

88th Congress, 2d Session

1964

SUPPLEMENT TO

Economic Indicators

**HISTORICAL AND DESCRIPTIVE
BACKGROUND**

*Prepared for the Subcommittee on Economic Statistics of the
Joint Economic Committee by the Committee Staff and the
Office of Statistical Standards, Bureau of the Budget*

Printed for the use of the Joint Economic Committee

[JOINT COMMITTEE PRINT]

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U.S. Congress, Joint Economic Committee,
1964 Supplement to Economic Indicators,
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LETTERS OF TRANSMITTAL

DECEMBER 28, 1964.

To Members of the Joint Economic Committee:

For information of the members of the Joint Economic Committee and others interested there is transmitted herewith a sixth edition of the *Supplement* to the Committee's monthly publication *Economic Indicators*, containing selected charts and historical tables of the indicator series which are published monthly, along with a description of the derivation, limitations, and uses of each indicator. These materials were developed by the Committee staff and the Office of Statistical Standards, Bureau of the Budget, with the cooperation of the agencies responsible for each series.

There has been continuing widespread interest in having this information available. The historical and descriptive *Supplement to Economic Indicators* is used not only by Members of Congress and other users of *Economic Indicators*, both within the Government and among the nearly 9,200 private subscribers, but has also become an important teaching aid in college courses in statistics.

PAUL H. DOUGLAS,
Chairman, Joint Economic Committee.

DECEMBER 21, 1964.

The Honorable PAUL H. DOUGLAS,
Chairman, Joint Economic Committee,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Transmitted herewith is the 1964 *Supplement* to the Committee's monthly publication *Economic Indicators* prepared in response to the Committee's instructions to the Subcommittee on Economic Statistics.

A brief explanation of the purpose and content of the *Supplement* is presented in the Foreword. It might be helpful to point out for the benefit of persons not familiar with the monthly *Economic Indicators* that this is a regular publication printed by the Congress in accordance with Public Law 120, 81st Congress, 1st session, Chapter 237. *Economic Indicators* was first published by the Joint Economic Committee as a Committee Print in 1948 to provide its members with information on current economic trends and developments in a concise and graphic form. Knowing that other Members of the Congress, businessmen, farm leaders, labor organizations, and representatives of the press also sought such information, the Joint Committee at the same time sponsored legislation which later resulted in authorizing publication on a permanent basis. *Economic Indicators* is prepared each month for the Joint Economic Committee by the Council of Economic Advisers.

The monthly *Indicators* is used widely by schools and libraries as a reference source and has an extensive circulation of foreign subscribers, covering all major nations of the world. The publication currently has a distribution of approximately 10,000. *Economic Indicators* is available at 25 cents a single copy or by subscription at \$2.50 per year (foreign, \$3.50), from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402. The domestic airmail subscription price is \$5.40 per year.

Over the years the Joint Committee has welcomed comments directed toward making *Economic Indicators* and the *Supplement* more useful publications. Comments were solicited during a special review of the monthly *Indicators* this year and many suggestions were received and considered. Beginning with the November issue of *Economic Indicators*, a few changes were made which this 1964 *Supplement* reflects. Of necessity, materials included have to be limited to those series most widely used by Members of Congress,

executive Government agencies, and others. The Committee policy has been to publish these data without interpreting them. Interpretations of the data often appear in other publications of the Committee and Executive agencies.

The development and supervisory work on the first issue of the *Supplement* was done by the Committee staff, with descriptions of the series written by members of the staff of the Office of Statistical Standards, Bureau of the Budget, and tables prepared by Frances James of the Council of Economic Advisers and the agencies compiling the original data. The 1964 *Supplement* was prepared under the direction of Raymond T. Bowman, Assistant Director for Statistical Standards, Bureau of the Budget, by the staff of the Office of Statistical Standards in consultation with the Council of Economic Advisers and with the cooperation of the agencies compiling the data.

I wish to express the appreciation of the Subcommittee to the Council of Economic Advisers, the Bureau of the Budget, and other Government agencies and their staffs who have cooperated so ably and wholeheartedly with the Subcommittee over the years in the development of both *Economic Indicators* and this *Supplement*. Their cooperation has been a source of great satisfaction to each Member of the Committee. The monthly *Economic Indicators* and the biennial *Supplement* continue to give outstanding testimony to the benefits of this interagency collaboration.

Sincerely,

WILLIAM PROXMIRE,
Chairman, Subcommittee on Economic Statistics.

Foreword

This is the sixth edition of the *Supplement to Economic Indicators* containing historical data and a description of each series as well as references to additional technical publications. It shows annual data for each series in the same tabular form as current data are published monthly in *Economic Indicators*. The tables showing these data are numbered to correspond to the pages in the monthly publication. The explanatory text accompanying each series is intended to meet the need for general information which cannot be repeated each month but which is essential for understanding and interpreting the significance of the current data. The *Supplement*, along with the current issues of *Economic Indicators*, also meets a need of teachers and students for a convenient source of information for keeping up with current economic conditions and at the same time becoming familiar with basic sources and methods used to provide such indicators.

The text accompanying each series provides in nontechnical language: a description of the series, an explanation of how the data are obtained and the series derived, its relation to other series, and its principal uses and limitations. References are also given to primary publications of the series, sources showing more detailed data, and publications which contain more complete and technical explanations.

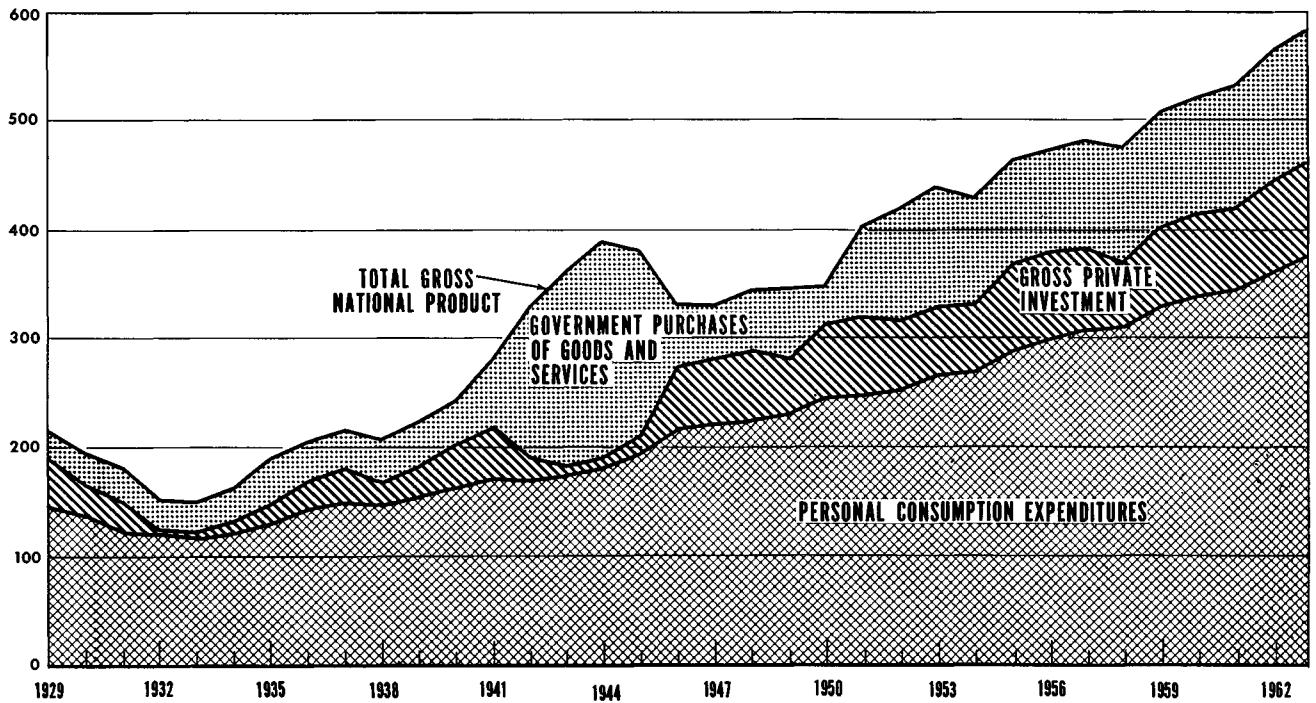
The *Supplement* was first published in December 1953. It was revised in November 1955, in September 1957, in December 1960, and again in December 1962. In the November 1964 issue of the *Economic Indicators*, a few changes were made. This issue of the *Supplement* reflects these changes. Both text and tables are brought up to date. The descriptive material gives the sources of data and statistical procedures now being used in compiling the series. Brief explanations of the methods used in making seasonal adjustments are also provided.

A more comprehensive guide to the organization of Federal statistics and the basic responsibilities of the various Federal statistical agencies, as well as brief descriptions of the principal economic and social statistics series collected by Government agencies, is contained in *Statistical Services of the Federal Government*, prepared by the Bureau of the Budget and available from the Superintendent of Documents, Government Printing Office for \$1 a copy.

Gross National Product or Expenditure in 1963 Prices, 1929-63

(Annual data. Gross private investment includes net exports of goods and services)

BILLIONS OF DOLLARS

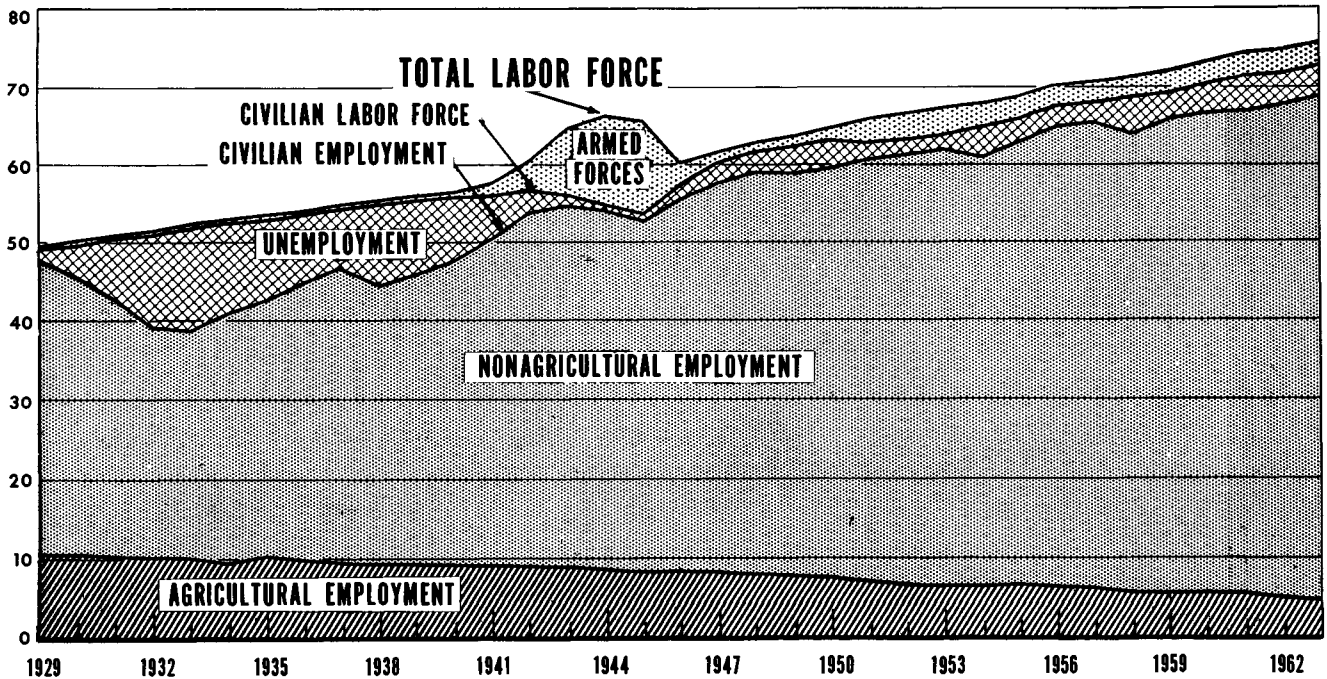


SOURCE OF DATA: DEPARTMENT OF COMMERCE

Growth of the Labor Force, 1929-63

(Annual data)

MILLIONS OF PERSONS



SOURCE OF DATA: DEPARTMENT OF LABOR

Contents

	Page
TOTAL OUTPUT, INCOME, AND SPENDING	
1. The Nation's Income, Expenditure, and Saving.....	1
2. Gross National Product or Expenditure.....	5
3. National Income.....	9
4. Sources of Personal Income.....	12
5. Disposition of Personal Income.....	14
6. Farm Income.....	16
7. Corporate Profits.....	20
8. Gross Private Domestic Investment.....	23
9. Expenditures for New Plant and Equipment.....	27
EMPLOYMENT, UNEMPLOYMENT, AND WAGES	
10. Status of the Labor Force.....	31
11. Selected Measures of Unemployment and Part-Time Employment.....	36
12. Unemployment Insurance Programs.....	38
13. Nonagricultural Employment.....	42
14. Weekly Hours of Work—Selected Industries.....	47
15. Average Hourly and Weekly Earnings—Selected Industries.....	49
PRODUCTION AND BUSINESS ACTIVITY	
16 and 17. Industrial Production and Production of Selected Manufactures.....	52
18. Weekly Indicators of Production.....	58
19. New Construction.....	61
20. New Housing Starts and Applications for Financing.....	66
21. Business Sales and Inventories—Total and Trade.....	72
22. Manufacturers' Shipments, Inventories, and New Orders.....	76
23. Merchandise Exports and Imports.....	80
24 and 25. U.S. Balance of International Payments.....	84
PRICES	
26. Consumer Prices.....	90
27. Wholesale Prices.....	93
28. Prices Received and Paid by Farmers.....	97
MONEY, CREDIT, AND SECURITY MARKETS	
29. Money Supply.....	103
30. Selected Liquid Assets Held by the Public.....	105
31. Bank Loans, Investments, Debits, and Reserves.....	107
32. Consumer and Real Estate Credit.....	111
33. Bond Yields and Interest Rates.....	115
34. Common Stock Prices, Yields, and Earnings.....	118
FEDERAL FINANCE	
35. Federal Administrative Budget Receipts and Expenditures.....	120
36. Federal Cash Receipts from and Payments to the Public.....	123
37. Federal Budget, National Income Accounts Basis.....	126

List of Charts

	Page
Gross National Product or Expenditure in 1963 Prices, 1929-1963.....	vi
Growth of the Labor Force, 1929-1963.....	vi
Gross National Product or Expenditure, 1947-1964.....	5
National Income, 1947-1964.....	10
Per Capita Disposable Income, 1947-1964.....	14
Farm Income, 1947-1964.....	17
Corporate Profits, 1947-1964.....	21
Gross Private Domestic Investment, 1947-1964.....	24
Expenditures for New Plant and Equipment, 1947-1964.....	27
Status of the Labor Force, 1947-1964.....	31
Rates of Insured Unemployment under State Programs, U.S., 1949-1964.....	40
Employees in Nonagricultural Establishments, 1947-1964.....	43
Average Weekly Hours in Selected Industries, 1947-64.....	47
Average Hourly Earnings in Selected Industries, 1947-1964.....	49
Industrial Production, 1947-1964.....	53
New Construction, 1947-1964.....	62
Nonfarm Private Housing Starts, 1947-1964.....	67
Retail Sales and Inventories, 1948-1964.....	75
Manufacturers' Shipments, Inventories and New Orders, 1947-1964.....	77
Merchandise Exports and Imports, 1947-1964.....	80
U.S. Exports and Imports of Goods and Services, 1947-1964.....	84
U.S. Balance of International Payments, 1950-1964.....	86
Consumer Prices, 1947-1964.....	90
Wholesale Prices, 1947-1964.....	94
Prices Received and Paid by Farmers, 1947-1964.....	99
Loans and Investments at All Commercial Banks, 1948-1964.....	108
Consumer Credit Outstanding, 1947-1964.....	112
Bond Yields and Interest Rates, 1947-1964.....	115
Cash Receipts From and Payments to the Public, 1947-1964.....	124
Federal Expenditures, National Income Accounts Basis, 1947-1964.....	127
Federal Receipts, National Income Accounts Basis, 1947-1964.....	128

TOTAL OUTPUT, INCOME, AND SPENDING

1. THE NATION'S INCOME, EXPENDITURE, AND SAVING

DESCRIPTION OF SERIES

The Nation's income, expenditure, and saving, representing a summary of the Nation's economic accounts, are shown in the accompanying table for the following sectors: persons, business, international, and government. The accounts shown here represent a statement of the national economy in terms of receipts and expenditures for these four categories. The combined receipts (disposable personal income, gross retained earnings of business, and government receipts) equal the combined expenditures (personal consumption expenditures, gross private domestic investment, net exports, and government expenditures). It follows that for any period in which the receipts for any of the four categories exceed expenditures, the difference will be offset by an excess of expenditures over receipts in another category or categories. The relationship of receipts to expenditures for each of the four categories is shown in the first table in *Economic Indicators*. Important expenditure components in terms of 1963 prices are shown in the first chart in this volume.

The balancing of the combined receipts and expenditures reported for the four categories—persons, business, international, government—is conceptually exact. However, since the estimating procedure involves independent data sources for receipts and expenditures it does not produce the identity which is conceptually present. This requires a balancing “error” item or statistical discrepancy. In the accompanying table, the total of personal and business receipts, foreign net transfers by government, and government receipts plus the statistical discrepancy equals the total of personal and business expenditures, government purchases of goods and services, and net exports.

The personal account summarizes the more detailed statistics on personal income and consumption shown elsewhere in *Economic Indicators*, particularly in the table on Disposition of Personal

Income. It should be noted that although personal income includes the income of unincorporated businesses and farms, consumer expenditure includes only expenditures for consumption purposes. Investments of noncorporate as well as corporate businesses are included in the business account. The actual or imputed rent of dwellings is included in consumer expenditure; but residential construction, whether for owner occupancy or for rental purposes, is included with business investment.

In the business account, receipts or gross retained earnings include the undistributed profits of corporations after adjustment for inventory valuation, plus the capital consumption allowances of both corporate and noncorporate enterprises and institutions, including residences. The capital consumption allowances are added to net receipts since investment is on a gross basis. Business investment includes additions to plant, equipment, and inventories of corporate and noncorporate enterprises, as well as residential construction. Because of conceptual difficulties and limitations in the data which prevent differentiating investment items in the present consumer and government accounts business investment is the only investment item shown as such in this table.

In the international account, the expenditures item represents the difference between exports of goods and services on the one hand, and imports of goods and services on the other. The receipts item consists solely of foreign net transfers by government. For 1929–45, foreign net transfers by government were negligible. For that period, net exports of goods and services have been equated with the excess of receipts or expenditures for this sector.

The government account shows receipts and expenditures on an income and product account basis, rather than on either a cash or a conventional budget basis, to be consistent with the receipts and expenditures of consumers and business and with the gross national product total. The government receipts

TABLE 1.—*The Nation's Income, Expenditure, and Saving*

[Billions of dollars]

Year	Persons			Business			International				
	Disposable personal income ¹	Personal consumption expenditures	Personal saving or dis-saving (-)	Gross retained earnings ²	Gross private domestic investment ³	Excess of investment (-)	Foreign net transfers by Government ⁴	Net exports of goods and services ⁴			Excess of transfers or of net exports (-) ⁵
								Net exports	Exports	Imports	
1929.....	83.1	79.0	4.2	11.5	16.2	-4.7	(⁴)	0.8	7.0	6.3	-0.8
1930.....	74.4	71.0	3.4	8.8	10.3	-1.5	(⁴)	.7	5.4	4.8	-.7
1931.....	63.8	61.3	2.5	5.2	5.5	-.3	(⁴)	.2	3.6	3.4	-.2
1932.....	48.7	49.3	-.6	2.7	.9	1.8	(⁴)	.2	2.5	2.3	-.2
1933.....	45.7	46.4	-.6	2.6	1.4	1.2	(⁴)	.2	2.4	2.3	-.2
1934.....	52.0	51.9	.1	4.9	2.9	2.0	(⁴)	.4	3.0	2.5	-.4
1935.....	58.3	56.3	2.0	6.3	6.3	.1	(⁴)	-.1	3.3	3.3	.1
1936.....	66.2	62.6	3.6	6.5	8.4	-1.9	(⁴)	-.1	3.5	3.6	.1
1937.....	71.0	67.3	3.7	7.8	11.7	-4.0	(⁴)	.1	4.6	4.5	-.1
1938.....	65.7	64.6	1.1	7.8	6.7	1.2	(⁴)	1.1	4.3	3.2	-1.1
1939.....	70.4	67.6	2.9	8.3	9.3	-1.0	(⁴)	.9	4.4	3.5	-.9
1940.....	76.1	71.9	4.2	10.4	13.2	-2.8	(⁴)	1.5	5.4	3.8	-1.5
1941.....	93.0	81.9	11.1	11.5	18.1	-6.6	(⁴)	1.1	6.0	4.8	-1.1
1942.....	117.5	89.7	27.8	14.1	9.9	4.3	(⁴)	-.2	4.9	5.1	.2
1943.....	133.5	100.5	33.0	16.3	5.6	10.7	(⁴)	-2.2	4.5	6.8	2.2
1944.....	146.8	109.8	36.9	17.2	7.1	10.1	(⁴)	-2.1	5.4	7.5	2.1
1945.....	150.4	121.7	28.7	15.6	10.4	5.2	(⁴)	-1.4	7.4	8.8	1.4
1946.....	160.6	147.1	13.5	13.1	28.1	-15.1	0.3	4.9	12.8	7.9	-4.6
1947.....	170.1	165.4	4.7	18.9	31.5	-12.6	.1	9.0	17.9	8.0	-8.9
1948.....	189.3	178.3	11.0	26.6	43.1	-16.5	1.6	3.5	14.5	11.0	-1.9
1949.....	189.7	181.2	8.5	27.6	33.0	-5.4	3.2	3.8	14.0	10.2	-.5
1950.....	207.7	195.0	12.6	27.7	50.0	-22.3	2.8	.6	13.1	12.5	2.2
1951.....	227.5	209.8	17.7	31.5	56.3	-24.8	2.1	2.4	17.9	15.5	-.2
1952.....	238.7	219.8	18.9	33.2	49.9	-16.6	1.5	1.3	17.4	16.1	.2
1953.....	252.5	232.6	19.8	34.3	50.3	-16.0	1.6	-.4	16.6	17.0	2.0
1954.....	256.9	238.0	18.9	35.5	48.9	-13.4	1.4	1.0	17.5	16.5	.4
1955.....	274.4	256.9	17.5	42.1	63.8	-21.8	1.5	1.1	19.4	18.3	.4
1956.....	292.9	269.9	23.0	43.0	67.4	-24.3	1.5	2.9	23.1	20.2	-1.5
1957.....	308.8	285.2	23.6	45.6	66.1	-20.5	1.5	4.9	26.2	21.3	-3.5
1958.....	317.9	293.2	24.7	44.8	56.6	-11.9	1.3	1.2	22.7	21.5	.1
1959.....	337.1	313.5	23.6	51.3	72.7	-21.4	1.5	-.8	22.9	23.6	2.3
1960.....	349.9	328.2	21.7	50.7	71.8	-21.1	1.6	3.0	26.3	23.3	-1.4
1961.....	364.7	337.3	27.3	51.2	68.8	-17.6	1.6	4.6	27.6	23.0	-3.0
1962.....	384.6	356.8	27.8	57.5	79.1	-21.7	1.6	4.0	29.2	25.2	-2.4
1963.....	402.5	375.0	27.5	59.1	82.0	-22.9	1.6	4.4	30.7	26.3	-2.8
1964 ⁷	431.8	399.3	32.5	65.0	87.7	-22.6	1.8	7.0	35.2	28.2	-5.3

See footnotes next page.

include personal, corporate and indirect business taxes and nontaxes, and contributions for social insurance. Government interest charges and transfer payments, such as social security and veterans' benefits and net transfers to abroad, are not included in the gross national product, although some items are income to recipients. They are therefore subtracted here from both receipts and expenditures.

The government income and product accounts are on a consolidated basis, just as the cash accounts are, but they depart from the latter because of the timing of the items included in each and because of conceptual differences. The income and product accounts of the government are designed to be in accord with the accrual records maintained by private business. Thus, business taxes, especially those on corporate

TABLE 1.—*The Nation's Income, Expenditure, and Saving*—Continued

[Billions of dollars]

Year	Government						Surplus or deficit (—) on income and product account	Total income or receipts	Statistical discrepancy	Gross national product or expenditure
	Net receipts			Expenditures						
	Net receipts	Tax and nontax receipts or accruals	Transfers, interest, and subsidies ⁶	Purchases of goods and services	Total expenditures	Transfers, interest, and subsidies ⁶				
1929	9.5	11.3	1.7	8.5	10.2	1.7	1.0	104.2	0.3	104.4
1930	8.9	10.8	1.8	9.2	11.0	1.8	— .3	92.1	—1.0	91.1
1931	6.4	9.5	3.1	9.2	12.3	3.1	—2.8	75.4	.8	76.3
1932	6.4	8.9	2.5	8.1	10.6	2.5	—1.7	57.7	.8	58.5
1933	6.7	9.3	2.6	8.0	10.7	2.6	—1.4	55.0	.9	56.0
1934	7.4	10.5	3.1	9.8	12.8	3.1	—2.4	64.2	.7	65.0
1935	8.0	11.4	3.4	10.0	13.3	3.4	—2.0	72.7	— .2	72.5
1936	8.9	12.9	4.1	11.8	15.9	4.1	—3.0	81.6	1.1	82.7
1937	12.3	15.4	3.1	11.7	14.8	3.1	.6	91.0	— .2	90.8
1938	11.2	15.0	3.8	12.8	16.6	3.8	—1.6	84.8	.5	85.2
1939	11.2	15.4	4.2	13.3	17.5	4.2	—2.1	89.9	1.2	91.1
1940	13.3	17.7	4.4	14.1	18.5	4.4	— .7	99.8	.8	100.6
1941	21.0	25.0	4.0	24.8	28.8	4.0	—3.8	125.4	.4	125.8
1942	28.3	32.6	4.3	59.7	64.0	4.3	—31.4	160.0	— .8	159.1
1943	44.4	49.2	4.8	88.6	93.4	4.8	—44.2	194.2	—1.7	192.5
1944	44.6	51.2	6.5	96.5	103.1	6.5	—51.9	208.6	2.8	211.4
1945	43.1	53.2	10.1	82.9	92.9	10.1	—39.7	209.1	4.5	213.6
1946	34.6	51.1	16.5	30.5	47.0	16.5	4.1	208.6	2.1	210.7
1947	41.6	57.1	15.4	28.4	43.8	15.4	13.3	230.7	3.5	234.3
1948	42.8	59.2	16.5	34.5	51.0	16.5	8.2	260.3	— .8	259.4
1949	37.0	56.4	19.4	40.2	59.5	19.4	—3.1	257.5	.5	258.1
1950	47.2	69.3	22.1	39.0	61.1	22.1	8.2	285.3	— .7	284.6
1951	66.6	85.4	18.9	60.5	79.4	18.9	6.1	327.7	1.2	329.0
1952	72.2	90.6	18.4	76.0	94.4	18.4	—3.9	345.6	1.4	347.0
1953	75.7	94.9	19.2	82.8	102.0	19.2	—7.1	364.1	1.3	365.4
1954	68.5	90.0	21.5	75.3	96.7	21.5	—6.7	362.3	.9	363.1
1955	78.4	101.4	23.0	75.6	98.6	23.0	2.9	396.5	1.0	397.5
1956	84.2	109.5	25.3	79.0	104.3	25.3	5.2	421.6	—2.4	419.2
1957	87.5	116.3	28.7	86.5	115.3	28.7	1.0	443.4	— .6	442.8
1958	82.0	115.1	33.1	93.5	126.6	33.1	—11.4	446.0	—1.5	444.5
1959	95.7	130.2	34.4	97.2	131.6	34.4	—1.5	485.7	—3.0	482.7
1960	103.5	140.6	37.1	99.6	136.7	37.1	3.9	505.6	—3.0	502.6
1961	103.8	145.6	41.8	108.0	149.8	41.8	—4.2	521.2	—2.6	518.7
1962	114.4	157.8	43.4	116.3	159.8	43.4	—1.9	558.0	—1.8	556.2
1963	123.4	168.9	45.4	122.6	168.0	45.4	.9	586.7	—2.7	583.9
1964 ⁷	125.7	173.3	47.6	128.6	176.2	47.6	—2.9	624.4	—1.7	622.3

¹ Personal income less personal taxes and nontax payments (fines, penalties, etc.).² Undistributed corporate profits, corporate inventory valuation adjustment, capital consumption allowances, and excess of wage accruals over disbursements.³ Private business investment, purchases of capital goods by private nonprofit institutions, and residential housing.⁴ For 1929-45, net exports of goods and services and net foreign investment have been equated.⁵ Net foreign investment with sign changed.⁶ Government transfer payments to persons, foreign net transfers by Government, net interest paid by Government, and subsidies less current surplus of Government enterprises.⁷ Preliminary.

NOTE.—Data for Hawaii and Alaska introduced in 1960.

Source: Department of Commerce.

profits, are recorded on an accrual rather than a collections basis, and government expenditures for goods are corrected for the lag between deliveries and payments therefor. Capital transactions, such as re-

ceipts from the sale of government property and changes in loans and investments of government credit agencies, are excluded from the income and product accounts although such transactions are in-

cluded in both the cash and conventional budgets.

USES AND LIMITATIONS

A set of economic accounts for the Nation reduces the voluminous detail of economic activity to understandable proportions by providing the factual background for seeing in perspective the operations of the major categories of the economy—persons, business, international, and government—and the interrelationships or transactions between and among them. A statement of these accounts serves a number of purposes:

(1) In summarizing the pattern of change in the economy over recent periods, the statement indicates what one should look for among the other charts and tables included in *Economic Indicators*.

(2) The accounting methodology needed to prepare this statement helps to assure that the various estimates, such as income, expenditures, savings, investment, in the other charts and tables are consistent.

(3) It is frequently necessary to project and evaluate the likely economic impact of public and private programs on the economy. These accounts make possible the quantitative expression of the combination of such public and private plans within a framework of the flows of incomes and expenditures of various groups in the economy so as to measure inconsistencies or imbalances among them, and inconsistencies between and among the assumptions upon which these plans are based.

Preparation of a Nation's economic budget for a future period, using these accounts, is especially helpful when government programs are of such magnitude and importance that they dominate changes in the economy; in other words, when government spending and tax plans are the main forces making for changes in the economy. At other times, its main benefit is in identifying inflationary and deflationary programs of government and private economic groups.

(4) Another use, related to the preceding, is that of enabling those who must make actual forecasts, such as business firms, private economists, and others, to check their forecasts for consistency with past

patterns of fluctuations in activity in both the economy as a whole and in its various segments, and consistency among the various assumptions as to income, savings, investment, prices, and employment that underlie the forecast.

Certain limitations must be recognized in using these economic accounts. In the first place, the statistics do not throw light on all aspects of the economy but only on broad summary categories; thus they must be supplemented by the use of additional economic information, such as that contained in other parts of *Economic Indicators*. Second, since the data are national in coverage, their trends and changes must be carefully interpreted and supplemented by other data for use in the analysis of regional or individual industry problems. Third, they do not, of course, provide the assumptions or the reasons which one should have for explaining or projecting economic changes; they provide only the relevant statistical background for intelligent reasoning and judgment. Finally, it must be recognized that for some of these categories estimates for both receipts and expenditures rest upon data collected for other purposes, or upon indirect estimates in cases where no direct survey is regularly conducted. Thus, there will be times when it will be difficult to interpret the meaning of some of the changes in the accounts if statistical discrepancies arising from technical problems in estimating various items are so large that they throw doubt on the importance of movements in the accounts.

REFERENCES

The estimates included in the Nation's economic accounts are all taken from the national income and product statistics of the Department of Commerce; see references below, under National Income.

See also Technical Notes on the Nation's Economic Budget, Appendix A: *Report of the Joint Committee on the Economic Report on the January 1952 Economic Report of the President*, Senate Report No. 1295, 82d Congress, 2d session, pages 99–105, and statistical materials prepared by the Council of Economic Advisers for inclusion with the Economic Report of the President.

2. GROSS NATIONAL PRODUCT OR EXPENDITURE

DESCRIPTION OF SERIES

Gross National Product (often called GNP) represents the total national output of goods and services at current market prices. It measures this output in terms of the expenditures by which these goods are acquired. These expenditures are the sum of four major items: (1) personal consumption expenditures, (2) gross private domestic investment, (3) net export of goods and services, and (4) government purchases of goods and services. The total and its major components are charted below for the period 1947-64. The goods and services included in the GNP are for the most part those actually bought for final use in legal markets. There are a number of exceptions, the most important of which is the imputed rental value of owner-occupied dwellings.

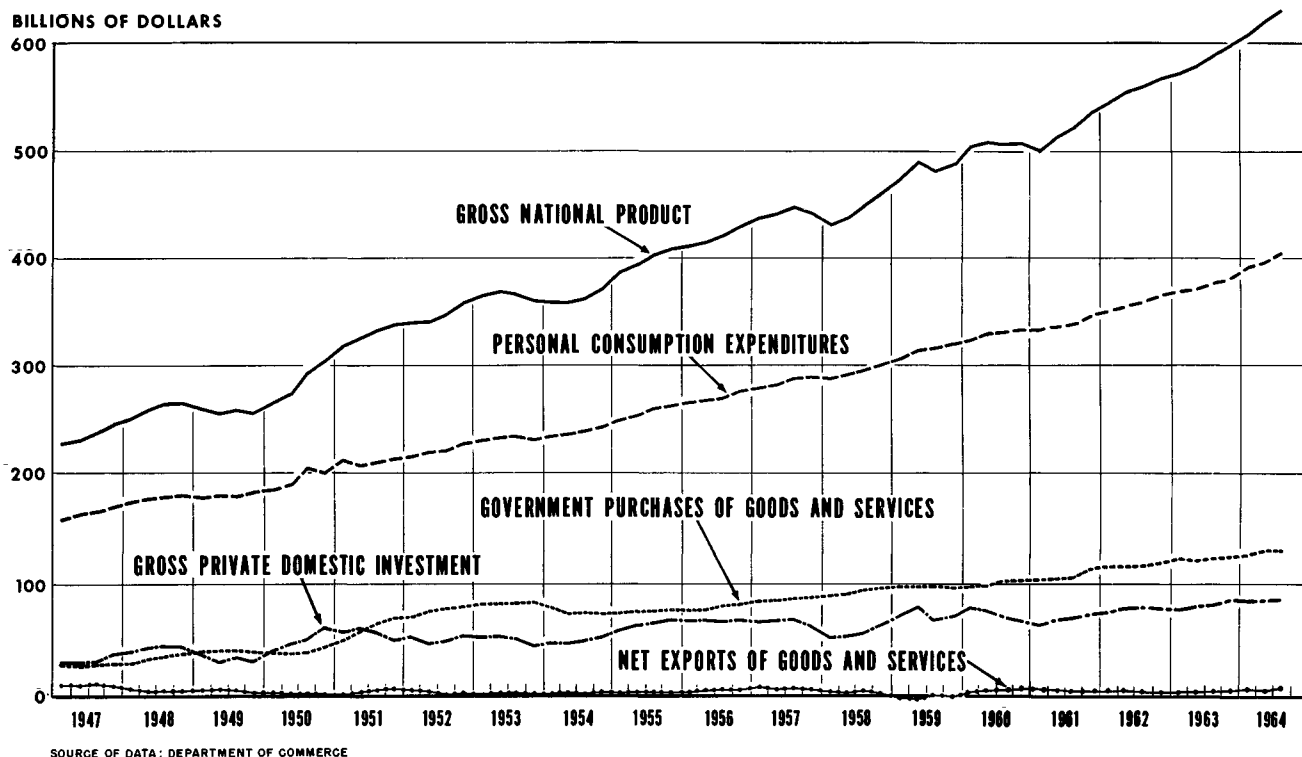
The GNP series measures the product attributable to the factors of production—labor and property—supplied by residents of the Nation. For the most

part these factors are located in this country, but the GNP total also includes earnings of American employees of the United States Government stationed abroad, foreign interest and dividends received by Americans, and the profits from foreign branches of American business.

The national income and product estimates beginning 1960 are defined to include Alaska and Hawaii; those for prior years do not. This does not significantly affect the comparability of the data for most purposes. The gross product of the two new States amounted to roughly \$2½ billion in 1960 (their income originating to \$2¼ billion and personal income to \$2 billion). But about one-half billion dollars of these aggregates was already included in the previous figures for the continental United States since the series were defined to include contributions of Federal Government employees and other residents working temporarily in Alaska and Hawaii. Further, the GNP total included another \$1 billion of Alaskan and Hawaiian product because the

Gross National Product or Expenditure, 1947-64

(Quarterly data in current prices. Seasonally adjusted annual rates)



statistics had not been sufficiently refined to exclude it.

On balance, the explicit additions to GNP that were made in order to cover the two new States amounted to about \$1 billion in 1960, or only about 0.2 percent of the total. Half of this was in consumption, about \$0.3 billion in State and local government purchases, and about \$0.2 billion in construction. About \$1.5 billion had to be explicitly added to the income series, largely to the labor component.

"Personal consumption expenditures" measures the sum of money and imputed expenditures made by consumers (individuals, nonprofit institutions such as hospitals, etc.) for goods and services. This series is described below, in the section on Disposition of Personal Income (p. 14).

"Gross private domestic investment" consists of new construction, purchases of producers' durable equipment, and the change in business inventories. This component of GNP is described below, in a separate section (p. 23).

"Net exports of goods and services" measures the excess of "exports" of goods and services (domestic output sold abroad, and the production abroad credited to United States-owned resources) over "imports" (United States purchases of foreign output, production in the United States credited to foreign-owned resources, and net private cash remittances to abroad). The items are obtained from the official balance of payments series; reconciliations of the GNP measures with the balance of payments are shown in *U.S. Income and Output, A Supplement to the Survey of Current Business* (1958), Table IV-4 and in the July issue of the *Survey of Current Business*. See also the sections of this report dealing with the U.S. Exports and Imports of Goods and Services and the U.S. Balance of Payments (p. 84).

"Government purchases of goods and services" are those made by Federal, State, and local governments. They include (1) net purchases of new goods (such as school buildings and armaments), (2) payments for services (principally compensation for government employees), (3) gross investment by government enterprises, and (4) net government purchases from abroad. Items which do not represent current productive activity—such as transfer payments (e.g., social security, veterans' payments, and net transfers to abroad), government interest, subsidies, loans, and other financial transfers—are excluded. The GNP series on government purchases

differs from expenditures shown in the Federal Budget, which include many but not all of these items. Differences may also arise because of variation in the time at which expenditures occur and are recorded. For a more extended discussion, see the section below, "Federal Budget, National Income Accounts Basis" (p. 126).

STATISTICAL PROCEDURES

Hundreds of basic economic series are evaluated, adjusted, and combined in the process of preparing the GNP estimates. For example, consumer expenditures are estimated for benchmark years primarily from data in the Censuses of Business and Manufactures, reports of the Department of Agriculture, Internal Revenue Service, and Interstate Commerce Commission, with current annual and quarterly estimates carried forward by using the Census Bureau's Annual Survey of Manufactures and Monthly Report on Retail Trade, and data from other sources. Construction activity is estimated as described below in the section on New Construction (p. 61). Investment in producers' durable equipment is estimated for benchmark years from Census of Manufactures and related data, with current quarterly and annual totals estimated principally from sample surveys and construction data of the Department of Commerce and financial reports to other agencies. For details of the methods used, reference should be made to the comprehensive studies by the Department of Commerce, e.g., the 1954 *National Income Supplement* to the Survey of Current Business, and *U.S. Income and Output*, 1958. Revisions currently underway will not be published until 1965.

The methods used to eliminate seasonal variation differ with the particular series to be adjusted. For most components the conventional ratio-to-moving-average method has been employed. However, when satisfactory results have not been obtained, resort has been made to more refined methods. For further information see the section "Measurements of Quarterly and Monthly Movements," *U.S. Income and Output*, p. 95 ff.

The magnitude of the seasonal correction may be illustrated by the accompanying comparison of the GNP on an unadjusted and seasonally adjusted basis for the year 1963. The corrections shown in the table are computed values reflecting the net results of many individually corrected components underlying the published series. It follows from this that the magnitude of the correction will vary somewhat

TABLE 2.—Gross National Product or Expenditure

Year	Total gross national product in 1963 prices	Total gross national product	Personal consumption expenditures	Gross private domestic investment	Net exports of goods and services	Government purchases of goods and services					Implicit price deflator for total GNP, 1963=100 ³
						Total	Federal			State and local	
							Total ¹	National defense ²	Other		
Billions of dollars											
1929.....	214.1	104.4	79.0	16.2	0.8	8.5	1.3	(4)	(4)	7.2	48.8
1930.....	194.6	91.1	71.0	10.3	.7	9.2	1.4	(4)	(4)	7.8	46.8
1931.....	180.3	76.3	61.3	5.5	.2	9.2	1.5	(4)	(4)	7.7	42.3
1932.....	153.8	58.5	49.3	.9	.2	8.1	1.5	(4)	(4)	6.6	38.0
1933.....	150.0	56.0	46.4	1.4	.2	8.0	2.0	(4)	(4)	6.0	37.3
1934.....	164.3	65.0	51.9	2.9	.4	9.8	3.0	(4)	(4)	6.8	39.5
1935.....	179.9	72.5	56.3	6.3	-.1	10.0	2.9	(4)	(4)	7.1	40.3
1936.....	205.0	82.7	62.6	8.4	-.1	11.8	4.8	(4)	(4)	7.0	40.4
1937.....	215.7	90.8	67.3	11.7	.1	11.7	4.6	(4)	(4)	7.2	42.1
1938.....	206.3	85.2	64.6	6.7	1.1	12.8	5.3	(4)	(4)	7.5	41.3
1939.....	223.2	91.1	67.6	9.3	.9	13.3	5.2	1.3	3.9	8.2	40.8
1940.....	242.0	100.6	71.9	13.2	1.5	14.1	6.2	2.2	4.0	7.9	41.6
1941.....	281.6	125.8	81.9	18.1	1.1	24.8	16.9	13.8	3.2	7.8	44.7
1942.....	322.6	159.1	89.7	9.9	-.2	59.7	52.0	49.6	2.7	7.7	49.3
1943.....	363.6	192.5	100.5	5.6	-2.2	88.6	81.2	80.4	1.5	7.4	53.0
1944.....	390.1	211.4	109.8	7.1	-2.1	96.5	89.0	88.6	1.6	7.5	54.2
1945.....	382.4	213.6	121.7	10.4	-1.4	82.9	74.8	75.9	1.0	8.1	55.9
1946.....	331.8	210.7	147.1	28.1	4.9	30.5	20.6	18.8	4.5	9.9	63.5
1947.....	331.1	234.3	165.4	31.5	9.0	28.4	15.6	11.4	5.4	12.7	70.8
1948.....	344.2	259.4	178.3	43.1	3.5	34.5	19.3	11.6	8.2	15.2	75.4
1949.....	345.3	258.1	181.2	33.0	3.8	40.2	22.2	13.6	8.9	17.9	74.7
1950.....	373.9	284.6	195.0	50.0	.6	39.0	19.3	14.3	5.2	19.7	76.1
1951.....	404.6	329.0	209.8	56.3	2.4	60.5	38.8	33.9	5.2	21.7	81.3
1952.....	420.4	347.0	219.8	49.9	1.3	76.0	52.9	46.4	6.7	23.2	82.5
1953.....	439.6	365.4	232.6	50.3	-.4	82.8	58.0	49.3	9.0	24.9	83.1
1954.....	431.0	363.1	238.0	48.9	1.0	75.3	47.5	41.2	6.7	27.7	84.2
1955.....	464.5	397.5	256.9	63.8	1.1	75.6	45.3	39.1	6.6	30.3	85.6
1956.....	474.4	419.2	269.9	67.4	2.9	79.0	45.7	40.4	5.7	33.2	88.4
1957.....	483.6	442.8	285.2	66.1	4.9	86.5	49.7	44.4	5.7	36.8	91.6
1958.....	476.4	444.5	293.2	56.6	1.2	93.5	52.6	44.8	8.3	40.8	93.3
1959.....	508.2	482.7	313.5	72.7	-.8	97.2	53.6	46.2	7.9	43.6	95.0
1960.....	521.1	502.6	328.2	71.8	3.0	99.6	53.1	45.7	8.0	46.5	96.5
1961.....	531.2	518.7	337.3	68.8	4.6	108.0	57.4	49.0	8.9	50.6	97.6
1962.....	564.7	556.2	356.8	79.1	4.0	116.3	62.9	53.6	10.2	53.5	98.5
1963.....	583.9	583.9	375.0	82.0	4.4	122.6	64.7	55.2	10.3	57.9	100.0
1964 ⁵	610.6	622.6	399.3	87.7	7.0	128.6	65.5	55.4	11.2	63.0	101.9

¹ Less Government sales.² These expenditures correspond closely with budget expenditures for national defense, shown in table 35 on Federal Administrative Budget Receipts and Expenditures on p. 121.³ Gross national product in current prices divided by gross national product in 1963 prices.⁴ Not available.⁵ Preliminary.

NOTE.—Data for Alaska and Hawaii included beginning 1960.

Source: Department of Commerce.

from year to year as the result of shifts in the relative importance of the component series. The summary results may also be modified by changes in the seasonal patterns of the individual component series, which regularly come under review. (See table, "Seasonal Correction, GNP 1963," p. 8.)

The GNP is also "deflated" or expressed in dollars of constant purchasing power. The procedure in general is to divide components of the current dollar GNP by appropriate price indexes, utilizing as fine a product breakdown as possible, and then to sum the components to obtain the constant dollar GNP.

The price information, which in most cases is available in greater detail than the current dollar estimates, is combined into composite indexes applicable to the various current dollar series. The deflation makes use of price indexes and other information from such sources as the Bureau of Labor Statistics, Agricultural Marketing Service, Interstate Commerce Commission, etc.

Weights for constructing the composites, approximating expenditures for the products represented by the price series, have been obtained from the detailed industrial censuses. Expenditure weights in some instances have been broken down between urban and rural areas in order to incorporate price data of the agricultural marketing service. Quantity data also are utilized in lieu of price deflation in a number of instances, most notably in the case of government employment (man-hours, to the extent available). The GNP implicit deflator is an index of price changes in the GNP, and is computed by dividing the deflated estimates into the corresponding current dollar estimates.

The basic work in deflating the GNP converted the current dollar series to 1954 prices; 1954 prices are used in presenting the constant dollar GNP in "U.S.

Income and Output" and other publications of the Department of Commerce. For convenience in current business analysis, the GNP has been converted to 1963 dollars in *Economic Indicators*.

In shifting from a 1954 price base to a 1963 base a short-cut procedure is used. The major components of the GNP are shifted from 1954 to 1963 prices separately and then summed to obtain an estimate of the GNP in 1963 prices. This is believed to give a close approximation to the results which would be obtained if each sub-component of the GNP used in the deflation to 1954 prices were shifted individually.

RELATION TO OTHER SERIES

Two other series widely used as indicators of the general level of economic activity are National Income and the Federal Reserve Index of Industrial Production. Gross national product and national income are compiled from the same series of accounts, but whereas the former measures the market value of total output, the latter measures only the earnings of labor and property (net of capital consumption) which flow from that output. National income is

Seasonal Correction, Gross National Product, 1963

[Billions of dollars]

	Seasonally adjusted				Unadjusted				Corrections, quarterly rates (seasonally adjusted minus unadjusted)			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Gross national product.....	142.9	144.3	146.8	149.8	137.4	144.0	143.6	158.9	5.5	.3	3.2	-9.1
Personal consumption expenditures..	92.3	93.0	94.3	95.3	87.9	92.1	91.5	103.4	4.4	.9	2.8	-8.1
Durable goods.....	12.8	12.9	13.1	13.4	11.4	12.9	11.6	16.2	1.4	0	1.5	-2.8
Nondurable goods.....	41.5	41.6	42.1	42.2	38.0	40.9	40.7	47.9	3.5	.7	1.4	-5.7
Services.....	38.0	38.5	39.1	39.7	38.5	38.4	39.1	39.3	-.5	.1	0	.4
Gross private domestic investment..	19.5	20.1	20.7	21.8	19.2	20.7	21.0	21.1	.3	-.6	-.3	.7
New construction.....	11.2	11.5	11.8	12.1	9.4	11.7	13.0	12.6	1.8	-.2	-1.2	-.5
Producers' durable equipment..	7.4	7.7	7.8	8.1	6.7	8.2	7.5	8.6	.7	-.5	.3	-.5
Change in business inventories..	.9	.9	1.0	1.6	3.1	.8	.5	0	-2.2	.1	.5	1.6
Net exports of goods and services...	.8	1.1	1.1	1.4	1.1	1.3	.3	1.8	-.3	-.2	.8	-.4
Exports.....	7.2	7.6	7.7	8.2	7.0	7.9	7.3	8.5	.2	-.3	.4	-.3
Imports.....	6.3	6.6	6.7	6.7	6.0	6.6	7.0	6.7	.3	0	-.3	0
Government purchases of goods and services.....	30.4	30.2	30.7	31.2	29.2	29.9	30.9	32.6	1.2	.3	-.2	-1.4
Federal.....	16.3	16.1	16.1	16.2	15.9	15.6	16.0	17.2	.4	.5	.1	-1.0
State and local.....	14.1	14.2	14.6	15.0	13.3	14.3	14.9	15.5	.8	-.1	-.3	-.5

smaller than the gross national product chiefly because the former is a "net" estimate excluding (1) allowances for depreciation and other capital consumption, and (2) indirect taxes (such as sales and excise taxes).

The GNP measures total output, whereas the Federal Reserve Index of Industrial Production covers selected sections of the economy—manufactures, mining, electricity, and gas. The products in the GNP series are final product, whereas the Federal Reserve index includes both final and intermediate product, and thus may show an increase or decrease in activity to be reflected later or not at all in the flow of final output. The GNP series in current prices combines price and volume changes, whereas the Federal Reserve index measures only physical volume.

USES AND LIMITATIONS

The GNP total is the most inclusive monetary measure of trends in the economy as a whole which is currently estimated. It also has high value as an analytic tool, since the movements of many sectors of the economy, including the sales of many in-

dustries and enterprises, are quite closely related to changes in the level of GNP.

The GNP in current dollars combines the effects of changes in both the price level and the physical volume of output. Movements in the total from quarter to quarter should not be interpreted as necessarily representing changes in the physical quantity of goods and services produced by the economy. GNP estimates corrected for price changes ("deflated GNP") show annual and quarterly changes in the total volume of national output as well as in the major components. The accompanying table shows the trend in GNP in terms of 1961 prices since 1929, and the implicit deflator. One of the most important characteristics of the GNP is that changes in the total can be analyzed by examination of changes in its components, notably purchases by consumers, private business investment, government expenditures, and the movement of foreign trade. It thus provides a useful framework for economic projections.

REFERENCES

See p. 12, under National Income.

3. NATIONAL INCOME

DESCRIPTION OF SERIES

National Income is the aggregate of earnings by labor and property from the current production of goods and services by the Nation's economy. It is the sum of five major items: (1) compensation of employees, (2) proprietors' income, (3) rental income of persons, (4) net interest, and (5) corporate profits and inventory valuation adjustment.

"Compensation of employees" is the sum of wages, salaries, and certain supplements, such as employer contributions for social insurance.

"Proprietors' income" measures the monetary earnings and income in kind of sole proprietorships (including doctors, lawyers, and other self-employed), partnerships and producers' cooperatives, exclusive of capital gains or losses on inventory or other asset holdings. The farm proprietors' income shown here is conceptually the same as farm operators' net income including adjustment for inventory change, as shown below in the section on Farm Income. Some variations between the two series prior to 1952 result from differences in the timing of revisions. The

supplementary income which individuals obtain from renting property does not appear here, but under rental income of persons.

"Rental income of persons" consists of (1) net money income from rental of real property, (2) estimated net rental value to homeowners of their homes, and (3) royalties received from patents, copyrights, and rights to natural resources.

"Net interest" measures both the money interest and the imputed interest accruing to United States persons and governments from private business and from abroad, minus government interest disbursements. Imputed interest consists of the value of financial services received by persons without explicit payment, and of property income withheld by life insurance companies and mutual financial intermediaries for the account of persons.

"Corporate profits" are the earnings of corporations organized for profit which accrue to residents of this Nation measured before Federal and State profit taxes, but without deduction of depletion charges and exclusive of capital gains and losses. (For a more extended discussion, see section on Corporate Profits below, p. 20.)

“Corporate inventory valuation adjustment” measures the excess of the value of change in the volume of corporate inventories (in terms of average prices during the period) over the change in terms of book values. This adjustment is required since, as is customary in business accounting, corporate profits are reported inclusive of inventory profits or loss, whereas only the value of the real change in inventories is counted as current output in the national product.

The accompanying chart shows the movements of the national income by these major components since 1947.

STATISTICAL PROCEDURES

The methods of estimation employed in the very complex area of national income are described in detail in the 1954 *National Income Supplement to the Survey of Current Business*. Further information is provided in *U.S. Income and Output, 1958*, also issued as a supplement to the Survey. The following indicates briefly the types of estimating procedures used:

“Compensation of employees”—reliable data are

available each year from the unemployment insurance system, with current monthly estimates resting chiefly on employer reports on employment and earnings to the Bureau of Labor Statistics.

“Proprietors’ income”—estimated from income tax returns to the Internal Revenue Service with current quarterly data derived from analysis of trends in noncorporate as well as corporate sales and corporate profits in individual industries.

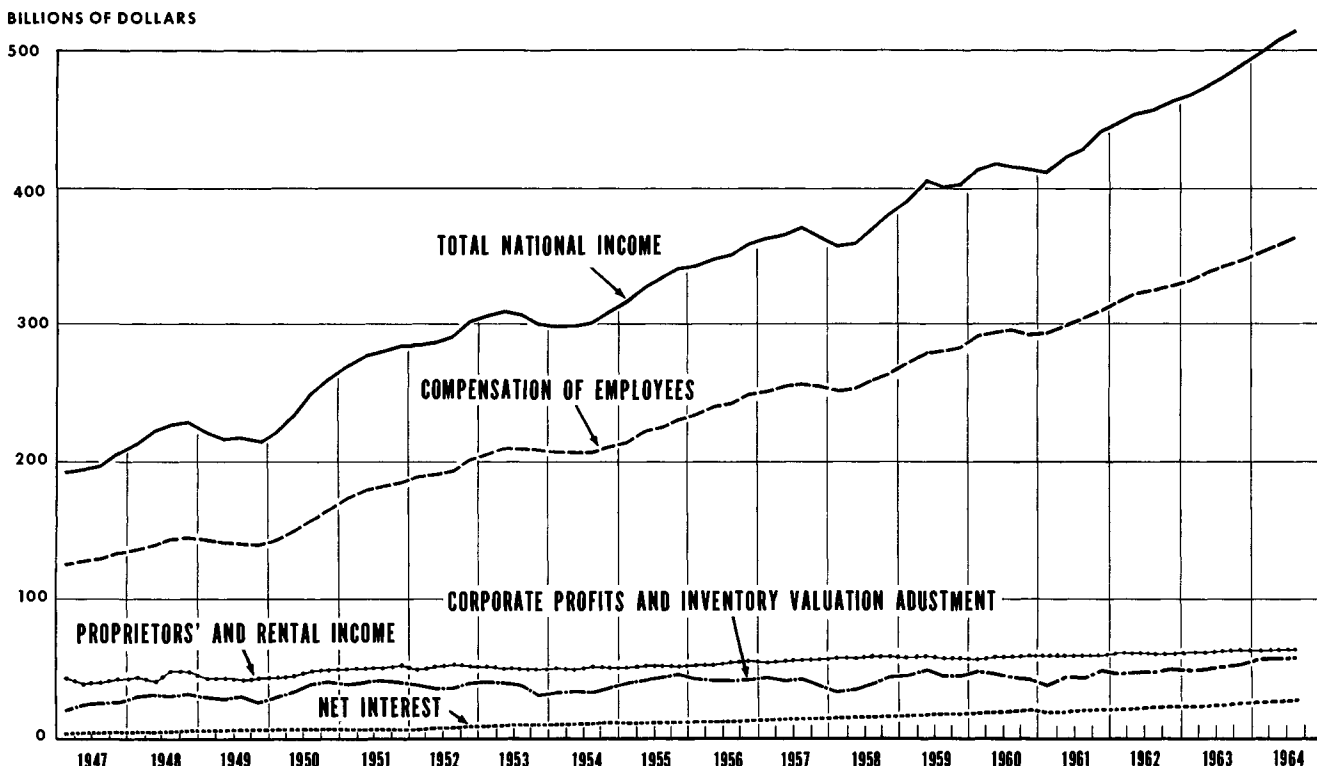
“Rental income of persons” is estimated from a variety of Census Bureau, Internal Revenue Service, Department of Agriculture, and BLS data on rents paid and on the distribution of property ownership and rental income between persons and business.

“Net interest” is estimated from reports to the Internal Revenue Service, Bureau of the Census, Board of Governors of the Federal Reserve System, and other agencies on interest and debt.

Seasonal adjustments are not available for the income components of the national accounts, with the exception of corporation profits. This is so because the basic data sources do not provide a completely unadjusted monthly series for wages and salaries,

National Income, 1947–64

(Quarterly data. Seasonally adjusted annual rates)



SOURCE OF DATA: DEPARTMENT OF COMMERCE

TABLE 3.—National Income
[Billions of dollars]

Year	Total national income	Compensation of employees ¹	Proprietors' income		Rental income of persons	Net interest ²	Corporate profits and inventory valuation adjustment		
			Farm	Business and professional			Total	Profits before tax	Inventory valuation adjustment
1929	87.8	51.1	6.0	8.8	5.4	6.4	10.1	9.6	0.5
1930	75.7	46.8	4.1	7.4	4.8	6.0	6.6	3.3	3.3
1931	59.7	39.7	3.2	5.6	3.8	5.8	1.6	-.8	2.4
1932	42.5	31.1	1.9	3.4	2.7	5.4	-2.0	-3.0	1.0
1933	40.2	29.5	2.4	3.2	2.0	5.0	-2.0	.2	-2.1
1934	49.0	34.3	2.4	4.6	1.7	4.9	1.1	1.7	-.6
1935	57.1	37.3	5.0	5.4	1.7	4.8	2.9	3.1	-.2
1936	64.9	42.9	4.0	6.5	1.8	4.7	5.0	5.7	-.7
1937	73.6	47.9	5.6	7.1	2.1	4.7	6.2	6.2	(³)
1938	67.6	45.0	4.3	6.8	2.6	4.6	4.3	3.3	1.0
1939	72.8	48.1	4.3	7.3	2.7	4.6	5.7	6.4	-.7
1940	81.6	52.1	4.6	8.4	2.9	4.5	9.1	9.3	-.2
1941	104.7	64.8	6.5	10.9	3.5	4.5	14.5	17.0	-2.5
1942	137.7	85.3	10.0	13.9	4.5	4.3	19.7	20.9	-1.2
1943	170.3	109.6	11.4	16.8	5.1	3.7	23.8	24.6	-.8
1944	182.6	121.3	11.5	18.0	5.4	3.3	23.0	23.3	-.3
1945	181.2	123.2	11.8	19.0	5.6	3.2	18.4	19.0	-.6
1946	180.9	117.7	15.3	21.3	6.2	3.1	17.3	22.6	-5.3
1947	198.2	128.8	15.5	19.9	6.5	3.8	23.6	29.5	-5.9
1948	223.5	141.0	17.8	22.4	7.3	4.2	30.8	33.0	-2.2
1949	217.7	140.8	12.9	22.7	8.3	4.8	28.2	26.4	1.9
1950	241.9	154.2	14.0	23.5	9.0	5.5	35.7	40.6	-5.0
1951	279.3	180.3	16.3	26.0	9.4	6.3	41.0	42.2	-1.2
1952	292.2	195.0	15.3	26.9	10.2	7.1	37.7	36.7	1.0
1953	305.6	208.8	13.3	27.4	10.5	8.2	37.3	38.3	-1.0
1954	301.8	207.6	12.7	27.8	10.9	9.1	33.7	34.1	-.3
1955	330.2	223.9	11.8	30.4	10.7	10.4	43.1	44.9	-1.7
1956	350.8	242.5	11.6	32.1	10.9	11.7	42.0	44.7	-2.7
1957	366.9	255.5	11.8	32.7	11.9	13.4	41.7	43.2	-1.5
1958	367.4	257.1	13.5	32.5	12.2	14.8	37.2	37.4	-.3
1959	400.5	278.5	11.4	35.1	11.9	16.4	47.2	47.7	-.5
1960	414.5	293.6	12.0	34.2	12.1	18.0	44.5	44.3	.2
1961	426.9	302.2	12.9	35.3	12.2	20.1	44.1	44.2	-.1
1962	455.6	323.1	13.2	36.6	12.2	22.1	48.4	48.2	.3
1963	478.5	340.3	13.0	37.6	12.3	24.4	50.8	51.3	-.4
1964 ⁴	509.8	361.7	12.7	39.3	12.4	26.8	57.0	57.2	-.2

¹ Includes employer contributions for social insurance. (See also table 4 on Sources of Personal Income on p. 13.)

² For explanation, see page 9. Does not include interest payments by governments or interest payments to financial institutions and corporations. Gross interest paid for 1963 was \$76.2 billion as aggregated from National Income accounts, table 71, "Survey of Current Business," July 1964.

³ Less than \$50 million.

⁴ Preliminary.

NOTE.—Quarterly data available beginning 1939; annual from 1929. Data for Alaska and Hawaii included beginning 1960.

SOURCE: Department of Commerce.

and because in the case of proprietors' income, actual net income data are lacking altogether on a monthly and quarterly basis.

USES AND LIMITATIONS

The national income is a useful measure of the rate of flow of earnings from current output. By

definition it excludes income from the revaluation of past output—e.g., capital gains and losses. The movements of this series correspond with movements in production. However, the value of the national income series lies more in the composition than in the total. It may mean little to know that national income (unadjusted for price changes) has gone up; but it may be very important to know the relative

contribution of wages and profits to that increase.

The chief cautions for use result partly from the definitions used, and partly from the nature of the basic data. With respect to the first, care must be taken not to interpret movements in the series as measuring something other than they are intended to measure. For example, variations in wages and profits do not necessarily indicate changes in the welfare of workers or in the ability of corporations to provide new capital. For such purposes, these variations must be considered in the light of other factors such as the cost of living and the cost of new plant and equipment. With respect to the second—which is particularly applicable to the current data on proprietors' income, rental income of persons, and the corporate inventory valuation adjustment—it should be recognized that many of the available data permit only fair approximations of the phenomena being measured, and therefore too great reliance should not be placed on these statistics as instruments of precise measurement.

REFERENCES

The official quarterly estimates for the series included in the national income and product accounts are published by the Office of Business Economics, Department of Commerce, in the *Survey of Current Business*: a preliminary estimate is published in the

Survey in the first month after the close of the quarter; revised figures for each quarter are shown in a subsequent issue of the *Survey*. The figures also appear in *Economic Indicators*. Preliminary annual estimates are published by the Office of Business Economics in the January issue of the *Survey*, revised estimates in the July issue. Complete annual and quarterly statistics for 1929–45, with and without seasonal adjustment, and a detailed explanation of fundamental concepts and underlying procedures are given in the 1954 *National Income Supplement* to the *Survey of Current Business*. Further information and detailed statistics for 1946–55 are presented in *U.S. Income and Output*, a 1958 supplement to the *Survey*. Annual and quarterly data for 1956–58 are published in the July 1962 *Survey*. Similar data for the 1959–63 period may be found in the July 1964 *Survey*. For personal income, detailed State estimates are presented in *Personal Income by States Since 1929*, issued as a supplement to the *Survey* in 1957. These statistical data are updated each year in the August *Survey*.

A statistical evaluation report, "Revisions of First Estimates of Quarter-to-Quarter Movement in National Income Series, 1947–1958" is available from the Office of Statistical Standards, Bureau of the Budget.

4. SOURCES OF PERSONAL INCOME

DESCRIPTION OF SERIES

"Personal income" is composed of income received currently by individuals, unincorporated businesses, and nonprofit institutions (including pension, trust, and welfare funds). This income is divided into labor income, proprietors' income, rental income of persons, dividends, personal interest, and transfer payments. Capital gains and losses are excluded. Most of the income is in monetary form, but there are important exceptions—chiefly the net rental value of owner-occupied homes and value of food produced and consumed on farms.

"Labor income" is principally wages and salaries. It excludes employer contributions for social insurance. "Proprietors' income" and "Rental income of persons" are defined above, in the section on National Income. "Dividends" are cash dividend disbursements by corporations organized for profit to stockholders who are United States persons. "Personal

interest income" is the "Net interest" component of National Income plus net interest paid by Government. "Transfer payments" include payments not resulting from current production, such as social security benefits, military pensions, corporate gifts to nonprofit institutions, direct relief, and consumer bad debts.

Seasonally adjusted data, preferred for most purposes, are derived directly from seasonally adjusted source materials for some national income components. Unadjusted data are not available for personal incomes or for national income.

RELATION TO OTHER SERIES

Personal income differs from national income by including transfer payments and government interest and by excluding contributions for social insurance (by employee and employer), the corporate inventory valuation adjustment, and corporate profits tax liability and undistributed corporate profits.

TABLE 4.—Sources of Personal Income

[Billions of dollars]

Year	Total personal income	Wage and salary disbursements ¹	Other labor income ²	Proprietors' income		Rental income of persons	Dividends	Personal interest income ³	Transfer payments	Less: Personal contributions for social insurance	Non-agricultural personal income ⁴
				Farm	Business and professional						
1929	85.8	50.4	0.6	6.0	8.8	5.4	5.8	7.4	1.5	0.1	77.7
1930	76.9	46.2	.6	4.1	7.4	4.8	5.5	6.9	1.5	.1	70.8
1931	65.7	39.1	.5	3.2	5.6	3.8	4.1	6.9	2.7	.2	60.9
1932	50.1	30.5	.5	1.9	3.4	2.7	2.6	6.6	2.2	.2	46.9
1933	47.2	29.0	.4	2.4	3.2	2.0	2.1	6.2	2.1	.2	43.6
1934	53.6	33.7	.4	2.4	4.6	1.7	2.6	6.1	2.2	.2	49.8
1935	60.2	36.7	.5	5.0	5.4	1.7	2.9	5.9	2.4	.2	53.9
1936	68.5	41.9	.6	4.0	6.5	1.8	4.5	5.8	3.5	.2	63.2
1937	73.9	46.1	.6	5.6	7.1	2.1	4.7	5.9	2.4	.6	67.0
1938	68.6	43.0	.6	4.3	6.8	2.6	3.2	5.8	2.8	.6	62.8
1939	72.9	45.9	.6	4.3	7.3	2.7	3.8	5.8	3.0	.6	67.1
1940	78.7	49.8	.7	4.6	8.4	2.9	4.0	5.8	3.1	.7	72.6
1941	96.3	62.1	.7	6.5	10.9	3.5	4.5	5.8	3.1	.8	88.0
1942	123.5	82.1	.9	10.0	13.9	4.5	4.3	5.8	3.1	1.2	111.5
1943	151.4	105.6	1.1	11.4	16.8	5.1	4.5	5.8	3.0	1.8	137.6
1944	165.7	117.0	1.5	11.5	18.0	5.4	4.7	6.2	3.6	2.2	151.6
1945	171.2	117.6	1.8	11.8	19.0	5.6	4.7	6.9	6.2	2.3	156.8
1946	179.3	111.9	1.9	15.3	21.3	6.2	5.8	7.6	11.4	2.0	161.2
1947	191.6	122.8	2.3	15.5	19.9	6.5	6.5	8.2	11.8	2.1	172.8
1948	210.4	135.2	2.7	17.8	22.4	7.3	7.2	8.7	11.3	2.2	189.2
1949	208.3	134.4	3.0	12.9	22.7	8.3	7.5	9.4	12.4	2.2	192.1
1950	228.5	146.4	3.8	14.0	23.5	9.0	9.2	10.3	⁵ 15.1	2.9	211.3
1951	256.7	170.7	4.8	16.3	26.0	9.4	9.0	11.2	12.6	3.4	237.0
1952	273.1	184.9	5.3	15.3	26.9	10.2	9.0	12.1	13.2	3.8	254.3
1953	288.3	198.1	6.0	13.3	27.4	10.5	9.2	13.4	14.3	3.9	271.5
1954	289.8	196.3	6.2	12.7	27.8	10.9	9.8	14.6	16.2	4.6	273.8
1955	310.2	210.9	7.1	11.8	30.4	10.7	11.2	15.8	17.5	5.2	295.0
1956	332.9	227.6	8.1	11.6	32.1	10.9	12.1	17.5	18.8	5.8	317.9
1957	351.4	238.5	9.1	11.8	32.7	11.9	12.6	19.6	21.9	6.7	336.1
1958	360.3	239.8	9.4	13.5	32.5	12.2	12.4	21.0	26.3	6.9	343.0
1959	383.9	258.5	10.4	11.4	35.1	11.9	13.7	23.5	27.5	7.9	368.6
1960	401.3	271.3	11.0	12.0	34.2	12.1	14.5	25.8	29.5	9.2	385.1
1961	417.6	278.8	11.6	12.9	35.3	12.2	15.2	27.5	33.6	9.6	400.4
1962	442.4	297.1	12.3	13.2	36.6	12.2	16.5	30.0	34.7	10.3	424.9
1963	464.1	312.1	13.1	13.0	37.6	12.3	18.0	32.9	36.7	11.8	446.6
1964 ⁶	491.4	331.6	14.1	12.7	39.3	12.4	19.8	36.0	38.2	12.7	474.2

¹ Compensation of employees (see table, p. 11) excluding employer contributions for social insurance and the excess of wage accruals over disbursements.
² Employer contributions to private pension, health, and welfare funds; Compensation for injuries; directors' fees; military reserve pay; and a few other minor items.
³ For explanation, see page 12 and footnote 2, table 3. Does not include interest payments to financial institutions and corporations.
⁴ Personal income less net income of unincorporated farm enterprises, farm wages, agricultural net interest, and net dividends paid by agricultural corporations.
⁵ Includes \$2.7 billion National Service Life Insurance dividend, most of which was paid in the first half of the year. ⁶ Preliminary.
 NOTE.—Quarterly data available beginning 1939; annual from 1929. Data for Hawaii and Alaska included beginning 1960.
 Source: Department of Commerce.

USES AND LIMITATIONS

The estimates for personal income and components and for disposable income measure trends in spending power of individuals. The inclusion of substantial nonmonetary items—imputed rent, interest, food, fuel—should be noted but the effect of these items should not be overemphasized. They tend to make income estimates more stable, but have little effect

on the ability of the estimates to show when a change is occurring and the direction of the shift.

Disposable personal income, discussed in the next section, is often used as a measure of income available for spending. For measuring changes, in real terms, i.e., in consumers' buying power, the estimates of disposable income in constant prices are to be preferred.

TABLE 5.—Disposition of Personal Income

Year	Personal income	Less: Personal taxes ¹	Equals: Disposable personal income	Less: Personal consumption expenditures				Equals Personal saving	Per capita disposable personal income		Saving as percent of disposable income	Population ³
				Total	Durable goods	Non-durable goods	Services		Current prices	1963 prices ²		
Billions of dollars									Dollars		Percent	Thousands
1929..	85.8	2.6	83.1	79.0	9.2	37.7	32.1	4.2	682	1,256	5.1	121,875
1930..	76.9	2.5	74.4	71.0	7.2	34.0	29.8	3.4	604	1,164	4.6	123,188
1931..	65.7	1.9	63.8	61.3	5.5	28.9	26.9	2.5	514	1,110	3.9	124,149
1932..	50.1	1.5	48.7	49.3	3.6	22.8	22.9	- .6	390	951	-1.2	124,949
1933..	47.2	1.5	45.7	46.4	3.5	22.3	20.7	- .6	364	924	-1.3	125,690
1934..	53.6	1.6	52.0	51.9	4.2	26.7	21.0	.1	411	981	.2	126,485
1935..	60.2	1.9	58.3	56.3	5.1	29.3	21.9	2.0	458	1,070	3.4	127,362
1936..	68.5	2.3	66.2	62.6	6.3	32.8	23.5	3.6	516	1,194	5.4	128,181
1937..	73.9	2.9	71.0	67.3	6.9	35.2	25.1	3.7	551	1,227	5.2	128,961
1938..	68.6	2.9	65.7	64.6	5.7	34.0	25.0	1.1	506	1,150	1.7	129,969
1939..	72.9	2.4	70.4	67.6	6.7	35.1	25.8	2.9	537	1,237	4.1	131,028
1940..	78.7	2.6	76.1	71.9	7.8	37.2	26.9	4.2	576	1,312	5.5	132,122
1941..	96.3	3.3	93.0	81.9	9.7	43.2	29.0	11.1	697	1,486	11.9	133,402
1942..	123.5	6.0	117.5	89.7	7.0	51.3	31.5	27.8	871	1,659	23.7	134,860
1943..	151.4	17.8	133.5	100.5	6.6	59.3	34.7	33.0	976	1,705	24.7	136,739
1944..	165.7	18.9	146.8	109.8	6.8	65.4	37.7	36.9	1,061	1,755	25.1	138,397
1945..	171.2	20.9	150.4	121.7	8.1	73.2	40.4	28.7	1,075	1,717	19.1	139,928
1946..	179.3	18.7	160.6	147.1	15.9	84.8	46.4	13.5	1,136	1,680	8.4	141,389
1947..	191.6	21.5	170.1	165.4	20.6	93.4	51.4	4.7	1,180	1,578	2.8	144,126
1948..	210.4	21.1	189.3	178.3	22.7	98.7	56.9	11.0	1,291	1,632	5.8	146,631
1949..	208.3	18.7	189.7	181.2	24.6	96.6	60.0	8.5	1,272	1,621	4.5	149,188
1950..	228.5	20.8	207.7	195.0	30.4	99.8	64.9	12.6	1,369	1,720	6.1	151,689
1951..	256.7	29.2	227.5	209.8	29.5	110.1	70.2	17.7	1,475	1,738	7.8	154,283
1952..	273.1	34.4	238.7	219.8	29.1	115.1	75.6	18.9	1,521	1,756	7.9	156,947
1953..	288.3	35.8	252.5	232.6	32.9	118.0	81.8	19.8	1,582	1,808	7.8	159,559
1954..	289.8	32.9	256.9	238.0	32.4	119.3	86.3	18.9	1,582	1,792	7.4	162,388
1955..	310.2	35.7	274.4	256.9	39.6	124.8	92.5	17.5	1,661	1,870	6.4	165,276
1956..	332.9	40.0	292.9	269.9	38.5	131.4	100.0	23.0	1,741	1,930	7.9	168,225
1957..	351.4	42.6	308.8	285.2	40.4	137.7	107.1	23.6	1,803	1,943	7.6	171,278
1958..	360.3	42.3	317.9	293.2	37.3	141.6	114.3	24.7	1,826	1,930	7.8	174,154
1959..	383.9	46.8	337.1	313.5	43.6	147.1	122.8	23.6	1,904	1,987	7.0	177,080
1960..	401.3	51.4	349.9	328.2	44.9	151.8	131.5	21.7	1,936	1,994	6.2	180,684
1961..	417.6	52.9	364.7	337.3	43.7	155.4	138.3	27.3	1,985	2,028	7.5	183,756
1962..	442.4	57.9	384.6	356.8	48.4	162.0	146.4	27.8	2,060	2,087	7.2	186,656
1963..	464.1	61.6	402.5	375.0	52.1	167.5	155.3	27.5	2,125	2,125	6.8	189,375
1964 ⁴	491.4	59.5	431.8	399.3	57.0	177.3	165.1	32.5	2,248	2,217	7.5	192,072

¹ Includes also such items as fines and penalties.² Income in current prices divided by the implicit price deflator for personal consumption expenditures on a 1961 base.³ Population of the United States as of July 1, excluding Alaska and Hawaii prior to 1960; includes armed forces abroad.⁴ Preliminary.

NOTE.—Quarterly data available beginning 1939; annual from 1929.

Source: Department of Commerce.

STATISTICAL PROCEDURES

Most personal consumption expenditures for goods are estimated for benchmark years from the value of the output of specified items as reported in the Census of Manufactures, less the portion of this output bought by business and government or exported.

To the consumer portion of manufactured products is added the value of nonmanufactured consumer goods (for example, nonprocessed foods) to derive producers' output for consumers. Successive adjustments are added for transportation, imports and exports, wholesale and retail inventory changes, wholesale and retail markups, and sales taxes.

Transportation charges are computed from data on transportation compiled by the Interstate Commerce Commission and other sources. Wholesale and retail markups are derived from Census of Business and Internal Revenue Service data. For service items a great variety of sources and procedures are used.

Estimates of consumption expenditures for years between benchmarks and quarterly consumption expenditures estimates rest chiefly on the trends shown by the Census Bureau's Annual Survey of Manufactures and retail sales figures by kind of store, Federal Reserve Board data for department stores, State sales tax reports, and other source data.

For information on seasonal adjustments, see the discussion in the sections on Gross National Product or Expenditure, and National Income.

RELATION TO OTHER SERIES

Estimates of personal consumption expenditures will show much the same movements from quarter to quarter as the figures for total retail sales. However, personal consumption expenditures also include a wide variety of services and such items as food produced and consumed on farms which are outside of retail trade. Conversely, retail trade includes some commodity items, such as building materials and trucks, which are not part of personal consumption expenditures.

The estimate of personal net saving and the net claims estimate of the Securities and Exchange Com-

mission differ in level and trend. The chief reason for the difference is the inclusion in the personal savings series (and not in the net claims estimates) of net purchases of nonfarm residences and net increases in persons' equities in farms and other unincorporated businesses. (For a detailed reconciliation of the two series, see table V-9 in *U.S. Income and Output*, which is carried forward each year in the July issue of the *Survey*.)

USES AND LIMITATIONS

The estimates of personal consumption expenditures represent a generally useful, reliable measure of trends in consumer purchases. They may be used to study trends in the ratio of wages, or more generally of income, to expenditure, and to review the division of the national output between consumer takings, business capital formation, and government defense or other expenditures.

The estimates of personal saving are among the least satisfactory of the significant series which appear in the national income accounts. They are the residual from two larger estimates. The errors and limitations present in the hundreds of series, developed for other purposes, which must be used at present in estimating the national income do not completely cancel out. To this extent these errors are transmitted into the saving estimate. Quarter-to-quarter changes for recent periods are, however, subject to revision as better data become available.

6. FARM INCOME

DESCRIPTION OF SERIES

There are two major concepts of farm income. One, a personal income concept, relates to all the people who live on farms and the incomes they receive from nonfarm as well as farm sources. The other views agriculture as a business and measures the gross and net income received from farming. The Economic Research Service of the Department of Agriculture prepares estimates relating to both concepts.

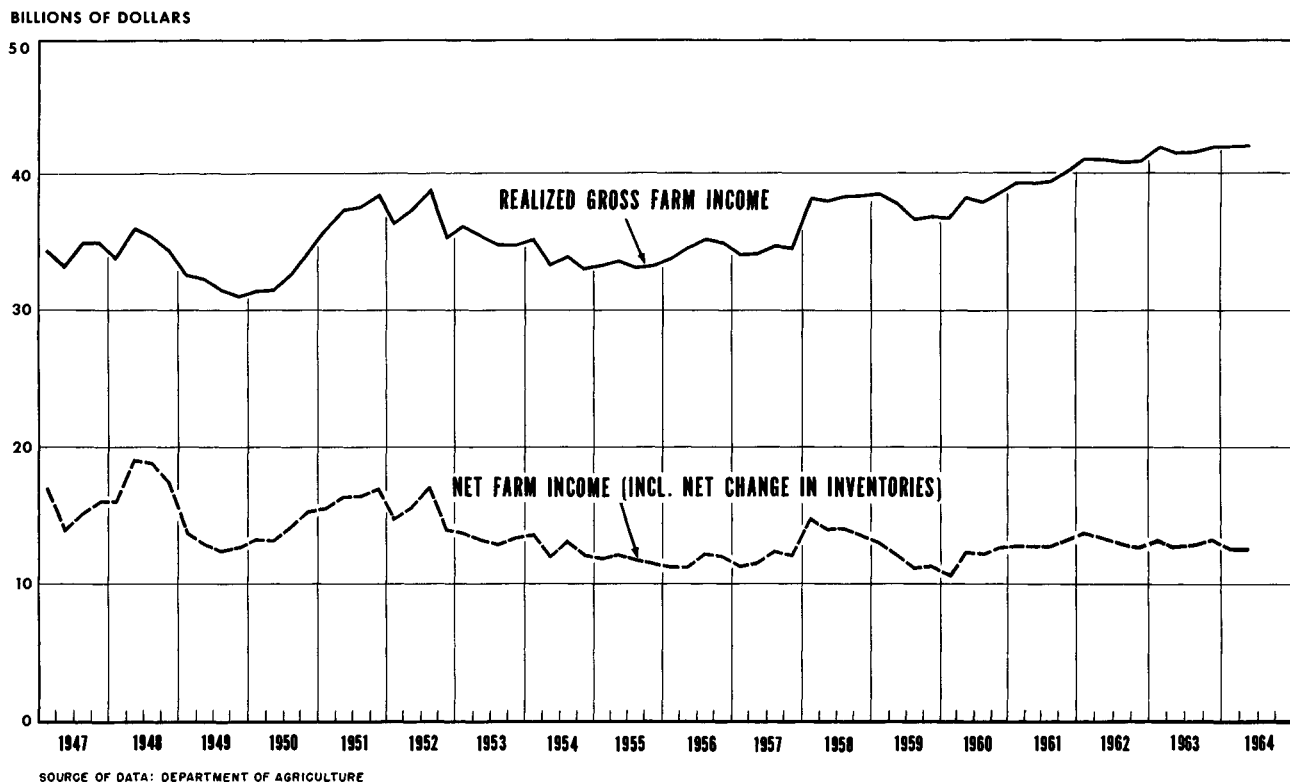
Estimates of the personal income received by the total farm population are available only on an annual basis back to 1934. The personal income of the farm population from farm sources covers the net income of resident farm operators from farming plus farm wages received by farm resident workers less

contributions to social insurance. It includes Government payments and makes an allowance for the net value of physical changes in farm inventories of crops and livestock. Personal income from nonfarm sources includes salaries and wages, interest, dividends, rents, royalties, and transfer payments, such as unemployment compensation and veterans' benefits.

Gross and net farm income from farming and farm production expenses are estimated annually from 1910 and quarterly at seasonally adjusted annual rates, from 1929. Realized gross income from farming is the sum of (1) cash receipts from farm marketings, (2) the value of farm products consumed directly in farm households, (3) the imputed gross rental value of farm dwellings, and (4) Government payments to farmers. Farm production expenses,

Farm Income, 1947-64

(Quarterly data. Seasonally adjusted annual rates)



which now offset about 70 percent of realized gross farm income, are the aggregate of all current farm operating expenses and overhead costs. Farm operators' net income excluding the net change in inventories is the remainder of realized gross farm income after farm production expenses have been deducted. Farm operators' net income including net change in inventories takes into account changes in farmers' holdings of livestock and crops, as shown on the accompanying chart. Net income per farm is calculated by dividing the U.S. income totals by the Department of Agriculture series on estimated numbers of farms.

STATISTICAL PROCEDURES

Since the average farm family receives about a third of its total personal income in the form of earnings from employment in nonfarm occupations or as returns from investments in nonfarm property, the measurement of these items is obviously important as a supplement to the regular measures of farm income. Estimates of income received by the farm population from nonfarm sources are tied to bench-

mark estimates from sample surveys for several scattered years and interpolated or extrapolated for other years. Since the first benchmark surveys were for the years 1934-36, the series starts there and does not extend back to 1910 along with many other series on farm income. Totals derived from various surveys covering the years 1946, 1950, 1955 and 1960 have been used as benchmarks or as supplementary check data.

For the computation of gross farm income, the estimates of cash receipts from marketings are based on information collected by the Department of Agriculture on the quantity sold and average prices received by farmers for the various farm commodities. The current estimates of monthly crop marketings are based on estimated production, the normal percentage of the crop sold, and the usual seasonal movement to market, supplemented by available current data on market receipts and Commodity Credit Corporation loan activity. Formost of the important livestock items, current reports on production or market receipts are available and are used to estimate current livestock marketings. The

estimates of cash receipts from marketings are later revised as more complete data on production, crop-year sales and monthly marketings become available. The value of farm products consumed directly in farm households is estimated on the basis of information obtained from farmers (annually for important products and less frequently for other products) on the volume of home consumption, valued at prices received by farmers for the sale of similar products. The gross rental value of farm dwellings is designed to represent the amount which would have to be paid if the dwellings were rented separately from the farms. Government payments to farmers comprise all Federal payments made directly to farmers in which a sale or title transfer to the Government is not involved—at the present time, Feed Grain and Wheat Programs, Soil Bank, Conservation, Wool, and Sugar Act payments. Net Commodity Credit Corporation loans and purchase-agreement deliveries are included in cash receipts from marketings.

The estimates of farm production expenses are based on about 40 separate series. Annual survey data are available only for replacement and feeder livestock and taxes on farm real estate. Some of the operating expenses series are based on data obtained in the Censuses of Agriculture, with interpolations for intercensal years; others are based on special surveys and trade information. Depreciation charges on buildings, motor vehicles, and other farm machinery and equipment are estimated annually as the amount which farmers would have had to pay if they had replaced, at prices prevailing during the year, the amount of plant and equipment used up during the year. Estimates are also made for taxes on farm property, interest on outstanding indebtedness, and net property-insurance premiums.

The net change in inventories reflects physical changes in all livestock and crops on farms, except crops under CCC loan, with the changes valued at average prices for the year.

Annual estimates are made of the number of farms, based on benchmark data from the Censuses of Agriculture adjusted for underenumeration and some of the Soil Bank farms excluded in the Census. National estimates for intercensal years utilize June Enumerative Surveys of the Statistical Reporting Service based on an area probability sample.

Quarterly estimates of cash receipts from farm marketings are expanded to a seasonally adjusted annual rate. The normal quarterly distribution of

cash receipts in recent years has been 22 percent in the first quarter, 19 percent in the second quarter, 26 percent in the third quarter, and 33 percent in the fourth quarter—requiring some fairly large seasonal adjustments.

Except for cash receipts, however, monthly or quarterly information on components of farm income and expense is insufficient for the direct application of ordinary methods of seasonal adjustment. While cash receipts can be seasonally adjusted in the usual manner, the other quarterly estimates are interpolated from annual data largely in terms of price changes, with the quantity factors either held constant throughout the year or varied in some reasonable manner.

RELATION TO OTHER SERIES

The series on net income of farm operators including net change in inventories is conceptually the same as farm proprietors' income in the national income series, although some variations exist prior to 1946 because of differences in the timing of revisions.

The Department of Agriculture also publishes other estimates such as the net cash income of farm operators, the income of farm workers, farm capital expenditures, and related series.

USES AND LIMITATIONS

These estimates of realized gross farm income are for the most part based on a comprehensive body of basic data and are considered to be reasonably accurate. The estimates of farm production expenses, however, are based in part on incomplete data, less frequently collected, and may be subject to a fair-sized margin of error. Any errors in the expense estimates are fully reflected in the estimates of net income of farm operators.

Information on total farm income and on net income per farm and per capita is useful as a general indicator of the economic well-being of a broad sector of the economy. Its usefulness is limited, however, because of a wide variation in type-of-farming operations and in size of farms. Some segments of the farm economy may prosper at the same time that other segments are seriously distressed. In order to supply more detailed data on how the different segments of the farm economy are affected by chang-

TABLE 6.—Farm Income

Year	Personal income received by total farm population			Income received by farm operators from farming							Net income per farm including net inventory change ³	
	From all sources	From farm sources	From nonfarm sources	Realized gross		Production expenses	Realized net		Current prices	1963 prices ⁴		
				Total ¹	Cash receipts from marketings		Excluding net inventory change	Including net inventory change ²				
	Billions of dollars									Dollars		
1929.....	(⁵)	(⁵)	(⁵)	13.9	11.3	7.6	6.3	6.1	943	1,813		
1930.....	(⁵)	(⁵)	(⁵)	11.4	9.0	6.9	4.5	4.3	650	1,354		
1931.....	(⁵)	(⁵)	(⁵)	8.4	6.4	5.5	2.9	3.3	506	1,234		
1932.....	(⁵)	(⁵)	(⁵)	6.4	4.8	4.4	1.9	2.0	305	847		
1933.....	(⁵)	(⁵)	(⁵)	7.1	5.3	4.3	2.8	2.6	382	1,032		
1934.....	5.4	3.2	2.2	8.6	6.4	4.7	3.9	2.9	434	1,059		
1935.....	7.7	5.4	2.3	9.7	7.1	5.1	4.6	5.3	778	1,898		
1936.....	7.2	4.6	2.6	10.7	8.4	5.6	5.1	4.3	643	1,568		
1937.....	9.0	6.3	2.7	11.3	8.9	6.1	5.2	6.0	911	2,119		
1938.....	7.2	4.7	2.5	10.1	7.7	5.8	4.3	4.4	675	1,646		
1939.....	7.4	4.8	2.6	10.6	7.9	6.2	4.4	4.5	697	1,742		
1940.....	7.6	4.9	2.7	11.0	8.4	6.7	4.3	4.6	720	1,800		
1941.....	10.1	6.9	3.2	13.8	11.1	7.7	6.2	6.6	1,044	2,428		
1942.....	14.0	10.2	3.8	18.8	15.6	9.9	8.8	9.9	1,600	3,200		
1943.....	16.3	12.2	4.1	23.4	19.6	11.5	11.9	11.8	1,942	3,468		
1944.....	16.5	12.3	4.2	24.4	20.5	12.2	12.2	11.8	1,967	3,334		
1945.....	17.1	12.9	4.2	25.8	21.7	12.9	12.8	12.4	2,080	3,355		
1946.....	20.1	15.7	4.4	29.7	24.8	14.5	15.2	15.3	2,574	3,785		
1947.....	21.0	16.0	5.0	34.3	29.6	17.0	17.3	15.5	2,648	3,310		
1948.....	23.5	18.1	5.4	34.9	30.2	18.8	16.1	17.8	3,065	3,606		
1949.....	19.0	13.5	5.5	31.8	27.8	18.0	13.8	12.9	2,259	2,755		
1950.....	20.4	14.3	6.1	32.5	28.5	19.3	13.2	14.0	2,479	2,987		
1951.....	22.8	16.5	6.3	37.4	33.0	22.2	15.2	16.3	3,009	3,343		
1952.....	22.3	15.7	6.6	37.0	32.6	22.6	14.4	15.3	2,951	3,243		
1953.....	20.0	13.8	6.3	35.3	31.1	21.4	13.9	13.3	2,664	2,960		
1954.....	19.0	13.2	5.8	33.9	30.0	21.7	12.2	12.7	2,645	2,939		
1955.....	18.3	12.2	6.1	33.3	29.6	21.9	11.5	11.8	2,529	2,779		
1956.....	18.6	12.0	6.6	34.6	30.6	22.6	12.0	11.6	2,574	2,798		
1957.....	18.8	12.2	6.6	34.4	29.8	23.4	11.0	11.8	2,695	2,837		
1958.....	20.5	13.8	6.7	37.9	33.4	25.3	12.6	13.5	3,201	3,334		
1959.....	19.0	11.8	7.1	37.5	33.5	26.2	11.3	11.4	2,775	2,861		
1960.....	19.6	12.3	7.2	37.9	34.0	26.2	11.7	12.0	3,044	3,106		
1961.....	20.1	13.1	7.0	39.6	34.9	27.0	12.6	12.9	3,389	3,458		
1962.....	20.4	13.3	7.1	40.9	36.1	28.3	12.6	13.2	3,581	3,617		
1963.....	19.9	13.0	6.8	41.7	36.9	29.2	12.5	13.0	3,643	3,643		
1964 ⁶	19.6	12.7	6.9	42.0	36.7	29.4	12.6	12.7	3,656	3,620		

¹ Cash receipts from marketings, Government payments, and nonmoney income furnished by farms.

² Data prior to 1946 differ from "Farm proprietors' income" in the table "Sources of Personal Income" because of revisions by the Department of Agriculture not yet incorporated into the national income accounts of the Department of Commerce. Inventory of crops and livestock valued at the average price for the year.

³ Based on the 1960 Census of Agriculture definition of a farm. The numbers of farms (in millions) are 3.6 for 1963 and 3.5 for 1964.

⁴ Income in current prices divided by the index of prices paid by farmers for items used in family living on a 1963 base.

⁵ Series on personal income begins in 1934.

⁶ Preliminary.

Source: Department of Agriculture.

ing prices of farm products and of farm production items, the Economic Research Services has developed data on farm costs and returns for 40 of the more important type-of-farming areas. The Economic

Research Service has also developed some preliminary estimates of income for commercial and for non-commercial farms and some distributions of farm income by value of sales classes for 1959-63.

REFERENCES

The basic release of the farm income data is *The Farm Income Situation*, published four times a year by the Economic Research Service. The annual series are also published, with other principal series relating to agriculture, in the Department of Agriculture's annual *Agriculture Statistics*. The methods used to estimate farm operators' income are described in detail in *Major Statistical Series of the U.S. Department of Agriculture*, Volume 3—Gross and

Net Farm Income, published in 1957. The methods used for the quarterly estimates of farm operators' income in terms of seasonally adjusted annual rates are described in an article by Ernest W. Grove in the July 1954 issue of *Agricultural Economic Research*, published by the Agricultural Marketing Service (now published by the Economic Research Service). The individual studies of commercial family-operated farms by types and location are published annually by the Economic Research Service in *Farm Costs and Returns*.

7. CORPORATE PROFITS

DESCRIPTION OF SERIES

The corporate profits and related series of the Office of Business Economics, Department of Commerce, pertain to all United States corporations organized for profit. Data are shown for broad industry groups, and estimates are made of the distribution of profits between corporate tax liability, dividends, and retained earnings. Corporate capital consumption allowances and corporate cash flow (i.e., corporate profits after taxes plus capital consumption allowances) are also shown. Capital consumption allowances consist of depreciation, capital outlays charged to current expense, and accidental damage to fixed capital.

The national income concept of profit is used in these series. Dividends received by corporations are deducted from profits (and dividends) to obtain unduplicated totals reflecting income originating in the United States corporations. Profits are calculated inclusive of depletion, which is not considered an element of capital consumption in the national income and product accounts. (Depletion allowances are not included in the capital consumption allowance estimates.) Capital gains and losses are eliminated from profits because they do not measure gains or losses originating from current production.

Adjustments for international flows affecting profits are made. In these respects the national income measure of profits differs from those shown in the Internal Revenue Service tabulations of tax returns. The national income profits measure also differs from those commonly shown in company reports and from the financial reports series of the Federal Trade Commission and Securities and Exchange Commission.

STATISTICAL PROCEDURES

The annual data published in the corporate profits series are, except for the most recent year or two, based upon tabulations by the Internal Revenue Service of unaudited corporate income tax returns. The data in these tabulations are adjusted to make them comparable, statistically and conceptually, with other entries in the national income accounts. The important conceptual accounting adjustments are suggested by the statement above of differences between the tax-return concept of profit and the national income concept. In addition, the tax-return figures are augmented by the audit adjustment, which makes allowance for additional profit disclosed by auditing of the income tax returns by Internal Revenue. Mutual financial intermediaries are not considered part of the corporate universe for national

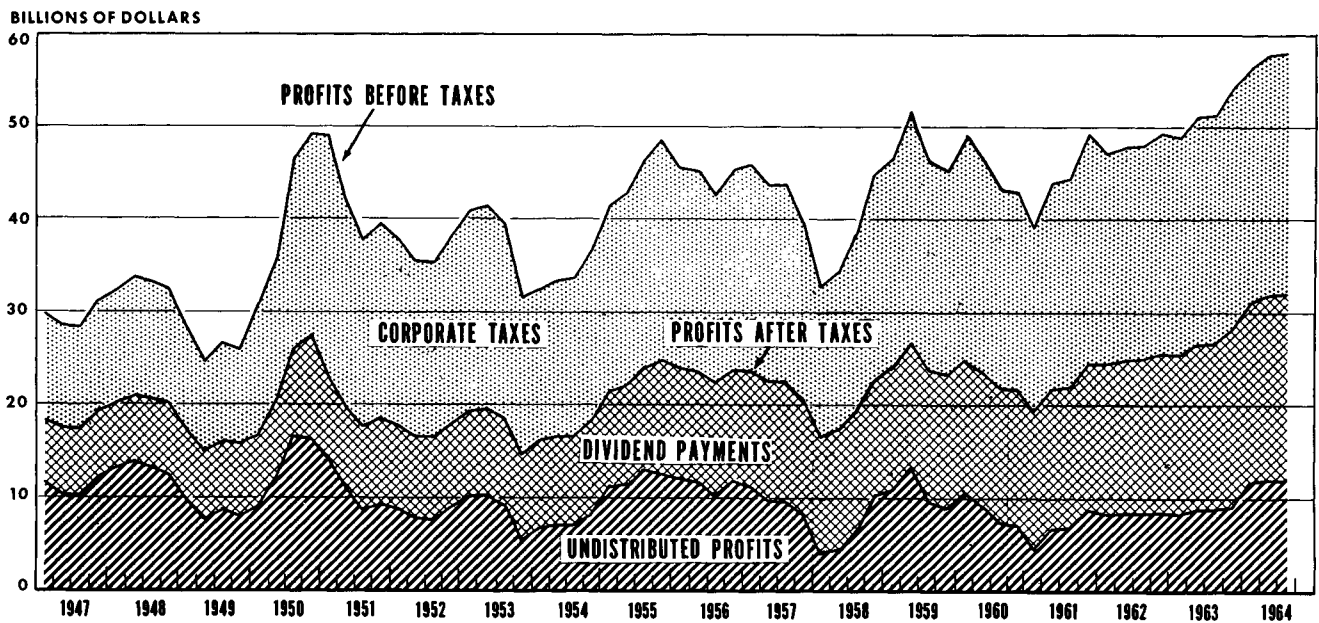
Seasonal Correction, Corporate Profits and Inventory Valuation Adjustment, 1963

[Billions of dollars]

Quarters	Seasonally adjusted quarterly rates	Unadjusted quarterly rates	Correction, quarterly rates (seasonally adjusted minus unadjusted)
I.....	12.3	11.5	0.8
II.....	12.5	12.9	-.4
III.....	12.8	12.6	.2
IV.....	13.3	13.8	-.5

Corporate Profits, 1947-64

(Quarterly data. Seasonally adjusted annual rates)



SOURCE OF DATA: DEPARTMENT OF COMMERCE

income purposes, and profits of these companies are removed from the tax-return tabulations.

The estimates for the most recent year or two and for quarters are made by extrapolating the latest available estimates based upon Internal Revenue tabulations of corporation tax returns. The extrapolators for manufacturing corporations are based upon the FTC-SEC *Quarterly Financial Report*; those for Federally regulated industries are obtained from reports to the Federal regulatory agencies; and those for other industries are based upon non-governmental surveys and upon miscellaneous sources of varying reliability. When the Internal Revenue tabulations of tax returns for a given year become available, the estimates for that year are revised to conform to the Internal Revenue tabulations.

The adjustment of corporate profits estimates for seasonal variation is difficult because of the volatility of profits. A diversity in seasonal patterns exists among the various industries, so the adjustment is made in considerable industry detail. While for most industry components the ratio-to-moving-average method has been used, a clearer seasonal pattern has been obtained in certain industries by using linear regressions of the unadjusted data for the given quarter of each year against trend, plus cyclical values for the same period. The seasonal patterns

in corporate profits have been subject to periodic revision as the postwar experience lengthened. The correction for seasonal variation is made in terms of the corporate profits share of national income (i.e., corporate profits before tax, plus inventory valuation adjustment).

The magnitude of the corporate profits seasonal correction may be seen in the comparison of unadjusted and seasonally adjusted quarterly data for the year 1963 shown in the table.

Quarterly corporate income tax liability estimates are derived by multiplying the quarterly estimates of profits before taxes by annual tax ratios. For current quarters the ratios of taxes to profits before tax for the latest full year are used with any necessary adjustments, such as to allow for new Federal tax legislation. Quarterly net corporate dividends are estimated from a sample of publicly reported dividends which account for three-fourths of total dividend disbursements. Other profit components are estimated as residuals: profits after tax being equal to profits before tax less corporate income tax liability, and undistributed corporate profits being equal to profits after tax less dividends.

In general, the valuation of the capital consumption allowance charges reflects the type of accounting practices followed in arriving at the corporate profits reported to the Internal Revenue Service. Tabu-

TABLE 7.—Corporate Profits

[Billions of dollars]

Period	Corporate profits (before taxes) and inventory valuation adjustment ¹						Corporate profits before taxes	Corporate income tax liability	Corporate profits after taxes			Corporate capital consumption allowances ²	Profits plus capital consumption allowances ³
	All industries	Manufacturing			Transportation, communications, and public utilities	All other industries			Total	Dividend payments	Undistributed profits		
		Total	Durable goods industries	Non-durable goods industries									
1929	10.1	5.1	2.6	2.5	2.0	3.0	9.6	1.4	8.3	5.8	2.4	4.4	12.7
1930	6.6	3.9	1.5	2.4	1.2	1.5	3.3	.8	2.5	5.5	-3.0	4.4	6.9
1931	1.6	1.3	.0	1.3	.6	-.2	-.8	.5	-1.3	4.1	-5.4	4.3	3.0
1932	-2.0	-.6	-1.1	.4	.2	-1.5	-3.0	.4	-3.4	2.6	-6.0	4.0	.6
1933	-2.0	-.5	-.5	.0	.1	-1.5	-.2	.5	-.4	2.1	-2.4	3.8	3.4
1934	1.1	.9	.2	.7	.4	-.2	1.7	.7	1.0	2.6	-1.6	3.6	4.6
1935	2.9	2.0	.9	1.1	.5	.5	3.1	1.0	2.2	2.9	-.7	3.7	5.9
1936	5.0	3.1	1.7	1.4	.7	1.2	5.7	1.4	4.3	4.5	-.2	3.7	8.0
1937	6.2	3.6	1.7	2.0	.8	1.8	6.2	1.5	4.7	4.7	.0	3.8	8.5
1938	4.3	2.2	.7	1.4	.6	1.5	3.3	1.0	2.3	3.2	-.9	3.8	6.1
1939	5.7	3.2	1.6	1.5	1.0	1.5	6.4	1.4	5.0	3.8	1.2	3.9	8.9
1940	9.1	5.4	3.0	2.3	1.3	2.4	9.3	2.8	6.5	4.0	2.4	4.0	10.5
1941	14.5	9.3	6.3	3.0	2.0	3.2	17.0	7.6	9.4	4.5	4.9	4.5	13.9
1942	19.7	11.7	7.1	4.5	3.5	4.5	20.9	11.4	9.5	4.3	5.2	5.1	14.6
1943	23.8	13.7	8.0	5.6	4.4	5.7	24.6	14.1	10.5	4.5	6.0	5.5	16.0
1944	23.0	13.0	7.3	5.7	3.9	6.1	23.3	12.9	10.4	4.7	5.7	6.3	16.7
1945	18.4	9.5	4.5	5.0	2.8	6.1	19.0	10.7	8.3	4.7	3.6	6.7	15.0
1946	17.3	8.4	2.1	6.3	1.8	7.1	22.6	9.1	13.4	5.8	7.7	5.2	18.6
1947	23.6	12.8	5.3	7.4	2.1	8.7	29.5	11.3	18.2	6.5	11.7	6.3	24.5
1948	30.8	16.8	7.4	9.4	2.9	11.2	33.0	12.5	20.5	7.2	13.3	7.7	28.2
1949	28.2	15.3	7.9	7.4	2.9	10.1	26.4	10.4	16.0	7.5	8.5	8.5	24.5
1950	35.7	20.4	12.0	8.4	4.0	11.3	40.6	17.9	22.8	9.2	13.6	9.4	32.2
1951	41.0	24.4	13.5	10.9	4.5	12.0	42.2	22.4	19.7	9.0	10.7	11.0	30.7
1952	37.7	21.1	11.8	9.3	4.8	11.8	36.7	19.5	17.2	9.0	8.3	12.3	29.6
1953	37.3	21.4	12.1	9.3	4.9	11.0	38.3	20.2	18.1	9.2	8.9	14.1	32.2
1954	33.7	18.4	10.1	8.3	4.4	11.0	34.1	17.2	16.8	9.8	7.0	15.8	32.7
1955	43.1	25.0	14.2	10.8	5.4	12.8	44.9	21.8	23.0	11.2	11.8	18.4	41.4
1956	42.0	23.5	12.6	10.9	5.6	12.9	44.7	21.2	23.5	12.1	11.3	20.0	43.5
1957	41.7	22.9	13.1	9.8	5.5	13.3	43.2	20.9	22.3	12.6	9.7	21.8	44.1
1958	37.2	18.3	9.0	9.3	5.6	13.3	37.4	18.6	18.8	12.4	6.4	22.7	41.4
1959	47.2	25.4	13.4	11.9	6.7	15.1	47.7	23.2	24.5	13.7	10.8	24.3	48.7
1960	44.5	23.0	11.6	11.4	7.0	14.4	44.3	22.3	22.0	14.5	7.5	25.6	47.6
1961	44.1	21.7	10.9	10.8	7.3	15.1	44.2	22.3	21.9	15.2	6.7	26.9	48.8
1962	48.4	24.7	13.2	11.5	8.0	15.7	48.2	23.2	25.0	16.5	8.5	30.5	55.5
1963	50.8	26.7	14.4	12.3	8.4	15.7	51.3	24.6	26.7	18.0	8.7	31.8	58.5
1964 ⁴	57.0	30.7	16.5	14.2	8.9	17.4	57.2	25.6	31.6	19.8	11.8	33.7	65.3

¹ See table 3 (p. 11) on National Income for the inventory valuation adjustment.² Includes depreciation, capital outlays charged to current accounts and accidental damages.³ Corporate profits after taxes plus corporate capital consumption allowances.⁴ Preliminary.

NOTE.—Data for Alaska and Hawaii included beginning 1960.

Source: Department of Commerce.

lations of Federal income tax returns data are the primary source of the estimates of depreciation, which account for about 90 percent of corporate capital consumption allowances. Pending the availability of tax return data for the latest two years,

the same sources used to estimate corporate profits are used to estimate depreciation charges. Estimates of capital outlays charged to current expense are prepared in two parts: drilling and development costs of oil and gas wells, which are included in the

new construction component of gross private domestic investment; and purchases of producers' durable goods charged to current account, of which hand tools are an example. Estimates of accidental damage to fixed capital are compiled from fire loss, accident loss and other relevant loss reports.

RELATION TO OTHER SERIES

The corporate profits series is designed primarily to measure the contribution of corporate profits to the national income. It is as consistent with the concepts of the national income accounts, and with other series which are a part of those accounts, as the basic data permit, and can be used in conjunction with the other national income series (e.g., net interest, proprietors' and rental income, compensation of employees, etc.) with confidence in their conceptual comparability.

The corporate profits series is based upon reports from companies rather than establishments. This limits the industrial comparability of profits with series based upon reports from establishments. Furthermore, surveys based upon the establishment unit of classification are not confined to establishments of corporations but include establishments of other forms of organization as well. The corporate profits series, or any other series based upon company reports, cannot safely be assumed to be directly comparable with these establishment series unless the reports on the different bases have been reconciled. These factors are more important when series for specific industries are being compared, however, than when the broad aggregates published in *Economic Indicators* are compared.

The series on expenditures for new plant and equipment and sales and inventories are also based primarily upon company reports. The plant and equipment expenditures and the sales and inventories

series, however, cover unincorporated as well as incorporated business. These three series cover closely related economic phenomena and can be used to supplement one another analytically.

USES AND LIMITATIONS

The corporate profits series is an important economic indicator, reflecting the state of health of a substantial part of the Nation's business community. Certain limitations of the series require that it be used with caution, however.

(1) As its title indicates, the series measures only the profits of corporations. It does not, therefore, portray fully the profit position of all business.

(2) The corporate profits series contained in *Economic Indicators* are rather broad aggregates and need to be supplemented by data pertaining to specific industries for some analytical uses.

(3) The quarterly corporate profits estimates are less reliable than the annual estimates, especially the annual estimates for periods more than two years prior to the current year. There are two principal reasons for this: (a) quarterly income statements, upon which the quarterly series must be based, are inherently less reliable than annual income statements; and (b) wide gaps in the financial data available quarterly for some industries, such as trade and services, make the underlying basis of the quarterly estimates weaker than that of the annual estimates.

REFERENCES

See above under National Income. A complete statement of the methods and the sources of data used in preparing these estimates is presented in pages 92-97 of the 1954 *National Income Supplement* to the Survey of Current Business, and pages 93-94, 100-101, and 105 of *U.S. Income and Output*, also a supplement to the *Survey of Current Business*.

8. GROSS PRIVATE DOMESTIC INVESTMENT

DESCRIPTION OF SERIES

Gross Private Domestic Investment is one of the major components of gross national product. The series measures gross fixed investment and net changes in business inventories, as shown in the accompanying chart. Gross fixed investment (or gross fixed capital formation) is defined as all newly produced durable goods (i.e., those with an average life exceeding one year) acquired by their ultimate

business users. New residential construction purchased by owner-occupants is also included because homeownership is treated as a business in the national accounts. The "Change in business inventories" series measures physical changes in business inventories valued at current replacement cost.

Separate statistical series are published for "Fixed investment" (which in turn consists of separate series for "New construction" and "Producers' durable

equipment”) and for “Change in business inventories.” The “New Construction” series used in computing gross private domestic investment is based on the private construction component of the new construction series described below, with the addition of estimates for oil- and gas-well drilling.

A major revision of the “Producers’ durable equipment” series was undertaken in conjunction with the preparation of the 1954 *National Income Supplement* to the Survey of Current Business. The estimates were revised for the entire period since 1929. Further significant revisions covering the period beginning with 1946 are described in *U.S. Income and Output*.

The quarterly estimates of producers’ durable equipment and change in business inventories are revised annually to reflect more complete data than were available when the initial estimates were made. The revisions in the “Change in business inventories” series have sometimes been quite sizable, and have resulted primarily from revisions in the basic book value inventory aggregates.

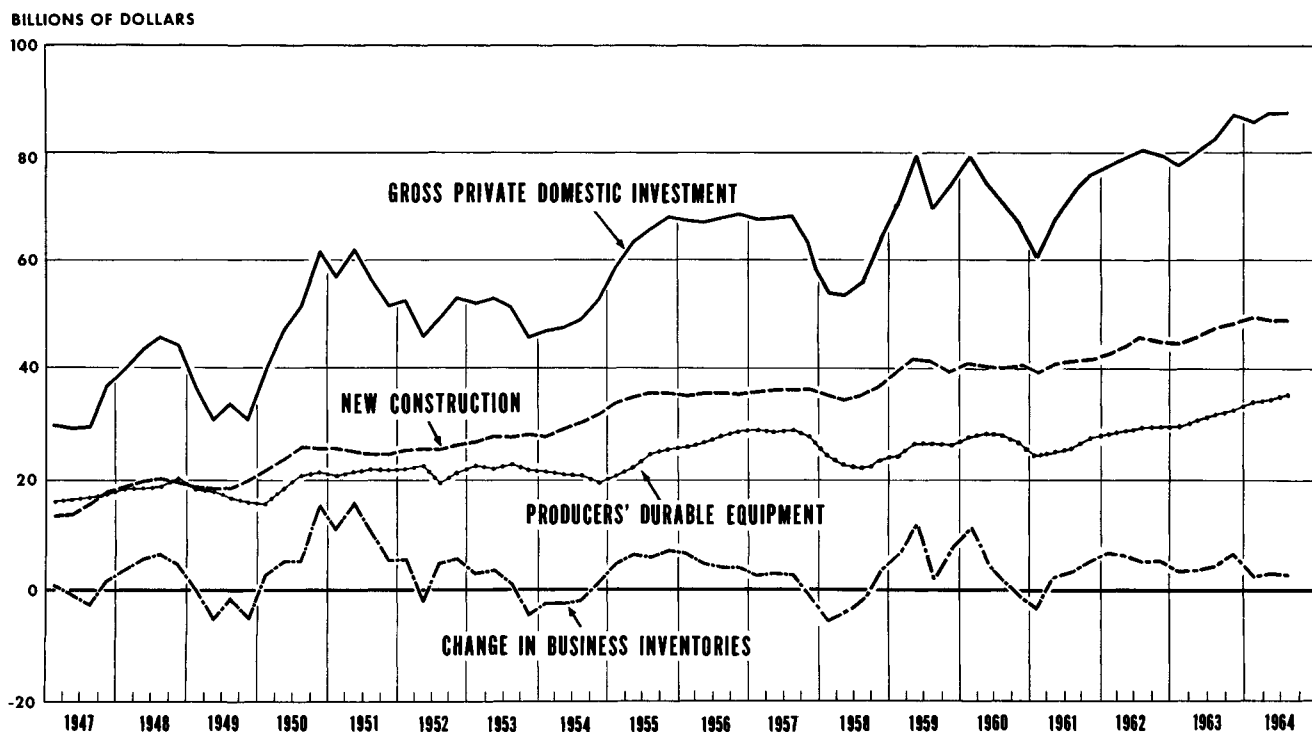
STATISTICAL PROCEDURES

The principal method of estimation used for the “Producers’ durable equipment” series is the commodity-flow technique. In brief, this technique consists of (1) analyzing total manufacturing output to obtain an estimate of the proportion that consisted of finished producers’ durable goods, (2) tracing the flow of those goods through distribution channels, (3) measuring their distributive costs, and (4) adding the estimate of those distributive costs to manufacturers’ sales value to arrive at an estimate of the costs of those goods to their purchasers.

For the years 1929–39, 1947, and, to a lesser extent, 1954, data available from the manufacturers and trade censuses made it possible to carry out the commodity-flow technique of estimating purchases of producers’ durable equipment in greater detail than was possible in other years. New benchmark estimates of producers’ durable equipment for 1954 were developed on the basis of Census data, and it has been possible to develop annually for 1955–57 “secondary” benchmark estimates primarily from data

Gross Private Domestic Investment, 1947–64

(Quarterly data. Seasonally adjusted annual rates)



SOURCE OF DATA: DEPARTMENT OF COMMERCE

TABLE 8.—Gross Private Domestic Investment

[Billions of dollars]

Year	Total gross private domestic investment	Fixed investment						Change in business inventories	
		Total	New construction ¹			Producers' durable equipment		Total	Nonfarm
			Total	Residential nonfarm	Other ²	Total	Nonfarm		
1929	16.2	14.6	8.7	3.6	5.1	5.8	5.2	1.7	1.8
1930	10.3	10.6	6.2	2.1	4.1	4.5	4.0	-.4	-.1
1931	5.5	6.8	4.0	1.6	2.4	2.8	2.6	-1.3	-1.6
1932	.9	3.5	1.9	.6	1.2	1.6	1.4	-2.6	-2.6
1933	1.4	3.0	1.4	.5	1.0	1.6	1.5	-1.6	-1.4
1934	2.9	4.0	1.7	.6	1.1	2.3	2.1	-1.1	.2
1935	6.3	5.4	2.3	1.0	1.3	3.1	2.7	.9	.4
1936	8.4	7.4	3.3	1.6	1.7	4.2	3.6	1.0	2.1
1937	11.7	9.5	4.4	1.9	2.5	5.1	4.5	2.2	1.7
1938	6.7	7.6	4.0	2.0	2.0	3.6	3.1	-.9	-1.0
1939	9.3	8.9	4.8	2.7	2.1	4.2	3.7	.4	.3
1940	13.2	11.0	5.5	3.0	2.5	5.5	4.9	2.2	1.9
1941	18.1	13.6	6.6	3.5	3.1	6.9	6.1	4.5	4.0
1942	9.9	8.1	3.7	1.7	2.0	4.3	3.7	1.8	.7
1943	5.6	6.4	2.3	.9	1.4	4.0	3.5	-.8	-.6
1944	7.1	8.2	2.7	.8	1.9	5.4	4.7	-1.0	-.6
1945	10.4	11.5	3.8	1.1	2.7	7.7	6.9	-1.1	-.6
1946	28.1	21.7	11.0	4.8	6.3	10.7	9.8	6.4	6.4
1947	31.5	32.0	15.3	7.5	7.7	16.7	14.9	-.5	1.3
1948	43.1	39.4	19.5	10.1	9.3	18.9	16.4	4.7	3.0
1949	33.0	36.0	18.8	9.6	9.2	17.2	14.4	-3.1	-2.2
1950	50.0	43.2	24.2	14.1	10.1	18.9	16.2	6.8	6.0
1951	56.3	46.1	24.8	12.5	12.3	21.3	18.4	10.2	9.1
1952	49.9	46.8	25.5	12.8	12.7	21.3	18.6	3.1	2.1
1953	50.3	49.9	27.6	13.8	13.8	22.3	19.5	.4	1.1
1954	48.9	50.5	29.7	15.4	14.3	20.8	18.5	-1.6	-2.1
1955	63.8	58.1	34.9	18.7	16.2	23.1	20.6	5.8	5.5
1956	67.4	62.7	35.5	17.7	17.8	27.2	25.0	4.7	5.1
1957	66.1	64.6	36.1	17.0	19.0	28.5	26.2	1.6	.8
1958	56.6	58.6	35.5	18.0	17.4	23.1	20.3	-2.0	-2.9
1959	72.7	66.2	40.2	22.3	17.9	25.9	23.1	6.6	6.5
1960	71.8	68.3	40.7	21.1	19.7	27.6	25.1	3.5	3.2
1961	68.8	66.9	41.0	21.1	19.8	25.9	23.3	1.9	1.5
1962	79.1	73.3	44.2	23.6	20.6	29.0	26.3	5.9	5.3
1963	82.0	77.6	46.6	25.2	21.3	31.0	27.9	4.4	3.9
1964 ³	87.7	84.0	48.9	26.0	22.9	35.1	31.5	3.7	3.6

¹ Revisions in the "New construction" series shown in table "New Construction" (p. 65) have not yet been incorporated into these accounts.² Includes petroleum and natural gas well drilling, which are excluded from "New construction" estimates.³ Preliminary estimates.

NOTE.—Quarterly data available beginning 1939; annual from 1929. Detail will not necessarily add to totals because of rounding.

Source: Department of Commerce.

collected by the Bureau of the Census in its annual sample surveys of manufacturers. Annual estimates for the years 1955-57 take into account both the secondary benchmarks and the series used in making the quarterly estimates. The quarterly estimates and the annual estimates of producers' purchases of

durable equipment for 1957 and later years are derived largely by interpolation and extrapolation based on the OBE-SEC Plant and Equipment Expenditures Survey (see next section). The Survey results are adjusted to make them comparable with estimates of producers' durable equipment, principally by ex-

cluding expenditures on new plant, including expenditures on new farm equipment and adding an estimate of expenditures for business passenger cars to the extent that they are not covered. The Plant and Equipment Expenditures Survey has been used to estimate the quarterly movement of producers' durable equipment for the period 1947 to date. The quarterly estimates for earlier years, except for the 1950-52 period when data from the National Production Authority were utilized, are based mainly on selected industry sales data from the Department of Commerce Monthly Industry Survey series (which has been revamped and is now identified as the Manufacturers' Shipment, Inventories, and Orders series).

The primary source for estimates of changes in the nonfarm portion of business inventories is reported accounting data on the book value of inventories at the beginning and end of the period for which the estimates are made. Because inventory calculation by individual business firms varies widely in method, numerous adjustments in the reported data are necessary to arrive at an estimate consistent with the basic concept. The principal adjustment is that of removing the price-change element in the reported figures and revaluing inventory change in current dollars.

RELATION TO OTHER SERIES

The relationship between the "Producers' durable equipment" series and the estimated equipment series implied in Expenditures for New Plant and Equipment, to which it is most closely related, is discussed in the following section.

The "Change in business inventories" series is most closely related to the estimates of "Business Inventories," discussed later. A basic difference between these series is that the series on business inventory change, included here, measures changes in inventories over a period of time, whereas the inventories series presented below measures the level of inventories at a given point in time. The series also differ conceptually in their measurement of inventories: the inventories series is based upon data as reported by the reporting companies, whereas in the inventory-change series in the income accounts a uniform method of valuation is used.

The producers' durable equipment series and the change in business inventories series are seasonally adjusted primarily by use of the ratio-to-moving-

average method. Modifications in this seasonal adjustment method are made when appropriate, and improvements in the seasonal adjustment factors are instituted when experience suggests that they are desirable. The magnitude of the gross private domestic investment seasonal correction may be seen in the accompanying table on page 8.

USES AND LIMITATIONS

Changes in business investment are a major—if not the major—factor determining business conditions.

Unfortunately, there are many shortcomings in the data on which both fixed investment and inventory changes are based, especially for current quarters.

The absence of reliable current data on government purchases of producers' durable equipment constitutes a special problem. The limitations of the data on manufacturers' commodity sales and on new plant and equipment expenditures affect the current estimates of investment in producers' durable equipment. The rate of investment in construction is also subject to many data inadequacies, requiring the use of "phasing patterns" and other synthetic statistical techniques.

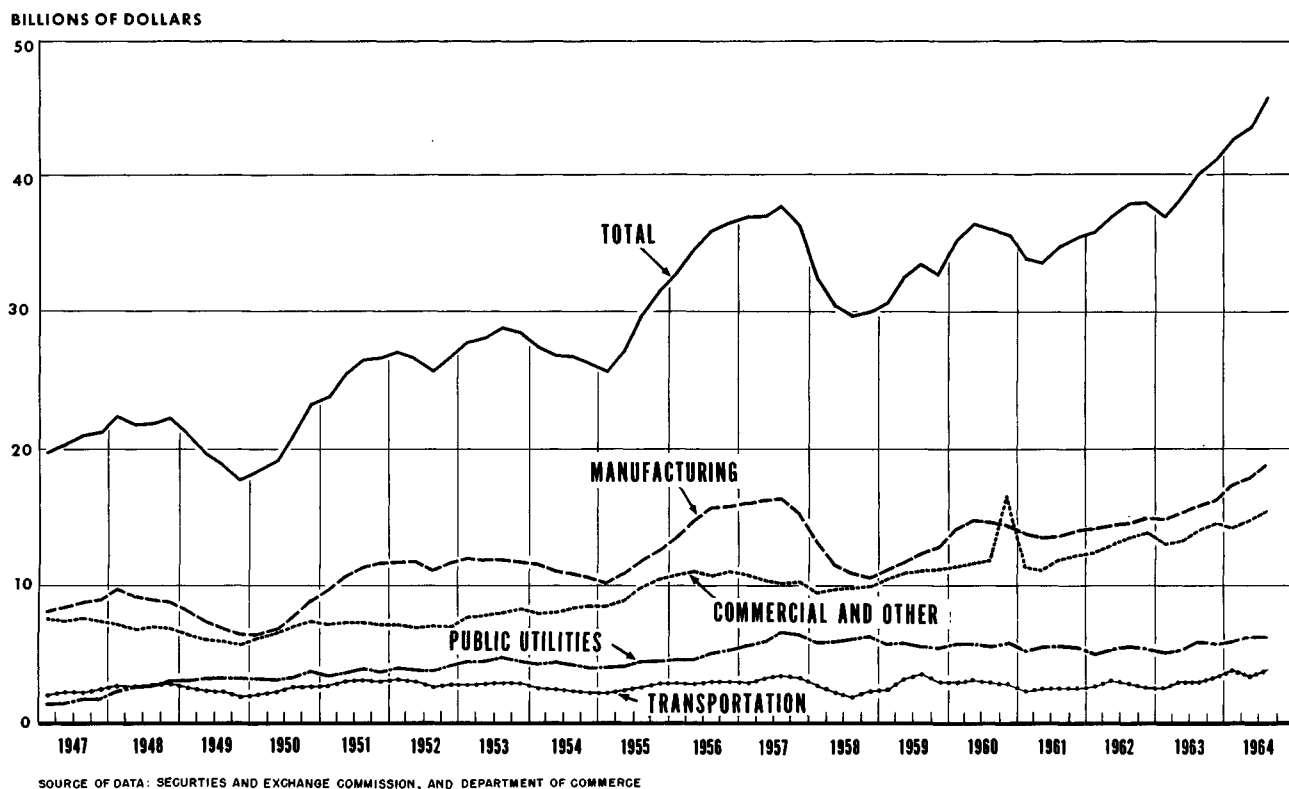
The figures on "Change in business inventories," although rough estimates to a considerable degree, are useful indicators of the physical volume change in inventories during the period under review. A serious limitation in the series is inherent in the basic method of calculation that must be used. The estimates are calculated as the difference between large and possibly volatile inventory totals at two points in time. Even small errors in the estimates of total inventories can lead to large relative errors in the estimates of inventory change. This limitation contributes appreciably to the difficulty of determining seasonal patterns in the quarterly changes in business inventories. Estimates of current inventory change are based upon less satisfactory data than are the estimates for past years.

REFERENCES

See above, under National Income. For a full discussion of the concepts and statistical methods, see particularly pages 43-45 and 122-138 in the *1954 National Income Supplement*, and pages 82-85 and 97-98 of *U.S. Income and Output*.

Expenditures for New Plant and Equipment, 1947-64

(Quarterly data. Seasonally adjusted annual rates)



9. EXPENDITURES FOR NEW PLANT AND EQUIPMENT

DESCRIPTION OF SERIES

The series on expenditures for new plant and equipment, published jointly by the Office of Business Economics (Department of Commerce) and the Securities and Exchange Commission, measures the expenditures by all private business (except farming, real estate, the professions, and non-profit and other institutions) for new plant, machinery, and equipment for which depreciation accounts are maintained. Expenditures charged off as current expense are excluded. Estimates are made quarterly for actual plant and equipment expenditures and for anticipated expenditures for two succeeding quarters and the calendar year. These estimates are based upon information contained in annual reports of all corporations registered with SEC and quarterly reports from a group of registered corporations which make over 90 percent of the capital expenditures by registered

corporations; in annual and quarterly reports by a group of unregistered mining, manufacturing, trade, service, and construction companies to OBE, and by regulated railroads, motor carriers, water carriers, and pipeline companies to the Interstate Commerce Commission. In 1960 a large expansion was made in the sample of financial organizations.

The last major revision in the series was published in two parts, the revision for manufacturing industries in the December 1951 issue of the *Survey of Current Business* and the revision for nonmanufacturing industries in the August 1952 issue. The revision established a new set of benchmark data and introduced improvements in the estimating procedures being used. For example, information contained in the annual mandatory financial reports (Form 10K) to SEC was used for the first time and adjustments were made for biases arising out of changes in the business population.

STATISTICAL PROCEDURES

The benchmarks for the estimates were developed by applying weights derived from reports to the Internal Revenue Service for the tax year 1948 to sample expenditure figures for the benchmark period (i.e., 1948). Actual plant and equipment expenditures data were not available for the universe of all firms, so it was necessary to derive a benchmark by using pieces of related information which were complete—specifically, total assets for corporations and total sales and operating receipts for unincorporated business. Ratios of plant and equipment expenditures to total assets or to sales and operating receipts were computed from the reporting sample and from other sources. These ratios were multiplied by IRS universe assets, or sales and operating receipts, to determine universe estimates of plant and equipment expenditures in 1948.

The estimations of year-to-year and quarter-to-quarter movements in these expenditures are made by extrapolating the benchmark estimates on the basis of the annual and quarterly reports received by SEC, OBE and ICC. Essentially, the estimation procedure is as follows: given a universe estimate for one period, the universe estimate for the next period is derived by multiplying the first given universe estimate by a link relative which is derived from aggregates for the first period and the period following for a matched sample of reporting companies. The group of reporting companies accounts for at least two-thirds of aggregate investment in plant and equipment, although the sample is not randomly selected. Coverage varies considerably by industry groups. Sample expenditures as a percent of estimated universe expenditures in the third quarter of 1957 were as follows: manufacturing 79; mining 37; railroads 99; transport, except railroads, 50; public utilities 82; communications 95; commercial 11; and total 66.

The factors used for adjusting plant and equipment expenditures data for seasonal fluctuations are derived from the X-9 version of the Census method adjustment program. These seasonal adjustment factors are applied both to the estimates of anticipated expenditures for a given quarter and to the estimates of actual expenditures for that quarter. The seasonally adjusted estimates of anticipated expenditures are further adjusted for the systematic biases of underestimation or overestimation that have been found in the reported data.

The seasonal adjustment factors and the bias adjustment factors have remained relatively stable for any given quarter during recent years, but they are modified as circumstances warrant. The bias adjustment factors are applied as multipliers; the seasonal adjustment factors are applied as divisors. The magnitudes of the seasonal and bias adjustments made in the 1961 quarterly estimates are suggested by the implicit adjustment factors shown in the table below.

RELATION TO OTHER SERIES

The OBE-SEC series on actual plant and equipment expenditures utilizes the same definitions of investment as those of the Census of Manufactures, Census of Business, and the annual survey of manufactures of the Bureau of the Census. There are substantial differences between the Census Bureau data on expenditures for plant and equipment and the OBE-SEC series, however. Most important, the OBE-SEC series supplies both actual and anticipatory data on a quarterly and annual basis, whereas the Census data relate only to annual expenditures in past periods. In addition, the OBE-SEC series obtains reports on companywide outlays, whereas the Census Bureau obtains reports on outlays of establishments. Thus, the Census Bureau's annual series on manufacturers covers only *establishments*

Implicit Adjustment Factors, Expenditures for New Plant and Equipment, 1963

Quarter	Bias Adjustment Factors		Seasonal adjustment factors for the same quarter
	First anticipated expenditures estimate for a given quarter	Second anticipated expenditures estimate for the same quarter	
First	0. 96	0. 91	0. 89
Second 98	. 96	1. 02
Third 99	. 92	1. 01
Fourth	1. 06	1. 01	1. 08

TABLE 9.—Expenditures for New Plant and Equipment

[Billions of dollars]

Year	Total ¹	Manufacturing			Mining	Transportation		Public utilities	Commercial and other ²
		Total	Durable goods	Nondurable goods		Railroads	Other		
1939.....	5.51	1.94	0.76	1.19	0.33	0.28	0.36	0.52	2.08
1945.....	8.69	3.98	1.59	2.39	.38	.55	.57	.50	2.70
1946.....	14.85	6.79	3.11	3.68	.43	.58	.92	.79	5.33
1947.....	20.61	8.70	3.41	5.30	.69	.89	1.30	1.54	7.49
1948.....	22.06	9.13	3.48	5.65	.88	1.32	1.28	2.54	6.90
1949.....	19.28	7.15	2.59	4.56	.79	1.35	.89	3.12	5.98
1950.....	20.60	7.49	3.14	4.36	.71	1.11	1.21	3.31	6.78
1951.....	25.64	10.85	5.17	5.68	.93	1.47	1.49	3.66	7.24
1952.....	26.49	11.63	5.61	6.02	.98	1.40	1.50	3.89	7.09
1953.....	28.32	11.91	5.65	6.26	.99	1.31	1.56	4.55	8.00
1954.....	26.83	11.04	5.09	5.95	.98	.85	1.51	4.22	8.23
1955.....	28.70	11.44	5.44	6.00	.96	.92	1.60	4.31	9.47
1956.....	35.08	14.95	7.62	7.33	1.24	1.23	1.71	4.90	11.05
1957.....	36.96	15.96	8.02	7.94	1.24	1.40	1.77	6.20	10.40
1958.....	30.53	11.43	5.47	5.96	.94	.75	1.50	6.09	9.82
1959.....	32.54	12.07	5.77	6.29	.99	.92	2.02	5.67	10.88
1960.....	35.68	14.48	7.18	7.30	.99	1.03	1.94	5.68	11.57
1961.....	34.37	13.68	6.27	7.40	.98	.67	1.85	5.52	11.68
1962.....	37.31	14.68	7.03	7.65	1.08	.85	2.07	5.48	13.15
1963.....	39.22	15.69	7.85	7.84	1.04	1.10	1.92	5.65	13.82
1964 (anticipated) ³	44.66	18.51	9.35	9.16	1.18	1.46	2.31	6.14	15.06

¹ Excludes agriculture.² Includes trade, service, finance, communications, and construction.³ Estimates based on anticipated capital expenditures as reported by business in November 1964. Includes adjustments when necessary for systematic tendencies in anticipatory data.

NOTE.—These figures do not agree precisely with the plant and equipment expenditures included in the gross national product estimates of the Department of Commerce. The main difference lies in the inclusion in the gross national product of investment by farmers, professionals, and institutions, and of certain outlays charged to current expense.

Data on expenditures for new plant and equipment are not available for the years prior to 1939 and for the years 1940-44.

Sources: Securities and Exchange Commission and Department of Commerce.

whose primary activity is manufacturing, whereas the OBE-SEC quarterly and annual manufacturing series covers all activities, manufacturing as well as nonmanufacturing, of companies whose primary activity is manufacturing; and excludes manufacturing activities of companies whose primary activity is nonmanufacturing. Finally, the OBE-SEC estimates cover all industries except agriculture, the professions and nonprofit and other institutions, and real estate, whereas the Census estimates cover only manufacturing, mining (1954 and 1958) and the wholesale, retail and service trades (1958).

The OBE-SEC series, covering all industries, differs somewhat in concept from the "Producers' durable equipment" and "New construction" components of gross private domestic investment. Unlike the latter, the OBE-SEC series is confined to nonagricultural industries, and excludes expenditures of institutions and professional persons and plant

and equipment outlays charged off as current expenses; it is based on a survey requesting information on expenditures charged to capital account, for which depreciation accounts are maintained. The current estimates of investment in producers' durable equipment are for the most part derived indirectly by extrapolating benchmarks on the basis of percent-change estimates developed from the equipment expenditures portion of the OBE-SEC series; and the estimates of new private construction are developed from both direct and indirect sources.

The OBE-SEC series on manufacturers' expenditures for new plant and equipment is directly comparable in classification and scope with the Census-OBE series on manufacturers' sales, new orders, and inventories, although the comparability will diminish somewhat as the sales, orders and inventories survey reports for large multi-industry firms are shifted from a company to a divisional basis. Then

OBE series has a different scope from the Federal Trade Commission-Securities and Exchange Commission manufacturing, financial reports series, mainly in that the FTC-SEC estimates of balance sheet and income statement items covers only *corporations*, and a different degree of consolidation is involved.

USES AND LIMITATIONS

This series is one of the very few economic series in which estimates of anticipated events as well as historical events are made. Anticipated capital outlays, especially for the coming year, are of great importance in the analysis of business conditions. Anticipated expenditures for a period differ from actual expenditures for the same period for a number of reasons. Nevertheless, except in a few periods in the past when unanticipated developments of major importance have occurred, such as the outbreak of Korean hostilities, both the annual data and the quarterly anticipatory data adjusted for seasonal variations and systematic biases have proved a reliable indicator of the overall trend of capital expenditures. The survey has generally reflected the cyclical turning points in the postwar period.

There are two principal deficiencies in the statistical procedures employed in making the estimates of expenditures for new plant and equipment. One of these, mentioned above, is the inadequacy of the sam-

ple for some industries. This is so despite the fact that within the past few years the coverage in some of these industries—notably: mining, finance, service, construction, trade and transportation other than rail and air—has been strengthened considerably. The second deficiency is that in several areas, especially trade, services and construction, the benchmark data are either out of date or of limited reliability.

REFERENCES

These estimates are published quarterly in Department of Commerce and Securities and Exchange Commission press releases and in the *Survey of Current Business*. Annual data and quarterly data for the preceding four years are shown in *Business Statistics*, the biennial statistical supplement to the Survey of Current Business. For a fuller description of the methods employed in making the estimates and of the latest revisions in the series, see the December 1951 and August 1952 issues of the *Survey of Current Business*. Further elaboration on the methods employed and a qualitative evaluation of the series for the years 1948-1958 is contained in *Statistical Evaluation Reports, Report No. 1, "An Appraisal of OBE-SEC Estimates of Plant and Equipment Expenditures, 1947-1958,"* published by the Office of Statistical Standards, Bureau of the Budget.

EMPLOYMENT, UNEMPLOYMENT, AND WAGES

10. STATUS OF THE LABOR FORCE

DESCRIPTION OF SERIES

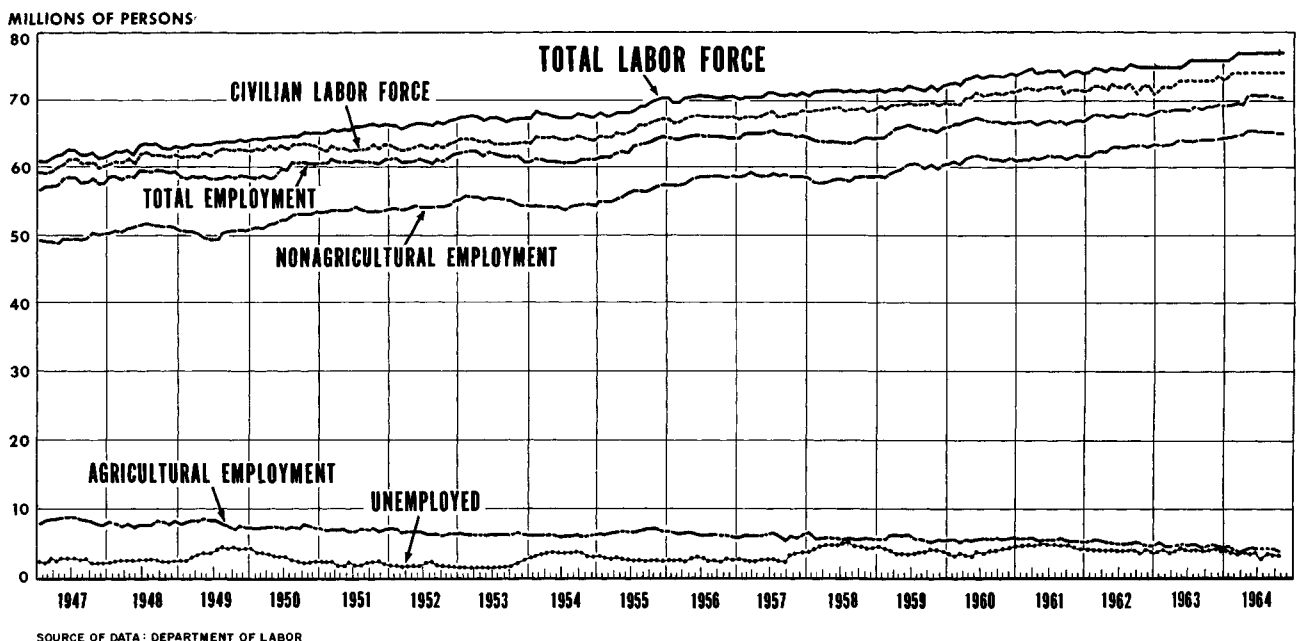
Each month the Bureau of Labor Statistics of the Department of Labor publishes estimates of the labor force and of total employment and unemployment. In addition to the overall figures, detail is presented on the characteristics of employed and unemployed persons, such as age, sex, color, marital status, and veteran status. Employed persons are further subdivided into those employed in agriculture or in other pursuits, and into wage and salary workers, or the self-employed. Workers are also classified by broad occupation groups, by hours worked during the survey week and by reasons for part-time work. Duration of unemployment is shown for the unemployed.

The information is obtained from a monthly sample survey of households, conducted by the Bureau of the Census, which represents all persons in the United States except those living in institutions (such as prisons or homes for the aged). On the basis of responses to interviewers, all persons 14 years and over in the sample households are classified as employed, unemployed, or not in the labor force for the calendar week containing the 12th of the month. Prior to July 1955, the reference week was the calendar week containing the 8th of the month; this change was made to improve comparability with other series.

Counted as *employed* are all persons who, during the survey week, were either (a) "At work"—those who did any work for pay or profit, or those who worked without pay for 15 hours or more on a family

Status of the Labor Force, 1947-64

(Monthly data. Seasonally adjusted)



farm or business; or (b) "With a job but not at work"—those who did not work and were not looking for work but had a job or business from which they were temporarily absent because of vacation, illness, industrial dispute, bad weather, or for various other reasons. Prior to 1957, this group also included persons on layoff who had definite instructions to return to work within 30 days after the date of layoff (now classified as unemployed) and those waiting to start new wage and salary jobs within 30 days (now classified either as unemployed or, if currently in school, as not in the labor force).

Included as *unemployed* are persons who did not work at all during the survey week and were looking for work. Also included as unemployed are those who did not work at all during the survey week and (a) were waiting to be called back to a job from which they had been laid off; or (b) were waiting to report to a new wage or salary job scheduled to start within the following 30 days (and were not in school during the survey week); or (c) would have been looking for work except that they were temporarily ill or believed no work was available in their line of work or in the community.

The sum of the employed and the unemployed constitutes the *civilian labor force*. The *total labor force* also includes members of the Armed Forces stationed either in the United States or abroad. All other civilians 14 years of age and over are classified as "not in the labor force" (housewives, students, retired or disabled persons, those doing less than 15 hours of unpaid family work, and the voluntarily idle).

The sample survey described above was started in March 1940. Prior to that date there was no periodic direct enumeration of the labor force. The estimates shown for 1939 and earlier years were prepared by the Bureau of Labor Statistics, using information such as the 1930 and 1940 Censuses of Population, and employment trends from BLS and Department of Agriculture series for intervening years. The techniques used in preparing the estimates for the earlier years are described in "Labor Force, Employment, and Unemployment, 1929-39: Estimating Methods," which appeared in the July 1948 issue of the Labor Department's *Monthly Labor Review*.

The labor force survey, initiated by the WPA, was conducted by the Bureau of the Census from 1942 through June 1959 as part of the Current Population Survey. Since July 1959, the Bureau of Labor Statistics has been responsible for monthly statistics on

the labor force, with the Bureau of the Census acting as collecting and compiling agent.

STATISTICAL PROCEDURES

Since the survey was instituted in 1940, there have been a number of revisions in the series. In November 1943 an improved sample design was introduced and the estimates were revised back to 1940 using the 1940 Census of Population figures as a benchmark for that date. Starting in July 1945, a modified set of questions was used which resulted in a more nearly complete count of employed persons; the estimates were again revised back to 1940 to take account of the improvement in interviewing procedure. Beginning in 1953, 1950 population counts were introduced into the estimating procedure and no backward revisions were made. The 1953 changes raised the levels of labor force, total employment, and agricultural employment by about 350,000, affecting primarily the figures for totals and for males.

In 1954 the sample was spread from 68 sample areas to 230 sample areas (although retaining the overall size of about 21,000 interviewed households) in the interest of improving the reliability of the estimates. The estimates for 1953, which were deficient in certain respects, were revised to achieve greater comparability with those from the new sample. Estimates prior to 1953 are not exactly comparable with those from the expanded sample, although for most major items the series can be regarded as reasonably consistent.

In May 1956, the sample was expanded from 230 to 330 sample areas and from 21,000 to 35,000 interviewed households, to improve further the reliability of the statistics and to provide a basis for more detailed data for the Nation as a whole and limited data for broad geographic regions. Full comparisons of the results from the 230- and 330-area supplies—available for both April and May of 1956—showed only small differences either in major categories or in detailed groups. For most purposes, therefore, the data from the expanded sample since May 1956 can be used as a continuous series with earlier statistics.

Starting in January 1957, certain limited changes were made in the definitions of employment and unemployment, following a comprehensive interagency review of concepts in this field. The changes involved primarily a transfer of two small groups from the employed to the unemployed classification, as described in the definitions given above. Statistics

TABLE 10.—*Employment Status of the Labor Force*

Year	Total labor force (including armed forces) ¹	Civilian labor force	Civilian employment			Unemployment		Labor force participation rate ²
			Total	Agricultural	Nonagricultural	Number	Percent of civilian labor force	
Thousands of persons 14 years of age and over							Percent	
1929	49,440	49,180	47,630	10,450	37,180	1,550	3.2	(³)
1930	50,080	49,820	45,480	10,340	35,140	4,340	8.7	(³)
1931	50,680	50,420	42,400	10,290	32,110	8,020	15.9	(³)
1932	51,250	51,000	38,940	10,170	28,770	12,060	23.6	(³)
1933	51,840	51,590	38,760	10,090	28,670	12,830	24.9	(³)
1934	52,490	52,230	40,890	9,900	30,990	11,340	21.7	(³)
1935	53,140	52,870	42,260	10,110	32,150	10,610	20.1	(³)
1936	53,740	53,440	44,410	10,000	34,410	9,030	16.9	(³)
1937	54,320	54,000	46,300	9,820	36,480	7,700	14.3	(³)
1938	54,950	54,610	44,220	9,690	34,530	10,390	19.0	(³)
1939	55,600	55,230	45,750	9,610	36,140	9,480	17.2	(³)
1940	56,180	55,640	47,520	9,540	37,980	8,120	14.6	56.0
1941	57,530	55,910	50,350	9,100	41,250	5,560	9.9	56.7
1942	60,380	56,410	53,750	9,250	44,500	2,660	4.7	58.8
1943	64,560	55,540	54,470	9,080	45,390	1,070	1.9	62.3
1944	66,040	54,630	53,960	8,950	45,010	670	1.2	63.1
1945	65,300	53,860	52,820	8,580	44,240	1,040	1.9	61.9
1946	60,970	57,520	55,250	8,320	46,930	2,270	3.9	57.2
1947	61,758	60,168	57,812	8,256	49,557	2,356	3.9	57.4
1948	62,898	61,442	59,117	7,960	51,156	2,325	3.8	57.9
1949	63,721	62,105	58,423	8,017	50,406	3,682	5.9	58.0
1950	64,749	63,099	59,748	7,497	52,251	3,351	5.3	58.4
1951	65,983	62,884	60,784	7,048	53,736	2,099	3.3	58.9
1952	66,560	62,966	61,035	6,792	54,243	1,932	3.1	58.8
1953 ⁴	67,362	63,815	61,945	6,555	55,390	1,870	2.9	58.5
1954	67,818	64,468	60,890	6,495	54,395	3,578	5.6	58.4
1955	68,896	65,848	62,944	6,718	56,225	2,904	4.4	58.7
1956	70,387	67,530	64,708	6,572	58,135	2,822	4.2	59.3
1957	70,744	67,946	65,011	6,222	58,789	2,936	4.3	58.7
1958	71,284	68,647	63,966	5,844	58,122	4,681	6.8	58.5
1959	71,946	69,394	65,581	5,836	59,745	3,813	5.5	58.3
1960 ⁵	73,126	70,612	66,681	5,723	60,958	3,931	5.6	58.3
1961	74,175	71,603	66,796	5,463	61,333	4,806	6.7	58.0
1962 ⁶	74,681	71,854	67,846	5,190	62,657	4,007	5.6	57.4
1963	75,712	72,975	68,809	4,946	63,863	4,166	5.7	57.3
1964	76,971	74,233	70,357	4,761	65,596	3,876	5.2	57.4

¹ Data for 1940-52 revised to include about 150,000 members of the armed forces who were outside the United States in 1940 and therefore were not enumerated in the 1940 census and were excluded from 1940-52 estimates.

² Total labor force as percent of noninstitutional population 14 years of age and over.

³ Not available.

⁴ Beginning 1953, labor force and employment figures are not strictly comparable with previous years as a result of the introduction of material from the 1950 Census into the estimating procedure. Population levels were raised by about 600,000; labor force, total employment, and agricultural employment by about 350,000, primarily affecting the figures for total and males. Other categories were relatively unaffected.

⁵ Data for 1960 include Alaska and Hawaii and are therefore not strictly comparable with previous years. This inclusion has resulted in an increase of about half a million in the noninstitutional population 14 years of age and over, and about 300,000 in the labor force, four-fifths of this in nonagricultural employment. The levels of other labor force categories were not appreciably changed.

⁶ Beginning in 1962, comparability with previous years is affected somewhat by the introduction of material from the 1960 census into the estimating procedure. The level of labor force and employment was lowered by about 150,000.

NOTE.—Monthly labor force data available beginning March 1940. Annual data are averages of monthly figures. Data for 1947 forward adjusted to reflect new definitions of employment and unemployment adopted in 1957.

Source: Department of Labor.

for major categories on both the old and new bases have been published by the Bureau of the Census for 1957 and adjustments carried back to 1947. Starting in 1960, data include Alaska and Hawaii increasing the number of sample areas to 333. This inclusion has resulted in an increase of about 300,000 in the labor force, four-fifths of this in nonagricultural employment. The levels of other labor force categories were not changed appreciably.

In December 1961 a modification of the CPS sample design was begun to gradually incorporate information obtained from the 1960 Decennial Census. The transition was completed in March 1963. The number of households interviewed each month remains at approximately 35,000 but the number of geographical areas sampled was increased from 333 to 357. The sampling areas continue to be stratified according to the following criteria:

(1) Standard Metropolitan Statistical Area or not; (2) Rate of population change; (3) Percent of population living in urban areas; (4) Percent of population in manufacturing; (5) Principal industries; (6) Average value of retail trade; (7) Proportion of nonwhite population. (For further information, see the 1962 Report of the President's Committee to Appraise Employment and Unemployment Statistics: *Measuring Employment and Unemployment*, Appendix E: "Revision of the CPS Sample 1961-1963.")

The panel of respondents is rotated. A single household is interviewed for four consecutive months, dropped for eight months, and picked up again for the next four months. Thus, roughly three-fourths

of the sample is identical from one month to the next, and one-fourth is added; and in any given month about one-half the sample is identical with that interviewed in the same month a year earlier.

A composite estimating procedure is used. This method involves the preparation of two intermediate estimates for a given item each month: (1) an estimate obtained by applying to the final estimate for the preceding month an estimate of month-to-month change based on those parts of the sample common to the 2 months (roughly 75 percent of the sample units); and (2) an estimate based on the data for the current month only, inflated to independent estimates of the population by age, sex, and color (prior to 1954 the sole estimation procedure used). The final estimate is then obtained from a weighted average of the intermediate estimates (1) and (2), achieving a substantial reduction in sampling variability for most items.

The major labor force categories (using the definitions as revised in 1957) have been seasonally adjusted back to 1947 using a ratio-to-moving-average method with a provision for "moving" adjustment factors to take account of changing seasonal patterns. The method used is described in "The BLS Seasonal Factor Method (1964)," available upon request to the Division of Statistical Standards, Bureau of Labor Statistics, Washington, D.C. Factors in use during 1964 for the years 1963 and 1964 indicate the range of magnitude of the seasonal fluctuations in the series.

Seasonal Adjustment Factors for the Labor Force and Major Components To Be Used for the Period 1963-64

Month	Agriculture				Nonagricultural				Unemployment			
	Male		Female		Male		Female		Male		Female	
	Age 14 to 19	Age 20 and over	Age 14 to 19	Age 20 and over	Age 14 to 19	Age 20 and over	Age 14 to 19	Age 20 and over	Age 14 to 19	Age 20 and over	Age 14 to 19	Age 20 and over
January	59.8	91.5	25.3	62.0	85.2	98.4	90.2	99.1	87.9	127.0	75.9	109.2
February	61.8	92.6	29.6	61.8	88.4	98.6	90.9	100.4	96.0	128.6	78.3	107.9
March	73.2	96.6	29.6	74.6	85.0	98.8	92.1	101.6	93.5	123.6	79.5	103.4
April	85.0	99.6	43.9	81.8	90.1	99.5	89.7	101.5	90.3	105.2	81.4	96.3
May	94.7	103.3	80.3	111.6	98.8	100.1	92.3	101.7	96.5	91.1	108.0	93.8
June	163.1	106.6	212.2	139.0	118.9	100.8	103.5	98.4	182.0	90.2	203.7	101.1
July	166.4	105.3	205.1	129.8	131.9	100.6	122.0	96.6	133.3	90.8	143.7	100.7
August	149.7	103.1	190.3	113.5	130.4	100.9	121.6	97.1	98.4	90.6	97.4	100.2
September	102.6	103.7	145.5	132.0	95.8	100.9	94.8	99.6	78.8	79.4	88.4	101.0
October	98.4	103.8	136.7	130.7	93.5	101.0	99.3	101.0	78.4	78.8	79.2	96.7
November	82.4	100.8	66.5	99.0	91.2	100.6	97.5	101.3	77.4	88.8	89.3	99.9
December	62.9	92.9	35.0	64.3	90.9	100.0	106.1	101.8	87.4	106.0	75.1	89.7

RELATION TO OTHER SERIES

The labor force estimates of employment, obtained from a sample of households, differ in a number of respects from estimates of employment prepared from reports of employing establishments and based on payroll records, such as the Bureau of Labor Statistics current nonagricultural employment series and the Department of Agriculture estimates of farm employment. Because of these differences and variability in sampling and response, changes in the various series may not always be consistent. The labor force estimates provide information on the work status of the population: persons employed at more than one job either because they hold more than one job concurrently or because they changed jobs during the survey week, are counted only once and are classified according to the job at which they work the greatest number of hours during the week. Estimates based on reports from business establishments and farms, on the other hand, count persons who work for more than one establishment as many times as the number of different payrolls on which their names appear. The labor force estimates relate to all types of workers, including domestic service workers, unpaid family workers (working 15 hours or more during the week) and self-employed persons, groups which are excluded from nonagricultural employment series based on establishment reports. On the other hand, workers less than 14 years of age are excluded from the labor force estimates, whereas the payroll-based series have no age exclusions. An additional difference arises from the fact that certain persons with a job but not at work are included with the employed in the labor force estimates, whereas only part of this group (those receiving pay while away from work) are included in the payroll estimates.

For a number of reasons, the unemployment estimates are not directly comparable with statistics derived from unemployment insurance operations. In the first place, some unemployed persons are not eligible for unemployment insurance, particularly young persons looking for their first jobs, domestic servants, most former State and local government workers, agricultural workers, and persons who lost their jobs in firms too small to be covered by the various State unemployment insurance laws. Unemployed persons who have already received all of the benefits to which they are currently entitled are not

included in the insured unemployment figures. Also, the qualifications for drawing unemployment insurance differ from the definition of unemployment used in the labor force series. For example, some persons with a job but not at work and persons working only a few hours during the week are eligible for unemployment insurance, but are classified in the labor force series as employed. Furthermore, some persons may be reported to the Census Bureau interviewers as not looking for work even though they may be registered at public employment offices, consider themselves available for jobs and may be eligible for unemployment insurance.

The effect of differences in these series is analyzed in Chapter IV, A Comparison of Estimates from the Different Sources, in *Measuring Employment and Unemployment*.

USES AND LIMITATIONS

One of the chief advantages of the household labor force, employment and unemployment estimates is that they provide the only comprehensive figures covering the employment status of the whole population. The data are collected monthly and published promptly. The estimates of unemployment, in particular, are used as a current indicator of the general health of the economy.

Another advantage of the household enumeration method of obtaining labor force information is the possibility of relating work status to other personal and family characteristics. Classifications are made not only by broad occupation and industry groups, but also by sex, age, and color, by marital status and number of children. For example, changes in the employment of married women, and of married women with small children, can be studied. By asking supplementary questions from time to time other information concerning the family can be similarly estimated, such as family incomes and the amount of migration during the course of a year. All these analyses throw light on the changing size and composition of the labor force.

Since the estimates are prepared from a relatively small sample, the user should not attach significance to very small changes. Estimates of sampling variability in the data are regularly published. The relative standard sampling error for the 333-area sample is estimated at about 0.3 to 0.5 percent for summary estimates of the civilian labor force, total employment, and nonagricultural employment; and roughly

2.5 to 3.5 percent for agricultural employment and total unemployment.

The user should also keep in mind that the information is collected by personal interview, usually with the housewife. She may not, in some cases, have exact knowledge for all members of the household. For this reason, as well as because of the relatively small size of the sample, only broad occupational and industry groupings of the data are published. Finally, the measurement of unemployment is in some cases difficult, since it depends in part on the attitude of the person interviewed. The classification of a person as unemployed has been made as objective as possible, by using the criterion of "looking for work," but no method has been as yet developed which will insure consistent reporting of activity month after month. Some marginal (usually very small) groups may be reported as unemployed in some circumstances where they would be reported as not in the labor force in others. Most of these problems of measurement affect persons whose attachment to the labor force is casual or intermittent, especially married women and youths still in school looking for part-time jobs.

REFERENCES

Summary employment and unemployment figures are released near the first of the month for the preceding month by the Bureau of Labor Statistics. More detailed estimates are available a week or so later in the *Monthly Report on the Labor Force* which presents the household labor force series, the employer nonagricultural employment series, and the insured unemployment series in a combined release. The same labor force data, together with additional details, are published monthly in *Employment and Earnings* which also includes explanatory notes describing the data and the methodology, indicating the reliability of the estimates and summarizing the seasonal adjustments. A more detailed technical note is available on request to the BLS. Annual summaries and supplementary information on work experience during the preceding year, multiple job-holding, etc., are published by the BLS in a series of "Special Labor Force Reports." Related demographic data from the Current Population Survey are published by the Bureau of the Census in special reports (*Current Population Reports: Series P-60, Consumer Income; Series P-20, Population Characteristics*).

11. SELECTED MEASURES OF UNEMPLOYMENT AND PART-TIME EMPLOYMENT

Unemployment Rates

In addition to unemployment rates for all workers, it is often useful to have rates computed for specific groups. The rate for experienced wage and salary workers excludes unemployed new entrants into the labor force, the self-employed and unpaid family workers. This rate tends to be about the same as the overall unemployment rate. The unemployment rate for married men is sometimes considered to better indicate "hardship" or "need" than the overall rate but has many deficiencies for the purpose. For example, widowers with family responsibilities and women heads of households are not represented. Other unemployment ratios for selected groups are published in *Employment and Earnings*.

Labor Force Time Lost

This is a measure of productive hours lost to the economy. Total labor force time lost is computed on the assumption that those working part time for "economic" reasons—i.e. reasons aside from personal

preference (see below)—lost the difference between their average hours and 37.5 hours per week, that those seeking full-time jobs lost the full 37.5 hours per week, and that persons seeking part-time work lost the average hours worked by the voluntary part-time employed. "Time lost" is derived by subtraction of time worked from total labor time potentially available. Data are available to compute this measure only since May 1955. However, data regarding persons seeking part-time work were not available on a monthly basis until January 1963. This refinement in the measurement of labor force time lost reduced the rate an average of .3-.5 percentage points each month.

Persons at Work, by Hours Worked

DESCRIPTION OF SERIES

As part of the collection of information on the labor force, hours worked during the survey week at all jobs are obtained. Those working less than 35 hours a week are divided first into two groups, those who

TABLE 11.—Selected Measures of Unemployment and Part-time Employment

Year	Unemployment rate				Labor force time lost through unemployment and part-time work ³	Persons at work in nonagricultural industries by hours worked per week ⁴				
	All workers	Experienced wage and salary workers ¹	Married men ²	Percent		Over 40 hours	35-40 hours	Under 35 hours		
								Total	Usually work full time ⁵	Usually work part time ⁶
	Percent				Millions of persons 14 years of age and over					
1940	14.6	(?)	(?)	(?)	31.5	5.6	(?)	(?)		
1941	9.9	(?)	(?)	(?)	35.2	5.2	(?)	(?)		
1942	4.7	(?)	(?)	(?)	38.2	5.3	(?)	(?)		
1943	1.9	(?)	(?)	(?)	39.7	4.6	(?)	(?)		
1944	1.2	(?)	(?)	(?)	38.1	5.4	(?)	(?)		
1945	1.9	(?)	(?)	(?)	36.5		5.9	(?)	(?)	
1946	3.9	(?)	(?)	(?)	21.4	18.1	5.4	(?)	(?)	
1947	3.9	(?)	(?)	(?)	20.3	21.2	6.0	(?)	(?)	
1948	3.8	4.2	(?)	(?)	19.4	21.0	8.5	(?)	(?)	
1949	5.9	6.7	(?)	(?)	17.6	20.9	9.9	(?)	(?)	
1950	5.3	6.0	(?)	(?)	17.5	22.4	10.2	(?)	(?)	
1951	3.3	3.7	(?)	(?)	19.3	23.3	8.9	(?)	(?)	
1952	3.1	3.3	(?)	(?)	19.4	25.1	7.3	(?)	(?)	
1953	2.9	3.2	(?)	(?)	18.1	26.3	8.6	(?)	(?)	
1954	5.6	6.0	(?)	(?)	15.7	24.4	11.8	(?)	(?)	
1955	4.4	4.8	2.5	⁸ 4.8	18.0	27.0	8.7	(?)	(?)	
1956	4.2	4.4	2.3	5.1	18.7	27.3	9.4	1.1	0.9	
1957	4.3	4.5	2.8	5.3	17.6	28.6	9.7	1.2	1.0	
1958	6.8	7.2	5.1	8.1	16.6	28.3	10.4	1.6	1.3	
1959	5.5	5.6	3.6	6.6	17.3	27.7	11.7	1.0	1.3	
1960 ⁹	5.6	5.7	3.7	6.7	17.7	28.7	11.5	1.2	1.3	
1961	6.7	6.8	4.6	8.0	18.2	29.0	11.1	1.3	1.5	
1962	5.6	5.5	3.6	6.7	19.0	28.9	11.7	1.0	1.3	
1963	5.7	5.5	3.4	¹⁰ 6.4	19.3	29.4	11.9	1.1	1.2	
1964	5.2	5.0	2.8	5.8	19.3	29.1	13.9	1.0	1.2	

¹ Includes all persons who have worked at a job two weeks or more.
² Data for 1955 and 1956 have not been adjusted to reflect changes in the definition of employment and unemployment adopted in January 1960.
³ This ratio relates man-hours lost to man-hours which would have been worked had there been no unemployment and no involuntary part-time employment. It is assumed that the unemployed and part-time workers would have worked 37.5 hours per week.
⁴ Differs from total employed in nonagricultural industries which includes persons with jobs but not at work for such reasons as illness, vacation, bad weather, and industrial disputes.
⁵ Includes persons who worked part time because of slack work, material shortages or repairs, new job started, or job terminated.
⁶ Primarily includes persons who could find only part-time work.
⁷ Not available.
⁸ Average of 8 months (May-December).
⁹ Data include Alaska and Hawaii beginning 1960 and are therefore not strictly comparable with previous years. This inclusion has resulted in an increase of about half a million in the noninstitutional population 14 years of age and over, and about 300,000 in the labor force, four-fifths of this in nonagricultural employment. The levels of other labor force categories were not appreciably changed.
¹⁰ If data had not been available as to whether unemployed persons sought full- or part-time work, the rate would have been 6.8 percent in 1963. (See discussion on p. 36.)

NOTE.—Monthly data on persons at work by hours worked per week available monthly beginning 1940, and numbers classified by reason for part-time work available monthly beginning May 1955.

Source: Department of Labor.

usually work full time, and those who usually work part time. Each of these groups is then classified according to whether the part-time work during the survey week was the result of (1) "economic" reasons, such as slack work, material shortages, plant or machine repairs, new job started during week, could find only part-time work; or (2) other reasons, such as holidays, bad weather, own illness, vacation, participation in labor dispute, did not want full-time work, etc.

The average hours worked per week by persons working part time in nonagricultural industries for economic reasons differ according to whether such persons usually work full time or usually hold part-time jobs. Annual averages are available since 1956:

	Usually work full time	Usually work part time
1956.....	24.0	18.2
1957.....	24.5	18.3
1958.....	25.2	18.1
1959.....	23.8	18.3
1960.....	24.7	18.2
1961.....	24.2	18.1
1962.....	23.6	17.3
1963.....	23.6	17.5

USES AND LIMITATIONS

Changes in the number of persons working part time for economic reasons may reflect changes in economic conditions as soon as, or even earlier than, the number of unemployed. Experience in interpreting the series on reasons for part-time employ-

ment has been limited, since the figures have been available on a monthly basis only since May 1955. Information on persons at work by hours worked is also published classified by broad industrial and occupational groups and by selected personal characteristics.

The monthly labor force survey is the only source of information on hours covering all industries. In analyzing these data, and comparing them with the results of the establishment survey, it should be remembered that the labor force survey includes hours worked at *all* jobs during the survey week, and that the hours reported by the household respondent may reflect in some cases scheduled hours rather than actual hours worked. The establishment survey, on the other hand, includes hours paid for but not worked as well as hours worked, and the average is affected by turnover during the payroll period.

REFERENCES

See page 36 above, under Status of the Labor Force.

12. UNEMPLOYMENT INSURANCE PROGRAMS

DESCRIPTION OF SERIES

Weekly data on claims for benefits under employment security programs, obtained as a byproduct of operations, represent a measure of unemployment among workers covered by the programs. The series are compiled by the Bureau of Employment Security from reports from State employment security agencies covering State programs, the program of unemployment compensation for Federal employees, and the ex-servicemen's unemployment compensation program. Figures also include World War II veterans who filed for benefits under the Servicemen's Readjustment Act of 1944, Korean War veterans filing under the Veterans' Readjustment Assistance Act of 1952, and claimants under the Federal and State programs for temporary extension of unemployment compensation. The data for "all programs" also include in the national totals the program of unemployment insurance administered by the Railroad Retirement Board. "State programs" exclude the Federal employee, servicemen, and railroad industry programs.

Insured unemployment represents the number of covered workers totally or partially unemployed during a given week for which they have filed unemployment insurance claims. Weekly insured unemploy-

ment figures are available for each State for the State, Federal employee (UCFE), and ex-servicemen's (UCX) programs. Weekly averages for the calendar month are also provided. In addition, for the week ending nearest the fifteenth of each month, insured unemployment figures for 145 major labor market areas are provided, including State programs, UCFE, and UCX.

Initial claims are notices of the beginning of a period of unemployment for which benefits may later be claimed. These data are also available on a weekly basis for each State. This series provides a measure of the volume of new unemployment emerging under the State, UCFE, and UCX programs. Data on initial claims are not added to the insured unemployment count, however, since such claims do not certify to completed weeks of unemployment.

Exhaustions are a count of the number of claimants who have drawn the final weekly benefit payment to which they are entitled in a given benefit year under provisions of the State unemployment insurance laws.

Covered employment under all programs includes the employment of workers covered by State programs, and the Railroad Retirement Board programs from the beginning of the series, the employment of Federal government workers since 1955, and the

TABLE 12.—Unemployment Insurance Programs

Year	All programs			State programs					
	Covered employment ¹	Insured unemployment (weekly averages) ²	Benefits paid ²	Insured unemployment	Initial claims	Exhaustions	Insured unemployment as percent of covered employment	Benefits paid	
								Total	Average weekly check
	Thousands		Mil. dol.	Weekly average, thousands			Percent	Mil. dol.	Dollars
1940.....	24, 291	1, 331	534. 7	1, 282	214	50	5. 6	518. 7	10. 56
1941.....	28, 136	842	358. 8	814	164	30	3. 0	344. 3	11. 06
1942.....	30, 819	661	350. 4	649	122	21	2. 2	344. 1	12. 66
1943.....	32, 419	149	80. 5	147	36	4	. 5	79. 6	13. 84
1944.....	31, 714	111	67. 2	105	29	2	. 4	62. 4	15. 90
1945.....	30, 087	720	574. 9	589	116	5	2. 1	445. 9	18. 77
1946.....	31, 856	2, 804	2, 878. 5	1, 295	189	38	4. 3	1, 094. 9	18. 50
1947.....	33, 876	1, 805	1, 785. 0	1, 009	187	24	3. 1	775. 1	17. 83
1948.....	34, 646	1, 468	1, 328. 7	1, 002	210	20	3. 0	789. 9	19. 03
1949.....	33, 098	2, 479	2, 269. 8	1, 979	322	37	6. 2	1, 736. 0	20. 48
1950.....	34, 308	1, 605	1, 467. 6	1, 503	236	36	4. 0	1, 373. 1	20. 76
1951.....	36, 334	1, 000	862. 9	969	208	16	2. 8	840. 4	21. 09
1952.....	37, 006	1, 069	1, 043. 5	1, 024	215	18	2. 9	998. 2	22. 79
1953.....	38, 072	1, 065	1, 050. 6	995	218	15	2. 8	962. 2	23. 58
1954.....	36, 622	2, 048	2, 291. 8	1, 865	303	34	5. 2	2, 026. 9	24. 93
1955.....	40, 018	1, 395	1, 560. 2	1, 254	226	25	3. 5	1, 350. 3	25. 04
1956.....	42, 633	1, 318	1, 540. 6	1, 212	226	20	3. 2	1, 380. 7	27. 02
1957.....	43, 436	1, 567	1, 913. 0	1, 450	268	23	3. 6	1, 733. 9	28. 17
1958.....	44, 412	3, 269	4, 209. 2	2, 509	370	50	6. 4	3, 512. 7	30. 58
1959.....	45, 728	2, 099	2, 803. 0	1, 682	281	33	4. 4	2, 279. 0	30. 41
1960.....	46, 334	2, 067	3, 022. 7	1, 906	331	31	4. 8	2, 726. 7	32. 87
1961.....	46, 264	2, 994	4, 358. 1	2, 290	350	46	5. 6	3, 422. 7	33. 80
1962.....	47, 766	1, 924	3, 160. 0	1, 783	302	32	4. 4	2, 675. 4	34. 56
1963.....	48, 435	1, 973	3, 025. 9	1, 806	294	30	4. 3	2, 774. 7	35. 27
1964.....	49, 295	1, 753	2, 749. 2	1, 605	268	26	3. 8	2, 522. 4	35. 96

¹ For definitions of persons covered under various programs, see accompanying text.

² Includes among others, persons covered by Federal and State programs for temporary extension of benefits from June 1958 through June 1962.

Source: Department of Labor.

armed forces since 1958, when the UCX program became operative. Although coverage of the Federal and State unemployment insurance programs has expanded until it now includes about 80 percent of all wage and salary workers in nonagricultural industries, certain groups of workers are excluded—namely, self-employed persons, unpaid family workers, and persons employed in specific industries, such as agriculture, domestic service, many nonprofit organizations, and most State and local governments. Also, within the “covered” industries, employees of firms below a specified size (fewer than four employees) are excluded in many States.

Prior to 1958, members of the armed forces were excluded from the count of covered employment because it was impossible to estimate the numbers actually eligible in any given year under the various

programs which were in effect beginning with World War II. Between September 1940 and July 1947, an estimated 16.5 million different individuals served in the Armed Forces. These persons, upon discharge, could have drawn benefits under the Servicemen’s Readjustment Act between September 1944 and September 1951 if unemployed and otherwise eligible. Between June 1950 and January 1955, an estimated 6.8 million individuals served in the armed forces during the Korean conflict. These individuals, upon discharge, could have drawn benefits under the UCV program (Unemployment Compensation for Veterans) beginning October 1952. The rights for most such veterans under this program were terminated in July 1958. However, a small number, depending upon their discharge dates, were still eligible for UCV benefits through January 1960. Persons eligible for

benefits under the UCX program include ex-servicemen who entered the armed forces after January 31, 1955, as well as veterans who entered prior to that date but were discharged after October 27, 1958.

The annual covered employment series is the average of 12 mid-monthly employment figures for the year. In 1962, workers covered by State programs accounted for about 87 percent of the total. Insured unemployment as a percent of covered employment (shown here for the State programs only) relates insured unemployment to the average covered employment for a preceding 12-month period, the period approximating the time when the wage credits were earned on which benefits were based.

Under State programs, the average weekly check is obtained by dividing the number of weeks compensated for total unemployment into the amount of benefits paid for total unemployment.

STATISTICAL PROCEDURES

The insured unemployment figures are complete counts of completed weeks of unemployment for which benefits are claimed (by the filing of continued claims). The BES sums the data reported by the State employment security agencies and the Railroad Retirement Board to get national totals weekly. Generally, a continued claim filed in a given week certifies to unemployment in the preceding week.

Therefore, the weeks of unemployment claimed in a given week are assumed to represent insured unemployment in the preceding week, i.e., the week in which the unemployment actually occurred.

Insured unemployment as a percent of covered employment is seasonally adjusted by a ratio-to-moving-average method, using the same techniques as are used in the labor force and nonagricultural employees series noted above. The seasonal adjustment factors for the rate of insured unemployment, State programs, for use with data for 1963 and 1964 are:

January.....	132.6	July.....	87.4
February.....	133.4	August.....	81.9
March.....	128.1	September.....	75.2
April.....	110.4	October.....	75.8
May.....	94.2	November.....	87.0
June.....	85.5	December.....	108.3

RELATION TO OTHER SERIES

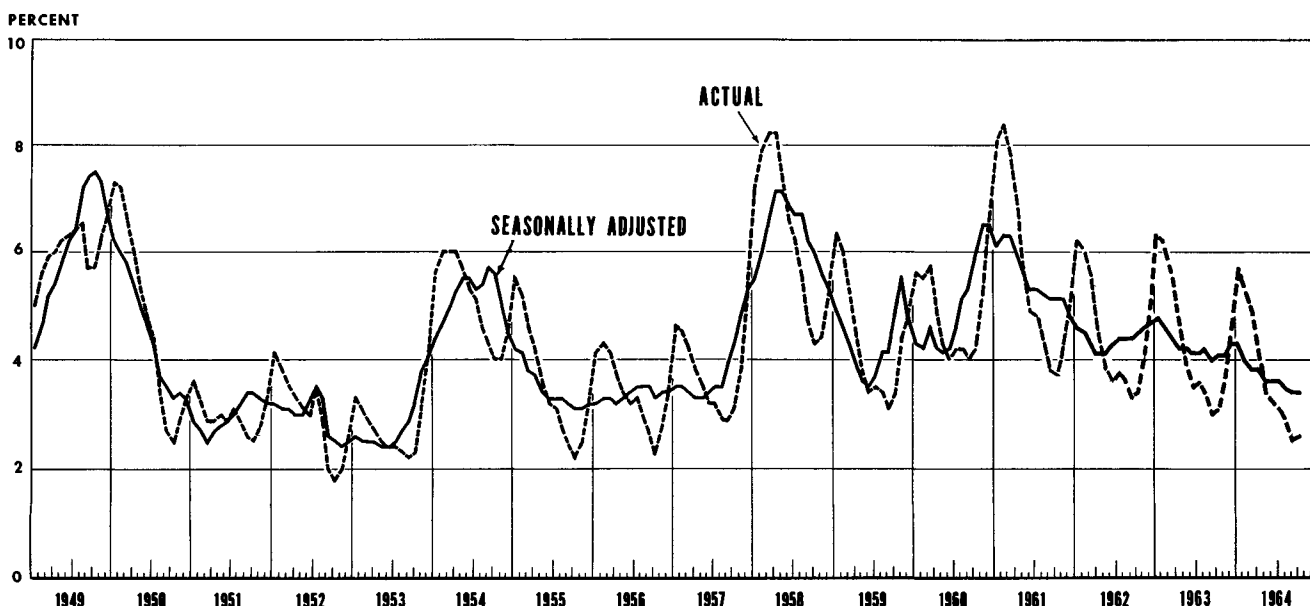
For a comparison with total unemployment, see above, under Status of the Labor Force (p. 35).

USES AND LIMITATIONS

The BES series are derived from administrative records and provide complete counts of claims-taking transactions, on a weekly basis and with minimum delay. The insured unemployment figures serve

Rates of Insured Unemployment Under State Programs, U.S., 1949-64

(Monthly data. Percent of covered employment)



SOURCE OF DATA: DEPARTMENT OF LABOR

two purposes as economic indicators. First, since they are available weekly they provide the most up-to-date information on current trends in unemployment. Second, they provide geographic detail for labor market areas as well as for States. In using these figures as economic indicators, however, certain inherent limitations must be kept in mind.

The limitations of the series, as well as their unique advantages, stem from the fact that they are by-products of administrative records. In the first place, as described above, workers in certain industries and in the very small firms are not covered, at least in some States. In addition, some groups of covered workers may not be included in the data on insured unemployment because they are not eligible for benefits. These groups include: unemployed workers whose previous jobs were in covered industries, but who did not earn sufficient wage credits or were not employed the required length of time; unemployed covered workers who were disqualified for various reasons, such as voluntary quitting without good cause, discharge for misconduct, refusal of suitable work, or temporary illness; persons who were eligible to receive benefits but for one reason or another did not apply; and finally, workers who have exhausted their benefit rights. In a period when unemployment is substantial and of long duration, the volume of exhaustions may have an important bearing on the magnitude of the insured unemployment level. Unlike total unemployment, the insured unemployment series does not include new entrants into the labor market, who are looking for, but have not yet found work.

These limitations vary over time as well as between States. During the years since 1939, exclusions due to "size-of-firm" provisions have declined. Originally, State unemployment insurance programs excluded workers in firms with fewer than eight employees. In January 1956, amendments to the Social Security Act resulted in coverage of workers in firms employing four or more. In addition, changes in many State laws during these years have resulted in the coverage of workers in firms employing fewer than four. At the beginning of 1964, twenty States had "size-of-firm" provisions of one or more.

Weekly data are subject to some variation from week to week as holidays call for a rescheduling of the claimant's appearance at the local office. The effects of this factor, however, have been reduced considerably since 1959, when nearly all the States

adopted procedures for adjusting "weeks claimed" totals affected by holidays. Monthly data are presented as "average weekly volume of insured unemployment" and are not significantly affected by holiday weeks. The monthly data, however, are influenced to some extent by administrative factors. Forty-six States, Puerto Rico, and the District of Columbia operate on an "individual benefit year" basis. In such States a worker who previously had insufficient wage credits may become eligible for benefits when the earnings of a new quarter become a part of his base period. This administrative factor exerts an upward influence on both insured unemployment and initial claims during the first month of each quarter in most States. Similarly, four States which operate on a "uniform benefit year" usually show an administrative rise in insured unemployment at the beginning of the new benefit year.

Exhaustion of benefits reflects both economic conditions and duration provisions of the various State unemployment insurance laws. While a count of the number of claimants who have exhausted their benefit rights is a useful economic indicator, it is difficult to determine how long unemployment continues after the claimant has exhausted his benefits. It may be assumed that some exhaustees will find new employment shortly after their benefits for a given benefit year have been exhausted, while others will remain unemployed for varying periods of time. Consequently, a knowledge of the number of persons who have exhausted benefits in the past gives no indication of the number who are still unemployed, and hence does not provide an estimate which can be added to insured unemployment to estimate a total count of unemployment from covered industries. Furthermore, in interpreting monthly figures on exhaustions, the usual seasonal increase in the late winter months should be kept in mind.

REFERENCES

The basic release of the weekly data is the BES Unemployment Insurance Claims, which contains initial claims as well as insured unemployment for the State, Federal employee and ex-servicemen programs by States, and nationally for the Railroad Retirement Board program. Insured unemployment for the week ending nearest the 15th of the month is included in *The Monthly Report on the Labor Force* for the States and for major labor market areas. Weekly figures, monthly averages, and actual and seasonally adjusted insured unemployment rates

are also published in the BES monthly periodical, *Unemployment Insurance Review*. Weekly data back to July 1945 are available upon request from the BES. A comprehensive summary of technical notes, "Insured Unemployment and Wage Statistics; Their

Source, Nature and Limitations," appears in the March 1960 issue of *The Labor Market and Employment Security*. Reprints of this summary of technical notes are available upon request to the BES.

13. NONAGRICULTURAL EMPLOYMENT

DESCRIPTION OF SERIES

Current monthly series on employment in non-agricultural establishments, with related information on hours and earnings (see below), are prepared by the Bureau of Labor Statistics. Employment estimates are published for about 365 separate industry groups and subgroups as well as 8 major industry divisions (manufacturing, mining, trade, etc.). Annual average data for all the major industry divisions are available on a comparable basis back to 1919. For the 21 major groups in manufacturing, all series go back to 1947 and for most groups to 1939. Estimates of women employed in manufacturing industries and selected nonmanufacturing industries are available quarterly.

Employment figures represent the total number of persons employed in nonagricultural establishments in the United States during a specified payroll period which, for all industries except Federal Government is that including the 12th of the month. Employed persons include all those who worked during or received pay for any part of the payroll period, including part time as well as full time, temporary as well as permanent, employees. Workers on an establishment's payroll who are on paid sick leave, paid holiday or paid vacation, or who work a part of a specified pay period and are unemployed or on strike during the other part are considered employed. Persons on the payroll of more than one establishment during the pay period are counted each time reported. On the other hand, persons are not considered employed who are laid off, on leave without pay, or on strike for the entire pay period. Proprietors, the self-employed and unpaid family workers, and domestic workers in households are not included. Government employment statistics refer to civilian employees only, but include employees of State and local governments as well as Federal.

Information on employment, hours and earnings is collected each month from a sample of establishments under cooperative arrangements with State

agencies (primarily State employment security agencies affiliated with the Bureau of Employment Security). The cooperating State agencies mail questionnaires to the reporting establishments and edit them when returned, before passing the information on to the BLS. To eliminate duplicate reporting, the same establishment reports are used for preparing State, area, and national estimates.

Durable goods manufacturing industries include: ordnance and accessories, lumber and wood products, furniture and fixtures, stone, clay and glass products, primary metal industries, fabricated metal products, machinery, electrical equipment and supplies, transportation equipment, instruments, and miscellaneous manufacturing industries. All other manufacturing industries are included in the nondurable manufacturing estimates. Employees of government-operated manufacturing establishments, such as ordnance plants and shipyards, are included under government.

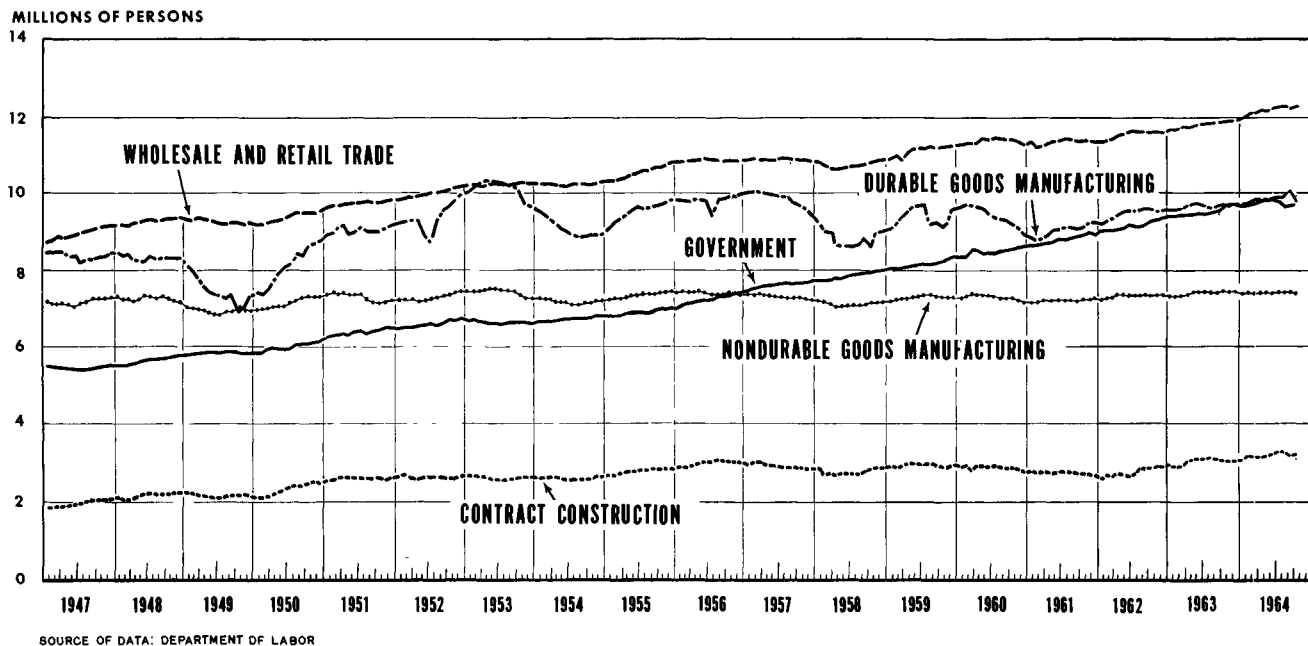
STATISTICAL PROCEDURES

Current estimates depend on monthly reports from a sample of employers. The sample of establishments employing collectively about 25,000,000 workers, is designed to obtain reports from most if not all the large establishments in each industry but the proportion of total employment covered varies considerably from industry to industry. It is high (65 percent) in manufacturing, for example, and much lower in wholesale and retail trade (20 percent) and service industries (18 percent).

In order to compute total employment from the sample reports, month-to-month changes in the sample establishments are applied to a total employment figure (benchmark) separately for each industry. The benchmark figures are obtained from sources which, singly or in combination, insure either a complete count of employment for the specified benchmark period, or an estimate of reasonable accuracy. This method takes advantage of benchmark data which are byproducts of other governmental functions.

Employees in Nonagricultural Establishments, 1947-64

(Monthly data. Seasonally adjusted)



Since 1939 the basic sources of benchmark information have been periodic tabulations of employment data by industry compiled by State agencies from reports of establishments covered under State unemployment insurance laws. Employment in small-size establishments exempt from State unemployment insurance laws is based on data obtained from the Social Security Administration. For industries which are not covered or are largely exempted by either of the two programs, benchmarks are compiled from other sources: for example, for interstate railroads, from information reported to the Interstate Commerce Commission; for State and local government, from data reported to the Bureau of the Census; for the Federal Government, from data compiled by the Civil Service Commission; for private hospitals, American Hospital Association data; for private schools, colleges, and universities, data from the U.S. Office of Education and from the National Catholic Welfare Conference. For charitable and certain other types of nonprofit organizations, benchmarks are derived from statistics on employment in organizations which elect voluntary coverage under the Old-Age and Survivors' and Disability Insurance program (OASDI) and from various studies and surveys. Establishments are classified into the same industrial groupings for benchmark

purposes as for monthly reporting. The most recent benchmark adjustment was to data for March 1962 (published in September 1963).

The sample design used in the BLS establishment employment statistics program is that of a modified cutoff sample. In a cutoff design, all establishments in a category are listed in sequence by number of employees. A cutoff point is selected in terms of the number of employees in an establishment, and only establishments above the cutoff point are included in the design. At present, sample selection is made by the cooperating State agencies at the area level with supplementation for establishments in sections of the State lying outside of the defined areas. The national sample therefore is then the sum of all the State samples.

In cutoff sampling, the general objective is to obtain a sample comprising a large enough proportion of universe employment so that satisfactory estimates can be prepared. Since employer participation in the BLS programs is voluntary, some establishments above the cutoff may decline to report. To replace these in the design, reports are solicited from the next largest establishments below the cutoff until the desired employment coverage is attained. In addition, to meet the needs of preparing estimates of weekly hours and hourly earnings,

procedures were introduced to secure representation of the smaller establishments in each industry. Because of this procedure, and also because sampling takes place primarily at the level of the metropolitan areas, which vary greatly in size, the sample includes a considerable number of small establishments, together with a very substantial proportion of the larger establishments in American industry.

In the context of the BLS employment and labor turnover statistics program, with their emphasis on producing timely data at minimum cost, a sample must be obtained which will provide coverage of a sufficiently large segment of the universe to provide reasonably reliable estimates that can be published promptly and regularly. The present sample meets these specifications for most industries. With its use, the BLS is able to produce preliminary estimates each month for many industries and for many geographic levels within a few weeks after reports are mailed by respondents, and at a somewhat later date, statistics in considerably greater industrial detail. Frequent revisions to benchmark estimates prevent possible biases in the system from cumulating over an extended period of time. The system works well for the many important industries which are characterized by large establishments, less well for those industries composed of large numbers of very small establishments.

Experience with the program has shown that the monthly employment data in some industries tend to have an increasing bias for the successive months between two benchmarks. Although this error cannot be adjusted precisely on a current basis, average adjustment is made through the use of small bias adjustment factors before publication. Appropriate changes in employment levels are also made, when necessary, at the next revision to new benchmarks.

Since "cut-off" sampling rather than a probability design has been used, it is not possible to calculate the sampling variability of the monthly estimates. The size of the revision to benchmarks provides a rough basis for measuring the accuracy of the original estimates. The comparison made for March 1962, the last benchmark date, indicated that the estimate was within 0.7 percent of the benchmark. For manufacturing, the discrepancy was 0.6 percent; in other industry divisions the discrepancy was 1.0 percent or less, except for contract construction, which was 6.1 percent, and services and miscellane-

ous, which was 2.0 percent. These differences, which developed over a three-year interval, reflect sampling errors, response errors, and changes in the industrial classification of individual firms, which are not incorporated into employment levels until the benchmarks are revised. Changes in industrial classification of firms affect primarily the detailed industry estimates.

The foregoing description depicts the sampling procedure upon which historical statistics are based. In 1964, however, the Bureau of Labor Statistics adopted a new sample design for its establishment employment statistics program, stratified for each industry by size of establishment and based on the principle of optimum allocation. The new design incorporates the existing sample but provides for the selection of additional reports by random methods. For manufacturing industries, the two designs are approximately equivalent, but for nonmanufacturing industries, particularly for trade and service industries the implementation of the new design should ultimately result in improved quality of the estimates and an expansion of the publication detail. The new plan will be put into effect as rapidly as resources permit. The development of a new sampling design became possible because tabulations of employment data by size of reporting unit covered by the State Unemployment Insurance programs became available on a regular basis starting in 1959.

The national industry statistics were converted to the 1957 SIC late in 1961, at the time of the revision to 1959 benchmark information.

Since 1959, data include estimates for Hawaii and Alaska.

The seasonal adjustment method used for these series is an adaptation of the standard ratio-to-moving average method, with a provision for "moving" adjustment factors to take account of changing seasonal patterns. The seasonal factors, prepared for "two-digit" manufacturing industries and for the nonmanufacturing industry divisions, are available from the Bureau of Labor Statistics on request. The magnitudes of the adjustments may be judged from the implicit seasonal adjustment factors for total nonagricultural employment for 1963. The adjusted series prepared by summing the aggregates of the seasonally adjusted components will give slightly different results from that which might be obtained from an independent seasonal adjustment of the total nonagricultural series.

TABLE 13.—Nonagricultural Employment ¹

[Thousands of wage and salary workers]

Year	Total	Manufacturing, private			Nonmanufacturing, private							Government	
		Total	Durable goods	Non-durable goods	Total	Mining	Contract construction	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Service and miscellaneous	Federal	State and local
1929	31,339	10,702	(²)	(²)	17,572	1,087	1,497	3,916	6,123	1,509	3,440	533	2,532
1930	29,424	9,562	(²)	(²)	16,714	1,009	1,372	3,685	5,797	1,475	3,376	526	2,622
1931	26,649	8,170	(²)	(²)	15,215	873	1,214	3,254	5,284	1,407	3,183	560	2,704
1932	23,628	6,931	(²)	(²)	13,472	731	970	2,816	4,683	1,341	2,931	559	2,666
1933	23,711	7,397	(²)	(²)	13,148	744	809	2,672	4,755	1,295	2,873	565	2,601
1934	25,953	8,501	(²)	(²)	14,153	883	862	2,750	5,281	1,319	3,058	652	2,647
1935	27,053	9,069	(²)	(²)	14,503	897	912	2,786	5,431	1,335	3,142	753	2,728
1936	29,082	9,827	(²)	(²)	15,587	946	1,145	2,973	5,809	1,388	3,326	826	2,842
1937	31,026	10,794	(²)	(²)	16,476	1,015	1,112	3,134	6,265	1,432	3,518	823	2,923
1938	29,209	9,440	(²)	(²)	15,886	891	1,055	2,863	6,179	1,425	3,473	829	3,054
1939	30,618	10,278	4,715	5,564	16,345	854	1,150	2,936	6,426	1,462	3,517	905	3,090
1940	32,376	10,985	5,363	5,622	17,189	925	1,294	3,038	6,750	1,502	3,681	996	3,206
1941	36,554	13,192	6,968	6,225	18,702	957	1,790	3,274	7,210	1,549	3,921	1,340	3,320
1942	40,125	15,280	8,823	6,458	19,452	992	2,170	3,460	7,118	1,538	4,084	2,213	3,270
1943	42,452	17,062	11,084	6,518	18,771	925	1,567	3,647	6,982	1,502	4,148	2,905	3,174
1944	41,883	17,328	10,856	6,472	18,511	892	1,094	3,829	7,058	1,476	4,163	2,928	3,116
1945	40,394	15,524	9,074	6,450	18,925	836	1,132	3,906	7,314	1,497	4,241	2,808	3,137
1946	41,674	14,703	7,742	6,962	21,376	862	1,661	4,061	8,376	1,697	4,719	2,254	3,341
1947	43,881	15,545	8,385	7,159	22,862	955	1,982	4,166	8,955	1,754	5,050	1,892	3,582
1948	44,891	15,582	8,326	7,256	23,659	994	2,169	4,189	9,272	1,829	5,206	1,863	3,787
1949	43,778	14,441	7,489	6,953	23,481	930	2,165	4,001	9,264	1,857	5,264	1,908	3,948
1950	45,222	15,241	8,094	7,147	23,955	901	2,333	4,034	9,386	1,919	5,382	1,928	4,098
1951	47,849	16,393	9,089	7,304	25,067	929	2,603	4,226	9,742	1,991	5,576	2,302	4,087
1952	48,825	16,632	9,349	7,284	25,585	898	2,634	4,248	10,004	2,069	5,730	2,420	4,188
1953	50,232	17,549	10,110	7,438	30,648	866	2,623	4,290	10,247	2,146	5,867	2,305	4,340
1954	49,022	16,314	9,129	7,185	25,957	791	2,612	4,084	10,235	2,234	6,002	2,188	4,563
1955	50,675	16,882	9,541	7,340	26,879	792	2,802	4,141	10,535	2,335	6,274	2,187	4,727
1956	52,408	17,243	9,834	7,409	27,887	822	2,999	4,244	10,858	2,429	6,536	2,209	5,069
1957	52,894	17,174	9,856	7,319	28,104	828	2,923	4,241	10,886	2,477	6,749	2,217	5,399
1958	51,368	15,945	8,830	7,116	27,584	751	2,778	3,976	10,750	2,519	6,811	2,191	5,648
1959	53,297	16,675	9,373	7,303	28,539	732	2,960	4,011	11,127	2,594	7,115	2,233	5,850
1960	54,203	16,796	9,459	7,336	29,054	712	2,885	4,004	11,391	2,669	7,392	2,270	6,083
1961	53,989	16,326	9,070	7,256	29,069	672	2,816	3,903	11,337	2,731	7,610	2,279	6,315
1962	55,515	16,853	9,481	7,372	29,772	650	2,902	3,906	11,566	2,800	7,947	2,340	6,550
1963	56,643	17,005	9,625	7,380	30,439	635	2,983	3,914	11,803	2,873	8,230	2,358	6,841
1964	58,178	17,301	9,848	7,454	31,376	636	3,105	3,974	12,184	2,945	8,532	2,348	7,153

¹ Includes all full- and part-time wage and salary workers in nonagricultural establishments who worked during or received pay for any part of the pay period including the 12th of the month. Excludes proprietors, self-employed persons, domestic servants, unpaid family workers, and personnel of the armed forces. Total derived from this table not comparable with estimates of nonagricultural employment of the civilian labor force which include proprietors, self-employed persons, unpaid family workers, and domestic servants, which count persons as employed when they are not at work because of industrial disputes, bad weather, etc., and which are based on a sample survey of households, whereas the estimates in this table are based on reports from employing establishments.

² Not available.

³ State and local government and total series revised in December 1964.

⁴ Data include Alaska and Hawaii beginning 1959. This inclusion has resulted in an increase of 212,000 (0.4 percent) in the nonagricultural total for the March 1959 benchmark month.

⁵ Preliminary.

NOTE.—Monthly data available beginning January 1939 and annual from 1919 for all major industry divisions.

SOURCE: Department of Labor.

*Implicit Seasonal Adjustment Factors for Total Nonagricultural
Employment for 1963, by Months*

January.....	98. 4	July.....	100. 1
February.....	98. 1	August.....	100. 6
March.....	98. 3	September.....	101. 3
April.....	99. 3	October.....	101. 3
May.....	99. 8	November.....	101. 1
June.....	100. 7	December.....	101. 5

RELATION TO OTHER SERIES

A comparison between the series discussed above and the nonagricultural employment estimates compiled as a part of the labor force series can be found in the section on Employment Status of the Labor Force, see above (p. 35).

In addition to total employment in each industry, BLS also prepares estimates of production worker employment for mining and manufacturing industries for construction workers in contract construction, and for nonsupervisory workers in some or all industry components of the other nonmanufacturing divisions except government. These estimates are comparable with the average hours and earnings series (see below) which are prepared from information reported on the same questionnaires as the employment figures.

Establishments reporting employment information are classified into industries on the basis of their principal product or activity. Prior to publication of State and area data for January 1959, all national, State and area employment, hours, and earnings series were classified in accordance with the following: (1) for manufacturing, the Standard Industrial Classification, 1945, and (2) for nonmanufacturing, the Industrial Classification Code, Social Security Board, 1942. Beginning with January 1958, national, State and area series are classified under the revised Standard Industrial Classification, 1957.

In general, BLS employment estimates are comparable with other data collected from establishments, such as employment, production, and similar data obtained by the Census Bureau in the manufacturing censuses and annual surveys. Some differences will be found, however, especially for individual industries, caused chiefly by differences in definitions of the industries covered, in the business units considered parts of an establishment, and in the industrial classification of some establishments.

The BLS establishment-based series are not comparable with those based on reports from companies because the industry totals that result when a single industry classification is assigned to an entire com-

pany differ substantially from those in which each establishment of the company has been assigned to the industry of its principal activity. (See Corporate Profits, above, p. 20.)

USES AND LIMITATIONS

Current employment statistics are widely used as a timely indicator of changes in economic activity in various sectors of the economy. Comparable information for a large number of detailed industries is provided within a few weeks. Furthermore, because of the promptness with which basic information is supplied in considerable industry detail, these estimates are frequently incorporated in other Federal statistical series, particularly in making current estimates of production, productivity, and national income.

The publication of comparable State and local area estimates by the cooperating State agencies using the same concepts and methods provides a means whereby business trends can be followed for all States and the District of Columbia and for 151 labor market areas.

The employment estimates are not all of uniform quality, however, either on a national or a local area basis. In general, those for manufacturing industries are most reliable and extensive industry detail is shown. For certain nonmanufacturing industries, especially in the services sector, the estimates are less reliable and little industry detail is presented.

REFERENCES

Monthly summary data first appear in *The Monthly Report on the Labor Force*. The basic monthly release for the employment, hours, and earnings series is the *Employment and Earnings*, which contains national, State, and area estimates and explanatory notes. The national employment, hours and earnings series for 13 months are also reprinted in the *Monthly Labor Review*. Continuous data for the entire history of the national series prior to June 1963 are available in *Employment and Earnings Statistics for the United States, 1909-62*, BLS Bulletin 1312-1. This is the second of a series of annual compendium volumes. More detailed technical notes are available on "Measurement of of Employment, Hours, and Earnings in Non-agricultural Industries." A *Guide to Employment Statistics of BLS* (1961) is also available upon request. The Guide shows the beginning date of each industry series published on a national basis

and gives each industry definition, both on the 1957 Standard Industrial Classification and on the classification structure used prior to conversion to the 1957 SIC.

Historical State and area data from the earliest date of availability for all industry series published by cooperating State agencies are available in

Employment and Earnings Statistics for States and Areas 1939-63, BLS Bulletin 1370-1. This is the second of a series of annual publications presenting State and area data, and it contains more than 6,000 series on payroll employment by industry and over 3,000 series of hours and earnings of production workers by industry.

14. WEEKLY HOURS OF WORK—SELECTED INDUSTRIES

Average Weekly Hours

DESCRIPTION OF SERIES

With the employment figures for the specified payroll period, described in the preceding section, BLS collects from the sample establishments total man-hours for which pay is received by production or non-supervisory workers, including hours for holidays, vacation time, or other employer-paid leave. Data on average weekly hours, weekly earnings and hourly earnings are regularly published for 21 major manufacturing groups and about 240 manufacturing industries, as well as about 65 nonmanufacturing groups and divisions. Many of the nonmanufacturing industries for which estimates are not prepared are characterized by small establishments creating

special collection problems; for other industries, such as insurance and real estate, collection presents difficult problems as to definition. For overtime hours (hours in excess of regular hours and for which premium payments were made) series are prepared for 143 manufacturing industries.

STATISTICAL PROCEDURES

The average hours figures are obtained by dividing the number of production and related workers (or nonsupervisory workers in industries other than mining and manufacturing) into the total man-hours reported for each industry. The average hours are normally less than scheduled hours because of such factors as absenteeism, labor turnover, part-time work, and stoppages.

Average Weekly Hours in Selected Industries, 1947-64

(Monthly data for production workers or nonsupervisory employees. Seasonally adjusted)

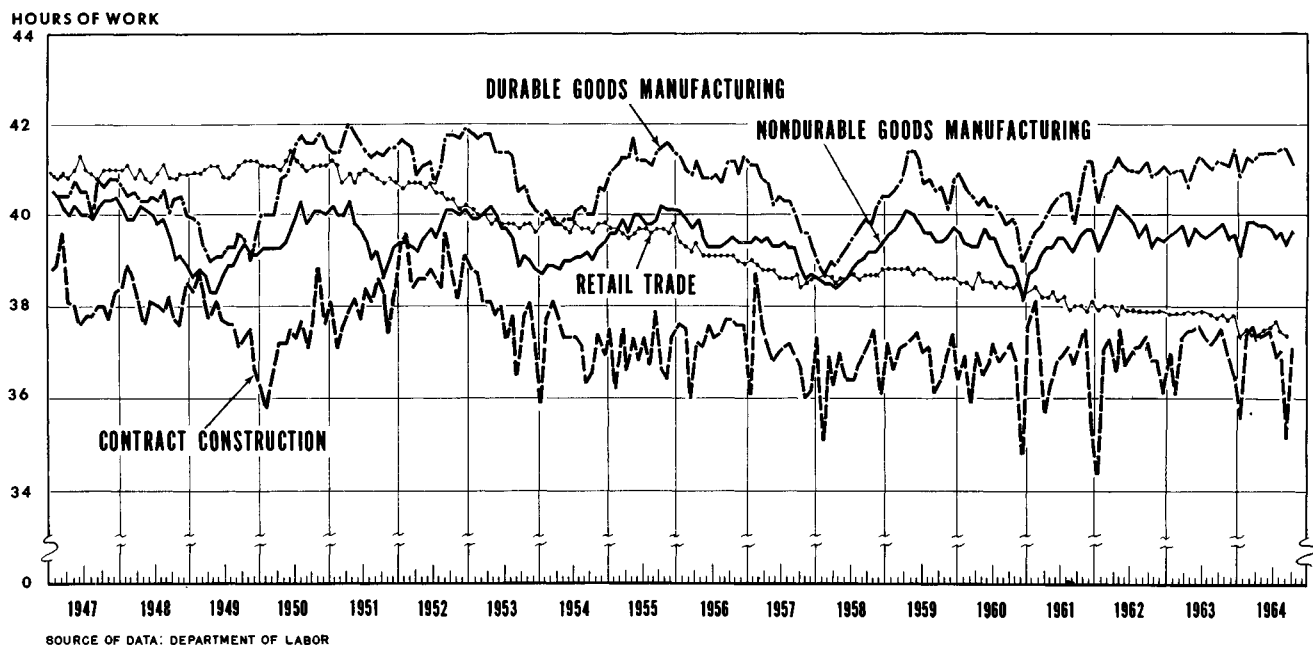


TABLE 14.—Weekly Hours of Work in Selected Industries ¹

[Hours per week]

Year	Manufacturing			Contract construction	Retail trade ²
	Total	Durable goods	Nondurable goods		
1929.....	44.2	(³)	(³)	(³)	(³)
1930.....	42.1	(³)	(³)	(³)	(³)
1931.....	40.5	(³)	(³)	(³)	(³)
1932.....	38.3	32.5	41.9	(³)	(³)
1933.....	38.1	34.7	40.0	(³)	(³)
1934.....	34.6	33.8	35.1	(³)	(³)
1935.....	36.6	37.2	36.1	(³)	(³)
1936.....	39.2	40.9	37.7	(³)	(³)
1937.....	38.6	39.9	37.4	(³)	(³)
1938.....	35.6	34.9	36.1	(³)	(³)
1939.....	37.7	37.9	37.4	(³)	43.4
1940.....	38.1	39.2	37.0	(³)	43.2
1941.....	40.6	42.0	38.9	(³)	42.8
1942.....	43.1	45.0	40.3	(³)	41.8
1943.....	45.0	46.5	42.5	(³)	40.9
1944.....	45.2	46.5	43.1	(³)	41.0
1945.....	43.5	44.0	42.3	(³)	40.9
1946.....	40.3	40.4	40.5	(³)	41.3
1947.....	40.4	40.5	40.2	38.2	41.0
1948.....	40.0	40.4	39.6	38.1	40.9
1949.....	39.1	39.4	38.9	37.7	41.0
1950.....	40.5	41.1	39.7	37.4	41.1
1951.....	40.6	41.5	39.5	38.1	40.9
1952.....	40.7	41.5	39.7	38.9	40.5
1953.....	40.5	41.2	39.6	37.9	39.8
1954.....	39.6	40.1	39.0	37.2	39.7
1955.....	40.7	41.3	39.9	37.1	39.6
1956.....	40.4	41.0	39.6	37.5	39.1
1957.....	39.8	40.3	39.2	37.0	38.7
1958.....	39.2	39.5	38.8	36.9	38.7
1959 ⁴	40.3	40.7	39.7	37.0	38.7
1960.....	39.7	40.1	39.2	36.7	38.5
1961.....	39.8	40.3	39.3	36.9	38.1
1962.....	40.4	40.9	39.6	37.0	37.9
1963.....	40.5	41.1	39.6	37.3	37.8
1964 ⁵	40.7	41.4	39.7	37.1	37.4

¹ For manufacturing, data relate to production and related workers; for contract construction, to construction workers, and for retail trade to nonsupervisory workers. Hours are hours paid for including paid holiday, vacation, and sick-leave hours.

² Data exclude eating and drinking places.

³ Not available.

⁴ Data include Alaska and Hawaii beginning 1959. This inclusion has not significantly affected these weekly hours series.

⁵ Preliminary.

NOTE.—Monthly data on average weekly hours available beginning 1932 for manufacturing industries, 1947 for contract construction, and 1939 for retail trade. Annual data for total manufacturing industries available for years 1909 and 1914 and on continuous basis beginning with 1919.

Source: Department of Labor.

Seasonally adjusted series are prepared in a manner similar to that for nonagricultural employment. The magnitude of the seasonal adjustments is illustrated by the seasonal adjustment factors for average hours of manufacturing production workers, which are:

Average Weekly Hours—Seasonal Adjustment Factors

January.....	99.2	July.....	100.3
February.....	99.2	August.....	100.5
March.....	99.3	September.....	100.1
April.....	99.4	October.....	100.3
May.....	100.1	November.....	100.1
June.....	100.7	December.....	100.8

USES AND LIMITATIONS

Changes in hours worked supplement the information on employment, since frequently hours worked are affected even before employment by changes in economic activity. Hours in manufacturing are an important leading indicator. The hours figures are used in compiling the average earnings figures discussed below. They also serve as a basis for current production estimates for some industries (see description of the Index of Industrial Production, p. 52).

Important limitations of the average hours series are (1) that the figures refer only to production or nonsupervisory workers and (2) that summary series

are not available for all nonagricultural workers because data are not collected for a number of important industries.

Hours paid for as measured by these series differ from hours worked, and from "plant man-hours," which do not include hours paid for vacation, sick leave, or holidays.

In addition to average gross hours and average overtime hours for a large number of industries, BLS also publishes indexes of aggregate weekly man-hours in industrial and construction activities.

REFERENCES

See page 46, under Nonagricultural Employment.

15. AVERAGE HOURLY AND WEEKLY EARNINGS—SELECTED INDUSTRIES

DESCRIPTION OF SERIES

The payroll figures on which these averages are based are collected by BLS from employers on the same form with the employment and hours figures, described above. They are reported before deductions for taxes, social insurance, etc. They include pay for overtime, holidays, vacations, and sick leave paid directly by the firm but exclude retroactive pay and bonuses, unless earned and paid regularly each pay period.

STATISTICAL PROCEDURES

Average hourly earnings are derived by dividing total payrolls by total manhours reported for each industry. Only the sample data are used, since there are no benchmarks available for hours and earnings.

Average weekly earnings are obtained by multiplying average weekly hours and average hourly earnings for each industry.

The series "adjusted hourly earnings" is constructed to show the relation between straight-time

Average Hourly Earnings in Selected Industries, 1947-64

(Monthly data for production workers or nonsupervisory employees)

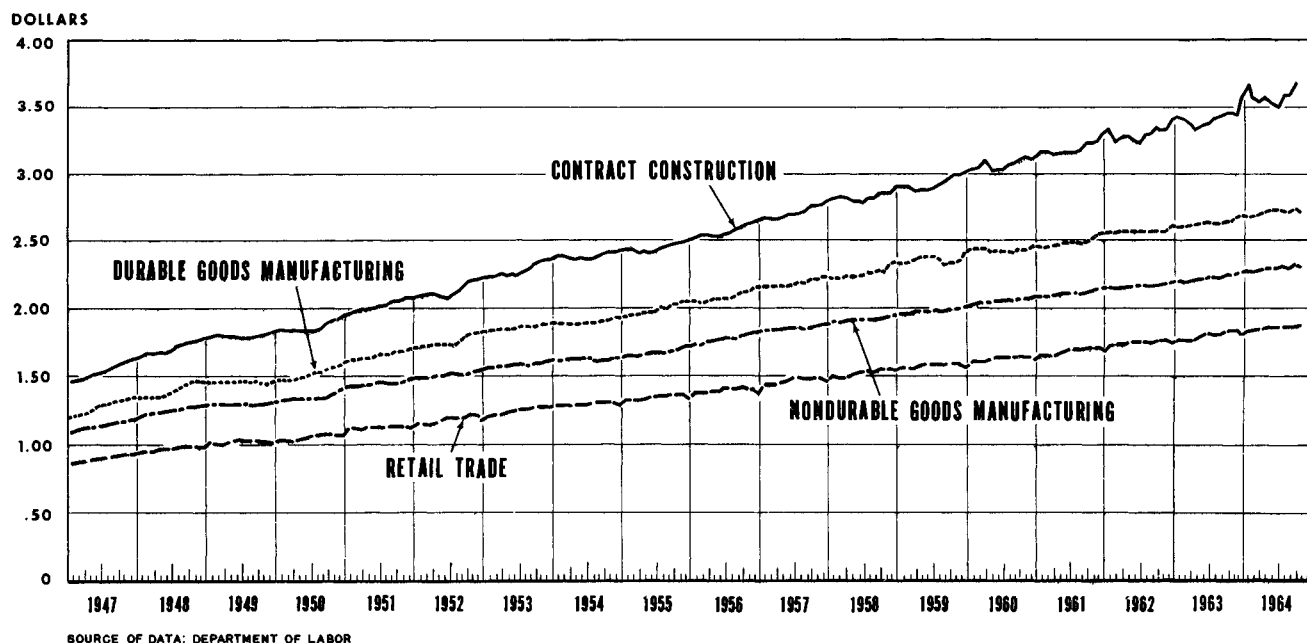


TABLE 15.—Average Hourly and Weekly Earnings—Selected Industries ¹

Year	Average hourly earnings—current prices					Average weekly earnings—current prices					Manufacturing industries	
	Manufacturing industries			Contract construction	Retail trade ²	Manufacturing industries			Contract construction	Retail trade ²	Index of adjusted hourly earnings, 1957-59=100 ³	Average weekly earnings, 1963 prices ⁴
	All	Durable goods	Non-durable goods			All	Durable goods	Non-durable goods				
1929	\$0. 560	(⁵)	(⁵)	(⁵)	(⁵)	\$24. 76	\$26. 84	\$22. 47	(⁵)	(⁵)	(⁵)	\$44. 21
1930	. 546	(⁵)	(⁵)	(⁵)	(⁵)	23. 00	21. 42	21. 40	(⁵)	(⁵)	(⁵)	42. 20
1931	. 509	(⁵)	(⁵)	(⁵)	(⁵)	20. 64	20. 98	20. 09	(⁵)	(⁵)	(⁵)	41. 53
1932	. 441	\$0. 492	\$0. 412	(⁵)	(⁵)	16. 89	15. 99	17. 26	(⁵)	(⁵)	(⁵)	37. 87
1933	. 437	. 467	. 419	(⁵)	(⁵)	16. 65	16. 20	16. 76	(⁵)	(⁵)	(⁵)	39. 36
1934	. 526	. 550	. 505	(⁵)	(⁵)	18. 20	18. 59	17. 73	(⁵)	(⁵)	(⁵)	41. 65
1935	. 544	. 571	. 520	(⁵)	(⁵)	19. 91	21. 24	18. 77	(⁵)	(⁵)	(⁵)	44. 44
1936	. 550	. 580	. 519	(⁵)	(⁵)	21. 56	23. 72	19. 57	(⁵)	(⁵)	(⁵)	47. 59
1937	. 617	. 667	. 566	(⁵)	(⁵)	23. 82	26. 61	21. 17	(⁵)	(⁵)	(⁵)	50. 79
1938	. 620	. 679	. 572	(⁵)	(⁵)	22. 07	23. 70	20. 65	(⁵)	(⁵)	(⁵)	47. 98
1939	. 627	. 691	. 571	(⁵)	\$0. 484	23. 64	26. 19	21. 36	(⁵)	\$21. 01	32. 2	52. 07
1940	. 655	. 716	. 590	(⁵)	. 494	24. 96	28. 07	21. 83	(⁵)	21. 34	(⁵)	54. 62
1941	. 726	. 799	. 627	(⁵)	. 518	29. 48	33. 56	24. 39	(⁵)	22. 17	33. 4	61. 29
1942	. 851	. 937	. 709	(⁵)	. 559	36. 68	42. 17	28. 57	(⁵)	23. 37	37. 5	68. 95
1943	. 957	1. 048	. 787	(⁵)	. 606	43. 07	48. 73	33. 45	(⁵)	24. 79	40. 8	76. 23
1944	1. 011	1. 105	. 844	(⁵)	. 653	45. 70	51. 38	36. 38	(⁵)	26. 77	43. 7	79. 48
1945	1. 016	1. 099	. 886	(⁵)	. 699	44. 20	48. 36	37. 48	(⁵)	28. 59	45. 5	75. 17
1946	1. 075	1. 144	. 995	(⁵)	. 797	43. 32	46. 22	40. 30	(⁵)	32. 92	50. 4	68. 01
1947	1. 217	1. 278	1. 145	\$1. 541	. 901	49. 17	51. 76	46. 03	\$58. 87	36. 94	57. 8	67. 45
1948	1. 328	1. 398	1. 250	1. 713	. 972	53. 12	56. 36	49. 50	65. 27	39. 75	63. 2	67. 67
1949	1. 378	1. 453	1. 295	1. 792	1. 015	53. 88	57. 25	50. 38	67. 56	41. 62	66. 1	69. 25
1950	1. 440	1. 519	1. 347	1. 863	1. 050	58. 32	62. 43	53. 48	69. 68	43. 16	68. 2	74. 29
1951	1. 56	1. 65	1. 44	2. 02	1. 13	63. 34	68. 48	56. 88	76. 96	46. 22	73. 6	74. 69
1952	1. 65	1. 75	1. 51	2. 13	1. 18	67. 16	72. 63	59. 95	82. 86	47. 79	77. 4	77. 46
1953	1. 74	1. 86	1. 58	2. 28	1. 25	70. 47	76. 63	62. 57	86. 41	49. 75	81. 6	80. 72
1954	1. 78	1. 90	1. 62	2. 39	1. 29	70. 49	76. 19	63. 18	88. 91	51. 21	84. 3	80. 38
1955	1. 86	1. 99	1. 67	2. 45	1. 34	75. 70	82. 19	66. 63	90. 90	53. 06	86. 9	86. 61
1956	1. 95	2. 08	1. 77	2. 57	1. 40	78. 78	85. 28	70. 09	96. 38	54. 74	91. 5	88. 72
1957	2. 05	2. 19	1. 85	2. 71	1. 47	81. 59	88. 26	72. 52	100. 27	56. 89	96. 2	88. 88
1958	2. 11	2. 26	1. 91	2. 82	1. 52	82. 71	89. 27	74. 11	103. 78	58. 82	100. 2	87. 62
1959 ⁶	2. 19	2. 36	1. 98	2. 93	1. 57	88. 26	96. 05	78. 61	108. 41	60. 76	103. 5	92. 81
1960	2. 26	2. 43	2. 05	3. 08	1. 62	89. 72	97. 44	80. 36	113. 04	62. 37	106. 8	92. 88
1961	2. 32	2. 49	2. 11	3. 20	1. 68	92. 34	100. 35	82. 92	118. 08	64. 01	109. 8	94. 51
1962	2. 39	2. 56	2. 17	3. 31	1. 74	96. 56	104. 70	85. 93	122. 47	65. 95	112. 5	97. 73
1963	2. 46	2. 64	2. 22	3. 41	1. 80	99. 63	108. 50	87. 91	127. 19	68. 04	115. 4	99. 63
1964 ⁷	2. 54	2. 71	2. 29	3. 55	1. 87	103. 38	112. 19	90. 91	131. 71	69. 94	118. 4	102. 00

¹ For manufacturing, data relates to production and related workers; for contract construction, to construction workers; and for retail trade to nonsupervisory workers.

² Excludes eating and drinking places.

³ Earnings in current prices, adjusted to exclude overtime and interindustry shifts (April used for 1941-46).

⁴ Earnings in current prices divided by consumer price index on a 1961 base.

⁵ Not available.

⁶ Data include Alaska and Hawaii beginning 1959. This inclusion has not significantly affected these earnings series.

⁷ Preliminary.

NOTE.—Average hourly earnings monthly data available beginning 1932 for manufacturing industries, 1947 for contract construction, and 1939 for retail trade. Annual data for total manufacturing industries available for years 1909 and 1914 and on continuous basis beginning with 1919.

Average weekly earnings monthly data available beginning June 1914 for all manufacturing industries, 1923 for durable and nondurable goods manufacturing, 1947 for building construction, and 1939 for retail trade. Annual data for all manufacturing industries also available for the years 1909 and 1914.

Source: Department of Labor.

hourly earnings in the base period, 1957-59, and other years on the assumption that the proportion of workers in each industry remains unchanged. The object is to show changes in pay scales unaffected by such factors as variations in the amount of overtime pay or shifts of workers into higher (or lower) paying industries.

USES AND LIMITATIONS

Average hourly earnings figures are widely used in collective bargaining, in "escalating" long-term sales contracts (such as labor costs for equipment which takes a number of months or years to build) and in general economic analysis.

The hourly earnings figures reflect not only changes in basic hourly and incentive wage rates, but also such variable factors as premium pay for overtime and late-shift work and changes in output of workers paid on an incentive basis. The changing employment of workers as between relatively high-paid and low-paid work, and relatively high-wage and low-wage industries, also affects the hourly earnings averages.

Hourly earnings refer to the actual return to the worker for a stated period of time, and should not be

confused with wage rates, which represent the rates stipulated for a given unit of work or time. Since certain types of payments (see above) as well as payments to workers excluded from the production worker (or nonsupervisory employee) definition are not included, the earnings series should not be taken to represent labor costs to the employer.

Average weekly earnings are affected by changes in the length of the workweek as well as all of the factors which affect average hourly earnings. While they represent what the worker has earned for the week, they do not represent take-home pay, since they are subject to deductions for income and social security taxes, group insurance, occupational supplies, union dues, or other items.

Since hours and earnings data are not collected for all industries, there are no summary series for average hourly or weekly earnings in all nonagricultural establishments.

REFERENCES

See above, under Nonagricultural Employment (p. 46). Estimates of hourly earnings excluding overtime and of net spendable weekly earnings in manufacturing and earnings in 1957-59 dollars for selected industries are also published in *Employment and Earnings*.

PRODUCTION AND BUSINESS ACTIVITY

16 and 17. INDUSTRIAL PRODUCTION AND PRODUCTION OF SELECTED MANUFACTURES

DESCRIPTION OF SERIES

The index of industrial production is prepared monthly by the Board of Governors of the Federal Reserve System. It is designed to measure changes in the physical volume or quantity of output of manufacturing and mining establishments and electric and gas utilities. The industries covered by the index produce about 35 percent of the value of the total output of goods and services in the United States.

The monthly indexes are based on figures compiled by government agencies and by various trade organizations and publications. The component series are selected to represent the industries, industry groups, and other subdivisions in the index, and where necessary and possible they include adjustments for under-coverage or other deficiencies in the basic series. For example, series based on shipments data are adjusted, where feasible, for inventory changes; and those based on man-hours data for estimated changes in output per man-hour. In all, there are 207 monthly series, combined according to relative value added in 1957 adjusted to 1957-59 for the period beginning in 1953.

The monthly series are adjusted periodically to levels indicated by more reliable and comprehensive annual indexes and, for manufactured goods, Census benchmark indexes. The most recent benchmark indexes were based on quantity and value data for thousands of individual products covered in the Censuses of Manufactures for 1947 and 1954. Benchmark indexes 1954 to 1958 based on the 1958 Census of Manufactures are now being calculated. Annual indexes which are based on more information than is available monthly but generally less than is available at Census intervals are also used to adjust many of the monthly series.

The Census benchmark indexes were based very largely on physical product data, and to a minor

degree on value data deflated by price indexes and materials consumption data. The annual indexes rely more heavily on deflated value data, although they are still predominantly physical product measures. A little less than half of the monthly series are based on physical product data, and about half are based on man-hour data adjusted for estimated changes in output per man-hour. Man-hour series are of very minor importance in the annual indexes, and were not used at all in the Census benchmark indexes.

INDUSTRY GROUPINGS

The 207 monthly series are grouped in two separate classifications, permitting two alternative ways of accounting for changes in the total index. One of the two, based largely on the 1957 edition of the Standard Industrial Classification (SIC), has as its principal categories durable manufactures, nondurable manufactures, mining, and utilities. Durable manufactures include 11 of the SIC major groups—primary metals; fabricated metal products; nonelectrical machinery; electrical machinery; transportation equipment; instruments; ordnance; stone, clay, and glass; lumber; furniture; and miscellaneous manufactures. It also includes measures of the manufacturing activities of the Department of Defense. It accounted, in the 1957-59 base period, for 48 percent of the weight of the total index.

Nondurable manufactures include 10 SIC major groups—food and beverages, tobacco, textiles, apparel, paper, printing, chemicals, petroleum, rubber and plastics, leather, and also includes representation of the manufacturing establishments owned by the Atomic Energy Commission. It accounted, in the 1957-59 base period, for 38 percent of the total index. Mining activities, accounting for 8 percent of the index in this same period, include coal and metal mining, crude oil and natural gas extraction, oil and gas well drilling, and production of sand,

clay, and other nonmetallic minerals. Utility output of electricity and gas includes both private- and government-owned establishments, and accounted for 5 percent of the total index in the 1957-59 base period.

In the table "Production of Selected Manufactures" nine series selected from the component group indexes are shown for the period 1947-1961. These are among the major components of the index of manufactures.

MARKET GROUPINGS

The second system of classification is based on type of end-use, and has as its major categories consumer goods, equipment, and materials. Each of the 207 monthly series is assigned to one of the market groupings as well as to an industry grouping. For example, the auto production series is a component of consumer goods in the market classification and of transportation equipment in the industry classification. Truck production, which is also part of transportation

equipment in the industry grouping, is in equipment in the market grouping.

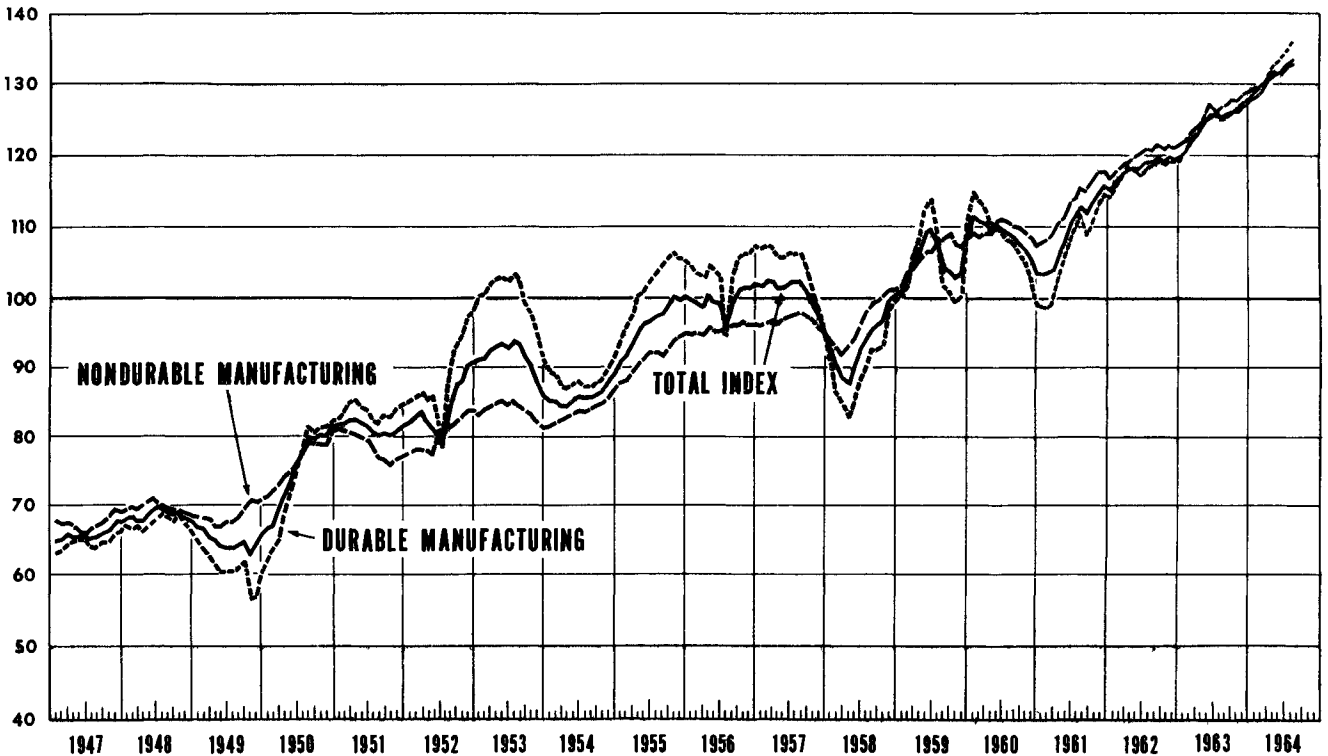
The consumer goods grouping, accounting for 32 percent of the total index in the 1957-59 period, is further subdivided into automotive products, home goods (including appliances, furniture, television, etc.), apparel, and consumer staples. The first two of these categories, automotive and home goods, include the series which comprised the consumer durables sector of the index previous to the 1959 Revision and the combination of these two is now published as a supplementary grouping of the regular production index. The equipment series, accounting for 15 percent of the total in 1957-59, are further divided between business equipment and an unpublished defense equipment category.

The materials component consists of two major categories, durable goods materials and nondurable materials. Durable goods materials, accounting for 27 percent of the total index in 1957-59, include all industries producing materials or components used

Industrial Production, 1947-64

(Monthly data. Seasonally adjusted)

INDEX: 1957-59 = 100



SOURCE OF DATA: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

primarily in the manufacture of finished durable goods; they range from metal mining and logging to electronic tubes and original equipment auto tires. Nondurable materials, comprising 26 percent of the total in 1957-59, include business fuel and power, containers, and other business supplies as well as textiles, industrial chemicals, paper, and other basic nondurable materials.

STATISTICAL PROCEDURES

The method used in combining the individual series is the weighted average of relatives. This consists of (1) reducing each series into relatives with the average for the base period, 1957-59, as 100; (2) multiplying each series of relatives by a base-year weight factor; and (3) adding the products (series of relatives multiplied by weights) for any one month to obtain the index number for the month. The weights used are percentage weight factors, that is, percentage of the weight assigned to each series to the total weight assigned to all series in the base period. Since the total of the percentage weight factors is equal to 100, the sum of the products of all series for any one month (all series times their respective weight factors) gives the index of industrial production for that month. The products of the component series and their weights give the number of points contributed to the index by indi-

vidual series. This method of computation facilitates analysis of the changes in the index. For example, it makes it possible to observe the points contributed by each series or group of series, and therefore to determine which series or group of series is responsible for the month-to-month changes in the total index or in the index for any group or subgroup of industries.

The weights used are based on value added—the difference between the value of production and the cost of materials or supplies consumed—in individual industries in 1957 adjusted to 1957-59. The value-added data for mining are based on the 1954 Census of Mineral Industries and on Department of Commerce national income estimates by industry for 1954 and 1957. The value-added figures for manufacturing were obtained mainly from the Census Bureau Annual Survey of Manufactures for 1957. Weights for utility series were derived from Federal Power Commission data. In many cases, value-added data are available only for groups of two or more individual series in the index; the assumption usually made in these cases is that value added is proportional to value of product within each group. The 1957-59 proportions (or the relative importance of the major groupings based on the 1957 weights) shown here for major groupings are given in detail in *Industrial Production—1957-59 Base*, Board of Governors of the Federal Reserve System.

Relative Importance of Major Groupings in the Index of Industrial Production—1957-59 Comparison Basis

Industry group	1957-59 base period proportion	Market group	1957-59 base period proportion
Total index.....	100.00	Total index.....	100.00
Manufacturing, total.....	86.45	Final products, total.....	47.35
Durable.....	48.07	Consumer goods.....	32.31
Nondurable.....	38.38	Equipment, including defense.....	15.04
Mining.....	8.23	Materials.....	52.65
Utilities.....	5.32		
		Consumer Goods	
Durable Manufactures		Automotive products.....	3.21
Primary metals.....	6.95	Home goods.....	4.59
Fabricated metal products.....	5.37	Apparel, including knit goods and shoes.....	5.41
Machinery.....	14.80	Consumer staples.....	19.10
Transportation equipment.....	10.19		
Lumber and products.....	1.73	Equipment	
Other durable manufactures.....	9.03	Business equipment.....	11.63
		Defense equipment.....	3.41
Nondurable Manufactures			
Textiles, apparel, and leather.....	7.60	Materials	
Paper and printing.....	8.17	Durable goods materials.....	26.97
Chemicals, petroleum, and rubber.....	11.54	Nondurable materials.....	25.23
Food, beverages, and tobacco.....	11.07		

TABLE 16.—Industrial Production

[1957-59=100]

Year	Total industrial production	Industry groupings					Market groupings			
		Manufacturing			Mining	Utilities	Final products			Ma- terials
		Total	Durable	Non-durable			Total	Consumer goods	Equip- ment	
1929.....	38	39	38	38	54	13	(1)	(1)	(1)	(1)
1930.....	32	32	28	35	47	13	(1)	(1)	(1)	(1)
1931.....	27	26	20	33	40	13	(1)	(1)	(1)	(1)
1932.....	21	20	12	29	34	12	(1)	(1)	(1)	(1)
1933.....	24	24	16	33	39	12	(1)	(1)	(1)	(1)
1934.....	27	26	19	34	40	12	(1)	(1)	(1)	(1)
1935.....	31	31	24	37	44	13	(1)	(1)	(1)	(1)
1936.....	36	26	31	42	50	15	(1)	(1)	(1)	(1)
1937.....	40	40	35	44	57	16	(1)	(1)	(1)	(1)
1938.....	31	31	23	39	49	17	(1)	(1)	(1)	(1)
1939.....	38	38	31	45	54	18	(1)	(1)	(1)	(1)
1940.....	44	44	40	47	60	20	(1)	(1)	(1)	(1)
1941.....	56	58	58	58	65	23	(1)	(1)	(1)	(1)
1942.....	69	² 73	² 80	² 64	67	26	(1)	(1)	(1)	(1)
1943.....	83	² 89	² 103	² 71	69	28	(1)	(1)	(1)	(1)
1944.....	82	² 86	² 101	² 68	74	30	(1)	(1)	(1)	(1)
1945.....	71	73	78	66	73	31	(1)	(1)	(1)	(1)
1946.....	60	60	55	65	72	32	(1)	(1)	(1)	(1)
1947.....	66	66	64	67	80	37	64	67	55	67
1948.....	68	69	67	70	84	41	67	69	68	70
1949.....	65	65	61	68	75	43	65	69	52	65
1950.....	75	76	74	76	83	50	73	79	56	77
1951.....	81	82	84	79	91	56	79	78	78	84
1952.....	84	85	89	80	91	61	84	80	94	84
1953.....	91	93	100	84	93	67	90	85	101	93
1954.....	86	86	88	84	90	72	86	84	89	86
1955.....	97	97	102	92	99	80	94	93	95	99
1956.....	100	100	104	95	105	88	98	96	104	102
1957.....	101	101	104	97	105	94	99	97	105	102
1958.....	94	93	90	97	96	98	95	96	91	93
1959.....	106	106	106	107	100	108	106	107	104	105
1960.....	109	109	109	110	102	116	110	111	108	108
1961.....	110	110	107	113	103	122	111	113	108	108
1962.....	118	119	118	120	105	131	120	120	120	117
1963.....	124	125	125	125	108	140	125	125	124	124
1964.....	132	133	133	132	111	150	132	131	132	132

¹ Not available.² Indexes should be used with caution because of special conditions due to wartime activity.

Source: Board of Governors of the Federal Reserve System.

Components of the index are adjusted for two kinds of short-time recurring fluctuations—differences in the number of working days from month-to-month and seasonal variations. The first adjustment is accomplished by reducing reported quantity figures to average daily output in the month. For this purpose, only regular weekend closings—where in effect—are treated as nonworking days. No allowance is made for holiday shutdowns, whose effects

on production are adjusted by the seasonal variation factors. The adjustment, in effect, leads to monthly estimates of output on a daily-average basis. No working day adjustment is needed for the man-hour series which are reported in terms of weekly rates.

Adjustment for seasonal variation is made for 76 series or groupings of series, about half of them in the industry classification and half in the market classification. Seasonally adjusted indexes for larger

aggregates in both classifications and for total industrial production are weighted combinations of these groupings. Seasonal factors have been developed by the ratio-to-moving-average method described in "Adjustment for Seasonal Variation," published in the *Federal Reserve Bulletin* for June 1941. Use has been made of variations of the Census Method II programs for seasonal adjustment by electronic computer, which are a mechanical version of the ratio-to-moving-average technique. A description of the editing and professional review which accompanies the mechanical procedure is described in *Industrial Production 1959 Revision* published by the Board of Governors of the Federal Reserve System.

REVISIONS IN THE INDEX

Since its first publication in 1927, the index has undergone several major revisions. A major revision was completed in 1959, with revised indexes and new groupings carried back to January 1947. The principal changes were: (1) adjustment of individual monthly series to levels shown by Census of Manufactures and other data; (2) broadening of coverage to include electric and gas utility output, and introduction of new component series in a number of manufacturing and mining industries; (3) introduction of new market groupings of production series described above; (4) selection of 1957 as weight year for the period beginning with January 1953, and as a new reference base period; the old reference base of 1947-49 was continued through October 1962 in addition to the new one for major groupings of the index; and (5) adoption of the latest (1957) version of the Standard Industry Classification, prepared under the auspices of the U.S. Bureau of the Budget.

The 1962 revision of the index of industrial production shifted the comparison base from 1957 to an average of the years 1957-59. At the same time the index was updated for the period 1957 to 1961 by a general revision in seasonal factors and interim adjustments in the levels of eight series (see *Federal Reserve Bulletin*, October 1962). The 1957 value added continues to be the basis for the weights. Shifting the comparison base has raised the total index by less than 1 percent. The annual levels of eight series in the apparel, food, and chemical groups were revised since 1957 to take account of additional information based on more comprehensive annual data. These eight series of the 207 component series account for about 5 percent of the total

index, and since these changes were largely offsetting, the total index and its major divisions of market and industry groupings were not generally affected. Seasonal adjustment factors were revised generally beginning in 1959 and through 1961, though in a few series some revisions were carried back to 1957 and 1958 as well. This resulted in substantially modified cyclical patterns for some of the component indexes and a slight raising of the first quarter and a slight lowering of the third quarter in the total index.

RELATION TO OTHER SERIES

As an important general economic indicator, the index of industrial production is related in varying degrees to other general economic indicators. Among the more important series to which the index is closely related are those on manufacturers' sales. It should be observed, however, that these are value or dollar-volume series, and are therefore influenced by price as well as quantity changes. The industrial production index, on the other hand, being a measurement of physical volume, registers quantity changes only. Differences in movement between the production index for manufacturing and the shipment series for manufacturing are also possible for other reasons: production differs from shipments because of changes in factory inventories; the production index uses the establishment as the unit for the industry classification, whereas the shipment series uses the company division as the unit; and the production index uses value added as weights for the series, whereas the shipments series implicitly uses value of shipments.

The "consumer" and "business equipment" market groupings of industrial production refer to many of the same goods as the consumer goods and producers' durable equipment categories of the gross national product. Even after these gross national product categories are deflated for price changes, however, there are conceptual and statistical differences from the production series which should be kept in mind in comparing the two. The production series include production for inventory, for export, and for government purchase as well as for domestic business and consumers, and are weighted on the basis of value added by industry in 1957. The deflated consumer goods and equipment expenditure series in the gross national product include imported goods but not goods for export, inventory, or government use. They are implicitly weighted on the basis of final purchase price in 1954, including value added

TABLE 17.—*Production of Selected Manufactures*

[1957-59=100]

Year	Durable manufactures					Nondurable manufactures			
	Primary metals	Fabricated metal products	Machinery	Transportation equipment	Lumber and products	Textiles, apparel, and leather	Paper and printing	Chemicals, petroleum, and rubber	Foods, beverages, and tobacco
1947.....	91	76	65	43	88	81	67	48	81
1948.....	94	77	67	47	92	85	69	51	80
1949.....	79	70	59	47	81	81	69	49	81
1950.....	100	85	73	56	98	89	77	61	84
1951.....	109	91	83	63	98	87	79	67	85
1952.....	99	89	92	73	97	90	78	70	87
1953.....	113	100	101	92	102	91	83	75	88
1954.....	91	90	88	84	100	87	85	75	90
1955.....	118	98	97	102	110	96	93	87	93
1956.....	116	99	107	97	105	98	97	91	97
1957.....	112	102	104	106	96	97	98	96	97
1958.....	88	93	89	90	96	95	97	96	99
1959.....	100	106	107	104	109	108	105	109	104
1960.....	101	108	111	108	102	108	109	114	107
1961.....	99	107	110	104	101	108	112	119	110
1962.....	105	117	124	118	106	115	117	131	113
1963.....	113	123	129	127	109	119	120	142	117
1964.....	128	133	141	131	113	125	128	152	120

Source: Board of Governors of the Federal Reserve System.

by transportation, trade, and other sectors as well as industry. The basic data used to calculate the expenditure series, furthermore, differ in concept and coverage from the basic production data.

USES AND LIMITATIONS

The total index of industrial production is probably most widely used as a business barometer. Both in whole and in detail it is used with related data on employment, inventories, trade, prices, and other economic variables, in analyzing short- and long-run developments in the economy.

The component indexes are used to determine the areas in which the occurrence of important changes accounted for the observed changes in the total index. They are also used in analyses relating to individual industries. Many companies, for instance, make continuing studies of their own output and sales figures in relation to the output movements of the industry. They also use the industry and product series in studies of potential markets, and in other types of research.

The coverage of the index is limited to manufacturing, mining, and electric and gas utilities. It should

not be used as a measure of total production, because agriculture, construction activity, and the various service sectors are not included. It might be noted, however, that changes in the output of manufactures, minerals, and utilities are especially significant, in part because they account for such a large part of variation in the total of all economic activity.

REFERENCES

The index of industrial production is published monthly in the Business Indexes release, available on request from the Division of Administrative Services, Board of Governors of the Federal Reserve System, Washington, D.C., 20551. Each issue shows all the groupings and individual indexes published on a 1957-59 base. Indexes on a 1957-59 base for groupings, but not for individual series, are shown in the monthly *Federal Reserve Bulletin*. A detailed description, including historical tables for the revised indexes on the new base from January 1947 through December 1961 is found in a Federal Reserve Board publication, *Industrial Production—1957-59 Base*.

18. WEEKLY INDICATORS OF PRODUCTION

Steel Produced

The weekly series on steel production is compiled by the American Iron and Steel Institute. It includes steel for ingots and castings produced by open-hearth, Bessemer, basic oxygen, and electric-furnace processes, except for the small amount of steel for castings produced in foundries operated by companies which do not produce ingots. The small quantity of crucible steel now produced is included with the production of electric furnaces.

The series is based on current reports received from more than 97 percent of the industry, giving actual production for the preceding week.

The Institute publishes the weekly series each Monday, showing production for the preceding week, year to date, and preceding year to date. Also issued are indexes for each of the 11 steelmaking districts, but only for the previous week's production. The Institute also publishes each month detailed production of steel by types of furnaces, whether ingots or castings, and volume of carbon alloy and stainless steel. Monthly production of blast furnaces shows volume of pig iron and ferroalloys produced. Both series are supplemented with statistics showing States in which the steel and iron were produced. Annual statistics in similar detail are presented in the Institute's *Annual Statistical Report*.

With its weekly, monthly, and annual figures on production, the Institute publishes an "Index of Ingot Production, 1957-59=100." The index provides an accurate comparative measure of the volume of steel production from one period to another.

The weekly series was initiated in October 1933. Comparable annual data on steel production are available from 1867.

Electric Power Distributed

The weekly series on electric power distributed is compiled by the Edison Electric Institute. It may be defined as the energy sold to ultimate consumers plus energy lost, including unaccounted-for losses; or as net generation by the total electric utility industry plus net import over international boundaries plus purchases from industrial sources. It includes operations of all private, municipal, cooperative, and governmental enterprises engaged in the production

or distribution of electricity for the use of the public; it does not include energy generated by captive plants of industrial establishments.

The weekly figures are collected by the Institute by telegraph from approximately 110 reporting utilities (either companies or groups of interconnected companies) representing about 95 percent of the total energy available for public consumption. The estimated 100-percent production is obtained by applying to the summarized reported data an adjustment factor derived from the ratio of the monthly output of both companies reporting for the week to the output of all utilities as collected and presented by the Edison Electric Institute for the previous month.

The weekly series is useful in economic analysis, because it is available promptly and is a reliable measure of net energy distribution to the public supply. It is not a sensitive measure of important changes in industrial activity, however, since it includes energy used for nonindustrial purposes, such as air-conditioning loads, requirements of the Atomic Energy Commission, and sales to residential consumers.

The weekly series is issued each Wednesday by the Edison Electric Institute. The Institute also publishes monthly research statistics, including additional data on source and disposal of energy, for which the data on generation are obtained from the Federal Power Commission. The Federal Power Commission issues a monthly bulletin on *Electric Power Statistics*, with monthly and annual data on production, fuel consumption, requirements, and supply.

The weekly series was initiated in 1928. Annual data on the production of electrical energy are available from 1902.

Bituminous Coal Mined

The series on production of bituminous coal is compiled weekly by the Bureau of Mines, Department of the Interior. It includes bituminous coal and lignite, and is a very close approximation of total production in the United States.

The figures are estimated on the basis of carloadings and river shipments. The method of estimation consists of raising the rail and river shipment figures by factors to represent the coal that is not transported by rail or river, such as truck shipments,

TABLE 18.—*Weekly Indicators of Production*

[Weekly Averages]

Year	Steel produced		Electric power distributed (millions of kilowatt-hours)	Bituminous coal mined (thousands of short tons) ¹	Freight loaded (thousands of cars)	Paperboard produced (thousands of tons)	Cars and trucks assembled (thousands) ²		
	Thousands of net tons	Index (1957-59 = 100)					Total	Cars	Trucks
1929	1, 184	63. 5	1, 733	1, 740	1, 016	82	103. 0	88. 2	14. 8
1930	855	45. 9	1, 714	1, 522	882	76	64. 5	53. 5	11. 0
1931	549	29. 5	1, 646	1, 243	714	73	45. 9	37. 9	8. 0
1932	289	15. 5	1, 488	1, 007	542	64	26. 3	21. 8	4. 5
1933	493	26. 5	1, 544	1, 090	562	76	37. 0	30. 3	6. 7
1934	560	30. 1	1, 655	1, 173	593	76	52. 9	41. 8	11. 1
1935	732	39. 3	1, 793	1, 217	606	88	75. 9	62. 5	13. 4
1936	1, 023	54. 9	2, 037	1, 432	694	101	85. 7	70. 6	15. 1
1937	1, 086	58. 3	2, 256	1, 456	724	107	92. 5	75. 3	17. 2
1938	609	32. 7	2, 148	1, 139	586	95	47. 9	38. 5	9. 4
1939	1, 013	54. 4	2, 398	1, 293	652	114	69. 5	55. 7	13. 8
1940	1, 281	68. 8	2, 684	1, 503	699	122	86. 8	71. 7	15. 1
1941	1, 589	85. 3	3, 142	1, 695	814	152	93. 4	72. 3	21. 0
1942	1, 650	88. 6	3, 552	1, 909	823	138	20. 8	4. 0	16. 9
1943	1, 704	91. 5	4, 155	1, 907	816	147	14. 5	(³)	14. 5
1944	1, 715	92. 0	4, 385	2, 009	835	153	15. 2	(³)	15. 2
1945	1, 529	82. 0	4, 244	1, 891	806	153	15. 1	1. 6	13. 5
1946	1, 277	68. 6	4, 235	1, 745	795	163	59. 6	41. 5	18. 1
1947	1, 628	87. 4	4, 821	2, 058	856	177	92. 2	68. 4	23. 8
1948	1, 695	91. 0	5, 313	1, 948	822	184	101. 5	75. 2	26. 3
1949	1, 496	80. 3	5, 498	1, 427	691	177	120. 4	98. 6	21. 8
1950	1, 857	99. 7	6, 183	1, 687	748	214	154. 2	128. 4	25. 9
1951	2, 016	108. 3	6, 958	1, 772	779	229	129. 8	102. 7	27. 2
1952	1, 782	95. 7	7, 450	1, 548	730	212	106. 8	83. 4	23. 4
1953	2, 141	114. 9	8, 237	1, 521	735	241	141. 1	118. 0	23. 2
1954	1, 694	90. 9	8, 859	1, 303	652	236	125. 6	106. 0	19. 7
1955	2, 245	120. 5	10, 315	1, 542	724	270	176. 7	152. 7	24. 0
1956	2, 204	118. 3	11, 292	1, 693	728	276	132. 8	111. 6	21. 2
1957	2, 162	116. 0	11, 873	1, 644	683	273	138. 6	117. 6	21. 0
1958	1, 635	87. 8	12, 082	1, 380	581	274	98. 4	81. 6	16. 8
1959	1, 792	96. 2	13, 297	1, 380	596	307	129. 5	107. 6	21. 9
1960	1, 899	101. 9	14, 424	1, 390	585	306	151. 8	128. 8	23. 0
1961	1, 880	100. 9	15, 139	1, 353	550	322	127. 9	106. 1	21. 8
1962	1, 886	101. 2	16, 325	1, 414	552	343	157. 5	133. 4	24. 1
1963	2, 096	112. 5	17, 490	1, 535	555	358	175. 0	146. 9	28. 1
1964	2, 428	130. 3	18, 728	1, 607	566	383	178. 8	148. 8	30. 0

¹ Daily average. Includes data for Alaska.² Production figures for 1929-63.³ Less than 500.

NOTE.—Detail will not necessarily add to totals because of rounding.

Sources: American Iron and Steel Institute, Edison Electric Institute, Department of the Interior, Association of American Railroads, National Paperboard Association, and Ward's Automotive Reports.

local sales, colliery fuel, and coal produced by small mines for local use. The weekly estimates are adjusted annually by the actual figures on production of coal and lignite collected each year from all producers. The correction is negligible—within less than one-half of 1 percent. The daily average for the week is obtained by dividing the weekly production by the maximum number of working days (not days actually worked) in that week.

Although bituminous coal is still an important industrial fuel, its importance has decreased in recent years. In 1920 it accounted for 67.4 percent of the total supply of energy from mineral fuels, in 1940 for 47.2 percent, and in 1959 for 22.4 percent. The series on production of bituminous coal and lignite has other weaknesses as an indicator of industrial activity. Coal mines normally operate at a fraction of their capacity—about 3 days a week—and the

coal-using industries carry considerable stocks to allow for changes in industrial activity, with resultant changes in coal consumption, without regard to the ups and downs in coal output. The figures on coal production should therefore be analyzed in conjunction with related series, also compiled by the Bureau of Mines, on the consumption of coal by industries and deliveries to retail dealers, and on stocks of coal held by industries and retail dealers.

The weekly estimates of total production and average production per working day and series on consumption and consumer's stocks are published in the Bureau of Mines multilithed *Weekly Coal Report*. Detailed annual data and monthly data for the current and preceding years, as well as a description of the method used in making the estimates, are published in the Bureau of Mines *Minerals Yearbook*. Prior to publication of the bound volumes of the *Yearbook*, this information is also available in the "preprint" of the *Yearbook* chapter distributed as a separate publication.

Weekly data on production of bituminous coal and lignite are available from 1917, annually from 1807.

Freight Loaded

The weekly revenue freight cars loaded series, compiled by the Association of American Railroads, was initiated in 1919 as an operations report for railroad officers. The published data are totals of weekly reports received by the AAR from all class I railroads. Revisions in the data are necessary in only a very few cases, usually when a preliminary estimate is filed to meet the reporting deadline and then is corrected when a final figure is available. The weekly revenue freight loaded report to the AAR contains information on carloads of revenue freight by eight broad commodity groups, and on total loads received from connections by railroad geographical districts and by individual class I railroads. Comparisons are shown for the corresponding week of the preceding year.

The weekly revenue freight loaded series is widely used by business analysts as one of the indicators of general business activity. It should be remembered, however, that long-term changes in the series inadequately reflect business activity, especially because of the increased importance of competing means of transportation (primarily truck).

The detailed data are published by the AAR in its CS-54A report, "Revenue Freight Loaded and Re-

ceived from Connections." The report is published weekly on the Thursday following the week to which the data relate.

The freight loaded data are available from 1919.

Paperboard Produced

The weekly series on production of paperboard, compiled by the National Paperboard Association, measures the production of container board, folding, set-up, special food board, special paperboard, and other miscellaneous types of paperboard. The data are obtained from weekly reports which the Association collects from member companies, currently accounting for about 87 percent of total production. The estimated 100 percent production is calculated on the basis of the ratio of the annual production of the companies which submit weekly reports to total production for the previous year. The figures on total annual production are a summation of annual data reported to the Association by practically all mills. Because of the extensive use of paperboard in the manufacture of containers and boxes for packaging and shipping numerous products, the production of paperboard moves closely with general economic activity.

The weekly data are issued by the Association in a one-page release on Wednesday of the week following that to which the figures relate. More detailed statistics are presented in the Association's annual *Paperboard Industry Statistics*. The Association also publishes a series on "percent of activity" based on industry reports of the time in use of the machines on an inch-hour basis (1 inch of machine width operated for 1 hour).

Comprehensive monthly and annual data on pulp, paper, and paperboard are collected by the Bureau of the Census and published in its *Current Industrial Reports* series. The paperboard component of the Census series is not completely comparable with the Association series, though the differences are not large.

The Association's weekly data on paperboard production were initiated in 1933. Comparable annual data are available from 1925.

Cars and Trucks Assembled

The weekly series on output of cars and trucks is compiled by Ward's Reports, Inc., and is based on information received from each of the individual producers in the United States. It is published each Monday in *Ward's Automotive Reports*, which shows

a breakdown of the weekly total by cars and trucks and by makes, current and cumulative monthly totals, and corresponding figures for the previous year, with similar data for Canada. Summary data are presented in *Ward's Automotive Yearbook*.

Monthly and annual data on factory sales are compiled and published by the Automobile Manufacturers Association. The sales figures differ somewhat from the production figures, principally because they include some units produced in earlier periods

and exclude some units produced in the current month.

In the accompanying historical table, data for the years 1929 through 1963 are average weekly production figures derived from annual totals in Ward's yearbooks; and data for 1964 are taken from the weekly reports.

The weekly production figures have been published by Ward's since 1925. Annual data on factory sales of cars and trucks are available from 1900.

19. NEW CONSTRUCTION

Value of New Construction Put in Place

DESCRIPTION OF SERIES

The series on the value of new construction put in place are compiled monthly and represent estimates of the dollar value of construction work installed or erected on the site during each month. Effective July 1959, responsibility for compilation of new construction estimates was transferred from the Business and Defense Services Administration of the Department of Commerce and the Bureau of Labor Statistics of the Department of Labor to the Bureau of the Census of the Department of Commerce. Pending revisions of concepts and methods, the Bureau of the Census is continuing the existing series. Annual data for recent years and seasonally adjusted annual rates of the data for recent months are published in current issues of *Economic Indicators*.

New construction covers the erection or installation of, and additions and alterations to buildings, structures, and utilities, together with the necessary service facilities, such as plumbing, heating, and elevators. Construction also covers certain types of immobile equipment which are primarily assembled or erected on the site, such as blast furnaces and fractionating towers. New construction does not include maintenance and repair, drilling of oil and gas wells, digging and shoring of mines, and operations which are an integral part of farming such as plowing, terracing, and digging drainage ditches.

The distinction between private and public (Federal, State, and local) construction is made on the basis of ownership, not source of funds. Residential construction includes housekeeping units and non-housekeeping facilities such as hotels, motels, and dormitories.

REVISIONS IN THE HISTORICAL SERIES

Since the publication of the 1962 Historical and Descriptive Supplement to Economic Indicators several major revisions have been made in the series on new construction. Previously, major revisions had been made in a number of the component series back only to January 1959 and those revisions caused a break in comparability with the historical series for prior years. However, the Census Bureau's publication of revised estimates back to January 1946, in *Construction Report C30-61 (Supplement)*, re-established comparability back to that date with one minor exception—estimates for Alaska and Hawaii (about one-half of one percent of the 50 States' total) are included only from 1959.

The major elements in the historical revision of the value in place series were:

(1) The introduction in July 1961 of a new, higher level series of estimates for new private nonfarm housing units back to January 1959 and in August 1964 with data back to January 1946. These revisions resulted from the introduction in May 1960 of a new higher level series of housing starts estimates back to January 1959 in *Construction Report C20-11 (Supplement)* and the introduction in June 1964 of comparably revised housing starts estimates for the period back to January 1945, in *Construction Report C20-60*.

(2) The introduction in July 1961 of a new series of estimates of the value of private residential additions and alterations, beginning with data for January 1959, in *Construction Report C30-25 (Supplement)*. This new series was based on data compiled by the Census Bureau in a new quarterly survey (beginning in the first quarter of 1960) of Residential

Additions, Alterations and Repairs—see *Construction Report C50-1*. Comparable data for earlier years were estimated by linking the 1960 survey estimates to the original estimates for 1950, the previous base year, and published in *Construction Report C30-61 (Supplement)*.

(3) The introduction of a new, lower level series of estimates for farm housing construction expenditures in August 1960, with estimates back to January 1959, in *Construction Report C30-13*. The revisions of the original Department of Agriculture estimates were based largely on information obtained by the Bureau in its monthly housing starts survey. The Department of Agriculture, as a result of a re-examination of its farm construction expenditure estimates, particularly expenditures for farm housing revised its earlier estimates. The revised data back to 1946 were introduced by the Census Bureau in August 1964 in *Construction Report C30-61 (Supplement)*.

(4) A detailed review of the public utility construction expenditure data resulted in revisions of the Census Bureau's estimates of construction by electric light and power, gas and petroleum pipeline com-

panies back to 1946 and the elimination of estimates for local transit companies beginning in 1959. Revised estimates for the 1959-1963 period were released in December 1963 in *Construction Report C30-53 (Supplement)*. Revised monthly estimates from January 1946 were released in August 1964 in *Construction Report C30-61 (Supplement)*.

In addition to these major revisions, estimates for Alaska and Hawaii were introduced in the value put in place series for all types of construction back to January 1959. This resulted in increases of about one-half of one percent over the original 1959 estimates. Finally, the estimates for recent years for a number of component series were revised to incorporate the latest available revisions in basic source data.

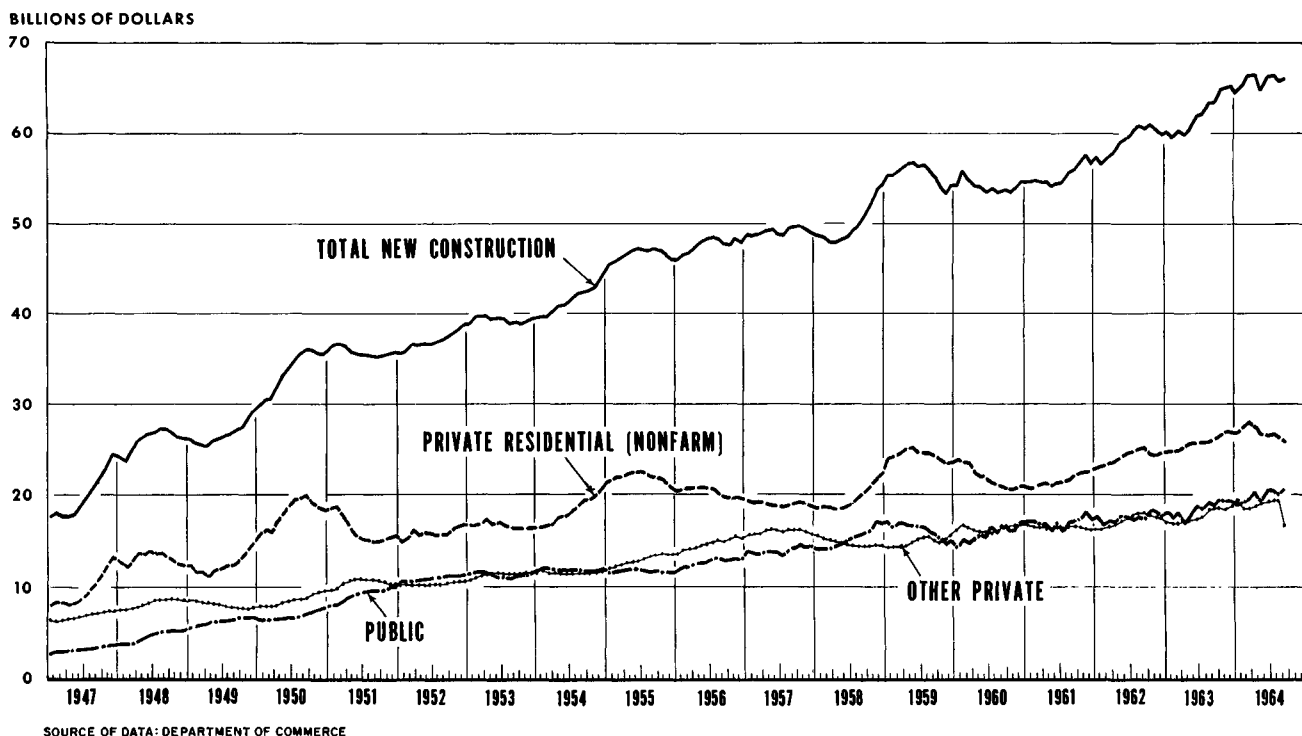
For a more complete discussion of these revisions, see the introductory text in the Bureau of the Census August 1964 release, *Construction Report C30-61 (Supplement)*.

STATISTICAL PROCEDURES

Three general methods are used by the Bureau of the Census in making the final estimates of new construc-

New Construction, 1947-64

(Monthly data revised in 1964. Seasonally adjusted annual rates)



tion activity, depending on the kind of data available for the different types of construction. In some instances, a preliminary projection is made based on related data or normal seasonal changes, pending receipt of data required for the final estimates.

The first method.—This method is used for most types of private and non-Federal public construction. It involves the derivation of estimates of the value of work started and the translation of these estimates into value of work put in place by the application of phasing patterns. Phasing patterns are estimates of the monthly rate at which the total value of construction work is put in place from the start to the completion of construction. Separate patterns have been developed which vary by type of construction, project valuation, and month in which the work is started. The estimates of value of work started are derived by two separate procedures, as follows: (1) For new housing units, an estimate of the value of work started is obtained by multiplying the number of units reported in the new nonfarm housing starts series (p. 69) by average valuation figures derived from building permit data. The building permit valuations are first adjusted to reflect the relationship between permit valuation figures and construction costs. (2) For the remaining categories for which the first method is used, data representing the value of contracts awarded in the 37 Eastern States are compiled by the F. W. Dodge Corporation. Contract awards for State and locally owned projects in the Western States, including Alaska and Hawaii, are compiled by the Bureau of the Census from various construction publications. An estimate of the value of contracts awarded for privately owned projects in the 13 Western States is obtained by applying a factor derived from building permit statistics to the Dodge contract award data. The factor represents the ratio of the value of building permits issued in the 37 States to the valuation of permits issued in all 50 States for each of the major types of construction involved. The sum of these data, which represents the estimated value of contracts awarded in the 50 States is adjusted for under-coverage—chiefly small projects and work done on force account—and for architectural and engineering fees. The resulting adjusted value of contracts awarded each month is assumed to represent the value of work started in the following month.

The second method.—This method is used for most Federally owned programs and for some public utility construction. The Census Bureau obtains monthly

reports of construction expenditures made, or of the estimated value of physical progress, on Federally owned construction from the Federal agencies administering the various programs. Monthly estimates of construction by telephone and telegraph companies are obtained from the American Telephone and Telegraph Company and the Western Union Telegraph Company, respectively.

The third method.—This method is used for farm service buildings, some highway construction, and most public utility construction. As a first step, this involves obtaining annual estimates and fitting a trend line to the estimates of the value of construction expenditures in successive years. Monthly value put in place estimates are then derived by applying appropriate seasonal indexes to the monthly values described by the annual trend line. The annual estimates for the current year are based on forecasts of construction expenditures and are later revised to reflect estimates of construction actually accomplished.

The annual forecasts and estimates are based on data prepared by: The U.S. Department of Agriculture for farm service buildings construction; the Bureau of Public Roads for highway construction; the Edison Electric Institute for electric light and power construction; the American Gas Association for construction of gas lines and gas plants; the Interstate Commerce Commission for: construction of Class I line-haul railroads, adjusted to an estimate for all railroads on the basis of Interstate Commerce Commission data on the value of gross investment in railroad property by each class of railroad; and, for construction of interstate petroleum pipelines, inflated to include an estimate for intrastate companies on the basis of data prepared by the Chase Manhattan Bank, on the ratio of gross investment in carrier properties by interstate companies to gross investment in all carrier properties.

RELATION TO OTHER SERIES

The new construction activity series is one of the components in the gross national product series and in the gross private domestic investment series. The series differ in one respect, however: gas and oil well drilling is included in the new construction series in the national accounts, but not in the series shown here.

The definition of construction used in the new construction series is more inclusive than that in some of

the series pertaining to labor. The nonagricultural employment series contains a component for employment in contract construction only, excluding employment on construction performed by force account. (For a fuller discussion of noncomparability of these data, see the Technical Note in the March 1955 issue of *Construction Review*.) The series on average weekly hours and average hourly and weekly earnings cover contract construction of buildings only.

USES AND LIMITATIONS

Although the new construction series indicates the current volume of this segment of economic activity, it does not serve the same purpose as would a series on new work started. The future trend in the series is determined to a considerable extent by past commitments made.

The new construction figures cannot be used as an indicator of the physical volume of construction without extensive adjustment for changes in price and wage rates, technological advances, and other relevant factors. Also, since the series does not include maintenance and repair, it cannot be related directly to the total use of construction labor and materials. Seasonally adjusted annual rates of new construction in 1957-59 dollars, which reflect some of these adjustments, are published monthly in *Construction Report C30* and in *Construction Review*. In addition, annual estimates of the value of maintenance and repairs are published in *Construction Review*.

While extensive adjustments are made for under-coverage of the source data now used, there is no satisfactory factual basis for making these adjustments, and much reliance is placed on judgment and opinion. The construction patterns used in translating work started into work put in place may be obsolete and do not reflect short-run changes due to such factors as weather or the labor and materials supply situation. The Bureau of the Census is developing plans for improvements in concepts and methods for estimating the value put in place data. Pending the introduction of such improvements, the existing series are being continued.

Because of these limitations resulting from the many different sources of data and the kinds of estimating procedures used, the error in the estimates cannot be statistically measured. Caution should be exercised in drawing conclusions from relatively small month-to-month or year-to-year changes.

REFERENCES

Data on construction value put in place are published in more detail by type of construction and ownership in *Construction Report C30, Value of New Construction Put in Place*, a monthly publication of the Bureau of the Census. This publication also presents data on a seasonally adjusted annual rate basis, both in current dollars and in constant (1957-59) dollars. *Construction Review*, a monthly publication of the Business and Defense Services Administration, U.S. Department of Commerce, publishes value put in place data for new public construction, by source of funds, in addition to the value put in place data shown in *Construction Report C30*.

Historical monthly data for 1939-45 are published in *Construction Volume and Costs, 1915-1956*, a statistical supplement to *Construction Review* and for 1945-63 in *Construction Report C30-61 Supplement*. These publications may be purchased from the U.S. Government Printing Office.

More detailed descriptions of the sources of data and the methods of compiling the estimates are also published in *Construction Report C30-61 Supplement*.

F. W. Dodge Construction Contracts Series

DESCRIPTION OF SERIES

The total value index on construction contracts compiled by the F. W. Dodge Company covers private and public ownership for residential buildings, nonresidential buildings, public works, and utilities construction. The series includes additions and alterations, but not maintenance and repair. Coverage is not complete, particularly for force-account work and smaller construction projects. Farm construction is excluded, and rural nonfarm construction is probably covered less fully than urban. Prior to 1956, Dodge construction statistics covered only the 37 Eastern States. Beginning in January 1956, coverage was expanded to 48 States and the value index, together with its 1947-49 base, was adjusted back to 1947. Current issues of *Economic Indicators* show the annual index for recent years and seasonally adjusted data for recent months.

The major segments of the Dodge series on construction contracts are compiled by several methods. Data on privately owned one-family houses are based upon a combination of building permits in the most active building permit areas and a sample in all other areas. Permit costs are adjusted to reflect estimated

TABLE 19.—New Construction

Year	Total expenditures	Private expenditures							Construction contract ³	
		Total	Residential non-farm			Commercial and industrial	Other	Federal, State, and local expenditures ²	Total value	Commercial and industrial floor space
			Total ¹	New housing units	Additions and alterations					
Billions of dollars										
								(Index 1957-59=100)	Millions of square feet	
1929	10.8	8.3	3.6	3.0	0.3	2.1	2.6	2.5	(⁴)	267
1930	8.7	5.9	2.1	1.6	.3	1.4	2.4	2.9	(⁴)	145
1931	6.4	3.8	1.6	1.3	.2	.7	1.5	2.7	(⁴)	70
1932	3.5	1.7	.6	.5	.1	.3	.7	1.9	(⁴)	33
1933	2.9	1.2	.5	.3	.1	.3	.5	1.6	(⁴)	42
1934	3.7	1.5	.6	.4	.2	.4	.5	2.2	(⁴)	46
1935	4.2	2.0	1.0	.7	.2	.4	.6	2.2	(⁴)	56
1936	6.5	3.0	1.6	1.2	.3	.6	.9	3.5	(⁴)	97
1937	7.0	3.9	1.9	1.5	.3	.9	1.1	3.1	(⁴)	123
1938	7.0	3.6	2.0	1.6	.3	.5	1.1	3.4	(⁴)	67
1939	8.2	4.4	2.7	2.3	.3	.5	1.2	3.8	(⁴)	93
1940	8.7	5.1	3.0	2.6	.3	.8	1.3	3.6	(⁴)	162
1941	12.0	6.2	3.5	3.0	.4	1.2	1.5	5.8	(⁴)	294
1942	14.1	3.4	1.7	1.4	.2	.5	1.2	10.7	(⁴)	520
1943	8.3	2.0	.9	.7	.2	.2	.9	6.3	(⁴)	128
1944	5.3	2.2	.8	.6	.2	.3	1.1	3.1	(⁴)	96
1945	5.8	3.4	1.3	.7	.5	.8	1.3	2.4	(⁴)	221
1946	14.3	12.1	6.2	4.8	1.3	2.8	3.1	2.2	(⁴)	354
1947	20.2	16.7	9.9	7.8	2.0	2.7	4.1	3.3	33.9	243
1948	26.1	21.4	13.1	10.5	2.5	2.8	5.5	4.7	41.1	211
1949	26.7	20.4	12.4	10.0	2.2	2.2	5.8	6.3	43.7	147
1950	33.6	26.7	18.1	15.6	2.4	2.5	6.1	6.9	61.4	237
1951	35.4	26.2	15.9	13.2	2.5	3.6	6.7	9.2	63.4	⁵ 225
1952	36.8	26.0	15.8	12.9	2.8	3.5	6.7	10.8	66.8	⁵ 197
1953	39.1	27.9	16.6	13.4	2.9	4.0	7.3	11.2	69.5	⁵ 235
1954	41.4	29.7	18.2	14.9	3.0	4.2	7.3	11.7	76.2	238
1955	46.5	34.8	21.9	18.2	3.3	5.6	7.3	11.7	91.1	298
1956	47.6	34.9	20.2	16.1	3.6	6.7	8.0	12.7	91.6	⁶ 436
1957	49.1	35.1	19.0	14.7	3.8	7.1	9.0	14.0	93.2	421
1958	50.2	34.7	19.8	15.4	3.7	6.0	8.9	15.5	101.7	359
1959 ⁷	55.0	39.0	24.1	19.1	4.2	6.0	8.9	16.0	105.1	440
1959 ⁷	55.3	39.2	24.3	19.2	4.3	6.0	8.9	16.1		
1960	53.9	38.1	21.7	16.4	(⁴)	7.0	9.3	15.9	105.2	461
1961	55.4	38.3	21.7	16.2	(⁴)	7.5	9.2	17.1	107.6	443
1962	59.5	41.7	24.3	18.6	(⁴)	7.9	9.5	17.8	119.7	500
1963	62.5	43.8	25.8	20.1	(⁴)	8.2	9.8	18.7	132.0	534
1964 ⁸	66.0	46.0	26.6	20.7	(⁴)	9.0	10.4	20.0	137.0	598

¹ Includes nonhousekeeping residential buildings not shown separately.

² Includes public residential construction.

³ Compiled by F. W. Dodge Corporation. Omits small contracts and covers rural areas less fully than urban.

⁴ Not available.

⁵ Excludes floor space of Atomic Energy Commission projects, because of security reasons. Valuation of projects for which floor space was omitted (in millions):

1951, \$980; 1952, \$923; 1953, \$479.

⁶ Revised series beginning January 1956; not comparable with earlier data.

⁷ Alaska and Hawaii included beginning 1959. Comparative data, exclusive of Alaska and Hawaii, also shown.

⁸ Preliminary.

Source: New construction expenditures by U.S. Department of Commerce; construction contracts by F. W. Dodge Corporation.

actual construction costs. In the 37 Eastern States, data for all other project types in the Dodge series are based upon the Company's news reporting service: interviews with architects, contractors, owners, real estate brokers and others, to obtain information on construction jobs being planned and the awarding of construction contracts. In the 11 Western States, the corresponding segment of the series is based predominantly upon information from building permits in a sample of geographic areas, adjusted to reflect actual construction costs. This information is supplemented with data from secondary sources and field reports on public construction and on private construction in nonpermit portions of the sample areas.

20. NEW HOUSING STARTS AND APPLICATIONS FOR FINANCING HOUSING STARTS

DESCRIPTION OF SERIES

The current series of housing starts is compiled by the Bureau of the Census. The series contains data on the number of housing units on which construction is started in the United States. Until 1959 the data cover only nonfarm units. Beginning with January 1959, the coverage of the series extends to all new housing units including not only farm housing but also seasonal, low-value, and possibly temporary units. Breakdowns by public and private ownership are provided.

The table shows an old series and a new series. The old series covering the years through 1945 is presented as originally compiled (see BLS Bulletin No. 1260). The new series covering the years from 1945 through 1963 consists of two parts. The data beginning with 1959 are based on a technique of direct measurements described below. The estimates for the period from 1945 to 1958 reflect the old series adjusted to provide comparability with the data for the subsequent years (see Census Bureau Construction Report, Series C20-60).

Independently of the Census (or BLS) compilation, the Federal Housing Administration and the Veterans' Administration provide reports on the number of units involved in their respective programs.

The description which follows refers to the procedures used in deriving the current estimates of new housing starts.

The current series is a comprehensive measure of the number of new housing units in housekeeping

In the series showing square feet of commercial and industrial construction, the Dodge category of "Commercial" includes store buildings, restaurant buildings, office and bank buildings, nonindustrial warehouses and storage structures, and commercial garages and service stations. The category of "Industrial" includes the manufacturing facilities (less cost of processing equipment) and warehouses built by companies classified by the Bureau of the Budget in their Standard Industrial Classification as "Manufacturing" and covered by the major group codes 19 through 39.

Data on construction contracts are available monthly in more detail by type of construction, geographic location, and ownership in F. W. Dodge Company's several subscription statistical services.

residential buildings on which construction has started in the United States each month. Start of construction is defined as the beginning of excavation for the footings or foundation of the building. A housing unit is defined as a room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is a building consisting primarily of housing units.

The housing starts series exclude group quarters (such as dormitories, fraternity houses, nurses' homes, etc.), transient accommodations (such as transient hotels and motels) and units in primarily nonresidential buildings. Also excluded is the manufacture of mobile homes or house trailers.

Housing units are classified as public or private on the basis of ownership. They are classified as farm or nonfarm on the basis of responses of builders of a sample of units to questions regarding the intended use of the land on which the building is located.

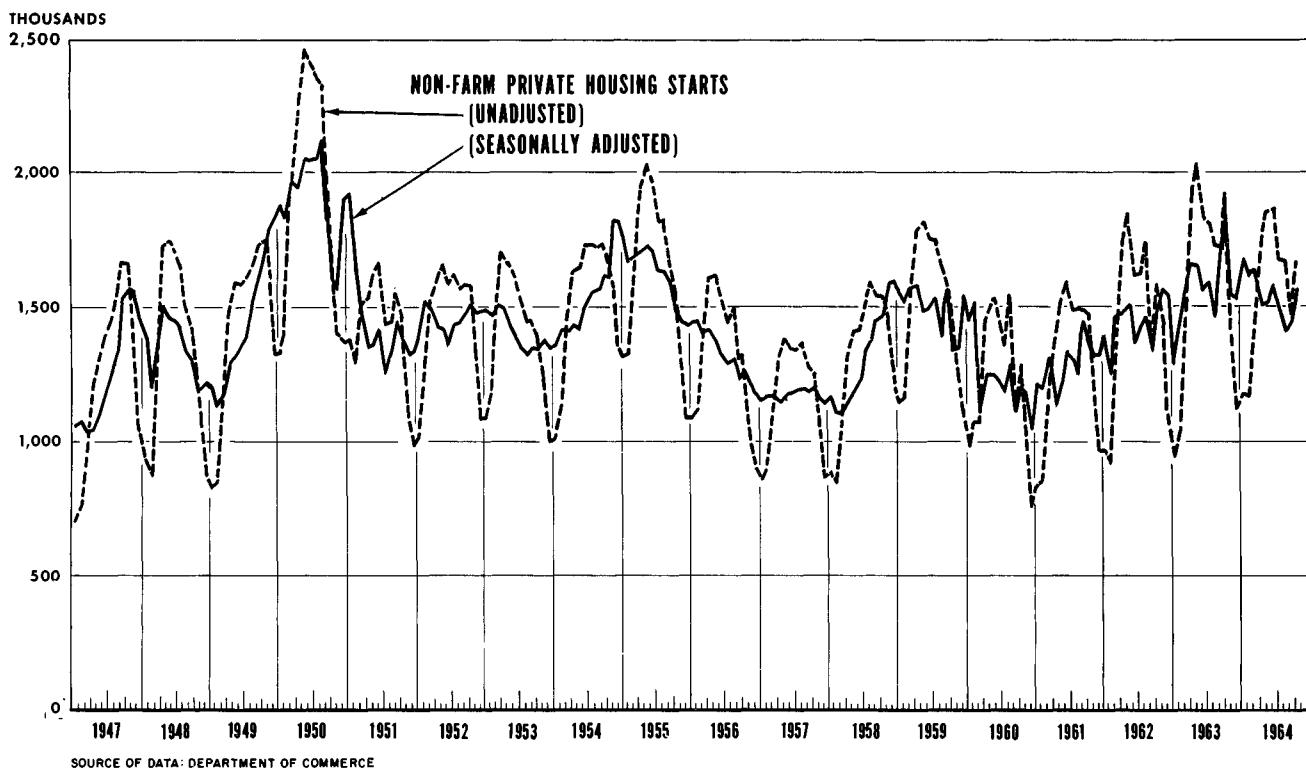
STATISTICAL PROCEDURE

Four steps are involved in preparing the monthly estimates.

(a) Each month the Census Bureau mails questionnaires to some 4,000 local government officials who issue building permits in incorporated places or in counties and townships throughout the country. Of these places, 3,500 account for approximately 90 percent of housing units authorized, the remaining 500 represent a sample of the approximately 8,500 other permit-issuing places accounting for the re-

Nonfarm Private Housing Starts, 1947-64

(Monthly data revised in 1964. Annual rates)



maining 10 percent. Information is requested, among other things, on the number of privately owned housing units authorized by building permits issued during the month.

(b) The second step is to convert the permit authorizations to starts. The information required for this conversion is obtained through a continuing monthly sample survey of building permits conducted in a sample of about 570 places. In 1964, the average monthly sample was approximately 18,000 housing units for which permits were issued. For each housing unit in the sample, information is obtained on the month in which construction started, establishing it as either prior to the month the permit was issued, during the month of permit issuance, the following month, etc. The number of starts in any given month is then calculated by applying the proportion of actual starts of units authorized during the month, the proportion of units started during the given month but authorized in the previous month, etc., to the estimates of the total number of housing units authorized during these months in all 12,000 places, as estimated from the 4,000 place

sample. This is done separately for each of four major regions (North East, North Central, South, and West) of the United States, and within each region by inside or outside Standard Metropolitan Statistical Areas. Finally, an adjustment of 4.8 percent is added to take account of the estimated number of housing units started without permit authorization. This factor is based primarily on information from the 1956 National Housing Inventory and, if necessary, will be modified as current survey information now being collected becomes available.

(c) Information on new private housing starts in areas not covered by building permits is obtained from field surveys in a sample of 122 primary sampling units comprising (1) all or part of Standard Metropolitan Statistical Areas, (2) individual counties, or (3) groups of counties. In the survey, data on starts are first obtained through contacts with previously identified individuals or organizations familiar with construction activity in these areas. This information is then checked by field visits to the sites of reported construction or by telephone

calls to the owner or builder. As a final step, estimates of starts not provided by the sources are prepared on the basis of an intensive canvass by interviewers of a subsample of 313 land areas within the 122 primary areas.

The separate estimates for permit-issuing areas and for nonpermit areas are added to produce the figures for privately-owned housing.

(d) Information on the number of public units started is obtained directly from the sponsoring Federal, State, and local agencies. This figure, added to the estimate for private units, gives the estimate of the total number of housing units started each month.

The seasonally adjusted annual rate of starts of private units, published in current issues of *Economic Indicators*, is based on four years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and six years of data (1957-1962) for starts in nonpermit areas. The rate is obtained by making separate seasonal adjustments of housing units started in permit-issuing places in each of the four regions using the standard Univac No. II Census method for seasonal adjustment, and of total nonpermit starts and then adding the five individual adjusted series. The implicit seasonal factors for total private nonfarm housing starts for 1963 are as follows:

	Within permit places	Within non-permit areas
January.....	77.2	49.6
February.....	76.3	70.5
March.....	97.7	83.0
April.....	117.9	114.2
May.....	121.6	133.3
June.....	116.3	120.7
July.....	111.9	121.4
August.....	115.0	140.5
September.....	99.4	107.2
October.....	107.3	100.2
November.....	90.8	97.6
December.....	74.7	60.2

A preliminary estimate is issued 15 to 20 days following the end of the month. The preliminary estimate differs somewhat from the final figures for the following reasons: (a) it is based on a sample of about 1,900 permit-issuing places; (b) not all the results of the field survey used to convert housing unit authorizations to starts are received in time to be used; and (c) housing units started prior to the issuance of permits may not be adequately accounted for. Final revisions are made within the next two months.

The figures for the FHA and VA programs are based on administrative reports of the number of units on which first compliance inspections have

been made by those agencies. The first inspection is usually made after the footings are in—normally only a slight lag from the time construction is considered started in the Census series. The FHA and VA figures for “Proposed home construction” are also based on administrative reports of the two agencies. The number of units for which FHA has received applications is limited to those on 1-to-4 family home mortgages, thus making it more nearly comparable with the VA series since the VA program covers only homes to be built for occupancy by veteran owners.

RELATION TO OTHER SERIES

The series on new housing starts has a limited relationship to Census of Housing figures. Units started should not be added to housing inventory figures without an adjustment to allow time for completion. Also, although new construction usually accounts for the greater part of the difference in inventory reported in successive housing censuses, there are other changes, too, such as demolitions, disaster losses, and additions and losses due to conversions or mergers. The magnitudes of these factors are indicated in the National Housing Inventory of 1956. The Census of Housing also includes certain types of residences which are not counted in the new housing starts series, such as living quarters in trailers or mobile homes and in institutions or primarily nonresidential or transient structures.

The Census Bureau also publishes data on the number of housing units authorized by building permits each month. These figures differ from housing starts in that the units are reported in the month of permit issuance rather than in the month of start of construction and they exclude units in nonpermit areas.

Data compiled for the housing starts series are used in the preparation of estimates for the series on value of new construction put in place described in the preceding section.

USES AND LIMITATIONS

The series on housing starts serves as an important guide in the formulation of national housing policy and as an indicator of residential building activity. It must be recognized that the current estimates have a number of limitations: First, both the level of the estimates and the measures of month-to-month change are subject to sampling error. The

TABLE 20.—*New Housing Starts and Applications for Financing*

[Thousands of units]

	Housing starts							New private housing units authorized by building permits	Proposed home construction			
	Total private and public (including farm) ¹	Total private (including farm)	Private nonfarm				FHA (1-4 family units)		VA	Applications for FHA commitments ²	Requests for VA appraisals ²	
			Total	1-family	2 or more family	Government programs						
1946.....	(3)	(3)	1, 015. 2	(3)	(3)	67. 1	91. 8	(3)	121. 7	(3)		
1947.....	(3)	(3)	1, 265. 1	(3)	(3)	178. 3	160. 3	(3)	286. 4	(3)		
1948.....	(3)	(3)	1, 344. 0	(3)	(3)	216. 4	71. 1	(3)	293. 2	(3)		
1949.....	(3)	(3)	1, 429. 8	(3)	(3)	252. 6	90. 8	(3)	327. 0	(3)		
1950.....	(3)	(3)	1, 908. 1	(3)	(3)	328. 2	191. 2	(3)	397. 7	(3)		
1951.....	(3)	(3)	1, 419. 8	(3)	(3)	186. 9	148. 6	(3)	192. 8	164. 4		
1952.....	(3)	(3)	1, 445. 4	(3)	(3)	229. 1	141. 3	(3)	267. 9	226. 3		
1953.....	(3)	(3)	1, 402. 1	(3)	(3)	216. 5	156. 5	(3)	253. 7	251. 4		
1954.....	(3)	(3)	1, 531. 8	(3)	(3)	250. 9	307. 0	41, 056. 5	338. 6	535. 4		
1955.....	(3)	(3)	1, 626. 6	(3)	(3)	268. 7	392. 9	1, 152. 6	306. 2	620. 8		
1956.....	(3)	(3)	1, 324. 9	(3)	(3)	183. 4	270. 7	921. 9	197. 7	401. 5		
1957.....	(3)	(3)	1, 174. 8	(3)	(3)	150. 1	128. 3	820. 3	198. 8	159. 4		
1958.....	(3)	(3)	1, 314. 2	(3)	(3)	270. 3	102. 1	950. 8	341. 7	234. 2		
1959.....	1, 553. 5	1, 516. 8	1, 494. 6	1, 211. 7	282. 9	307. 0	109. 3	41, 208. 3	369. 7	234. 0		
1960.....	1, 296. 0	1, 252. 1	1, 230. 1	972. 3	257. 8	225. 7	74. 6	998. 0	242. 4	142. 9		
1961.....	1, 365. 0	1, 313. 0	1, 284. 8	946. 4	338. 4	198. 8	83. 3	1, 064. 2	243. 8	177. 8		
1962.....	1, 492. 4	1, 462. 8	1, 439. 1	967. 8	471. 3	197. 3	77. 8	1, 186. 6	221. 1	171. 2		
1963.....	1, 640. 9	1, 609. 2	1, 581. 7	993. 2	588. 5	166. 2	71. 0	41, 334. 7	190. 2	139. 3		
1964 (preliminary)...	1, 575. 7	1, 543. 9	1, 516. 9	945. 9	571. 0	154. 0	59. 2	1, 273. 8	182. 1	113. 6		

¹ Military housing starts including those financed with mortgages insured by FHA under Section 803 of the National Housing Act, are included in publicly financed starts but excluded from the privately financed starts for FHA and Government programs.

² Units in mortgage applications for new home construction.

³ Not available.

⁴ For 1954-58, coverage limited to 6,600 places; 1959-62, 10,000 places; and for 1963 and 1964, 12,000 places.

NOTE.—Monthly data on new nonfarm housing starts available beginning 1939, annual from 1889. Revised series, beginning with 1945, includes Alaska and Hawaii, and beginning with 1959, includes farm as well as nonfarm housing starts.

Sources: Department of Labor prior to 1946, Department of Commerce, Federal Housing Administration (FHA), Veterans' Administration (VA).

standard error for the monthly estimate of total housing is between 3 and 4 percent. Secondly, it is possible that there is still some understatement of starts due to the difficulty of locating and identifying construction projects in nonpermit areas. Another limitation is in the seasonal adjustment factors which of necessity are based on a relatively small number of years; after sufficient time has elapsed the seasonal factors will be based on a number of years sufficient to yield sounder seasonal indexes.

The FHA and VA series indicate the importance of these government programs in the field of new home construction. Certain limitations in these series should be observed, however, particularly in their relation to other data. Although FHA and VA may make inspections during construction and

the units may be counted as FHA or VA "starts" the permanent financing after completion may not be underwritten. Also, some applications for FHA commitments or requests for VA appraisals lapse. There is some duplication of units in application for FHA commitments and requests for VA appraisals. In cases where both agencies issue valuation commitments, FHA makes the compliance inspection and the unit is reported as an FHA start, even though the mortgage may finally be underwritten by VA or by neither agency. The FHA series on housing starts includes units in buildings with 5 or more housing units as well as those in buildings with 1-4 housing units, whereas the FHA applications series covers only 1-to-4-family homes.

REFERENCES

Monthly data on housing starts are published in somewhat greater detail in *Construction Reports, Housing Starts (Census Series C20)*. Related information on residential housing units authorized by building permits is published in *Construction Reports, Housing Authorized in Permit-Issuing Places: Summary Statistics (Census Series C42)*. Much of this information is reprinted in *Construction Review* published monthly by the Department of Commerce. Historical data for 1889 to 1958 may be found in: *Construction During Five Decades, Historical Statistics 1907-1952 (BLS Bulletin 1146)*; *Trends in Building Permit Activity (BLS Bulletin 1243)*; *Nonfarm Housing Starts 1889-1958 (BLS Bulletin 1260)*. A more detailed technical description of the methods used to prepare the new series of housing starts may be found in the *Census Report C20-11 (Supplement), May 1960*. A description of the old series is given in *Techniques of Preparing Major BLS Statistical Series (BLS Bulletin 1168)*, December 1954. A series on *Sales of New One-Family Homes (Census-HHFA Report Series C25)* was initiated in 1962.

For the government programs, monthly data from 1952 on starts and on proposed home construction are given in current issues of *Housing Statistics*, a monthly publication of the Housing and Home Finance Agency.

For the Census Univac II method of seasonal adjustment see *Electronic Computers and Business Indicators* by Julius Shishkin, published as Occasional Paper No. 57 by the National Bureau of Economic Research, especially Appendix A.

New Private Housing Units Authorized in Permit Places

DESCRIPTION OF SERIES

A revised monthly series on the number of new private housing units authorized by local building permits, unadjusted and seasonally adjusted by region and by type of structure, was introduced by the Bureau of the Census in January 1964, presenting data from January 1963. The new series pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. For 1954-59, available data relate to only 6,600 places. In 1963, the number of housing units authorized in the 12,000 places was

3.9 percent greater than the number in the 10,000 places. The procedure followed in arriving at the monthly building permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some States) in a recent year with estimates for the less active places based on a stratified probability sample of these places. Annual totals are based on reports from all 12,000 permit-issuing places. This 12,000 place universe accounts for a major portion but not all of residential building in the United States. About 83 percent of all private housing in 1963 was constructed within these 12,000 permit-issuing places.

These figures relate to new building intended for occupancy on a housekeeping basis. They do not include hotels, motels, and other structures for transient accommodation or group residential buildings such as nurses' homes and college dormitories. They also exclude additions, alterations, and repairs to existing buildings, as well as conversions.

The building permit data are adjusted for seasonal variation by the use of moving seasonal indexes (derived by the X-9 version of the Census Method II, based on data from January 1954-June 1964). Before calculation of the seasonal factors, the data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlaps of the two series in the first four months of 1960. It is assumed that the 12,000 permit-issuing place universe has seasonal movements which are very little different (if different at all) from those that apply to the 10,000 place universe, since the additional places added about 4 percent to the units reported by the 10,000 places.

Building permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Year's, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month to arrive at a daily average for that month. The seasonal adjustment indexes are then applied to the daily average and the results multiplied by the number of working days in the year.

Building permit data are also presented in considerable geographic detail not available for the housing starts series.

Number of new private housing units authorized by local building permits in 10,000 and 12,000 permit-issuing places: Unadjusted and seasonally adjusted annual rates, 1959-64

Period	In thousands of units	
	Unadjusted	Seasonally adjusted annual rate
10,000 permit-issuing places		
Annual totals:		
1959-----	1, 208. 3	-----
1960-----	998. 0	-----
1961-----	1, 064. 2	-----
1962-----	1, 186. 6	-----
1963-----	1, 285. 0	-----
Monthly:		
1963—January-----	81. 4	1, 217
February-----	76. 2	1, 187
March-----	104. 5	1, 229
April-----	125. 8	1, 233
May-----	133. 8	1, 309
June-----	113. 9	1, 300
July-----	116. 7	1, 266
August-----	110. 0	1, 234
September-----	110. 8	1, 322
October-----	123. 2	1, 351
November-----	95. 0	1, 309
December-----	93. 7	1, 359
12,000 permit-issuing places		
Annual totals:		
1962-----	1, 229. 5	-----
1963-----	1, 334. 7	-----
Monthly:		
1963—January-----	84. 4	1, 267
February-----	78. 7	1, 226
March-----	108. 8	1, 279
April-----	131. 5	1, 287
May-----	138. 7	1, 360
June-----	118. 7	1, 352
July-----	121. 9	1, 320
August-----	115. 0	1, 286
September-----	114. 7	1, 371
October-----	127. 8	1, 401
November-----	98. 6	1, 359
December-----	96. 1	1, 402
1964—January-----	85. 5	1, 333
February-----	90. 0	1, 404
March-----	119. 8	1, 377
April-----	127. 7	1, 280
May-----	122. 0	1, 271
June-----	123. 7	1, 306
July-----	118. 1	1, 242

LIMITATIONS OF DATA

The portion of residential construction measurable from building records is inherently limited, since such records obviously do not reflect construction activity outside of areas subject to local permit requirements. During 1963 about 17 percent of the housing units in the United States were constructed

in areas not requiring building permits. However, this proportion varies from State to State and among the metropolitan areas. The reported statistics are also influenced by the following factors:

1. Some new residential construction in building permit jurisdictions escapes recording. A current measure of such incomplete filing is not presently available.

2. Changes in boundaries of localities due to annexation, new incorporations, etc., result in problems in comparability over time, even for the same places.

To the extent that these limiting factors apply rather consistently over an extended period, they may not seriously impair the usefulness of building permit statistics as indicators of *trends* in residential construction activity, although even in this connection the geographical limitations of the data need to be kept in mind.

REFERENCES

Monthly data are published in Construction Reports, Series C20, "*Housing Starts*." Building permit authorizations by type of structure, and covering the numbers of units as reported by individual permit-issuing places, appear in the Annual C40 reports of the Bureau of the Census, *Housing Authorized in Individual Permit-Issuing Places*.

Data showing authorizations by type of structure and covering both numbers of units and permit valuations, for States and selected metropolitan statistical areas (based on 3,014 places), appear each month in the C42 series of reports, *Housing Authorized in Permit-Issuing Places: Summary Statistics*. Similar data covering all SMSA's and States, and based on approximately all of the 12,000 permit-issuing places in the United States, appear in the annual summaries of the C42 series of reports, *Housing Authorized in Permit-Issuing Places: Summary Statistics*.

Related Construction Data Reports

- Construction Reports, Series C25: *Sales of New One-Family Homes* (monthly)
- Construction Reports, Series C30: *Value of New Construction Put in Place* (monthly)
- Construction Reports, Series C41: *Authorized Construction, Washington, D.C. Area* (monthly)

21. BUSINESS SALES AND INVENTORIES—TOTAL AND TRADE

Total Business

For convenience in summarizing business trends, total business sales and inventories as shown here combine wholesale, retail, and manufacturers' data. The series included are described in the individual presentations which follow. It should be noted that these data, when compared with the nonfarm business statistics used in gross national product computations and elsewhere, are smaller, since they do not include construction, utilities, or other nonindustrial sectors.

Wholesale Trade

DESCRIPTION OF SERIES

The series on wholesale sales and inventories is limited to merchant wholesalers as information on other types of wholesalers is not available except for years when the Census of Business is taken. The 1958 Census of Business indicated that merchant wholesalers accounted for 43 percent of the sales and 75 percent of the inventories of all wholesale establishments. The areas of wholesale trade not covered in this series include manufacturers sales offices and branches, agents and brokers, petroleum bulk stations and terminals and assemblers of farm products. The wholesale series shown in issues of this report prior to December 1963 included information for some types of nonmerchant wholesalers but this series has been discontinued. The revised series, beginning with data for 1948 and limited to merchant wholesalers was issued in December 1963.

The term "sales" as used here includes sale of merchandise, after deducting returns, allowances, and discounts, and receipts from repairs or other services to customers. Inventories represent stocks, at cost, of all merchandise owned by wholesalers and available for sale. They do not include goods held on a consignment basis nor do they include such items as fixtures, equipment and supplies not held for sale.

STATISTICAL PROCEDURES

Sales and inventories of merchant wholesalers are compiled and released by the Bureau of the Census, on the basis of dollar estimates reported monthly by a probability sample of merchant wholesalers representing all kinds of business. The data from 1960 to date are based on a sample selected from the 1958

Census of Business universe and supplemented by a sample of new businesses obtained from Social Security Administration lists. Data prior to 1960, based on samples selected from the 1954 and 1948 Censuses of Business, have been adjusted by the Office of the Business Economics to the level of the sample selected from the 1958 Census.

The sales and inventory data are adjusted for seasonal variation and, in the case of sales, also for trading day differences using the X-9 version of the Census Method II seasonal adjustment program. The magnitude of these adjustments is suggested by the following comparison of unadjusted and adjusted data for 1963 for merchant wholesalers, all trades combined.

[Dollar figures in billions]

	Unadjusted		Seasonally adjusted		Implicit seasonal adjustment factors	
	Sales	Inventories	Sales ¹	Inventories	Sales ¹	Inventories
Jan----	11.5	14.5	12.1	14.6	94.5	99.5
Feb----	11.3	14.5	12.5	14.6	90.0	99.6
Mar----	12.3	14.7	12.5	14.6	98.3	100.2
Apr----	12.6	14.6	12.6	14.8	100.3	98.8
May----	13.0	14.7	12.5	14.8	103.7	99.4
Jun----	12.2	14.8	12.6	14.9	97.4	99.5
Jul----	13.0	14.9	12.9	15.0	101.0	99.3
Aug----	13.1	15.1	12.8	15.1	102.2	99.8
Sept----	12.8	15.3	12.9	15.3	99.4	100.3
Oct----	14.3	15.8	13.0	15.5	110.4	101.9
Nov----	13.0	15.9	12.8	15.5	101.8	102.4
Dec----	13.2	15.5	13.0	15.6	101.3	99.6

¹ Includes adjustments for trading day differences.

USES AND LIMITATIONS

The monthly wholesale trade series are important economic indicators which reflect the level of economic activity at an intermediate stage of the distributive process. The wholesale data are also used together with similar data for manufacturing and retail trade to provide a consistent aggregate series for total business.

The monthly estimates of sales and inventories are based upon a sample and are therefore subject to sampling variability. In addition, they are subject to nonsampling errors, such as the failure of respondents to submit reports in time for tabulation, to submit correct figures, or to respond at all. The estimates of sales are more accurate than the estimates of inventories. The statistics on inventories

TABLE 21.—Business Sales and Inventories—Total and Trade
[Billions of dollars]

Period	Total business ¹		Wholesale ⁴		Retail ⁵					
	Sales ²	Inventories ³	Sales ²	Inventories ³	Sales ²			Inventories ³		
					Total	Durable goods stores	Non-durable goods stores	Total	Durable goods stores	Non-durable goods stores
1929.....	(⁶)	(⁶)	(⁶)	(⁶)	4. 04	1. 30	2. 74	(⁶)	(⁶)	(⁶)
1939.....	(⁶)	(⁶)	(⁶)	(⁶)	3. 50	0. 94	2. 56	5. 53	2. 09	3. 45
1940.....	(⁶)	(⁶)	(⁶)	(⁶)	3. 86	1. 13	2. 73	6. 12	2. 47	3. 65
1941.....	(⁶)	(⁶)	(⁶)	(⁶)	4. 61	1. 43	3. 17	7. 78	3. 18	4. 60
1942.....	(⁶)	(⁶)	(⁶)	(⁶)	4. 77	1. 03	3. 74	8. 02	2. 75	5. 27
1943.....	(⁶)	(⁶)	(⁶)	(⁶)	5. 27	1. 02	4. 25	7. 56	2. 21	5. 35
1944.....	(⁶)	(⁶)	(⁶)	(⁶)	5. 85	1. 16	4. 69	7. 64	2. 24	5. 40
1945.....	(⁶)	(⁶)	(⁶)	(⁶)	6. 50	1. 34	5. 17	7. 95	2. 43	5. 52
1946.....	(⁶)	(⁶)	(⁶)	(⁶)	7 8. 73	7 2. 35	7 6. 38	8 12. 06	8 3. 85	8 8. 21
1947.....	(⁶)	(⁶)	(⁶)	(⁶)	10. 20	3. 13	7. 07	14. 24	5. 35	8. 90
1948.....	35. 99	52. 51	6. 81	7. 96	11. 14	3. 57	7. 56	16. 01	6. 57	9. 44
1949.....	33. 79	49. 50	6. 51	7. 71	11. 15	3. 75	7. 40	15. 47	6. 26	9. 21
1950.....	38. 60	59. 82	7. 70	9. 28	12. 27	4. 52	7. 75	19. 46	8. 29	11. 17
1951.....	43. 36	70. 24	8. 60	9. 89	13. 05	4. 54	8. 51	21. 05	9. 63	11. 42
1952.....	44. 84	72. 38	8. 78	10. 21	13. 53	4. 61	8. 92	21. 03	9. 49	11. 54
1953.....	47. 99	76. 12	9. 05	10. 69	14. 09	5. 03	9. 06	21. 49	9. 78	11. 71
1954.....	46. 44	73. 18	8. 99	10. 64	14. 10	4. 85	9. 25	20. 93	9. 27	11. 66
1955.....	51. 69	79. 52	9. 89	11. 68	15. 32	5. 58	9. 74	22. 77	10. 53	12. 24
1956.....	54. 06	87. 30	10. 51	13. 26	15. 81	5. 48	10. 33	23. 40	10. 50	12. 91
1957.....	55. 88	89. 05	10. 48	12. 73	16. 67	5. 70	10. 97	24. 45	11. 28	13. 17
1958.....	54. 23	86. 92	10. 26	12. 74	16. 70	5. 28	11. 41	24. 11	10. 53	13. 59
1959.....	59. 58	91. 96	11. 41	13. 95	17. 95	5. 97	11. 98	25. 31	11. 04	14. 26
1960.....	60. 53	94. 61	11. 44	13. 98	18. 29	5. 89	12. 40	26. 81	11. 95	14. 86
1961.....	60. 75	95. 58	11. 63	14. 25	18. 23	5. 61	12. 63	26. 24	11. 02	15. 22
1962.....	65. 08	100. 27	12. 16	14. 58	19. 61	6. 25	13. 37	27. 94	11. 73	16. 21
1963.....	68. 00	105. 13	12. 69	15. 60	20. 54	6. 68	13. 86	29. 38	12. 51	16. 87
1964 ⁹	72. 63	108. 76	13. 72	16. 40	21. 79	7. 09	14. 71	29. 59	12. 17	17. 43

¹ The term "business" here includes wholesale, retail, and manufacturing trade (see page 72).

² Monthly average for year and total for month.

³ Book value, end of period, seasonally adjusted.

⁴ Merchant wholesalers. Beginning January 1961, data include Alaska and Hawaii.

⁵ Beginning January 1960, data include Alaska and Hawaii.

⁶ Not available.

⁷ In 1951, a basic change in the method of estimating retail sales directly from sample data (rather than linked to a Census of Retail Trade) was introduced. The "new" series, which begins with data for 1946, is not comparable with sales figures for earlier periods.

⁸ Retail inventory estimates beginning with year-end 1946 utilize as benchmarks the *Retail Trade Annual Reports* of the Bureau of the Census, are based on the latest (1957) Standard Industrial Classification, and include data for Alaska and Hawaii. The "old" estimates for 1939 through 1945 are based on the Censuses of Business for 1939 and 1948 and are not comparable with the "new" series.

⁹ Preliminary.

Source: Department of Commerce.

are based on estimates by respondents or imputations due to nonresponse to a greater extent than are sales statistics, reflecting the fact that wholesalers do not keep inventory records on a monthly basis to the same extent that they keep monthly sales records. Comparisons of the monthly estimates with the Census of Business data indicate that the monthly estimates are subject to some undercoverage due primarily to the time lag in representing births in the monthly survey. This undercoverage, however, is

not considered sufficiently serious to affect the reliability of short term trend comparisons made from these data.

REFERENCES

Sales and inventory data for merchant wholesalers, both unadjusted and adjusted, are published in greater detail by kind of business by the Bureau of the Census in its Monthly Wholesale Trade Report which also includes a detailed description of the

sample, estimation procedures and reliability of the data. The data for the summary trade groups are also published by the Office of Business Economics in its Business News Reports series and in the Survey of Current Business. Data from 1960 to date are available from the Bureau of the Census; data from 1948 to 1959 are available from the Office of Business Economics.

Additional information on the seasonal adjustment of these series may be found in the references to the retail trade section, page 76.

Retail Trade

DESCRIPTION OF SERIES

The series on retail sales and inventories represent sales and inventories of all establishments classified in retail trade. Sales are net, i.e., less discounts, returns and allowances, and include all business receipts of the reporting establishments, not just receipts from sales of merchandise, as well as sales taxes and excises. Inventories are valued at the cost of merchandise on hand. The separation of estimates into "durable goods" and "nondurable goods" is based upon classifications of stores according to the durability of the commodities accounting for the major portion of their sales.

In 1951 a basic change in the method of estimating retail sales was introduced. The "new" series, which started in January 1951, was not comparable with the sales figures for earlier periods. In early 1957 the new series was revised back to January 1951 to exclude data for milk dealers engaged in processing on the premises; this exclusion conforms to a change made in the Standard Industrial Classification. Estimates of retail sales in Alaska and Hawaii are included beginning with data for 1960. In mid-1961 the sales data for 1946-50 were revised for comparability with the latest revised series. A "new" series on inventories, comparable in concept and coverage to the latest series on sales begins with January 1946. The new series is not comparable with the series for years prior to 1946.

STATISTICAL PROCEDURES

Census of Retail Trade data for the years 1929, 1933, 1935, 1939, and 1948 were used as benchmarks for the sales series for the period 1929-1951. Sales estimates for the intercensus years between 1935 and 1951 were based in large part on changes in sales-tax collections of 20 States (whose sales accounted for 40 percent of total retail sales) supplemented by data from special Internal Revenue Service tabu-

lations, Federal Reserve System data on department stores, and data on the taxable quantity and average price of gasoline. In developing these estimates, use was also made of monthly estimates of sales derived from data reported to the Bureau of the Census by a constant sample of large independent retailers and chain stores.

Beginning with January 1951 monthly estimates have been prepared by the Census Bureau directly from probability sample data. Estimates comparable in concept and coverage were prepared by the Office of Business Economics back to January 1946. The new estimates are not linked to a census of business benchmark, a factor that accounts for most of the difference in level between the sales estimates for 1951 indicated by the old and new series. The new estimates from the probability sample of reporting firms are derived essentially by weighting the reported sales of each firm or store in the sample by a value dependent upon its probability of selection.

The year-end estimates of inventories prior to 1946 were based on the Censuses of Retail Trade for 1939 and 1948, the Internal Revenue Service's *Statistics of Income*, Part 2, and Federal Reserve data on department store inventories. Retail inventories estimates beginning with December 1946 utilize as benchmarks the data in the *Annual Retail Trade Reports* of the Bureau of the Census. Monthly estimates are made by the Office of Business Economics and are based primarily on sample data reported to the Bureau of the Census.

The sales and inventories data are adjusted for seasonal variation and, in the case of sales, also for holidays and trading day differences, using the X-9 version of the Census Method II seasonal adjustment program. The magnitude of the seasonal adjustments is indicated by the following comparison of unadjusted and seasonally adjusted data for 1963.

[Dollar figures in billions]

	Unadjusted		Seasonally adjusted		Implicit seasonal adjustment factors	
	Sales	Inventories	Sales ¹	Inventories	Sales ¹	Inventories
Jan----	18.3	27.0	20.4	28.0	89.6	96.4
Feb----	17.1	27.7	20.4	28.0	83.9	99.0
Mar----	19.7	28.6	20.4	28.1	96.6	101.8
Apr----	20.5	28.6	20.3	28.1	101.2	102.1
May----	21.2	28.4	20.2	28.1	105.1	101.3
June----	20.7	28.0	20.5	28.1	101.2	99.7
July----	20.5	28.0	20.7	28.3	99.1	98.9
Aug----	21.0	27.6	20.7	28.1	101.7	98.0
Sept----	19.3	27.9	20.4	28.1	94.3	99.1
Oct----	21.5	29.1	20.7	28.4	103.9	102.7
Nov----	21.5	30.0	20.6	28.7	104.6	104.7
Dec----	25.1	27.8	21.0	28.7	119.4	97.0

¹ Includes adjustments for holidays and trading day differences.

RELATION TO OTHER SERIES

Retail sales data reflect a substantial portion of personal consumption expenditures and are, therefore, related to the personal consumption expenditure estimates that appear in the national accounts. They are different from personal consumption expenditures in that they include purchases by others than households and exclude such major expenditures as household expenditures for personal services, rent, medical services, etc. Retail sales and inventories data are closely related to wholesale trade and manufacturers' sales and inventories data, reflecting as they do the activities of the final stage of distribution in our economy.

USES AND LIMITATIONS

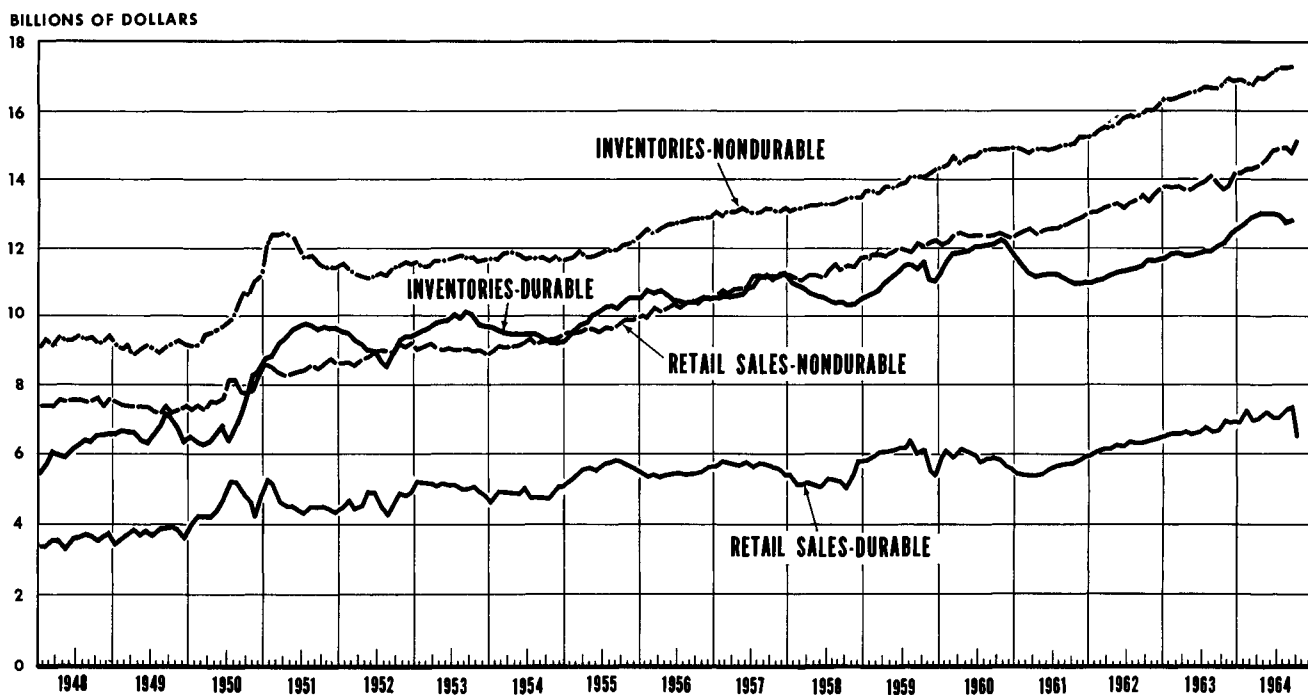
The monthly retail trade series reflect the trend of a major part of personal consumption expenditures well in advance of the availability of more comprehensive data. They and the inventories series are useful indicators of probable future economic activity at the manufacturing and other earlier stages of production and distribution.

Since the monthly retail sales estimates are based on a probability sample, they are subject to sampling variability, as well as such biases as nonresponse or reporting errors. The monthly sales estimates are compared with Census of Business data when those statistics become available. Although differences for individual kinds of business occur, reflecting, among other things, differences in classification due to differences in data collection methods, measures of total retail sales from these two sources have not differed significantly. To illustrate, the sum of the twelve monthly estimates of total retail sales were within one-half of one percent of the 1958 retail sales shown by the 1958 Census of Business.

The monthly retail inventories statistics are believed to be less accurate than the sales statistics, since fewer retailers maintain monthly records of their inventories than monthly records of sales. Even so, the monthly series estimate for December 1963 was within two percent of the *Annual Retail Trade Survey* estimate for the same date.

Retail Sales and Inventories, 1948-64

(Monthly data. Seasonally adjusted)



SOURCE OF DATA: DEPARTMENT OF COMMERCE

REFERENCES

Sales and inventories data for retail trade, seasonally adjusted as in current issues of *Economic Indicators*, are issued as monthly press releases by the Office of Business Economics and are published shortly thereafter in the *Survey of Current Business*. Sales data are also published by the Bureau of the Census in the *Monthly Retail Trade Report*. Advance estimates are published ten days after the report month in the *Advance Monthly Retail Sales Report*. Beginning with data for January 1962, estimates of weekly sales of retail stores are issued as a weekly report, generally on Thursday following the week covered.

More complete descriptions of these series have been published in the following issues of the *Survey of Current Business*: June 1948, October 1951, September and November 1952, January 1954, June 1957, December 1961, December 1963, and in the

biennial Business Statistics, a supplement to the Survey. The *Monthly Retail Trade Report* contains a detailed description of the Census Bureau's monthly retail trade series. A description of the sample and estimating procedure used for that series and additional information on the reliability of the estimates are available in a Bureau of the Census pamphlet entitled "Description of the Sample for the *Monthly Retail Trade Report*."

Additional information on the seasonal adjustment of sales, including specifications for the X-9 seasonal adjustment program are available from the Chief Economic Statistician, Bureau of the Census. Adjustments for trading day differences are similar to that described in "Census Trading-Day Adjustment Method", published in the May 1964 issue of *Business Cycle Developments*. A description of the retail sales series and seasonal adjustment techniques is also provided in the September 1964 issue of *Business Cycle Developments*.

22. MANUFACTURERS' SHIPMENTS, INVENTORIES, AND NEW ORDERS

DESCRIPTION OF SERIES

Manufacturers' shipments, inventories, new orders, and unfilled orders are estimated monthly by the Bureau of the Census. In several respects, these series are conceptually different from the monthly "Industry Survey," formerly published by the Office of Business Economics, from which they were evolved. The changes from the earlier series are explained in detail in the Bureau of the Census comprehensive report, "Manufacturers' Shipments, Inventories, and Orders: 1947-1963 Revised." They include: introduction of the Annual Survey of Manufactures as a new benchmark level, broadened coverage, revision of the sample design, refinement of industry reporting, expansion in the number of industry groups published, revision of seasonal factors, and introduction of market groupings. Totals for all manufacturing, durable goods industries, and nondurable goods industries, have been carried back to 1947, while figures for detailed industry and market categories are shown back to 1953.

The term "shipments" as used here represents manufacturers' receipts, billings, or the value of products shipped, less discounts, returns, and allowances. Shipments for export as well as those for domestic use are included. Shipments of foreign

subsidiaries are excluded, but shipments to a foreign subsidiary by a domestic firm are included. The shipment figures from the Annual Survey of Manufactures to which the current series is benchmarked, include interplant transfers as well as commercial sales. The new orders series represents new orders net of cancellations received during the period.

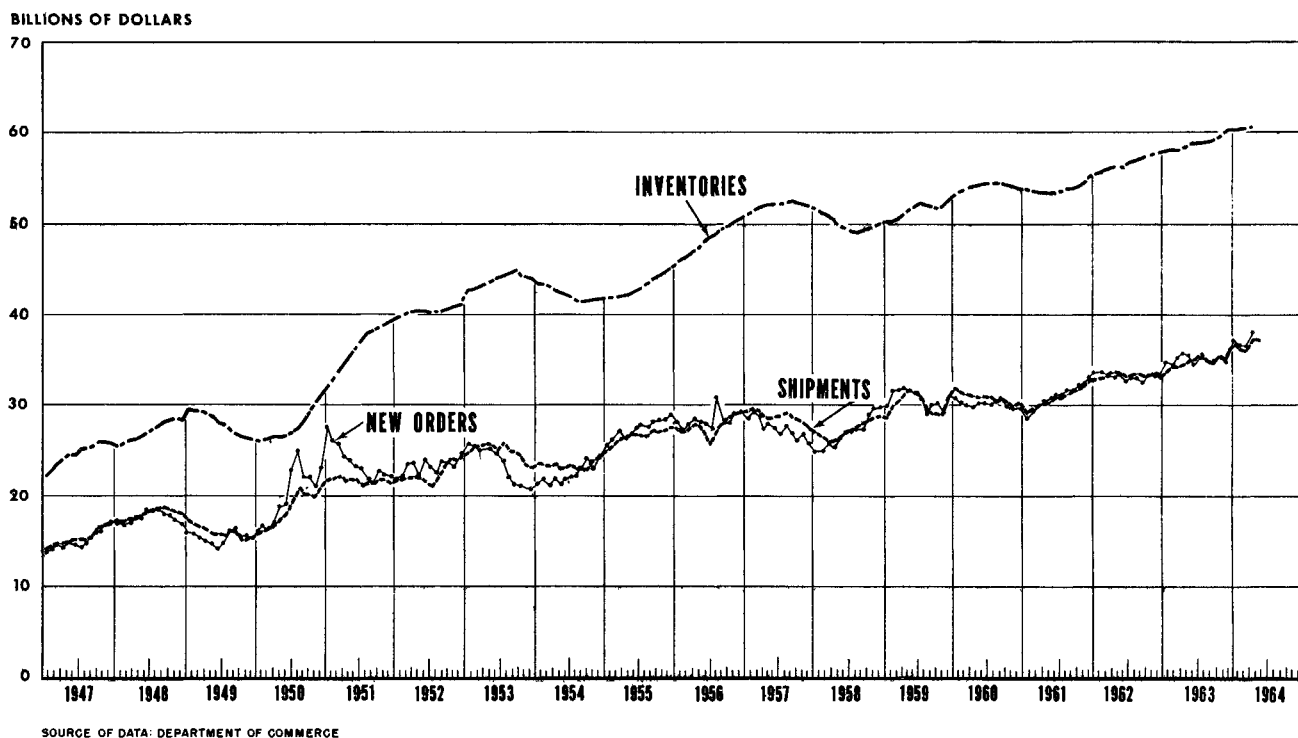
Inventory data are book values of stocks on hand at the end of the period, seasonally adjusted, and include materials and supplies, goods-in-process, and finished goods. Inventories associated with the non-manufacturing activities of the company are excluded from the benchmark in the revised series. In general, inventories are valued at the lower of cost or market price.

STATISTICAL PROCEDURES

Current estimates of manufacturers' shipments, inventories, and orders are made on the basis of reports received in the monthly manufactures program. The sample is defined as a subsample of the 1959 Annual Survey of Manufactures and was designed to provide estimates for approximately 55 detailed industry categories and to permit supplementary presentations of the data such as by market groupings. As in the Annual Survey, all companies engaged in manufacturing constituted the sampling

Manufacturers' Shipments, Inventories, and New Orders, 1947-64

(Monthly data. Seasonally adjusted)



units. All manufacturing companies with 1,000 or more employees were included with certainty, while smaller companies were sampled with probabilities proportional to their employment size within each industry category stratum. Approximately 7,500 companies were thus drawn for the sample.

Estimates of shipments, inventories, and unfilled orders are obtained for each detailed category by multiplying the estimate for the preceding month by the link relatives based on a matched sample of reporting companies. The data for each company are inflated by their sampling weights before being summarized. Estimates for higher levels (subtotals and totals) are obtained by aggregating the related component categories within the series.

The shipments and inventory estimates are adjusted annually to the benchmark levels from the Annual Survey of Manufactures. Since comparable universe data are not available for new and unfilled orders, a level for unfilled orders was established as of August 1964 by relating a modified ratio of unfilled orders to shipments obtained from the sample to the August 1962 shipments estimates by each

detailed category. Net new orders estimates are derived by adding the change in unfilled orders to the shipments estimate.

All the component series were seasonally adjusted by the Bureau of the Census using the X-9 and X-10 versions of Census Method II. In addition, the series on shipments and new orders were adjusted for the number of trading days and length of calendar month prior to seasonal adjustment. The magnitude of the seasonal adjustments are suggested by the comparison of shipments, orders, and inventories data with and without seasonal adjustment for 1963 on the next page.

RELATION TO OTHER SERIES

The revised shipments and inventories series are coordinated with a large number of monthly, quarterly, and annual surveys which are also conducted by the Bureau of the Census on a product-oriented basis. The shipments series is, in general, more nearly comparable than before with the manufacturing component of the Federal Reserve Board's index of industrial production.

TABLE 22.—Manufacturers' Shipments, Inventories, and New Orders

Year	Shipments ¹			Inventories ²			New orders, net ¹				Manufacturers' inventory—sales ratio ³
	Total	Durable goods	Non-durable goods	Total	Durable goods	Non-durable goods	Total	Durable goods		Non-durable goods	
								Total	Machinery and equipment		
Millions of dollars											
1947-----	15,500	6,683	8,817	25,897	13,061	12,836	15,256	6,388	(⁴)	8,868	1.58
1948-----	18,105	8,337	9,768	28,543	14,662	13,884	17,692	8,126	(⁴)	9,566	1.50
1949-----	16,092	7,167	8,925	26,321	13,960	13,261	15,614	6,633	(⁴)	8,981	1.75
1950-----	18,620	8,835	9,785	31,078	15,539	15,539	20,110	10,165	(⁴)	9,945	1.48
1951-----	21,702	10,483	11,219	39,306	20,991	18,315	23,907	12,841	(⁴)	11,066	1.66
1952-----	22,581	11,338	11,243	41,136	23,731	17,405	23,203	12,061	(⁴)	11,142	1.78
1953-----	24,823	13,335	11,488	43,948	25,878	18,070	23,533	12,105	2,084	11,428	1.76
1954-----	23,351	11,827	11,524	41,612	23,710	17,902	22,313	10,743	1,770	11,570	1.81
1955-----	26,486	14,080	12,406	45,069	26,405	18,664	27,423	41,954	2,499	12,469	1.62
1956-----	27,740	14,715	13,025	50,642	30,447	20,195	28,383	15,381	2,870	13,002	1.73
1957-----	28,736	15,237	13,499	51,872	31,728	20,143	27,514	14,073	2,566	13,441	1.80
1958-----	27,280	13,572	13,708	50,070	30,095	19,975	26,901	13,170	2,354	13,731	1.84
1959-----	30,219	15,544	14,675	52,707	31,839	20,868	30,679	15,951	2,878	14,728	1.70
1960-----	30,796	15,817	14,979	53,814	32,360	21,454	30,115	15,223	2,791	14,892	1.76
1961-----	30,884	15,532	15,352	55,087	32,646	22,441	31,061	15,664	2,854	15,397	1.74
1962-----	33,308	17,184	16,124	57,753	34,326	23,427	33,167	17,085	3,090	16,082	1.70
1963-----	34,774	18,071	16,704	60,147	36,028	24,119	35,036	18,300	3,326	16,736	1.69
1964 ⁵ -----	37,124	19,232	17,892	62,764	38,311	24,453	37,682	19,797	3,700	17,886	1.64

¹ Monthly average for the year.

² Book value, end of year, seasonally adjusted.

³ Ratio of weighted average inventories to average monthly shipments.

⁴ Not available.

⁵ Preliminary.

Source: Department of Commerce.

The manufacturers' shipments and inventories series are closely related to the sales and inventories series for merchant wholesalers and retail trade. The shipments and inventories series are not entirely comparable to the sales and inventories series which are compiled on a company-oriented basis, particularly the FTC-SEC "Quarterly Financial Report for Manufacturing Corporations" and Internal Revenue Service, "Statistics of Income, Corporation Income Tax Returns."

The manufacturers' inventory data, together with inventory data for retailers and merchant wholesalers, are the basic data used in computing estimates of the "change in business inventories" component of Gross Private Domestic Investment. In measuring the change in business inventories, the book value inventory change data are adjusted to remove the effect of changes in replacement costs.

The new orders estimates are most closely related to the Census unfilled orders series, although they

Comparison of Shipments, Inventories, and Orders Data With and Without Seasonal Adjustments, 1963

(Dollar figures in billions)

	Without seasonal adjustment		Seasonally adjusted		Implicit seasonal adjustment factors	
	Shipments ¹	Inventories	Shipments ¹	Inventories	Shipments	Inventories
Jan----	31.2	58.0	33.5	57.9	93.1	100.2
Feb----	34.7	58.4	34.1	58.0	101.8	100.6
Mar----	35.1	58.4	34.2	58.1	102.4	100.5
Apr----	35.4	58.6	34.6	58.3	102.5	100.4
May----	35.0	58.9	34.8	58.5	100.5	100.7
June----	36.5	59.0	34.9	58.7	104.5	100.5
July----	32.7	58.6	35.6	58.9	91.9	99.5
Aug----	32.8	58.7	34.7	58.9	97.2	99.6
Sept----	36.0	58.8	34.7	59.1	103.9	99.6
Oct----	36.8	59.0	35.2	59.3	104.6	99.5
Nov----	35.4	59.4	35.0	59.8	101.1	99.4
Dec----	34.6	59.7	36.0	60.1	96.0	99.3

¹ Adjusted for trading-day and calendar-month variation.

are also akin to other anticipatory series such as new plant and equipment expenditures, construction contracts, etc.

USES AND LIMITATIONS

The manufacturers' shipments, inventories, and orders series reflect present and prospective conditions in this vital sector of the economy. The shipments series reflect the demand for the goods and services of manufacturers; trends in the inventories and changes in inventories series reflect the difference between production and shipments of manufactures; the new orders series indicates the probable course of manufacturers' activity in some industries in the immediate future. Study of the chart showing seasonally adjusted shipments, inventories, and new orders will reveal the tendency of new orders to lead shipments over the business cycle.

The market groupings provide a breakdown between final products and materials and a further division of final products between consumer goods and equipment for business and government use. Subtotals are shown for home goods and apparel and for consumer staples within the consumer goods division, while materials, including supplies and intermediate products are subdivided into construction materials and all other. Such economic time series provide useful measures for isolating the impact of changes in demand in various sectors of the economy and facilitate analysis of cyclical and growth developments.

The user should keep in mind the conceptual differences between the new series and the old monthly Industry Survey series. In summary, the new series (1) reflects only manufacturing activities from its Annual Survey benchmark basis, (2) is based on the 1957 SIC system, (3) excludes significant nonmanufacturing activities of companies, and (4) includes interplant as well as intercompany sales. Although the two series exhibited similar cyclical movements and approximate the same levels on an overall basis, the component series differed rather substantially, particularly with regard to level.

Although the objectives of the Bureau ultimately are to publish detail and sampling errors for approximately 55 industry categories and 12 market groupings, data are currently shown separately for only 14 two-digit major industry groupings, 16 detailed industry categories, 6 market categories and 3 supplementary series. The current response rate precludes the publication of sampling errors or additional detail at this time, particularly in industries which are predominantly comprised of small firms such as apparel, lumber, and furniture. In addition, there are a few industry categories for which the inclusion of secondary activities is considered to be too high and for which additional divisional reporting is necessary. The Bureau of the Census in studying various approaches to these problems which would permit a gradual increase in published data until the long-range goals are achieved.

REFERENCES

Detailed data for manufacturers' shipments, inventories, and orders are published by the Bureau of the Census in its *Current Industrial Report M3-1*, "Manufacturers' Shipments, Inventories, and Orders." Selected series are published by the Office of Business Economics in the *Survey of Current Business* and by the Census Bureau in *Business Cycle Developments*. A detailed explanation of the revisions made to the survey as well as revised historical data are published in the background report, *Manufacturers' Shipments, Inventories, and Orders: 1947-1963 Revised*. A supplementary chart-book shows seasonally adjusted data for each of the series published in its monthly M-3 survey, "Manufacturers' Shipments, Inventories, and Orders" for the years 1953-1963. Charts are provided for industry groupings, market groupings, and supplementary series such as machinery and equipment industries, consumer durables, and defense products.

23. MERCHANDISE EXPORTS AND IMPORTS

DESCRIPTION OF SERIES

The several export series cover exports of merchandise (except in-transit merchandise) from the United States to foreign countries. The larger aggregate, total exports (including re-exports), includes exports of domestic merchandise and re-exports of foreign merchandise, defined to cover commodities of foreign origin which have entered the United States as imports and which at the time of exportation are in the same condition as when imported. Imported foreign merchandise which has undergone some change in form in the United States is included under exports of domestic merchandise. The smaller aggregate, for total exports of domestic merchandise, shown also by economic class, is exclusive of re-exports. Both series as presented here are sometimes designated "commercial" because of the exclusion of data on Department of Defense shipments of grant-aid military equipment and supplies under the Mutual Security Program (referred to below as D.O.D. military aid shipments), but are not strictly "commercial" because they include other government sponsored shipments as noted in the table. Ship-

ments to United States armed forces and diplomatic missions abroad for their own use are also excluded.

Export series covers all exports from within the customs area of the United States, which includes all of the States and Puerto Rico (and included the Territories of Alaska and Hawaii prior to their admission to statehood). Other possessions are not included in the customs area, nor are shipments between the United States and these possessions included in the export series.

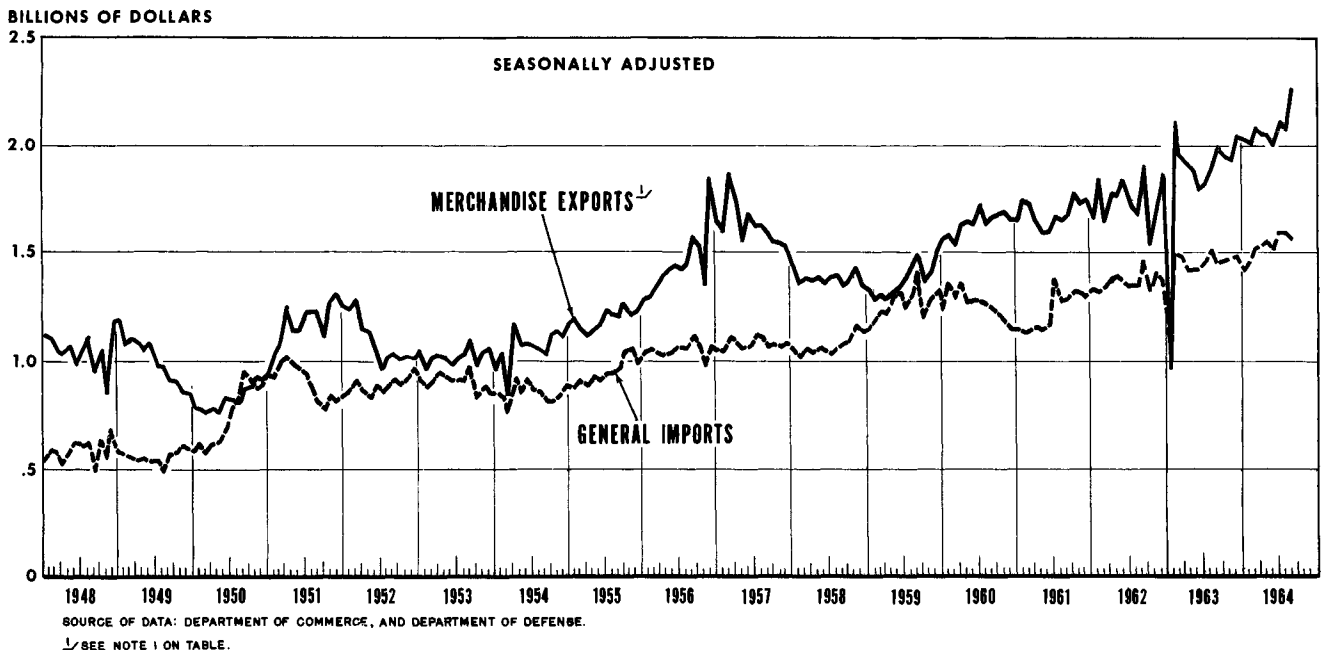
Excluded are certain special types of shipments as follows: gold and silver, oil and coal bunkers laden in the United States on vessels engaged in foreign trade, and some items of relatively small importance such as low valued or noncommercial shipments by mail and gifts valued at less than \$100.

Export shipments are valued at the time and place of export—that is at actual selling price, or at cost if not sold, including inland freight, insurance, and other charges to the place of export. Transportation and other costs beyond the United States port of exportation are excluded.

Imports are shown on two bases, "general imports" and "imports for consumption." Both series

Merchandise Exports and Imports, 1947-64

(Monthly data. Seasonally adjusted)



cover merchandise which is released from customs custody immediately upon arrival. They differ in their treatment of merchandise which enters into customs bonded warehouses. Such merchandise is included in "general imports" when it enters such warehouses on arrival. It enters into imports for consumption only when withdrawn from the warehouse for consumption. Governmental imports are included. Import coverage is in terms of the customs area (as explained above) and, as in the case of exports, in-transit shipments, gold and silver, and items of small importance are excluded.

Imports are valued in accordance with the Tariff Act of 1930, as amended, which defines the value of imports of merchandise generally as the market value in the foreign country and should exclude United States import duties, ocean freight, and marine insurance. Prior to January 1962, in actual practice only the values reported for imports subject to an *ad valorem* rate of duty (a percentage of the value) tended to conform precisely to the valuation definition.

For merchandise not subject to an *ad valorem* rate of duty (80-90 percent of imports), the reported values prior to 1962 may not be in accordance with the market value in the foreign country. For example, ocean freight may be included inadvertently in the values, data for shipments between allied firms may reflect arbitrary values, etc. Beginning January 1962, procedures were inaugurated for the verification by Customs examiners of statistical factors on import entries, and close conformity with the Tariff Act value definition is expected regardless of whether the item involved is dutiable at an *ad valorem* rate. In general, import values approximate an f.o.b. exporting country basis.

STATISTICAL PROCEDURES

Export statistics (except for D.O.D. military aid shipments, as explained below) are obtained from the Shipper's Export Declaration which exporters are required to file with the collectors of customs, giving a description of the merchandise, its classification under the prescribed commodity classification for exports, quantity, value, and other essential information. These declarations, after a preliminary review for accuracy and completeness, are transmitted by the Bureau of Customs to the Bureau of the Census, where they are sorted and coded prior to further processing. Data for smaller valued shipments, accounting for a considerable proportion of the

volume of documents but a relatively small proportion of total value, are based on estimating procedures. Currently, shipments to Canada valued at \$100-\$1,999 are sampled at a ratio of 10 percent while shipments to countries other than Canada valued at \$100-\$499 are sampled at a ratio of 50 percent. The value of shipments valued at below \$100, accounting in 1963 for a little less than 1 percent of total exports by value, is estimated and shown in this table under "finished manufactures."

For exports made by the Department of Defense of grant-aid military equipment and supplies under the Mutual Security Program (excluded from the series in this table) and for other Department of Defense shipments such as those under the civilian supply program, information is compiled by the Bureau of the Census from the records of the Department of Defense. In most instances, these records show values f.o.b. point of origin. These are adjusted to show value at the United States port of exportation.

Import information is derived from the import entry form prescribed by the Customs Bureau to be filed by the importer for each shipment arriving in the United States, and on which importers report value, country of origin, type of commodity, classified in accordance with the prescribed import commodity classification, and other essential information. After a review by Customs, the statistical copy of the entry form is transmitted to the Bureau of the Census. Statistics covering low valued import shipments are estimated on the basis of a sample. The sampling procedures have varied. Currently a one percent sample is taken of all imports valued at less than \$100 on formal entries and of all imports reported on informal entries (which may include shipments valued at not more than \$250). Sampled shipments (estimated for 1963 at about 1 percent of total imports) are distributed by country and allocated to the commodity class "finished manufactures."

With respect to both exports and imports, coverage for a given calendar month approximates fairly closely all shipments departing or entering during the calendar month. Documents arriving too late for inclusion, as well as those rejected for verification, are included in the total for a subsequent month, usually the following month.

The seasonally adjusted series have been adjusted for working days as well as seasonal variation. The seasonal adjustment factors are derived by a ratio-

to-moving-average method. The seasonal adjustment factors used in 1964 are:

	Imports	Exports excluding MSP
January.....	97.0	95.3
February.....	100.6	103.6
March.....	102.4	102.7
April.....	100.6	105.0
May.....	98.0	105.1
June.....	103.8	103.3
July.....	96.7	92.6
August.....	96.3	91.8
September.....	99.1	92.8
October.....	103.5	101.6
November.....	101.2	104.0
December.....	N.A.	N.A.

N.A. = Not available.

RELATION TO OTHER SERIES

Statistics of exports and imports are available in Census and other Government publications on bases varying with respect to the treatment of re-exports, of D.O.D. military aid shipments, of goods entering into or withdrawn from Customs bonded warehouses and other matters, depending on the purpose of the presentation. The series here shown are among those presented in monthly Census releases, with certain qualifications.

Thus, monthly Census data for exports by economic classes are for total exports of domestic merchandise, in contrast with the series shown here exclusive of D.O.D. military aid shipments; however, this affects only the category of "finished manufactures," since all D.O.D. military aid shipments are allocated to this class (military aid shipments amounting to about 4 percent of total exports in 1963). The seasonally adjusted series was published for the first time in 1960.

The economic classes as presented here are derived from the five Census classes of "crude foodstuffs" and "manufactured foodstuffs" (combined as "foodstuffs"), "crude materials" and "semimanufactures" (combined as "industrial materials") and "finished manufactures." The indexes of quantum, value, and unit value for foreign trade, prepared by the Bureau of International Commerce, Department of Commerce, are available by economic class for exports of domestic merchandise on the same basis as the corresponding series shown here (i.e., net of D.O.D. military aid shipments) and for imports for consumption. The indexes are also available for total domestic exports inclusive of such D.O.D. shipments.

Series for merchandise exports and imports appear as major components of the balance of international

payments. They are combined with series covering various other current transactions to form the larger aggregates for exports and imports of "goods and services." The merchandise series used are based on, and roughly equivalent to, the series shown here for total exports (including re-exports) net of D.O.D. military aid shipments and for general imports. The series are further adjusted by exclusion of other military shipments and by other adjustments with respect to coverage, valuation, and timing, for consistency with balance of payments concepts. The seasonally adjusted quarterly figures for merchandise exports and imports will not necessarily agree precisely with corresponding quarterly totals compiled from the seasonally adjusted monthly series in the balance of payments because they differ in content. (See discussion in Balance of Payments Section which follows.)

USES AND LIMITATIONS

These summary series provide useful monthly indicators of the movement of merchandise exports and imports. As a measure of cyclical or long-term movement, monthly foreign trade data, even after seasonal adjustment, are erratic. While these data will necessarily be followed by users from month to month, judgments as to trend are more properly based on derived series for longer periods such as quarterly or three-month moving totals.

Although merchandise trade bulks large among the sources of international payments, the balance of payments can be comprehended only in terms of the full range of merchandise, service, capital, unilateral and other transactions. Undue importance should not be attached to the trade figures alone or to the surplus or deficit in merchandise trade.

Because of the variety of bases on which foreign trade data are presented the user must be attentive to the precise specifications of particular series, especially when they are to be used with or compared with other series. Similarly, when U.S. trade statistics are compared with those of other countries, special attention is due to the extent to which the series differ as to valuation and coverage.

REFERENCES

Totals for exports of domestic and foreign merchandise, general imports and imports for consumption are published monthly in the Census Bureau's *United States Foreign Trade* summary reports (FT 900 E and I, 930 E and I, 950 E and I, and 970 E and

TABLE 23.—*Merchandise Exports and Imports*

[Millions of dollars monthly average]

Year	Merchandise exports					Merchandise imports					Merchandise trade surplus
	Total (including re-exports) ¹	Domestic exports			General imports	Imports for consumption					
		Total ¹	Food-stuffs ²	Industrial materials		Finished manufactures ¹	Total ³	Food-stuffs	Industrial materials	Finished manufactures	
1929	437	430	63	156	211	367	367	80	204	83	70
1930	320	315	45	112	158	255	255	58	134	63	65
1931	202	198	31	74	93	174	174	44	85	46	28
1932	134	131	20	59	52	110	110	34	48	28	24
1933	140	137	17	69	51	121	119	35	59	27	19
1934	178	175	19	83	73	138	136	43	64	29	40
1935	190	187	18	86	83	171	170	53	83	34	19
1936	205	202	17	89	96	202	202	61	102	39	3
1937	279	275	24	117	135	257	251	71	134	46	22
1938	258	255	36	92	127	163	163	48	80	35	95
1939	265	260	26	95	139	193	190	50	103	37	72
1940	335	328	20	114	194	219	212	47	131	34	116
1941	429	418	42	94	281	279	268	58	175	35	150
1942	673	667	83	111	472	230	232	52	142	38	443
1943	1,080	1,070	140	146	784	282	283	84	143	56	798
1944	1,188	1,180	150	138	892	327	324	114	149	62	861
1945	817	799	143	138	518	347	342	96	176	69	470
1946	812	792	184	193	415	412	402	110	222	71	400
1947	1,278	1,263	263	282	719	481	474	139	252	82	797
1948	1,054	1,044	219	238	587	594	593	167	317	109	460
1949	1,004	995	187	261	546	553	551	173	274	104	451
1950	833	822	116	251	455	740	730	221	384	125	93
1951	1,164	1,151	190	345	616	917	904	258	488	158	247
1952	1,100	1,088	175	300	612	896	899	263	462	174	204
1953	1,022	1,012	143	254	614	910	902	274	444	183	112
1954	1,071	1,060	131	310	620	858	860	276	400	183	213
1955	1,191	1,180	162	351	667	958	954	260	477	217	233
1956	1,154	1,432	216	441	775	1,064	1,056	267	521	268	380
1957	1,625	1,611	208	530	872	1,105	1,102	274	534	294	520
1958	1,364	1,351	198	368	784	1,105	1,101	288	489	326	259
1959	1,366	1,352	210	366	776	1,302	1,284	285	569	431	64
1960	1,633	1,617	230	510	877	1,251	1,251	274	539	438	382
1961	1,679	1,659	254	486	919	1,226	1,221	277	522	423	453
1962	1,745	1,723	281	440	1,002	1,366	1,354	297	561	496	379
1963	1,869	1,845	314	494	1,031	1,428	1,417	310	574	532	440
1964	2,135	2,106	348	566	1,150	1,557	1,550	316	615	605	578

¹ Starting with 1950, figures shown exclude Department of Defense shipments of grant-aid military equipment and supplies under the Mutual Security Program. For 1941 and subsequent years, figures include shipments under special programs, including I.C.A. and predecessor programs, UNRRA, Lend-Lease (1941-1947), Greek-Turkish Aid (1947-1952), interim aid (1947-1948), and United States foreign relief (1947-1948). Figures for 1948 and subsequent years also include Department of the Army civilian supply shipments.

² The grant-aid military shipments excluded beginning with 1950 (see note 1 above) have been deducted entirely from "Finished manufactures." Private relief shipments of foodstuffs are included in "Finished manufactures" prior to 1941 and in "Foodstuffs" thereafter.

³ "General imports" through 1932, "Imports for consumption" thereafter.

Source: Department of Commerce.

I). These reports give monthly data for the current and preceding years. Separate data on Department of Defense shipments of grant-aid military equipment and supplies are provided monthly in FT 900E, *Total Export Trade*. Detailed commodity by country data are also published by the Census Bureau. Supplementary information is available on such items as unusual transactions appearing in the statistics, changes in the types of shipments included in the statistics, and special problems of valuation, commodity classification, and the like. This information, formerly published in a monthly pamphlet *Foreign Trade Statistics Notes*, has been carried since January 1961 in the statistical reports themselves.

Indexes of foreign trade (quantity, unit value, and value) are computed by the Bureau of International Commerce of the Department of Commerce in its *Overseas Business Reports*.

Summary explanations of the export and import series appear in the introductory notes of Census monthly bulletins FT 410 and 420 (exports) and FT 125 (imports). The last comprehensive discussion of the series appeared in the 1946 edition of *Foreign Commerce and Navigation of the United States* (issued in 1950) and is still generally applicable. A complete list of all Census publications in the field of foreign trade is available in the Bureau of the Census Catalog.

24 and 25. UNITED STATES BALANCE OF INTERNATIONAL PAYMENTS

DESCRIPTION OF SERIES

The balance of payments of the United States is a summary of the economic transactions between residents of the United States and residents of the rest of the world. The tables here presented are derived from the more detailed regular quarterly presentation published by the Office of Business Economics, Department of Commerce.

All reported or recorded foreign transactions or those which can be estimated on the basis of sample data are summarized under general categories shown in the balance of payments. Since not all transactions can be accurately measured or estimated, a discrepancy between total payments and total receipts regularly appears which is designated "errors and unrecorded transactions."

U.S. Exports and Imports of Goods and Services, 1947-64

(Quarterly data. Seasonally adjusted annual rates)

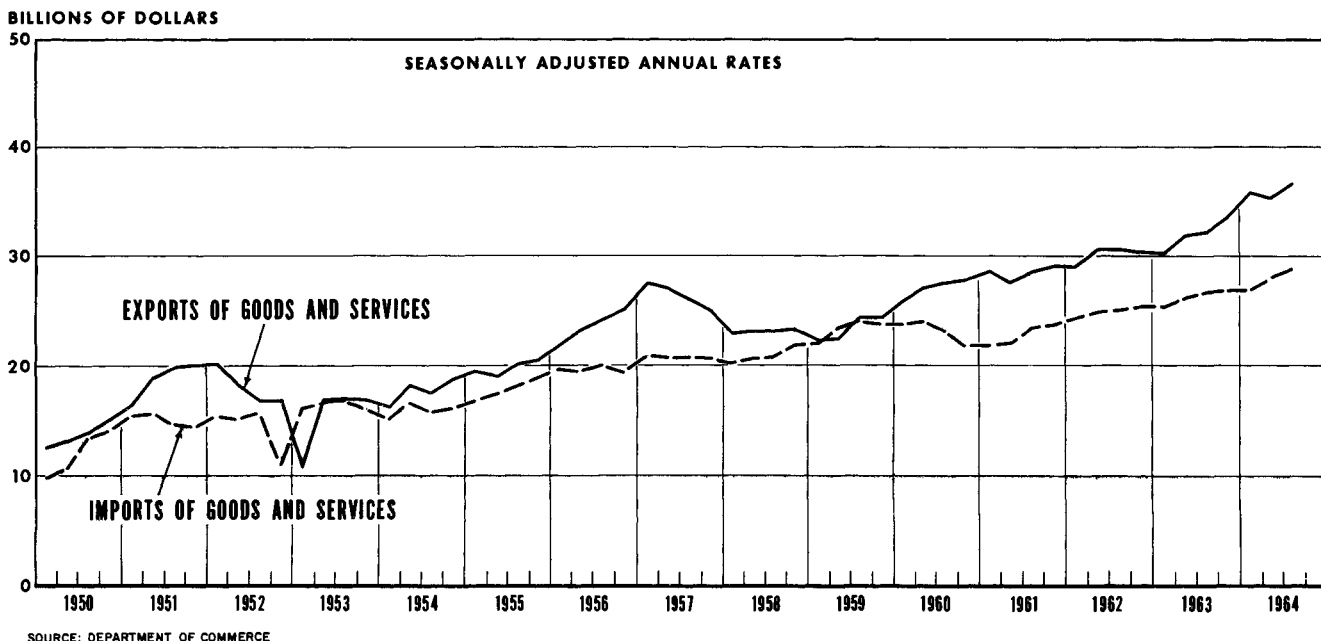


TABLE 24.—U.S. Exports and Imports of Goods and Services

[Millions of dollars]

Period	Exports of goods and services						Addendum: goods and services financed by Government grants and capital	Imports of goods and services				Balance on goods and services
	Total	Merchandise ¹	Military sales	Income on investments		Other services		Total	Merchandise ¹	Military expenditures	Other services	
				Private	Government							
1929---	7,034	5,347	(2)	982	157	548	(3)	5,886	4,463	50	1,373	1,148
1930---	5,448	3,929	(2)	876	164	479	(3)	4,416	3,104	49	1,263	1,032
1931---	3,641	2,494	(2)	674	92	381	(3)	3,125	2,120	48	957	516
1932---	2,474	1,667	(2)	460	67	280	(3)	2,067	1,343	47	677	407
1933---	2,402	1,736	(2)	417	20	229	(3)	2,044	1,510	41	493	358
1934---	2,975	2,238	(2)	437	-----	300	(3)	2,374	1,763	34	577	601
1935---	3,265	2,404	(2)	521	-----	340	(3)	3,137	2,462	41	634	128
1936---	3,539	2,590	(2)	567	2	380	(3)	3,424	2,546	38	840	115
1937---	4,553	3,451	(2)	576	1	525	(3)	4,256	3,181	41	1,034	297
1938---	4,336	3,243	(2)	583	2	508	(3)	3,045	2,173	41	831	1,291
1939---	4,432	3,347	(2)	539	2	544	(3)	3,366	2,409	46	911	1,066
1940---	5,355	4,124	(2)	561	3	667	(3)	3,636	2,698	61	877	1,719
1941---	6,896	5,343	(2)	535	9	1,009	(3)	4,486	3,416	162	908	2,410
1942---	11,769	9,187	(2)	496	18	2,068	(3)	5,356	3,499	953	904	6,413
1943---	19,134	15,115	(2)	497	12	3,510	(3)	8,096	4,599	1,763	1,734	11,038
1944---	21,438	16,969	(2)	556	17	3,896	(3)	8,986	5,043	1,982	1,961	12,452
1945---	16,273	12,472	(2)	572	17	3,211	(3)	10,232	5,245	2,434	2,553	6,041
1946---	14,735	11,707	(2)	751	21	2,256	(3)	6,991	5,073	493	1,425	7,744
1947---	19,737	16,015	(2)	1,036	66	2,620	(3)	8,208	5,979	455	1,774	11,529
1948---	16,789	13,193	(2)	1,238	102	2,256	(3)	10,349	7,563	799	1,987	6,440
1949---	15,770	12,149	(2)	1,297	98	2,226	(3)	9,621	6,879	621	2,121	6,149
1950---	13,807	10,117	(2)	1,484	109	2,097	(3)	12,028	9,108	576	2,344	1,779
1951---	18,744	14,123	(2)	1,684	198	2,739	(3)	15,073	11,202	1,270	2,601	3,671
1952---	17,992	13,319	(2)	1,624	204	2,845	(3)	15,766	10,838	2,054	2,874	2,226
1953---	16,947	12,281	192	1,658	252	2,564	(3)	16,561	10,990	2,615	2,956	386
1954---	17,759	12,799	182	1,955	272	2,551	(3)	15,931	10,354	2,642	2,935	1,828
1955---	19,804	14,280	200	2,170	274	2,880	(3)	17,795	11,527	2,901	3,367	2,009
1956---	23,595	17,379	161	2,468	194	3,393	(3)	19,628	12,804	2,949	3,875	3,967
1957---	26,481	19,390	375	2,612	205	3,899	(3)	20,752	13,291	3,216	4,245	5,729
1958---	23,067	16,264	300	2,538	307	3,658	(3)	20,861	12,952	3,435	4,474	2,206
1958---	23,476	16,282	302	2,694	349	3,849	(3)	23,342	15,310	3,107	4,925	134
1960---	27,044	19,459	335	2,911	349	3,990	2,239	23,193	14,723	3,048	5,422	3,851
1961---	28,438	19,913	402	3,464	380	4,279	2,687	22,852	14,497	2,954	5,401	5,586
1962---	30,084	20,576	656	3,850	471	4,531	2,908	25,021	16,134	3,044	5,843	5,063
1963---	32,020	21,089	659	3,969	498	4,905	3,338	26,335	16,996	2,897	6,442	5,685

¹ Adjusted from Customs data for differences in timing and coverage.

² Military transactions for cash and credit prior to 1953 are included in "Merchandise" and in "Other Services". Prior to 1941 there were no such transactions.

³ Not available. Estimates of this type have not been carried back beyond 1960.

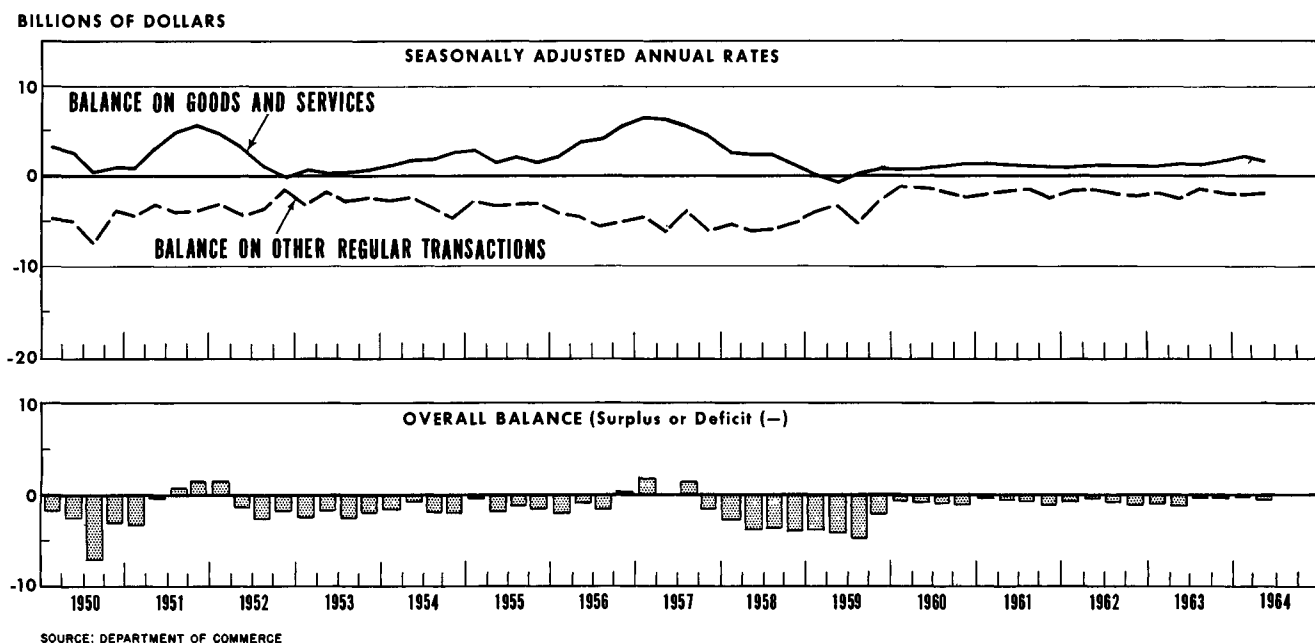
Source: Department of Commerce.

In the Office of Business Economics presentation a balance is struck in such a way as to emphasize the effect of these transactions on the international liquidity position of the United States. The OBE does this in more than one way. It presents in its regular releases an overall balance, which is the algebraic sum of all transactions other than those

which specifically measure changes in official reserve assets (gold, convertible currencies, and the gold *tranche* position in the International Monetary Fund) and in liquid liabilities to foreigners. It also presents a balance on "regular transactions", from which are excluded certain Government transactions which are affected by wide variations or are limited in

U.S. Balance of International Payments, 1950-64

(Quarterly data. Seasonally adjusted annual rates)



amount and duration. The major types of such "special" transactions are advance repayment of foreign loans, advances on military sales contracts, and Government borrowing abroad through the sale of medium-term nonmarketable securities. While conceding that these receipts do improve the overall balance, the compilers regard the balance on "regular" transactions, which excludes them, as a better indication of the longer run balance of payments problem. Data on special Government transactions were not separated from other transactions prior to 1959.

Table 25 shows only the balance on regular transactions. This is the algebraic sum of all payments and receipts as summarized under major categories in the columns to the left of this balance, and in the "balance on goods and services" (the final column in table 24 on "U.S. Exports and Imports of Goods and Services"), and of certain other transactions (notably remittances and pensions resulting in recent years in net payments of between \$700 and \$900 million per year), which are not shown separately but are included in the total. For the balance and for all columns to the left, net receipts are shown as without sign and net payments as (-); for the columns to the right, unsigned numbers mean

a decrease in liquidity while increases in liquidity are designated (-).

Transactions reflected in the "Balance on goods and services" are shown in more detail and on a gross basis in the table 24. They include mainly merchandise trade, but also military sales and purchases, income on investments, both private and governmental, transportation services, travel expenditures, and miscellaneous transactions.

"Goods and services financed by Government grants and capital" represents an estimate of payments by the Government itself to U.S. suppliers, and of reimbursements to foreign buyers for amounts they paid to U.S. suppliers under specific purchase authorizations under foreign assistance programs. The figures do not include the use by foreign Governments or other foreign residents for purchases in the United States of funds originally provided to them under assistance programs if such purchases are not specified in the assistance agreements.

The figures do not purport to measure the actual net effect of foreign assistance programs on exports of goods or services. This would involve assumptions concerning the amount of exports that would have occurred in the absence of the assistance programs to the country receiving the assistance and to other countries which may be affected indirectly.

TABLE 25.—United States Balance of International Payments
[Millions of dollars]

Period	Government grants and capital, net ¹	U.S. private capital, net			Foreign capital net ³	Errors and unrecorded transactions	Balance on regular transactions ⁴	Selected special Government transactions ⁵	Changes in selected liabilities (decrease(-)) ⁶			Changes in gold convertible currencies, and IMF, gold tranche position. (increase (-))
		Direct investment	Long-term portfolio ²	Short-term					To foreign official holders ⁷		To other foreign holders ⁸	
									Special non-marketable convertible bonds and notes	Other		
1929...	38	-602	-34	-200	358	-384	-53	(⁹)	(¹⁰)	196	-143	
1930...	77	-294	-70	-191	66	320	598	(⁹)	(¹⁰)	-288	-310	
1931...	14	-222	350	628	66	99	1,132	(⁹)	(¹⁰)	-1,265	133	
1932...	26	-16	267	227	-26	79	726	(⁹)	(¹⁰)	-673	-53	
1933...	-7	32	-80	42	125	61	323	(⁹)	(¹⁰)	-454	131	
1934...	-5	-17	202	104	15	412	1,140	(⁹)	(¹⁰)	126	-1,266	
1935...	1	34	82	427	320	364	1,174	(⁹)	(¹⁰)	648	-1,822	
1936...	3	-12	189	52	600	157	896	(⁹)	(¹⁰)	376	-1,272	
1937...	2	35	241	43	245	425	1,053	(⁹)	(¹⁰)	311	-1,364	
1938...	-9	16	24	36	57	249	1,482	(⁹)	(¹⁰)	317	-1,799	
1939...	-14	9	104	226	-86	788	1,915	(⁹)	(¹⁰)	1,259	-3,174	
1940...	51	32	36	177	-90	1,277	2,890	(⁹)	(¹⁰)	1,353	-4,243	
1941...	-1,323	47	19	21	-327	476	1,119	(⁹)	(¹⁰)	-400	-719	
1942...	-6,525	19	-84	96	-84	-8	-205	(⁹)	(¹⁰)	182	23	
1943...	-12,847	98	-58	-12	-63	34	-1,979	(⁹)	(¹⁰)	1,222	757	
1944...	-14,077	71	-62	-85	175	-37	-1,859	(⁹)	(¹⁰)	509	1,350	
1945...	-7,561	-100	-354	-96	-104	8	-2,737	(⁹)	(¹⁰)	2,189	548	
1946...	-5,293	-230	127	-310	-347	195	1,261	(⁹)	(¹⁰)	-638	-623	
1947...	-6,121	-749	-49	-189	-75	936	4,567	(⁹)	(¹⁰)	-1,252	-3,315	
1948...	-4,918	-721	-69	-116	-173	1,179	1,005	(⁹)	(¹⁰)	731	-1,736	
1949...	-5,649	-660	-80	187	83	775	175	(⁹)	(¹⁰)	91	-266	
1950...	-3,640	-621	-495	-149	90	-21	-3,580	(⁹)	(¹⁰)	1,554	1,758	
1951...	-3,191	-508	-437	-103	243	477	-305	(⁹)	(¹⁰)	-505	-33	
1952...	-2,380	-852	-214	-94	212	601	-1,046	(⁹)	(¹⁰)	1,237	-415	
1953...	-2,055	-735	185	167	178	339	-2,152	(⁹)	(¹⁰)	848	1,256	
1954...	-1,554	-667	-320	-635	240	173	-1,550	(⁹)	(¹⁰)	1,043	480	
1955...	-2,211	-823	-241	-191	394	503	-1,145	(⁹)	(¹⁰)	559	182	
1956...	-2,362	-1,951	-603	-517	653	543	-935	(⁹)	(¹⁰)	1,130	-869	
1957...	-2,574	-2,442	-859	-276	487	1,157	520	(⁹)	(¹⁰)	20	-1,165	
1958...	-2,587	-1,181	-1,444	-311	22	488	-3,529	(⁹)	(¹⁰)	735	2,292	
1959...	-2,421	-1,372	-926	-77	863	412	-4,178	435	(¹⁰)	1,248	1,035	
1960...	-2,781	-1,674	-863	-1,348	341	-772	-3,918	37	(¹⁰)	1,449	2,143	
1961...	-3,396	-1,599	-1,025	-1,556	622	-998	-3,071	701	(¹⁰)	681	606	
1962...	-3,547	-1,654	-1,227	-553	162	-1,111	-3,605	1,402	(¹⁰)	457	1,533	
1963...	-3,785	-1,888	-1,685	-734	311	-339	-3,261	617	702	970	378	

¹ Includes associated Govt. liabilities and scheduled loan repayments.

² Includes banking claims.

³ Other than liquid funds; includes miscellaneous Govt. nonliquid liabilities.

⁴ Includes balance on goods and services as well as net pensions and remittance payments (\$826 million in 1963). Prior to 1950 this is referred as the overall balance.

⁵ Includes official debt prepayment, advances on military exports, and net sales of those nonmarketable, medium-term, nonconvertible securities not included under foreign capital.

⁶ Includes short-term official and banking liabilities and foreign holdings of U.S. Govt. bonds and notes (other than nonmarketable, nonconvertible).

⁷ Central banks and governments.

⁸ Private holders; includes banks and international and regional organizations. Excludes liabilities to IMF relevant to U.S. gold tranche position. Data were not collected separately for liabilities to foreign officials and to other holders prior to 1950.

⁹ This category of transaction first distinguished in 1959. No comparable transactions of consequence have been identified for prior years.

¹⁰ No such transactions prior to 1963.

NOTE.—Data exclude military grant aid and U.S. subscriptions to IMF.

Source: Department of Commerce.

Such assumptions would have to vary from country to country and from one time period to another.

The item "Government grants and capital" includes Government grants other than military under the various aid programs, and the net outflow of long-term capital through various foreign lending programs. "U.S. private capital" refers to investment of U.S. capital abroad, and is classified as: (a) "direct investment," which includes investments in foreign branches and subsidiaries; or (b) "long-term portfolio", which includes long-term security investments not entailing effective control; or (c) "short-term" investment—i.e., in loans or instruments with an original maturity of one year or less. "Foreign capital" includes corresponding foreign investments in the United States exclusive of certain liquid investments which are, as explained below, accounted for as a component of the surplus or deficit. Foreign capital movements have usually resulted in the past in net "receipts," but do not necessarily do so.

The "balance" is equal to the algebraic sum (with sign reversed) of the columns to the right, which summarize the special Government transactions, changes in official reserve assets, and changes in liquid liabilities to foreigners and international organizations in the form of deposits, U.S. Government securities, bankers acceptances, commercial paper, and certain other short-term liabilities of the United States.

STATISTICAL PROCEDURES

The preparation of the balance of payments involves the bringing together, and the adjustment to balance of payments concepts, of data from a variety of sources, including direct reports to the Office of Business Economics. The largest components are those for merchandise imports and exports, as published by the Bureau of the Census, subject to certain adjustments for coverage, valuation, and timing. Other sources include quarterly reports by U.S. companies with branches or subsidiaries abroad and by branches and subsidiaries of foreign companies in the United States; occasional "benchmark" surveys of U.S. investments abroad and of foreign investments in the United States; reports from U.S. Government agencies on their foreign transactions, including grants, loans, and purchases and sales; reports from U.S. and foreign shipping lines and financial data from the Maritime Administration; reports from U.S. travelers on their expenditures

abroad and from foreign travelers on their expenditures in the United States, together with travel statistics of the Immigration and Naturalization Service; reports to the Treasury Department on international claims and liabilities; and a variety of other sources including Government administrative data, and questionnaire surveys of the Office of Business Economics.

Balance of payments series manifesting seasonal variation are separately adjusted, including the unrecorded items, and the resultant effect of these adjustments becomes the seasonal adjustment for the balance, whether computed on an overall basis or for "regular" transactions. Series shown to the right of the balance are not individually adjusted, and are shown as unadjusted in the monthly *Economic Indicators*.

RELATION TO OTHER SERIES

Since the balance of payments is a synthesis of data from a variety of sources, a close relationship exists between various components of the balance of payments and certain other bodies of published data. Because of technical adjustments to balance of payments concepts, which cannot be detailed here, the components will ordinarily differ somewhat from the related sources. Among the important bodies of related data are: data on merchandise exports and imports published by the Bureau of the Census; data on U.S. Government aid as published in the Office of Business Economics semi-annual bulletin *Foreign Grants and Credits of the United States*; annual estimates of the international debtor-creditor position of the United States as published in the *Survey of Current Business*; and data on international capital transactions of the United States as published by the Treasury Department in the *Treasury Bulletin*. Balance of payments data with certain further adjustments are used as a component of the national income and products accounts, summarized under the categories of exports and imports. However, the concepts in the national income accounts for imports and exports of goods and services are not in complete agreement with those used here.

The regular quarterly balance of payments presentation in the *Survey of Current Business* shows transactions with major areas of the world, and gives a more detailed classification of transactions by type.

The balance of payments presents an integrated summary of international transactions and their relation to the international financial position of the United States. A major contribution is the presentation of individual components in their proper context in the total flow of international transactions. The interrelationships within the balance of payments are complex and no discussion of analytical technique can be attempted here.

The balance of payments lends itself to more than one form of presentation, and variations from the form here used may be found in the regular quarterly articles of the *Survey of Current Business*.

The "unrecorded transactions" reflect a significant and fluctuating difference between the net surplus or deficit figure arrived at independently by (a) netting all measured payments and receipts on account of gold, convertible currencies and liquid liabilities to foreigners, and (b) netting all other measured payments and receipts. The reduction of the errors and omissions through more complete reporting presents considerable difficulty because of the elusiveness of many international transactions and some caution is indicated in the interpretation of the balance of payments and its components.

The most complete discussion of balance of payments concepts used and of statistical sources and techniques is contained in the 1952 Supplement to the *Survey of Current Business* entitled *Balance of Payments of the United States: 1949-51*, although there have been subsequent developments in sources and technique. Later briefer statements of sources may be found in *Business Statistics, 1959 Edition*, and in the Census publication, *Historical Statistics of the United States: Colonial Times to 1957*. A *Balance of Payments Statistical Supplement* (to the *Survey of Current Business*) of 1958 gives detailed global figures by quarters for the period 1919-1956 and by areas for 1946-1956. *Historical Statistics* gives available, but fragmentary, data back to 1790. The *Survey of Current Business* carries balance of payments data regularly, with quarterly and annual detailed tables and explanatory text, as well as regular articles detailing developments in major components of balance of payments accounts.

Note: As this is written, the Review Committee for Balance of Payments Statistics—a group of non-governmental experts appointed in 1963 to appraise the balance of payments statistics and to make recommendations for their improvement—is preparing a report to the Bureau of the Budget on these data which is expected to be published in early 1965.

PRICES

26. CONSUMER PRICES

DESCRIPTION OF SERIES

The Consumer Price Index compiled by the Bureau of Labor Statistics, is a measure of changes in prices of goods and services purchased by urban wage earners and clerical workers. The index is often called the "cost-of-living" index, but its official name is *Consumer Price Index for Urban Wage Earners and Clerical Workers*. Prior to January 1964 a complete name for the index was "Index of Change in Prices of Goods and Services Purchased by City Wage-Earner and Clerical-Worker Families to Maintain Their Level of Living." Through December 1963, the index applied only to families of two or more persons. With the January 1964 index, the coverage was extended to include single workers living alone.

The index covers prices of everything people buy for living—food, clothing, automobiles, homes, house-

furnishings, household supplies, fuel, drugs, and recreational goods; fees to doctors, lawyers, beauty shops, rent, repair costs, transportation fares, public utility rates, etc. It deals with prices actually charged to consumers, including sales and excise taxes. It also includes real estate taxes on owned homes, but it does not include income or social security taxes.

The index is based upon prices of about 400 items collected in 50 cities. The 400 items were selected by the BLS as representative of the thousands of commodities and services purchased by wage earners and salaried clerical workers, as reported in a survey conducted in 66 cities. Detailed specifications are used to identify each of the 400 items so that, insofar as possible, prices are obtained for articles of the same quality in successive periods. Revisions in the

Consumer Prices, 1947-64

(Monthly data)

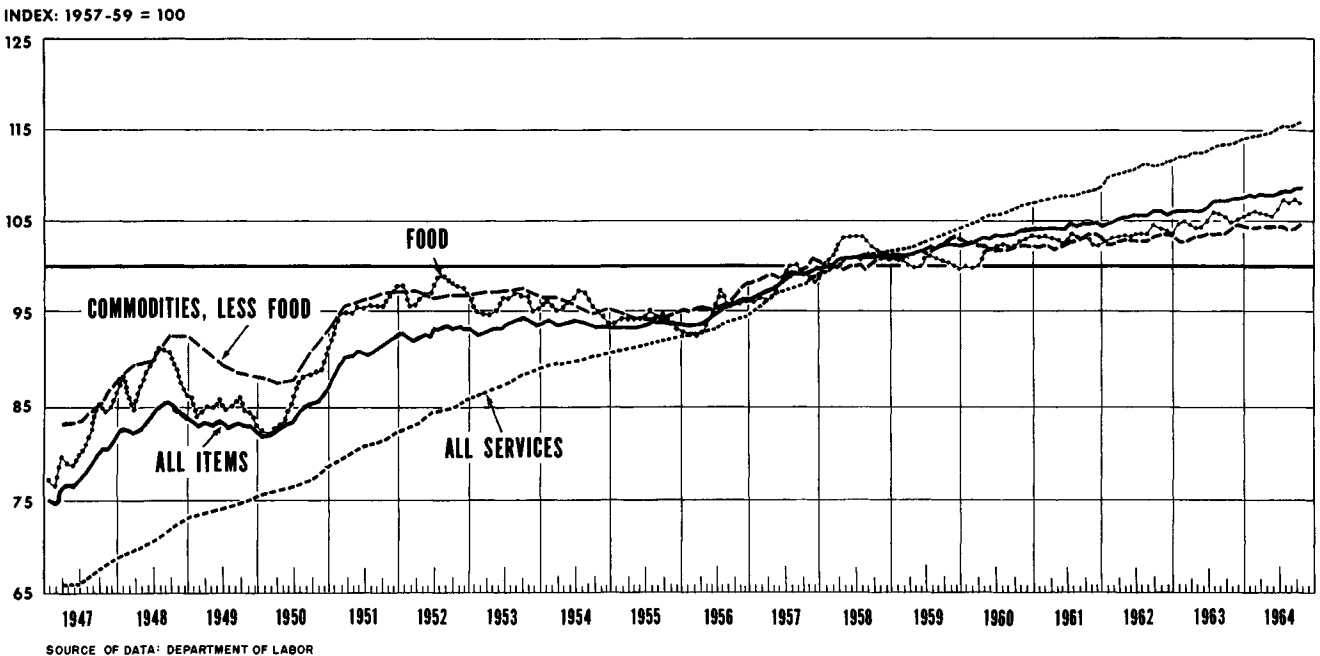


TABLE 26.—Consumer Prices

[1957-59=100]¹

Year	All items	Commodities					Services		
		All commodities ²	Food	Commodities less food			All services ²	Rent	Services less rent ²
				All ²	Durable ²	Non-durable			
1929	59.7	(3)	55.6	(3)	(3)	(3)	(3)	85.4	(3)
1930	58.2	(3)	52.9	(3)	(3)	(3)	(3)	83.1	(3)
1931	53.0	(3)	43.6	(3)	(3)	(3)	(3)	78.7	(3)
1932	47.6	(3)	36.3	(3)	(3)	(3)	(3)	70.6	(3)
1933	45.1	(3)	35.3	(3)	(3)	(3)	(3)	60.8	(3)
1934	46.6	(3)	39.3	(3)	(3)	(3)	(3)	57.0	(3)
1935	47.8	45.0	42.1	50.3	47.1	48.8	52.3	56.9	49.5
1936	48.3	45.6	42.5	50.9	47.8	49.2	52.9	58.3	49.2
1937	50.0	47.4	44.2	53.1	50.8	51.2	54.5	60.9	49.7
1938	49.1	45.6	41.0	53.1	51.7	50.9	55.5	62.9	50.1
1939	48.4	44.7	39.9	52.2	50.6	50.1	55.6	63.0	50.1
1940	48.8	45.1	40.5	52.5	50.2	50.6	55.8	63.2	50.2
1941	51.3	48.2	44.2	55.1	53.7	52.8	56.5	64.3	50.7
1942	56.8	55.2	51.9	61.3	60.9	58.4	58.3	65.7	53.0
1943	60.3	60.1	57.9	63.9	63.0	60.9	59.4	65.7	55.3
1944	61.3	60.8	57.1	67.4	68.7	64.0	60.8	65.9	58.1
1945	62.7	62.6	58.4	70.1	73.9	66.3	61.6	66.1	59.2
1946	68.0	69.4	66.9	74.4	77.4	71.1	62.8	66.5	61.4
1947	77.8	83.4	81.3	84.0	83.8	81.7	65.4	68.7	64.5
1948	83.8	89.4	88.2	90.4	90.0	88.0	69.5	73.2	68.2
1949	83.0	87.1	84.7	89.1	91.3	86.3	72.7	76.4	71.6
1950	83.8	87.6	85.8	89.0	92.3	86.2	75.1	79.1	73.6
1951	90.5	95.5	95.4	95.7	99.3	92.7	79.0	82.3	78.1
1952	92.5	96.7	97.1	96.5	100.6	93.2	82.6	85.7	81.8
1953	93.2	96.4	95.6	96.6	99.5	94.0	86.0	90.3	84.9
1954	93.6	95.4	95.4	95.6	97.1	94.4	88.7	93.5	87.4
1955	93.3	94.6	94.0	94.9	95.3	94.4	90.5	94.8	89.4
1956	94.7	95.5	94.7	95.9	95.4	96.5	92.8	96.5	91.9
1957	98.0	98.5	97.8	98.8	98.5	99.1	96.6	98.3	96.1
1958	100.7	100.8	101.9	99.9	100.0	99.8	100.3	100.1	100.2
1959	101.5	100.9	100.3	101.2	101.5	101.0	103.2	101.6	103.6
1960	103.1	101.7	101.4	101.7	100.9	102.6	106.6	103.1	107.4
1961	104.2	102.3	102.6	102.0	100.8	103.2	108.8	104.4	110.0
1962	105.4	103.2	103.6	102.8	101.8	103.8	110.9	105.7	112.1
1963	106.7	104.1	105.1	103.5	102.1	104.8	113.0	106.8	114.5
1964	108.1	105.2	106.4	104.4	103.0	105.7	115.2	107.8	117.0

¹ Beginning in January 1964, the index structure has been revised. The Bureau of Labor Statistics converted the Consumer Price Index series from a 1947-49 = 100 base to a 1957-59 = 100 as of January 1962. Index users who desire to maintain previous index series on a 1947-49 base may obtain such indexes from the Bureau, upon request.

² Not comparable to previously published (old series) indexes; home purchase included as a durable commodity in new series, previously included in services.

³ Not available.

NOTE.—The "all items" and "food" indexes are available monthly from 1913; "rent" annually from 1913 through 1918, for varied intervals (generally semi-annually or quarterly) from 1919 through September 1940, monthly from October 1940 through September 1944, quarterly from December 1944 through January 1947, and monthly from February 1947 to date; all other groups, selected months for 1935 and 1936, quarterly from 1937 through 1955, and monthly from 1956 to date.

Source: Department of Labor.

specifications are made from time to time as production changes and descriptions become obsolete.

PRICING PROCEDURES

Current prices for the 400 items are collected regularly from a list of stores and service establishments

in the 50 cities. This list includes chain stores, independent stores, department stores, specialty stores, and public utilities which have been selected by BLS as representative of the types of outlets in which wage-earner and clerical-workers make their purchases. Prices are also collected on the services

of physicians and dentists, hospitals and beauty parlors, repairmen and service contractors.

Prices for most items are collected at intervals ranging from every month to every third month. A few items are priced semiannually or annually. Food pricing is conducted each month in all cities. In the five largest cities most goods and services are priced every month. Rent in these five cities is priced every second month and some items such as medical care, alcoholic beverages, tobacco and certain services are priced quarterly or semiannually. In the remaining 45 cities prices for foods and some other goods and services, such as fuels, used cars, streetcar and bus fares, and a few other important items, are collected each month. For most of the remaining items prices are collected every third month. Pricing in these 45 cities is on a rotating cycle, so that several cities of each size group are priced each month. Prices for unpriced items are held constant between the scheduled pricing periods in a given city in the computation of the monthly national index.

Prices for practically all of the commodities and most of the services are collected by personal interview. A few prices (e.g., public utility rates and fuel prices) are collected by mail.

STATISTICAL PROCEDURES

The purpose of the index is to measure price change, i.e. to show how much more or less it would cost to purchase the same quantities and qualities of goods and services in one period than in an earlier period. The first step in the index computation is to calculate for each city, a price relative for each item by comparing the prices reported for that particular item by the same retail outlets as in the preceding period. This relative change for the item is next multiplied by the estimated cost in the preceding period for a fixed quantity of the item. (The fixed quantity, or weight, for each item is determined by the average annual quantity of that item purchased by urban wage-earner and clerical-worker families in the years 1960-61, plus the purchases of those unpriced commodities it represents in the index.) These calculations are then totaled for all items in a group—all food items, for example, are combined into a total showing the food cost for the fixed quantities in the current period. This total is compared with the food total for the preceding period to give a measure of the average

price change for all foods, from which the index number of food for each city is computed. Similar calculations are made for apparel, rent, and all other groups of items priced.

The national index is calculated by combining the city totals with weights based on estimated 1960 population of urban wage earner and clerical workers. Two-fifths of the weight is carried by the 12 largest cities; more than one-fourth by the 11 cities selected to represent the 56 cities with populations of 250,000 to 1,400,000; nearly 15 percent by the 10 cities selected to represent the 145 cities with populations of 50,000 to 250,000; and one-fifth by the 17 cities selected to represent the over 3,000 towns with populations ranging from 2,500 to 50,000.

HISTORICAL SERIES

In addition to the national index, separate indexes are computed for 17 of the 50 cities—monthly for the 5 largest and quarterly for the other 12.

Beginning with the January 1962 index, the Consumer Price Index was converted to the standard reference base period of 1957-59=100 from the former base 1947-49=100. No other aspects of the index, such as weight structure, and city and item samples, were changed in connection with the rebasing. Historical tables of monthly and annual price indexes on the 1957-59 base are available upon request to the Bureau of Labor Statistics. As a convenience to users of the index, the all items and group indexes will continue to be published on the 1947-49=100 base indefinitely.

National indexes are shown for all items and for major commodities and services groupings back to 1935 in the accompanying table.

Over this period major revisions, incorporating expenditure patterns for 1934-36 and 1950 and other changes were introduced by linking—in 1940 and 1953 respectively; other minor revisions were introduced at other points in the series. A third major revision was completed with the release of the January 1964 index; this incorporated a new weight structure, and updated city, commodity and outlet samples and certain improvements in statistical procedures, such as greater use of probability sampling and more flexible use of specification pricing.

The relative importance of the various groups shown in the table of indexes can be seen in the

following table which compares relative importances in the old and new series for December 1963:

Relative Importance of Specified Groups in the CPI, December 1963, Old and New Series

Specified group	New series	Old series
All items.....	100. 00	100. 00
All commodities.....	65. 97	67. 73
All food.....	22. 43	28. 18
All commodities less food.....	43. 54	39. 55
All durable commodities.....	18. 78	17. 53
All nondurable commodities less food.....	24. 76	22. 02
All services.....	34. 03	32. 27
Rent.....	5. 50	6. 16
Services less rent.....	28. 53	26. 11

USES AND LIMITATIONS

The index is designed to measure only changes in prices, not expenditures resulting from changes in purchasing habits or standards of living. Also, it measures price changes for only a limited population group: wage earners and salaried clerical workers living in urban areas. Other qualities of commodities and weights would have to be used to measure price changes for other groups, such as farm families, retired people, etc. The fixed market basket represents the average quantities bought by all wage earner and clerical workers and is not necessarily representative of the purchases made by any single family or individual consumer.

The city indexes indicate the difference in the rate of price movement in the various cities, but should not be used to compare price levels in one city with those in another. For instance, if the index for

27. WHOLESALE PRICES

DESCRIPTION OF SERIES

The Wholesale Price Index, compiled by the Bureau of Labor Statistics, is a measure of the general rate and direction of the composite of price movements in primary markets, and of the specific rates and directions of price movements for individual commodities and groups of commodities.

The index is based on price quotations for approximately 2,200 commodities selected to represent all commodities sold on primary markets in the United States. All types of commodities, from raw materials to fabricated products, are included in the index. For commodities traded on organized ex-

city A is 113 and that for city B is 115, it does not necessarily follow that prices are higher in city B than in city A, since the base-period prices may have been higher in city A. These indexes do show that prices have increased more rapidly since the base period in city B than in city A.

Although efforts are made to minimize the effects of quality changes on the "fixed market basket," it has not been possible thus far to adjust completely for these effects.

REFERENCES

The basic release of the index is the report entitled "Consumer Price Index," issued by the Bureau of Labor Statistics toward the end of the month following the month to which the figures relate. The periodic indexes—semiannually, quarterly, or monthly—for periods earlier than those shown in current issues of *Economic Indicators* are available from the Bureau of Labor Statistics upon request. Monthly indexes and average prices are available for individual food and fuel items; quarterly indexes are available upon request for selected groups of items and for individual commodities and services other than foods and fuels. Descriptions of the procedures, uses, and limitations of the index are presented in varying degrees of technical detail in "The Consumer Price Index as Revised, January 1964—A Short Description," in *Techniques of Preparing Major BLS Statistical Series* (BLS Bulletin 1168), in "Consumer Price Indexes in the United States, 1953-58 (BLS Bulletin 1256)," and in various articles, such as the "Statistical Structure of the Revised Consumer Price Index," in the July 1964 issue of the *Monthly Labor Review*.

changes, such as livestock and grains, the quotations are furnished by the exchanges or Government agencies, or are taken from published sources. For some standardized commodities, such as certain chemicals and specified constructions of cotton gray goods, quotations are taken from authoritative trade publications. For the majority of fabricated products, prices are reported to the Bureau of Labor Statistics by producers.

Initial contacts with manufacturers to solicit their cooperation in reporting prices on specified commodities are made by personal interview; subsequent price reports are mailed to Washington by the reporting firm.

Prices are quoted at the level of the first significant commercial transaction, and, for each commodity, the reporter is requested to quote the price which he charges to the channel of distribution to which he sells the largest volume of this particular commodity. The prices relate to a particular day of the month—usually Tuesday of the week containing the 15th.

Insofar as possible, identical qualities of the commodities are priced from period to period so that the index will measure only real price changes, not changes due to differences in qualities or terms of sales. When commodities of identical qualities are not available for pricing in successive periods, it is sometimes possible to obtain information on the cost of the features added to or removed from the original article. This can frequently be done, for example, when new models of machinery are introduced. In such cases it is possible to estimate the true price change, excluding the effect of changes due to specification modifications. When adequate estimates of the true price change cannot be made, the new commodity is substituted for the original in such a way that the level of the index is not affected by the difference in their prices. To the extent that identical qualities are not available in successive periods and no adjustment can be made, the index may not precisely measure price changes.

A major revision of this index was introduced with release of the January 1952 index. The principal changes from the old series were: (1) increase in the number of items priced, from approximately 900 to about 2,000; (2) change in the basis for weights from quantity of shipments for sale in 1929–31 to 1947 average value of shipments for sale; (c) change of the base period from 1926 to 1947–49; and (4) modification of the classification system. Weights based upon the industrial censuses for 1947 were used in the index from January 1947 through December 1954. Adjustments were made in January 1955 to bring the major groups weight totals into agreement with the 1952–53 average shipment values. New weights were introduced in January 1958 based upon the industrial censuses for 1954. Weights based upon the 1958 censuses were introduced early in 1961. Data from Alaska and Hawaii were included in this last weight revision.

With release of data for January 1962, the indexes were shifted to a new base (1957–59=100). Data which had previously been available for each series on the 1947–49 base are available on the new base from the earliest date for which they were published on the former base.

The relative importance of the groups, subgroups, and items in the index at any one period depends on

Wholesale Prices, 1947–64

(Monthly data)

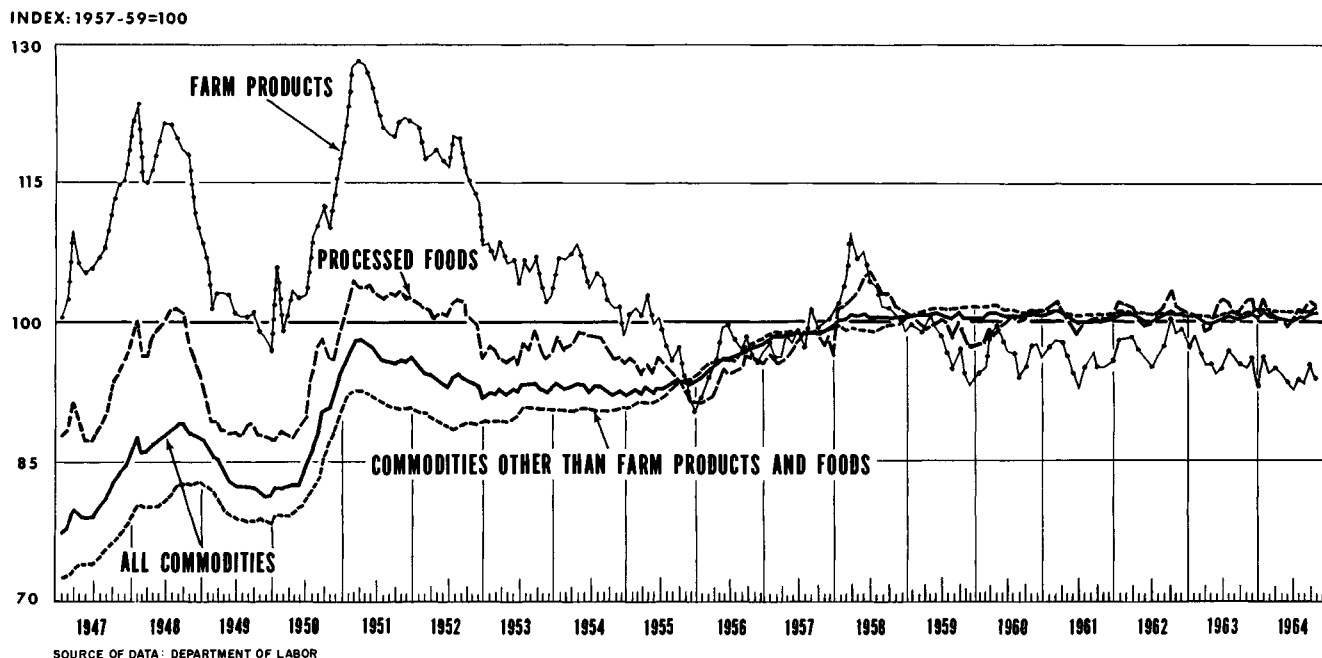


TABLE 27.—Wholesale Prices

[1957-59=100]

Year	All commodities	Farm products	Processed foods	Commodities other than farm products and foods (industrial)					
				All industrials ¹	Industrial crude materials	Industrial intermediate materials ²	Producer finished goods	Consumer finished goods excluding food	
								Durable	Nondurable
1929.....	52.1	63.9	54.3	51.7	(3)	(3)	(3)	(3)	(3)
1930.....	47.3	54.0	49.5	48.1	(3)	(3)	(3)	(3)	(3)
1931.....	39.9	39.6	41.6	42.4	(3)	(3)	(3)	(3)	(3)
1932.....	35.6	29.4	33.9	39.7	(3)	(3)	(3)	(3)	(3)
1933.....	36.1	31.3	33.7	40.2	(3)	(3)	(3)	(3)	(3)
1934.....	41.0	39.9	39.6	44.2	(3)	(3)	(3)	(3)	(3)
1935.....	43.8	48.0	48.3	44.0	(3)	(3)	(3)	(3)	(3)
1936.....	44.2	49.4	46.4	44.9	(3)	(3)	(3)	(3)	(3)
1937.....	47.2	52.7	48.6	48.1	(3)	(3)	(3)	(3)	(3)
1938.....	43.0	41.9	42.3	46.1	(3)	(3)	(3)	(3)	(3)
1939.....	42.2	39.9	40.2	46.0	(3)	(3)	(3)	(3)	(3)
1940.....	43.0	41.3	40.4	46.8	(3)	(3)	(3)	(3)	(3)
1941.....	47.8	50.1	46.7	50.3	(3)	(3)	(3)	(3)	(3)
1942.....	54.0	64.6	54.8	53.9	(3)	(3)	(3)	(3)	(3)
1943.....	56.5	74.8	57.2	54.7	(3)	(3)	(3)	(3)	(3)
1944.....	56.9	75.3	56.0	55.6	(3)	(3)	(3)	(3)	(3)
1945.....	57.9	78.3	56.4	56.3	(3)	(3)	(3)	(3)	(3)
1946.....	66.1	90.6	71.7	61.7	(3)	(3)	(3)	(3)	(3)
1947.....	81.2	109.1	91.1	75.3	79.2	73.4	61.8	75.9	86.5
1948.....	87.9	117.1	98.4	81.7	92.5	79.8	67.4	81.1	92.0
1949.....	83.5	101.3	88.8	80.0	84.0	77.8	70.7	83.2	88.2
1950.....	86.8	106.4	92.6	82.9	93.6	81.4	72.4	84.1	89.6
1951.....	96.7	123.8	103.3	91.5	102.9	91.2	79.5	89.7	96.5
1952.....	94.0	116.8	100.9	89.4	93.1	88.3	80.8	90.4	94.1
1953.....	92.7	105.9	97.0	90.1	92.4	89.4	82.1	91.1	95.0
1954.....	92.9	104.4	97.6	90.4	88.0	89.8	83.1	91.8	95.3
1955.....	93.2	97.9	94.3	92.4	96.6	92.5	85.6	92.8	95.8
1956.....	96.2	96.6	94.3	96.5	102.3	97.0	92.0	95.9	97.7
1957.....	99.0	99.2	97.9	99.2	100.9	99.6	97.7	98.7	99.9
1958.....	100.4	103.6	102.9	99.5	96.9	99.4	100.2	100.1	99.3
1959.....	100.6	97.2	99.2	101.3	102.3	101.0	102.1	101.3	100.8
1960.....	100.7	96.9	100.0	101.3	98.3	101.4	102.3	100.9	101.5
1961.....	100.3	96.0	100.7	100.8	97.2	100.1	102.5	100.5	101.5
1962.....	100.6	97.7	101.2	100.8	95.6	99.9	102.9	100.0	101.6
1963.....	100.3	95.7	101.1	100.7	94.3	99.6	103.1	99.5	101.9
1964 ⁴	100.5	94.3	101.0	101.2	97.1	100.2	104.1	99.9	101.6

¹ Excludes all farm products and foods; coverage of the subgroups does not correspond exactly to coverage of this index.² Excludes intermediate materials for food manufacturing and manufactured animal feeds; includes, in part, grain products for further processing.³ Not available for this classification prior to 1947.⁴ Preliminary.

NOTE.—Monthly indexes available for some groups from January 1926 on the 1957-59=100 base and on the 1947-49=100 base through 1961. Monthly indexes available for "all commodities" from 1890 through 1951 on the 1926=100 base.

Source: Department of Labor.

the relationship among value aggregates as of that period. As of December 1957, using the 1954 weights, the relative importance of "Farm Products" was 10.7 percent, of "Processed foods," 12.7 percent and of "Other than Farm Products and Foods"

(machinery, nonmetallic minerals, fuels, etc.) 76.6 percent. Following introduction of the 1958 weights the corresponding percents giving the relative importance of the three groups named, for December 1960, were 10.6, 14.0, and 75.4 respectively.

The following table indicates the relative importance of the chief economic-sector components in December 1957, and in December 1960.

Relative Importance of Components of the Wholesale Price Index, December 1957 and December 1960

Commodity grouping	December 1960 (1958 weights)	December 1957 (1954 weights)
All commodities.....	100.00	100.00
Farm products.....	10.59	10.69
Processed foods.....	14.04	12.73
All industrials ¹	75.37	76.58
Industrial crude materials.....	2.77	2.96
Industrial intermediate materials ²	38.86	40.33
Producer finished goods.....	11.09	11.23
Consumer finished goods excluding food.....	21.31	21.35
Durables.....	7.14	7.69
Nondurables.....	14.17	13.66

¹ Excludes all farm products and foods; coverage of the subgroups does not correspond exactly to coverage of this index.

² Excludes intermediate materials for food manufacturing and manufactured animal feeds; includes, in part, grain products for further processing.

In addition to the comprehensive index, BLS publishes a large number of subindexes in varying degrees of detail. One series (see table) describes price changes at various stages of production. Commodities are first divided by stage of processing among three categories: (1) crude materials for further processing; (2) intermediate materials, supplies, and components; and (3) finished goods. Each of these is further subdivided according to end-use and durability. Another series consists of separate indexes for durable and nondurable goods which are published each month for all commodities, total manufactures, and total raw or slightly processed goods. Indexes by commodity groupings are given each month for 15 major groups, such as farm products and processed foods; 85 subgroups such as grains and cotton products; 284 product classes; and many individual product series. In addition to the above, indexes for 27 other special commodity groups are regularly issued, including an index of prices of construction materials.

STATISTICAL PROCEDURES

Basically, the same statistical method is used in computing the Wholesale Price Index and the Consumer Price Index. The individual price series are combined into the index by multiplying the value weight assigned each item by its current price relative

and summing to obtain the current aggregate. The current aggregates are totaled by product classes, subgroups, groups, and all commodities. The current index for each of these is obtained by dividing the current aggregate by its appropriate value weight in the base period.

Each commodity price series in the index, as representative of prices for a group of commodities, is assigned its own direct weight (the value of the shipments for sale of that individual commodity), plus the weight of other commodities it was selected to represent in the index. Weights for commodities not priced for the index are assigned to commodities which are priced on the basis of available information on similarity of manufacturing process and price movements. Statistical studies and the advice of experts in industry and elsewhere are utilized in making these determinations.

RELATION TO OTHER SERIES

The BLS publishes a weekly index of wholesale prices based on that week's prices for a small sample (about 260) of the commodities included in the monthly index and an estimate of prices for all other commodities. The weekly index is calculated as an estimated percentage change from the latest published monthly comprehensive index. The weekly index is not maintained as a continuous series.

USES AND LIMITATIONS

The index is based for the most part on producers' prices; therefore, it should not be used as a measure of price change at the wholesale market level. "Wholesale" as used in the title of this index refers to sales in large lots, not to prices paid or received by wholesalers, jobbers, or distributors.

A comparison of the movement of the subgroup indexes of the Wholesale Price Index and the Consumer Price Index should not be used as a measure of the change in retailers' margins for the specified groups of commodities, mainly because the two indexes are based on different weighting patterns and the lists of commodities priced are not identical.

The index is designed to measure real price changes, that is, changes which are not occasioned by changes in quality, quantity, terms of sale, etc. It is not designed to measure changes in manufacturers' average realized prices which are affected by product mix and terms of sale as well as by price movements.

REFERENCES

The basic release of the index is the report entitled *Wholesale (Primary Market) Price Index*, usually issued by the Bureau of Labor Statistics during the second week of the month following the month to which the figures relate. This release contains indexes for groups and subgroups.

A more detailed report containing figures for all levels of the index plus a review of the month's price changes and special indexes is issued about two weeks after the press release.

Monthly indexes for periods earlier than those shown in current issues of *Economic Indicators* are available from the Bureau of Labor Statistics upon request. A detailed description of the index and its uses and limitations is presented in the February 1952 *Monthly Labor Review* (Reprint No. R. 2067) and in *Techniques of Preparing Major BLS Statistical Series*, Chapter 10 of BLS Bulletin 1168, December 1954. An article in the February 1962 *Monthly Labor Review* (Reprint No. 2384) and one of the detailed monthly reports (January-May 1961) gives informa-

tion concerning the latest reweighting of the WPI and the effect that it has on the index. The detailed report for January 1962 contains information explaining the rebasing of the index to 1957-59=100 and also a table showing the conversion factors that are to be used when converting a particular index from a 1947-49=100 base to the base of 1957-59=100 or vice versa. In addition, statistical series and summaries as well as descriptions of the procedures, uses, and limitations of the Wholesale Price Index and of the various special indexes are in a series of annual bulletins *Wholesale Prices and Price Indexes, 1954-56* (Bulletin 1214) which contains a description of the stage of processing series and the construction materials index, *Wholesale Prices and Price Indexes, 1957* (Bulletin 1235) which describes the indexes on durability of product, *Wholesale Prices and Price Indexes, 1958* (Bulletin 1257) which supplies information on the most recent change in procedures for the construction materials index, *Wholesale Prices and Price Indexes, 1959* (Bulletin 1295), *Wholesale Prices and Price Indexes, 1960* (Bulletin 1376) and *Wholesale Prices and Price Indexes 1961* (Bulletin 1382).

28. PRICES RECEIVED AND PAID BY FARMERS

Prices Received by Farmers

DESCRIPTION OF SERIES

The Index of Prices Received by Farmers is computed by the Statistical Reporting Service (SRS) of the Department of Agriculture as a measure of the change from month to month in average prices of farm products. For most commodities, it is based on estimates of the average prices received for all grades and qualities at the point of first sale—generally the local market—about the middle of the month. For apples, peaches, pears, citrus, potatoes, tobacco, wholesale milk, broilers, and wool, monthly average prices rather than midmonth prices are used in computing the index.

The index is based on prices for 55 commodities which accounted for about 93 percent of the total cash receipts from marketings of all farm commodities in the years 1953-57. The price data are obtained chiefly by mail on a voluntary basis from buyers of farm products (e.g., country elevators, creameries and milk plants, cooperative marketing organizations, and local dealers) and other persons with a

knowledge of farm product prices (for example, local bankers and farmers).

In addition to the index for "all farm products," indexes are prepared for "all crops," with 11 subgroups, and for "livestock and products," with 4 subgroups. Five of these subgroup indexes (fresh fruit; fresh vegetables; potatoes, sweetpotatoes, and dry edible beans; dairy products; and poultry and eggs) are published also on a seasonally adjusted basis.

STATISTICAL PROCEDURES

Weights based on average quantities sold during 1953-57 have been used since September 1952 to combine the United States average prices for individual commodities into subgroup indexes. In combining the subgroup indexes into group and all-commodity indexes, the index numbers are weighted by the percentages that cash receipts from marketings for the particular commodity subgroups bear to total cash receipts for the same period—1953-57. For the official index the subgroups and group indexes are then converted from the 1953-57 to a 1910-14=100 base, the base period prescribed by law.

The accompanying tables show the Index converted to 1957-59=100 to facilitate comparison with other indexes.

Revisions have been made in the index series from time to time, mainly involving revisions in basic price series or changes in weights. A major revision in January 1950 put the index on a basis more consistent with that of the Parity Index, improved the weighting structure, and made minor changes in commodity coverage. Minor revisions in January 1954 incorporated revisions in component price series and reflected some revisions in the 1937-41 weight data. The latest major revision was made in January 1959 at which time the weight base period was shifted from 1937-41 to 1953-57, and improvements were made in the weighting and pricing system for vegetables and for noncitrus fruits. The new weighting structure was made effective as of September 1952. The following table shows the percent weights for important categories for the three periods 1924-29, 1937-41, and 1953-57:

Relative Weights for Index of Prices Received by Farmers

Commodity group	1924-29	1937-41	1953-57
All farm products.....	100.0	100.0	100.0
Crops.....	48.0	42.2	45.2
Food grains.....	8.9	7.0	7.9
Feed grains and hay.....	7.5	6.7	9.1
Cotton.....	13.9	8.3	8.4
Tobacco.....	2.6	3.7	4.1
Oil-bearing crops.....	2.3	3.1	4.9
Fruit.....	6.0	5.8	4.7
Commercial vegetables.....	3.5	4.8	4.2
Potatoes, sweetpotatoes, and dry edible beans.....	3.3	2.8	1.9
Livestock and products.....	52.0	57.8	54.8
Meat animals.....	26.1	28.6	29.1
Dairy products.....	15.1	17.7	14.6
Poultry and eggs.....	9.9	10.2	10.7
Wool.....	.9	1.3	.4

RELATION TO OTHER SERIES

This index should not be confused with the farm-product component of the Wholesale Price Index. There are significant differences. The Index of Prices Received by Farmers measures changes in prices at the point of first sale, and is based on average prices for all grades of a given commodity. The Wholesale Price Index, on the other hand, in general measures prices in selected central markets, and is based on prices of specific grades or qualities. Finally, there are differences in the weights and base periods used in the two indexes.

The index is widely used as a measure of changes in average prices received by farmers for commodities sold in local markets. It is a close approximation to a measure of the price component of receipts by farmers from the sale of farm products. It is used in computation of adjusted base-period prices, which are necessary for calculating parity prices under the formula prescribed by the Agricultural Adjustment Act of 1938, as amended.

The Index of Prices Received by Farmers is designed to measure the change in average prices for all grades and qualities of the products sold by farmers. Hence, the price changes it shows do not result wholly from price changes for specific grades, but may also reflect changes in the relative proportion of the various grades or qualities of commodities sold.

As noted above, the index is based on commodities which account for about 93 percent of the total value of farmers' sales. Adequate marketing and price data are not available for most of the other 7 percent (timber and other forest products, greenhouse products, and a number of miscellaneous and minor commodities), but these omissions are probably not significant with respect to the index as a whole.

REFERENCES

See below, under Prices Paid by Farmers.

Prices Paid by Farmers

DESCRIPTION OF SERIES

The Index of Prices Paid by Farmers for Commodities and Services, Including Interest, Taxes, and Farm Wage Rates (commonly called the Parity Index) is computed by the Statistical Reporting Service (SRS) of the Department of Agriculture. It is a measure of the changes in prices paid by farm families for a list of commodities and services used for family living and farm production.

The index is composed of five major groups: (1) prices paid for items used in family living, (2) prices for items used in farm production, (3) interest on indebtedness secured by farm mortgages, (4) taxes on farm real estate, and (5) rates of wages paid hired farm labor. The percents of the total weight which are accounted for by the groups and their principal components at different periods are given in the fol-

lowing table. Those utilized in the indexes subsequent to September 1952 are shown in the last column of the table.

Relative Weights for the Index of Prices Paid by Farmers, Including Interest, Taxes, and Farm Wage Rates

Item	Weight base period		
	1924-29 ¹	1937-41 ²	1955 ³
Commodities, interest, taxes, and cash wage rates-----	100.0	100.0	100.00
Living-----	41.2	44.0	39.50
Food (including tobacco ⁴)-----	14.8	16.7	13.40
Clothing-----	12.5	8.6	6.34
Autos and auto supplies-----	4.5	6.9	5.63
Household operations-----	3.9	5.9	5.77
Household furnishings-----	2.4	4.0	3.99
Building materials, house-----	3.1	1.9	4.37
Production-----	36.4	41.2	50.90
Feed-----	10.1	10.2	12.80
Livestock-----	4.4	5.3	4.60
Motor supplies-----	3.9	5.2	8.39
Motor vehicles-----	3.9	5.2	4.38
Farm machinery-----	3.4	4.5	5.21
Building and fencing materials-----	3.7	2.7	5.20
Fertilizer and lime-----	2.7	3.1	4.11
Equipment and supplies-----	3.3	3.3	3.66
Seeds-----	1.0	1.7	2.55
Total commodities-----	77.6	85.2	90.40
Taxes-----	5.7	3.8	2.04
Interest-----	6.5	3.0	.96
Cash wage rates-----	10.2	8.0	6.60

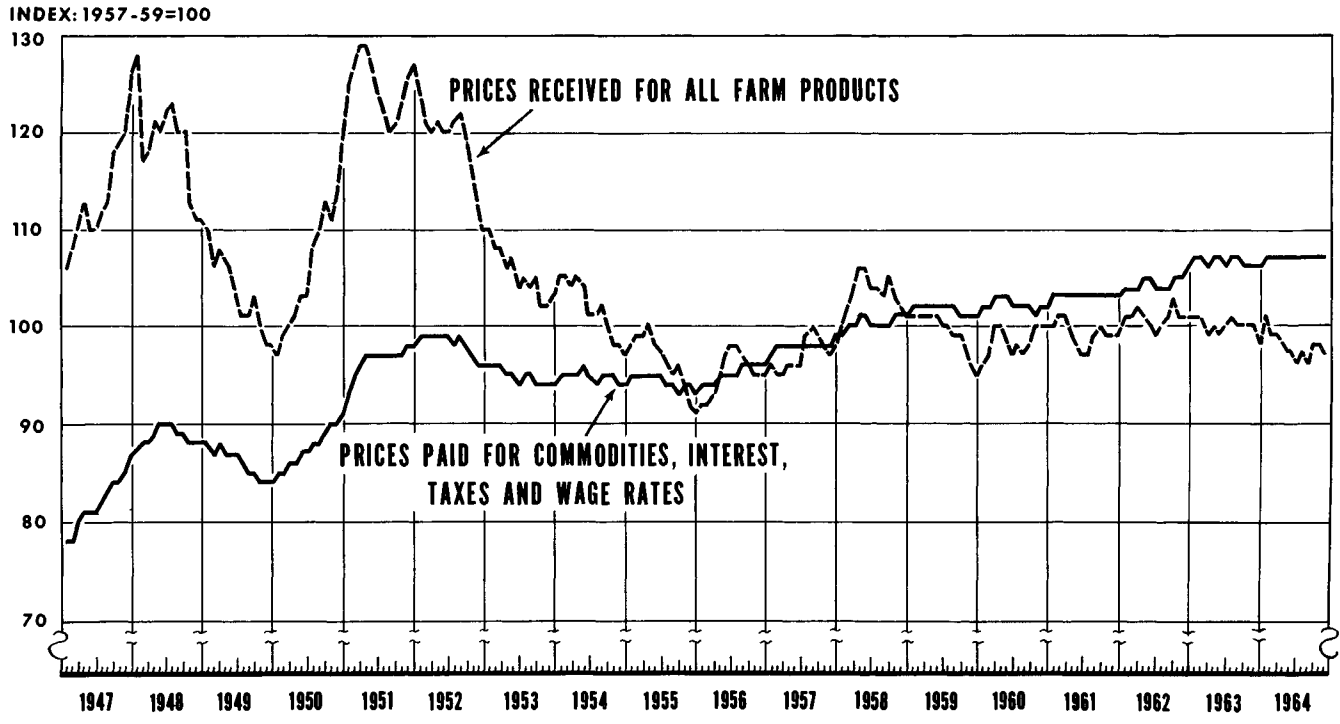
¹ 1910 to March 1935.
² March 1935 to September 1952, inclusive.
³ Subsequent to September 1952.
⁴ June 1935 forward.

The most recent revision of the index was in January 1959. The revised indexes are of the same general form as those of the preceding revision in 1950. There were two major changes in the revised series: (1) a weighting pattern based on farmers' expenditures during 1955 was adopted for the period subsequent to September 1952, in place of the previous weighting pattern which related to 1937-41; and (2) the commodity content of the various groups was modernized and expanded. As of June 1963, the index of prices paid for items used in family living included price series for 242 commodities and services, and the index for items used in farm production included 244, with 42 series being used in both indexes.

STATISTICAL PROCEDURES

The Index of Prices Paid by Farmers for commodities and services is based upon prices of commodities reported by chain and independent stores and costs of electricity and telephone services reported by farmers. Beginning in March 1953 the index has been based primarily on price information collected monthly from chain stores and quarterly from independent stores. Price changes for the independent

Prices Received and Paid by Farmers, 1947-64
 (Monthly data)



SOURCE OF DATA: DEPARTMENT OF AGRICULTURE

stores in interquarterly months are estimated largely from changes in chain-store prices. Information on average costs of electricity and telephone services is obtained in an annual survey of about 20,000 farmers. The index base period 1910-14 is set by law. As in the case of the Index of Prices Received by Farmers, the Parity Index also is shown in the table on a 1957-59=100 base to facilitate comparisons with other indexes.

Price reports for independent dealers are received in the SRS State offices, where average prices for the State are calculated for each item. Chain store prices and farm utility costs are reported directly to the Washington office of SRS. Where appropriate, they are combined with State averages of independent store prices. Final estimates by States and commodities are combined into national averages for each item by weighting each State price estimate by an estimate of the amount of that commodity purchased by farmers in that State. These estimates of purchases are based upon the distribution of farm population, farm income, farm expenditures and other available information.

From the national averages for each item the SRS computes subgroup indexes for 15 types of expenditures. Six subgroup indexes (food and tobacco, clothing, autos and auto supplies, household operations, household furnishings, and building materials for farm homes) are combined into the index of prices paid by farmers for items used in family living; and 9 subgroup indexes (feed, livestock, motor supplies, motor vehicles, farm machinery, building and fencing materials, fertilizer and lime, equipment and supplies, and seed) are combined into the index of prices paid for items used in farm production.

These two group indexes of prices paid for items used in family living and farm production are then combined with the indexes for interest, taxes, and wage rates to form the Parity Index. The index of interest charges is developed annually on the basis of data obtained from lending agencies and special surveys. The tax index is developed annually from data obtained in special surveys. The wage-rate index is based on information collected in a quarterly mail survey of farmers.

RELATION TO OTHER SERIES

The Index of Prices Paid by Farmers for family-living items is frequently used with the Consumer Price Index (CPI) to compare the movements of retail prices as they affect farmers and urban workers,

respectively. Even though in some periods the movements of the two indexes have been quite similar, there are important differences between the two indexes which on occasion give rise to differences in movements. Some of the principal differences are:

1. The lists of commodities included in the two indexes are not identical, and different weights are used for individual commodities, since the CPI is based on the purchasing habits of urban families and the farm family-living index on those of farm families.

2. Expenditures for all major commodity and service groups purchased by urban families are represented in the weights for the CPI. It has not been possible to include in the family living component of the Parity Index price series for certain types of farm family-living expenditures. For example, medical care, utilities, public transportation, and personal care, are directly represented in the CPI; but of these only telephone and electricity costs are represented in the farm family-living index. Since few farmers rent homes other than those that are rented with the farm, the farm family-living index does not include residential rents. The CPI price series represent various costs of homeownership—purchase, repairs and maintenance, and insurance; whereas the prices of building materials for houses comprise the only representation of this expenditure group which it has been possible to include in the farm family-living index.

3. Although both the CPI and the farm family-living index are composed of a fixed list of items for any two successive dates, the CPI measures price changes in successive periods for narrowly specified descriptions of the items, whereas the Index of Prices Paid by Farmers is designed to measure average price changes for those qualities of each item which are currently purchased in greatest volume by farmers. These qualities may change in response to (a) changes, resulting from technological developments and other causes, in the quality or types of commodity stocked by merchants, or (b) changing levels of farm income.

USES AND LIMITATIONS

The Index of Prices Paid by Farmers for Commodities and Services, including interest, taxes, and farm wage rates is based for the most part upon data relating to the middle of a given month. For certain uses, in accordance with statutory formulae,

TABLE 28.—Prices Received and Paid by Farmers

Year	Prices received by farmers			Prices paid by farmers			Parity ratio ¹
	All farm products	Crops	Livestock and products	All items, interest, taxes, and wage rates (parity index)	Family living items	Production items	
	1957-59=100						
1929.....	61	61	62	55	54	56	92
1930.....	52	52	52	52	51	52	83
1931.....	36	34	38	44	43	43	67
1932.....	27	26	28	38	37	38	58
1933.....	29	32	27	37	38	38	64
1934.....	37	44	32	41	42	44	75
1935.....	45	46	44	42	43	46	88
1936.....	47	49	46	42	44	46	92
1937.....	51	53	49	45	45	50	93
1938.....	40	36	43	42	42	47	78
1939.....	39	37	41	42	42	46	77
1940.....	42	41	42	42	42	47	81
1941.....	51	48	53	45	46	50	93
1942.....	66	65	66	52	52	57	105
1943.....	² 80	84	² 77	58	58	63	113
1944.....	² 82	89	² 76	62	61	66	108
1945.....	² 86	91	² 82	65	64	67	109
1946.....	² 98	102	² 94	71	70	73	113
1947.....	114	118	111	82	83	85	115
1948.....	119	114	122	89	88	95	110
1949.....	103	100	106	86	85	91	100
1950.....	107	104	108	88	86	94	101
1951.....	125	119	130	96	94	104	107
1952.....	119	120	119	98	95	104	100
1953.....	105	108	104	95	94	97	92
1954.....	102	108	97	95	95	97	89
1955.....	96	104	90	94	95	96	84
1956.....	95	105	88	95	96	95	83
1957.....	97	101	94	98	99	98	82
1958.....	104	100	106	100	100	100	85
1959.....	99	99	100	102	101	102	81
1960.....	98	99	98	102	102	101	80
1961.....	99	102	98	103	102	101	79
1962.....	101	104	99	105	103	103	79
1963.....	100	106	95	106	104	104	78
1964.....	98	106	91	107	105	103	75

¹ Percentage ratio of Index of Prices Received by Farmers to Index of Prices Paid, including interest, taxes, and wage rates on 1910-14 base.

² Includes wartime subsidies paid on beef cattle, sheep, lambs, milk, and butterfat between October 1943 and June 1946.

NOTE.—For the Index of Prices Received by Farmers, monthly and annual data available from January 1910; for the Indexes of Prices Paid, annual data available from 1910, quarterly from 1923, and monthly from January 1937.

The official indexes are published on a 1910-14=100 base as required by law. The indexes have been converted to 1957-59=100 for the above tables to facilitate comparisons with other indexes.

Source: Department of Agriculture.

it constitutes the Parity Index for the following month; that is, the Index and parity prices of individual commodities computed from it are the legally applicable index and parity prices for the month following that to which the prices-paid data relate. Agricultural support programs are in many cases based on these parity prices.

The Index of Prices Paid by Farmers including interest, taxes, and farm wage rates is a close approximation to a measure of the price component of aggregate expenditures by farmers for living and production purposes.

REFERENCES

The Parity Index and the Index of Prices Received by Farmers are published monthly by SRS in *Agricultural Prices*. Revisions of the Parity Index are published in "*Agricultural Prices*" in September of each year; revised indexes of Prices Received by

Farmers, in May. A comprehensive discussion of the January 1959 revision of the price indexes is presented in the April-July 1959 issue of *Agricultural Economic Research*. A detailed description of the price series is presented in the Statistical Reporting Service of the U.S. Department of Agriculture—Scope and Methods (Miscellaneous Publication No. 967 of the Department of Agriculture).

Parity Ratio

The Parity Ratio is computed by dividing the Index of Prices Received by Farmers by the Index of Prices Paid, Including Interest, Taxes, and Farm Wage Rates. It measures the extent to which prices farmers receive for farm products are on the average higher or lower in relation to the prices they pay for goods and services than they were in the base period, 1910-14.

MONEY, CREDIT, AND SECURITY MARKETS

29. MONEY SUPPLY

DESCRIPTION OF SERIES

“Money supply” is defined here as the total of the public’s holdings of coin, currency, and demand deposits. The currency component is the total of coin and currency in circulation outside the Treasury and Federal Reserve Banks, from which has been deducted the vault cash holdings of commercial banks (but not that of other financial institutions). The deposit component includes commercial bank demand deposit liabilities to nonbank financial institutions, mutual savings banks, foreign banks, and

State and local governments, but excludes those to other commercial banks (with minor exceptions) and to the Federal government (these being shown as a separate series). Foreign balances with Federal Reserve banks also are included in the deposit component.

Time deposits are not included in the “money supply” but are nevertheless closely related because of their high liquidity. They consist of savings accounts of individuals and nonprofit organizations, and other time deposits held by individuals, partnerships, corporations, states and political subdivisions,

TABLE 29.—*Money supply*
[Averages of daily figures, billions of dollars]

End of year ¹	Money supply			Time deposits ²	Money supply			Time deposits ²	U.S. Government demand deposits ²
	Total	Currency outside banks	Demand deposits		Total	Currency outside banks	Demand deposits		
	Seasonally adjusted				Unadjusted				
1947	113.1	26.4	86.7	35.4	115.9	26.8	89.1	35.1	1.0
1948	111.5	25.8	85.8	36.0	114.3	26.2	88.1	35.7	1.8
1949	111.2	25.1	86.0	36.4	113.9	25.5	88.4	36.1	2.8
1950	116.2	25.0	91.2	36.7	119.2	25.4	93.8	36.4	2.4
1951	122.7	26.1	96.5	38.2	125.8	26.6	99.2	38.0	2.7
1952	127.4	27.3	100.1	41.1	130.8	27.8	103.0	40.9	4.9
1953	128.8	27.7	101.1	44.5	132.1	28.2	103.9	44.2	3.8
1954	132.3	27.4	104.9	48.3	135.6	27.9	107.7	48.0	5.0
1955	135.2	27.8	107.4	50.0	138.6	28.4	110.2	49.6	3.4
1956	136.9	28.2	108.7	51.9	140.3	28.8	111.5	51.4	3.4
1957	135.9	28.3	107.6	57.4	139.3	28.9	110.4	56.7	3.5
1958	141.1	28.6	112.6	65.4	144.7	29.2	115.5	64.6	3.9
1959	142.1	28.9	113.2	67.4	145.6	29.5	116.1	66.6	4.9
1960	141.1	28.9	112.1	72.9	144.7	29.6	115.2	72.1	4.7
1961	145.5	29.6	116.0	82.8	149.4	30.2	119.2	81.8	4.9
1962	147.6	30.6	117.1	97.9	151.6	31.2	120.3	96.7	5.6
1963	153.2	32.4	120.7	112.3	157.2	33.1	124.1	111.3	5.2
1964 (preliminary)	159.4	34.2	125.2	126.5	163.6	34.9	128.7	125.0	5.5

¹ Averages of daily December figures.

² Deposits at all commercial banks.

Source: Board of Governors of the Federal Reserve System.

and foreign central governments and official institutions. Certificates of deposit are redeemable after 30 days' notice, and prior notification of up to 30 days may also be required for withdrawals from savings accounts. Banks may pay interest on time deposits but not on demand deposits. The published series cover deposits at all commercial banks.

All monthly and semi-monthly data are shown as averages of daily figures while annual data are represented by averages of daily figures for December. In general the series cover all banks in the United States, with upward adjustments (amounting to approximately \$400 million for demand deposits) during 1959 for the admission of Alaska and Hawaii to statehood.

STATISTICAL PROCEDURES

The total of demand deposits is derived, on the basis of daily figures reported by member banks, as follows: from the total of reported demand deposits of member banks (excluding interbank deposits of domestic commercial banks) cash items in process of collection and U.S. Government demand deposits are deducted. An estimate of deposits in nonmember banks based on reported daily figures from "country" member banks (those outside the larger centers) in conjunction with quarterly "call report" data from non-member banks is added. From this aggregate is deducted the Federal Reserve "float", the resulting figure being the estimate for commercial bank demand deposits. Foreign balances with Federal Reserve Banks are added to the commercial bank demand deposits.

"Currency" is derived from daily Treasury figures for money "in circulation" (i.e., outside Treasury and the Federal Reserve Banks) from which is deducted an estimate of vault holdings of commercial banks, based on reported member bank data and an estimate for vault cash holdings of non-member banks prepared by a method similar to that for estimating deposits.

Seasonal adjustment is made separately for the two components, using a ratio-to-moving-average procedure. Adjustment factors applied to the 24 semimonthly periods for 1961 are shown in the table at the top of the next column.

Estimates for time deposits and U.S. government deposits, also shown in the table on page 103, are arrived at in a similar manner.

Seasonal Adjustment Factors for Money Supply Series: 1961

Period	Deposit Component	Currency Component	
Jan.	1.....	104.0	100.6
	2.....	102.8	98.6
Feb.	1.....	101.5	99.0
	2.....	99.1	98.5
Mar.	1.....	99.6	99.3
	2.....	98.9	98.8
Apr.	1.....	100.0	99.8
	2.....	101.4	98.6
May	1.....	99.6	99.5
	2.....	97.5	98.9
June	1.....	98.9	99.9
	2.....	98.1	99.5
July	1.....	98.1	101.2
	2.....	99.0	100.0
Aug.	1.....	99.0	100.7
	2.....	97.4	99.9
Sept.	1.....	99.2	100.8
	2.....	99.0	99.6
Oct.	1.....	99.4	100.7
	2.....	100.7	99.9
Nov.	1.....	101.1	100.9
	2.....	100.5	101.1
Dec.	1.....	102.2	101.9
	2.....	103.4	102.3

RELATION TO OTHER SERIES

The measure of "money supply" presented here is to be distinguished sharply from the well-known Treasury figure for "money in circulation." The latter is a much smaller aggregate covering only paper money and coin outside the Treasury and Federal Reserve Banks, and does not include the much larger volume of demand deposits. Nor is the Treasury figure identical with the currency component of the money supply figure, since the latter excludes from the total "in circulation" the relatively small amount of vault cash held by commercial banks.

The money supply series here presented differs also from certain other similar data on deposits and currency, also published by the Federal Reserve. Thus, as part of its Consolidated Condition Statement for Banks and the Monetary System, the Federal Reserve presents money supply estimates as of the last Wednesday of each month which differ in certain technical respects from the series shown here. However, this older series provides a measure of deposits and currency over a much longer time period.

As part of the Flow of Funds accounts published in the *Federal Reserve Bulletin*, quarterly figures on changes in demand deposits and currency are presented, again with certain technical differences from the series here presented.

The series on money supply in its present form appeared first in 1962, with revised back data to 1947. It is similar to the series on deposits and

currency shown in the table on page 107 as one of the components of "Selected Liquid Assets Held by the Public." However, the latter is net of deposits held by mutual savings banks and savings and loan associations.

USES AND LIMITATIONS

Changes in the total of deposits and currency, whether regarded as causative or symptomatic, are important factors in the analysis of economic change and of monetary policy. The definition of money supply here used has been chosen from among alternative definitions as one closely related to the mechanism through which money is created or extinguished. The money supply series permit a reasonably adequate measurement of the level and movement of this aggregate. They should be considered in the light of changes in the use of deposits as measured in the series on bank debits.

For analytical uses requiring attention to a broader group of highly liquid assets possessing some of the

attributes of money, the reader may turn to the table on liquid assets held by the public.

REFERENCES

The money supply series are issued semimonthly by Federal Reserve, and appear monthly in the *Federal Reserve Bulletin*. An article in the August, 1962 *Bulletin* presents a technical discussion of the derivation of the series and a comparison with similar series. Semimonthly and monthly average data for money supply, time deposits, and U.S. Government demand deposits were most recently revised in June 1964, and the data for the period 1947 to June 1964 appear in the *Federal Reserve Bulletin* for June 1964. The related Consolidated Condition Statement continues to appear in the monthly release J. 4 and in the *Bulletin*, with data for most component series for selected years back to 1929. Historical data on deposits and currency are available in *Banking and Monetary Statistics* from 1892 and in *Historical Statistics of the United States* from 1867.

30. SELECTED LIQUID ASSETS HELD BY THE PUBLIC

DESCRIPTION OF SERIES

The accompanying table shows public holdings of major types of liquid assets—that is, cash or assets readily convertible into cash with minimum risk of loss. In addition to currency and demand deposits, the table includes time deposits in commercial and mutual savings banks and the Postal Savings System, savings and loan shares, savings bonds, and short-term U.S. Government securities. Certain other assets ordinarily regarded as important liquidity instruments, particularly prime commercial paper, bankers acceptances, and credit union shares, have been omitted because adequate data are not available. However, these assets would add less than 3 per cent to the existing total.

For purposes of this table, public holdings include all holdings except those of the United States Government, Government agencies and trust funds, Federal Reserve Banks, and domestic commercial banks. The principal holders are individuals, partnerships, and nonbank corporations, State and local governments, corporate pension funds, non-profit institutions, and foreign holders, including foreign banks, Governments, and international institutions.

There are substantial differences in the ownership characteristics of the various types of assets. Deposits in mutual savings banks and the Postal Savings System, savings and loan shares, and savings bonds are almost entirely personal savings of individuals, while short-term U.S. Government securities are held mainly as liquidity reserves by financial and nonfinancial businesses. Although the bulk of commercial bank time deposits are savings accounts of individuals, substantial amounts of other time deposits are also held by businesses, State and local governments, and foreign banks and international institutions.

All of the series were adjusted for seasonal variation by the X-9 variant of Method II developed by the Bureau of the Census. Demand deposits and currency were independently adjusted for seasonal variation and then combined into a single seasonally adjusted series. For these two series special adjustments were made for those months in which the seasonal movement is greatly affected by the date on which the last Wednesday falls. The rationale for these adjustments is contained in an article in the *Federal Reserve Bulletin* for February 1960, page 133.

Demand Deposits and Currency

The figures are a combination of two series—"demand deposits adjusted" and "currency outside banks."

By "demand deposits adjusted" is meant total demand deposits at commercial banks in the United States less demand deposits due to the U.S. Government, to other domestic commercial banks, to mutual savings banks, or to savings and loan associations. Demand deposits held by mutual savings banks and savings and loan associations are deducted to avoid double counting, since liquid assets held by the public in these two types of institutions are shown separately. Cash items reported as in process of collection and Federal Reserve float have been eliminated. The series differs in concept from that shown under "Money Supply" above only in the deduction of deposits of mutual savings banks and savings and loan associations.

"Currency outside banks" is again consistent in concept with that shown under "Money Supply" except that it excludes cash in the vaults of mutual savings banks as well as commercial banks in the United States.

Demand deposits and currency are as of the close of business of the last Wednesday of the month and are available in the Federal Reserve J-4 release and the *Federal Reserve Bulletin*.

Time Deposits

Time deposits at commercial banks are roughly the same in concept as shown in the "Money Supply" table, but do exclude postal savings redeposited in commercial banks. Figures are as of the last Wednesday of each month, except that June 30 and December 31 call report data were used when available or Federal Reserve estimates were made for those dates.

Deposits at mutual savings banks are as of the end of the month and are supplied to the Federal Reserve by the National Association of Mutual Savings Banks. They include a small amount of demand deposits.

Figures for both commercial and mutual savings banks are included in the Federal Reserve J-4 release and are published in the *Federal Reserve Bulletin*,

with some subsequent adjustment of commercial bank time deposits by the Federal Reserve.

Postal Saving System

Data are end-of-month totals for savings accounts, obtained from the Post Office Department.

Savings and Loan Shares

Data are end-of-month figures compiled by the Federal Savings and Loan Insurance Corporation and are published in the *Federal Reserve Bulletin*, except that prior to 1955 data are Federal Reserve estimates based on monthly figures of inflow of new savings and withdrawal of savings capital compiled by the Federal Home Loan Bank Board.

United States Savings Bonds

Figures include all types of savings bonds held by investors other than domestic commercial banks and United States Government agencies and trust funds. To avoid double counting, holdings of mutual savings banks are excluded throughout and holdings of savings and loan associations beginning February 1960. Figures show par value and are partly estimated. They are as of the end-of-month and are obtained from the United States Treasury Department's survey of ownership of U.S. Government securities.

United States Government Securities Maturing Within One Year

Beginning December 1950 figures include Treasury marketable securities and Federal agency securities maturing within one year, except holdings of domestic commercial, mutual savings, and Federal Reserve Banks, Government agencies and trust funds, and beginning February 1960, savings and loan associations. Figures show par value and are partly estimated. They have been adjusted to include partially tax-exempt securities 12 months prior to first call date, and, prior to 1956, nonmarketable Treasury savings notes with maturities up to 36 months. Prior to December 1950, figures for marketable issues include securities callable within one year. Figures are as of the end of the month and are obtained from the U.S. Treasury's survey of ownership of U.S. Government securities.

TABLE 30.—Selected Liquid Assets Held by the Public

[Amounts in billions of dollars, seasonally adjusted]

End of year	Total selected liquid assets	Demand deposits and currency ¹	Time deposits		Postal Savings System	Savings and loan shares	U.S. Government savings bonds	U.S. Government securities maturing within one year
			Commercial banks	Mutual savings banks				
1946	239.1	108.5	33.9	16.9	3.3	8.5	48.6	19.4
1947	246.2	112.4	35.3	17.8	3.4	9.7	50.9	16.6
1948	254.1	110.5	35.9	18.4	3.3	11.0	53.4	21.6
1949	262.1	110.4	36.3	19.3	3.2	12.5	55.0	25.5
1950	271.4	115.5	36.6	20.1	2.9	14.0	55.8	26.4
1951	281.0	120.9	38.2	20.9	2.7	16.1	55.4	26.8
1952	296.0	125.5	41.2	22.6	2.5	19.2	55.7	29.3
1953	311.5	127.3	44.6	24.4	2.4	22.8	55.6	34.4
1954	320.3	130.2	48.2	26.3	2.1	27.2	55.6	30.6
1955	332.5	133.3	49.7	28.1	1.9	32.0	55.9	31.6
1956	343.2	134.6	52.0	30.0	1.6	37.0	54.8	33.2
1957	356.0	133.5	57.5	31.6	1.3	41.7	51.6	38.8
1958	373.1	138.8	65.4	33.9	1.1	47.7	50.5	35.6
1959	393.9	139.7	67.4	34.9	.9	54.3	47.9	48.8
1960	399.2	138.4	73.1	36.2	.8	61.8	47.0	41.9
1961	424.6	142.6	82.5	38.3	.6	70.5	47.4	42.6
1962	459.0	144.8	98.1	41.4	.5	79.8	47.6	46.8
1963	495.3	149.6	112.9	44.5	.5	90.7	49.0	48.1
1964 (preliminary)	529.9	156.1	126.9	48.8	.4	101.4	49.9	46.4

¹ Agrees in concept with money supply, except for deduction of demand deposits held by mutual savings banks and savings and loan associations. Data for last Wednesday of month.

Source: Board of Governors of the Federal Reserve System.

31. BANK LOANS, INVESTMENTS, DEBITS, AND RESERVES

DESCRIPTION OF SERIES

Major loan and investment categories are shown for all commercial banks in the United States. Commercial banks are in general distinguished from other lending institutions by the fact that they accept deposits subject to check or withdrawal on demand. They number approximately 13,500. Mutual savings banks are not included, nor are savings and loan associations or, in general, any other "banking" institutions which do not receive demand deposits. The "all commercial banks" series has been increased by the addition of banks in Alaska and Hawaii in January, April, and August, 1959, with an increase in total loans and investments of approximately \$650 million.

The "weekly reporting member banks" for which "business loans" are shown comprise approximately 350 banks which are members of the Federal Reserve System (see below) and are located in (or with head offices in) approximately 100 cities. They account

currently for over half of the total commercial banking loans and investments. The cities are the more important banking centers within each Federal Reserve district, and within each city the reporting banks constitute a voluntary sample, usually accounting for over 90 percent of member bank resources. The weekly reporting member bank series has been revised from time to time, most recently in July, 1959, and in April, 1961, with significant expansion in coverage and with more detailed classifications of loans, investments, and deposits (see page 654 of the June 1961 *Federal Reserve Bulletin*).

The category of "business loans" is a major component of total loans. In general, it includes all commercial and industrial loans (and agricultural loans prior to 1956) except those secured by real estate or for the purpose of purchasing or carrying securities and loans to financial institutions. The exclusion of the latter category was accomplished by the revision of July 1959, when such loans were reclassified, with a reduction of approximately 14 percent in the total

of commercial and industrial loans. Data prior to July 1959 are not available on the revised basis. The weekly reporting banks currently account for about 70 percent of business loans at all commercial banks.

The series on bank debits outside New York City covers debits to demand deposit accounts except interbank and U.S. Government accounts. Figures are aggregates for approximately 1,700 reporting banks in the 343 leading centers and cover substantially all debits in those centers.

Data on reserves and borrowings and free reserves are reported for all member banks of the Federal Reserve System. With few exceptions these are commercial banks and comprise approximately 4,500 nationally chartered banks ("National banks") plus about 1,500 State chartered banks which have chosen, and have been found eligible, to join the Federal Reserve System. Member banks account currently for about 85 percent of the total loans and investments and total deposits of commercial banks. Required reserves are minimum balances required to be maintained by member banks pursuant to

Federal Reserve regulations, measured as a percent of deposit liabilities and varying with the type of deposits and the classification of the bank; these reserve requirements vary from time to time. Prior to December 1959, the only permissible legal reserves were balances with the Federal Reserve Banks; since then, the inclusion of vault cash has been allowable. At first only limited amounts could be included, but since November 24, 1960, all vault cash has been allowed as reserves. Excess reserves are member bank balances of these types maintained in excess of the required minimum.

Member bank reserves have been affected by the inclusion of banks in Alaska and Hawaii—as have those for all commercial banks.

Monthly figures shown for commercial banks and weekly reporting member banks are as of the last Wednesday of the month, except that final December figures for "all commercial banks" are always as of the last day of the month, and are estimated for those years when call report data were not available for December 31 (1962 and 1963). The same is true of final June figures except that last Wednesday data

Loans and Investments at All Commercial Banks, 1948-64

(Monthly data, seasonally adjusted)

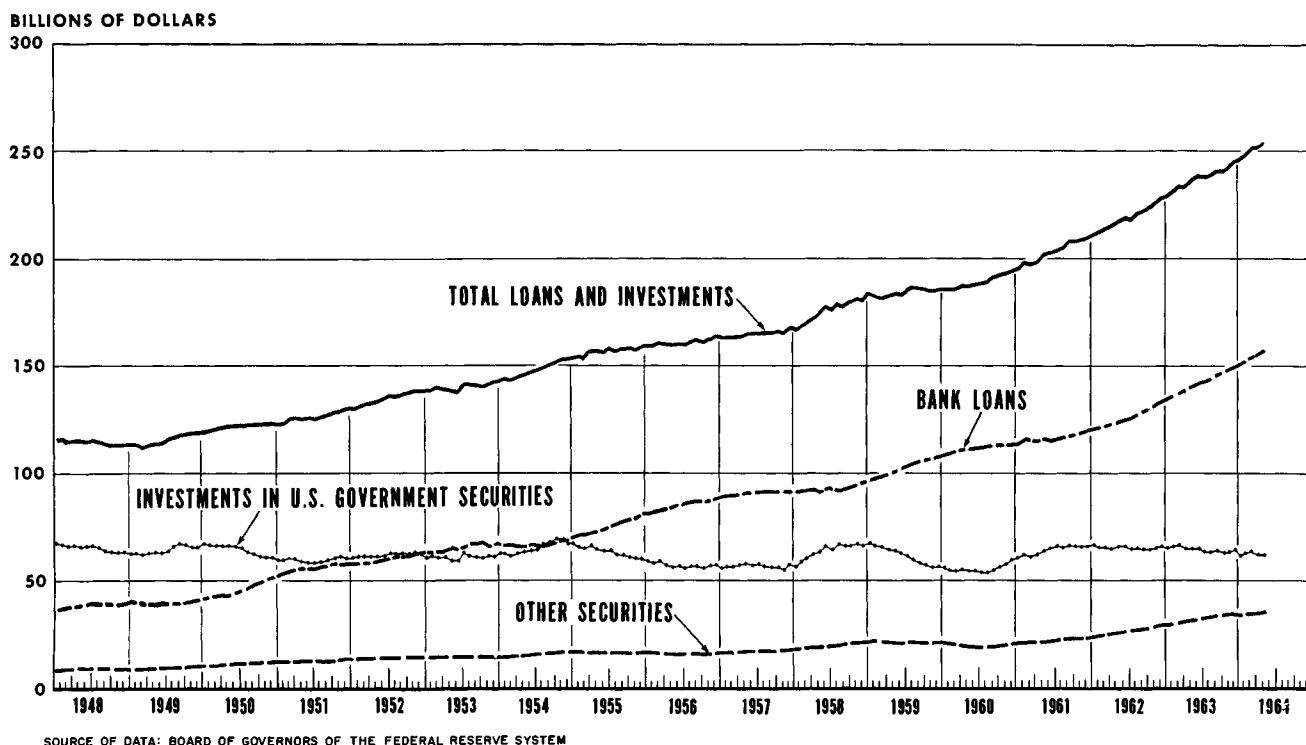


TABLE 31.—*Bank Loans, Investments, Debits, and Reserves*

End of period	All commercial banks (seasonally adjusted data)				Weekly reporting member banks	Bank debits outside New York City (343 centers) ³	All member banks ^{1 4}			
	Total loans and invest- ments	Loans, excluding inter- bank	Investments		Business loans ²		Total reserves	Excess reserves	Borrow- ings at Federal Reserve Banks	Free reserves
			U.S. Gov- ernment securities	Other securi- ties						
Billions of dollars						Millions of dollars				
1948.....	113. 0	41. 5	62. 3	9. 2	15. 6	784	19,990	797	134	663
1949.....	118. 7	42. 0	66. 4	10. 3	13. 9	760	16,291	803	118	685
1950.....	124. 7	51. 1	61. 2	12. 4	17. 9	871	17,391	1,027	142	885
1951.....	130. 2	56. 5	60. 3	13. 4	21. 6	998	20,310	826	657	169
1952.....	139. 1	62. 8	62. 1	14. 2	23. 4	1,045	21,180	723	1,593	-870
1953.....	143. 1	66. 1	62. 3	14. 7	23. 4	1,126	19,920	693	441	252
1954.....	153. 1	69. 0	67. 7	16. 4	22. 4	1,148	19,279	703	246	457
1955.....	157. 6	80. 5	60. 3	16. 8	² 26. 7	1,277	19,240	594	839	-245
1956.....	161. 6	88. 0	57. 3	16. 3	30. 8	1,385	19,535	652	688	-36
1957.....	166. 4	91. 4	57. 1	17. 9	31. 8	1,468	19,420	577	710	-133
1958.....	181. 2	95. 6	65. 1	20. 5	² 31. 7	1,481	18,899	516	557	-41
1959.....	185. 9	107. 6	57. 8	20. 5	² 30. 7	1,656	18,932	482	906	-424
1960.....	194. 5	113. 8	59. 9	20. 8	32. 2	1,736	19,283	756	87	669
1961.....	209. 8	120. 5	65. 4	23. 9	² 32. 9	1,832	20,118	568	149	419
1962.....	228. 3	133. 9	65. 2	29. 2	35. 2	2,021	20,040	572	304	268
1963.....	246. 5	149. 4	62. 1	35. 0	38. 8	2,199	20,746	536	327	209
1964 (preliminary).....	266. 0	166. 7	60. 9	38. 4	42. 1	2,405	21,615	414	243	171

¹ Member banks are all national banks and those State banks which have taken membership in the Federal Reserve System.

² Commercial and industrial loans and prior to 1956 agricultural loans. Series revised beginning October 1955, July 1958, July 1959, and April 1961.

³ Debits during period to demand deposit accounts except interbank and U.S. Government. Prior to 1955, relates to 344 centers outside New York City.

⁴ Data are daily averages for December.

NOTE.—Between January and August 1959, series for all commercial banks expanded to include data for all banks in Alaska and Hawaii. Data for all member banks include Alaska and Hawaii beginning 1954 and 1959, respectively.

Source: Board of Governors of the Federal Reserve System.

were used in years when June 30 call report data were not available. Beginning in 1948, seasonally adjusted monthly data for loans and investments at all commercial banks are available. Reserves and borrowings are shown as averages of daily figures during the period.

STATISTICAL PROCEDURES

The "all commercial banks" and "weekly reporting member banks" series are closely related. The weekly series is based on weekly reports filed with Federal Reserve Banks and compiled cooperatively by these banks and the Board of Governors. Published figures are simple aggregates for the reporting banks. The monthly estimates for all commercial banks are prepared, also by the Federal Reserve System, on the basis of the weekly series, monthly reports from all other member banks, and other information. Estimates are made for nonmember banks, accounting currently for about 17 percent of

commercial bank credit, on the basis of the relationship between the movement of "country" member banks (those outside the major cities) and that of the nonmember banks, as determined semiannually when complete reports for the banking system are available. The December and June estimates are later replaced by "benchmark" figures, if available, for all commercial banks. These benchmarks are compiled by the Federal Deposit Insurance Corporation on the basis of compulsory "call reports" filed by all banks subject to Federal supervision (national banks, State member banks, and nonmember insured banks) with one or another of the Federal bank supervisory agencies, and of information obtained from State banking authorities and other sources for the relatively few uninsured banks. Interim monthly estimates are revised semiannually to bring them into line with the "call report" benchmarks.

The debits series is a simple aggregate of the reports of reporting banks. Monthly data are season-

ally adjusted by means of a modified ratio-to-moving-average procedure. The series shown is a composite of adjusted series derived separately for each of six major centers and for the aggregate of the other centers.

The series on total and excess reserves and member bank borrowing is based on reports of deposits, reserves, and borrowing from all member banks, filed biweekly or more frequently, depending on the class of bank. "Free reserves" for the member banks as a group are computed by netting total borrowings at Federal Reserve Banks against excess reserves.

Relation to other series.—The Federal Government publishes a variety of statistical series covering all or part of the banking system. For purposes of general analysis these may conform closely in trend and lead to similar conclusions, but the differences should be kept in mind. Thus, the all-commercial-bank series should be distinguished from the somewhat larger "all-bank" series which includes some 500 mutual savings banks; and from smaller aggregates such as those for national banks and insured commercial banks. The all-commercial-bank aggregates here are for the United States, exclusive of possessions, and may differ slightly from totals which include banks in the possessions, published by the Comptroller of the Currency and the FDIC.

The weekly series includes most of the larger banks in larger cities and covers a substantial segment of total commercial bank resources. Although the series is not identical in coverage with any published call report aggregate, it is similar in coverage to the aggregate for all member banks other than "country" banks. The "business loans" series is shown in Federal Reserve publications as "commercial and industrial loans." A more recently developed Federal Reserve series showing changes in commercial and industrial loans by type of business of borrower, weekly from 1951, is based on a subsample of the weekly reporting banks and ties in with the aggregate commercial and industrial loan figure.

The series on reserves and member bank borrowings, being averages of daily figures, are not directly comparable with week-end or month-end member bank or Reserve bank statistics.

USES AND LIMITATIONS

The all-commercial-bank figures are useful indicators of business activity and trends in bank credit use. Data for the weekly reporting member banks

are more frequent and more prompt than those for all commercial banks and provide the more detailed category of "business loans." The weekly series also is a more sensitive indicator of developments in the short-term money market, because it covers the larger banks in the more important centers.

The series on reserves and borrowing are a partial reflection of the credit potential of the banking system. Excess reserves are available, to the banks holding them, for further credit expansion. Member bank borrowing from the Reserve banks reflects the extent to which some banks (not holding excess reserves) have borrowed temporarily to meet minimum reserve requirements. "Free reserves" may be computed by subtracting borrowings from excess reserves. The series on required and excess reserves forms an integral part of the significant weekly and monthly Federal Reserve tabulation entitled "Member Bank Reserves, Reserve Bank Credit and Related Items," which shows interrelationships among various sources and uses of reserve funds. Users should recognize that there is a seasonal movement in the data on loans and reserves.

REFERENCES

The monthly estimates for all commercial banks appear initially about two weeks after the last Wednesday of the month in a Federal Reserve release J.4, showing the major balance sheet items and changes during the past month and year for all banks, all commercial banks, and member banks. The *Federal Reserve Bulletin* also carries the estimates for recent months, with call report data for selected years back to 1941. Historical data to 1914 and explanatory technical footnotes are presented in *Banking and Monetary Statistics. A Supplement to Banking and Monetary Statistics, Section 1 Banks and the Monetary System*, published in 1962, contains a tabulation of recent data.

The Wednesday data for the weekly reporting member banks appear initially on the following Wednesday in a Federal Reserve release (H.4.2), showing also changes in assets and liabilities over the last week and year. The *Federal Reserve Bulletin* carries the weekly data for the last two months and for the comparable month a year ago. Historical data from 1919 appear in *Banking and Monetary Statistics*. The most recent revisions of the weekly series are discussed in the August 1959 and June 1961 issues of the *Federal Reserve Bulletin*.

Debits figures appear in an advance monthly release G.6, showing aggregates for all centers, for Federal Reserve districts, and for individual centers, and in an annual summary release, G.5. A summary table appears monthly in the *Federal Reserve Bulletin*, with annual data for about eight years. The last major revision of the debits series is discussed in the April 1953 *Bulletin*. Back data may be traced in current and past issues of the *Federal Reserve Bulletin*, and historical data, though not wholly comparable, are presented in *Banking and Monetary Statistics* back to 1919.

Figures for member bank reserves and borrowings appear first in the weekly release H.4.1, showing weekly averages of daily figures, available the day following the end of the weekly period. The bi-

weekly release J.1 gives similar data for biweekly periods (semimonthly periods prior to 1959) available with a lag of about twenty days. Weekly and monthly data appear in the *Bulletin*, and back data may be traced in current and past issues and in *Banking and Monetary Statistics* back to 1914. A *Supplement to Banking and Monetary Statistics, Section 10, Member Bank Reserves and Related Items*, published in 1962, contains a tabulation of recent data.

Banking and Monetary Statistics, published by the Federal Reserve Board in 1943, contains technical discussions of the general banking series, the weekly reporting member bank series, and the data on reserves. *Historical Statistics of the United States, Colonial Times to 1957* presents earlier banking series, in part back to 1834.

32. CONSUMER AND REAL ESTATE CREDIT

DESCRIPTION OF SERIES

"Consumer credit" is defined as short- and intermediate-term credit used to finance the purchase of commodities and services for personal consumption or to refinance debts originally incurred for such purposes. Credit covers both loans and sales involving deferred payment. Personal consumption is defined to exclude consumption by businesses and by nonprofit organizations. The estimates of consumer credit are made in total and for major types of credit. They exclude home mortgage credit, which is shown separately for one-to-four family homes in the last column on the accompanying table.

Instalment credit, accounting for the bulk of consumer credit, is that scheduled to be repaid in two or more payments. Instalment credit classified as "automobile paper" includes credit for the purchase of automobiles regardless of whether originating as loans or as credit sales, and regardless of whether the paper is held by a dealer or a financial institution. Other components of total instalment credit are "other consumer goods paper," defined analogously to automobile paper; "repair and modernization loans," representing debt owed to financial institutions for repair and modernization of owner-occupied homes; and "personal loans," comprising loans by financial institutions for all other consumer purposes, such as to consolidate debts, to pay medical expenses, or for education. "Noninstalment credit" comprises three major types: charge accounts (including service station and miscellaneous credit-card accounts and

home heating-oil accounts); single-payment loans; and service credit extended by a variety of creditors including hospitals, doctors, utilities, and service establishments.

The above definition is followed generally but not rigidly in the construction of the series. In the absence of sufficiently refined data, certain arbitrary decisions have been made. For example, all bank credit to farmers is excluded even though an undetermined part is for consumption. Credit for the purchase of passenger automobiles *by individuals* probably includes a relatively small amount of credit on vehicles that are used for business purposes.

The several series on instalment credit extended and repaid measure the gross flows of lending and repayment which determine changes in the level of instalment credit outstanding. The monthly series for extensions and repayments, as shown in *Economic Indicators*, are adjusted for trading day and seasonal variation.

Data for Alaska were added in January, and for Hawaii in August, of 1959, with an increase in total consumer credit of approximately \$180 million.

STATISTICAL PROCEDURES

The several series are aggregates of separate estimates of credit held (or extended and repaid) by various types of creditors—financial institutions, retail and service establishments, and others. The procedures vary but in general involve estimates based on a benchmark and moved by monthly sample data. The 1948 Census of Business and subse-

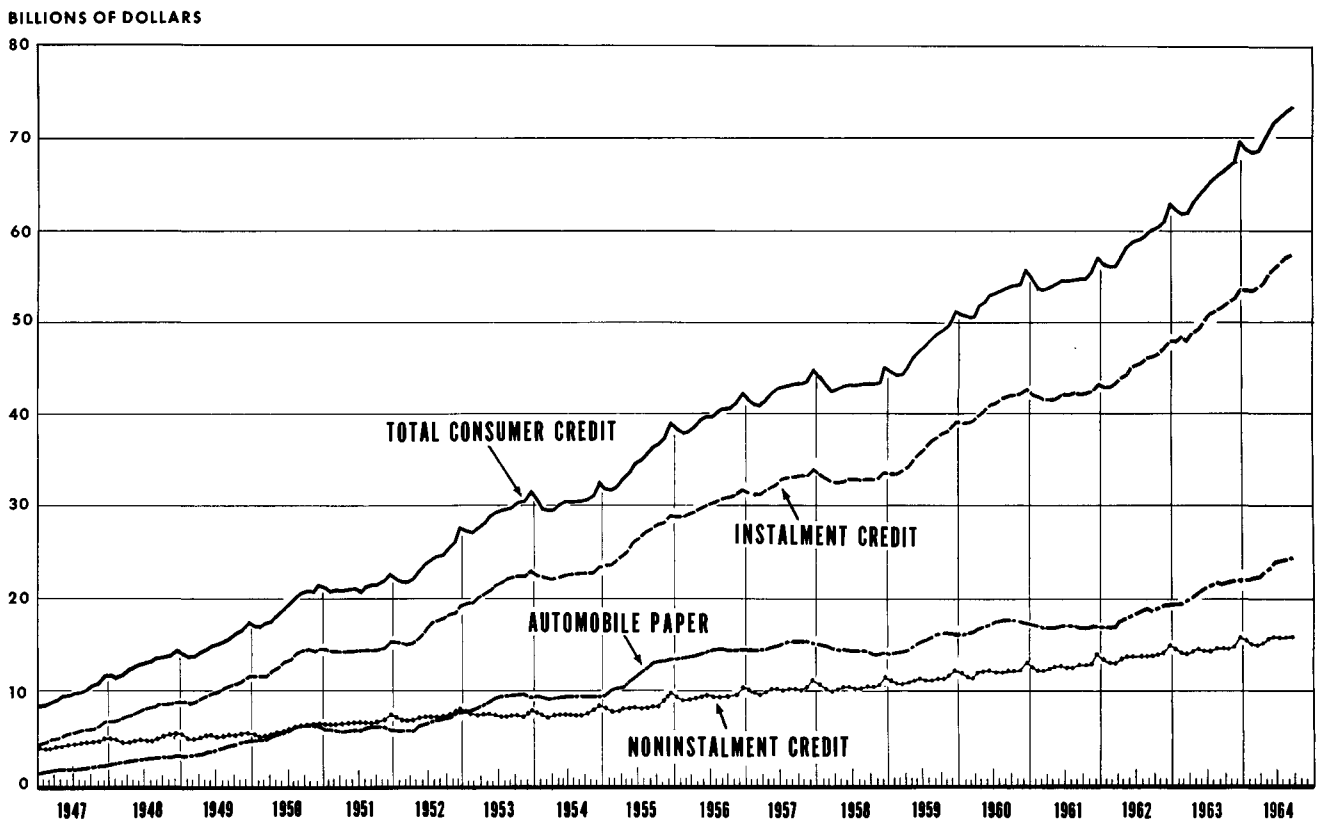
quent annual surveys provide benchmarks for credit held by the various retail lines. For the more important credit-granting lines there are monthly and annual sample data on receivables. For some lines monthly receivables are estimated on the basis of weighted sales adjusted annually to survey benchmark data. Monthly data on receivables are available from reporting samples of financial institutions engaged in consumer lending. Benchmarks for credit outstanding are provided for certain holders by annual or more frequent reports with complete coverage, and for others by occasional special surveys. For example, a benchmark survey of sales and consumer finance companies (or finance companies) was held as of June, 1960, to update the benchmark derived from a similar survey in 1955. Estimates of service credit vary but in general are based on less substantial data. The largest component, medical debt, is based on periodic data collected in a sample survey of consumers and an estimated seasonal pattern. On the other hand, virtually com-

plete reports on certain utility receivables are available monthly or semiannually.

Estimates of instalment credit extended and repaid are derived from currently reporting samples of lending and instalment-selling groups covering either collections or credit extended. These data are shown currently on a monthly basis by type of credit and major holder group. The imputed factors for seasonal and trading day adjustment of total instalment credit for the 12 months of 1963 are as follows:

	Credit extended	Credit repaid
January.....	90	102
February.....	82	93
March.....	95	100
April.....	106	103
May.....	106	102
June.....	103	96
July.....	105	104
August.....	103	100
September.....	93	96
October.....	103	104
November.....	100	99
December.....	113	102

Consumer Credit Outstanding, 1947-64
(Short- and intermediate-term. End-of-month data)



SOURCE OF DATA: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

TABLE 32.—Consumer and Real Estate Credit

[Billions of dollars]

Year	Consumer credit outstanding ¹					Consumer instalment credit extended and repaid				Mortgage debt on 1- to 4-family homes ¹
	Total	Instalment			Non-instalment ³	Total		Automobile paper		
		Total ²	Auto-mobile paper	Personal loans		Ex-tended	Repaid	Ex-tended	Repaid	
1929	7.1	3.5	1.4	0.6	3.6	(4)	(4)	(4)	(4)	18.9
1930	6.4	3.0	1.0	.6	3.3	(4)	(4)	(4)	(4)	18.9
1931	5.3	2.5	.7	.5	2.9	(4)	(4)	(4)	(4)	18.1
1932	4.0	1.7	.4	.5	2.4	(4)	(4)	(4)	(4)	16.7
1933	3.9	1.7	.5	.4	2.2	(4)	(4)	(4)	(4)	15.4
1934	4.2	2.0	.6	.5	2.2	(4)	(4)	(4)	(4)	15.6
1935	5.2	2.8	1.0	.6	2.4	(4)	(4)	(4)	(4)	15.4
1936	6.4	3.7	1.4	.7	2.6	(4)	(4)	(4)	(4)	15.4
1937	6.9	4.1	1.5	.9	2.8	(4)	(4)	(4)	(4)	15.5
1938	6.4	3.7	1.1	.9	2.7	(4)	(4)	(4)	(4)	15.8
1939	7.2	4.5	1.5	1.1	2.7	(4)	(4)	(4)	(4)	16.3
1940	8.3	5.5	2.1	1.2	2.8	8.2	7.2	3.1	2.5	17.4
1941	9.2	6.1	2.5	1.3	3.1	9.4	8.9	3.8	3.4	18.4
1942	6.0	3.2	0.7	1.0	2.8	5.2	8.2	1.0	2.7	18.2
1943	4.9	2.1	.4	.8	2.8	4.6	5.6	.8	1.1	17.8
1944	5.1	2.2	.4	.9	2.9	4.9	4.9	.9	.9	17.9
1945	5.7	2.5	.5	1.0	3.2	5.4	5.1	1.0	.9	18.6
1946	8.4	4.2	1.0	1.5	4.2	8.5	6.8	2.0	1.4	23.0
1947	11.6	6.7	1.9	1.9	4.9	12.7	10.2	3.7	2.7	28.2
1948	14.4	9.0	3.0	2.2	5.5	15.6	13.3	5.2	4.1	33.3
1949	17.4	11.6	4.6	2.4	5.8	18.1	15.5	7.0	5.4	37.6
1950	21.5	14.7	6.1	2.8	6.8	21.6	18.4	8.5	7.0	45.2
1951	22.7	15.3	6.0	3.4	7.4	23.6	23.0	9.0	9.1	51.7
1952	27.5	19.4	7.7	4.1	8.1	29.5	25.4	11.8	10.0	58.5
1953	31.4	23.0	9.8	4.8	8.4	31.6	28.0	13.0	10.9	66.1
1954	32.5	23.6	9.8	5.4	8.9	31.1	30.5	11.8	11.8	75.7
1955	38.8	28.9	13.5	6.1	9.9	39.0	33.6	16.7	13.1	88.2
1956	42.3	31.7	14.4	6.8	10.6	39.9	37.1	15.5	14.6	99.0
1957	45.0	33.9	15.3	7.6	11.1	42.0	39.9	16.5	15.5	107.6
1958	45.1	33.6	14.2	8.1	11.5	40.1	40.3	14.2	15.4	117.7
1959	51.5	39.2	16.4	9.4	12.3	48.1	42.6	17.8	15.6	130.9
1960	56.0	42.8	17.7	10.5	13.2	49.6	46.0	17.7	16.4	141.3
1961	57.7	43.5	17.2	11.3	14.2	48.4	47.7	16.0	16.5	153.1
1962	63.2	48.0	19.5	12.6	15.1	55.1	50.6	19.8	17.5	166.5
1963	69.9	53.7	22.2	14.4	16.1	60.8	55.1	22.0	19.4	182.2
1964 (preliminary)	76.8	59.4	24.5	16.1	17.4	66.1	60.4	23.6	21.2	197.9

¹ End of period, unadjusted.² Also includes other consumer goods paper, and repair and modernization loans, not shown separately.³ Consists of single-payment loans, charge accounts, and service credit.⁴ Not available.

NOTE.—Data for Alaska and Hawaii included beginning January and August 1959, respectively.

Source: Board of Governors of the Federal Reserve System and Federal Home Loan Bank Board.

RELATION TO OTHER SERIES

The series shown here are selected from a more comprehensive body of consumer credit data prepared by Federal Reserve, showing consumer credit

outstanding by major types in greater detail; instalment credit outstanding by type of holder; and supplementary tabulations of instalment credit of commercial banks, sales finance companies, and other financial institutions, and of noninstalment credit

by type of holder. Instalment credit extended and repaid for major types, with changes in outstanding credit, are shown on both an adjusted and an unadjusted basis. Related series may also be found as components of the separate statistics published for banks, and other financial institutions.

USES AND LIMITATIONS

The widespread interest in consumer credit is due in part to its importance as a source of consumer purchasing power and especially its significance in the market for consumer goods frequently bought on the instalment plan. In part it is due to the fact that consumer credit reflects one aspect of the financial position of consumers. Consumer credit is also an important element in the demand for funds in the financial community.

Because of the difficulty of adapting available data to the precise definition of consumer credit adopted, Federal Reserve faces problems of both over- and under-coverage, the net effect of which is probably some understatement of the true total of consumer credit outstanding.

REFERENCES

General discussions of concepts and sources and estimating techniques appeared in the *Federal Reserve Bulletin* for April 1953 and for October 1956. Consumer credit estimates appear originally in several monthly Federal Reserve releases of which the basic one is "Consumer Credit." Current data with selected historical data appear in detail in monthly issues of the *Bulletin* supplemented by periodic revisions. The data are revised regularly in the fourth quarter of each year for the preceding year or two. A more comprehensive revision based on the survey of finance companies in mid-1960 was published in the December 1961 *Bulletin*. A Federal Reserve pamphlet *Consumer Credit Statistics*, February, 1963, contains selected data back to 1919.

Mortgage Debt Outstanding on Nonfarm One-to-Four Family Properties

Estimates of mortgage debt on one-to-four family nonfarm homes are available for the end of each year since 1925. The present series of quarterly estimates, dating from the first quarter of 1949, are

prepared by the Federal Home Loan Bank Board in cooperation with the Federal Reserve Board. Quarterly estimates from 1949 to 1957 are available from the Federal Reserve Board.

The major holders of mortgage debt are the saving and loan associations, commercial banks, mutual savings banks, and insurance companies. Estimates of the volume of mortgage debt held by these institutions rest on firm data, although the proportion of debt on one-to-four-family properties to debt on all residential properties is not a matter of record in most cases and must be imputed from related information.

Data on mortgage holdings by savings and loan associations are compiled from reports of the associations to the FHLBB or to State supervisory authorities; mortgage holdings of life insurance companies (which include all legal reserve companies) are based on direct reports from such companies to the FHLBB and the Institute of Life Insurance. Home mortgage debt held by commercial banks (including nondeposit trust companies) are estimated by the Federal Reserve Board from related call report figures compiled by the Federal Reserve Board, the Federal Deposit Insurance Corporation and the Comptroller of the Currency. Estimates for mutual savings banks are compiled from FDIC call reports.

The mortgage debt series also covers holdings recorded by the various Government agencies, including the Federal National Mortgage Association, the Federal Housing Administration, the Veterans Administration, and the Home Owners' Loan Corporation (for the period 1935-50).

The volume of mortgages held by real estate and mortgage companies, trust departments of commercial banks, pension funds, philanthropic institutions, fraternal organizations, casualty and fire insurance companies and individuals is more difficult to determine with certainty. Estimates for this miscellaneous group are based on the 1950 Census Bureau Survey of Residential Financing, updated by estimates of nonfarm mortgage recordings and related information.

The FHLBB publishes estimates of home mortgage debt in a quarterly release, "Estimated Home Mortgage Debt and Financing Activity," and the Federal Reserve Board publishes estimates of various categories of real estate debt regularly in the *Bulletin*.

33. BOND YIELDS AND INTEREST RATES

3-Month Treasury Bills

Treasury bills are issued weekly. An average discount rate is computed for each weekly issuance, on the basis of the varying prices at which portions of the issue are awarded, in order, to the highest bidders. The monthly series presented in *Economic Indicators* is a simple average of the average rates for the 4 or 5 issues during the month.

The series is useful as a measure of a short-term rate on relatively riskless borrowing. Issuance or "auction" rates are related to but not typically identical with average "market" rates, also published by Federal Reserve, which are averages based on daily trading quotations for the issue closest in maturity to 3 months.

The monthly averages are issued in an advance Federal Reserve release, G. 13, and are published in the *Federal Reserve Bulletin*. Fuller information on the individual issues appears in the *Treasury Bulletin*. Textual discussion appears in *Banking and Monetary Statistics*, with yield data back to 1929.

Taxable Bonds

TREASURY NOTES AND BONDS

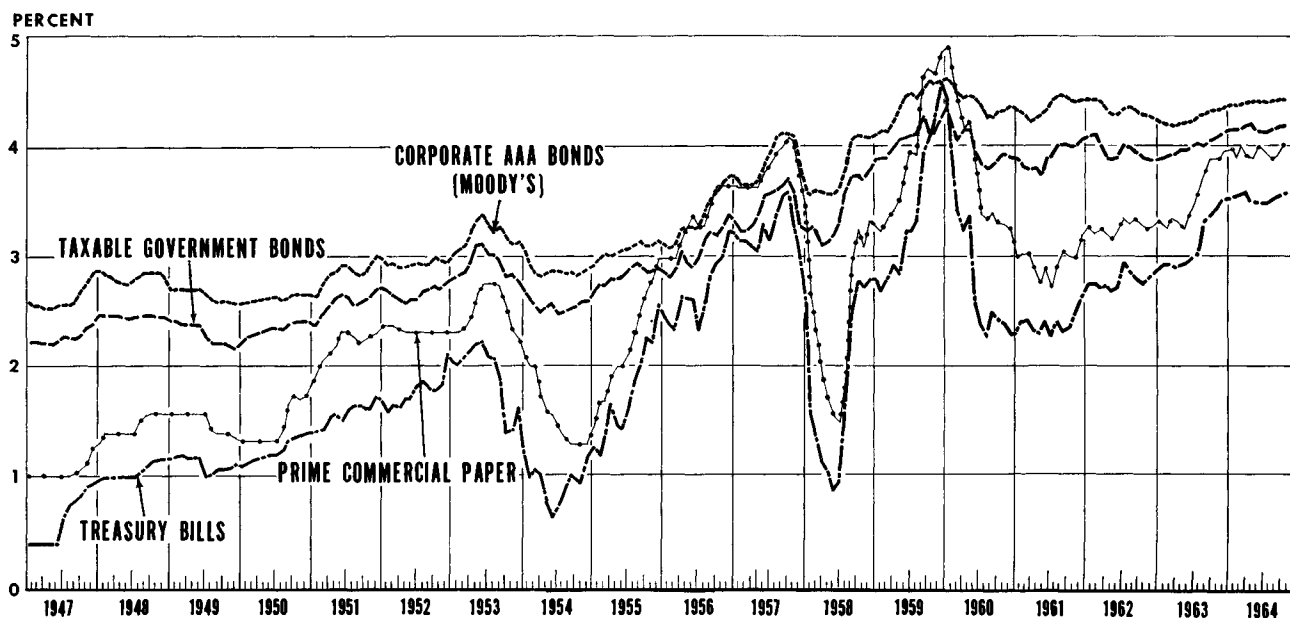
Two series of market yields on longer-term Treasury obligations are computed—3-5 year issues and long-term bonds. The series covering 3-5 year issues includes both notes and bonds and in July 1964 was composed of six issues. On the same date, the series on long-term bonds comprised twelve issues, all due or callable in more than 10 years. Prior to April 1953 this series incorporated bonds due or callable after 12 years and prior to April 1952 bonds due or callable after 15 years.

Since 1942 both series have included fully taxable issues. The maturity distribution of the obligations entering into the averages varies with the passage of time and as new issues are added or old issues removed.

Both series are based on daily closing-bid quotations in the over-the-counter market as reported to the Federal Reserve Bank of New York by leading dealers in New York City. Prior to April 1953 the

Bond Yields and Interest Rates, 1947-64

(Monthly data. Percent per annum)



SOURCE: MOODY'S INVESTORS SERVICE, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, AND TREASURY DEPARTMENT

yields were computed on the basis of the mean of closing bid and ask quotations. The table shows averages of daily figures, each of which is an unweighted average of yields on the individual bonds.

The long-term series is published monthly in the *Treasury Bulletin*. A similar series is published in the *Federal Reserve Bulletin*, and in the Federal Reserve release G. 13, Open Market Money Rates and Bond Prices. The two series differ only in that the series in the *Treasury Bulletin* includes yields based on "when issued" prices for new issues. The difference is generally very small and is limited to those months in which new securities appear in the market. The 3-5 year series is published in the *Federal Reserve Bulletin* and the G. 13 release.

High-Grade Municipal Bonds

This series, compiled by Standard & Poor's Corporation, is an arithmetic average of the yield to maturity of 15 high-grade tax-exempt, general obligation domestic municipal bonds, each with approximately 20 years to maturity. The issues are selected on the basis of quality, trading activity, and geographic representation. The bonds vary in quality, however, as is indicated by the fact that the yield sometimes exceeds that of U.S. taxable bonds. The yields are based on Wednesday's closing bid quotation, and the monthly figures are averages of the four or five weekly figures for the month. Prior to 1929 the monthly figures were based on an average of the high and low prices for the month. The series is available from 1929 on a weekly, and from 1900 on a monthly basis.

The series is published weekly in Standard & Poor's *Outlook* and *Bond Outlook*. Monthly and annual average figures back to 1900 and a description of the series and list of the issues used appear in the 1964 edition of Standard & Poor's *Security Price Index Record*.

Corporate Aaa and Baa Bonds

These series measure the currently prevailing maturity yields on seasoned long-term corporate bonds of the highest quality and of "lower medium grade", as reflected in the yields of selected bonds rated Aaa and Baa by Moody's Investors Service. The series shown here are 2 of a group of similar series computed by Moody's covering bonds classified by 4

rating groups (Aaa, Aa, A, Baa) and by 3 industrial groups. The formula for these series was established in 1928 to include for each rating 10 industrial, 10 railroad, and 10 public utility bonds. Since 1935 however, there have not always been 10 suitable bonds for each classification. The Aaa series currently includes 7 industrials, 6 railroads, and 10 public utilities; and the Baa 10 industrials, 10 railroads, and 10 public utilities.

The series were calculated on a monthly basis from 1919 through 1931, and have been calculated daily beginning in 1932. Weekly and monthly figures are averages of daily figures; annual figures are averages of 12 monthly figures.

The daily yield for each selected bond is computed on the basis of closing price, as reported in the dealers' asked quotation, adjusted as necessary for occasional abnormally wide spreads between the bid and asked quotation or for other temporarily distorting factors. For each of the rating classifications the 10 (or fewer) individual yields for each industrial group are averaged, without weighting; and the corporate index is computed as the unweighted average of the 3 industrial-group averages.

Issues included in each average are selected to represent typical long-term bonds in each rating group. Occasional substitutions in the bond list have been made when ratings have been changed, when a bond has been called or sells too high above its call price, or because of approaching maturity. Suitable adjustments (usually small), which are gradually amortized, are introduced to prevent such substitutions from impairing the comparability of the series.

These series are useful general indicators of the level and movement of average yields of selected seasoned bonds of the respective grades with sufficiently long maturities and other features to afford adequate measures of long-term interest rates. They are not a measure of average yields of all Aaa or all Baa bonds available to the investor, particularly those on new offerings; nor do they reflect changes in qualitative terms of borrowing such as call provisions.

The daily corporate bond yield averages are published weekly in *Moody's Bond Survey*, which includes from time to time the list of bonds. Historical monthly data and annual averages for these two series are available back to 1919, and are published in *Moody's Industrial Manual*.

TABLE 33.—*Bond Yields and Interest Rates*

[Percent per annum]

Year	U.S. Government security yields			High-grade municipal bonds (Standard & Poor's)	Corporate bonds (Moody's)		Prime commercial paper, 4-6 months	FHA new home mortgage yields ⁴
	3-month Treasury bills ¹	3-5 year issues ²	Taxable bonds ³		Aaa	Baa		
1929				4.27	4.73	5.90	5.85	(⁵)
1930				4.07	4.55	5.90	3.59	(⁵)
1931	1.402			4.01	4.58	7.62	2.64	(⁵)
1932	.879			4.65	5.01	9.30	2.73	(⁵)
1933	.515	2.66		4.71	4.49	7.76	1.73	(⁵)
1934	.256	2.12		4.03	4.00	6.32	1.02	(⁵)
1935	.137	1.29		3.40	3.60	5.75	.75	(⁵)
1936	.143	1.11		3.07	3.24	4.77	.75	(⁵)
1937	.447	1.40		3.10	3.26	5.03	.94	(⁵)
1938	.053	.83		2.91	3.19	5.80	.81	(⁵)
1939	.023	.59		2.76	3.01	4.96	.59	(⁵)
1940	.014	.50		2.50	2.84	4.75	.56	(⁵)
1941	.103	.76		2.10	2.77	4.33	.53	(⁵)
1942	.326	1.13	2.46	2.36	2.83	4.28	.66	(⁵)
1943	.373	1.34	2.47	2.06	2.73	3.91	.69	(⁵)
1944	.375	1.33	2.48	1.86	2.72	3.61	.73	(⁵)
1945	.375	1.18	2.37	1.67	2.62	3.29	.75	(⁵)
1946	.375	1.16	2.19	1.64	2.53	3.05	.81	(⁵)
1947	.594	1.32	2.25	2.01	2.61	3.24	1.03	(⁵)
1948	1.040	1.62	2.44	2.40	2.82	3.47	1.44	(⁵)
1949	1.102	1.43	2.31	2.21	2.66	3.42	1.49	4.34
1950	1.218	1.50	2.32	1.98	2.62	3.24	1.45	4.15
1951	1.552	1.93	2.57	2.00	2.86	3.41	2.16	4.23
1952	1.766	2.13	2.68	2.19	2.96	3.52	2.33	4.30
1953	1.931	2.56	2.94	2.72	3.20	3.74	2.52	4.65
1954	.953	1.82	2.55	2.37	2.90	3.51	1.58	4.60
1955	1.753	2.50	2.84	2.53	3.06	3.53	2.18	4.65
1956	2.658	3.12	3.08	2.93	3.36	3.88	3.31	4.80
1957	3.267	3.62	3.47	3.60	3.89	4.71	3.81	5.44
1958	1.839	2.90	3.43	3.56	3.79	4.73	2.46	5.49
1959	3.405	4.33	4.08	3.95	4.38	5.05	3.97	5.77
1960	2.928	3.99	4.02	3.73	4.41	5.19	3.85	6.16
1961	2.378	3.60	3.90	3.46	4.35	5.08	2.97	5.78
1962	2.778	3.57	3.95	3.18	4.33	5.02	3.26	5.60
1963	3.157	3.72	4.00	3.23	4.26	4.86	3.55	5.46
1964	3.549	4.06	4.15	3.22	4.40	4.83	3.97	5.45

¹ Rate on new issues within period.

² Selected note and bond issues. Prior to 1941 these were tax-exempt issues.

³ Series includes: April 1953 to date, bonds due or callable 10 years and after; April 1952-March 1953, bonds due or callable after 12 years; October 1941-March 1952, bonds due or callable after 15 years.

⁴ Based on the maximum permissible interest rate (5¼% since May 1961), and 25-year mortgages paid in 12 years, until 1962. From 1962, 30-year mortgage paid in 15 years.

⁵ Not available.

Sources: Treasury Department, Board of Governors of the Federal Reserve System, Federal Housing Administration, Standard & Poor's Corporation, and Moody's Investors Service.

Prime Commercial Paper

This series measures the prevailing rate on prime 4 to 6 months' commercial paper. It is useful as a measure of the cost of open-market short-term credit available to large business borrowers of the highest credit standing.

The prevailing daily selling quotation is deter-

mined by the Federal Reserve Bank of New York on the basis of information obtained through continuing contacts with New York City dealers handling the bulk of the volume of commercial paper of the inventory type, and less frequent reports concerning rates outside New York. Monthly and weekly figures are averages of daily prevailing rates.

Annual, monthly, and weekly figures for the period since 1941 are available in the *Federal Reserve Bulletin*, and the most recent data are shown in the advance Federal Reserve monthly release, G. 13. Annual and monthly data, 1890-1941, and weekly data, 1919-41, may be found in *Banking and Monetary Statistics*.

FHA New Home Mortgage Yields

Yields on mortgages on new homes insured by the Federal Housing Administration are computed from a national average of secondary market prices. Mortgages in this series carry FHA's maximum permissible interest rate, and, until 1961, a maturity of 25 years, and the assumption is made that they will be prepaid at the end of 12 years. From 1962 the series is based on 30-year mortgages that will be prepaid at the end of 15 years. Data on prices per \$100 of mortgage loan amount are based on FHA field office opinion reports on transactions in market

areas of insuring office cities as of the first of each month.

Transactions are for immediate delivery of home mortgages in the secondary market and exclude seasoned mortgages or deliveries to Federal National Mortgage Association. Average prices are net after discounts, commitment fees, or other charges.

Price quotations prior to January 1956 represent typical transactions; after that date, they represent new-home mortgages with a 10 percent downpayment and a 25-year maturity. Prior to March 1956, the national average prices were unweighted; subsequently, data have been weighted to reflect the probable volume of transactions in the various insuring office areas. After a regulatory change in FHA's maximum permissible interest rate, generally a lapse of about two months is required before a national average price can be computed on a firm basis for mortgages bearing the new interest rate.

34. COMMON STOCK PRICES, YIELD, AND EARNINGS

Price Indexes

The Standard and Poor's composite price index measures the average price movement of a sample of common stocks listed on the New York Stock Exchange. The sample, selected from the more actively traded shares, currently includes 500 stocks, accounting for about 85% of the total market value of all common stocks listed on the Exchange. The base of the index is the aggregate value of the shares of these securities in the period 1941-43, considered as equal to 10. Weekly figures shown in the monthly *Economic Indicators* are averages of daily figures (except that for the capital and consumer goods series Wednesday figures are used). Monthly figures are averages of daily figures, and annual figures are averages of the twelve monthly indexes.

The index is shown in *Economic Indicators* for three main subgroups: industrials (with further classification into capital goods and consumers' goods groups), railroads, and public utilities.

The index measures fluctuations in current market values of the sample. Each component stock is weighted according to the number of shares outstanding at the time of observations. Appropriate adjustments in these weights and/or base period values are made on the occasion of stock dividends, split-ups, consolidations or similar events, to insure that the index will reflect only price movement.

The Standard & Poor's Corporation also provides readings of the composite 500-stock index and of the three main sub-categories hourly, with closing and high and low values for the day.

It should be noted that this series covers active listed stocks on the New York Stock Exchange only, and may not reflect price movements on other exchanges or in over-the-counter issues.

Price-Earnings Ratios and Dividend Yields

The price-earnings ratio compares the aggregate value of the stocks in the index as of the last day of the quarter with the latest available quarterly earnings, adjusted for seasonal influences and converted to an annual rate. Since 1935, annual data are averages of the four quarterly ratios. Prior to that time, annual data were based on annual earnings and end of year prices.

Dividend yield, or *dividend-price* ratio, is the ratio of the current annual rate of cash aggregate dividends to aggregate market value based on Wednesday closing prices. Monthly yield figures are averages of the four or five weekly figures. Annual data are averages of the 12 monthly figures.

Standard & Poor's Stock Price Indexes are privately published. Indexes for the main groups appear hourly and daily on the tickers of stock exchanges and are also sent over the wires of news services.

TABLE 34.—Common Stock Prices, Yield, and Earnings

Period	Price index ¹						Dividend yield ² (percent)	Price/ earnings ratios ³
	Total	Industrials			Public utilities	Railroads		
		Total	Capital goods	Consumers' goods				
	1941-43=10							
1929	26.02	21.35	21.48	22.49	59.33	46.15	3.47	13.32
1930	21.03	16.42	16.24	15.67	53.24	39.62	4.51	15.81
1931	13.66	10.51	8.81	11.41	37.18	23.72	6.15	13.31
1932	6.93	5.37	3.99	6.19	20.65	8.75	7.43	16.80
1933	8.96	7.61	6.33	8.27	19.72	12.75	4.21	22.95
1934	9.84	9.00	7.62	9.85	15.79	14.05	3.72	19.39
1935	10.60	10.13	8.91	11.18	15.15	11.78	3.82	14.18
1936	15.47	14.69	13.96	14.90	22.47	17.71	3.44	15.44
1937	15.41	14.97	15.34	13.81	19.07	16.86	4.86	12.38
1938	11.49	11.39	11.26	10.77	14.17	9.15	5.18	18.38
1939	12.06	11.77	11.91	11.88	16.34	9.82	4.05	13.80
1940	11.02	10.69	11.07	11.34	15.05	9.41	5.59	10.24
1941	9.82	9.72	10.21	9.80	10.93	9.39	6.82	8.26
1942	8.67	8.78	8.93	8.56	7.74	8.81	7.24	8.80
1943	11.50	11.49	10.87	11.65	11.34	11.81	4.93	12.84
1944	12.47	12.34	11.23	13.43	12.81	13.47	4.86	13.66
1945	15.16	14.72	13.66	16.46	16.84	18.21	4.17	16.33
1946	17.08	16.48	15.86	19.22	20.76	19.09	3.85	17.69
1947	15.17	14.85	14.27	16.38	18.01	14.02	4.93	9.36
1948	15.53	15.34	14.67	15.75	16.77	15.27	5.54	6.90
1949	15.23	15.00	14.14	15.76	17.87	12.83	6.59	6.64
1950	18.40	18.33	18.07	18.97	19.96	15.53	6.57	6.63
1951	22.34	22.68	22.54	20.99	20.59	19.91	6.13	9.27
1952	24.50	24.78	23.04	21.40	22.86	22.49	5.80	10.47
1953	24.73	24.84	23.46	21.91	24.03	22.60	5.80	9.69
1954	29.69	30.25	29.93	24.85	27.57	23.96	4.95	11.25
1955	40.49	42.40	42.55	32.28	31.37	32.94	4.08	11.50
1956	46.62	49.80	48.79	34.55	32.25	33.65	4.09	14.05
1957	44.38	47.63	47.01	32.48	32.19	28.11	4.35	12.89
1958	46.24	49.36	47.93	36.33	37.22	27.05	3.97	16.64
1959	57.38	61.45	63.93	47.35	44.15	35.09	3.23	17.05
1960	55.85	59.43	59.75	47.21	46.86	30.31	3.47	17.09
1961	66.27	69.99	67.33	57.01	60.20	32.83	2.97	21.06
1962	62.38	65.54	58.15	54.96	59.16	30.56	3.37	16.68
1963	69.87	73.39	63.30	62.28	64.99	37.58	3.17	17.62
1964	81.37	86.19	76.32	73.83	69.91	45.46	3.01	-----

¹ Includes 500 common stock, 425 are industrials; 50 are public utilities; and 25 are railroads.

² Aggregate cash dividends (based on latest known annual rate) divided by the aggregate monthly market value of the stocks in the group. Annual yields are averages of monthly data. Weekly data are Wednesday figures.

³ Ratio of price index for last day in quarter to quarterly earnings (seasonally adjusted annual rate). Annual ratios are averages of quarterly data.

Source: Standard and Poor's Corporation.

FEDERAL FINANCE

35. FEDERAL ADMINISTRATIVE BUDGET RECEIPTS AND EXPENDITURES

DESCRIPTION OF SERIES

Budget receipts and expenditures are frequently referred to as the conventional or administrative budget, to distinguish them from other budget concepts. They measure the financial transactions of all federally owned Government funds. Budget receipts are derived mainly from individual and corporate income taxes, but also from excise taxes, estate and gift taxes, customs duties, and from miscellaneous sources such as rents, fines, fees, sales of products and services, and collections on certain loans and investments. Budget expenditures primarily include outlays for goods and services, transfer payments to individuals, aids to States, loans, purchases of financial and other existing assets, and Government contributions as employer to civilian retirement and social security trust funds. Transactions of trust funds, representing monies held in trust by the Government for specific purposes, are excluded from both budget receipts and expenditures.

"Net budget receipts," as shown in the table on the following page, represent the total revenues collected for the general fund and for special federally owned funds whose receipts are earmarked under law for specific purposes, less (a) refunds of receipts, (b) transfers of receipts to trust funds in those cases where the law provides an indefinite appropriation to a trust fund in an amount based on certain tax receipts, and (c) certain interfund transactions, namely those general or special fund receipts which are also expenditures of a Government-owned fund. Budget receipts do not include money obtained from borrowing; nor do they include receipts of public enterprise revolving funds (such as the postal fund and most Government corporations) or of intragovernmental revolving and management funds, since these funds are included on a net expenditure basis in budget expenditures figures.

"Net budget expenditures" cover Government-owned funds; namely, the general fund, the special

funds, the public enterprise revolving funds, and the intragovernmental revolving and management funds. Expenditures for the public enterprise funds and for the intragovernmental funds are included in the totals on a *net* basis—that is, their collections are deducted from gross expenditures and the net results are budget expenditures. Payments to the general fund of earnings and dividends on capital of revolving funds, and the return of such capital to the general fund, are excluded to avoid double counting. Certain interfund transactions (namely, general or special fund receipts which are also expenditures of a Government-owned fund) are deducted to avoid double counting. Interest paid to the Treasury by such funds is the major category of this kind.

Net budget expenditures do not include retirement of Government debt, nor do they include investments of Government enterprises in United States securities.

"National defense," shown in the table, is a major classification of budget expenditures which is currently used in the budget. It comprises: (1) Department of Defense military functions; (2) military assistance to other nations; (3) development and control of atomic energy; and (4) stockpiling and certain other defense-related activities.

The "budget surplus or deficit" represents the difference between budget receipts and budget expenditures.

The "public debt" figures shown consist of all securities issued or guaranteed by the U.S. Government, excluding guaranteed securities held by the Treasury.

The budget surplus or deficit is not the only factor which affects the size of the public debt, although it is generally the major factor. The other factors affecting the size of the debt are: (1) changes in Government cash balances; (2) trust fund transactions; (3) the use of Government corporation borrowing directly from the public or the utilization of their net receipts to repay such borrowing; and (4) changes in the amount of checks outstanding.

TABLE 35.—Federal Administrative Budget Receipts and Expenditures

[Billions of dollars]

Fiscal year	Net budget receipts	Net budget expenditures				Budget surplus or deficit (—)	Public debt (end of period) ³
		Total	National defense ¹				
			Total	Department of Defense, military functions	Military assistance ²		
1929	3.9	3.1	0.7	0.7		0.7	16.9
1930	4.1	3.3	.7	.7		.7	16.2
1931	3.1	3.6	.7	.7		— .5	16.8
1932 ⁴	1.9	4.7	.7	.7		—2.7	19.5
1933	2.0	4.6	.6	.6		—2.6	22.5
1934	3.0	6.6	.5	.5		—3.6	27.7
1935	3.7	6.5	.7	.7		—2.8	32.8
1936	4.0	8.4	.9	.9		—4.4	38.5
1937	5.0	7.7	.9	.9		—2.8	41.1
1938	5.6	6.8	1.0	1.0		—1.2	42.0
1939	5.0	8.8	1.1	1.1		—3.9	45.9
1940	5.1	9.1	1.5	1.5		—3.9	48.5
1941	7.1	13.3	6.1	6.0		—6.2	55.3
1942	12.5	34.0	24.0	23.6	(⁵) 0.4	—21.5	77.0
1943	21.9	79.4	63.2	62.7	.5	—57.4	140.8
1944	43.6	95.0	76.8	75.8	.9	—51.4	202.6
1945	44.4	98.3	81.3	80.0	1.2	—53.9	259.1
1946	39.6	60.3	43.2	42.0	1.1	—20.7	269.9
1947	39.7	38.9	14.4	13.8	.3	.8	258.4
1948	41.4	33.0	11.8	10.9	.3	8.4	252.4
1949	37.7	39.5	12.9	11.6	.4	—1.8	252.8
1950	36.4	39.5	13.0	11.9	.1	—3.1	257.4
1951	47.5	44.0	22.5	19.8	1.0	3.5	255.3
1952	61.3	65.3	44.0	38.9	2.4	—4.0	259.2
1953	64.7	74.1	50.4	43.6	4.0	—9.4	266.1
1954	64.4	67.5	47.0	40.3	3.6	—3.1	271.3
1955	60.2	64.4	40.7	35.5	2.3	—4.2	274.4
1956	67.8	66.2	40.7	35.8	2.6	1.6	272.8
1957	70.6	69.0	43.4	38.4	2.4	1.6	270.6
1958	68.6	71.4	44.2	39.1	2.2	—2.8	276.4
1959	67.9	80.3	46.5	41.2	2.3	—12.4	284.8
1960	77.8	76.5	45.7	41.2	1.6	1.2	286.5
1961	77.7	81.5	47.5	43.2	1.4	—3.9	289.2
1962	81.4	87.8	51.1	46.8	1.4	—6.4	298.6
1963	86.4	92.6	52.8	48.3	1.7	—6.3	306.5
1964	89.5	97.7	54.2	49.8	1.5	—8.2	312.5

¹ Includes military functions of Department of Defense, military assistance, Atomic Energy Commission, stockpiling, defense production expansion, and certain other defense-related activities. For 1942-46, also includes Coast Guard.

² Expenditures for 1941 through 1946 represent the part of defense aid (lend-lease) classified as military.

³ Includes guaranteed securities held outside the Treasury. Not all of total shown is subject to statutory debt limitation.

⁴ Beginning in 1932, total budget receipts and expenditures have been adjusted to exclude certain intragovernmental transactions.

⁵ Less than \$50 million.

STATISTICAL PROCEDURES

Data on budget receipts and expenditures for actual past periods are derived for the most part from accounting records rather than statistical estimating procedures. Budget receipts and expenditures are published each month by the Treasury Department in the *Monthly Statement of Receipts and Expenditures of the United States Government*.

Under a reporting procedure instituted in February 1954 (which also covers comparative data for part of fiscal 1953), budget expenditures are reported on the basis of checks issued or cash payments made by Government disbursing officers, except that since June 1955, interest on the public debt has been reported on an accrual basis.

Data for fiscal 1952 and earlier were reported on a different basis under which receipt and expenditure totals were derived primarily from daily telegraphic reports from Federal Reserve Banks reporting deposits and withdrawals clearing through the accounts of the Treasurer of the United States.

Data on the public debt are published in the *Daily Statement of the United States Treasury* (with details at the end of each month) as well as in the *Monthly Statement*.

RELATION TO OTHER SERIES

Budget receipts and expenditures are one of the five major series dealing with Federal Government income and outgo. The others are:

1. Cash receipts from and payments to the public.
2. Cash deposits in and withdrawals from the Account of the Treasurer of the United States.
3. Federal receipts and expenditures in the national income accounts.
4. Federal revenue and expenditures as reported by the Bureau of the Census.

The differences among these various measures are mainly ones of coverage and timing. Significant specific differences are:

(a) Coverage

1. All four of the other measures encompass, in addition to budget amounts, the very sizable transactions of Federal trust funds with the public.
2. Transactions of five Government-sponsored enterprises not included in the budget are included (on a net basis) in cash payments to the public and (to the extent such transactions affect the Treasurer's cash position) in cash withdrawals.

3. Cash withdrawals, payments to the public, and Federal expenditures as reported by the Census include actual disbursements for interest rather than interest accruals.

4. Federal receipts and expenditures in the national income accounts and Federal revenues and expenditures as reported by Census exclude loans, loan repayments, and related financial investments from both receipts and expenditures.

5. Federal expenditures in the national income accounts exclude purchases of existing physical assets.

6. Census figures record transactions of some public enterprises such as the Post Office on a gross rather than a net basis—that is, postal receipts are counted as revenue rather than as an offset to expenditures.

(b) Timing

7. Budget receipts as well as cash receipts are by-and-large on a cash basis, whereas Federal receipts in the national income accounts record tax revenues mainly on an accrual basis.

8. Budget expenditures are on a checks-issued basis whereas payments to the public and Treasury cash withdrawals are recorded on a checks-paid basis.

9. Budget expenditures are largely measured at the time of payment, whereas that portion of Federal expenditures in the national income accounts which consists of purchases of goods and services is reported at the time of delivery.

USES AND LIMITATIONS

The main use for budget receipts and expenditures is as a guide to executive and legislative budget and tax policy. Budget receipts and expenditures figure prominently in the annual budget process, involving the projection of fund requirements by Government agencies, and preparation of an integrated executive budget including estimates under both existing law and under proposed changes in laws and programs. The administrative budget also is the vehicle for congressional review and enactment of annual appropriation bills, agency financial management, and it also is a prime consideration in changes in tax legislation. Moreover, the relationship between the totals of budget receipts and budget expenditures usually serves as the major determinant of increases or decreases in the public debt. Finally, since this series is prepared in detail based on the Government's financial accounts, it is a basic source of data for

various other series on Federal financial transactions which are more important for economic analysis.

For purposes of appraising the effect of Federal financial transactions on the economy, however, this series has important limitations. For example, the operations of the trust funds and Government-sponsored enterprises play an important role in the economy which is not reflected in the budget figures. Moreover, business activity may be influenced by Government financial operations long before such operations are reflected in the figures on budget expenditures or receipts; some of the economic impact is reflected at the stage when contracts for goods and services are let, i.e., when obligations are incurred, or when tax liabilities accrue. In addition, Federal guaranties and insurance of private loans also influence the economy, although they have a relatively minor effect on budget receipts or expenditures.

REFERENCES

The basic release of the budget receipts and expenditures data is made in the *Monthly Statement*

of Receipts and Expenditures of the United States Government issued by the Treasury Department. A description of the basis for this statement is summarized in current issues of the *Treasury Bulletin*, page II. Annual data are available in the Budgets of the United States Government issued by the Bureau of the Budget, and are also reported in the *Combined Statement of Receipts, Expenditures, and Balances of the United States Government*, issued by the Treasury Department. Data beginning with 1789 are published in the *Annual Report of the Secretary of the Treasury on the State of the Finances*.

For further detail on the relation of Federal Government receipts and expenditures in the national income accounts to the Budget, see table III-10 in the *U.S. Income and Output* and Part 6, Special Analysis A, "Three Measures of Federal Financial Transactions," in the *Budget of the United States Government* for fiscal 1966.

36. FEDERAL CASH RECEIPTS FROM AND PAYMENTS TO THE PUBLIC

DESCRIPTION OF SERIES

These series, often referred to as the consolidated cash statement, present information on the cash flows between the public and the Federal Government as a whole. They represent, in effect, a consolidated statement of Federal cash transactions with the public—other than borrowing. The public is defined to include individuals, banks, other private corporations and associations, unincorporated businesses, the Federal Reserve System, the Postal Savings System, State and local governments, foreign governments, and international organizations. The Government includes, in addition to the Federal funds comprising budget receipts and expenditures, the transactions of trust and (on a net basis) of deposit funds and Government-sponsored enterprises.

STATISTICAL PROCEDURES

Annual totals and unadjusted monthly and quarterly cash receipts from and payments to the public are taken from accounting records rather than statistical estimates. These series are based on data published in the *Monthly Statement of Receipts and Expenditures of the United States*

Government and the *Daily Statement of the United States Treasury*.

The figures on Federal cash receipts from and payments to the public are derived from the conventional budget data by making three basic adjustments: (1) adding receipts and expenditures of Federal trust and deposit funds, and certain net transactions of Government-sponsored enterprises which are not considered a part of the Government in the conventional budget figures (the enterprises are the Federal Deposit Insurance Corporation, Federal land banks, Federal home loan banks, banks for cooperatives, and—after January 1, 1959—the Federal intermediate credit banks); (2) eliminating intragovernmental transactions which do not involve any flow of money with the public; and (3) shifting to a cash basis (i.e., a checks-paid basis) certain noncash transactions recorded as receipts or expenditures in the budget and trust accounts. For example, the semiannual increase in the redemption value of Series E savings bonds, although a part of budget expenditures, is deducted from cash payments while interest actually paid in cash to the public on savings bonds redeemed during the years is added. Receipts of the Government from exercise of the monetary authority—

seigniorage on silver—are subtracted as are payments to certain international organizations made in the form of notes. When the notes are redeemed, this constitutes a cash outflow and a cash payment.

Historical data have been adjusted wherever possible for conceptual and statistical revisions of this series. Data beginning with fiscal year 1953 and calendar year 1954 are on the reporting basis instituted in February 1954.

Seasonally adjusted data published in *Economic Indicators* have been derived by applying the Census Bureau's Univac X-9 method to the two totals—cash receipts and cash payments. Quarterly data from 1947 to date are adjusted using this Univac method, a variant of the Univac II method.

RELATION TO OTHER SERIES

The major differences between “cash receipts and expenditures” and “budget receipts and expenditures” were enumerated above. The cash series are very similar in general concept to the series on Treasury cash deposits and withdrawals published in the *Daily Statement of the United States Treasury*. Both

series and the reconciliation between the two are published monthly in the *Treasury Bulletin*.

Principal differences between the cash receipts and payments series and the other major series have been discussed in the section on the administrative budget and are as follows:

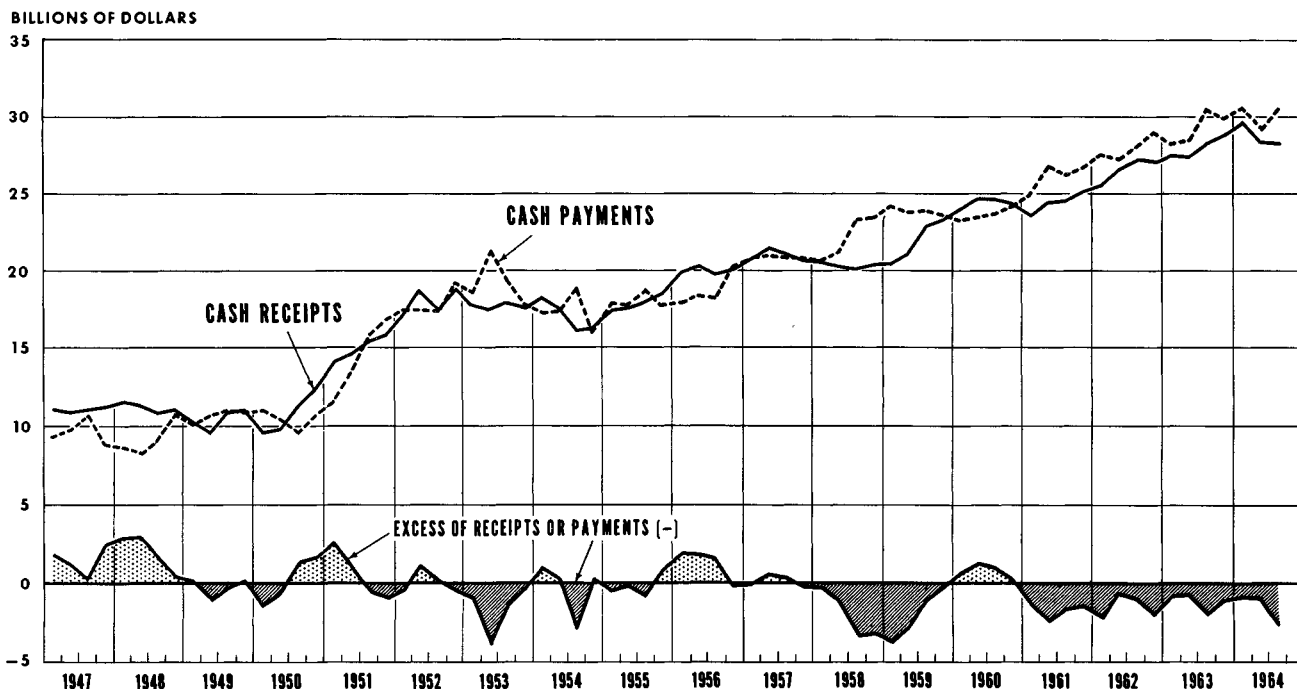
1. Federal Government receipts and expenditures in the national income accounts and Federal revenue and expenditure as reported by the Census exclude loans, loan repayments, mortgage purchases, and similar financial investments.

2. That part of Federal expenditures for goods and services in the national income accounts consisting of purchases of goods and services are recorded to the maximum extent possible on the basis of time of delivery rather than time of payment.

3. Federal Government employer and employee contributions to employee retirement funds are considered intragovernmental transactions and are deducted from both receipts and payments in arriving at the consolidated cash totals, whereas in the national income accounts, payments of both employers and employees are counted both as receipts (“con-

Cash Receipts From and Payments to the Public, 1947-64

(Quarterly data. Seasonally adjusted)



SOURCE OF DATA: BUREAU OF THE BUDGET

TABLE 36.—Federal Cash Receipts From and Payments to the Public

[Billions of dollars]

Year	Cash receipts from the public	Cash payments to the public	Excess of receipts or payments (-)	Year	Cash receipts from the public	Cash payments to the public	Excess of receipts or payments (-)
Fiscal year:							
1929	3.8	2.9	0.8	1957	82.1	80.0	2.1
1930	4.0	3.1	.9	1958	81.9	83.5	-1.6
1931	3.2	4.1	-1.0	1959	81.7	94.8	-13.1
1932	2.0	4.8	-2.7	1960	95.1	94.3	.8
1933	2.1	4.7	-2.6	1961	97.2	99.5	-2.3
1934	3.1	6.4	-3.3	1962	101.9	107.7	-5.8
1935	3.8	6.3	-2.4	1963	109.7	113.8	-4.0
1936	4.2	7.6	-3.5	1964	115.5	120.3	-4.8
1937	5.6	8.4	-2.8	Calendar year:			
1938	7.0	7.2	-.1	1943 ³	37.9	89.0	-51.1
1939	6.6	9.4	-2.9	1944	48.1	94.8	-46.7
1940	6.9	9.6	-2.7	1945	49.4	86.1	-36.7
1941	9.2	14.0	-4.8	1946	41.4	41.4	(²)
1942	15.1	34.5	-19.4	1947	44.3	38.6	5.7
1943	25.1	78.9	-53.8	1948	44.9	36.9	8.0
1944 ¹	47.8	94.0	-46.1	1949	41.3	42.6	-1.3
1945	50.2	95.2	-45.0	1950	42.4	42.0	.5
1946	43.5	61.7	-18.2	1951	59.3	58.0	1.2
1947	43.5	36.9	6.6	1952	71.3	72.0	-.6
1948	45.4	36.5	8.9	1953	70.2	77.4	-7.2
1949	41.6	40.6	1.0	1954	68.6	69.7	-1.1
1950	40.9	43.1	-2.2	1955	71.4	72.2	-.7
1951	53.4	45.8	7.6	1956	80.3	74.7	5.6
1952	68.0	68.0	(²)	1957	84.5	83.4	1.1
1953	71.5	76.8	-5.3	1958	81.7	89.0	-7.2
1954	71.6	71.9	-.2	1959	87.6	95.6	-8.0
1955	67.8	70.5	-2.7	1960	98.3	94.7	3.6
1956	77.1	72.5	4.5	1961	97.9	104.7	-6.8
				1962	106.2	111.9	-5.7
				1963	112.6	117.2	-4.6
				1964	115.0	120.9	-5.8

¹ Data for fiscal years prior to 1944 are not exactly comparable with those for later years in that only major intragovernmental transactions have been eliminated in the earlier years. ² Less than \$50 million. ³ First calendar year for which data are available.

Sources: Treasury Department and Bureau of the Budget.

tributions for social insurance") and expenditures ("purchases of goods and services—compensation of employees"). In Federal revenue and expenditure as recorded by the Census, the Federal Government's contribution as employer is deducted as an intragovernmental transaction (but not employee contributions).

4. Transactions of public enterprises such as the Post Office are recorded gross in the Census tabulation of Federal revenue and expenditure but net in Federal cash receipts from and payments to the public.

USES AND LIMITATIONS

The series on receipts from and payments to the public is a more complete measure of the impact of

Federal financial transactions on the economy than budget receipts and expenditures. Moreover, since it furnishes comprehensive totals of cash transactions, the consolidated cash series is valuable for determining Government financing and net borrowing requirements and for analyzing the financial impact of the Government's overall program. Nevertheless, for purposes of economic analysis the cash receipts and payments series has certain shortcomings.

Any series on overall Government transactions is necessarily an aggregation of many different kinds of transactions with widely varying economic effects. Government loans and purchases of existing assets in most cases do not have the same impact as an equivalent sum expended for Government purchases of currently produced goods and services. Equivalent

sums collected from income taxes or estate taxes may also be expected to vary in effect. The date of accrual of tax liabilities may have a more important impact on the economy than the actual tax payment.

Other steps in the Federal financial process may be important indicators of economic impact. An expansion in new appropriations and in Government orders can stimulate business activity before the authorized funds are paid to the public. Likewise, the enactment of a tax measure may affect business activity before the cash flows involved between the Federal Government and the public take place.

Finally, other financial activities have important economic effects. For example, Federal guaranties and insurance of private loans influence the economy even though they normally have little or no immediate impact on Federal receipts from and payments to the public. Aside from the significance of interest payments to the public, the management of the public debt is a factor which has particular impact in the money and credit markets of the economy.

REFERENCES

Unadjusted monthly data on Federal cash receipts from and payments to the public appear in the *Monthly Statement of Receipts and Expenditures of the United States Government, Treasury Bulletin*, and the *Federal Reserve Bulletin*, and quarterly data in *Economic Indicators* and the *Federal Reserve Bulletin*. Seasonally adjusted quarterly data also appear in *Economic Indicators* and the *Federal Reserve Bulletin*.

Annual data by fiscal years back to 1929 are published in the *Historical Statistics of the United States, Colonial Times to 1957*. Starting with the 1944 budget each year the *Budget of the United States Government* has also presented data for the most recent fiscal year and estimates for the current and following fiscal years. The data have also been included in the annual *Budget Review*, when prepared by the Bureau of the Budget in the fall. The closely related series on Treasury cash deposits and withdrawals is published in the *Daily Statement of the United States Treasury*, and monthly in the *Treasury Bulletin*.

Adjustments made in the data on budget receipts and expenditures to arrive at Federal cash receipts from and payments to the public on a monthly basis are summarized in the *Monthly Statement of Receipts and Expenditures of the United States Government* and in the *Treasury Bulletin*. The adjustments made in the annual figures are listed in detail in a release of the Bureau of the Budget entitled "Receipts From and Payments To the Public, Supporting Tables and Supplementary Information." This release is issued in conjunction with the annual publication of the *Budget of the United States Government*. A summary reconciliation of the differences between this series and the Treasury cash deposits and withdrawals series is published monthly in the *Treasury Bulletin* and annually in "Receipts From and Payments To the Public, Supporting Tables and Supplementary Information."

37. FEDERAL BUDGET, NATIONAL INCOME ACCOUNTS BASIS

DESCRIPTION OF SERIES

This series reports Federal transactions as they are recorded in the U.S. income and output accounts. The Federal sector data are designed to measure the purchases of current output by the Federal Government and the relationship of Federal receipts and other Federal expenditures to national, personal, and disposable personal income. (See descriptions of these concepts in prior sections of this *Supplement*.) The Federal sector is recorded in a manner consistent with the conceptual treatment of the personal, business, and State and local government sectors in the national income and output accounts.

Federal purchases of goods and services are measured, insofar as is possible, on a delivery basis rather than on an obligation, checks-issued, or pay-

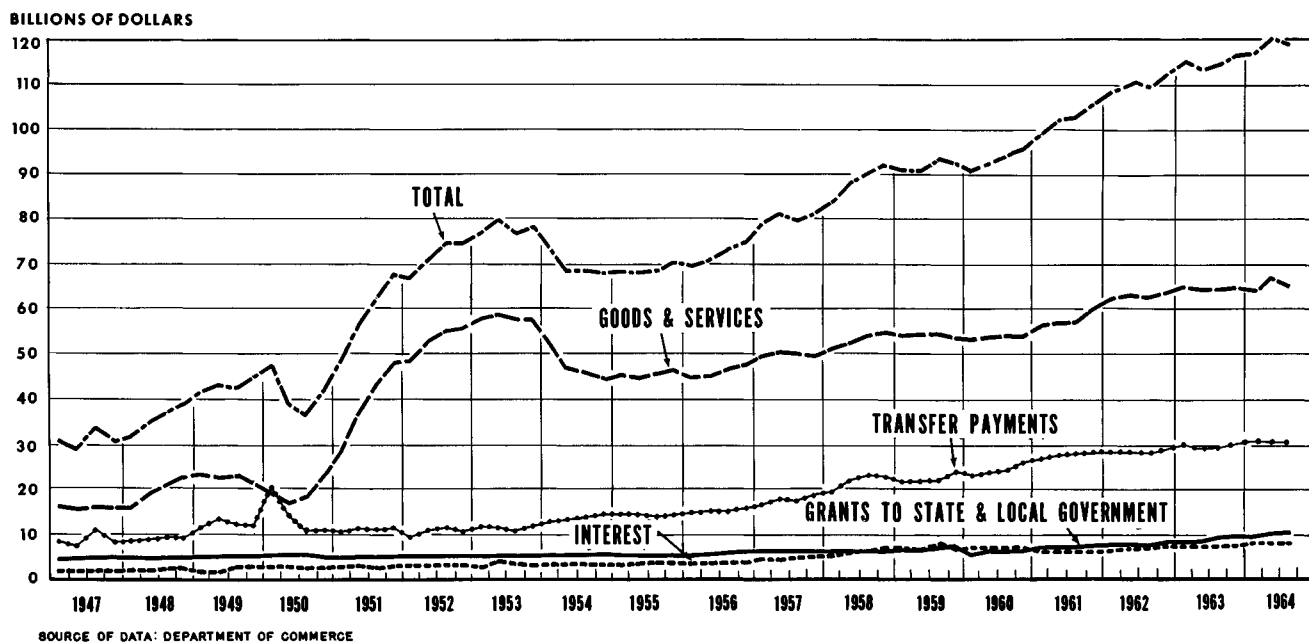
ments basis. This timing of purchases corresponds more closely to current production. Receipts, by and large, are on an accrual basis. For example, corporate profits taxes are included as liabilities when incurred, rather than when collected. There may be a substantial lag between the accrual of a liability and its collection.

As shown in the table, expenditures in the Federal sector account are presented in a 5-way classification:

Federal *purchases of goods and services* is the only category of Federal spending which is included in the gross national product (GNP). These purchases represent the value of the Nation's currently produced output bought directly by the Federal Government. They include the pay of military and civilian employees of the Federal Government, outlays on equipment and supplies for defense and other

Federal Expenditures, National Income Accounts Basis, 1947-64

(Quarterly data. Seasonally adjusted annual rates)



programs, new construction, and the capital formation of Government enterprises.

Transfer payments and *net interest paid* by the Federal Government are outlays in return for which no current service is deemed to be obtained; the most important transfer payments include such items as old-age and survivors' insurance benefits, unemployment compensation, and military and veterans pensions. Although such transfer payments are not included in GNP, they do enter into the income stream and have an impact on national output; they are reflected in the GNP in another sector of the accounts when respent by the recipients.

Federal grants-in-aid to State and local governments, like transfer payments and net interest paid, have their impact on GNP when respent by the recipient governmental unit. Most grants are for highways, public assistance, and public health.

Private incomes are also affected by Federal subsidies and by the net surplus of Government enterprises in their operations with the public. These *subsidies less current surplus of Government enterprises* reflect mainly Government payments to farmers, certain outlays for the export and disposal of surplus agricultural commodities, shipping subsidies, payments to air carriers, and the current

operating deficit of the Post Office and Government enterprises.

The receipts of the Federal sector account are shown in a 4-way classification: (1) *Personal tax and nontax receipts* consist mostly of individual income taxes, estate and gift taxes, and certain charges for Government services, fines, and penalties; (2) *corporate profits tax accruals* represent the Federal tax liability incurred and accrued by resident corporations on their corporate earnings during the specific year or period; (3) *indirect business tax and nontax accruals* primarily include liquor, tobacco, and other excise taxes, and customs duties; (4) *contributions for social insurance* are composed chiefly of employment taxes, contributions to the retirement funds for Government employees, and deposits by the States to the unemployment trust fund.

STATISTICAL PROCEDURES

Data for the Federal sector account are based on the *Budget of the United States Government*, reports of various agencies (particularly the Internal Revenue Service), and (unlike other records of Federal transactions) to a large extent, on estimates made by the Department of Commerce. Thus, the results are to be regarded as statistical estimates, rather than as accounting totals in the ordinary sense.

Data are available quarterly and annually for both the fiscal and calendar years. The quarterly figures are published in seasonally adjusted as well as in unadjusted form. Both expenditures and receipts are seasonally adjusted by applying the adjustments individually to their many components having marked seasonal variation. The seasonally adjusted total is the sum of the several separately adjusted components. Many statistical adjustment techniques are used including the moving average and least squares methods. The deficit or surplus is not seasonally adjusted separately. The seasonally adjusted deficit or surplus is the difference between seasonally adjusted receipts and expenditures.

RELATION TO OTHER MEASURES

The Federal sector account differs from the budget receipts and expenditures series and the consolidated cash series in several major respects: (1) coverage, (2) netting and consolidation, (3) timing, and (4) the exclusion of capital transactions.

With respect to *coverage*, the Federal sector account, unlike the administrative budget, includes the trust and deposit funds. It omits the revenues and expenditures of the District of Columbia, which are classified by the Department of Commerce in the State and local government sector.

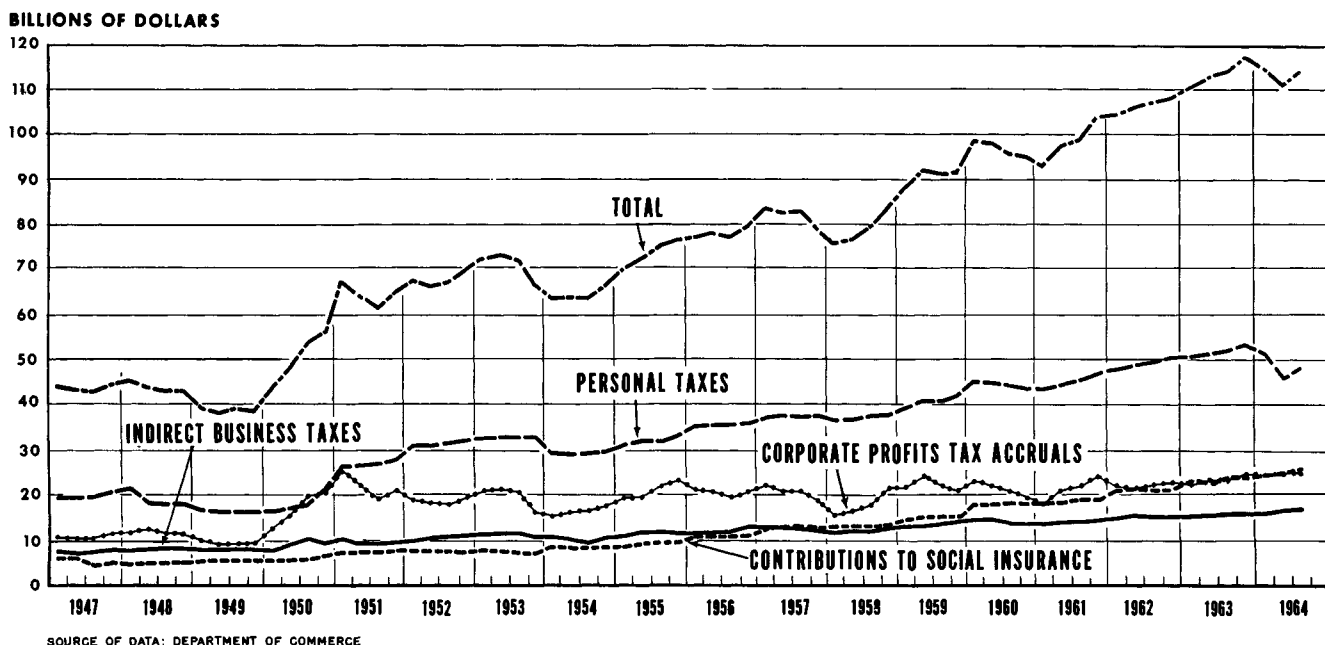
As to *netting and consolidation*, the national income accounts record both interest paid by the Government and Government purchases on a net basis. Accordingly, interest received by the Government is excluded from receipts and subtracted from Federal interest payments; and receipts from sales of Government products are similarly subtracted from Government purchases. Neither adjustment affects the surplus or deficit, for, in effect, both receipts and expenditures are decreased by the same amount.

Adjustments for consolidation are needed to reflect in the Federal sector account a few transactions such as employer and employee contributions to Federal employees' retirement funds. These contributions are part of the total compensation of Government employees, but are excluded from the consolidated cash statement. Again, the deficit or surplus is unaffected by the adjustment, since total receipts and expenditures are both increased by the same amount.

With respect to *timing*, business taxes are recorded in the national income accounts as they are accrued by the private sector, rather than when they are collected by the Government. The accrued liability is more likely to coincide with the effects of corporate taxes on corporate spending decisions than are the collections. The principal timing adjustments for

Federal Receipts, National Income Accounts Basis, 1947-64

(Quarterly data. Seasonally adjusted annual rates)



SOURCE OF DATA: DEPARTMENT OF COMMERCE

TABLE 37.—Federal Budget, National Income Accounts Basis

[Billions of dollars]

Calendar year	Federal Government receipts					Federal Government expenditures						
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions to social insurance	Total	Purchases of goods and services	Transfer payments	Grants to State and local governments	Net interest paid	Subsidies less current surplus of Government enterprises	Surplus or deficit (-)
1929.....	3.8	1.3	1.2	1.2	0.1	2.6	1.3	0.7	0.1	0.4	0.1	1.2
1930.....	3.0	1.1	.7	1.0	.1	2.8	1.4	.7	.1	.4	.1	.3
1931.....	2.0	.6	.4	.9	.1	4.2	1.5	1.7	.3	.4	.2	-2.1
1932.....	1.7	.3	.3	.9	.1	3.2	1.5	.9	.1	.5	.2	-1.5
1933.....	2.7	.5	.5	1.6	.1	4.0	2.0	.7	.5	.5	.3	-1.3
1934.....	3.5	.6	.6	2.2	.1	6.4	3.0	.6	1.6	.6	.6	-2.9
1935.....	4.0	.8	.8	2.2	.1	6.5	2.9	.6	1.7	.5	.7	-2.6
1936.....	5.0	1.1	1.3	2.3	.4	8.5	4.8	2.1	.7	.5	.4	-3.5
1937.....	7.0	1.7	1.3	2.4	1.6	7.2	4.6	.8	.8	.6	.5	-.2
1938.....	6.5	1.6	.9	2.2	1.7	8.5	5.3	1.2	.8	.6	.6	-2.0
1939.....	6.7	1.2	1.3	2.3	1.9	9.0	5.2	1.2	1.0	.6	.9	-2.2
1940.....	8.6	1.4	2.6	2.6	2.0	10.1	6.2	1.4	.9	.7	.9	-1.4
1941.....	15.4	2.0	7.3	3.6	2.5	20.5	16.9	1.4	.8	.8	.7	-5.1
1942.....	22.9	4.7	11.1	4.0	3.2	56.1	52.0	1.4	.9	1.0	.8	-33.2
1943.....	39.3	16.5	13.6	4.9	4.2	86.0	81.2	1.2	.9	1.7	.9	-46.7
1944.....	41.0	17.5	12.5	6.2	4.8	95.6	89.0	1.8	.9	2.4	1.4	-54.6
1945.....	42.5	19.4	10.2	7.1	5.8	84.8	74.8	4.3	.9	3.3	1.5	-42.3
1946.....	39.2	17.2	8.6	7.9	5.5	37.0	20.6	9.5	1.1	4.2	1.6	2.2
1947.....	43.3	19.7	10.7	7.9	5.1	31.1	15.6	9.0	1.7	4.2	.6	12.2
1948.....	43.4	19.0	11.8	8.1	4.5	35.4	19.3	9.2	2.0	4.3	.6	8.0
1949.....	39.1	16.2	9.8	8.2	4.9	41.6	22.2	12.0	2.2	4.4	.7	-2.5
1950.....	50.2	18.2	17.1	9.0	5.9	41.0	19.3	13.7	2.3	4.5	1.2	9.2
1951.....	64.5	26.3	21.6	9.5	7.1	58.0	38.8	10.8	2.5	4.7	1.3	6.4
1952.....	67.7	31.2	18.6	10.5	7.4	71.6	52.9	10.4	2.6	4.7	1.0	-3.9
1953.....	70.3	32.4	19.4	11.2	7.4	77.7	58.0	11.3	2.8	4.8	.8	-7.4
1954.....	63.8	29.2	16.5	10.1	8.1	69.6	47.5	13.0	2.9	5.0	1.2	-5.8
1955.....	72.8	31.5	20.9	11.0	9.3	68.9	45.3	14.0	3.0	4.9	1.6	3.8
1956.....	77.5	35.2	20.2	11.6	10.6	71.8	45.7	14.9	3.3	5.2	2.7	5.7
1957.....	81.7	37.3	19.9	12.2	12.2	79.7	49.7	17.4	4.1	5.7	2.8	2.0
1958.....	78.5	36.6	17.7	11.9	12.4	87.9	52.6	21.3	5.4	5.6	3.0	-9.4
1959.....	90.3	40.4	22.0	13.0	14.9	91.4	53.6	22.2	6.7	6.4	2.5	-1.1
1960.....	96.6	44.0	21.0	14.0	17.6	93.1	53.1	23.8	6.3	7.1	2.8	3.5
1961.....	98.3	45.1	20.9	14.1	18.2	102.6	57.4	27.4	7.2	6.7	3.9	-4.3
1962.....	106.4	49.1	21.8	15.1	20.5	110.4	62.9	28.3	8.0	7.1	4.2	-4.1
1963.....	113.6	51.9	23.0	15.6	23.0	115.2	64.7	29.9	9.1	7.7	3.8	-1.5
1964 ¹	113.9	49.0	24.0	16.4	24.5	119.2	65.6	31.1	10.4	8.4	3.8	-5.3

¹ Preliminary estimate.

Source: Department of Commerce.

expenditures are: (1) The Federal sector account records Federal purchases in terms of the delivery of goods and services to the Government, whereas cash payments for these deliveries may precede or follow; (2) the account also records as purchases loans by the Commodity Credit Corporation at the time the loans are made, rather than when the collateral is surrendered, (3) interest on savings bonds and Treasury bills is treated as an expenditure by the Government when the interest is accrued, rather than when it is actually paid out in cash; and (4) certain foreign currency activities of the Commodity Credit Corporation require an adjustment. The Corporation facilitates exports of surplus agricultural commodities by paying dollars to exporters, in exchange for foreign currencies received for the exports. Expenditures in the Federal sector account are recorded only at the time these foreign currencies are subsequently used for Government programs. The consolidated cash statement, on the other hand, includes the dollar payments to exporters but excludes both the receipt and the subsequent expenditure of a large part of these foreign currencies.

Many *capital transactions* of a financial nature which are included in budget receipts and expenditures and cash receipts and payments are excluded from the Federal sector. These items are primarily loans, mortgages, other financial claims, and subscriptions to international lending institutions. Also excluded are purchases and sales of existing assets, such as land and secondhand property. These exclusions neither represent the production of current output nor do they offset that income.

USES AND LIMITATIONS

Each of the three major series on Federal finance—the administrative budget, consolidated cash, and the Federal sector account—is useful for specific kinds of analysis, and the selection of which to use should be determined by the problem at hand. The Federal sector account is especially suited for an analysis of fiscal policy. It was specifically designed to complement the data on private expenditures and

incomes contained in the national income accounts. The accounts, however, exclude a substantial volume of financial transactions through which the Federal Government significantly affects the capital and credit markets. As a result, for purposes of analysis of the Federal impact on such markets, the consolidated cash statement may be more useful than the national income accounts.

For certain types of problems, no overall measure of receipts and expenditures will serve adequately. Since the various receipt and expenditure transactions have different economic effects, a given aggregate will have an economic impact which depends largely on the composition of the total. In addition, many Government activities besides receipts and expenditures affect the economy. For example, a rapid expansion in new appropriations and in Government orders could stimulate a rise in business activity well before either the delivery of goods, the performance of services, or the payment for them. The management of the public debt is a further factor which has a significant impact on the money and credit markets of the economy. Consequently, in evaluating the economic impact of Federal Government activities, there is no substitute for complete and detailed analysis of the Government program in all its aspects.

REFERENCES

Current estimates by quarters on both seasonally unadjusted and adjusted bases are published regularly by the Department of Commerce in the *Survey of Current Business*. Revised estimates for previous years are generally published in the July issue. The July 1964 issue contains statistics for the years 1959 through 1963 on a quarterly and annual basis, and the July 1962 issue contains these statistics for 1956 to 1958. Estimates from 1946 through 1955 may be found in *U.S. Income and Output* (1958); estimates for prior years may be found in *National Income* (1954). These latter two publications were prepared by the Department of Commerce, as supplements to the *Survey of Current Business*.