2
3	Wages and salaries	114.1	115.6	117.9	119.6	116.8	122.3	121.4	117.1	109.4	117.6
4	Private	83.3	83.1	83.9	84.9	83.8	86.9	85.4	80.6	77.7	82.7
5	Military	18.0	19.6	20.9	21.7	20.0	22.3	22.9	23.0	19.2	21.8
6	Government civilian	12.8	12.9	13.1	13.0	12.9	13.2	13.2	13.5	12.5	13.1
7	Supplements to wages and salaries	4.2	4.4	4.5	4.8	4.5	5.2	5.5	5.8	5.9	5.6
8	**Proprietors' and rental income** [1]	35.1	35.6	34.2	35.0	35.0	36.7	36.5	35.9	36.7	36.5
9	Business and professional	17.7	17.9	18.2	18.4	18.0	18.8	19.1	18.9	19.2	19.0
10	Farm	12.1	12.3	10.6	11.0	11.5	12.3	11.8	11.4	11.8	11.8
11	Rental income of persons	5.3	5.4	5.4	5.5	5.4	5.7	5.6	5.6	5.7	5.6
12	**Corporate profits and inventory valuation adjustment**	23.8	23.6	22.6	22.1	23.0	22.4	22.5	15.6	13.2	18.4
13	Corporate profits before tax	24.1	24.0	22.7	22.4	23.3	22.9	23.0	16.1	13.9	19.0
14	Corporate profits tax liability	13.4	13.3	12.6	12.4	12.9	12.9	13.0	9.1	7.8	10.7
15	Corporate profits after tax	10.7	10.7	10.1	10.0	10.4	10.0	10.1	7.0	6.1	8.3
16	Inventory valuation adjustment	−.3	−.4	−.1	−.3	−.3	−.5	−.6	−.5	−.7	−.6
17	**Net interest**	3.4	3.3	3.3	3.4	3.3	3.3	3.3	3.1	3.0	3.2
18	**Addendum: Compensation of general government employees**	29.8	31.6	33.2	34.1	32.2	35.2	36.2	36.9	32.2	35.2

1. Includes noncorporate inventory valuation adjustment.

Table 43.—*National Income by Distributive Shares, Seasonally Adjusted Quarterly Totals at Annual Rates, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**National income**	220.5	217.8	215.2	211.3	216.2	218.9	232.2	249.9	258.8	240.0
2	**Compensation of employees**	142.0	141.0	140.1	140.4	140.9	143.0	149.8	158.5	166.1	154.3
3	Wages and salaries	135.7	134.5	133.5	133.6	134.3	135.7	142.2	150.5	157.7	146.5
4	Private	115.6	114.3	112.9	112.6	113.9	114.7	121.0	128.1	133.4	124.3
5	Military	4.2	4.1	4.2	4.5	4.2	4.4	4.3	4.9	6.3	5.0
6	Government civilian	15.9	16.1	16.3	16.5	16.2	16.6	16.9	17.5	18.0	17.2
7	Supplements to wages and salaries	6.3	6.5	6.6	6.7	6.5	7.3	7.5	8.0	8.4	7.8
8	**Proprietors' and rental income** [1]	44.0	42.6	41.3	40.2	42.0	42.4	43.8	45.4	46.9	44.6
9	Business and professional	21.5	21.6	21.3	21.3	21.4	21.6	22.5	23.7	23.6	22.9
10	Farm	14.9	13.2	12.0	10.8	12.7	12.4	13.0	13.2	14.5	13.3
11	Rental income of persons	7.6	7.8	7.9	8.1	7.9	8.4	8.4	8.5	8.7	8.5
12	**Corporate profits and inventory valuation adjustment**	29.7	29.2	28.6	25.3	28.1	27.8	32.8	40.0	39.7	35.1
13	Corporate profits before tax	28.6	25.1	26.4	24.8	26.2	29.1	34.7	47.1	48.9	40.0
14	Corporate profits tax liability	11.4	10.0	10.5	9.9	10.4	13.0	15.5	21.0	21.8	17.8
15	Corporate profits after tax	17.2	15.1	15.9	15.0	15.8	16.1	19.2	26.1	27.1	22.1
16	Inventory valuation adjustment	1.1	4.1	2.2	.4	1.9	−1.3	−1.9	−7.1	−9.2	−4.9
17	**Net interest**	4.9	5.1	5.3	5.5	5.2	5.7	5.8	6.0	6.1	5.9
18	**Addendum: Compensation of general government employees**	19.0	19.1	19.4	19.9	19.3	19.7	19.8	20.9	22.8	20.8

1. Includes noncorporate inventory valuation adjustment.

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Table 43.—*National Income by Distributive Shares, Seasonally Adjusted Quarterly Totals at Annual Rates, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
93.9	101.5	109.0	114.1	104.7	120.1	131.0	144.1	155.9	137.7	163.4	169.1	172.9	176.0	170.3	1
58.5	62.7	67.2	70.6	64.8	74.7	81.1	89.0	96.4	85.3	103.5	108.1	111.5	115.2	109.6	2
56.0	60.0	64.4	67.7	62.1	71.7	78.0	85.7	92.9	82.1	100.0	104.4	107.6	111.3	105.8	3
46.6	50.1	54.0	56.6	51.9	59.6	63.7	68.6	72.5	66.1	75.5	78.6	80.5	82.3	79.2	4
1.1	1.6	2.2	2.5	1.9	3.2	4.8	7.0	9.7	6.2	12.3	13.4	14.6	16.2	14.1	5
8.2	8.3	8.2	8.6	8.3	9.0	9.6	10.0	10.7	9.8	12.2	12.5	12.6	12.8	12.5	6
2.5	2.6	2.8	2.9	2.7	2.9	3.0	3.3	3.4	3.2	3.5	3.7	3.8	4.0	3.8	7
18.6	20.2	21.9	22.7	20.9	24.7	27.3	29.9	32.0	28.5	33.0	33.2	33.3	33.6	33.3	8
10.0	10.5	11.4	11.6	10.9	12.4	13.3	14.4	15.5	13.9	16.5	16.4	17.0	17.4	16.8	9
5.5	6.3	6.9	7.3	6.5	8.1	9.5	10.8	11.6	10.0	11.5	11.7	11.1	11.1	11.4	10
3.1	3.4	3.6	3.8	3.5	4.1	4.5	4.7	4.9	4.5	5.0	5.1	5.1	5.2	5.1	11
12.3	14.1	15.3	16.2	14.5	16.2	18.3	21.0	23.6	19.7	23.0	24.0	24.5	23.6	23.8	12
13.4	16.3	18.9	19.1	17.0	18.8	20.0	21.3	23.9	20.9	24.0	25.0	24.9	24.3	24.6	13
6.0	7.3	8.5	8.6	7.6	10.3	10.9	11.6	13.0	11.4	13.8	14.3	14.3	13.9	14.1	14
7.4	9.0	10.4	10.6	9.4	8.5	9.1	9.7	10.8	9.5	10.2	10.7	10.6	10.4	10.5	15
−1.2	−2.1	−3.7	−2.9	−2.5	−2.6	−1.6	− .3	−.3	−1.2	−1.0	−1.0	−.4	−.7	−.8	16
4.5	4.5	4.6	4.6	4.5	4.5	4.4	4.2	4.0	4.3	3.9	3.7	3.6	3.5	3.7	17
8.6	9.2	9.6	10.3	9.4	11.4	13.5	16.2	19.5	15.1	23.5	24.8	26.1	27.9	25.6	18

Table 43.—*National Income by Distributive Shares, Seasonally Adjusted Quarterly Totals at Annual Rates, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
168.9	175.5	183.3	190.4	179.6	192.2	193.4	197.0	205.7	197.2	212.4	221.5	225.2	227.1	221.6	1
113.2	115.2	119.5	122.7	117.7	125.7	127.1	128.8	133.2	128.8	136.0	138.9	143.7	144.8	140.9	2
107.3	109.3	113.6	116.8	111.8	119.6	121.0	123.2	127.5	122.9	130.3	133.2	137.9	139.0	135.2	3
82.4	89.1	94.8	98.4	91.2	101.8	103.6	106.3	110.1	105.5	112.6	115.1	118.7	119.0	116.4	4
12.5	7.6	5.9	5.3	7.8	4.7	4.0	3.8	3.9	4.1	3.8	3.9	4.0	4.2	4.0	5
12.4	12.6	12.9	13.2	12.8	13.2	13.4	13.1	13.5	13.3	13.9	14.2	15.2	15.8	14.8	6
5.8	5.9	5.9	5.9	5.9	6.0	6.1	5.7	5.8	5.9	5.7	5.7	5.8	5.9	5.8	7
39.2	40.8	42.8	43.2	41.5	41.9	38.9	40.1	42.8	40.9	43.4	46.9	46.2	45.8	45.6	8
20.7	21.7	21.8	21.0	21.3	20.1	19.8	19.6	20.3	19.9	21.3	21.7	21.9	21.7	21.6	9
12.5	13.0	14.7	15.6	13.9	15.3	12.9	14.1	15.6	14.5	15.3	18.1	17.1	16.4	16.7	10
5.9	6.1	6.2	6.6	6.2	6.5	6.2	6.4	6.9	6.5	6.8	7.1	7.1	7.7	7.2	11
13.5	16.5	17.9	21.2	17.3	21.1	23.6	24.1	25.5	23.6	28.7	31.2	30.7	31.7	30.6	12
14.8	19.3	26.0	30.2	22.6	31.2	27.7	28.6	30.4	29.5	32.3	32.8	34.3	31.6	32.8	13
6.0	7.8	10.5	12.2	9.1	11.9	10.6	10.9	11.6	11.3	12.3	12.5	13.1	12.0	12.5	14
8.8	11.5	15.5	18.0	13.4	19.3	17.1	17.6	18.8	18.2	20.0	20.2	21.2	19.5	20.3	15
−1.2	−2.8	−8.1	−8.9	−5.3	−10.1	−4.1	−4.4	−4.9	−5.9	−3.7	−1.5	−3.6	.2	−2.2	16
3.0	3.0	3.1	3.3	3.1	3.5	3.8	3.9	4.1	3.8	4.3	4.5	4.6	4.7	4.5	17
25.3	20.5	18.9	18.2	20.7	17.6	17.1	15.8	16.2	16.7	16.5	16.8	17.7	18.5	17.4	18

Table 43.—*National Income by Distributive Shares, Seasonally Adjusted Quarterly Totals at Annual Rates, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
268.9	275.8	278.4	285.1	277.0	286.1	287.2	290.3	300.1	291.0	305.9	308.2	306.2	299.9	305.0	1
173.7	179.5	182.7	185.8	180.4	190.1	192.1	196.1	203.2	195.4	206.2	210.0	211.4	208.8	209.1	2
164.5	170.0	173.1	175.9	170.9	180.2	181.9	185.5	192.4	185.0	195.3	198.9	200.3	197.6	198.0	3
138.2	141.9	143.0	145.1	142.1	148.2	149.2	152.3	159.1	152.2	162.0	165.3	166.7	164.1	164.5	4
7.4	8.5	9.2	9.7	8.7	10.2	10.6	10.7	10.4	10.5	10.3	10.4	10.2	9.9	10.2	5
19.0	19.6	20.9	21.0	20.1	21.8	22.2	22.6	22.9	22.4	23.1	23.2	23.4	23.5	23.3	6
9.2	9.5	9.6	9.9	9.5	10.0	10.2	10.5	10.8	10.4	10.9	11.1	11.1	11.2	11.1	7
49.3	49.4	49.8	51.3	49.9	49.5	50.1	50.3	49.8	49.9	50.3	48.9	47.8	49.1	49.0	8
25.2	24.7	24.4	24.8	24.8	25.1	25.7	25.8	26.4	25.7	26.5	26.3	26.1	25.9	26.2	9
15.3	15.7	16.1	17.0	16.0	14.8	14.5	14.3	13.2	14.2	13.4	12.1	11.1	12.3	12.2	10
8.9	9.0	9.2	9.5	9.1	9.6	10.0	10.2	10.2	10.0	10.5	10.5	10.6	10.8	10.6	11
39.5	40.2	39.0	41.0	39.9	39.3	37.5	36.5	39.4	38.2	41.4	41.0	38.3	33.1	38.5	12
47.9	41.0	36.5	39.2	41.2	39.1	35.5	35.8	38.3	37.2	42.4	41.9	40.9	32.5	39.4	13
26.2	22.4	19.9	21.4	22.5	21.0	19.0	19.2	20.6	20.0	22.7	22.5	21.9	17.4	21.1	14
21.8	18.6	16.6	17.8	18.7	18.1	16.4	16.6	17.7	17.2	19.7	19.5	19.0	15.1	18.3	15
−8.4	−.8	2.5	1.7	−1.3	.1	2.1	.7	1.1	1.0	−.9	−.9	−2.6	.6	−1.0	16
6.4	6.7	6.9	7.1	6.8	7.2	7.4	7.5	7.6	7.4	7.9	8.3	8.6	8.9	8.4	17
25.0	26.7	28.3	29.0	27.2	30.1	30.9	31.4	31.5	31.0	31.4	31.6	31.5	31.3	31.4	18

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Table 44.—*Gross National Product or Expenditure, Quarterly, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	21.5	21.8	22.8	25.0	91.1	23.8	24.1	24.9	27.8	100.6
2	**Personal consumption expenditures**	15.6	16.7	16.6	18.7	67.6	16.8	17.8	17.5	19.9	71.9
3	Durable goods	1.4	1.7	1.5	2.1	6.7	1.6	2.0	1.7	2.4	7.8
4	Nondurable goods	7.8	8.6	8.6	10.1	35.1	8.5	9.0	9.1	10.6	37.2
5	Services	6.4	6.4	6.4	6.5	25.8	6.7	6.7	6.6	6.9	26.9
6	**Gross private domestic investment**	2.5	1.5	2.8	2.6	9.3	3.3	2.5	3.8	3.6	13.2
7	New construction	1.0	1.2	1.3	1.3	4.8	1.0	1.3	1.6	1.5	5.5
8	Residential nonfarm	.6	.7	.7	.7	2.7	.5	.7	.9	.8	3.0
9	Other	.4	.5	.6	.6	2.1	.5	.6	.7	.7	2.5
10	Producers' durable equipment	1.0	1.1	1.0	1.2	4.2	1.3	1.4	1.3	1.5	5.5
11	Change in business inventories—total	.6	−.8	.5	.1	.4	1.0	−.3	.9	.6	2.2
12	Nonfarm only	.6	−.8	.4	.1	.3	.9	−.3	.8	.5	1.9
13	**Net foreign investment**	.2	.2	.3	.3	.9	.4	.4	.3	.3	1.5
14	**Government purchases of goods and services**	3.3	3.4	3.2	3.5	13.3	3.3	3.4	3.3	4.0	14.1
15	Federal	1.3	1.3	1.2	1.3	5.2	1.4	1.4	1.4	1.9	6.2
16	National security	.3	.3	.3	.4	1.3	.4	.4	.5	.9	2.2
17	National defense										
18	Other national security										
19	Other	1.0	1.0	.9	1.0	3.9	1.1	1.0	.9	1.0	4.0
20	Less: Government sales	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	State and local	2.0	2.1	2.0	2.1	8.2	1.9	2.0	1.9	2.1	7.9

Table 44.—*Gross National Product or Expenditure, Quarterly, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	50.6	51.7	53.3	55.8	211.4	54.4	54.8	52.6	51.7	213.6
2	**Personal consumption expenditures**	25.1	26.8	27.2	30.8	109.8	28.1	29.1	29.7	34.8	121.7
3	Durable goods	1.4	1.6	1.5	2.2	6.8	1.6	1.8	1.8	2.9	8.1
4	Nondurable goods	14.5	15.7	16.2	18.9	65.4	16.6	17.3	17.8	21.5	73.2
5	Services	9.2	9.4	9.4	9.6	37.7	9.9	10.0	10.1	10.4	40.4
6	**Gross private domestic investment**	2.4	1.5	2.5	.8	7.1	2.4	2.0	3.3	2.7	10.4
7	New construction	.6	.7	.8	.7	2.7	.6	.8	1.1	1.3	3.8
8	Residential nonfarm	.2	.2	.2	.2	.8	.1	.2	.3	.4	1.1
9	Other	.4	.5	.5	.5	1.9	.5	.6	.8	.9	2.7
10	Producers' durable equipment	1.2	1.4	1.3	1.5	5.4	1.7	1.8	2.1	2.0	7.7
11	Change in business inventories—total	.6	−.6	.4	−1.4	−1.0	.1	−.6	.1	−.6	−1.1
12	Nonfarm only	.7	−.5	.5	−1.2	−.6	.2	−.4	.2	−.5	−.6
13	**Net foreign investment**	−.7	−.7	−.3	−.4	−2.1	−.7	−.7	−.3	.2	−1.4
14	**Government purchases of goods and services**	23.8	24.1	24.0	24.6	96.5	24.7	24.4	19.9	13.9	82.9
15	Federal	21.9	22.2	22.3	22.6	89.0	22.7	22.4	18.0	11.7	74.8
16	National security	21.9	22.1	22.2	22.5	88.6	22.7	22.4	18.5	12.3	75.9
17	National defense										
18	Other national security										
19	Other	.3	.4	.5	.4	1.6	.3	.3	.3	.2	1.0
20	Less: Government sales	.3	.3	.3	.3	1.2	.3	.3	.7	.8	2.2
21	State and local	1.9	1.9	1.7	2.0	7.5	2.0	2.0	1.9	2.2	8.1

Table 44.—*Gross National Product or Expenditure, Quarterly, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	63.0	63.1	64.0	67.2	257.3	64.1	67.7	73.5	79.8	285.1
2	**Personal consumption expenditures**	42.0	45.0	44.1	49.5	180.6	43.7	47.1	49.7	53.6	194.0
3	Durable goods	4.7	5.9	5.9	7.0	23.6	5.6	6.7	8.2	8.1	28.6
4	Nondurable goods	22.5	24.0	23.2	27.1	96.9	22.3	24.2	25.2	28.8	100.4
5	Services	14.8	15.0	15.0	15.4	60.1	15.8	16.2	16.3	16.7	65.0
6	**Gross private domestic investment**	10.1	6.6	9.0	6.8	32.5	10.7	10.9	14.5	15.2	51.2
7	New construction	3.6	4.2	4.8	4.7	17.5	4.3	5.5	6.8	6.1	22.7
8	Residential nonfarm	1.5	1.9	2.3	2.5	8.3	2.2	3.1	3.9	3.4	12.6
9	Other	2.1	2.3	2.5	2.3	9.2	2.1	2.4	2.9	2.8	10.1
10	Producers' durable equipment	4.5	4.8	4.4	4.2	17.8	4.1	5.1	6.0	5.9	21.1
11	Change in business inventories—total	2.0	−2.5	−.2	−2.1	−2.7	2.3	.2	1.7	3.1	7.4
12	Nonfarm only	1.9	−2.2	.2	−1.8	−1.9	2.3	.0	1.4	2.8	6.4
13	**Net foreign investment**	.3	.3	.0	−.1	.5	−.4	−.4	−.8	−.6	−2.2
14	**Government purchases of goods and services**	10.5	11.2	10.9	11.0	43.6	10.1	10.1	10.2	11.6	42.0
15	Federal	6.4	6.6	6.3	6.1	25.4	5.5	5.2	5.2	6.3	22.1
16	National security	4.8	5.1	4.9	4.5	19.3	4.2	4.3	4.4	5.5	18.5
17	National defense	3.4	3.5	3.4	3.3	13.6	3.2	3.0	3.5	4.6	14.3
18	Other national security	1.4	1.7	1.5	1.2	5.7	1.1	1.3	.9	1.0	4.3
19	Other	1.6	1.6	1.6	1.8	6.6	1.3	.9	.8	.8	3.9
20	Less: Government sales	.1	.1	.2	.1	.4	.1	.1	.1	.1	.3
21	State and local	4.1	4.6	4.6	4.9	18.2	4.6	5.0	5.0	5.3	19.9

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Table 44.—*Gross National Product or Expenditure, Quarterly, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
27.5	30.3	31.9	36.1	125.8	34.6	37.9	40.9	45.6	159.1	44.8	47.1	48.7	51.8	192.5	1
18.2	20.3	20.6	22.8	81.9	20.5	21.7	22.1	25.4	89.7	23.1	24.7	24.8	27.9	100.5	2
2.0	2.8	2.3	2.5	9.7	1.6	1.7	1.6	2.1	7.0	1.4	1.7	1.5	2.0	6.6	3
9.1	10.3	11.0	12.7	43.2	11.3	12.2	12.7	15.2	51.3	13.3	14.4	14.6	17.0	59.3	4
7.0	7.2	7.2	7.6	29.0	7.7	7.8	7.8	8.1	31.5	8.4	8.6	8.7	9.0	34.7	5
4.3	4.4	4.8	4.5	18.1	4.1	3.0	1.9	.8	9.9	.9	.8	2.4	1.5	5.6	6
1.3	1.7	2.0	1.7	6.6	1.1	1.1	.8	.7	3.7	.5	.6	.7	.6	2.3	7
.6	.9	1.1	.9	3.5	.5	.6	.3	.3	1.7	.2	.2	.3	.2	.9	8
.7	.8	.9	.8	3.1	.6	.5	.5	.4	2.0	.3	.3	.4	.4	1.4	9
1.7	2.0	1.7	1.6	6.9	1.2	1.3	1.0	.8	4.3	.8	1.0	1.1	1.2	4.0	10
1.3	.7	1.1	1.3	4.5	1.7	.6	.1	−.6	1.8	−.4	−.7	.7	−.3	−.8	11
1.2	.6	1.0	1.2	4.0	1.6	.3	−.3	−1.0	.7	−.5	−.6	.8	−.2	−.6	12
.3	.2	.2	.5	1.1	.2	−.2	.0	−.2	−.2	−.4	−.6	−.5	−.7	−2.2	13
4.7	5.4	6.4	8.3	24.8	9.8	13.5	16.9	19.6	59.7	21.3	22.2	22.0	23.1	88.6	14
2.8	3.4	4.5	6.2	16.9	7.8	11.5	15.1	17.6	52.0	19.4	20.3	20.3	21.2	81.2	15
1.9	2.7	3.8	5.4	13.8	7.0	10.8	14.6	17.1	49.6	19.0	20.0	20.2	21.1	80.4	16
															17
															18
.9	.7	.7	.8	3.2	.8	.7	.6	.6	2.7	.5	.4	.3	.3	1.5	19
.0	.0	.0	.0	.0	.0	.1	.0	.1	.2	.1	.1	.2	.2	.6	20
1.9	2.0	1.9	2.1	7.8	1.9	2.0	1.8	2.0	7.7	1.9	1.9	1.7	1.9	7.4	21

Table 44.—*Gross National Product or Expenditure, Quarterly, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
47.7	50.1	53.6	57.8	209.2	54.1	56.0	57.5	64.6	232.2	60.2	62.7	65.1	69.3	257.3	1
32.2	35.3	36.9	42.1	146.6	37.4	40.5	40.6	46.5	165.0	41.2	43.7	43.8	48.9	177.6	2
2.7	3.7	4.1	5.4	15.9	4.2	5.1	4.9	6.4	20.6	4.7	5.6	5.5	6.4	22.2	3
18.6	20.2	21.1	24.6	84.5	20.9	22.7	22.7	26.9	93.1	22.8	24.0	24.0	27.9	98.7	4
11.0	11.4	11.8	12.1	46.2	12.4	12.7	12.9	13.3	51.3	13.8	14.1	14.3	14.5	56.7	5
5.9	6.0	8.3	7.0	27.1	7.6	6.0	7.7	8.5	29.7	10.3	9.3	11.6	10.0	41.2	6
1.7	2.5	3.1	3.0	10.3	2.6	3.2	4.0	4.2	14.0	3.6	4.5	5.2	4.6	17.9	7
.6	.9	1.3	1.2	4.0	1.0	1.3	1.8	2.1	6.3	1.7	2.2	2.5	2.2	8.6	8
1.1	1.5	1.9	1.8	6.3	1.6	1.8	2.2	2.1	7.7	1.9	2.3	2.7	2.4	9.3	9
2.0	2.4	2.8	3.5	10.7	4.0	4.3	4.0	4.4	16.7	4.6	4.9	4.8	4.8	19.1	10
2.3	1.0	2.3	.5	6.1	1.0	−1.5	−.4	−.1	−1.0	2.1	−.1	1.7	.5	4.2	11
2.3	1.1	2.4	.6	6.4	1.4	−.7	.3	.2	1.3	2.0	−.5	1.3	.2	3.0	12
.7	1.3	1.3	1.2	4.6	2.2	2.6	2.2	2.0	8.9	1.0	.7	−.1	.3	2.0	13
8.9	7.5	7.1	7.5	30.9	6.9	7.0	7.1	7.6	28.6	7.7	9.0	9.8	10.1	36.6	14
6.6	5.1	4.6	4.6	20.9	4.0	3.8	3.9	4.0	15.8	4.2	5.1	5.8	5.9	21.0	15
6.9	5.5	4.6	4.2	21.2	3.6	3.5	2.9	3.3	13.3	3.6	3.9	4.2	4.3	16.0	16
					3.5	3.0	2.7	3.0	12.3	2.9	2.9	2.8	3.1	11.6	17
					.1	.5	.2	.3	1.1	.8	1.0	1.4	1.2	4.4	18
.3	.5	.8	.9	2.5	.9	.7	1.2	.9	3.8	.9	1.3	1.7	1.7	5.6	19
.6	.9	.8	.4	2.7	.5	.4	.2	.2	1.3	.3	.1	.1	.1	.5	20
2.3	2.4	2.5	2.8	10.0	2.8	3.2	3.2	3.6	12.8	3.5	3.9	4.0	4.3	15.6	21

Table 44.—*Gross National Product or Expenditure, Quarterly, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
77.9	80.6	82.3	87.4	328.2	83.1	84.6	85.1	93.3	346.1	88.5	91.5	91.1	93.8	364.9	1
49.8	50.7	50.7	57.1	208.3	50.5	53.9	53.2	60.7	218.4	54.4	57.4	56.7	61.6	230.1	2
6.8	6.6	6.3	7.4	27.1	5.7	6.8	6.1	8.2	26.8	6.8	7.7	7.4	7.8	29.7	3
25.8	26.6	26.9	31.7	111.1	26.3	28.2	28.3	33.1	116.0	27.6	29.3	28.9	33.1	118.9	4
17.2	17.5	17.4	18.0	70.1	18.6	18.8	18.8	19.4	75.6	20.0	20.4	20.3	20.7	81.4	5
16.1	14.7	14.6	11.5	56.9	14.0	10.9	13.0	12.8	50.7	14.3	12.8	13.6	10.7	51.4	6
5.2	5.9	6.4	5.8	23.3	5.0	5.9	6.5	6.2	23.7	5.4	6.5	7.1	6.6	25.5	7
2.6	2.8	2.9	2.7	11.0	2.2	2.8	3.1	3.0	11.1	2.4	3.1	3.3	3.1	11.9	8
2.6	3.1	3.5	3.1	12.4	2.9	3.2	3.4	3.2	12.6	2.9	3.4	3.7	3.5	13.6	9
5.9	6.1	5.4	5.8	23.2	5.9	6.4	5.3	5.6	23.3	6.0	6.5	6.0	6.0	24.4	10
5.0	2.6	2.8	−.1	10.4	3.0	−1.5	1.2	.9	3.6	2.9	−.1	.5	−1.8	1.5	11
4.7	2.3	2.5	−.5	9.0	2.7	−1.7	1.1	.9	3.0	3.1	.1	.8	−1.7	2.2	12
−.7	.0	.2	.8	.2	.6	.1	−.6	−.2	−.2	−.5	−.6	−.7	−.1	−1.9	13
12.7	15.2	16.9	18.0	62.8	18.1	19.6	19.4	20.0	77.2	20.3	21.8	21.5	21.6	85.2	14
7.7	9.7	11.3	12.3	41.0	12.7	13.8	13.5	13.9	54.0	14.5	15.5	15.1	15.0	60.1	15
6.9	8.8	10.4	11.2	37.3	11.6	12.5	12.0	12.5	48.5	12.7	13.6	13.1	12.6	52.0	16
6.0	7.9	9.6	10.4	33.9	11.0	11.8	11.2	12.0	46.1	12.2	13.0	12.6	12.2	50.0	17
.8	.9	.8	.9	3.4	.6	.7	.7	.5	2.4	.6	.6	.4	.5	2.0	18
.9	1.0	1.1	1.2	4.2	1.3	1.4	1.7	1.5	5.8	1.9	2.1	2.1	2.4	8.5	19
.1	.1	.1	.1	.4	.1	.1	.1	.1	.4	.1	.1	.1	.1	.4	20
5.0	5.5	5.6	5.7	21.8	5.3	5.9	5.9	6.1	23.2	5.8	6.2	6.4	6.7	25.1	21

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Table 45.—*Gross National Product or Expenditure, Seasonally Adjusted Quarterly Totals at Annual Rates, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	88.8	89.1	92.6	93.9	91.1	97.3	98.5	101.7	104.9	100.6
2	**Personal consumption expenditures**	65.5	67.3	68.3	69.2	67.6	70.1	71.7	72.2	73.5	71.9
3	Durable goods	6.1	6.5	6.9	7.1	6.7	7.3	7.7	7.9	8.2	7.8
4	Nondurable goods	34.0	35.1	35.5	36.0	35.1	36.4	37.2	37.3	37.9	37.2
5	Services	25.4	25.7	25.9	26.1	25.8	26.4	26.8	27.0	27.4	26.9
6	**Gross private domestic investment**	9.1	7.8	10.4	10.0	9.3	11.9	11.9	14.6	14.3	13.2
7	New construction	4.7	4.8	4.7	4.9	4.8	4.9	5.4	5.6	5.8	5.5
8	Residential nonfarm	2.8	2.7	2.6	2.6	2.7	2.7	3.0	3.1	3.2	3.0
9	Other	1.9	2.0	2.1	2.2	2.1	2.2	2.4	2.5	2.7	2.5
10	Producers' durable equipment	3.7	3.9	4.3	4.8	4.2	5.1	5.2	5.8	6.1	5.5
11	Change in business inventories—total	.7	−.9	1.4	.4	.4	1.9	1.3	3.2	2.4	2.2
12	Nonfarm only	.6	−1.0	1.3	.3	.3	1.7	1.1	2.9	2.0	1.9
13	**Net foreign investment**	.7	.6	1.0	1.2	.9	1.8	1.6	1.4	1.3	1.5
14	**Government purchases of goods and services**	13.5	13.4	12.9	13.4	13.3	13.6	13.4	13.5	15.8	14.1
15	Federal	5.2	5.3	4.8	5.4	5.2	5.8	5.5	5.6	7.8	6.2
16	National security	1.1	1.2	1.3	1.4	1.3	1.6	1.7	1.8	3.8	2.2
17	National defense										
18	Other national security										
19	Other	4.1	4.1	3.4	3.9	3.9	4.2	3.9	3.7	4.0	4.0
20	Less: Government sales	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	State and local	8.3	8.1	8.1	8.1	8.2	7.8	7.9	7.9	8.0	7.9

Table 45.—*Gross National Product or Expenditure, Seasonally Adjusted Quarterly Totals at Annual Rates, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	205.6	209.4	214.1	216.5	211.4	221.2	223.7	212.2	197.1	213.6
2	**Personal consumption expenditures**	105.3	108.4	111.4	114.1	109.8	117.4	118.8	122.2	128.4	121.7
3	Durable goods	6.6	6.6	6.7	7.1	6.8	7.5	7.4	7.9	9.6	8.1
4	Nondurable goods	62.1	64.3	66.7	68.4	65.4	70.6	71.6	73.7	77.1	73.2
5	Services	36.7	37.5	38.1	38.6	37.7	39.3	39.8	40.7	41.7	40.4
6	**Gross private domestic investment**	8.0	7.6	7.0	5.9	7.1	8.0	10.2	10.7	12.9	10.4
7	New construction	2.7	2.7	2.7	2.7	2.7	2.8	3.3	3.9	5.3	3.8
8	Residential nonfarm	1.0	.8	.7	.7	.8	.7	.8	1.1	1.8	1.1
9	Other	1.7	1.9	2.0	2.0	1.9	2.1	2.5	2.8	3.5	2.7
10	Producers' durable equipment	4.9	5.5	5.2	6.2	5.4	6.7	6.9	8.6	8.4	7.7
11	Change in business inventories—total	.5	−.6	−.9	−3.1	−1.0	−1.6	.0	−1.8	−.8	−1.1
12	Nonfarm only	.9	−.1	−.5	−2.6	−.6	−1.1	.5	−1.3	−.5	−.6
13	**Net foreign investment**	−2.7	−2.9	−1.2	−1.6	−2.1	−2.7	−2.7	−1.0	.6	−1.4
14	**Government purchases of goods and services**	95.0	96.2	96.9	98.1	96.5	98.6	97.4	80.2	55.2	82.9
15	Federal	87.5	88.8	89.3	90.4	89.0	90.8	89.5	72.1	46.8	74.8
16	National security	87.5	88.4	88.6	90.0	88.6	90.9	89.8	73.9	49.2	75.9
17	National defense										
18	Other national security										
19	Other	1.1	1.6	2.0	1.6	1.6	1.0	1.1	1.1	.9	1.0
20	Less: Government sales	1.0	1.2	1.3	1.2	1.2	1.1	1.3	2.9	3.4	2.2
21	State and local	7.5	7.4	7.6	7.7	7.5	7.8	7.8	8.1	8.5	8.1

Table 45.—*Gross National Product or Expenditure, Seasonally Adjusted Quarterly Totals at Annual Rates, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	259.9	257.2	256.5	255.5	257.3	264.9	275.9	294.4	305.0	285.1
2	**Personal consumption expenditures**	178.4	180.4	180.1	183.5	180.6	185.2	189.1	202.9	198.8	194.0
3	Durable goods	21.6	23.4	24.2	25.1	23.6	25.7	26.4	33.2	29.2	28.6
4	Nondurable goods	98.0	97.3	95.6	96.6	96.9	96.7	98.3	103.9	102.7	100.4
5	Services	58.8	59.6	60.4	61.7	60.1	62.8	64.5	65.8	67.0	65.0
6	**Gross private domestic investment**	37.0	32.1	32.0	29.1	32.5	39.9	49.0	53.4	62.6	51.2
7	New construction	17.3	16.9	17.1	18.6	17.5	20.7	22.0	24.1	24.1	22.7
8	Residential nonfarm	7.8	7.6	8.2	9.6	8.3	11.2	12.4	13.7	13.1	12.6
9	Other	9.6	9.3	8.9	9.0	9.2	9.5	9.6	10.4	11.0	10.1
10	Producers' durable equipment	18.2	18.3	17.9	16.9	17.8	16.6	19.6	24.4	23.8	21.1
11	Change in business inventories—total	1.5	−3.1	−3.0	−6.3	−2.7	2.5	7.3	4.8	14.7	7.4
12	Nonfarm only	.9	−2.0	−1.3	−5.1	−1.9	2.6	6.3	3.5	13.3	6.4
13	**Net foreign investment**	1.4	.4	.9	−.5	.5	−1.5	−2.3	−2.5	−2.4	−2.2
14	**Government purchases of goods and services**	43.1	44.4	43.5	43.4	43.6	41.3	40.1	40.7	46.0	42.0
15	Federal	25.6	26.6	25.1	24.5	25.4	21.9	20.7	20.7	25.1	22.1
16	National security	19.4	20.5	19.5	17.8	19.3	17.0	17.2	17.8	22.1	18.5
17	National defense	13.6	13.9	13.6	13.2	13.6	12.6	12.2	14.0	18.2	14.3
18	Other national security	5.8	6.6	5.9	4.7	5.7	4.3	5.1	3.7	3.9	4.3
19	Other	6.6	6.3	6.4	7.0	6.6	5.2	3.8	3.2	3.3	3.9
20	Less: Government sales	.3	.3	.7	.3	.4	.3	.2	.2	.3	.3
21	State and local	17.5	17.8	18.4	18.9	18.2	19.4	19.4	20.0	20.8	19.9

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Table 45.—*Gross National Product or Expenditure, Seasonally Adjusted Quarterly Totals at Annual Rates, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
112.5	**122.8**	**129.3**	**138.7**	**125.8**	**141.7**	**153.6**	**163.6**	**177.6**	**159.1**	**182.6**	**191.3**	**194.9**	**201.3**	**192.5**	1
76.8	**81.2**	**84.5**	**84.9**	**81.9**	**86.4**	**87.8**	**90.4**	**94.3**	**89.7**	**97.2**	**99.9**	**101.5**	**103.6**	**100.5**	2
9.1	10.4	10.1	9.1	9.7	7.4	6.9	6.8	6.8	7.0	6.5	6.9	6.6	6.4	6.6	3
39.8	42.2	45.3	45.5	43.2	48.5	49.8	51.9	55.1	51.3	57.4	58.7	59.7	61.2	59.3	4
27.9	28.6	29.2	30.3	29.0	30.5	31.1	31.8	32.4	31.5	33.3	34.3	35.1	36.0	34.7	5
15.7	**19.5**	**18.2**	**18.8**	**18.1**	**15.4**	**12.8**	**4.8**	**6.4**	**9.9**	**1.9**	**5.4**	**6.9**	**8.2**	**5.6**	6
6.2	6.9	7.0	6.4	6.6	5.4	4.1	2.8	2.6	3.7	2.3	2.2	2.4	2.4	2.3	7
3.2	3.6	3.9	3.4	3.5	2.7	2.1	1.1	1.0	1.7	.8	.9	.9	1.0	.9	8
3.0	3.3	3.1	3.1	3.1	2.7	2.0	1.8	1.6	2.0	1.5	1.4	1.4	1.5	1.4	9
6.6	7.3	7.2	6.6	6.9	4.9	5.1	4.1	3.3	4.3	3.3	3.7	4.4	4.7	4.0	10
2.9	5.3	4.0	5.7	4.5	5.2	3.7	−2.1	.5	1.8	−3.7	−.5	.1	1.0	−.8	11
2.5	4.9	3.6	5.3	4.0	4.6	2.6	−3.6	−1.0	.7	−4.2	−.1	.6	1.5	−.6	12
1.1	**.7**	**.6**	**2.1**	**1.1**	**.6**	**−.6**	**.2**	**−1.0**	**−.2**	**−1.7**	**−2.5**	**−2.2**	**−2.7**	**−2.2**	13
18.8	**21.4**	**25.9**	**32.9**	**24.8**	**39.2**	**53.6**	**68.2**	**77.9**	**59.7**	**85.1**	**88.5**	**88.7**	**92.1**	**88.6**	14
11.2	13.6	18.0	24.9	16.9	31.3	45.8	60.6	70.4	52.0	77.7	81.1	81.3	84.8	81.2	15
7.5	10.7	15.2	21.7	13.8	28.2	43.4	58.4	68.3	49.6	76.0	80.1	81.0	84.4	80.4	16
															17
															18
3.7	2.9	2.8	3.3	3.2	3.2	2.8	2.4	2.3	2.7	2.2	1.5	1.0	1.2	1.5	19
.0	.0	.1	.1	.0	.1	.3	.2	.3	.2	.5	.5	.7	.8	.6	20
7.6	7.8	7.9	7.9	7.8	7.9	7.7	7.6	7.5	7.7	7.5	7.4	7.4	7.3	7.4	21

Table 45.—*Gross National Product or Expenditure, Seasonally Adjusted Quarterly Totals at Annual Rates, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
196.7	**205.0**	**215.2**	**220.1**	**209.2**	**223.2**	**229.4**	**232.6**	**243.7**	**232.2**	**247.9**	**255.5**	**261.9**	**264.0**	**257.3**	1
137.0	**142.5**	**152.1**	**154.8**	**146.6**	**158.9**	**163.5**	**166.8**	**170.7**	**165.0**	**174.1**	**176.8**	**179.5**	**180.1**	**177.6**	2
12.7	14.9	17.4	18.6	15.9	19.2	20.4	20.8	22.0	20.6	21.4	22.2	23.0	22.3	22.2	3
80.6	82.3	87.4	87.7	84.5	90.3	92.6	93.9	95.5	93.1	97.9	98.6	99.0	99.4	98.7	4
43.7	45.3	47.3	48.5	46.2	49.4	50.5	52.1	53.2	51.3	54.8	56.0	57.4	58.4	56.7	5
21.3	**28.0**	**28.5**	**30.8**	**27.1**	**27.4**	**29.1**	**27.4**	**35.0**	**29.7**	**38.6**	**41.2**	**42.5**	**42.4**	**41.2**	6
7.9	10.1	11.4	11.8	10.3	12.5	12.7	14.3	16.6	14.0	17.1	18.1	18.4	18.0	17.9	7
3.0	3.8	4.5	4.8	4.0	5.3	5.3	6.3	8.3	6.3	8.3	8.9	8.8	8.3	8.6	8
4.9	6.2	6.9	7.0	6.3	7.2	7.4	8.0	8.3	7.7	8.9	9.2	9.5	9.7	9.3	9
7.7	9.4	11.4	14.5	10.7	16.1	16.4	16.7	17.4	16.7	18.4	18.9	19.7	19.5	19.1	10
5.7	8.5	5.7	4.5	6.1	−1.2	−.1	−3.7	1.0	−1.0	3.0	4.3	4.4	4.9	4.2	11
6.0	8.7	5.9	4.8	6.4	.7	3.1	−.9	2.3	1.3	2.6	2.9	2.9	3.6	3.0	12
3.0	**4.6**	**5.9**	**4.8**	**4.6**	**8.8**	**9.2**	**9.8**	**8.0**	**8.9**	**3.9**	**1.9**	**.6**	**1.3**	**2.0**	13
35.5	**29.9**	**28.7**	**29.6**	**30.9**	**28.0**	**27.7**	**28.7**	**30.0**	**28.6**	**31.2**	**35.6**	**39.2**	**40.2**	**36.6**	14
26.4	20.4	18.4	18.5	20.9	16.1	15.3	15.7	16.1	15.8	16.9	20.5	23.2	23.4	21.0	15
27.7	22.1	18.3	16.7	21.2	14.4	14.1	11.7	13.2	13.3	14.5	15.5	16.8	17.1	16.0	16
					14.1	12.1	10.8	12.0	12.3	11.4	11.5	11.2	12.2	11.6	17
					.3	2.0	.9	1.3	1.1	3.1	4.1	5.5	4.9	4.4	18
1.2	1.9	3.2	3.6	2.5	3.5	2.8	5.0	3.8	3.8	3.5	5.4	6.7	6.6	5.6	19
2.5	3.6	3.1	1.7	2.7	1.8	1.6	1.0	.9	1.3	1.1	.4	.3	.3	.5	20
9.0	9.5	10.3	11.1	10.0	11.9	12.5	13.0	13.9	12.8	14.3	15.1	16.0	16.8	15.6	21

Table 45.—*Gross National Product or Expenditure, Seasonally Adjusted Quarterly Totals at Annual Rates, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
319.3	**326.1**	**331.3**	**336.3**	**328.2**	**340.3**	**341.4**	**344.2**	**358.5**	**346.1**	**361.8**	**369.9**	**367.2**	**360.5**	**364.9**	1
210.0	**204.4**	**207.3**	**211.6**	**208.3**	**213.5**	**216.7**	**218.2**	**225.3**	**218.4**	**228.6**	**230.8**	**231.2**	**229.7**	**230.1**	2
30.6	26.0	26.2	25.8	27.1	25.8	27.0	25.4	29.1	26.8	30.4	30.3	30.3	28.0	29.7	3
111.1	109.1	110.5	113.5	111.1	114.2	114.9	116.6	118.4	116.0	118.8	119.6	118.6	118.7	118.9	4
68.3	69.3	70.7	72.2	70.1	73.5	74.8	76.2	77.8	75.6	79.4	80.9	82.3	83.0	81.4	5
59.6	**62.2**	**55.4**	**50.3**	**56.9**	**50.7**	**47.2**	**50.2**	**54.4**	**50.7**	**51.9**	**55.9**	**52.4**	**45.5**	**51.4**	6
24.0	23.5	23.1	22.7	23.3	23.3	23.7	23.7	24.2	23.7	25.0	25.9	25.6	25.7	25.5	7
12.1	10.9	10.4	10.5	11.0	10.5	10.9	11.3	11.6	11.1	11.7	12.2	12.1	11.7	11.9	8
11.8	12.6	12.7	12.3	12.4	12.8	12.7	12.4	12.6	12.6	13.3	13.7	13.5	13.9	13.6	9
23.8	23.1	22.5	23.3	23.2	24.0	24.5	22.0	22.8	23.3	24.1	24.6	24.8	24.0	24.4	10
11.8	15.5	9.9	4.2	10.4	3.4	−.9	4.6	7.5	3.6	2.8	5.4	2.0	−4.2	1.5	11
10.4	14.1	8.4	2.8	9.0	2.1	−1.8	4.0	7.5	3.0	3.3	6.2	2.9	−3.7	2.2	12
−2.5	**−1.1**	**1.7**	**2.8**	**.2**	**2.3**	**−.7**	**−1.5**	**−.8**	**−.2**	**−1.8**	**−3.3**	**−1.8**	**−.6**	**−1.9**	13
52.2	**60.5**	**66.9**	**71.6**	**62.8**	**73.7**	**78.1**	**77.3**	**79.6**	**77.2**	**83.0**	**86.6**	**85.4**	**86.0**	**85.2**	14
30.6	38.8	45.2	49.4	41.0	50.9	55.1	54.1	55.7	54.0	58.1	62.2	60.3	59.8	60.1	15
27.4	35.2	41.4	45.0	37.3	46.2	50.0	47.8	50.0	48.5	51.0	54.3	52.3	50.6	52.0	16
24.1	31.5	38.3	41.5	33.9	44.0	47.3	45.0	48.1	46.1	48.7	52.0	50.6	48.7	50.0	17
3.3	3.7	3.1	3.5	3.4	2.2	2.7	2.8	1.9	2.4	2.2	2.3	1.7	1.9	2.0	18
3.5	3.9	4.4	4.9	4.2	5.1	5.5	6.6	6.0	5.8	7.7	8.3	8.4	9.6	8.5	19
.3	.3	.6	.5	.4	.4	.4	.3	.3	.4	.5	.4	.4	.3	.4	20
21.6	21.8	21.7	22.2	21.8	22.8	23.0	23.1	23.9	23.2	24.9	24.4	25.1	26.2	25.1	21

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Table 46.—*Disposition of Personal Income, Quarterly, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Personal income**	17.6	17.9	17.9	19.5	72.9	18.6	19.2	19.5	21.4	78.7
2	Less: Personal tax and nontax payments	.8	.6	.5	.5	2.4	.9	.6	.5	.6	2.6
3	Federal	.4	.3	.3	.2	1.2	.5	.3	.3	.3	1.4
4	State and local	.4	.3	.2	.3.	1.2	.4	.3	.2	.3	1.2
5	Equals: Disposable personal income	16.8	17.2	17.4	19.0	70.4	17.8	18.6	18.9	20.8	76.1
6	Less: Personal consumption expenditures	15.6	16.7	16.6	18.7	67.6	16.8	17.8	17.5	19.9	71.9
7	Equals: Personal saving	1.3	.5	.8	.3	2.9	1.0	.8	1.5	.9	4.2

Table 46.—*Disposition of Personal Income, Quarterly, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Personal income**	40.3	41.2	41.3	42.9	165.7	42.8	43.4	42.2	42.7	171.2
2	Less: Personal tax and nontax payments	5.2	6.0	4.4	3.3	18.9	8.5	4.9	3.9	3.6	20.9
3	Federal	4.8	5.6	4.1	3.0	17.5	8.0	4.5	3.6	3.3	19.4
4	State and local	.4	.4	.3	.3	1.4	.4	.4	.3	.3	1.5
5	Equals: Disposable personal income	35.0	35.2	36.9	39.6	146.8	34.4	38.6	38.3	39.1	150.4
6	Less: Personal consumption expenditures	25.1	26.8	27.2	30.8	109.8	28.1	29.1	29.7	34.8	121.7
7	Equals: Personal saving	9.9	8.5	9.7	8.8	36.9	6.3	9.5	8.6	4.3	28.7

Table 46.—*Disposition of Personal Income, Quarterly, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Personal income**	51.3	51.7	51.1	52.6	206.8	53.9	54.9	57.0	61.3	227.1
2	Less: Personal tax and nontax payments	7.3	3.4	4.4	3.6	18.7	7.1	4.0	4.9	4.9	20.9
3	Federal	6.6	2.7	3.8	3.1	16.2	6.3	3.3	4.3	4.3	18.2
4	State and local	.7	.7	.6	.5	2.5	.8	.7	.7	.6	2.7
5	Equals: Disposable personal income	44.0	48.4	46.8	49.0	188.2	46.8	50.9	52.1	56.4	206.1
6	Less: Personal consumption expenditures	42.0	45.0	44.1	49.5	180.6	43.7	47.1	49.7	53.6	194.0
7	Equals: Personal saving	2.1	3.4	2.6	−.5	7.6	3.1	3.8	2.4	2.8	12.1

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Table 46.—*Disposition of Personal Income, Quarterly, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	I	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
21.5	**23.4**	**24.7**	**26.7**	**96.3**	**27.1**	**29.6**	**31.9**	**34.9**	**123.5**	**35.8**	**37.5**	**38.1**	**40.0**	**151.4**	1
1.2	.8	.6	.6	3.3	2.4	1.3	1.2	1.0	6.0	3.8	3.7	4.9	5.4	17.8	2
.8	.5	.4	.4	2.0	2.0	.9	1.0	.7	4.7	3.4	3.4	4.7	5.1	16.5	3
.4	.4	.3	.3	1.3	.4	.4	.3	.3	1.3	.4	.4	.3	.3	1.3	4
20.3	22.6	24.1	26.0	93.0	24.6	28.3	30.7	33.9	117.5	32.0	33.8	33.2	34.6	133.5	5
18.2	20.3	20.6	22.8	81.9	20.5	21.7	22.1	25.4	89.7	23.1	24.7	24.8	27.9	100.5	6
2.1	2.3	3.5	3.2	11.1	4.1	6.6	8.6	8.5	27.8	9.0	9.0	8.4	6.6	33.0	7

Table 46.—*Disposition of Personal Income, Quarterly, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
41.9	**43.9**	**45.1**	**47.1**	**178.0**	**45.8**	**46.1**	**48.1**	**50.5**	**190.5**	**49.6**	**51.8**	**52.9**	**54.4**	**208.7**	1
7.6	3.4	4.2	3.6	18.8	8.7	4.0	4.7	4.1	21.5	9.3	3.9	4.2	3.7	21.1	2
7.1	2.9	3.9	3.3	17.2	8.2	3.5	4.3	3.7	19.6	8.6	3.3	3.8	3.3	19.0	3
.5	.4	.4	.4	1.6	.5	.5	.4	.4	1.9	.6	.6	.5	.5	2.1	4
34.3	40.5	40.9	43.4	159.2	37.1	42.1	43.4	46.4	169.0	40.3	47.9	48.7	50.7	187.6	5
32.2	35.3	36.9	42.1	146.6	37.4	40.5	40.6	46.5	165.0	41.2	43.7	43.8	48.9	177.6	6
2.1	5.2	4.0	1.3	12.6	−.3	1.7	2.9	−.1	4.0	−.9	4.2	4.9	1.8	10.0	7

Table 46.—*Disposition of Personal Income, Quarterly, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
60.7	**63.1**	**64.1**	**67.4**	**255.3**	**64.9**	**66.7**	**68.1**	**71.6**	**271.2**	**69.6**	**71.5**	**71.6**	**73.4**	**286.1**	1
10.7	5.9	6.6	6.0	29.3	12.2	7.3	8.0	6.9	34.4	12.7	7.2	8.8	7.3	36.0	2
9.8	5.1	5.9	5.3	26.3	11.2	6.4	7.3	6.2	31.1	11.7	6.3	8.0	6.5	32.5	3
.9	.8	.7	.6	3.0	.9	.8	.8	.7	3.2	1.0	.9	.8	.8	3.5	4
50.0	57.2	57.4	61.5	226.1	52.7	59.4	60.0	64.7	236.9	56.9	64.3	62.8	66.1	250.1	5
49.8	50.7	50.7	57.1	208.3	50.5	53.9	53.2	60.7	218.4	54.4	57.4	56.7	61.6	230.1	6
.1	6.5	6.8	4.3	17.7	2.2	5.5	6.8	4.0	18.4	2.5	6.8	6.2	4.5	20.0	7

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Table 47.—*Disposition of Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Personal income**	71.3	71.7	72.9	75.5	72.9	76.3	76.7	78.8	82.9	78.7
2	Less: Personal tax and nontax payments	2.4	2.4	2.4	2.4	2.4	2.6	2.6	2.6	2.6	2.6
3	Federal	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
4	State and local	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.2
5	Equals: Disposable personal income	68.9	69.3	70.4	73.1	70.4	73.8	74.1	76.2	80.3	76.1
6	Less: Personal consumption expenditures	65.5	67.3	68.3	69.2	67.6	70.1	71.7	72.2	73.5	71.9
7	Equals: Personal saving	3.4	2.0	2.1	3.9	2.9	3.7	2.4	4.0	6.7	4.2

Table 47.—*Disposition of Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Personal income**	163.1	164.9	165.8	168.8	165.7	173.6	173.5	169.7	168.1	171.2
2	Less: Personal tax and nontax payments	18.9	18.9	18.9	19.0	18.9	21.3	21.2	20.7	20.3	20.9
3	Federal	17.5	17.5	17.5	17.6	17.5	19.9	19.8	19.2	18.7	19.4
4	State and local	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5
5	Equals: Disposable personal income	144.2	146.0	146.9	149.7	146.8	152.3	152.2	149.1	147.8	150.4
6	Less: Personal consumption expenditures	105.3	108.4	111.4	114.1	109.8	117.4	118.8	122.2	128.4	121.7
7	Equals: Personal saving	38.9	37.6	35.4	35.6	36.9	34.9	33.4	26.8	19.5	28.7

Table 47.—*Disposition of Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Personal income**	208.9	207.6	205.5	205.3	206.8	218.5	220.7	229.2	239.8	227.1
2	Less: Personal tax and nontax payments	18.7	18.7	18.6	18.6	18.7	19.4	20.0	20.7	23.6	20.9
3	Federal	16.3	16.2	16.2	16.1	16.2	16.7	17.3	17.9	20.8	18.2
4	State and local	2.4	2.4	2.5	2.5	2.5	2.7	2.7	2.8	2.8	2.7
5	Equals: Disposable personal income	190.2	188.9	186.9	186.7	188.2	199.1	200.7	208.5	216.2	206.1
6	Less: Personal consumption expenditures	178.4	180.4	180.1	183.5	180.6	185.2	189.1	202.9	198.8	194.0
7	Equals: Personal saving	11.8	8.6	6.7	3.2	7.6	13.9	11.6	5.6	17.4	12.1

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Table 47.—*Disposition of Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
87.7	93.4	99.7	103.8	96.3	110.1	118.4	128.4	137.3	123.5	145.2	149.8	153.2	157.3	151.4	1
3.3	3.3	3.3	3.3	3.3	6.0	6.0	6.0	6.0	6.0	14.6	14.7	20.9	21.2	17.8	2
2.0	2.0	2.0	2.0	2.0	4.7	4.7	4.7	4.7	4.7	13.3	13.4	19.6	19.8	16.5	3
1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	4
84.4	90.1	96.4	100.6	93.0	104.1	112.4	122.4	131.4	117.5	130.7	135.1	132.3	136.1	133.5	5
76.8	81.2	84.5	84.9	81.9	86.4	87.8	90.4	94.3	89.7	97.2	99.9	101.5	103.6	100.5	6
7.6	8.9	11.8	15.6	11.1	17.7	24.6	32.0	37.1	27.8	33.5	35.2	30.8	32.5	33.0	7

Table 47.—*Disposition of Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
170.6	175.6	181.0	184.5	178.0	186.7	185.0	192.7	197.4	190.5	201.5	208.1	212.3	212.8	208.7	1
17.8	18.6	19.1	19.6	18.8	21.2	21.2	21.6	22.1	21.5	23.2	20.8	20.2	20.4	21.1	2
16.2	17.0	17.5	17.9	17.2	19.3	19.4	19.7	20.2	19.6	21.1	18.7	18.0	18.2	19.0	3
1.6	1.6	1.7	1.7	1.6	1.8	1.8	1.9	1.9	1.9	2.1	2.1	2.2	2.2	2.1	4
152.8	157.0	161.9	164.9	159.2	165.6	163.8	171.1	175.3	169.0	178.3	187.3	192.1	192.4	187.6	5
137.0	142.5	152.1	154.8	146.6	158.9	163.5	166.8	170.7	165.0	174.1	176.8	179.5	180.1	177.6	6
15.8	14.4	9.8	10.1	12.6	6.7	.3	4.4	4.6	4.0	4.2	10.6	12.6	12.3	10.0	7

Table 47.—*Disposition of Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
247.1	253.7	257.1	263.4	255.3	264.7	267.8	272.8	279.4	271.2	283.3	286.4	287.5	287.3	286.1	1
28.4	28.9	29.2	30.6	29.3	34.0	34.0	34.5	35.0	34.4	35.5	35.9	36.3	36.1	36.0	2
25.5	25.9	26.2	27.5	26.3	30.8	30.8	31.3	31.7	31.1	32.1	32.5	32.8	32.6	32.5	3
2.9	3.0	3.0	3.0	3.0	3.2	3.2	3.3	3.3	3.2	3.4	3.5	3.5	3.6	3.5	4
218.7	224.8	227.9	232.8	226.1	230.7	233.8	238.3	244.4	236.9	247.8	250.4	251.2	251.2	250.1	5
210.0	204.4	207.3	211.6	208.3	213.5	216.7	218.2	225.3	218.4	228.6	230.8	231.2	229.7	230.1	6
8.6	20.3	20.6	21.3	17.7	17.2	17.1	20.2	19.1	18.4	19.2	19.6	20.0	21.5	20.0	7

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Table 48.—*Relation of Gross National Product, National Income, and Personal Income, Quarterly, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	21.5	21.8	22.8	25.0	91.1	23.8	24.1	24.9	27.8	100.6
2	Less: Capital consumption allowances	1.9	1.9	2.0	2.0	7.8	2.0	2.0	2.1	2.1	8.1
3	Indirect business tax and nontax liability	2.2	2.3	2.4	2.4	9.4	2.3	2.5	2.6	2.6	10.0
4	Business transfer payments	.1	.1	.1	.1	.5	.1	.1	.1	.1	.4
5	Statistical discrepancy	.0	−.2	.3	1.0	1.2	.6	−.3	.0	.5	.8
6	Plus: Subsidies less current surplus of government enterprises	.1	.1	.1	.1	.5	.1	.1	.1	.1	.4
7	**Equals: National income**	17.4	17.7	18.1	19.5	72.8	18.9	19.9	20.2	22.6	81.6
8	Less: Corporate profits and inventory valuation adjustment	1.0	1.2	1.5	1.9	5.7	1.6	2.2	2.2	3.0	9.1
9	Contributions for social insurance	.5	.5	.5	.6	2.1	.6	.6	.6	.6	2.3
10	Excess of wage accruals over disbursements	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	Plus: Government transfer payments	.6	.6	.6	.6	2.5	.7	.7	.7	.6	2.7
12	Net interest paid by government	.3	.3	.3	.3	1.2	.3	.4	.3	.3	1.3
13	Dividends	.8	.8	.8	1.4	3.8	.8	.9	.9	1.4	4.0
14	Business transfer payments	.1	.1	.1	.1	.5	.1	.1	.1	.1	.4
15	**Equals: Personal income**	17.6	17.9	17.9	19.5	72.9	18.6	19.2	19.5	21.4	78.7

Table 48.—*Relation of Gross National Product, National Income, and Personal Income, Quarterly, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	50.6	51.7	53.3	55.8	211.4	54.4	54.8	52.6	51.7	213.6
2	Less: Capital consumption allowances	2.9	3.0	3.0	3.1	12.0	3.2	3.3	3.4	2.7	12.5
3	Indirect business tax and nontax liability	3.1	3.5	3.7	3.7	14.1	3.7	3.8	3.9	4.1	15.5
4	Business transfer payments	.1	.1	.1	.1	.5	.1	.1	.1	.1	.5
5	Statistical discrepancy	−.2	−.5	1.0	2.5	2.8	.6	.2	1.2	2.4	4.5
6	Plus: Subsidies less current surplus of government enterprises	.2	.2	.1	.2	.7	.1	.0	.2	.4	.8
7	**Equals: National income**	44.8	45.8	45.6	46.5	182.6	47.0	47.4	44.2	42.7	181.2
8	Less: Corporate profits and inventory valuation adjustment	5.9	6.0	5.6	5.6	23.0	5.5	5.6	3.7	3.5	18.4
9	Contributions for social insurance	1.3	1.3	1.3	1.3	5.2	1.5	1.6	1.5	1.5	6.1
10	Excess of wage accruals over disbursements	−.2	.0	.0	.0	−.2	.0	.0	.0	.0	.0
11	Plus: Government transfer payments	.7	.8	.8	.8	3.1	.9	1.0	1.2	2.5	5.6
12	Net interest paid by government	.6	.7	.7	.7	2.8	.9	1.0	.9	1.0	3.7
13	Dividends	1.0	1.1	1.1	1.5	4.7	1.0	1.1	1.1	1.5	4.7
14	Business transfer payments	.1	.1	.1	.1	.5	.1	.1	.1	.1	.5
15	**Equals: Personal income**	40.3	41.2	41.3	42.9	165.7	42.8	43.4	42.2	42.7	171.2

Table 48.—*Relation of Gross National Product, National Income, and Personal Income, Quarterly, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	63.0	63.1	64.0	67.2	257.3	64.1	67.7	73.5	79.8	285.1
2	Less: Capital consumption allowances	4.4	4.6	4.7	4.8	18.4	4.9	5.1	5.2	5.3	20.5
3	Indirect business tax and nontax liability	5.1	5.3	5.6	5.7	21.6	5.4	5.8	6.4	6.2	23.7
4	Business transfer payments	.2	.2	.2	.2	.8	.2	.2	.2	.2	.8
5	Statistical discrepancy	−.4	−1.3	−.6	2.3	.1	.3	−1.2	−1.1	2.2	.2
6	Plus: Subsidies less current surplus of government enterprises	.0	.0	−.1	−.1	−.2	.0	.2	.0	.0	.2
7	**Equals: National income**	53.7	54.2	54.1	54.2	216.2	53.3	58.1	62.7	65.9	240.0
8	Less: Corporate profits and inventory valuation adjustment	6.6	7.3	7.2	7.1	28.1	6.1	8.4	10.2	10.5	35.1
9	Contributions for social insurance	1.5	1.5	1.4	1.3	5.7	1.8	1.8	1.7	1.6	6.9
10	Excess of wage accruals over disbursements	.0	−.1	.0	.0	.0	.0	.0	.0	.0	.0
11	Plus: Government transfer payments	2.8	2.9	2.9	3.0	11.6	5.3	3.6	2.7	2.8	14.3
12	Net interest paid by government	1.0	1.4	1.0	1.2	4.6	1.1	1.4	1.0	1.2	4.7
13	Dividends	1.7	1.7	1.6	2.4	7.5	1.9	1.9	2.2	3.3	9.2
14	Business transfer payments	.2	.2	.2	.2	.8	.2	.2	.2	.2	.8
15	**Equals: Personal income**	51.3	51.7	51.6	52.6	206.8	53.9	54.9	57.0	61.3	227.1

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Table 48.—*Relation of Gross National Product, National Income, and Personal Income, Quarterly, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
27.5	30.3	31.9	36.1	125.8	34.6	37.9	40.9	45.6	159.1	44.8	47.1	48.7	51.8	192.5	1
2.1	2.2	2.3	2.4	9.0	2.5	2.5	2.6	2.6	10.2	2.6	2.7	2.7	2.8	10.9	2
2.6	2.8	2.9	3.0	11.3	2.9	2.9	3.0	3.0	11.8	3.1	3.1	3.3	3.3	12.7	3
.1	.1	.1	.1	.5	.1	.1	.1	.1	.5	.1	.1	.1	.1	.5	4
−.2	−.4	−.6	1.5	.4	−.4	−.4	−.7	.7	−.8	−1.3	−1.2	−.4	1.3	−1.7	5
.1	.9	.0	.0	.1	−.1	.0	.2	.0	.2	.0	.1	.1	.0	.2	6
22.9	25.6	27.2	29.1	104.7	29.5	32.9	36.1	39.2	137.7	40.4	42.5	43.1	44.3	170.3	7
2.7	3.7	3.8	4.3	14.5	3.8	4.6	5.4	5.9	19.7	5.6	6.1	6.1	5.9	23.8	8
.6	.7	.7	.7	2.8	.8	.8	.9	.9	3.5	1.1	1.1	1.2	1.1	4.5	9
.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.0	.2	10
.7	.7	.6	.6	2.6	.7	.7	.7	.6	2.6	.6	.6	.6	.6	2.5	11
.3	.4	.3	.3	1.3	.3	.4	.3	.4	1.5	.4	.6	.5	.6	2.1	12
.9	1.0	1.0	1.5	4.5	.9	1.0	1.0	1.4	4.3	1.0	1.0	1.0	1.4	4.5	13
.1	.1	.1	.1	.5	.1	.1	.1	.1	.5	.1	.1	.1	.1	.5	14
21.5	23.4	24.7	26.7	96.3	27.1	29.6	31.9	34.9	123.5	35.8	37.5	38.1	40.0	151.4	15

Table 48.—*Relation of Gross National Product, National Income, and Personal Income, Quarterly, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
47.7	50.1	53.6	57.8	209.2	54.1	56.0	57.5	64.6	232.2	60.2	62.7	65.1	69.3	257.3	1
2.7	2.8	3.0	3.1	11.7	3.3	3.5	3.6	3.8	14.1	3.9	4.1	4.2	4.3	16.5	2
4.0	4.2	4.5	4.6	17.3	4.4	4.5	4.7	5.1	18.7	4.8	5.0	5.2	5.4	20.4	3
.1	.1	.1	.1	.6	.2	.2	.2	.2	.7	.2	.2	.2	.2	.7	4
.0	−.4	.1	1.3	.9	−.6	−.1	−.6	2.7	1.4	−.7	−1.7	−1.1	1.3	−2.1	5
.4	.5	.0	.0	.8	.0	.1	−.1	−.2	−.2	−.1	.0	−.1	.0	−.2	6
41.3	43.8	45.9	48.6	179.6	46.9	48.1	49.5	52.7	197.2	51.9	55.1	56.6	58.1	221.6	7
2.9	4.0	4.5	5.9	17.3	4.7	5.8	6.0	7.1	23.6	6.5	7.7	7.7	8.7	30.6	8
1.6	1.6	1.5	1.4	6.0	1.6	1.6	1.3	1.2	5.7	1.3	1.3	1.3	1.2	5.2	9
.2	−.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	10
3.0	2.8	2.6	2.5	10.9	2.6	2.5	3.3	2.7	11.1	2.8	2.7	2.5	2.6	10.5	11
1.0	1.3	1.0	1.1	4.5	1.0	1.2	1.0	1.1	4.4	1.0	1.3	1.0	1.2	4.4	12
1.2	1.3	1.3	2.0	5.8	1.4	1.5	1.5	2.1	6.5	1.6	1.6	1.6	2.4	7.2	13
.1	.1	.1	.1	.6	.2	.2	.2	.2	.7	.2	.2	.2	.2	.7	14
41.9	43.9	45.1	47.1	178.0	45.8	46.1	48.1	50.5	190.5	49.6	51.8	52.9	54.4	208.7	15

Table 48.—*Relation of Gross National Product, National Income, and Personal Income, Quarterly, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
77.9	80.6	82.3	87.4	328.2	83.1	84.6	85.5	93.3	346.1	83.5	91.5	91.1	93.8	364.9	1
5.6	5.8	6.0	6.1	23.5	6.1	6.3	6.4	6.5	25.3	6.6	6.8	6.8	7.0	27.2	2
6.3	6.2	6.4	6.7	25.6	6.6	6.9	7.2	7.4	28.0	7.2	7.5	7.6	7.7	30.0	3
.2	.2	.2	.2	1.0	.2	.3	.3	.3	1.0	.3	.3	.3	.3	1.0	4
.0	−.4	−.2	1.9	1.3	−.1	−.7	−1.6	3.0	.6	−1.0	−.4	−.6	3.1	1.0	5
.1	.2	−.1	.0	.2	.0	.0	−.1	−.1	−.2	−.1	−.1	−.1	−.2	−.5	6
65.9	68.9	69.9	72.4	277.0	70.2	71.8	72.9	76.0	291.0	75.4	77.2	76.9	75.6	305.0	7
9.2	10.2	9.9	10.6	39.9	9.1	9.7	9.3	10.0	38.2	10.0	10.6	9.9	8.0	38.5	8
2.2	2.2	2.0	1.8	8.2	2.5	2.2	2.1	1.9	8.7	2.6	2.3	2.1	1.8	8.8	9
.1	.0	.2	−.1	.1	.0	.0	−.1	.0	.0	0.	0.	.0	.0	−.1	10
2.9	2.9	2.9	2.9	11.6	2.9	3.0	3.1	3.1	12.1	3.2	3.2	3.1	3.3	12.8	11
1.0	1.4	1.0	1.3	4.8	1.0	1.4	1.1	1.4	4.9	1.1	1.6	1.0	1.3	5.0	12
2.0	2.1	2.1	2.8	9.1	2.1	2.2	2.1	2.8	9.1	2.2	2.2	2.2	2.7	9.4	13
.2	.2	.2	.2	1.0	.2	.3	.3	.3	1.0	.3	.3	.3	.3	1.0	14
60.7	63.1	64.1	67.4	255.3	64.9	66.7	68.1	71.6	271.2	69.6	71.5	71.6	73.4	286.1	15

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Table 49.—*Relation of Gross National Product, National Income, and Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	88.8	89.1	92.6	93.9	91.1	97.3	98.5	101.7	104.9	100.6
2	Less: Capital consumption allowances	7.7	7.8	7.9	8.0	7.8	8.0	8.1	8.2	8.3	8.1
3	Indirect business tax and nontax liability	9.2	9.3	9.4	9.6	9.4	9.6	9.9	10.2	10.4	10.0
4	Business transfer payments	.4	.5	.5	.5	.5	.4	.4	.4	.4	.4
5	Statistical discrepancy	.6	1.2	2.5	.5	1.2	2.1	1.2	1.8	−1.6	.8
6	Plus: Subsidies less current surplus of government enterprises	.4	.5	.6	.4	.5	.5	.5	.5	.3	.4
7	**Equals: National Income**	71.3	70.9	72.9	75.8	72.8	77.6	79.4	81.5	87.7	81.6
8	Less: Corporate profits and inventory valuation adjustment	5.4	5.0	6.0	6.4	5.7	7.8	8.8	8.9	10.9	9.1
9	Contributions for social insurance	2.0	2.1	2.2	2.3	2.1	2.2	2.2	2.3	2.4	2.3
10	Excess of wage accruals over disbursements	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	Plus: Government transfer payments	2.6	2.5	2.5	2.4	2.5	2.7	2.8	2.7	2.5	2.7
12	Net interest paid by government	1.1	1.2	1.2	1.3	1.2	1.3	1.3	1.3	1.3	1.3
13	Dividends	3.2	3.7	3.9	4.3	3.8	4.3	3.8	4.0	4.2	4.0
14	Business transfer payments	.4	.5	.5	.5	.5	.4	.4	.4	.4	.4
15	**Equals: Personal income**	71.3	71.7	72.9	75.5	72.9	76.3	76.7	78.8	82.9	78.7

Table 49.—*Relation of Gross National Product, National Income, and Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	205.6	209.4	214.1	216.5	211.4	221.2	223.7	212.2	197.1	213.6
2	Less: Capital consumption allowances	11.5	11.9	12.2	12.5	12.0	12.8	13.2	13.4	10.7	12.5
3	Indirect business tax and nontax liability	13.0	14.2	14.6	14.7	14.1	15.0	15.3	15.6	16.1	15.5
4	Business transfer payments	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
5	Statistical discrepancy	.8	.9	4.9	4.7	2.8	3.5	5.5	5.9	3.0	4.5
6	Plus: Subsidies less current surplus of government enterprises	.7	.6	.5	.7	.7	.6	.2	.8	1.5	.8
7	**Equals: National income**	180.6	182.5	182.5	184.7	182.6	189.9	189.2	177.6	168.2	181.2
8	Less: Corporate profits and inventory valuation adjustment	23.8	23.6	22.6	22.1	23.0	22.4	22.5	15.6	13.2	18.4
9	Contributions for social insurance	5.0	5.1	5.2	5.4	5.2	5.8	6.1	6.3	6.3	6.1
10	Excess of wage accruals over disbursements	−.8	.0	.0	.0	−.2	.0	.0	.0	.0	.0
11	Plus: Government transfer payments	3.0	3.1	3.0	3.2	3.1	3.4	4.2	5.0	9.9	5.6
12	Net interest paid by government	2.5	2.7	2.9	3.1	2.8	3.3	3.6	3.8	4.1	3.7
13	Dividends	4.5	4.6	4.7	4.7	4.7	4.6	4.6	4.7	4.8	4.7
14	Business transfer payments	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
15	**Equals: Personal income**	163.1	164.9	165.8	168.8	165.7	173.6	173.5	169.7	168.1	171.2

Table 49.—*Relation of Gross National Product, National Income, and Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Gross national product**	259.9	257.2	256.5	255.5	257.3	264.9	275.9	294.4	305.0	285.1
2	Less: Capital consumption allowances	17.6	18.3	18.7	19.1	18.4	19.6	20.2	20.9	21.3	20.5
3	Indirect business tax and nontax liability	20.9	21.5	22.1	22.0	21.6	22.3	23.3	25.2	24.2	23.7
4	Business transfer payments	.8	.8	.8	.8	.8	.8	.8	.8	.9	.8
5	Statistical discrepancy	.1	−1.1	−.7	2.0	.1	3.6	.0	−2.6	.0	.2
6	Plus: Subsidies less current surplus of government enterprises	.0	.0	−.4	−.3	−.2	.2	.6	−.2	.2	.2
7	**Equals: National income**	220.5	217.8	215.2	211.3	216.2	218.9	232.2	249.9	258.8	240.0
8	Less: Corporate profits and inventory valuation adjustment	29.7	29.2	28.6	25.3	28.1	27.8	32.8	40.0	39.7	35.1
9	Contributions for social insurance	5.8	5.7	5.7	5.7	5.7	6.6	6.7	6.9	7.3	6.9
10	Excess of wage accruals over disbursements	.1	−.3	.0	.0	.0	.0	.0	.0	.0	.0
11	Plus: Government transfer payments	11.2	11.7	11.9	11.8	11.6	20.6	14.2	11.1	11.3	14.3
12	Net interest paid by government	4.6	4.6	4.6	4.6	4.6	4.7	4.7	4.7	4.8	4.7
13	Dividends	7.4	7.3	7.3	7.8	7.5	7.9	8.3	9.5	11.1	9.2
14	Business transfer payments	.8	.8	.8	.8	.8	.8	.8	.8	.9	.8
15	**Equals: Personal income**	208.9	207.6	205.5	205.3	206.8	218.5	220.7	229.2	239.8	227.1

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Table 49.—*Relation of Gross National Product, National Income, and Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
112.5	**122.8**	**129.3**	**138.7**	**125.8**	**141.7**	**153.6**	**163.6**	**177.6**	**159.1**	**182.6**	**191.3**	**194.9**	**201.3**	**192.5**	1
8.4	8.8	9.3	9.7	9.0	9.9	10.1	10.3	10.4	10.2	10.5	10.8	11.0	11.2	10.9	2
10.8	11.2	11.3	11.9	11.3	11.8	11.5	11.8	12.0	11.8	12.6	12.6	12.8	12.9	12.7	3
.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	4
−.8	.9	−.6	2.4	.4	−.9	.7	−2.3	−1.2	−.8	−4.3	−1.3	−1.8	.5	−1.7	5
.3	.1	.1	−.1	.1	−.3	.2	.7	.0	.2	.1	.4	.4	−.2	.2	6
93.9	**101.5**	**109.0**	**114.1**	**104.7**	**120.1**	**131.0**	**144.1**	**155.9**	**137.7**	**163.4**	**169.1**	**172.9**	**176.0**	**170.3**	7
12.3	14.1	15.3	16.2	14.5	16.2	18.3	21.0	23.6	19.7	23.0	24.0	24.5	23.6	23.8	8
2.5	2.7	2.9	3.0	2.8	3.1	3.3	3.6	3.9	3.5	4.2	4.5	4.7	4.8	4.5	9
.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.3	.3	.2	.2	10
2.7	2.6	2.6	2.6	2.6	2.8	2.7	2.6	2.4	2.6	2.4	2.4	2.5	2.5	2.5	11
1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.6	1.7	1.5	1.9	2.1	2.2	2.4	2.1	12
4.2	4.3	4.5	4.6	4.5	4.6	4.4	4.3	4.2	4.3	4.4	4.5	4.5	4.5	4.5	13
.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	14
87.7	**93.4**	**99.7**	**103.8**	**96.3**	**110.1**	**118.4**	**128.4**	**137.3**	**123.5**	**145.2**	**149.8**	**153.2**	**157.3**	**151.4**	15

Table 49.—*Relation of Gross National Product, National Income, and Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
196.7	**205.0**	**215.2**	**220.1**	**209.2**	**223.2**	**229.4**	**232.6**	**243.7**	**232.2**	**247.9**	**255.5**	**261.9**	**264.0**	**257.3**	1
11.0	11.4	11.8	12.5	11.7	13.1	13.9	14.4	15.0	14.1	15.6	16.4	16.7	17.3	16.5	2
16.5	17.1	17.8	18.0	17.3	18.0	18.2	18.7	19.7	18.7	19.6	20.3	20.7	20.9	20.4	3
.5	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.8	.8	.7	4
1.5	2.4	1.5	−1.5	.9	−.7	3.5	1.1	2.0	1.4	−.9	−3.4	−1.7	−2.0	−2.1	5
1.7	1.9	−.2	−.1	.8	.0	.3	−.6	−.6	−.2	−.4	.0	−.2	.0	−.2	6
168.9	**175.5**	**183.3**	**190.4**	**179.6**	**192.2**	**193.4**	**197.0**	**205.7**	**197.2**	**212.4**	**221.5**	**225.2**	**227.1**	**221.6**	7
13.5	16.5	17.9	21.2	17.3	21.1	23.6	24.1	25.5	23.6	28.7	31.2	30.7	31.7	30.6	8
6.1	6.1	5.9	5.8	6.0	6.1	6.1	5.3	5.3	5.7	5.2	5.1	5.3	5.3	5.2	9
.8	−.9	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	−.1	.1	.0	10
12.0	11.1	10.6	9.7	10.9	10.1	9.9	13.7	10.7	11.1	11.0	10.8	10.4	9.9	10.5	11
4.4	4.5	4.5	4.4	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.4	12
5.3	5.6	5.9	6.4	5.8	6.6	6.3	6.4	6.8	6.5	6.9	7.1	7.4	7.6	7.2	13
.5	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.8	.8	.7	14
170.6	**175.6**	**181.0**	**184.5**	**178.0**	**186.7**	**185.0**	**192.7**	**197.4**	**190.5**	**201.5**	**208.1**	**212.3**	**212.8**	**208.7**	15

Table 49.—*Relation of Gross National Product, National Income, and Personal Income, Seasonally Adjusted Quarterly Totals at Annual Rates, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
319.3	**326.1**	**331.3**	**336.3**	**328.2**	**340.3**	**341.4**	**344.2**	**358.5**	**346.1**	**361.8**	**369.9**	**367.2**	**360.5**	**364.9**	1
22.5	23.1	23.8	24.5	23.5	24.5	25.2	25.5	26.0	25.3	26.2	27.4	27.4	27.9	27.2	2
25.9	25.0	25.4	26.3	25.6	27.0	28.0	28.3	28.8	28.0	29.4	30.2	30.1	30.3	30.0	3
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4
1.5	1.8	2.6	−.7	1.3	1.3	.0	−1.2	2.2	.6	−1.2	2.6	2.1	.6	1.0	5
.3	.6	−.1	−.1	.2	−.2	.0	−.2	−.4	−.2	−.4	−.6	−.4	−.8	−.5	6
268.9	**275.8**	**278.4**	**285.1**	**277.0**	**286.1**	**287.2**	**290.3**	**300.1**	**291.0**	**305.9**	**308.2**	**306.2**	**299.9**	**305.0**	7
39.5	40.2	39.0	41.0	39.9	39.3	37.5	36.5	39.4	38.2	41.4	41.0	38.3	33.1	38.5	8
8.1	8.2	8.1	8.3	8.2	8.5	8.6	8.7	8.9	8.7	8.8	8.9	8.7	8.6	8.8	9
.2	−.1	.8	−.6	.1	.1	.0	−.3	.0	.0	.0	−.1	−.1	−.1	−.1	10
11.3	11.6	11.7	11.7	11.6	11.5	11.8	12.5	12.6	12.1	12.6	12.6	12.6	13.3	12.8	11
4.8	4.8	4.8	4.8	4.8	4.9	4.9	4.9	4.9	4.9	4.9	5.0	5.1	5.2	5.0	12
9.0	8.9	9.1	9.4	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.3	9.5	9.6	9.4	13
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	14
247.1	**253.7**	**257.1**	**263 4**	**255.3**	**264.7**	**267.8**	**272.8**	**279.4**	**271.2**	**283.3**	**286.4**	**287.5**	**287.3**	**286.1**	15

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Table 50.—*Personal Consumption Expenditures by Major Type, Quarterly, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Goods and services, total**	15.6	16.7	16.6	18.7	67.6	16.8	17.8	17.5	19.9	71.9
2	**Durable goods, total**	1.4	1.7	1.5	2.1	6.7	1.6	2.0	1.7	2.4	7.8
3	Automobiles and parts	.5	.6	.5	.6	2.2	.6	.8	.5	.8	2.7
4	Furniture and household equipment	.7	.9	.9	1.1	3.5	.8	1.0	1.0	1.1	3.9
5	Other durable goods	.2	.2	.2	.4	1.0	.2	.2	.2	.4	1.1
6	**Nondurable goods, total**	7.8	8.6	8.6	10.1	35.1	8.5	9.0	9.1	10.6	37.2
7	Clothing and shoes	1.4	1.8	1.5	2.4	7.1	1.5	1.8	1.6	2.5	7.4
8	Food and alcoholic beverages	4.3	4.8	5.0	5.0	19.2	4.7	5.1	5.2	5.3	20.3
9	Gasoline and oil	.5	.6	.6	.6	2.2	.5	.6	.6	.6	2.3
10	Semidurable housefurnishings	.1	.2	.2	.2	.7	.2	.2	.2	.2	.7
11	Tobacco	.4	.4	.4	.5	1.8	.4	.4	.5	.6	1.9
12	Other nondurable goods	1.1	.9	.9	1.4	4.2	1.2	.9	1.0	1.4	4.5
13	**Services, total**	6.4	6.4	6.4	6.5	25.8	6.7	6.7	6.6	6.9	26.9
14	Household operation	1.0	.9	.9	1.0	3.8	1.0	1.0	1.0	1.0	4.0
15	Housing	2.2	2.2	2.3	2.3	9.0	2.3	2.3	2.3	2.4	9.3
16	Personal services	.3	.4	.4	.4	1.4	.4	.4	.4	.4	1.5
17	Recreation	.4	.4	.4	.4	1.5	.4	.4	.4	.4	1.7
18	Transportation	.5	.5	.5	.5	2.0	.5	.5	.6	.5	2.1
19	Other services	2.0	2.0	2.0	2.0	8.0	2.1	2.1	2.0	2.1	8.2

Table 50.—*Personal Consumption Expenditures by Major Type, Quarterly, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Goods and services, total**	25.1	26.8	27.2	30.8	109.8	28.1	29.1	29.7	34.8	121.7
2	**Durable goods, total**	1.4	1.6	1.5	2.2	6.8	1.6	1.8	1.8	2.9	8.1
3	Automobiles and parts	.2	.2	.2	.2	.8	.2	.2	.3	.3	1.0
4	Furniture and household equipment	.8	1.0	.9	1.2	3.8	.9	1.1	1.0	1.6	4.6
5	Other durable goods	.4	.4	.4	.9	2.2	.5	.5	.5	1.0	2.5
6	**Nondurable goods, total**	14.5	15.7	16.2	18.9	65.4	16.6	17.3	17.8	21.5	73.2
7	Clothing and shoes	3.0	3.5	3.3	4.9	14.6	3.8	3.7	3.6	5.4	16.5
8	Food and alcoholic beverages	8.4	9.1	9.8	10.0	37.4	9.3	10.1	10.7	11.5	41.6
9	Gasoline and oil	.3	.4	.4	.3	1.4	.3	.4	.5	.6	1.8
10	Semidurable housefurnishings	.3	.4	.3	.5	1.5	.4	.4	.3	.5	1.5
11	Tobacco	.6	.7	.7	.8	2.7	.6	.7	.7	.9	3.0
12	Other nondurable goods	1.8	1.7	1.8	2.4	7.7	2.2	2.1	1.9	2.7	8.8
13	**Services, total**	9.2	9.4	9.4	9.6	37.7	9.9	10.0	10.1	10.4	40.4
14	Household operation	1.4	1.5	1.4	1.5	5.9	1.6	1.6	1.6	1.6	6.4
15	Housing	2.9	3.0	3.0	3.0	11.9	3.0	3.1	3.1	3.2	12.4
16	Personal services	.6	.7	.7	.7	2.7	.7	.8	.7	.7	2.9
17	Recreation	.6	.7	.7	.7	2.7	.7	.7	.8	.8	3.0
18	Transportation	.8	.9	1.0	.9	3.7	.9	1.0	1.1	1.0	4.0
19	Other services	2.7	2.7	2.6	2.8	10.9	2.9	2.9	2.8	3.0	11.6

Table 50.—*Personal Consumption Expenditures by Major Type, Quarterly, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Goods and services, total**	42.0	45.0	44.1	49.5	180.6	43.7	47.1	49.7	53.6	194.0
2	**Durable goods, total**	4.7	5.9	5.9	7.0	23.6	5.6	6.7	8.2	8.1	28.6
3	Automobiles and parts	1.8	2.5	2.7	2.4	9.5	2.4	3.0	3.8	3.1	12.4
4	Furniture and household equipment	2.2	2.6	2.6	3.4	10.9	2.6	2.9	3.7	3.7	12.9
5	Other durable goods	.6	.7	.7	1.2	3.2	.6	.7	.7	1.3	3.3
6	**Nondurable goods, total**	22.5	24.0	23.2	27.1	96.9	22.3	24.2	25.2	28.8	100.4
7	Clothing and shoes	4.0	4.8	3.8	5.9	18.5	3.7	4.5	4.1	6.1	18.5
8	Food and alcoholic beverages	13.4	14.0	14.3	14.8	56.5	13.3	14.3	15.4	15.8	58.8
9	Gasoline and oil	1.0	1.3	1.3	1.2	4.7	1.1	1.3	1.4	1.2	5.0
10	Semidurable housefurnishings	.5	.5	.5	.6	2.2	.5	.5	.7	.7	2.4
11	Tobacco	1.0	1.0	1.0	1.2	4.3	1.0	1.0	1.1	1.3	4.4
12	Other nondurable goods	2.6	2.4	2.3	3.4	10.7	2.6	2.4	2.5	3.6	11.2
13	**Services, total**	14.8	15.0	15.0	15.4	60.1	15.8	16.2	16.3	16.7	65.0
14	Household operation	2.2	2.1	2.0	2.2	8.5	2.4	2.3	2.2	2.4	9.4
15	Housing	4.7	4.8	4.9	5.0	19.4	5.2	5.3	5.4	5.5	21.4
16	Personal services	.9	1.0	.9	1.0	3.8	.9	1.0	1.0	1.0	3.9
17	Recreation	.9	1.0	1.0	1.0	3.9	.9	1.0	1.0	1.0	3.9
18	Transportation	1.4	1.5	1.5	1.4	5.8	1.3	1.5	1.5	1.5	5.8
19	Other services	4.6	4.7	4.6	4.8	18.7	5.0	5.2	5.1	5.3	20.6

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Table 50.—*Personal Consumption Expenditures by Major Type, Quarterly, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
18.2	20.3	20.6	22.8	81.9	20.5	21.7	22.1	25.4	89.7	23.1	24.7	24.8	27.9	100.5	1
2.0	2.8	2.3	2.5	9.7	1.6	1.7	1.6	2.1	7.0	1.4	1.7	1.5	2.0	6.6	2
.9	1.2	.7	.7	3.4	.2	.2	.2	.2	.7	.2	.2	.2	.2	.8	3
.9	1.3	1.4	1.3	4.9	1.1	1.2	1.0	1.3	4.7	.9	1.0	.9	1.1	3.9	4
.2	.3	.3	.5	1.4	.3	.3	.3	.6	1.6	.3	.4	.4	.8	1.9	5
9.1	10.3	11.0	12.7	43.2	11.3	12.2	12.7	15.2	51.3	13.3	14.4	14.6	17.0	59.3	6
1.6	2.2	2.1	2.9	8.8	2.4	2.5	2.4	3.7	11.0	3.0	3.3	2.9	4.3	13.4	7
5.1	5.7	6.3	6.5	23.6	6.2	7.0	7.5	8.0	28.8	7.6	8.3	8.8	9.0	33.7	8
.5	.7	.8	.7	2.6	.6	.6	.5	.4	2.1	.3	.4	.4	.3	1.3	9
.2	.2	.2	.3	.9	.3	.3	.3	.4	1.1	.3	.3	.3	.4	1.3	10
.5	.5	.5	.6	2.1	.5	.6	.6	.8	2.4	.6	.6	.6	.8	2.7	11
1.2	1.0	1.2	1.7	5.1	1.4	1.4	1.3	1.9	6.0	1.6	1.6	1.5	2.2	6.8	12
7.0	7.2	7.2	7.6	29.0	7.7	7.8	7.8	8.1	31.5	8.4	8.6	8.7	9.0	34.7	13
1.1	1.0	1.0	1.1	4.3	1.2	1.2	1.2	1.3	4.8	1.3	1.3	1.3	1.3	5.2	14
2.4	2.5	2.5	2.6	10.0	2.7	2.7	2.7	2.8	10.8	2.8	2.8	2.9	2.9	11.3	15
.4	.4	.4	.5	1.7	.4	.5	.5	.5	2.0	.5	.6	.6	.6	2.4	16
.4	.4	.4	.6	1.8	.5	.5	.6	.5	2.1	.5	.6	.6	.7	2.4	17
.6	.6	.6	.6	2.4	.6	.7	.7	.7	2.7	.8	.9	.9	.9	3.4	18
2.2	2.2	2.2	2.2	8.7	2.3	2.3	2.2	2.3	9.0	2.4	2.4	2.4	2.6	9.9	19

Table 50.—*Personal Consumption Expenditures by Major Type, Quarterly, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
32.2	35.3	36.9	42.1	146.6	37.4	40.5	40.6	46.5	165.0	41.2	43.7	43.8	48.9	177.6	1
2.7	3.7	4.1	5.4	15.9	4.2	5.1	4.9	6.4	20.6	4.7	5.6	5.5	6.4	22.2	2
.5	.8	1.2	1.4	3.9	1.4	1.6	1.6	1.7	6.3	1.6	1.8	2.0	1.9	7.3	3
1.6	2.1	2.2	2.8	8.7	2.2	2.7	2.7	3.4	11.0	2.4	3.0	2.9	3.2	11.5	4
.6	.8	.7	1.2	3.3	.6	.8	.7	1.3	3.4	.6	.8	.7	1.3	3.4	5
18.6	20.2	21.1	24.6	84.5	20.9	22.7	22.7	26.9	93.1	22.8	24.0	24.0	27.9	98.7	6
3.8	4.6	4.1	5.7	18.2	4.0	4.6	4.0	6.2	18.8	4.3	4.7	4.2	6.4	19.6	7
10.9	11.6	12.8	13.5	48.8	12.4	13.3	13.9	14.5	54.2	13.4	14.2	14.6	15.1	57.3	8
.6	.8	.8	.8	3.0	.7	1.0	1.0	.9	3.6	.9	1.1	1.2	1.1	4.3	9
.4	.5	.5	.6	2.0	.5	.5	.5	.7	2.1	.5	.5	.5	.7	2.3	10
.8	.8	.8	1.0	3.5	.9	.9	.9	1.1	3.9	.9	1.0	1.0	1.2	4.1	11
2.0	1.9	2.0	2.9	8.9	2.4	2.3	2.3	3.4	10.5	2.7	2.4	2.5	3.5	11.1	12
11.0	11.4	11.8	12.1	46.2	12.4	12.7	12.9	13.3	51.3	13.8	14.1	14.3	14.5	56.7	13
1.7	1.6	1.6	1.7	6.7	1.9	1.8	1.8	1.9	7.4	2.1	2.0	1.9	2.0	8.0	14
3.3	3.4	3.4	3.5	13.6	3.6	3.8	3.9	4.1	15.4	4.2	4.3	4.4	4.6	17.5	15
.8	.9	.9	.9	3.4	.9	1.0	.9	.9	3.7	.9	1.0	.9	1.0	3.8	16
.8	.9	1.0	.9	3.7	.9	.9	1.0	.9	3.8	.9	.9	1.0	1.0	3.8	17
1.1	1.3	1.4	1.3	5.1	1.3	1.4	1.5	1.4	5.5	1.3	1.5	1.6	1.5	5.9	18
3.3	3.3	3.4	3.7	13.7	3.8	3.8	3.9	4.0	15.5	4.3	4.4	4.4	4.5	17.5	19

Table 50.—*Personal Consumption Expenditures by Major Type, Quarterly, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
49.8	50.7	50.7	57.1	208.3	50.5	53.9	53.2	60.7	218.4	54.4	57.4	56.7	61.6	230.1	1
6.8	6.6	6.3	7.4	27.1	5.7	6.8	6.1	8.2	26.8	6.8	7.7	7.4	7.8	29.7	2
3.0	2.9	2.6	2.3	10.9	2.3	3.1	2.3	2.9	10.6	3.2	3.7	3.5	2.7	13.1	3
3.2	2.9	3.0	3.7	12.7	2.7	3.0	3.0	3.8	12.5	2.8	3.1	3.1	3.7	12.8	4
.6	.8	.7	1.4	3.5	.6	.8	.8	1.5	3.7	.7	.9	.8	1.4	3.9	5
25.8	26.6	26.9	31.7	111.1	26.3	28.2	28.3	33.1	116.0	27.6	29.3	28.9	33.1	118.9	6
4.5	4.7	4.1	6.5	19.8	4.0	4.9	4.4	6.8	20.1	4.2	5.0	4.2	6.4	19.8	7
15.5	16.3	17.0	17.7	66.5	16.3	17.3	17.9	18.4	70.0	17.0	17.9	18.3	18.7	71.8	8
1.2	1.4	1.5	1.4	5.5	1.3	1.6	1.6	1.5	6.0	1.4	1.7	1.8	1.7	6.6	9
.6	.6	.6	.7	2.5	.5	.5	.6	.8	2.4	.6	.6	.6	.8	2.5	10
1.1	1.1	1.2	1.4	4.7	1.2	1.2	1.3	1.4	5.1	1.3	1.3	1.3	1.4	5.3	11
2.8	2.6	2.6	4.0	12.0	3.0	2.7	2.6	4.2	12.4	3.1	2.8	2.7	4.2	12.9	12
17.2	17.5	17.4	18.0	70.1	18.6	18.8	18.8	19.4	75.6	20.0	20.4	20.3	20.7	81.4	13
2.7	2.5	2.4	2.6	10.3	2.9	2.7	2.6	2.8	11.1	3.2	3.0	2.8	3.0	12.0	14
5.6	5.8	5.9	6.1	23.4	6.2	6.4	6.5	6.6	25.6	6.7	6.8	7.0	7.2	27.7	15
1.0	1.1	1.0	1.0	4.1	1.0	1.1	1.0	1.1	4.2	1.0	1.2	1.1	1.1	4.4	16
1.0	1.0	1.1	1.0	4.1	1.0	1.1	1.1	1.1	4.2	1.0	1.1	1.2	1.1	4.4	17
1.5	1.6	1.7	1.6	6.4	1.6	1.7	1.8	1.7	6.8	1.7	1.8	1.9	1.8	7.1	18
5.5	5.4	5.4	5.6	21.9	5.8	5.9	5.8	6.1	23.6	6.4	6.5	6.4	6.6	25.8	19

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Table 51.—*Personal Consumption Expenditures by Major Type, Seasonally Adjusted Quarterly Totals at Annual Rates, 1939–40*

[Billions of dollars]

Line		1939					1940				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Goods and services, total**	65.5	67.3	68.3	69.2	67.6	70.1	71.7	72.2	73.5	71.9
2	**Durable goods, total**	6.1	6.5	6.9	7.1	6.7	7.3	7.7	7.9	8.2	7.8
3	Automobiles and parts	1.9	2.0	2.3	2.4	2.2	2.5	2.6	2.8	3.1	2.7
4	Furniture and household equipment	3.2	3.5	3.6	3.7	3.5	3.7	4.0	4.1	3.9	3.9
5	Other durable goods	.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.1
6	**Nondurable goods, total**	34.0	35.1	35.5	36.0	35.1	36.4	37.2	37.3	37.9	37.2
7	Clothing and shoes	6.9	7.1	7.1	7.4	7.1	7.2	7.4	7.5	7.7	7.4
8	Food and alcoholic beverages	18.5	19.2	19.4	19.5	19.2	19.9	20.5	20.3	20.7	20.3
9	Gasoline and oil	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3
10	Semidurable housefurnishings	.6	.7	.7	.7	.7	.7	.7	.8	.8	.7
11	Tobacco	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9
12	Other nondurable goods	4.1	4.1	4.2	4.4	4.2	4.5	4.4	4.6	4.6	4.5
13	**Services, total**	25.4	25.7	25.9	26.1	25.8	26.4	26.8	27.0	27.4	26.9
14	Household operation	3.7	3.8	3.8	3.8	3.8	4.0	4.0	4.1	4.1	4.0
15	Housing	8.9	9.0	9.0	9.1	9.0	9.2	9.3	9.4	9.5	9.3
16	Personal services	1.4	1.4	1.4	1.5	1.4	1.5	1.5	1.5	1.6	1.5
17	Recreation	1.5	1.5	1.6	1.6	1.5	1.7	1.7	1.6	1.7	1.7
18	Transportation	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.1
19	Other services	7.9	7.9	8.0	8.0	8.0	8.0	8.2	8.3	8.4	8.2

Table 51.—*Personal Consumption Expenditures by Major Type, Seasonally Adjusted Quarterly Totals at Annual Rates, 1944–45*

[Billions of dollars]

Line		1944					1945				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Goods and services, total**	105.3	108.4	111.4	114.1	109.8	117.4	118.8	122.2	128.4	121.7
2	**Durable goods, total**	6.6	6.6	6.7	7.1	6.8	7.5	7.4	7.9	9.6	8.1
3	Automobiles and parts	.7	.8	.8	.8	.8	.9	.8	1.0	1.3	1.0
4	Furniture and household equipment	3.7	3.8	3.8	4.1	3.8	4.2	4.2	4.3	5.6	4.6
5	Other durable goods	2.1	2.1	2.2	2.2	2.2	2.4	2.4	2.5	2.7	2.5
6	**Nondurable goods, total**	62.1	64.3	66.7	68.4	65.4	70.6	71.6	73.7	77.1	73.2
7	Clothing and shoes	13.5	14.4	15.1	15.6	14.6	16.1	15.9	16.7	17.1	16.5
8	Food and alcoholic beverages	35.6	36.8	38.1	39.2	37.4	39.6	40.8	42.0	44.0	41.6
9	Gasoline and oil	1.4	1.4	1.3	1.4	1.4	1.5	1.6	1.8	2.4	1.8
10	Semidurable housefurnishings	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5
11	Tobacco	2.8	2.8	2.7	2.6	2.7	2.8	2.8	3.0	3.3	3.0
12	Other nondurable goods	7.5	7.5	7.9	8.0	7.7	9.1	9.0	8.7	8.6	8.8
13	**Services, total**	36.7	37.5	38.1	38.6	37.7	39.3	39.8	40.7	41.7	40.4
14	Household operation	5.6	5.8	6.0	6.0	5.9	6.3	6.3	6.5	6.6	6.4
15	Housing	11.7	11.8	12.0	12.1	11.9	12.1	12.3	12.5	12.8	12.4
16	Personal services	2.6	2.6	2.7	2.7	2.7	2.8	2.9	2.9	3.0	2.9
17	Recreation	2.6	2.7	2.7	2.7	2.7	2.8	2.9	3.0	3.1	3.0
18	Transportation	3.6	3.6	3.7	3.9	3.7	3.9	3.9	4.0	4.3	4.0
19	Other services	10.7	10.9	11.0	11.2	10.9	11.3	11.5	11.7	12.0	11.6

Table 51.—*Personal Consumption Expenditures by Major Type, Seasonally Adjusted Quarterly Totals at Annual Rates, 1949–50*

[Billions of dollars]

Line		1949					1950				
		I	II	III	IV	Year	I	II	III	IV	Year
1	**Goods and services, total**	178.4	180.4	180.1	183.5	180.6	185.2	189.1	202.9	198.8	194.0
2	**Durable goods, total**	21.6	23.4	24.2	25.1	23.6	25.7	26.4	33.2	29.2	28.6
3	Automobiles and parts	8.0	9.8	10.0	10.1	9.5	10.6	11.6	14.2	13.1	12.4
4	Furniture and household equipment	10.3	10.3	11.1	11.9	10.9	11.9	11.5	15.6	12.8	12.9
5	Other durable goods	3.3	3.3	3.1	3.2	3.2	3.2	3.2	3.5	3.4	3.3
6	**Nondurable goods, total**	98.0	97.3	95.6	96.6	96.9	96.7	98.3	103.9	102.7	100.4
7	Clothing and shoes	19.5	18.8	17.7	18.0	18.5	17.9	18.0	19.1	18.8	18.5
8	Food and alcoholic beverages	56.8	56.6	56.1	56.5	56.5	56.6	57.7	60.7	60.4	58.8
9	Gasoline and oil	4.5	4.8	4.8	4.9	4.7	4.9	5.1	5.1	5.1	5.0
10	Semidurable housefurnishings	2.3	2.1	2.2	2.2	2.2	2.2	2.2	2.9	2.4	2.4
11	Tobacco	4.2	4.3	4.2	4.3	4.3	4.3	4.4	4.5	4.5	4.4
12	Other nondurable goods	10.7	10.7	10.6	10.8	10.7	10.8	11.0	11.6	11.4	11.2
13	**Services, total**	58.8	59.6	60.4	61.7	60.1	62.8	64.5	65.8	67.0	65.0
14	Household operation	8.3	8.4	8.3	8.8	8.5	9.1	9.3	9.4	9.8	9.4
15	Housing	18.7	19.2	19.6	20.2	19.4	20.7	21.1	21.6	22.0	21.4
16	Personal services	3.8	3.8	3.8	3.9	3.8	3.8	3.8	3.9	4.0	3.9
17	Recreation	3.9	3.8	3.9	3.9	3.9	3.9	3.9	4.0	4.0	3.9
18	Transportation	5.9	5.9	5.8	5.7	5.8	5.7	5.8	5.9	6.0	5.8
19	Other services	18.2	18.5	18.9	19.2	18.7	19.7	20.5	21.0	21.2	20.6

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Table 51.—*Personal Consumption Expenditures by Major Type, Seasonally Adjusted Quarterly Totals at Annual Rates, 1941–43*

[Billions of dollars]

1941					1942					1943					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
76.8	81.2	84.5	84.9	81.9	86.4	87.8	90.4	94.3	89.7	97.2	99.9	101.5	103.6	100.5	1
9.1	10.4	10.1	9.1	9.7	7.4	6.9	6.8	6.8	7.0	6.5	6.9	6.6	6.4	6.6	2
3.6	4.0	2.9	3.0	3.4	.7	.7	.7	.7	.7	.7	.9	.8	.7	.8	3
4.3	5.1	5.7	4.7	4.9	5.1	4.7	4.4	4.4	4.7	4.0	4.1	3.9	3.7	3.9	4
1.2	1.3	1.5	1.4	1.4	1.5	1.5	1.6	1.7	1.6	1.8	1.9	2.0	2.0	1.9	5
39.8	42.2	45.3	45.5	43.2	48.5	49.8	51.9	55.1	51.3	57.4	58.7	59.7	61.2	59.3	6
8.1	8.6	9.6	8.9	8.8	10.5	10.2	11.2	12.0	11.0	13.4	13.3	13.2	13.7	13.4	7
21.8	23.1	24.4	25.3	23.6	26.5	28.0	29.3	31.3	28.8	32.3	33.2	34.3	34.9	33.7	8
2.5	2.7	2.7	2.7	2.6	2.6	2.2	1.9	1.6	2.1	1.4	1.4	1.3	1.4	1.3	9
.8	.9	1.0	1.0	.9	1.1	1.0	1.1	1.2	1.1	1.3	1.3	1.4	1.4	1.3	10
2.1	2.1	2.1	2.2	2.1	2.2	2.3	2.4	2.7	2.4	2.6	2.7	2.6	2.8	2.7	11
4.7	4.9	5.4	5.4	5.1	5.7	6.0	5.9	6.2	6.0	6.4	6.9	7.0	7.1	6.8	12
27.9	28.6	29.2	30.3	29.0	30.5	31.1	31.8	32.4	31.5	33.3	34.3	35.1	36.0	34.7	13
4.1	4.2	4.3	4.5	4.3	4.6	4.7	4.9	5.1	4.8	5.1	5.2	5.2	5.3	5.2	14
9.7	9.9	10.2	10.4	10.0	10.6	10.8	10.8	11.0	10.8	11.1	11.2	11.4	11.6	11.3	15
1.6	1.7	1.7	1.8	1.7	1.8	1.9	2.0	2.1	2.0	2.3	2.4	2.4	2.5	2.4	16
1.7	1.8	1.7	2.1	1.8	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.5	2.6	2.4	17
2.3	2.4	2.4	2.5	2.4	2.5	2.6	2.8	3.0	2.7	3.2	3.4	3.5	3.6	3.4	18
8.5	8.7	8.9	8.9	8.7	8.8	9.0	9.1	9.2	9.0	9.4	9.7	10.0	10.4	9.9	19

Table 51.—*Personal Consumption Expenditures by Major Type, Seasonally Adjusted Quarterly Totals at Annual Rates, 1946–48*

[Billions of dollars]

1946					1947					1948					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
137.0	142.5	152.1	154.8	146.6	158.9	163.5	166.8	170.7	165.0	174.1	176.8	179.5	180.1	177.6	1
12.7	14.9	17.4	18.6	15.9	19.2	20.4	20.8	22.0	20.6	21.4	22.2	23.0	22.3	22.2	2
2.3	3.3	4.6	5.6	3.9	5.6	6.4	6.2	6.8	6.3	6.9	7.0	7.6	7.8	7.3	3
7.3	8.3	9.4	9.7	8.7	10.2	10.6	11.2	11.8	11.0	11.1	11.7	12.0	11.2	11.5	4
3.2	3.3	3.5	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	5
80.6	82.3	87.4	87.7	84.5	90.3	92.6	93.9	95.5	93.1	97.9	98.6	99.0	99.4	98.7	6
18.0	18.0	19.0	18.0	18.2	18.4	18.6	18.9	19.3	18.8	19.3	19.6	19.7	20.0	19.6	7
46.2	47.0	50.4	51.5	48.8	52.7	53.9	54.7	55.4	54.2	57.1	57.4	57.2	57.5	57.3	8
2.7	3.0	3.1	3.3	3.0	3.4	3.6	3.7	3.9	3.6	4.1	4.2	4.4	4.4	4.3	9
1.9	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.2	2.3	2.3	2.3	2.3	10
3.4	3.5	3.5	3.6	3.5	3.7	3.9	3.9	4.0	3.9	4.1	4.0	4.3	4.2	4.1	11
8.5	8.8	9.3	9.1	8.9	10.1	10.5	10.5	10.8	10.5	11.2	11.1	11.2	10.9	11.1	12
43.7	45.3	47.3	48.5	46.2	49.4	50.5	52.1	53.2	51.3	54.8	56.0	57.4	58.4	56.7	13
6.6	6.5	6.7	6.9	6.7	7.1	7.3	7.5	7.6	7.4	7.9	7.9	8.1	8.1	8.0	14
13.1	13.4	13.8	14.2	13.6	14.6	15.0	15.7	16.5	15.4	16.9	17.3	17.8	18.3	17.5	15
3.2	3.4	3.5	3.6	3.4	3.6	3.7	3.7	3.7	3.7	3.8	3.8	3.8	3.9	3.8	16
3.5	3.7	3.8	3.8	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.8	17
4.7	5.0	5.3	5.4	5.1	5.4	5.5	5.5	5.5	5.5	5.7	5.8	6.0	6.1	5.9	18
12.7	13.3	14.2	14.6	13.7	14.9	15.2	15.8	16.1	15.5	16.8	17.3	17.9	18.1	17.5	19

Table 51.—*Personal Consumption Expenditures by Major Type, Seasonally Adjusted Quarterly Totals at Annual Rates, 1951–53*

[Billions of dollars]

1951					1952					1953					Line
I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	
210.0	204.4	207.3	211.6	208.3	213.5	216.7	218.2	225.3	218.4	228.6	230.8	231.2	229.7	230.1	1
30.6	26.0	26.2	25.8	27.1	25.8	27.0	25.4	29.1	26.8	30.4	30.3	30.3	28.0	29.7	2
12.6	10.6	10.4	9.8	10.9	9.8	11.2	9.0	12.3	10.6	13.5	13.7	13.5	11.7	13.1	3
14.4	11.9	12.2	12.4	12.7	12.4	12.2	12.6	12.8	12.5	12.9	12.7	12.9	12.6	12.8	4
3.6	3.5	3.5	3.6	3.5	3.6	3.7	3.8	3.9	3.7	3.9	3.9	3.9	3.7	3.9	5
111.1	109.1	110.5	113.5	111.1	114.2	114.9	116.6	118.4	116.0	118.8	119.6	118.6	118.7	118.9	6
20.5	19.2	19.3	20.1	19.8	20.0	19.5	20.2	20.7	20.1	20.2	20.2	19.4	19.5	19.8	7
65.9	65.8	66.7	67.7	66.5	68.8	69.7	70.4	71.1	70.0	71.7	72.0	71.9	71.9	71.8	8
5.5	5.4	5.5	5.8	5.5	5.9	5.9	6.0	6.2	6.0	6.4	6.5	6.7	6.9	6.6	9
2.8	2.4	2.4	2.3	2.5	2.4	2.4	2.4	2.5	2.4	2.4	2.5	2.5	2.4	2.5	10
4.6	4.6	4.7	4.9	4.7	5.0	5.1	5.1	5.1	5.1	5.3	5.5	5.2	5.1	5.3	11
11.8	11.6	11.9	12.7	12.0	12.1	12.2	12.4	12.9	12.4	12.8	12.9	12.9	12.9	12.9	12
68.3	69.3	70.7	72.2	70.1	73.5	74.8	76.2	77.8	75.6	79.4	80.9	82.3	83.0	81.4	13
10.1	10.2	10.4	10.6	10.3	10.7	10.9	11.2	11.4	11.1	11.7	12.0	12.2	12.1	12.0	14
22.5	23.0	23.6	24.3	23.4	24.9	25.4	25.9	26.4	25.6	26.9	27.3	28.0	28.6	27.7	15
4.0	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.2	4.3	4.4	4.4	4.4	4.4	16
4.0	4.0	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.2	4.4	4.5	4.4	4.3	4.4	17
6.2	6.4	6.5	6.6	6.4	6.7	6.8	6.9	6.9	6.8	7.0	7.1	7.1	7.2	7.1	18
21.4	21.6	22.0	22.5	21.9	22.8	23.3	23.9	24.5	23.6	25.2	25.7	26.1	26.4	25.8	19

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Table 52.—*Personal Income, Seasonally Adjusted Monthly Totals at Annual Rates, 1929–53*

[Billions of dollars]

Year and month	Personal income	Wage and salary disbursements					Other labor income	Proprietors' and rental income	Dividends and personal interest income	Transfer payments	Less: Personal contributions for social insurance	Nonagricultural income
		Total	Commodity producing industries	Distributive industries	Service industries	Government						
1929												
January	86.3	49.7	21.3	15.2	8.4	4.8	0.6	21.0	13.6	1.6	0.2	77.6
February	85.6	49.7	21.3	15.2	8.4	4.8	.6	20.3	13.5	1.6	.1	77.4
March	86.1	50.0	21.3	15.5	8.4	4.8	.6	20.6	13.5	1.5	.1	77.8
April	86.1	50.1	21.4	15.4	8.4	4.9	.6	20.6	13.4	1.5	.1	77.5
May	85.3	50.3	21.5	15.5	8.4	4.9	.6	19.6	13.4	1.5	.1	77.6
June	85.8	50.8	21.9	15.6	8.4	4.9	.6	19.7	13.3	1.5	.1	78.0
July	87.0	50.9	21.6	15.8	8.5	5.0	.6	21.0	13.2	1.5	.2	78.2
August	87.4	51.4	22.1	15.8	8.5	5.0	.6	20.8	13.2	1.5	.1	78.8
September	87.1	51.4	22.1	15.8	8.5	5.0	.6	20.5	13.3	1.4	.1	78.9
October	86.7	50.9	21.7	15.7	8.5	5.0	.6	20.6	13.2	1.5	.1	78.6
November	83.8	50.1	21.1	15.6	8.4	5.0	.6	18.6	13.1	1.5	.1	76.4
December	83.3	49.4	20.4	15.6	8.4	5.0	.6	18.9	13.0	1.5	.1	75.7
Total	**85.8**	**50.4**	**21.5**	**15.6**	**8.4**	**4.9**	**.6**	**20.2**	**13.2**	**1.5**	**.1**	**77.7**
1930												
January	82.1	48.9	20.3	15.3	8.3	5.0	.6	18.3	12.9	1.6	.2	74.7
February	81.2	48.3	19.9	15.2	8.2	5.0	.6	18.0	12.9	1.5	.1	74.1
March	80.1	47.9	19.5	15.1	8.2	5.1	.6	17.4	12.8	1.5	.1	73.7
April	80.8	47.8	19.5	15.0	8.2	5.1	.6	18.2	12.8	1.5	.1	73.6
May	79.5	47.3	19.2	14.9	8.1	5.1	.6	17.5	12.7	1.5	.1	72.7
June	78.5	47.3	19.2	14.8	8.1	5.2	.6	16.7	12.6	1.4	.1	72.1
July	76.2	46.2	18.5	14.5	8.0	5.2	.6	15.5	12.6	1.5	.2	70.6
August	75.1	45.2	18.0	14.1	7.9	5.2	.6	15.6	12.4	1.5	.2	69.5
September	74.5	44.9	17.9	14.0	7.8	5.2	.6	15.4	12.2	1.5	.1	68.9
October	73.2	44.2	17.4	13.8	7.8	5.2	.6	15.0	12.0	1.6	.2	68.0
November	71.6	43.5	17.0	13.6	7.7	5.2	.6	14.2	11.8	1.6	.1	66.5
December	70.2	42.7	16.4	13.5	7.6	5.2	.5	13.8	11.6	1.7	.1	65.4
Total	**76.9**	**46.2**	**18.5**	**14.5**	**8.0**	**5.2**	**.6**	**16.3**	**12.4**	**1.5**	**.1**	**70.8**
1931												
January	69.3	41.9	16.0	13.2	7.5	5.2	.5	13.8	11.4	1.9	.2	64.5
February	69.1	41.7	15.8	13.3	7.4	5.2	.5	13.8	11.4	1.9	.2	64.3
March	72.8	41.7	15.7	13.3	7.4	5.3	.5	13.9	11.4	5.4	.1	67.5
April	73.3	41.1	15.4	13.1	7.3	5.3	.5	14.5	11.4	5.9	.1	67.9
May	68.4	40.5	15.1	12.9	7.2	5.3	.5	13.4	11.3	2.8	.1	63.3
June	66.3	39.9	14.7	12.8	7.1	5.3	.5	12.7	11.2	2.2	.2	61.6
July	65.2	39.2	14.3	12.6	7.0	5.3	.5	12.4	11.1	2.2	.2	60.3
August	62.8	38.2	13.8	12.3	6.9	5.2	.5	11.3	10.9	2.0	.1	58.6
September	61.6	37.3	13.2	12.1	6.8	5.2	.5	11.1	10.8	2.0	.1	57.4
October	60.7	36.4	12.6	11.8	6.8	5.2	.5	11.3	10.6	2.1	.2	56.3
November	59.9	36.1	12.6	11.7	6.6	5.2	.5	11.0	10.4	2.0	.1	55.2
December	58.9	35.5	12.3	11.4	6.5	5.3	.5	10.7	10.2	2.2	.2	54.4
Total	**65.7**	**39.1**	**14.3**	**12.5**	**7.1**	**5.3**	**.5**	**12.5**	**11.0**	**2.7**	**.2**	**60.9**
1932												
January	57.5	34.7	12.1	11.1	6.3	5.2	.5	10.5	9.9	2.1	.2	53.1
February	56.5	33.9	11.7	10.8	6.2	5.2	.5	10.3	9.9	2.1	.2	52.0
March	54.9	33.2	11.1	10.7	6.2	5.2	.5	9.3	9.8	2.2	.1	50.6
April	53.4	32.2	10.6	10.3	6.1	5.2	.5	9.1	9.7	2.1	.2	49.4
May	51.6	31.1	9.9	10.1	6.0	5.1	.5	8.4	9.6	2.1	.1	48.0
June	49.2	30.1	9.4	9.8	5.8	5.1	.5	7.4	9.3	2.1	.2	46.3
July	47.8	28.9	9.0	9.4	5.7	4.8	.4	7.2	9.2	2.3	.2	45.0
August	47.0	28.4	8.9	9.1	5.6	4.8	.4	7.2	8.9	2.3	.2	44.5
September	47.0	28.6	9.1	9.1	5.6	4.8	.4	7.3	8.6	2.2	.1	44.2
October	46.2	28.7	9.3	9.1	5.5	4.8	.4	6.8	8.4	2.1	.2	43.8
November	46.1	28.7	9.4	9.0	5.5	4.8	.4	6.6	8.4	2.1	.1	43.5
December	45.2	28.0	9.0	8.8	5.4	4.8	.4	6.2	8.5	2.2	.1	42.7
Total	**50.1**	**30.5**	**9.9**	**9.8**	**5.8**	**5.0**	**.5**	**8.0**	**9.1**	**2.2**	**.2**	**46.9**
1933												
January	45.6	28.0	9.0	8.8	5.3	4.9	.4	6.5	8.6	2.3	.2	42.7
February	44.4	27.5	8.8	8.6	5.2	4.9	.4	5.8	8.5	2.3	.1	41.9
March	43.0	26.4	8.0	8.3	5.1	5.0	.4	5.4	8.5	2.4	.1	40.6
April	44.1	26.6	8.2	8.4	5.1	4.9	.4	6.6	8.4	2.3	.2	41.0
May	46.3	27.2	8.8	8.4	5.1	4.9	.4	8.4	8.3	2.2	.2	42.2
June	48.4	28.4	9.6	8.5	5.2	5.1	.4	9.1	8.2	2.4	.1	43.5
July	49.2	28.9	10.2	8.6	5.2	4.9	.4	10.1	8.1	1.9	.2	43.9
August	48.4	30.2	11.0	9.0	5.3	4.9	.4	8.0	8.1	1.9	.2	45.0
September	48.7	30.8	11.3	9.2	5.4	4.9	.4	7.7	8.0	1.9	.1	45.1
October	48.6	30.8	11.1	9.4	5.4	4.9	.4	7.6	8.0	1.9	.1	45.0
November	49.0	31.1	11.0	9.3	5.4	5.4	.4	7.6	8.1	2.0	.2	45.2
December	50.8	32.3	10.8	9.1	5.4	7.0	.4	8.0	8.2	2.0	.1	46.9
Total	**47.2**	**29.0**	**9.8**	**8.8**	**5.2**	**5.1**	**.4**	**7.6**	**8.3**	**2.1**	**.2**	**43.8**

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Table 52.—*Personal Income, Seasonally Adjusted Monthly Totals at Annual Rates, 1929–53*—Continued

[Billions of dollars]

Year and month	Personal income	Wage and salary disbursements					Other labor income	Proprietors' and rental income	Dividends and personal interest income	Transfer payments	Less: Personal contributions for social insurance	Nonagricultural income
		Total	Commodity producing industries	Distributive industries	Service industries	Government						
1934												
January	52.1	33.5	11.1	9.5	5.5	7.4	0.4	8.1	8.3	2.0	0.2	48.7
February	52.7	33.9	11.9	9.7	5.5	6.8	.4	8.3	8.3	2.0	.2	49.2
March	53.2	34.1	12.3	9.8	5.6	6.4	.4	8.4	8.3	2.1	.1	49.9
April	53.2	33.8	12.8	9.9	5.7	5.4	.4	8.6	8.4	2.2	.2	49.6
May	53.8	34.2	13.0	10.0	5.7	5.5	.4	8.6	8.5	2.3	.2	50.4
June	54.1	34.0	12.7	10.0	5.7	5.6	.5	9.0	8.6	2.2	.2	50.0
July	54.4	33.7	12.2	10.1	5.7	5.7	.5	9.5	8.7	2.2	.2	49.9
August	54.2	33.8	12.1	10.0	5.7	6.0	.5	9.1	8.8	2.2	.2	50.3
September	53.0	32.8	11.3	10.0	5.6	5.9	.5	8.8	8.8	2.2	.1	49.2
October	53.5	33.3	11.5	10.1	5.7	6.0	.5	8.7	8.9	2.3	.2	49.9
November	53.7	33.6	11.7	10.0	5.7	6.2	.5	8.6	8.8	2.3	.1	50.2
December	54.3	34.1	12.3	10.0	5.7	6.1	.5	8.7	8.8	2.4	.2	51.0
Total	**53.6**	**33.7**	**12.1**	**9.9**	**5.7**	**6.1**	**.4**	**8.7**	**8.7**	**2.2**	**.2**	**49.8**
1935												
January	55.6	35.0	12.7	10.2	5.8	6.3	.5	9.1	8.7	2.5	.2	51.9
February	56.7	35.6	13.3	10.3	5.8	6.2	.5	9.8	8.6	2.4	.2	52.7
March	57.7	35.7	13.2	10.4	5.9	6.2	.5	10.7	8.6	2.4	.2	52.7
April	59.7	36.1	13.4	10.5	5.9	6.3	.5	12.3	8.6	2.4	.2	53.2
May	60.0	36.2	13.3	10.6	5.9	6.4	.5	12.5	8.6	2.4	.2	53.3
June	59.8	36.1	13.3	10.7	5.9	6.2	.5	12.5	8.6	2.3	.2	53.1
July	60.1	36.4	13.2	10.8	6.0	6.4	.5	12.5	8.6	2.3	.2	53.3
August	61.3	37.0	13.6	10.9	6.0	6.5	.5	12.9	8.7	2.4	.2	54.1
September	61.7	37.2	13.8	11.0	6.0	6.4	.5	13.0	8.8	2.4	.2	54.6
October	62.3	37.5	13.8	11.0	6.0	6.7	.5	13.1	8.9	2.5	.2	55.1
November	62.8	38.0	14.0	11.0	6.1	6.9	.5	13.1	9.0	2.4	.2	55.8
December	63.8	39.1	14.5	11.0	6.1	7.5	.5	13.0	9.1	2.3	.2	56.9
Total	**60.2**	**36.7**	**13.5**	**10.7**	**5.9**	**6.5**	**.5**	**12.0**	**8.8**	**2.4**	**.2**	**53.9**
1936												
January	64.0	39.5	14.4	11.2	6.2	7.7	.5	12.6	9.4	2.2	.2	57.6
February	63.9	39.9	14.4	11.4	6.3	7.8	.5	12.0	9.5	2.2	.2	58.2
March	64.0	40.2	14.6	11.4	6.3	7.9	.6	11.7	9.6	2.1	.2	58.9
April	64.7	40.9	15.2	11.5	6.4	7.8	.6	11.6	9.7	2.1	.2	59.8
May	65.6	41.7	15.7	11.6	6.5	7.9	.6	11.4	10.1	2.0	.2	61.2
June	76.3	42.0	15.9	11.7	6.5	7.9	.6	11.9	10.4	11.6	.2	71.6
July	72.8	42.2	15.9	11.8	6.6	7.9	.6	12.5	10.7	7.0	.2	67.6
August	69.1	42.5	16.2	11.8	6.6	7.9	.6	12.4	10.9	2.9	.2	63.8
September	68.7	42.4	16.0	11.9	6.6	7.9	.6	12.3	11.0	2.6	.2	63.5
October	69.3	43.0	16.2	12.1	6.6	8.1	.6	12.4	11.0	2.5	.2	64.3
November	70.8	43.9	16.9	12.2	6.7	8.1	.6	13.0	11.1	2.4	.2	65.2
December	72.1	44.8	17.8	12.3	6.8	7.9	.6	13.3	11.1	2.5	.2	66.2
Total	**68.5**	**41.9**	**15.8**	**11.8**	**6.5**	**7.9**	**.6**	**12.3**	**10.4**	**3.5**	**.2**	**63.2**
1937												
January	71.2	44.4	17.5	12.4	6.8	7.7	.6	13.3	11.1	2.5	.6	65.4
February	72.5	45.2	18.1	12.6	6.9	7.6	.6	13.7	11.2	2.4	.6	66.5
March	74.4	46.0	18.4	12.9	7.0	7.7	.6	14.7	11.2	2.5	.6	67.3
April	75.2	46.9	19.2	13.0	7.1	7.6	.6	14.7	11.2	2.4	.6	68.2
May	75.8	47.6	19.6	13.2	7.1	7.7	.6	14.9	11.0	2.3	.6	68.7
June	76.8	47.6	19.5	13.3	7.2	7.6	.6	15.9	10.9	2.4	.6	68.5
July	76.2	47.5	19.3	13.4	7.3	7.5	.6	15.6	10.7	2.4	.6	68.4
August	76.4	47.6	19.5	13.5	7.2	7.4	.6	15.9	10.5	2.4	.6	68.6
September	74.6	46.5	18.5	13.5	7.2	7.3	.6	15.4	10.3	2.4	.6	67.4
October	73.3	46.0	17.9	13.5	7.2	7.4	.6	14.8	10.1	2.4	.6	66.5
November	71.7	45.0	17.1	13.3	7.2	7.4	.6	14.4	9.9	2.4	.6	64.9
December	69.8	43.6	15.8	13.2	7.1	7.5	.6	13.9	9.7	2.6	.6	63.2
Total	**73.9**	**46.1**	**18.4**	**13.2**	**7.1**	**7.5**	**.6**	**14.8**	**10.6**	**2.4**	**.6**	**67.0**
1938												
January	68.7	42.4	15.0	12.9	7.0	7.5	.6	14.2	9.5	2.6	.6	62.0
February	68.7	42.4	15.2	12.8	6.9	7.5	.6	14.0	9.4	2.8	.5	62.2
March	68.5	42.2	15.0	12.6	6.8	7.8	.6	13.8	9.3	3.1	.5	62.3
April	67.7	42.3	14.8	12.7	6.8	8.0	.6	13.3	9.1	2.9	.5	61.9
May	67.1	42.0	14.6	12.5	6.8	8.1	.6	13.1	9.0	2.9	.5	61.5
June	67.5	42.1	14.6	12.4	6.8	8.3	.6	13.4	9.0	2.9	.5	61.8
July	67.7	42.4	14.7	12.4	6.9	8.4	.6	13.6	8.9	2.8	.6	62.1
August	68.6	43.0	15.3	12.4	6.8	8.5	.6	13.7	8.9	2.9	.5	63.2
September	69.0	43.7	15.7	12.6	6.8	8.6	.6	13.7	8.8	2.8	.6	63.6
October	69.2	43.7	15.6	12.6	6.8	8.7	.6	13.9	8.8	2.8	.6	63.7
November	69.8	44.4	16.1	12.7	6.9	8.7	.6	13.9	8.8	2.7	.6	64.4
December	70.1	44.9	16.6	12.8	6.9	8.6	.6	13.7	8.7	2.8	.6	65.0
Total	**68.6**	**43.0**	**15.3**	**12.6**	**6.8**	**8.2**	**.6**	**13.7**	**9.0**	**2.8**	**.6**	**62.8**

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Table 52.—*Personal Income, Seasonally Adjusted Monthly Totals at Annual Rates, 1929–53*—Continued

[Billions of dollars]

Year and month	Personal income	Wage and salary disbursements					Other labor income	Proprietors' and rental income	Dividends and personal interest income	Transfer payments	Less: Personal contributions for social insurance	Nonagricultural income
		Total	Commodity producing industries	Distributive industries	Service industries	Government						
1939												
January	71.0	45.0	16.7	12.9	6.9	8.5	0.6	14.3	8.8	2.9	0.6	65.3
February	71.0	45.0	16.8	12.9	6.9	8.4	.6	14.2	8.9	2.9	.6	65.4
March	71.7	45.1	16.7	12.9	7.0	8.5	.6	14.3	9.1	3.2	.6	66.0
April	71.1	44.8	16.4	13.0	7.0	8.4	.6	13.9	9.5	2.9	.6	65.5
May	71.8	45.2	16.6	13.1	7.1	8.4	.6	14.1	9.5	3.0	.6	66.1
June	72.2	45.9	17.1	13.3	7.2	8.3	.6	13.7	9.6	3.0	.6	66.8
July	71.8	45.6	17.1	13.2	7.2	8.1	.6	13.7	9.6	2.9	.6	66.4
August	72.8	46.0	17.5	13.3	7.2	8.0	.6	14.0	9.7	3.1	.6	67.3
September	74.1	46.4	17.8	13.6	7.2	7.8	.6	14.8	9.9	3.0	.6	68.1
October	74.8	47.1	18.2	13.7	7.2	8.0	.6	14.8	10.0	2.9	.6	68.8
November	75.7	47.4	18.5	13.7	7.2	8.0	.6	15.2	10.2	2.9	.6	69.6
December	76.2	47.8	18.7	13.8	7.2	8.1	.6	15.1	10.3	3.0	.6	70.1
Total	**72.9**	**45.9**	**17.4**	**13.3**	**7.1**	**8.2**	**.6**	**14.4**	**9.6**	**3.0**	**.6**	**67.1**
1940												
January	76.3	47.9	18.6	13.8	7.3	8.2	.6	15.0	10.4	3.1	.7	70.5
February	76.6	47.8	18.4	13.8	7.3	8.3	.7	15.4	10.1	3.2	.6	70.4
March	76.1	47.8	18.2	13.8	7.4	8.4	.7	15.2	9.8	3.2	.6	70.3
April	76.1	48.0	18.3	13.8	7.5	8.4	.7	15.4	9.5	3.1	.6	70.1
May	76.9	48.7	18.7	14.0	7.6	8.4	.7	15.3	9.6	3.2	.6	71.2
June	77.2	48.9	19.1	14.1	7.5	8.2	.7	15.3	9.7	3.2	.6	71.5
July	77.6	49.3	19.3	14.2	7.6	8.2	.7	15.4	9.7	3.2	.6	72.0
August	79.0	50.1	20.0	14.3	7.5	8.3	.7	15.8	9.8	3.2	.7	73.0
September	79.6	50.6	20.4	14.4	7.5	8.3	.7	16.1	9.9	3.0	.7	73.6
October	81.4	51.4	20.7	14.5	7.6	8.6	.7	17.1	9.9	3.0	.7	74.7
November	82.3	52.4	21.6	14.6	7.5	8.7	.7	17.1	9.9	2.9	.7	75.8
December	84.6	54.1	22.8	14.9	7.5	8.9	.7	17.6	9.9	3.0	.7	78.1
Total	**78.7**	**49.8**	**19.7**	**14.2**	**7.5**	**8.4**	**.7**	**15.9**	**9.8**	**3.1**	**.7**	**72.6**
1941												
January	86.2	54.9	23.3	14.7	7.7	9.2	.7	18.2	9.9	3.2	.7	79.5
February	87.7	55.9	24.0	15.0	7.7	9.2	.7	18.7	9.9	3.2	.7	80.0
March	89.1	56.9	24.4	15.2	7.8	9.5	.7	19.0	10.0	3.2	.7	81.8
April	90.3	57.8	24.5	15.6	7.9	9.8	.7	19.4	10.0	3.1	.7	82.8
May	93.4	60.1	26.2	15.9	8.0	10.0	.7	20.2	10.1	3.1	.8	85.4
June	96.4	62.2	27.6	16.4	8.1	10.1	.7	21.0	10.2	3.1	.8	88.0
July	97.9	63.3	28.4	16.6	8.1	10.2	.7	21.3	10.3	3.1	.8	89.4
August	100.1	64.6	29.2	16.9	8.1	10.4	.7	22.2	10.3	3.1	.8	91.3
September	101.0	65.5	29.7	16.9	8.3	10.6	.7	22.2	10.4	3.0	.8	92.2
October	101.7	66.4	30.3	17.0	8.3	10.8	.7	22.0	10.5	3.0	.9	93.0
November	102.6	66.8	30.6	17.0	8.3	10.9	.7	22.5	10.5	3.0	.9	93.9
December	107.0	69.9	31.5	18.4	8.4	11.6	.7	23.6	10.5	3.2	.9	97.3
Total	**96.3**	**62.1**	**27.5**	**16.3**	**8.1**	**10.2**	**.7**	**20.9**	**10.3**	**3.1**	**.8**	**88.0**
1942												
January	108.5	70.2	32.5	17.7	8.4	11.6	.8	24.4	10.6	3.4	.9	98.6
February	109.8	71.5	33.3	17.6	8.5	12.1	.8	24.6	10.5	3.3	.9	99.6
March	112.2	73.6	34.6	17.6	8.7	12.7	.8	25.0	10.4	3.4	1.0	102.0
April	115.6	75.5	35.8	17.6	8.7	13.4	.8	26.7	10.3	3.3	1.0	104.4
May	118.0	77.7	37.1	17.8	8.8	14.0	.8	27.1	10.2	3.2	1.0	106.5
June	121.7	80.8	38.6	17.7	8.9	15.6	.8	27.9	10.2	3.1	1.1	109.9
July	125.3	83.5	40.1	17.9	9.1	16.4	.9	28.8	10.1	3.2	1.2	113.0
August	128.8	86.0	41.7	18.1	9.2	17.0	.9	30.0	10.0	3.1	1.2	115.5
September	131.2	87.7	42.4	18.2	9.2	17.9	.9	30.9	10.0	3.0	1.3	117.8
October	134.6	90.6	43.4	18.5	9.3	19.4	.9	31.5	9.9	3.0	1.3	121.0
November	137.7	93.3	44.7	18.7	9.5	20.4	.9	32.0	10.0	2.9	1.4	123.7
December	140.0	95.1	45.4	18.9	9.3	21.5	1.0	32.5	10.0	2.9	1.5	125.8
Total	**123.5**	**82.1**	**39.2**	**18.0**	**9.0**	**16.0**	**.9**	**28.5**	**10.1**	**3.1**	**1.2**	**111.5**
1943												
January	142.6	98.1	45.9	18.9	9.4	23.9	1.0	32.0	10.1	2.9	1.5	129.1
February	145.5	99.8	46.7	19.2	9.4	24.5	1.0	33.3	10.1	2.9	1.6	131.7
March	147.7	101.8	47.7	19.4	9.6	25.1	1.0	33.5	10.2	2.9	1.7	133.5
April	148.7	103.2	48.3	19.5	9.7	25.7	1.0	33.2	10.2	2.9	1.8	134.8
May	149.8	104.0	48.6	19.8	9.8	25.8	1.0	33.5	10.2	2.9	1.8	135.2
June	150.7	105.3	48.9	20.2	10.1	26.1	1.1	33.0	10.3	2.9	1.9	137.1
July	152.0	106.5	49.3	20.5	10.0	26.7	1.1	33.0	10.3	3.0	1.9	138.7
August	153.9	107.3	49.6	20.7	9.9	27.1	1.1	34.1	10.3	3.0	1.9	139.7
September	153.5	108.1	50.0	20.5	10.0	27.6	1.1	32.8	10.4	3.0	1.9	140.3
October	155.2	109.5	50.6	20.6	10.1	28.2	1.2	33.1	10.4	3.0	2.0	141.9
November	157.9	111.5	51.2	20.9	10.2	29.2	1.2	33.8	10.4	3.0	2.0	144.3
December	158.7	112.3	51.2	21.3	10.2	29.6	1.3	33.9	10.3	3.0	2.1	145.0
Total	**151.4**	**105.6**	**49.0**	**20.1**	**9.9**	**26.6**	**1.1**	**33.3**	**10.3**	**3.0**	**1.8**	**137.6**

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Table 52.—*Personal Income, Seasonally Adjusted Monthly Totals at Annual Rates, 1929–53*—Continued

[Billions of dollars]

Year and month	Personal income	Wage and salary disbursements					Other labor income	Proprietors' and rental income	Dividends and personal interest income	Transfer payments	Less: Personal contributions for social insurance	Nonagricultural income
		Total	Commodity producing industries	Distributive industries	Service industries	Government						
1944												
January	161.1	113.8	51.3	21.6	10.4	30.5	1.3	34.7	10.3	3.1	2.1	146.6
February	164.0	115.6	51.0	23.5	10.5	30.6	1.4	35.4	10.4	3.4	2.2	149.0
March	164.3	115.3	50.7	22.5	10.7	31.4	1.4	35.4	10.5	3.9	2.2	149.6
April	164.0	114.7	50.1	22.0	10.7	31.9	1.5	35.6	10.6	3.8	2.2	148.9
May	164.7	115.5	49.9	22.2	10.9	32.5	1.5	35.6	10.7	3.6	2.2	150.1
June	165.8	116.6	50.2	22.4	11.0	33.0	1.5	35.7	10.8	3.5	2.3	151.4
July	166.0	117.9	50.1	22.8	11.2	33.8	1.6	34.4	10.9	3.5	2.3	152.5
August	166.0	118.0	50.0	22.9	11.1	34.0	1.6	34.3	10.9	3.5	2.3	152.8
September	165.6	117.8	49.9	22.8	11.0	34.1	1.6	33.9	11.0	3.6	2.3	152.7
October	167.7	118.9	50.2	23.0	11.0	34.7	1.6	34.8	11.1	3.6	2.3	154.3
November	169.0	119.4	50.3	23.2	11.3	34.6	1.7	35.4	11.1	3.7	2.3	155.1
December	169.5	120.5	50.9	23.5	11.3	34.8	1.7	34.6	11.2	3.8	2.3	156.1
Total	**165.7**	**117.0**	**50.4**	**22.7**	**10.9**	**33.0**	**1.5**	**35.0**	**10.8**	**3.6**	**2.2**	**151.6**
1945												
January	173.4	122.0	51.5	23.7	11.4	35.4	1.7	36.9	11.2	4.0	2.4	158.1
February	173.7	122.2	51.4	24.0	11.6	35.2	1.7	37.0	11.3	3.9	2.4	158.4
March	173.6	122.7	51.4	24.0	11.5	35.8	1.7	36.2	11.3	4.0	2.3	159.4
April	172.2	121.9	50.4	24.1	11.5	35.9	1.8	35.6	11.2	4.1	2.4	158.1
May	173.0	121.0	49.2	24.2	11.6	36.0	1.8	37.0	11.4	4.2	2.4	158.6
June	175.1	121.3	48.8	24.4	11.8	36.3	1.8	37.0	11.6	5.8	2.4	160.6
July	175.0	121.8	47.3	25.1	12.1	37.3	1.8	36.9	11.6	5.3	2.4	160.6
August	170.7	117.7	44.1	24.8	12.1	36.7	1.8	36.7	11.7	5.1	2.3	156.1
September	163.2	111.9	39.2	24.9	12.3	35.5	1.8	34.1	11.7	6.1	2.4	150.3
October	166.8	110.4	38.4	25.2	12.4	34.4	1.9	36.3	11.8	8.7	2.3	152.9
November	169.5	109.9	39.2	26.1	12.9	31.7	1.9	37.4	11.9	10.7	2.3	154.3
December	168.2	107.8	39.5	26.6	12.9	28.8	1.9	36.5	12.0	12.1	2.1	153.8
Total	**171.2**	**117.6**	**45.9**	**24.8**	**12.0**	**34.9**	**1.8**	**36.5**	**11.6**	**6.2**	**2.3**	**156.8**
1946												
January	170.0	106.9	39.3	27.4	13.1	27.1	1.8	38.1	12.4	12.9	2.1	155.6
February	169.3	104.4	38.6	28.0	13.4	24.4	1.8	40.3	12.6	12.2	2.0	153.1
March	172.6	108.2	42.7	28.8	13.8	22.9	1.8	39.2	12.9	12.5	2.0	157.5
April	174.2	109.3	43.8	30.4	14.0	21.1	1.8	40.2	13.0	12.0	2.1	158.6
May	175.3	110.2	44.5	31.6	14.0	20.1	1.8	40.6	13.1	11.7	2.1	159.8
June	177.3	111.3	46.4	30.8	14.3	19.8	1.9	41.5	13.3	11.3	2.0	161.1
July	181.9	111.9	46.7	31.5	14.5	19.2	1.9	45.7	13.4	11.0	2.0	161.3
August	182.6	114.1	48.7	32.0	14.6	18.8	1.9	44.1	13.6	10.9	2.0	163.5
September	178.8	115.0	49.6	32.1	14.8	18.5	1.9	38.5	13.8	11.5	1.9	165.1
October	184.0	115.5	49.7	32.3	15.0	18.5	2.0	44.0	13.9	10.5	1.9	164.9
November	183.9	116.5	50.4	32.7	15.1	18.3	2.0	43.1	14.2	10.1	2.0	165.5
December	185.8	118.6	51.5	33.2	15.2	18.7	2.1	42.4	14.4	10.3	2.0	167.7
Total	**178.0**	**111.9**	**46.0**	**30.9**	**14.3**	**20.6**	**1.9**	**41.5**	**13.4**	**11.4**	**2.0**	**161.1**
1947												
January	186.7	119.3	52.4	33.5	15.3	18.1	2.1	41.9	14.6	10.9	2.1	168.3
February	186.9	119.6	52.7	33.8	15.4	17.7	2.1	42.3	14.5	10.6	2.2	167.8
March	186.8	120.0	53.0	33.9	15.4	17.7	2.2	41.5	14.5	10.8	2.2	168.4
April	183.8	119.4	52.9	33.4	15.7	17.4	2.2	39.3	14.4	10.8	2.3	167.6
May	184.2	120.9	53.5	34.1	15.9	17.4	2.3	38.2	14.5	10.4	2.1	168.7
June	187.1	122.6	53.8	35.2	16.2	17.4	2.3	39.2	14.5	10.6	2.1	170.8
July	187.3	121.7	53.4	35.4	16.3	16.6	2.4	39.5	14.5	11.3	2.1	170.7
August	187.8	123.0	54.2	35.5	16.2	17.1	2.4	39.2	14.7	10.6	2.1	171.3
September	202.8	124.5	55.3	36.2	16.2	16.8	2.4	41.7	14.9	21.3	2.0	184.4
October	195.5	126.0	55.8	36.5	16.4	17.3	2.5	41.9	15.1	12.1	2.1	177.1
November	196.4	127.6	56.8	37.0	16.4	17.4	2.5	42.0	15.3	10.9	1.9	178.3
December	200.6	129.0	58.0	37.2	16.5	17.3	2.6	44.6	15.4	11.1	2.1	180.4
Total	**190.5**	**122.8**	**54.3**	**35.2**	**16.0**	**17.3**	**2.3**	**40.9**	**14.7**	**11.8**	**2.1**	**172.8**
1948												
January	201.5	129.9	58.1	37.5	16.7	17.6	2.6	44.4	15.4	11.4	2.2	181.9
February	199.8	130.1	57.8	38.1	16.9	17.3	2.6	42.1	15.6	11.4	2.0	182.1
March	203.3	130.8	57.8	37.8	16.9	18.3	2.7	43.8	15.7	12.4	2.1	184.3
April	206.0	131.1	58.3	37.8	17.2	17.8	2.7	46.3	15.9	12.1	2.1	185.0
May	206.8	133.2	59.5	38.3	17.4	18.0	2.7	45.7	16.0	11.3	2.1	186.0
June	211.6	135.0	60.4	38.6	17.5	18.5	2.7	48.7	16.1	11.3	2.2	188.8
July	210.9	136.7	60.9	39.3	17.6	18.9	2.7	46.2	16.2	11.3	2.2	190.2
August	212.7	138.3	61.7	39.7	17.7	19.2	2.7	45.2	16.4	11.3	2.2	192.1
September	213.3	139.2	62.2	39.9	17.6	19.5	2.7	43.1	16.7	10.9	2.3	192.8
October	213.4	138.8	62.0	39.5	17.7	19.6	2.8	43.5	16.9	10.6	2.2	192.4
November	213.0	139.3	62.0	39.3	17.8	20.2	2.8	45.6	16.9	10.6	2.2	193.0
December	212.1	138.5	61.3	39.3	17.7	20.2	2.8	45.4	16.8	10.9	2.3	193.0
Total	**208.7**	**135.1**	**60.2**	**38.8**	**17.4**	**18.7**	**2.7**	**45.6**	**16.2**	**11.3**	**2.2**	**188.5**

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Table 52.—*Personal Income, Seasonally Adjusted Monthly Totals at Annual Rates, 1929–53*—Continued

[Billions of dollars]

Year and month	Personal income	Wage and salary disbursements					Other labor income	Proprietors' and rental income	Dividends and personal interest income	Transfer payments	Less: Personal contributions for social insurance	Nonagricultural income
		Total	Commodity producing industries	Distributive industries	Service industries	Government						
1949												
January	208.7	136.9	59.8	39.2	17.9	20.0	2.8	43.2	16.8	11.3	2.3	191.4
February	208.2	135.5	58.8	38.9	17.8	20.0	2.8	43.7	16.8	11.7	2.3	190.5
March	209.7	134.2	57.3	38.8	18.0	20.1	2.9	45.1	16.9	12.9	2.3	190.4
April	208.6	135.2	57.6	39.4	18.0	20.2	2.9	43.3	16.9	12.5	2.2	191.4
May	208.1	135.3	57.2	39.6	18.3	20.2	3.0	42.6	17.0	12.4	2.2	191.2
June	206.3	134.1	56.4	39.2	18.1	20.4	3.0	41.9	17.1	12.5	2.3	190.4
July	203.8	133.2	55.9	38.9	17.9	20.5	3.0	40.0	17.2	12.5	2.1	189.5
August	205.8	133.3	56.1	39.0	17.7	20.5	3.1	41.7	17.2	12.7	2.2	190.0
September	207.1	134.0	56.3	39.1	17.9	20.7	3.1	42.2	17.2	12.8	2.2	191.0
October	202.9	132.6	54.6	38.7	18.3	21.0	3.2	39.9	17.2	12.2	2.2	188.6
November	205.0	133.3	55.5	38.5	18.3	21.0	3.2	40.7	17.4	12.6	2.2	190.6
December	208.2	135.1	56.9	38.9	18.3	21.0	3.2	40.0	19.1	13.0	2.2	194.4
Total	**206.8**	**134.4**	**56.9**	**39.0**	**18.0**	**20.5**	**3.0**	**42.0**	**17.2**	**12.4**	**2.2**	**190.8**
1950												
January	214.6	135.1	56.7	39.0	18.4	21.0	3.4	42.7	18.1	18.1	2.8	198.4
February	217.5	134.6	55.9	39.0	18.7	21.0	3.4	41.8	18.3	22.1	2.7	202.5
March	223.5	137.5	58.1	39.5	18.8	21.1	3.5	42.6	18.6	24.1	2.8	207.7
April	219.4	139.8	59.6	39.9	19.0	21.3	3.6	42.9	18.7	17.1	2.7	203.5
May	220.5	141.9	61.4	40.4	19.1	21.0	3.7	44.6	18.8	14.3	2.8	203.6
June	222.2	144.9	62.9	41.1	19.5	21.4	3.8	43.8	19.0	13.6	2.9	206.3
July	225.4	147.1	64.0	42.0	19.6	21.5	3.9	45.7	19.2	12.3	2.8	208.3
August	229.4	151.1	66.2	42.7	19.9	22.3	4.0	45.9	19.5	11.9	3.0	212.7
September	233.0	153.4	67.2	42.9	19.9	23.4	4.0	44.7	22.1	11.6	2.8	217.0
October	235.2	156.1	69.2	43.1	20.1	23.7	4.1	45.9	19.9	12.4	3.2	218.1
November	237.2	157.2	69.9	42.7	20.2	24.4	4.2	46.8	20.0	12.1	3.1	219.3
December	246.9	159.8	70.9	43.7	20.4	24.8	4.3	47.9	25.9	12.0	3.0	228.5
Total	**227.1**	**146.5**	**63.5**	**41.3**	**19.5**	**22.2**	**3.8**	**44.6**	**19.8**	**15.1**	**2.9**	**210.5**
1951												
January	245.5	162.3	71.7	44.4	20.6	25.6	4.4	49.7	20.1	12.5	3.5	226.8
February	247.1	164.2	72.4	44.8	20.6	26.4	4.5	49.4	20.1	12.2	3.3	228.2
March	248.7	166.4	73.5	45.0	20.9	27.0	4.6	48.9	20.2	12.2	3.6	230.0
April	252.0	168.6	74.8	45.3	21.0	27.5	4.6	49.6	20.2	12.3	3.3	232.4
May	253.9	169.7	75.2	45.4	21.1	28.0	4.7	50.1	20.3	12.7	3.6	234.3
June	255.2	172.0	75.3	46.7	21.3	28.7	4.8	48.5	20.5	12.8	3.4	236.7
July	254.9	171.5	74.9	46.2	21.5	28.9	4.8	48.7	20.6	12.7	3.4	235.9
August	257.9	171.9	74.8	46.2	21.5	29.4	4.9	50.8	20.8	12.8	3.3	237.2
September	258.6	173.4	75.8	46.3	21.5	29.8	4.9	49.8	21.2	12.6	3.3	238.9
October	263.1	175.2	76.0	46.3	21.8	31.1	5.0	52.2	21.1	13.1	3.5	241.7
November	263.1	176.4	76.1	46.6	21.9	31.8	5.1	51.3	21.1	12.7	3.5	242.5
December	264.2	177.8	77.7	46.9	22.0	31.2	5.1	50.4	22.0	12.3	3.4	244.1
Total	**255.3**	**170.8**	**74.9**	**45.8**	**21.3**	**28.8**	**4.8**	**49.9**	**20.7**	**12.6**	**3.4**	**235.7**
1952												
January	262.5	178.6	77.7	47.2	22.1	31.6	5.2	48.8	21.1	12.7	3.9	244.4
February	266.1	180.5	78.8	47.3	22.4	32.0	5.2	50.5	21.2	12.4	3.7	247.0
March	265.5	180.9	78.9	47.5	22.4	32.1	5.3	49.3	21.3	12.5	3.8	247.1
April	265.9	180.6	78.5	47.4	22.6	32.1	5.3	49.7	21.4	12.6	3.7	247.7
May	268.2	181.7	78.3	47.9	22.9	32.6	5.4	50.5	21.4	12.9	3.7	249.6
June	269.2	183.3	78.3	48.6	23.0	33.4	5.5	50.1	21.4	12.8	3.9	251.2
July	267.9	181.7	75.7	49.5	23.4	33.1	5.5	50.1	21.4	13.0	3.8	249.8
August	273.2	186.2	80.4	49.3	23.1	33.4	5.6	50.0	21.5	13.7	3.8	255.3
September	277.5	189.6	83.4	49.5	23.5	33.2	5.7	50.8	21.6	13.7	3.9	259.4
October	278.6	191.3	84.5	50.0	23.5	33.3	5.7	50.3	21.7	13.5	3.9	261.2
November	278.3	192.5	85.3	50.1	23.6	33.5	5.8	48.8	21.6	13.4	3.8	262.0
December	281.2	193.3	86.5	50.2	23.6	33.0	5.9	50.4	21.6	13.9	3.9	264.5
Total	**271.2**	**185.1**	**80.6**	**48.7**	**23.0**	**32.8**	**5.5**	**49.9**	**21.4**	**13.1**	**3.8**	**253.3**
1953												
January	282.0	193.6	86.4	50.0	23.9	33.3	5.9	51.1	21.7	13.7	4.0	264.0
February	282.2	195.2	87.5	50.3	24.1	33.3	6.0	49.5	21.9	13.4	3.8	266.0
March	285.6	197.2	88.3	50.9	24.5	33.5	6.1	50.3	22.2	13.8	4.0	268.5
April	285.4	197.9	88.7	51.0	24.7	33.5	6.2	49.2	22.4	13.7	4.0	269.0
May	286.3	199.0	89.2	51.5	24.6	33.7	6.3	48.8	22.6	13.6	4.0	270.5
June	287.3	199.9	89.3	51.9	25.0	33.7	6.3	48.8	22.8	13.6	4.1	271.5
July	288.2	201.4	89.8	52.7	25.3	33.6	6.4	47.9	23.0	13.6	4.1	273.0
August	286.4	200.6	89.2	52.4	25.2	33.8	6.5	46.6	23.2	13.6	4.1	272.6
September	287.7	199.2	88.0	52.5	24.9	33.8	6.5	48.9	23.4	13.7	4.0	271.9
October	287.8	199.1	87.9	52.5	25.0	33.7	6.6	48.0	23.5	14.6	4.0	272.7
November	287.2	197.9	87.0	52.4	25.0	33.5	6.6	49.1	23.7	13.9	4.0	271.3
December	287.0	196.0	85.5	52.1	25.0	33.4	6.7	50.2	23.8	14.4	4.1	269.6
Total	**286.1**	**198.1**	**88.1**	**51.7**	**24.8**	**33.6**	**6.3**	**49.0**	**22.8**	**13.8**	**4.0**	**270.0**

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