

SURVEY OF CURRENT BUSINESS



UNITED STATES DEPARTMENT OF COMMERCE / BUREAU OF ECONOMIC ANALYSIS

SURVEY OF CURRENT BUSINESS

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Explanations of Declining Productivity Growth

GROWTH of American productivity was rapid by historical standards during most of the postwar period. But in the last half of the 1960's the rate began to slacken. Until 1974 this slackening was not particularly disturbing from the standpoint of long-term growth. It was partly the consequence of short-term fluctuations in determinants of output that typically display irregular movements, chiefly a drop in the intensity of use of employed labor and capital from a peak reached in 1965-66. The remainder resulted from developments that were inevitable or even welcome. Transfer of surplus workers from farming to nonfarm jobs, in which they produce output of greater value, diminished as the pool of such labor approached exhaustion. The proportion of inexperienced workers among the employed was boosted by great increases in the working-age population under 25 years of age, a rising ratio of employment to population in the young age groups, and entry of many adult women into the labor force. Costs of regulations that the Government presumably felt had benefits in excess of their costs began to impinge upon productivity. This comfortable characterization of the

productivity slowdown is not applicable to more recent years. Beginning in 1974 the situation became disturbing and also puzzling. The productivity trend turned far more adverse, and the influences responsible for the slowdown prior to 1974 were no longer sufficient to explain the shortfall from the earlier trend. The major productivity series—output per person employed, output per hour, and output per unit of input—all show much the same pattern of retardation.

The discussion in this article is organized by reference to output per person employed and the decline in its growth rate since 1973. The estimates cited refer to the nonresidential business sector, which makes up more than three-fourths of the whole economy. Output is measured by national income in constant (1972) prices. Employment is defined as the number of persons employed, full-time or part-time, during an average week. Wage and salary workers, the self-employed, and unpaid family workers are included. The average level of the series is based on the Current Population Survey, but for maximum consistency with the national income series its movement is

based mainly on establishment reports

In nonresidential business, national income per person employed (NIPPE) increased by an average of 2.4 percent a year during the quarter century from 1948 to 1973—a total of 82 percent over the period. It then dropped by a total of 5.6 percent from 1973 to 1975. Even after a recovery in 1976, NIPPE remained lower than 3 years before; its 1973-76 growth rate was -0.5 percent a year. The analysis of growth sources upon which this article draws has been carried only to 1976, but it is evident that slow productivity growth has characterized the entire period after 1973, continuing to the present time. In 1977 and 1978 NIPPE increased only enough to regain its 1973 level, so over the whole 5-year period from 1973 to 1978 its growth rate was zero. The first half of 1979 was below 1973 (and 1978). Let me observe here that when I use adjectives such as "slow" or "retarded" to describe growth in recent periods, and when I refer to a growth rate as having declined, I mean to include situations in which the recent growth rate has actually been negative.

I have previously studied economic

This article discusses a wide range of suggested causes of the decline in the rate of productivity growth in recent years. It is the second SURVEY OF CURRENT BUSINESS article that presents portions of Mr. Denison's comprehensive study of this subject, which will be published by The Brookings Institution as *Accounting for Slower Growth: The United States in the 1970s*. The first article, which appeared in the January 1978 SURVEY, dealt with effects on output per unit of input of new requirements to protect the physical environment against pollution, increased requirements to protect the safety and health of employed persons, and a rise in dishonesty and crime.

Mr. Denison, who is now an Associate Director of the Bureau of Economic Analysis, was a Senior Fellow of The Brookings Institution when he wrote the forthcoming book. Financial support for the study was provided in part by National Science Foundation Grant 75-23131 to The Brookings Institution. Views expressed are the author's and should not be ascribed to the trustees, officers, or other staff members of the Institution or the Foundation or to the U.S. Department of Commerce.

growth in advanced countries by techniques that have become known as "growth accounting" or "sources of growth" analysis. Estimates resulting from such analysis were published for this country in my *Accounting for United States Economic Growth, 1929-1969* (hereinafter cited as *Accounting for Growth*).¹ They are revised and updated in a forthcoming book titled *Accounting for Slower Economic Growth: The United States in the 1970s* (hereinafter cited as *Accounting for Slower Growth*).² Growth accounting views growth as the result of changes in a large number of determinants that govern the size of a nation's output. The contributions, positive or negative, that were made to the growth rate by changes in these determinants are estimated directly for as many determinants as is feasible. The combined contribution of the remaining determinants is obtained as a residual.

Part 1. Sources of Growth of National Income Per Person Employed

GROWTH of output may be obtained by using more labor and property resources in production or by increasing the output obtained from the same quantity of resources. In a table showing sources of growth of total output, the contributions made to the growth rate of output by changes in employment, working hours, and pertinent personal attributes of employed persons, by changes in the amount of capital, and by changes in the amount of land, would appear as contributions of total factor input, while the contributions of output per unit of input would include changes in the state of knowledge, the degree of misallocation of resources, the size of markets, and other conditions that alter the amount of output that is obtained from a given amount of input. In a table, such as table 1, that shows the sources of growth of output per person employed, employment disappears as a source of growth, and all other inputs—capital and land as well as labor characteristics—are measured on a per person-employed basis. Output per unit of input is the

The directly estimated determinants of nonresidential business output accounted for almost all of the variation in the rate of growth of NIPPE within the period from 1948 to 1973. But they explain only part of the subsequent decline in this growth rate. The final chapter of the forthcoming book examines possible explanations for the remainder of the decline. That chapter is presented, with minor adaptations, as part 2 of this article.

To understand the discussion in part 2, the reader must know what output determinants have been estimated directly; these determinants are not discussed in part 2 because they do not contribute to the *unexplained* portion of the decline in the growth rate of NIPPE. Part 1, which should be regarded as an introduction, provides that information; it describes briefly these determinants and their contributions.

same as for total output because the ratio of output to input is unchanged when both are divided by employment.

Growth from 1948 to 1973

To consider recent changes, it is first necessary to know what the various determinants of output contributed to growth of NIPPE in the past. From 1948 to 1973 the growth rate of NIPPE was 2.43 percent a year.³ The first column of table 1 summarizes my estimates of the sources of its growth in that period.

Changes in average hours at work subtracted an estimated 0.24 percentage points from the growth rate in 1948-73. This is not an estimate of the growth rate of average hours, which was -0.50 percent, but an estimate of the net effect of changes in average working hours upon the growth rate of output. It allows for the fact that labor is only one, though by far the largest, type of factor input. In addition, it takes into account the probability that shorter hours for full-time workers have increased the work done in an hour by

lessening fatigue and absenteeism, so that the percentage decline in labor input is less than that in hours. Also, otherwise similar individuals are counted as the same amount of labor input whether they are nonfarm wage and salary workers, nonfarm self-employed and unpaid family workers, or farm workers, provided that each works the average full-time hours of persons of his or her own sex in the category in which he or she is employed. Consequently, the contribution of hours changes is not affected by that part of the decline in average hours that resulted from reductions in the proportions of workers in farming or nonfarm self-employment, categories with very long hours.

Hours worked by persons in different age-sex groups do not represent the same amount of labor input. If average hourly earnings in one such group are double those in another, an hour's work is considered, on the average, to represent twice as much labor input in the former as in the latter. Changes in age-sex composition make a positive contribution when the proportion of total hours that are worked by persons in the highly weighted groups—particularly males 35 to 64 years of age—rises, as was the case from 1948 to 1954, and a negative contribution when that proportion falls, as has been the case since 1954. Over the whole 1948-73 period changes in age-sex composition subtracted 0.17 percentage points from the growth rate.

Persons with different amounts of education also are regarded as providing different amounts of labor input. Their work is weighted in accordance with average earnings differentials between persons who differ only with respect to amount of education. For example, in recent years a full-time worker with 4 years of college is counted as 1.84 times as much labor as one with 8 years of elementary education. The contribution of education measures the amount by which output per worker has been raised by the upswing in the educational background of employed persons. The educational distribution of employed persons rose greatly, so the contribution of education was

Table 1.—National Income Per Person Employed in Nonresidential Business: Growth Rate and Sources of Growth, 1948-73 and 1973-76

	1948-73	1973-76	Change
Growth Rate.....	2.43	-0.54	-2.97
Contributions to growth rate in percentage points			
Total factor input:			
Changes in workers' hours and attributes:			
Hours.....	-.24	-.54	-.30
Age-sex composition.....	-.17	-.25	-.08
Education.....	.52	.88	.36
Changes in capital and land per person employed:			
Inventories.....	.10	.02	-.08
Nonresidential structures and equipment.....	.29	.25	-.04
Land.....	-.04	-.03	.01
Output per unit of input:¹			
Improved allocation of resources ²37	-.01	-.38
Changes in the legal and human environment ³	-.04	-.44	-.40
Economies of scale.....	.41	.24	-.17
Irregular factors.....	-.18	.09	.27
Advances in knowledge and miscellaneous determinants ⁴	1.41	-.75	-2.16

1. Contributions to the growth rate shown in subsequent lines are restricted to effects upon output per unit of input.

2. Includes only gains resulting from the reallocation of labor out of farming and out of self-employment and unpaid family labor in small nonfarm enterprises.

3. Includes only the effects on output per unit of input of costs incurred to protect the physical environment and the safety and health of workers, and of costs of dishonesty and crime.

4. Obtained as a residual.

Source: Edward F. Denison, *Accounting for Slower Economic Growth: The United States in the 1970s*, The Brookings Institution, 1979, Table 7-3. (To be published)

positive and large, 0.52 percentage points.⁴

The contributions of capital and land result from changes in the amounts of inventories, nonresidential structures and equipment, and land used in nonresidential business per person employed. The main points to note are that dwellings and governmental assets are excluded, and that capital input is so defined and measured that changes in output that result from advances in the design of capital goods are classified as contributions of advances in knowledge, not of capital.

The contributions of capital and land do not reflect changes in the intensity of their utilization. Instead, a single estimate is made of the effect upon output per unit of input of changes in the intensity with which capital, land, and labor (as measured by hours at work) are utilized. That series is a component of the "irregular factors" line in table 1.

Inventories and fixed capital both increased more than employment from 1948 to 1973, so that capital input per person employed rose. The increase in the quantity of inventories per person employed contributed an estimated 0.10 percentage points to the growth rate of NIPPE, and the increase in nonresidential structures and equipment per person employed contributed 0.29 percentage points. The land available

per worker declined as employment increased. This subtracted an estimated 0.04 percentage points from the 1948-73 growth rate.

Improved allocation of resources contributed an estimated 0.37 percentage points to the growth rate. This estimate refers to gains in output from bringing the allocation of resources within the nonresidential business sector nearer to the allocation that would maximize output per unit of input. Only two types of changes in resource allocation are covered by this estimate. One is the reduction in the percentage of the labor used in nonresidential business that consists of surplus labor in farming. The other is the reduction in the percentage of labor that is misallocated to nonfarm self-employment and unpaid family labor in enterprises too small for efficiency.

The institutional and human environment within which business must operate has changed in several ways that adversely affect output per unit of input. The effect of three such changes has been estimated. New or strengthened governmental controls required business to divert from ordinary production to pollution abatement a growing share of the labor and capital that it employs, so that these resources are no longer available to produce measured output. Other controls have

similarly diverted labor and capital to the protection of worker safety and health. In addition, rising crime has forced business to divert resources to crime prevention, and thefts of merchandise have directly reduced measured output. Important changes in these conditions began only towards the end of the 1948-73 period, and they are estimated to have subtracted only 0.04 percentage points from the growth rate over that whole period.

Gains from economies of scale refer to the rise in output per unit of input that is made possible by changes in the size of the markets that business serves. Economies of scale are not limited to those internal to firms; specialization of all sorts, including larger production runs and larger transactions, is covered by my use of the term. Economies of scale are estimated to have contributed 0.41 percentage points to the 1948-73 growth rate, and thus to be an important growth source. It should be noted that I have measured the contributions of all other sources as if the economy were operating under constant returns to scale, so that to the definition of their contributions must be added the stipulation that the size of markets is taken as given.

The estimate of the effects of irregular factors upon output per unit of input covers three determinants. Two—the effect of weather upon farm output, and the effect of work stoppages—are rather minor, but the third is often important. This is the effect of changes in the intensity with which employed labor, capital, and land are used that result from fluctuations in demand. These changes are related to the business cycle, but swings in productivity usually run substantially ahead of those in total output or unemployment. The position was much less favorable to high output per unit of input in 1973 than in 1948, and irregular factors subtracted 0.18 percentage points from the 1948-73 growth rate.

The contribution of advances in knowledge and miscellaneous determinants is obtained, statistically, as a residual. As its title indicates, it has two main parts.

The contribution of advances in

knowledge is, conceptually, a comprehensive measure of the gains in measured output that result from the incorporation into production of new knowledge of any type—managerial and organizational as well as technological—regardless of the source of that knowledge, the way it is transmitted to those who can make use of it, or the way it is incorporated into production. The reference to “measured” output is important because of quality change. The introduction of new final products provides the user with a greater range of choice or enables him to meet his needs better with the same use of resources, but it does not, in general, contribute to growth as measured; it results in “noneconomic” or “unmeasured” quality change. In general, as a consequence, only the advances in knowledge that reduce the unit costs of final products already in existence contribute to measured growth.

The “miscellaneous determinants” portion of the title of this series refers to a large number of determinants that can be specified but whose effects have either been estimated at zero or not quantified.⁵ The effects of the determinants included are believed small, and as a group as likely to be favorable as unfavorable, in the 1948-73 period.⁶

The advance in knowledge was the largest source of increase in NIPPE from 1948 to 1973 unless I am altogether wrong in my judgment that miscellaneous determinants were not important in that period. The contribution of advances in knowledge and miscellaneous determinants is estimated at 1.41 percentage points in 1948-73.

In summary, important contributions to the growth of NIPPE in 1948-73 were made by advances in knowledge, increased education of employed persons, increased capital per worker, improved resource allocation, and economies of scale. Reductions in average hours of work and shifts in age-sex composition were the main negative factors.

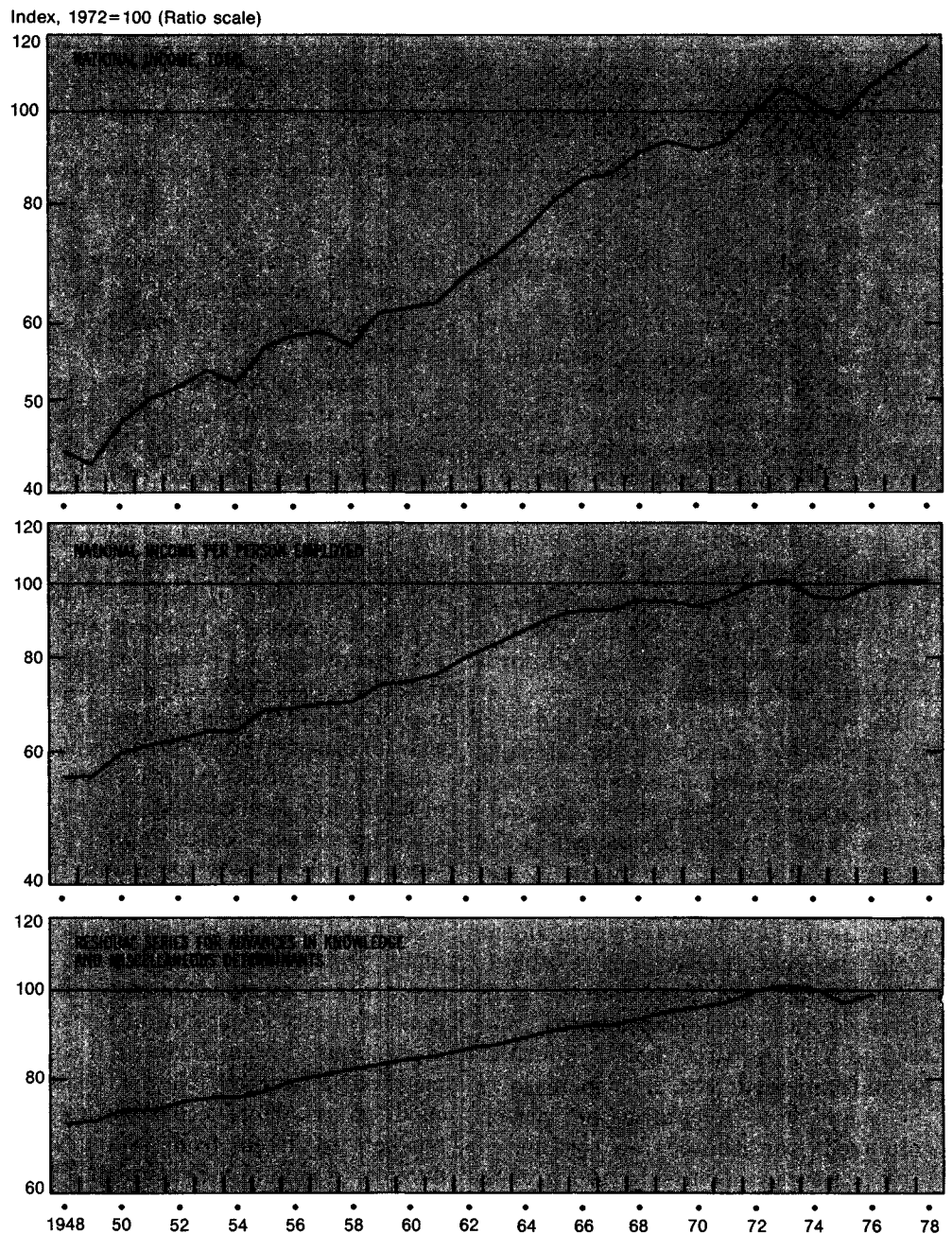
Change from 1948-73 to 1973-76

The growth rate of NIPPE fell from 2.43 percent in 1948-73 to -0.54 percent in 1973-76. This decline of nearly

3.0 percentage points occurred even though changes in three determinants were more favorable than in 1948-73. First, the contribution of education increased by 0.36 percentage points as the educational level of persons employed by business moved upward at an accelerated rate. Major factors were that government stopped absorbing a disproportionate part of the increase in

highly educated persons, and that the average age of adult workers declined. (Young adult workers have more education than older workers.) Second, the drag of a fixed quantity of land was a trifle less than in 1948-73 because employment increased less. Third, irregular factors were more favorable in 1976 than in 1973 and made a positive contribution to the 1973-76 growth rate,

Nonresidential Business: Constant-Dollar National Income, Total and Per Person Employed, 1948-78, and Residual Series, 1948-76



Source: Edward F. Denison, "Accounting for Slower Economic Growth: The United States in the 1970s," (Brookings Institution, 1979, forthcoming), tables 2-7, 4-6, and 5-1.

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whereas they reduced the 1948-73 rate. These determinants would, in themselves, have raised the growth rate by more than 0.6 percentage points.

Other sources for which specific estimates are made would, in themselves, have taken nearly 1.5 percentage points off the previous growth rate of NIPPE, an amount that is equal to three-fifths of the earlier rate. Six groups of sources contributed to this amount. An accelerated reduction in average hours was responsible for 0.30 percentage points, a faster shift in age-sex composition for 0.08 points, and a slower increase in capital per worker for 0.12 points, with both inventories and structures and equipment contributing to the last amount. Gains from the reallocation out of farming and nonfarm self-employment both disappeared, and this reduced the growth rate by 0.38 points. The three specified types of changes in the legal and human environment in which business operates cut the earlier growth rate of NIPPE by 0.40 points.⁷ Finally, gains from economies of scale were down by 0.17 points as growth of the economy slackened; this is a very crude estimate but there is no doubt that there was an appreciable reduction.

Almost 2.2 percentage points of the drop in the growth rate of NIPPE remain in the residual series for advances in knowledge and miscellaneous determinants. The contribution of the residual fell from 1.41 percentage points in 1948-73 to -0.75 percentage points in 1973-76. After rising steadily until 1973, the series dropped sharply in 1974 and 1975, then in 1976 made a normal gain from the lower level.

Chart 1 helps to make clear how extraordinary the period since 1973 has been. From 1948 to 1973 total national income originating in nonresidential business, shown in the top panel, grew irregularly, with actual declines experienced in 4 years. But by the second year the previous peak had been exceeded in every case. The 1973 peak, in contrast, was not exceeded until 3 years later, and then narrowly. NIPPE, plotted in the middle panel, is a smoother series. Although periods of slower and faster growth alternated, NIPPE increased annually until 1968

and, after a small cyclical dip in 1969-70, again rose strongly until 1973. Thereafter, it fell sharply in both 1974 and 1975 and showed no net increase from 1973 to 1978. At its 1948-73 growth rate, NIPPE would have risen 13 percent in these 5 years.

It is the change in the behavior of the residual series measuring the effects of advances in knowledge and miscellaneous determinants that is most remarkable, however. Because determinants whose effects are directly estimated account for most irregularities in the movement of NIPPE up to 1973, the residual is a rather smooth series with a nearly constant growth rate from 1948 to 1973 and an increase every year. Much of the variation in annual increases that does remain in the

residual appears to be due to the calendar.⁸ Up to 1973 there was no tendency for growth of the residual to slow down. Indeed, its growth rate from 1969 to 1973 was a little above that from 1948 to 1969. Thus the sharp drops in the series in 1974 and 1975 were abrupt departures from past experience. In 1976 the index was still 2.2 percent below 1973 whereas it would have been 4.3 percent above 1973 at its 1948-73 growth rate. The series (and hence the bottom panel of the chart) ends at 1976 but it seems safe to infer from the behavior of NIPPE that, if the residual index increased at all after 1976, the annual gain was far smaller than in the years up to 1973 and that the residual index was further below its 1948-73 trend line in 1978 than in 1976.

Part 2. The Unexplained Portion of the Decline in Productivity Growth

THE contribution of advances in knowledge and miscellaneous determinants to growth rates in nonresidential business, as measured by the residual series, fell from 1.4 percent a year in the 1948-73 period to -0.8 percent a year in the 1973-76 period, with the decline clearly beginning in 1974. The contribution over the whole 1973-78 period was also far below that in 1948-73, it can be inferred from the behavior of NIPPE and output per hour.

That I do not know why the record suddenly turned so bad after 1973 must be obvious, because the effects of all of the determinants of NIPPE that I could measure continuously are excluded from the residual. Perhaps it would be wisest to end with this statement, but I find that to do so leads to insistent questions about what *might* have been responsible and to requests for comments on specific suggestions. The rest of the article takes up these matters. From the almost limitless list of possible influences on the residual series, I have selected those that have been or may be seriously suggested as important causes of productivity slowdown. Inevitably there is some overlap-

ping among the suggestions examined.

One general point needs stressing. According to my estimates there is no unexplained retardation in the rate of growth of productivity change until 1974, and the drop in the rate that started at that time was abrupt and large. I consider this timing an important clue in any attempt to unravel the mystery surrounding the productivity slowdown. But nearly all the possible reasons advanced for the slowdown would be much more likely to take effect gradually than suddenly. This counts heavily against them. Nevertheless, I have included such suggestions in the following discussion. Most were proposed by observers who, if they had in mind any specific data at all, were trying to explain the slackening in growth that began about 1967 in the Bureau of Labor Statistics series for output per hour.

Of course, "coming events cast their shadows before," and the onset of fundamental changes that were to lead to decline may have been discernible in advance of the actual event. But the unexplained decline itself does not appear until 1974.

Suggestions Affecting Advances in Knowledge

This section is concerned with four suggested explanations that pertain to advances in knowledge. The two following sections are concerned with 13 suggested explanations relating to miscellaneous output determinants.

Curtailement of expenditures on research and development

Secretary of Commerce Juanita Kreps, formerly professor of economics at Duke University, has stated that a "Probable source of the slowdown in productivity is the dramatic reduction in expenditures for research and development."⁹ John W. Kendrick, of George Washington University, an expert in productivity analysis, has repeatedly called attention to the decline in research and development (R. & D.). The conclusions of a 2-day meeting held by the American Association for the Advancement of Science were summarized in *The Washington Post* as follows: "The United States is losing its competitive edge in technology because American industry is spending less on research and because the Federal Government withdrew much of its support for industrial research at the ends of the Apollo space program and the Vietnam War."¹⁰

Expenditures for organized R. & D. in the United States have been much larger in the postwar period than ever before, and within the period, expenditures rose rapidly until the mid-1960's. How one describes their subsequent behavior depends on the series he chooses to emphasize.

If expressed as a percentage of gross national product (GNP), total R. & D. expenditures rose from 0.95 percent in 1955 to a peak of 2.97 percent in 1964, then slipped gradually to 2.27 percent in 1976 and 1977. The drop was mainly in expenditures financed by the Federal Government, largely for defense and space programs, whose connections with productivity advance is slight. Expenditures financed by other sources (mostly industry but including universities and nonprofit organizations) con-

tinued to climb throughout the 1960's, rising from 0.99 percent of GNP in 1963 and 1964 to 1.15 percent in 1969 and 1970. They then slipped, but only to 1.07 percent, in 1972 and 1973 before recovering to 1.11-1.13 percent every year from 1974 through 1977.¹¹ I have quoted percentages of GNP because this practice is widespread, but its rationale is not clear. Just because the size of the economy is, say, twice as big, does it take twice as much R. & D. to obtain the same annual productivity gain? Doubtless it would take twice as much R. & D. if an economy doubled its size by producing twice as many products, each with a unique technology, and no more of any one product. But why should more R. & D. be needed if growth occurs by expanding the average output of products rather than their number? An invention that cuts 1 percent from the production cost of 5 million automobiles should do as much for 10 million.

Total R. & D. expenditures themselves, when expressed in constant (1972) dollars, rose rapidly until 1966, when they reached \$28.5 billion, then less rapidly until 1968, when they peaked at \$29.8 billion.¹² Expenditures in all years from 1969 through 1976 were in the range of \$27.7 billion to \$29.6 billion, so that in the whole 1966-76 period they were essentially flat. In 1977, constant-dollar expenditures reached a record \$30.2 billion. Within the total, R. & D. that was financed by industry increased rapidly until 1969, when it reached \$11.5 billion, then more slowly to \$13.2 billion in 1976 and \$13.9 billion in 1977. Its annual growth rate was 6.5 percent in 1960-69 and 2.0 percent in 1969-76.¹³ R. & D. financed by universities (including State and local governments) and nonprofit organizations increased steadily to \$1.1 billion in 1976. R. & D. financed by the Federal Government jumped rapidly to \$17.3 billion in 1964, peaked at \$18.2 billion in 1967, fell to \$14.4 billion in 1974, and recovered to \$14.6 billion in 1976 and \$15.2 billion in 1977.¹⁴

The number of scientists and engineers employed in R. & D., computed on a full-time equivalent basis, peaked at 558,000 in 1969, fell 7 percent to

521,000 in 1973, and recovered to 550,000 in 1976 and a record 571,000 in 1977. The pattern in industry was similar: a drop from a peak of 386,000 in 1969 to 353,000 in 1972, then a recovery to 372,000 in 1976 and to 390,000 in 1977. The industry figure includes personnel employed in business who are engaged in federally funded research, including defense and space.¹⁵

Kendrick constructed a series for the "stock" of knowledge acquired from all components of domestic organized R. & D. by cumulating past expenditures and applying an obsolescence rate. This series, measured in constant prices, increased at annual rates of 9.6 percent a year from 1948 to 1966 and 5.2 percent from 1966 to 1973, when it ends.¹⁶

Like the United States, other advanced countries sharply increased R. & D. spending, both in absolute terms and as a percentage of GNP, until about 1965. During the middle and late 1960's total R. & D. spending began to increase less than GNP not only in the United States but also in the United Kingdom, France, and Canada, and after 1970 in West Germany. In Japan, R. & D. spending continued to increase as a percentage of GNP but more slowly than before.¹⁷ The absolute amount of foreign R. & D. spending measured in constant prices increased throughout the period.

To consider the impact of changes in R. & D. on output per unit of input, it is first necessary to recall that only certain types of advances in knowledge raise output per unit of input as it is actually measured, namely, those that allow the same amount of measured output to be obtained with less input. Advances that do so are those that reduce the unit cost of final products that are already in existence.

Advances leading to the introduction of new products for final sale from the business sector (primarily to households and government) do not have this effect, no matter whether the new products are color television sets, space rockets, atomic-powered aircraft carriers, tastier biscuits, or microwave ovens for household use. After their introduction, total measured product will be the same as if the labor, capital, and land devoted to their production were

used instead to produce previously existing products. When products with new features—for example, refrigerators with automatic ice makers and stoves with self-cleaning ovens—are introduced, they qualify as new products in this formulation. Thus R. & D. that is directed toward new final products for civilian or military use, even if highly successful in meeting its objectives, does not contribute to the growth of measured output per unit of input except insofar as it may have some incidental offshoots that cut the costs of existing final products. Nearly all federally-financed R. & D. is in this category and so is the larger part of industry financed R. & D. Only R. & D. that is directed either toward new processes, which may be roughly identified with research to reduce a firm's own costs, or toward new *intermediate* products and capital goods has an objective that, if achieved, raises measured output per unit of input.¹⁸

Organized R. & D. in the United States is only one of many points of origin for advances in knowledge that raise output per unit of input, but fortunately it is one (the only one) for which a separate estimate of the contribution to growth has been hazarded. In 1961 I compounded a series of plausible assumptions and guessed that one-sixth of the total contribution of advances in knowledge was the contribution of domestic R. & D.¹⁹ A more recent and somewhat more solidly based attempt to estimate this contribution was made by Zvi Griliches of Harvard University.²⁰ Griliches estimated that R. & D. was contributing no more than 0.3 percentage points to the growth rate of private domestic GNP as of 1966 and probably considerably less; his maximum estimate equals less than one-fourth of my estimate of the contribution being made by advances in knowledge at that time.²¹

The main elements in these and similar calculations are the value of R. & D. expenditures for projects that, if successful, can be expected to raise output per unit of input; the social rate of return on such projects; and sometimes the rate of obsolescence on knowledge gained from previous R. & D.²² R. & D. expenditures are too small to yield

Griliches a contribution above 0.3 percentage points even though he deliberately made a generous estimate of their amount and even though the social rate of return is high.

The large gap between estimates of the contributions of advances in knowledge and of R. & D. expenditures does not imply that the estimates are inconsistent. As already stressed, organized R. & D. conducted in the United States is only one source of advances in knowledge. Managerial and organizational knowledge of how to produce at low cost stems from sources that are unrelated to expenditures measured in series for R. & D. The observation and ingenuity of persons engaged in production and distribution contribute new technological knowledge. So do individual inventors. All types of knowledge originate in all countries, not only the United States.

If R. & D. contributed no more than 0.3 percentage points to the growth rate in the mid-1960's, retardation of such expenditures could have contributed little, if anything, to the decline of productivity growth even if the percentage of GNP spent on R. & D. of all types were the relevant series and the period from 1964 peak to 1976 trough were the relevant timespan. The drop in the percentage was about one-fourth, so if the 0.3 percentage point contribution of R. & D. to the growth rate of output were reduced proportionally, it would decline by less than 0.1 percentage points. Expenditures financed from private sources, measured in constant prices, are a more pertinent series for R. & D. Since this series did not decline at all, there is no assurance that R. & D. spending contributed anything to the decline in productivity growth. Griliches, using a somewhat broader series for R. & D. spending relevant to productivity growth, suggested that the change in R. & D. spending from the 1966 rate to the 1970 rate might reduce its contribution by 0.1 percentage points, with the effect perhaps delayed until the mid-1970's. The range from 0.0 to -0.1 percentage points covers the probable change in the contribution.

Kendrick estimated higher contributions from organized R. & D. than did Griliches or I: The percentage point contributions were 0.85 in 1948-66 and 0.71 in 1966-73.²³ The high estimates stem from counting in the "stock" all R. & D. performed in the business sector, including all that is devoted to new and improved products and all that is financed by the Federal Government. As justifications, Kendrick mentions spin-offs and the prevalence of learning curves for all new products, regardless of their buyers, but I do not believe the procedure is tenable.²⁴ Even so, Kendrick obtains a reduction in the contribution only slightly in excess of 0.1 percentage points during the period he covered.

Roger E. Brinner of Data Resources, Inc., has, so far as I am aware, the only estimates that show a much larger decline.²⁵ His estimate of the contribution of R. & D. falls by 0.2 percentage points from the 1960-65 period to the 1965-70 period, and then an additional 0.2 percentage points from the 1965-70 period to the 1970-75 period, when he puts the contribution at only 0.05 percentage points.²⁶ This unusual set of results apparently stems from the combination of two features of his estimates. First, like Kendrick (whose stock series is Brinner's starting point), Brinner counts government-financed R. & D., so he has gross additions to knowledge from R. & D. declining. Second, the amount of old knowledge that he eliminates from the stock, presumably because it is rendered obsolete by new knowledge, is related to the stock of knowledge rather than to the amount of new knowledge, so it rises even when new knowledge falls. This procedure would permit R. & D. to contribute negatively to growth.²⁷

To conclude, as I have, that R. & D. probably is not responsible for much of the productivity retardation is not to deny that expansion of R. & D. is a promising way of promoting future productivity growth. Available studies, though limited in scope, indicate that the social rate of return on R. & D. is high.²⁸ This, when combined with the inability of firms financing successful R. & D. to capture more than a fraction of that return for themselves, provides

justification for policies either to raise that fraction or to increase governmental support.

Decline in opportunity for major new advances

In the postwar period, advances in knowledge and, in consequence, growth rates of productivity as well as total output have been exceptionally large by past standards. Many have regarded this period as beginning a new era, to be characterized by exponential growth at high rates for an indefinite time. But it is arguable that in the long sweep of history a slackening of the advance in knowledge might reasonably be anticipated quite apart from any reduction in research, and fast postwar growth may appear as a temporary bulge.

The postwar jump in productivity is attributed by some to the crest of a wave of new advances in knowledge made possible by science-based technology, the so-called "second industrial revolution." In their view this wave has passed. This opinion is often based on reasoning such as that of Orio Giarini, who stated that "we are more and more coming to the point where science-based technology, at least in certain sectors, has exploited all the major possibilities made available by the scientific advances of the last century," and that we may have to wait decades for the reservoir to be replenished.²⁹ Other observers, also envisaging a drop in the contribution of new knowledge, rely on Schumpeter's idea that innovations typically come in waves as an idea spreads and is applied in many fields, and suppose that we have come to the end of such a wave.

F. M. Scherer of Northwestern University, a former Director of the Bureau of Economics of the Federal Trade Commission, suggests, though cautiously, that both explanations may be correct (and their effects exacerbated by the slowdown in R. & D. expenditures and contracting career opportunities for scientists). To indicate a slackening rate of advance in technological knowledge, he points out that the number of patents issued to domestic corporations peaked in 1971 and declined 20 percent by 1976. Scherer notes that if patents lag 3 years behind inventions, this

would date the invention peak as 1968.³⁰

I have no trouble accepting the possibility of declining opportunities for technological advances, but the diversity of the economy should ensure that the resulting retardation of growth would be gradual. The residual shows no sign at all of retarded growth up to 1973. It is not plausible that declining opportunity for new advances could be responsible for much of the sudden drop in the residual after that year.

Decline of Yankee ingenuity and deterioration of American technology

"There is today a pervasive perception that the dynamic vitality of the U.S. economy is faltering. This perception appears to be founded on two concerns: first, that America is not as productive as it used to be; and second, that we are somehow not as inventive either." So reads the box summarizing a 1978 *Washington Post* article, "Something's Happened to Yankee Ingenuity."³¹

Have Americans become less ingenious? To answer this question one would have to isolate possible deterioration in American ingenuity from the possibility, which Giarini regards as a fact, that the remaining problems that would need solving to expand output are more stubborn than those encountered in the recent past.³² He would also have to disentangle changes in the speed with which Yankee ingenuity solves problems of production and distribution from possible lengthening of lags between solution and implementation as a result of new government regulations and other institutional changes. In fact, the main reason for suspecting a decline in Yankee ingenuity seems to be the retardation of productivity growth, a development for which there are many alternative suggestions. Irwin B. Margiloff, industrial executive and engineer, and Delbert Tesar of the University of Florida believe long-run deterioration of American technology is responsible for poor productivity performance, but the deterioration they have in mind set in much too early to explain the recent productivity slowdown.³³

Increased lag in the application of knowledge due to the aging of capital

The "best" practice possible with the knowledge available at any given time may be distinguished from the average practice actually in use. Translating this distinction into a classification suitable for analysis of growth, one may distinguish in principle between the contribution made possible by advances in knowledge as such and the contribution (positive or negative) that may be made by a change in the lag of average practice behind the best known.

The residual series under discussion, insofar as it measures the contribution of advances in knowledge, is an estimate of the effects of incorporating new knowledge into the productive process. It therefore includes the effect of changes in the "lag." It is widely suggested that the lag has increased and that this is a reason for the poor performance of productivity.

The most common basis for this belief is that fixed capital formation has declined. This is thought to be germane because it affects the average age of structures and equipment, the carriers of much new technology. Many observers think this was a very important factor. But this is not so. Even the assumptions of an extreme vintage model would yield only 0.1 percentage points as the contribution of the reduction in average age to the growth rate from 1948 to 1973, -0.1 percentage points as the contribution of the increase in average age from 1973 to 1976, and therefore -0.2 percentage points as the contribution of this factor to the decline in the growth rate of the residual.³⁴ This calculation assumes that reducing the average age of capital (when its mix is held constant) by 1 year raises output by 1.4 percent, the contribution of advances in knowledge and miscellaneous determinants to the 1948-73 growth rate. Such a model greatly overestimates the effect of a change in average age. One objection is the implausible assumption that all advances in knowledge are embodied in structures and equipment, but a little reflection will reveal a more fundamental objection. During any span of time, different types

of capital goods undergo very different amounts of quality improvement. Other things being equal, the return on replacement investment, and hence the incentive to invest, is highest for types of capital goods that have experienced the most obsolescence resulting from quality improvement in new vintages. Any substantial amount of total gross investment permits investment opportunities created by sizable quality improvements in new capital goods to be grasped. Additional gross investment involves less profitable investment, devoted to the replacement of capital goods of types in which quality change has been small. The gain in the average quality of capital that vintage models imagine to be derived from additional new investment is not realized because the effect on average age automatically is largely offset by a reduction in the average amount of quality improvement incorporated in new capital.³⁵

The lag of average practice behind the best known may have lengthened for a different reason: government regulations may delay or prevent remunerative projects using new technology. I discuss this possibility in the context of government regulation.

Suggested Effects of Government Regulation and Taxation

A variety of explanations for the retardation of output per unit of input would affect miscellaneous determinants. These explanations are often overlapping, and they could be classified and grouped in alternative ways. In this section I consider suggested effects of government regulation and taxation. Government actions that may have reduced output per unit of input are examined here under seven headings.³⁶

Diversion of input to comply with government regulation, except pollution and safety

The most direct way that government regulation affects measured output per unit of input is by requiring business to divert labor, capital, and land from production of measured output to tasks required to comply with regulations.

Under this heading I shall discuss diversions of input other than that imposed by programs for pollution abatement and worker safety and health. The effect of the latter programs, which deducted an estimated 0.3 percentage points from the 1973–76 growth rate, was eliminated before arrival at the residual series. There are, however, other programs that impose similar resource costs, and for which requirements are new or have become more stringent. In the field of consumer protection are regulation of food and drugs by various agencies and regulation by the Consumer Product Safety Commission, created in 1972 to protect the buyers of consumer goods from unnecessary hazards.³⁷ Other regulations, such as the national speed limit, are designed to conserve energy or force utilities and manufacturers to substitute one fuel for another; these began only after 1973. Costs in these and other relatively new areas have not been estimated, but they surely increased relative to national income from 1973 to 1976 and contributed to the decline in the residual. However, Robert W. Crandall, Senior Fellow of The Brookings Institution, states that of the agencies entrusted with social regulation, the two having the largest impact on business costs are the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA), both covered by my estimates for pollution abatement and worker safety and health.³⁸ This statement tends to be supported by a study of the 1977 incremental costs imposed on 48 large companies by six programs. Incremental costs to these companies imposed by requirements of the Equal Employment Opportunity Commission (EEOC), the Department of Energy, the Employee Retirement Income Security Act, and consumer protection activities of the Federal Trade Commission, together, were 19 percent as large as the incremental costs imposed by EPA and OSHA.³⁹

I should be surprised if the increase in the total resource costs, except paperwork costs, of all other regulatory programs together affected the change in output per unit of input as much from 1973 to 1976 as that attributable to the

two programs for which I made estimates. But it is also likely that these costs have been rising sharply.

Government-imposed paperwork

Filing reports, making and preserving records, and compiling data in order to meet government requirements also absorb resources that could otherwise be used to produce measured output. Most of these costs are associated with tax collection or with regulatory activities—for example, railroad rate or pension fund regulation—that do not otherwise require diversion of an appreciable amount of input from the production of measured output.

The Commission on Federal Paperwork estimated that paperwork necessary to meet the requirements of the Federal Government cost American business \$25 billion to \$32 billion in 1976.⁴⁰ This is 2.4 to 3.1 percent of 1976 nonresidential business national income. The requirements of State and local governments may have raised the percentage by one-fourth to one-half, bringing it into the 3.0–4.6 percent range.⁴¹

Estimates of the total hours required to meet Federal reporting requirements, assembled from agency reports by the Office of Management and Budget (OMB), suggest that business reports to the Federal Government required perhaps 530 million hours a year as of January 1977.⁴² This is only 0.2 percent of total hours worked in nonresidential business in 1976 and thus suggests a much smaller paperwork burden than do the dollar estimates; it seems, in fact, incredibly small.⁴³

Whether the higher or lower percentages for the level of the paperwork burden are correct, the following considerations show that the burden cannot have increased enough to depress productivity significantly from 1973 to 1976 if the OMB's allocation of the man-hour estimates among programs is anywhere near correct. OMB analyses indicate that major changes in the burden are the result of changes in programs.⁴⁴ Tax forms account for perhaps four-fifths of all the hours, and there were no major changes in the tax area; all of the principal tax forms go back to at least 1963.⁴⁵

The number of public use reports subject to OMB review, which excludes tax forms, peaked in 1944, 1952, and 1973 because of economic controls (wage and price controls in all three periods and, in the first two, production and resource allocation regulations as well). Statistical series for the number of such reports were disrupted after 1973 as responsibility for reviewing reports for regulatory commissions and certain other agencies was transferred from the OMB to the General Accounting Office. But it is known that elimination of wage and price controls had eliminated much reporting by 1976. Although new types of Government regulation created new paperwork requirements, the OMB estimates that the *total* hours outside the tax area declined from 1973 to 1976.

Thus the evidence indicates that paperwork can be eliminated as a significant source of productivity decline from 1973 to 1976, although it may have been a factor—but not a major one—if one goes back to 1966. The general impression of the burden of paperwork may be exaggerated because, in Herbert Kaufman's phrase, red tape is universally an "object of loathing."⁴⁷

Regulation and taxation: diversion of executive attention

The profitability of a business is now greatly affected by the way it responds to rapid changes in government action, not only with respect to regulation but also to provisions in the tax laws that discriminate among different types of income and different business costs. Under these conditions it is not surprising that top management and other business people of great talent devote more and more of their time to the firm's interaction with government and correspondingly less time to its interaction with competitors, customers, and suppliers and to its internal operation. This can hardly fail to impair efficiency and productivity in the ordinary sense of these words.

A burgeoning of regulation during the past decade has affected practically all the domestic and foreign activities of businesses in every industry, so much so that Senator Lloyd Bentsen, Chairman of the Joint Economic Committee's

Subcommittee on Economic Growth and Stabilization, calls Federal regulation "America's number one growth industry."⁴⁸ Failure to learn of and conform to regulations can have serious legal consequences, including criminal penalties.⁴⁹ Failure to find the cheapest way to conform can be expensive. Failure to learn of proposals for new laws or regulations and to participate in hearings and use other channels to help shape their final form can bring permanently higher costs or loss of markets. So can failure to foresee changes in laws and regulations and to take timely action in advance to minimize losses or maximize gains from the change.⁵⁰

Not only laws and regulations actually proposed or made effective are pertinent; one must guess at what may be proposed in the future. In the words of Irwin L. Kellner, vice president and economist of Manufacturers Hanover Trust, not only have laws, rules, regulations, and regulatory agencies leaped upward in number, but they "have become increasingly unpredictable of late. Unlike economic, technological, or other uncertainties indigenous to the private free enterprise system, political uncertainties tend to be sudden, swift, and unprecedented."⁵¹ Now that mandatory price and wage controls have been introduced once in peacetime, business must (and does) consider the possibility that such controls will be repeated and position itself appropriately. The spring and summer 1978 quarterly surveys of businessmen conducted by the U.S. Chamber of Commerce showed a majority anticipated mandatory wage and price controls within 2 years. In the same year, regulation displaced taxation as the greatest concern of respondents to the chamber's surveys.

Glen McLaughlin, vice president for finance of Four Phase Systems, Inc., of Cupertino, California, says:

"Corporations have been burdened with regulatory excess to the point of stifling normal improvement in efficiencies. Business leaders can and will continue to assume additional taxes and regulations; however, as each new tax and each new regulation is imposed, another layer of incentive to perform is

removed and otherwise creative efforts are diverted to nonproductive, but lucrative, jobs of avoiding taxes and doing battle with bureaucrats. This is a tremendous waste of national resources; however, it is occurring at an accelerating rate."⁵²

George C. Eads of the Rand Corporation suggests that the change in emphasis among the activities that are required for a business to prosper must also affect the type of person who will emerge to manage firms. Presumably more emphasis will be placed on knowledge of the law, the legislative process, and public relations and less on production, sales, and internal management.⁵³

Concern about government regulation is not confined to top management. Murray L. Weidenbaum of Washington University points out that:

"Virtually every major department of the typical industrial corporation . . . has one or more counterparts in a federal agency that controls or strongly influences its internal decision making: OSHA for 'production'; the Consumer Product Safety Commission for 'marketing'; several agencies concerned with safety and efficiency rather than sales promotion for 'advertising'; EEOC for 'personnel'; IRS, SEC (Securities and Exchange Commission), and the credit agencies for 'finance'; EPA for 'research and development'; and so on."⁵⁴

Government regulation: delay of new projects

Government regulatory requirements for applications, permits, and reports give rise to delays between first consideration and completion of projects, and the spread of regulation has undoubtedly lengthened delays substantially in recent years.⁵⁵ The difficulty of coordinating several permits from different agencies may result in long delays or even abandonment of projects.⁵⁶ The timespan between administrative receipt of an application and a decision is often long, and delays are greatly extended by judicial appeals. Delays resulting from government regulation not only slow the introduction of new ideas and new technology, but also reduce the flexibility of firms in dealing

with recurrent changes in production and marketing conditions.

Increased delay stemming from increased regulation unquestionably contributed to the recent retardation of productivity growth. No estimate is available of the amount by which it did so.

Regulation and taxation: misallocation of resources⁵⁷

Efficiency is greatest when individuals and jobs are properly matched (the round pegs are in the round holes) and when total input is allocated among uses in such a way as to maximize output. Government regulations and various provisions of the tax code affect resource allocation, and hence output, in many ways.

Because of privacy legislation, which denies confidentiality to appraisals of students, government employees, and other groups, prospective employers must find references of less value. Civil rights legislation has added new criteria for hiring, promotion, and release of workers that may affect resource allocation positively in the long run, yet in the short run be adverse to the selection of the best person for each job. It also adds to costs of personnel management.⁵⁸

At the macro level the tax code is packed with provisions that discriminate among types of expenditures and kinds of activity. For example, the investment tax credit has discriminated against inventories and structures in favor of producers' durables, and among producers' durables against those with the longest and shortest service lives. Neither inventories nor structures were eligible for any investment tax credit in the period under review. The credit on producers' durables was proportional to gross investment rather than to capital stock, a formula that discriminates against longer lived assets, but also contained a provision for graduated rates that more than offset that difference among durables with a service life of less than 7 years. The President's Council of Economic Advisers calculated that if the rate of return was 10.0 percent before allowance for the investment tax credit, the credit raised the rate of return to 11.57 percent if the asset had a 4-year service life, to 13.30 percent if it

had a 7-year life, and to 11.31 percent if it had a 30-year life.⁵⁹ The 1978 tax amendments made structures eligible for the credit but their long service lives assure that the benefit will be small relative to producers' durables.

New government regulations, like old ones, contain provisions to protect regional, industrial, or other special interests. Other provisions serve only to appeal to uninformed prejudices; an example is the prohibition of the exportation of surplus Alaskan oil from the west coast to Japan and the offsetting importation of oil on the Atlantic and gulf coasts.

Perhaps the aspect of regulation most adverse to efficient resource allocation is increased uncertainty. I do not refer now to the effect this uncertainty is sometimes said to have on the *amount* of investment; rather, I am concerned here with its effect on *composition*. The enormous change in the scope of regulation is sometimes said to have placed nearly all business in the category of regulated industries. When an investment decision must be made, the way that regulations will be applied in the specific instance and the length of time that will be required to secure all necessary regulatory decisions so that a project may proceed are important, but the difficulties of deciding the characteristics of a project or of determining the future benefits from it are accentuated by the prospect that regulatory conditions may change once a facility is in use, altering the optimal combination of inputs and conceivably even banning the sale of products. It is a reasonable inference that the allocation of the capital stock among types and uses must depart further from the optimal allocation at any given time than it would if regulations were less pervasive, changing, and uncertain in application. The wedge introduced by regulation between costs and benefits that are anticipated and those that are realized probably is increasingly widened as the planned life of investment lengthens, so regulation probably moves the distribution of investment toward shorter lived assets, as is frequently asserted. But this is only a detail within the general picture.

Effects of high tax rates on incentives and efficiency

Beryl W. Sprinkel, economist and executive vice president of the Harris Trust and Savings Bank, believes that:

"The reason for the poor performance of our economy [that is, significantly deteriorating productivity trends in the past dozen years, accompanied by accelerating inflation] has been the growing burden of government. The tax burden at all levels of government in 1966 was 33 percent of national income. This past fiscal year the tax burden rose to a record 39.2 percent of national income. Although voters perceive taxes paid as the cost of government, the real economic cost is represented by the share of national income devoted to government outlays. This figure rose from 34 percent of national income in fiscal 1966 to 41 percent last year."⁶⁰

One way a large government share might reduce productivity is by contributing to inflation, which (as explained in a later section) may impair efficiency. It was inflation that Colin Clark, the Australian author of *The Conditions of Economic Progress*, forecast as the disastrous result if government expenditures exceeded 25 percent of national income.⁶¹ Subsequently others have forecast various dire consequences, including impaired growth of both productivity and total output, at some higher percentage. The assertion that high taxes diminish incentives to work and to save is commonplace.

Herbert Stein, professor of economics at the University of Virginia and a former chairman of the President's Council of Economic Advisers, examined this view, which he described as follows:

"The argument that increased government spending, as a share of GNP, slows down the rate of growth of real output runs along familiar lines. The higher taxes needed to finance the higher spending would weaken incentives to work and to invest, and would absorb funds that otherwise would have been saved and invested. If the government borrows to finance its expenditures, that will crowd out private investment. A more recent version of this view is that the absorption of productive resources by the government cuts

the supply of resources available to produce investment goods and marketable consumption goods, which will reduce private investment especially, since workers will resist reducing their consumption of marketable goods. Another aspect to be considered is that increased government spending absorbs workers into public employment, where productivity is low and growing slowly if at all, and that this restrains the growth of total output."⁶²

If the consequences of large budgets asserted in this argument were confined to a reduction of the labor and capital used in nonresidential business, they would not reduce output per unit of input in the sector.⁶³ They would do so only if the effect on labor took the form of people working less hard while at work or refusing promotions.

But Stein finds little support in the American experience for any of the processes he described. In particular, "no stagnation of growth was evident during the period of high and rising government expenditures." Nor is any effect on the private saving rate or much, if any, on employment to be observed. Stein finds that the evidence suggests that the effects of government spending and taxes on economic growth during the period from 1956 to 1973 were "at least uncertain and probably small."⁶⁴

The period after 1973 was one of poor growth and productivity performance but not one in which the government share shot up abruptly. Federal, State, and local government expenditures, which rose from 24.8 percent of GNP in 1956 to 31.0 percent in 1973, went to 33.5 percent in 1976 and 32.5 percent in 1978. The increase from 1973 to 1976 was partly due to increased unemployment. Government receipts were 26.1 percent of GNP in 1956, 31.0 percent in 1973, 31.6 percent in 1976, and 32.4 percent in 1978.⁶⁵

I agree with Stein that the general size of government budgets has not had a substantial adverse effect on growth and productivity. This does not necessarily mean, of course, that there would be no such effect from a further increase, such as has recently been experienced in several European countries. In the Netherlands, the three Scandinavian

countries, and the United Kingdom, general government expenditure reached 44 to 51 percent of gross domestic product in 1975, compared with 34 percent in the United States.⁶⁶

Capital gains provisions of the Revenue Act of 1969

William F. Ballhaus, president of Beckman Instruments, Inc., ascribes the recent slowdown in growth and productivity to the provisions of the Revenue Act of 1969 that affected capital gains. Previously, only half of long-term capital gains (then gains on assets held 6 months or more) were subject to the Federal individual income tax, and the rate on this half was limited to 50 percent, so the top effective marginal rate was 25 percent.⁶⁷ The Revenue Act of 1969, effective January 1, 1970, deleted the 50 percent rate ceiling; this raised the effective rate for high-income individuals from 25 percent to 35 percent. For a small number whose income was largely from sources given preferential tax treatment, the effective marginal rate could be higher, as much as 49.1 percent, as the result of a new minimum tax provision of the law, or even 52.3 percent for a few individuals with large foreign tax credits. In addition, the period for which assets had to be held for gains on them to qualify as long-term rather than short-term gains (which are taxed like ordinary income) was to be increased, but this provision became effective only in 1977.⁶⁸

Ballhaus sees the increased taxation of capital gains as the cause of reduced investment.⁶⁹ He also sees it as the cause of reduced spending for research and development.⁷⁰ Even if these effects were sizable, they probably contributed little to the slowdown in the residual.⁷¹ Less investment reduces capital input, not the residual, although it does affect output per hour. Less R. & D. would tend to reduce the residual, but R. & D. has already been rejected as a probable cause of very much of the productivity slowdown.

But Ballhaus has a third effect: Taxation of capital gains biases the distribution of investment and R. & D. away from the more risky undertakings. This is another cause of misallocation

of resources that would reduce the residual. It seems inescapable that capital gains taxation has such a tendency, and therefore that higher capital gains taxation increases the tendency. This statement does not rely on an assumption that investors are averse to risks. A \$1 million investment certain to repay \$1.1 million has the same expected return as a \$1 million investment that has nine chances of becoming a total loss and one of repaying \$11 million, and the two investments are equally advantageous to society. But if the government shares in gains but not in losses, the safer investment promises the higher return to the investor. Ballhaus assigns a particularly strategic role to individual investors in small companies, and states that equity investment in small companies declined after 1969 and almost vanished in 1973-75.

The argument that high capital gains taxation impedes growth became central in 1978 to the case for Congressman William A. Steiger's proposal to restore the situation that existed before the Revenue Act of 1969. The tax bill actually passed in 1978 was not much less favorable than his proposal for any taxpayer and even more favorable for most. Sixty percent of long-term gains, as against the previous 50 percent, was exempted from income tax and this, together with changes in the minimum tax and the enactment of a new "alternative minimum tax," reduced the highest effective marginal tax rate on capital gains to 28 percent. If the 1969 change in capital gains taxation was an obstacle to growth, that obstacle has been removed.

However, the increase in the tax yield from capital gains that resulted from the 1969 law was less than \$1 billion at 1978 income levels, according to Treasury Department estimates. The small size of the extra tax burden suggests that the misallocation resulting from it, though doubtless present, was not large.

Other Suggestions Affecting Miscellaneous Determinants

In this part of the article I consider six additional causes that have been suggested for retardation of the growth

rate of productivity and that would affect my residual series. Like suggestions considered in the preceding section, their effects, if any, would be on miscellaneous determinants of output, including aspects of labor input and resource allocation for which specific estimates were not prepared.

“People don’t want to work any more”

The press recently quoted me as stating—as I have here—that productivity had declined, in part for reasons that were mysterious. The result was long-distance calls informing me, usually with the patronizing air used in speaking to children and the simple-minded, that the trouble is obvious: “People don’t want to work any more.” Sometimes the comment was more pointed: “Young people don’t work like we did at their age.” This is without doubt the number one popular explanation of low productivity. It is also shared by some economists.

Thus Arthur F. Burns, then Chairman of the Board of Governors of the Federal Reserve System and previously president of the National Bureau of Economic Research and Chairman of the President’s Council of Economic Advisers, devoted most of his 1977 commencement address at the University of South Carolina to this theme.⁷² “Careful study [of labor force composition and capital per worker] still leaves a substantial part of the recent productivity slowing unexplained,” he stated. “Other adverse influences apparently have been at work as well. My own judgment is that we have been undergoing a change in our societal values and attitudes that has contributed significantly to poorer job performance in recent years. I advance that as a hypothesis only, not as an established fact. It is a hypothesis, however, for which there is regrettably a considerable body of supportive evidence.”⁷³

The attitudes and behavior that trouble Burns and so many others are highly visible. And the difficulty of finding reliable workers for jobs that are particularly hot, dirty, noisome, arduous, or regarded as menial can scarcely be denied, though this may be more the result of improved alterna-

tives than of changes in workers’ preferences.

Yet I am skeptical that a sudden drop in willingness to work is responsible for the recent retardation of productivity, whether that is dated after 1966 or after 1973. My skepticism is largely attributable to having heard similar generalizations all my life and having read them in the works of observers who wrote long before my birth. It was well before 1967 that I wrote, “Like the supposed decline in the spirit of enterprise, there seems always to be a popular belief that people are less willing to ‘put in a hard day’s work’ than they used to be, but this is scarcely evidence.”⁷⁴

These generalizations, moreover, are also common in other countries, including those with excellent records for raising productivity. And they are not new there either. Thus the *Tokyo Mainichi Daily News* editorialized on April 7, 1976:

“Opinions have been expressed at offices and factories that today’s young people are not eager to work. The view is not anything new. Every generation seems to say the same thing about its youths. Still, young people must seriously ponder the allegation. . . . We . . . exhort the newly employed young people to tackle their work with due seriousness.

“A government survey shows that two thirds of today’s youth want to live a carefree life to their personal taste outside concern about work. If they want to take a job, however, they are required to care more seriously about work. A switch is needed in their life style concept.”

Testimony about a similar observation in Germany comes from Walter W. Heller, another former Chairman of the President’s Council of Economic Advisers and an expert on the puritan ethic, who dissents from the Burns view about “this supposedly weakening work ethic.” Heller noted:

“Ludwig Erhard used to tell me that ‘the world-famous German diligence has disappeared.’ He told me that in the fifties, and he told me that in the sixties, and now I am hearing it in the seventies.” Burns’ very interesting response to Heller was: “It has been true each time.”⁷⁵

It is indeed possible, as those quoted have suggested, that always and everywhere work effort has declined and has curtailed productivity growth. If so, my residual persistently understates the contribution of advances in knowledge. But even if this pattern were an accurate description, it would not explain a downturn in recent years in my residual. It is also possible, as Solomon Fabricant has suggested, that over long periods work effort has fluctuated and that the impressions reported all refer to the declining phases of these cycles.⁷⁶

Is there any reason at all for a recent (post-1966 or post-1973) sudden sharp decline in work effort from its past trend, whatever that trend may be? One possibility, perhaps slight, was suggested in *Accounting for Growth*. “Programs to hire the ‘hard core’ unemployed that do not require them to meet as stringent performance standards as those applied to the ordinary work force pose a possible danger: acceptance of lower standards for a special group in an establishment may reduce performance standards for the rest of the work force in that establishment.”⁷⁷ Hiring to meet objectives of legislation to promote equal employment opportunities has a similar potential. “On the other hand,” as I wrote, “such programs may help to remove irrelevant hiring tests or other forms of disguised discrimination.”⁷⁸

My series for average hours, which enters into the calculation of total input, measures time spent at the work place. The Survey Research Center at the University of Michigan reports that time records kept by a small sample of married men showed the ratio of time actually worked to time at the work place to have been 2 percent lower in 1974–76 than in 1965–66.⁷⁹ Whether there was a change in trend, and if so, when it occurred, cannot be ascertained from these data. The concept of time actually worked is obviously a difficult one for many categories of workers.

I have no desire to minimize the importance of work effort. In *Why Growth Rates Differ* I suggested that higher intensity of work in the United States than in at least several of the European countries may well help to account for the higher level of productivity in the

United States. I also stated that an "inability to answer the simple question—how hard do people work?—and to compare different places and dates, is probably the most serious gap in my measure of labor input."⁸⁰ It is quite possible that a decline in work effort contributed something to the retardation of productivity, although this has not been demonstrated. But it is unlikely to have been a major cause of the suddenly retarded growth of the residual after 1973.⁸¹

Impairment of efficiency by inflation

Inflation is widely thought to impair growth of output per hour or per worker by reducing saving and investment.⁸² In my classification this effect would be captured by the contribution of capital and would not reduce output per unit of input or the residual series. A consequence of inflation that would do so is rendering rational calculations by businessmen more expensive and less accurate. When prices are changing rapidly, information about prices charged in different markets and outlets is quickly outdated.⁸³ So is knowledge about wage rates and interest rates. The problem is intensified if, as stated by the Bank for International Settlements, "a high average rate of inflation almost certainly entails an increased variance of individual price changes."⁸⁴ As Arthur M. Okun, Senior Fellow of the Brookings Institution and a former Chairman of the President's Council of Economic Advisers, says, inflation "disturbs a valuable set of institutions that economize on information, prediction, and transaction costs through continuing employer-worker and buyer-seller relationships."⁸⁵ Many others have pointed out that inflation erratically affects the tax burden, especially that of firms, because the tax system is based on nominal incomes and book profits.⁸⁶

In his Nobel lecture, Milton Friedman of the University of Chicago discussed limitations of indexing as a method of minimizing the impact of inflation on efficiency. Inflation that is high on the average tends to be highly variable in its rate, and "increased variability shortens the optimum length of unindexed commitments [which

would itself increase transaction costs] and renders indexing more advantageous. But it takes time for actual practice to adjust. In the meantime, prior arrangements introduce rigidities that reduce the effectiveness of markets. An additional element of uncertainty is, as it were, added to every market arrangement. In addition, indexing is, even at best, an imperfect substitute for stability of the inflation rate. Price indexes are imperfect; they are available only with a lag and generally are applied to contract terms only with a further lag.

"These developments clearly lower economic efficiency."⁸⁷

Friedman also effectively states the general inefficiency argument. "A second related effect of increased volatility of inflation is to render market prices a less efficient system for coordinating economic activity. A fundamental function of a price system . . . is to transmit compactly, efficiently, and at low cost the information that economic agents need in order to decide what to produce and how to produce it, or how to employ owned resources. The relevant information is about *relative* prices—of one product relative to another, of the services of one factor of production relative to another, of products relative to factor services, of prices now relative to prices in the future. But the information in practice is transmitted in the form of *absolute* prices—prices in dollars or pounds or kronor. If the price level is on the average stable or changing at a steady rate, it is relatively easy to extract the signal about relative prices from the observed absolute prices. The more volatile the rate of general inflation, the harder it becomes to extract the signal about relative prices from the absolute prices: the broadcast about relative prices is, as it were, being jammed by the noise coming from the inflation broadcast. . . . At the extreme, the system of absolute prices becomes nearly useless, and economic agents resort either to an alternative currency or to barter, with disastrous effects on productivity. . . .

"These effects of increased volatility of inflation would occur even if prices were legally free to adjust—if, in that sense, the inflation were open. In prac-

tice, the distorting effects of uncertainty, rigidity of long-term contracts, and the contamination of price signals will almost certainly be reinforced by legal restrictions on price change. In the modern world, governments are themselves producers of services sold on the market: from postal services to a wide range of other items. Other prices are regulated by government and require government approval for change: from air fares to taxicab fares to charges for electricity. In these cases, governments cannot avoid being involved in the price-fixing process. In addition, the social and political forces unleashed by volatile inflation rates will lead governments to try to repress inflation in still other areas: by explicit price and wage control, or by pressuring private businesses or unions 'voluntarily' to exercise 'restraint,' or by speculating in foreign exchange in order to alter the exchange rate."⁸⁸

That inflation impairs productivity seems certain. But I have no idea how much it may have done so from 1973 to 1976.

Lessening of competitive pressure and changes in the quality of management

According to my calculations, output per unit of input in the United States surpassed that in Western Europe (in 1960) and Japan (in 1970) by a much wider margin than is explained by determinants whose effects I could calculate directly.⁸⁹ In discussing the differential with Europe, I listed less intense competitive pressures in Europe among probable contributors to the differential, noting that "less competition means that inefficient firms and inefficient management are under less pressure to minimize costs and less likely to be displaced by those who can do better." I also wrote: "In the field of 'managerial knowledge' it is probably futile to distinguish between what management knows and what management does with the knowledge it has; but somewhere in this area, I suspect, lies an important part of the explanation for the productivity differential."⁹⁰ Competitive pressure clearly affects management quality but is not the only influence on it. I have suggested

that increased competition and improved management probably contributed to the increase over time in efficiency in France. Eleanor M. Hadley of George Washington University and the General Accounting Office concluded that increased competition has done so in Japan.⁹¹

When I examined American economic growth in 1961, I quoted Edward S. Mason and Theodore J. Kreps to the effect that either there had not been a change in monopoly or the size of the competitive area in America or it was impossible to know whether there had been any change.⁹² This seems still to be the case.

The only broad quantitative measures available refer to concentration in manufacturing industries. The four-firm concentration ratio for an industry is the percentage of the industry's shipments made by the four firms with the largest value of shipments. A summary measure can be obtained by computing weighted average concentration ratios for all manufacturing industry, letting each individual industry's four-firm ratio be weighted by the value added originating in that industry. F. M. Scherer has provided such ratios for several years:⁹³

1947	35.3
1954	36.9
1958	37.0
1963	38.9
1972	39.2

Although there is some increase in concentration, it is small from 1963 to 1972. The increase up to 1963 seems to result mainly from changes in industry composition and weights; with constant weights and constant industry definitions—but unavoidably, much less complete coverage—the percentages are those shown below:

1947	38.0
1954	38.1
1958	
1963	37.9
1972	38.5

I am aware, of course, that some observers believe the breadth and strength of competition has declined. Sometimes this belief is related to the argument of a previous section, which

described how the need to interact with the government has diverted executive attention from competition and other conventional concerns. Other alleged effects of regulation (including financial regulation) are the heightening of barriers against the entry of new firms and the elimination of small firms that are unable to afford compliance costs (although the latter seems to be more a forecast of things to come than a description of events up to 1976). Conglomerate mergers, which peaked in number and value in 1966–68, are sometimes suspected of having lessened competition, but Peter O. Steiner of the University of Michigan, who cites Jesse W. Markham of Harvard University and the Bureau of Economics of the Federal Trade Commission in addition to his own analysis, found no major effect of this type.⁹⁴ On the other side, it is pointed out that foreign competition has become much more intense. Also, recurrent and persistent underutilization of resources since 1969 has cut into profits and made for a highly competitive situation.

Burton H. Klein of the California Institute of Technology places great emphasis on competition—or to use his term, “rivalry,” which he particularly associates with battles for market shares—as the engine driving firms to improve technique and especially to lower costs.⁹⁵ He regards the early post-war “golden age” as “primarily the result of a highly competitive economy generating a wide diversity of ideas.” As Klein sees it, the situation has changed, evidently, since about 1965. “The dynamism of the American economy is highly dependent upon new firms. . . .” Klein believes the entry of new firms has become rare, primarily because of the unavailability of risk capital for new firms. “Openness” of firms, which in Klein’s terminology is the opposite of a closed hierarchical system that is resistant to new blood and radical new ideas, has diminished. “A decline in openness,” he reports, “has caused large firms to become more structured and, as such, less able to deal with risk. Moreover, the change in internal incentives results in the selection of managers with quite different personality characteristics. And there

is a good deal of evidence that imaginative scientists and engineers are being replaced with business school graduates and lawyers, that is, by people who perform the same function in modern societies as did genetic inbreeding in feudalistic societies.”⁹⁶ It is evident that Klein blames loss of rivalry for alleged managerial changes that others ascribe to government regulation.

Managerial behavior is, of course, subject to many influences. For example, Alfred Rappaport of Northwestern University believes that executive compensation systems often instill a drive to produce short-term results, influencing management to forego investment in capital equipment and R. & D. and to take other actions, such as corporate takeovers, that sacrifice longer term earnings to secure short-term accounting profits of less value to the firm.⁹⁷

Rise in energy prices

The sharp drop in the growth of the residual series coincided with the sudden increase in OPEC oil prices at the end of 1973 and in early 1974. Explanations that ascribe the productivity drop to the oil price increase are therefore exceptional in that they account for the timing of the drop.⁹⁸ One study described later in this section, that by Rasche and Tatom, even estimated the effect to be of a size about equal to the amount by which growth of the residual deteriorated. To be able to accept this estimate would be doubly satisfying because it would not only solve the productivity mystery but also would be somewhat reassuring for the future. For even if a one-time fuel price increase permanently lowers the level of productivity, it should not reduce the subsequent growth rate once the transition is completed. Unfortunately, the Rasche-Tatom estimate appears to be many times too big, for reasons explained below, and I do not think that much of the productivity slowdown can be ascribed to energy prices.

It is necessary to distinguish three effects of the oil price increase. First, the increase in the price of imported oil was the main component of a deterioration in the terms of trade that reduced the Nation’s command over goods and

services by about 1 percent, but this did not directly change national income (or other output measures, such as GNP) or productivity.⁹⁹ Hence the "terms of trade" effect can be ignored here. Second, the Government did intervene, with controls over fuel consumption and choice of fuels, to try to reduce present and future imports. These were among the many new controls discussed earlier. Third, the high price of energy resulting from the higher price of imported oil probably caused nonresidential business to use less energy per unit of labor, capital, and land.¹⁰⁰ The questions that must be explored here are, How much? And what was the effect on output per unit of input? This section describes some studies.

The usual way to approach the subject is to treat energy as if it were a factor input. Energy gets about 5 percent of the total input weight in the business sector, according to Roger Brinner.¹⁰¹ Data from the Nuclear Energy Policy Study Group, when combined with estimates by Sam H. Schurr and Joel Darmstadter of Resources for the Future, yield about the same result, 4.6 percent. The calculation is as follows. The Study Group put the cost of primary energy in 1975 at \$70 billion.¹⁰² Schurr and Darmstadter state that "no more than 60 percent of yearly energy use goes to the (nonresidential) business sector."¹⁰³ Hence the value of primary energy used by nonresidential business can be put at \$42 billion in 1975, which was 4.6 percent of a \$916 billion nonresidential business national income.¹⁰⁴ This percentage is based on energy prices after the 1973-74 oil price increase; before the increase it was smaller.

Given the weight of energy, the effect on output per unit of input of any given percentage decline in energy use by nonresidential business depends on the elasticity of substitution between energy, on the one hand, and labor and capital, on the other. If the elasticity of substitution is unity and the weight of energy is 5 percent, a 1-percent reduction in energy consumption with no change in labor and capital would reduce output by 0.05 percent and out-

put per unit of input by the same percentage.

To be sure, this approach has difficulties. The amount by which the price rise may have reduced fuel consumption in nonresidential business is hard to estimate. One reason is that it is not easy to say what would have happened to total energy consumption after 1973 in the absence of a price change, because earlier experience was not uniform.¹⁰⁵ The ratio of total energy consumption to GNP has declined in the long run—say, since 1920—but not steadily; there was little net change from about 1953-54 to 1973. Short-run fluctuations in the ratio have been sizable, reflecting in part effects of the business cycle and war. Worse, a suitable time series for actual energy consumption by nonresidential business has not been compiled for either the historical or recent period.¹⁰⁶ Much of the energy supply is used to heat, air condition, and illuminate dwellings and government buildings; for cooking and household appliances; and to operate consumer and government motor vehicles, planes and ships. The remainder—that is, nonresidential business use—may not have moved as the total did. Partly because of these difficulties, only rough impressions of the elasticity of substitution are available.

Moreover, energy is not really a factor input but is itself the product of labor, capital, and land (natural resources). At the point where it reaches the user, most of its value consists of the earnings of the labor and capital required to transform a natural resource into the form needed by energy users and move it to where it is needed. Additional energy can always be provided by adding labor and capital, although it may require the use of poorer natural resources requiring more labor and capital.

This suggests another approach to the question. Suppose 20 percent of energy were imported and higher import prices caused imports to be cut by one-fourth (5 percent of consumption). The loss could be made good without changing consumption by raising domestic energy production from 80 percent to 85 percent of consumption. Suppose the cost in labor and capital

per unit of energy were as much as twice as high for the additional energy as for existing domestic production. If 80 units of labor and capital were required to produce 80 percent of consumption, 90 units would be required to produce 85 percent of the same consumption. The labor and capital requirement for domestic energy production per unit of energy would be raised to 105.9 percent ($90 \div 85$) of the original requirement. This would leave business with as much energy as ever. If domestically produced energy were initially 4 percent of nonresidential business output and input, output per unit of labor and capital in nonresidential business would be reduced by 4 percent of 5.9 percent, or 0.24 percent. This figure could be reduced by some substitution of labor and capital for energy. These import substitution numbers are only illustrative, but they suggest the dimensions of the effect.

I turn now to actual estimates that have been made of the effect of the energy price increase on the course of productivity after 1973. George L. Perry, a Senior Fellow of The Brookings Institution, has made what I regard as the most reasonable calculation.¹⁰⁷ Perry prepared a time series for nonresidential business use of energy, measured in BTUs, that begins in 1949. It covered about three-fifths of the total; the main omissions were commercial uses of petroleum for heating and transportation. For the 1949-73 period (as well as for subperiods) he related this series for energy use to gross business product, the ratio of actual to potential gross business product, and the trend in the ratio of energy use to output (which is downward by 1.3 percent to 1.6 percent a year). He then used three alternative equations based on these data to predict the ratio of energy use to gross business product in 1976. They predicted declines from 1973 to 1976 of 7.3, 7.0, and 5.3 percent, respectively. The actual decline was 10.2 percent. The difference of 2.9 to 4.9 percent between actual and predicted reductions is an estimate of the reduction one can ascribe to higher energy prices or other unspecified factors, including Government controls. Perry considers this a maximum estimate because the equations assume a

constant downtrend through 1973 in energy per unit of gross business product, whereas the decline was actually accelerating. (If the estimated 1973-76 decline in the absence of the price rise is understated for this reason, the effect of the price rise on energy use is overestimated.) Perry next estimates that the value of the energy saved by the 2.9- to 4.9-percent reduction was \$2.4 billion to \$4.1 billion, based on the 1976 general price level but (appropriately) at the average of the 1973 and 1976 ratios of the price of energy to the general price level.¹⁰⁸

Because Perry is interested in output per hour worked rather than output per unit of input (and also to avoid explicit estimates of elasticities of substitution), he uses a variant of the income share approach at this point. He reasons as follows:

"Even if business is assumed to have accomplished all this saving by substituting labor for energy, not much extra labor could have been used in this process. \$4.1 billion is 0.5 percent of employee compensation in the business sector. \$2.4 billion is 0.3 percent. Since an unknown amount of the substitution must involve capital as well as labor, the added labor input would be smaller still. . . . Finally, some part of the energy saving must have involved no substitution of other inputs at all: lowering thermostats to 68 degrees in winter and raising them to 75 degrees in summer or turning out every other light in hallways are obvious examples, but there must have been less obvious examples of 'waste' that were eliminated only after the OPEC crisis made firms more energy conscious . . . I know of no way to pin down the answer more accurately; but on the basis of the evidence here, it seems unlikely that higher energy prices have caused more than a 0.2 percent loss of labor productivity and potential output between 1973 and 1976."¹⁰⁹

When Perry reduced the initial 0.3 or 0.5 percent to 0.2 percent in order to obtain the effect of the higher energy price on labor productivity (output per hour) he took into account both the substitution of capital for energy and the conservation of energy without loss of production. To estimate the effect on

output per unit of input (my objective here), only the second reduction should be made. A reduction from a midpoint 0.4-percent estimate to 0.3 percent is reasonable for 1976. This would mean that higher energy prices reduced the growth rate of the residual from 1973 to 1976 by 0.1 percentage points. This is a significant amount, but less than one-twentieth of the drop for which an explanation is needed.

The conclusion that output per unit of input would be cut 0.3 percent by a 3.9-percent reduction in energy use in nonresidential business (the midpoint of Perry's estimates) is broadly similar to—indeed, even above—two other estimates. Ronald G. Ridker, William D. Watson, Jr., and Adele Shapanka, all of Resources for the Future, wrote: ". . . we believe that the following rule will prove to be in the ball park. According to this rule, a 10 percent reduction in net industrial and commercial energy use per unit of output, over what would otherwise have occurred had the pre-1973 trend in the ratio prevailed, results in a 0.5 percent decline in GNP during a transition period of ten to fifteen years."¹¹⁰ William W. Hogan and Alan S. Manne of the Institute for Energy Studies at Stanford University estimated the decline in output would be 0.4 percent from a 10 percent reduction in energy.¹¹¹ Moreover, the President's Council of Economic Advisers points out that the short-term effect is less than the longer term effect. "Widespread declines in productivity growth rates would only occur as adjustment of production methods to economize on energy took place. Actually, adjustment to the new oil prices has been extremely slow."¹¹²

Before Perry's study, Robert H. Rasche and John A. Tatom of the Federal Reserve Bank of St. Louis estimated that the increase in the price of energy permanently reduced economic capacity, or potential output, by 4 to 5 percent.¹¹³ This would mean a reduction of 5 or 6 percent in potential nonresidential business national income and in my residual series. Their estimate flowed from what are, conceptually, two equations. One assumes that the elasticity of demand for energy used in production is unity, so that each 10-percent increase

in the price of energy relative to the price of output reduces energy input by 9.1 percent. The other assumes a Cobb-Douglas-type of production function, in which energy is treated as an input along with labor and capital. Energy is given a weight of 12 percent, so each drop of 9.1 percent in energy consumption reduces GNP by 1.1 percent. Lacking data on energy consumption, Rasche and Tatom condensed the two equations, estimating that each 10 percent increase in the relative price of energy reduces output by 1.1 percent.

Although the condensation of the equations eliminates the calculation of energy input, it is easy to calculate that the assumption of unit elasticity of demand implies that the 57-percent increase in the relative price of energy from 1973 to 1976 reduced energy use by 36 percent relative to what it would otherwise have been (since $100 \div 1.57 = 64$) The Rasche-Tatom estimate of the productivity loss assumes that this actually happened. Although the size of the actual reduction is uncertain, it is obvious that it did not remotely approach such a magnitude. Rasche and Tatom radically overestimated the size of the quantity response to the price increase. A second reason the Rasche-Tatom result is so high is their use of a 12-percent weight for energy, which they based on "a finding that the share of energy costs in total factor costs" was quite stable throughout the 1960's at around 12 percent of total factor costs. The estimate cited refers only to manufacturing.¹¹⁴ It is far above any of the estimates for nonresidential business or the whole economy that I have located.

If Perry's estimate that the use of energy was reduced by 2.9 to 4.9 percent were substituted for the implied Rasche-Tatom estimate of 36 percent, and if Brinner's 5 percent weight were substituted for their 12 percent, then the second Rasche-Tatom formula would yield 0.14 to 0.25 percent as the reduction in output per unit of input in 1976 that stemmed from the energy price increase.¹¹⁵

Another sizable estimate has recently appeared. Edward A. Hudson of Data Resources, Inc., and Dale W. Jorgenson of Harvard University analyzed the

impact of higher energy prices by using their "dynamic general equilibrium model of the U.S. economy."¹¹⁶ A feature of the model is its reliance on a close relationship between the quantity of capital and energy use—that is, energy and capital are considered complements with a low elasticity of substitution between them. But a high degree of substitution is thought to exist between energy and capital, on the one hand, and labor, on the other. The model "was used to simulate two economic growth paths over the 1972–1976 period. In the first simulation, actual values of the exogenous variables, including world oil prices, were employed as the basis for model solution. . . . In the second simulation, 1972 energy prices were employed over the whole 1972–1976 period." Since all other exogenous variables were the same, "the differences in simulated economic activity can be attributed solely to the impact of the oil price increase."¹¹⁷ These differences include the effects of the impact of the oil price increase on demand as well as on production relationships.

Their model results showed energy consumption 8.8 percent lower in 1976 with the energy price increase than without, real GNP 3.2 percent lower, and energy consumption per unit of GNP 5.8 percent lower. The energy estimates refer to all uses of energy, not just business use, so the 5.8-percent reduction is not necessarily comparable to Perry's 2.4–4.9 percent; still, it is in the same ball park. The model showed labor input lower by 0.5 million jobs or just over 0.5 percent with the energy price increase than without it, and GNP per unit of labor 2.57 percent lower. Capital input evidently was 3.0 percent lower.¹¹⁸ The base to which the percentage reduction in capital refers is unclear. If it includes all nonresidential and residential business capital and land (that is, all nonlabor input) the reduction in total factor input is about 1.23 percent because the weights, gross of depreciation, in the economy as a whole, are about 0.72 for the drop of something over 0.5 percent in labor and 0.28 for the 3.0 percent drop in "capital."¹¹⁹ With total energy use reduced 8.8 percent, energy per unit of

factor input is lowered by 7.7 percent. With GNP reduced 3.2 percent, GNP per unit of factor input is lowered by 2.0 percent. If as seems reasonable, 1973 GNP was unaffected, the rise in energy prices would than have reduced the growth of GNP per unit of input in the whole economy by almost 0.7 percentage points from 1973 to 1976.

The implied drop of 2.0 percent in GNP per unit of labor, capital, and land as the result of a mere 7.7-percent decline in total energy consumption per unit of labor, capital, and land is puzzling. The value of energy used in nonresidential business does not exceed 4 percent of total factor input in the whole economy. Suppose business use of energy fell by the same percentage (7.7) per unit of input as total use. The usual procedure would then yield a reduction in output per unit of labor, capital, and land of only 0.3 percent (7.7×0.04). Hudson and Jorgenson obtain a result seven times as large. The disparity is partly due to different estimates of elasticities of substitution, but it does not seem that this could be the whole explanation. Both the difference in elasticities and the cause of the remainder of the difference need more explanation than has been made available.

My citation of several studies may create the false impression that the scale of investigation of the effect of the energy price increase on past output has been substantial. In fact, study of the actual effect of the change in the energy situation on total output and productivity since 1973 is miniscule even in comparison with the resources devoted to trying to guess at its implications for the 21st century. More research specifically devoted to measuring the effects already experienced is needed. Pending such research, the estimate that the energy price increase reduced the growth rate of my residual by about 0.1 percent a year from 1973 to 1976 is reasonable.

The "shift to the services" and other structural changes

Whenever productivity is discussed at any length, someone will assert that opportunities to raise productivity are less for services than for commodities,

that the service share of the economy is rising rapidly, and that the overall rate of productivity advance most therefore decline. I examined this allegation in a long article in 1973 and concluded that within the *nonfarm* nonresidential business sector it simply has no substance.¹²⁰ The most obvious, although not the only, reason is that within this sector there was no appreciable shift to the services. This is so whether one considers employment classified by industry or output classified by end product. The *shift* of employment from *farming* to other commodity and service industries did affect productivity. Because the shift reduced misallocation, its effect was favorable and its diminishment therefore unfavorable. But the amount was estimated in the present study and is excluded from my residual series.

In the same article I stressed that a classification based on commodities and services is in any case inappropriate because industries or products classified in each group are completely lacking in homogeneity with respect to productivity change—or to almost anything else. Both groups contain industries of fast and slow productivity growth.

The Bureau of Labor Statistics has also explored the effect of the shift to the services. Jerome A. Mark, its Assistant Commissioner for Productivity and Technology, noted in testimony before the Joint Economic Committee that services can be defined very narrowly, to include only business or personal services, or (as I defined them) very broadly to include all noncommodity producing industries. In either case the effect of the shift was trivial. Under the narrow definition the effect of shifts in hours to the services was -0.01 percentage points in 1947–76, zero in 1947–66, and -0.02 in 1966–76. By the broad definition it was slightly positive: 0.01 percentage points in 1947–76, zero in 1947–66, and 0.04 in 1966–76.¹²¹

Quite apart from such calculations and the inappropriateness of a commodity-service dichotomy, in the article previously cited I raised "a fundamental objection to the procedure of analyzing the behavior of components in the past in order to judge future productivity

trends within nonfarm nonresidential business. The objection is to the implicit assumption that components which gain or lose share of employment or total input, and which have above average or below average productivity gains in one period, will have the same characteristics in the next period."¹²²

I went on to say:

"Suppose we classify nonfarm nonresidential business or a major portion of it by detailed components, whether by industry or by end product. Available evidence suggests that over any time span that is long and terminated by years that are representative we are likely to find that employment and other input measures increased by an above average amount in components whose productivity increased by an above average amount. This is not really surprising. One reason is that components toward which demand shifts secure the greatest productivity gains from economies of scale. Another is that new components typically both increase their shares and have large productivity gains. A third is that demand appears typically to be so elastic that declining relative prices resulting from above average productivity gains raise volume more than enough to offset the saving in employment and other inputs that results from above average productivity gains."¹²³

And finally:

"If this relationship holds, components with above average productivity gains during a period will be found to have bigger shares of employment or total input at the end of a period than at its beginning. Does this mean we should expect ever-rising rates of productivity growth in the sector as a whole? Of course not. Such a tendency would be present only if at every date the components which had high rates of productivity gain and increased their shares of input or employment in previous periods will again have high rates of productivity gain, and increase or at least not reduce their shares, in the period to come. There is no such continuity. Industries rise and fall.

"Suppose, instead, that in some period or by some classification the relationship is the opposite: that components with fast-rising productivity in a period

systematically lose their shares of inputs. Would this mean an ever-falling rate of productivity increase? No, for the same reason."¹²⁴

Possible errors in the data

The change in the course of NIPPE was so sudden and sharp after 1973 that some observers have wondered whether it really happened. They ask whether some development might have introduced a sudden error into the output measure.

An error in real output could result from an incorrect series for output valued in current prices or from errors in price data used for deflation. Output (national income) in current prices is measured in two ways. In one, GNP is first estimated, as the sum of expenditures for final products (personal consumption expenditures, gross private domestic investment, net exports, and government purchases). To obtain national income, capital consumption, indirect business taxes, and business transfer payments are then subtracted from GNP and subsidies are added. The second way, on which my series is based, is to add the several types of earnings from current production (employee compensation, proprietors' earnings, rental income of persons, corporate earnings, and net interest). The two estimates agree rather well from 1973 to 1976.

There is, nevertheless, one reason to suspect that national income in current prices may be unusually subject to error in 1973-76. It pertains to the inventory valuation adjustment, which enters into the estimates obtained by both methods.¹²⁵ Estimates of inventory valuation adjustment are needed to obtain the change in nonfarm business inventories (a component of gross private domestic investment, which enters into the first estimate) and nonfarm proprietors' earnings and corporate earnings (components of the second estimate). The inventory valuation adjustment is difficult to measure and it was unusually big from 1973 through 1976 as the result of large price movements. At the same time, difficulties in its estimation were increased by widespread changes in business accounting practices (shifting from first-in-first-out

to last-in-first-out accounting). As a result, output in current prices was more susceptible to measurement error, in either direction, than usual. Even so, an error in the current-dollar figures large enough to alter the productivity picture materially would surprise me greatly. With respect to the possibility of systematic downward bias in the current-dollar series after 1973, I am not aware of any development likely to lead to such a bias.

The price data used for deflation are ordinarily subject to greater error than the current-dollar measures. The period under discussion was one of unusually large price change, and this may have made the data unusually prone to error. I do not know that price indexes are subject to greater error when prices are changing sharply than when they are relatively stable, but such a relationship seems plausible. For some components of fixed investment and government purchases from business there may be timing discrepancies between a price index and the current-dollar figure it is used to deflate; the former, for example, may refer to new contracts, the latter to deliveries or work done. Error from timing mismatches becomes more difficult to avoid if prices fluctuate widely.

In the period under review there is also a special consideration: Price data may have been affected by price controls. Price controls tend to cause understatement of reported prices, which would cause measures of real output to be overstated. Controls of fluctuating severity were in effect from August 15, 1971, through April 1974. Consequently output in this period may be overstated relative to earlier and later years. This would make the 1969-73 growth rate too high and the 1973-76 rate too low. If 1973 prices were understated by one-half percent, for example, the growth rates of output and the residual would be 0.13 percentage points too high in 1969-73 and 0.17 points too low in 1973-76. Unless the price bias were bigger than this, the retardation in the growth rate of the residual would still be confined to the 1973-76 period.¹²⁶

The Federal Reserve Board Index of Industrial Production is sometimes compared with components of real GNP that roughly correspond to its cover-

age.¹²⁷ With respect to changes from 1973 to either 1976 or 1977, and based on the data available at the end of 1978, the series happen to be in close agreement; the Industrial Production Index actually yields growth rates slightly (about 0.1 percent a year) lower than the GNP series.¹²⁸

There is no way to determine the accuracy of the output data conclusively; only impressions can be offered. Mine is that statistical errors in output measurement may have contributed something to the observed productivity slowdown, but it is improbable that they contributed very much.

The growth rate of NIPPE would be affected by errors in employment data as well as in the output series, except to the extent that inconsistencies are eliminated by measuring current-dollar output by adding the several types of earnings from current production.¹²⁹ The growth rate of the residual would also be affected by noncompensating errors in the series measuring effects of other determinants. Random errors in these series, if not offsetting, consequently could cause the amount of retardation in the residual to be overstated—or understated.¹³⁰

It is sometimes suggested that growth of an illegal economy, or a barter economy, has caused a large amount of production to disappear from the scope of the output measure. I have not been able to visualize how this might have occurred in such a way as to instill a sudden sharp downward bias in output per unit of input when output is measured by adding the several types of earnings from current production.

Summary and Clues

Seventeen suggested reasons for the slowdown in my residual series have been explored. I rejected a few suggestions, expressed skepticism about some, had no opinion about others, and characterized the rest as probably correct but individually able to explain only a small part of the slowdown. No single hypothesis seems to provide a probable explanation of the sharp change after 1973.

It is possible, perhaps even probable, that everything went wrong at once

Table 2.—GNP in 1973 in Constant (1972) Prices and Growth Rates of GNP Per Hour Worked, 1948-73, 1973-76, and 1973-78, by Industry¹

Industry ²	GNP, 1973 (Billions of 1972 dollars)	Growth rates (percent)		
		1948-73	1973-76	1973-78
Agriculture, forestry, and fisheries.....	35.9	4.5	1.1	2.0
Mining.....	19.2	3.6	-6.6	-4.8
Contract construction ³	58.3	1.6	.9	-1.1
Manufacturing; nondurable goods.....	124.1	3.3	2.0	2.3
Manufacturing; durable goods.....	189.0	2.6	1.1	1.1
Transportation.....	50.6	3.0	.1	.8
Communication.....	32.0	5.2	8.4	7.1
Electric, gas, and sanitary services.....	30.0	5.4	1.4	.7
Wholesale trade ³	88.9	3.3	-1.3	-6
Retail trade ³	123.1	2.4	1.1	1.1
Services ⁴	137.9	1.0	-2	.1

1. Denominator of GNP per hour worked excludes hours worked by unpaid family workers.
2. Excludes finance, insurance, and real estate; private households; and government and government enterprises.
3. Classification for 1948-73 growth rate differs slightly from classification used for 1973-76 and 1973-78 rates.
4. Excludes private households; includes nonprofit institutions.

Sources: Calculated from national income and product account tables 6.2, 6.11, and (to eliminate hours in private households) 6.10.

among the determinants that affect the residual series. Many determinants whose effects were directly estimated contributed to the drop in the growth rate of NIPPE from 1948-73 to 1973-76, and the rest of the drop may have resulted from a large number of the explanations explored here, with each subtracting one- or two-tenths of a point from the growth rate. Several developments may have combined to slow the advance in knowledge itself, and others to retard incorporation of new knowledge into production. Similarly, inflation, regulation, soaring energy prices, high taxes, and changing

attitudes may have conspired to exert a large adverse impact upon the miscellaneous determinants of output that forced the residual series into an actual decline.

The finding that the unexplained slowdown in productivity growth started only after 1973 not only is in itself an important clue to the causes of the slowdown but also permits one to arrive at another: The retardation was typical of the main industrial branches of the economy rather than focused in one or two areas for which one might seek special explanations.¹³¹ Table 2 compares the rates of real GNP per

Table 3.—Selected Growth Rates in Industrial Countries, Selected Periods

Country	Growth rates (percent)				
	1950-73	1960-73	1973-76	1973-77	1973-78
Real gross domestic product per employed civilian:					
United States.....	2.1	2.1	-0.1	0.3	n.a.
Canada.....	2.6	2.4	.4	.5	n.a.
Japan.....	7.8	8.8	2.3	2.7	n.a.
France.....	4.6	4.6	2.7	2.9	n.a.
West Germany.....	5.0	4.4	3.3	3.3	n.a.
Italy.....	5.3	5.8	.8	-2	n.a.
United Kingdom.....	2.5	2.6	.4	.4	n.a.
Output per hour in manufacturing:					
United States.....	2.7	3.2	1.2	1.5	1.7
Canada.....	4.2	4.6	1.3	2.1	2.5
Japan.....	9.7	10.0	1.4	2.4	3.5
Belgium.....	n.a.	7.0	6.7	6.6	n.a.
Denmark.....	5.2	7.0	6.2	5.2	4.7
France.....	5.3	5.7	4.7	4.8	4.8
West Germany.....	5.8	5.5	6.0	5.5	5.1
Italy.....	6.6	7.2	3.0	2.4	2.6
Netherlands.....	6.2	7.4	5.4	4.9	n.a.
Sweden.....	5.3	6.7	.9	.5	1.5
United Kingdom.....	3.1	3.9	.6	-2	.2

n.a. Not available.

Sources: Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, "Comparative Real Gross Domestic Product, Real GDP Per Capita, and Real GDP Per Employed Civilian, Seven Countries, 1950-77" (June 1978); "Output Per Hour, Hourly Compensation, and Unit Labor Costs in Manufacturing, Eleven Countries, 1950-78" (July 10, 1979).

hour at work in 1948-73 with the rates from 1973 to both 1976 and 1978. In 10 of the 11 branches, including both non-durable and durable goods manufacturing, the growth rates of GNP per hour in both 1973-76 and 1973-78 were much below the 1948-73 rate.¹³² The only exception is communication (mainly the telephone industry).¹³³ It seems safe to infer that the decline in the residual was also general.

International comparisons provide an opportunity to obtain still another clue. To do so, however, it would be necessary to develop up-to-date estimates of the sources of growth in other advanced countries comparable to mine for the United States.¹³⁴ If the residual series for other countries showed no retardation, it would suggest a localized cause for the decline in the United States. But if most other countries experienced a similar setback, this would strengthen the case for causes (such as inflation) that have been widespread.

The top panel of table 3 compares growth rates of output per employed civilian in the whole economy in the

United States and six other large industrial countries. In the United States the growth rate per employed civilian dropped by about 2 percentage points from either 1950-73 or 1960-73 to either 1973-76 or 1973-77. The rate also dropped in all six other countries shown. The drop was smaller than in the United States only in Germany. It was about the same in Canada, France, and the United Kingdom. In Japan and Italy it was much larger. It should be called, however, that all these countries shared in the world recession after 1973.

The bottom of table 3 compares output per hour in manufacturing in 1973-76, 1973-77, and 1973-78 with rates in 1950-73 and 1960-73 for 10 countries besides the United States. Among the six large foreign countries, all except Germany experienced an unambiguous drop in the rate. The drop was less than in the United States in France and larger in Canada, Japan, Italy, and the United Kingdom. Among the four smaller countries, the rate dropped sharply in Sweden. If the recent years are compared with 1960-73, the rate

also dropped appreciably (though much less than in Sweden) in Denmark and the Netherlands, but not very much in Belgium.

These data show that sharp declines in the growth rates of NIPPE and of output per hour in manufacturing were widespread. They do not prove that this pattern carries over to the residual, but it may. It would be worthwhile to find out.¹³⁵

Another way to learn more about the causes of the slowdown in the residual is to investigate intensively the suggestions I have reviewed in this chapter. Although some are not readily amenable to research, many are, and properly focused investigations on each of them would be valuable.

Finally, the mere accumulation of experience as time elapses will be helpful. The residual series may regain its lost ground, resume its old growth rate at the new lower level, or assume a lower growth rate from this lower level. Knowledge of the actual path over the next few years should assist in the identification of causes.

Footnotes

1. The Brookings Institution, 1974.

2. To be published by The Brookings Institution at the end of this year. Methods of estimation are little changed from those described in *Accounting for Growth*.

3. The practice of using two decimal points to present growth rates and the contributions of the sources is adopted to prevent rounding errors in small numbers when sources or periods are compared. It is not meant as an indication of accuracy.

4. Three aspects of the education component need stating even in a brief summary. First, it counts only regular, formal education (except insofar as other types of education are systematically related to formal education). Second, it measures the contribution made to output by increased skills and versatility of workers resulting from additional education *when the state of knowledge in the society is given*. Neither the fact that advances in knowledge permit new knowledge to be transmitted in educational institutions nor the possibility that a more educated population may advance the frontiers of knowledge more rapidly is reflected in the education estimate. Third, the size of the contribution made by education in any time period depends upon the difference between the education of persons who left employment during the period and those who entered it, not the difference between those attending school at the beginning of the period and those attending at its end.

5. See *Accounting for Growth, 1929-1969*, p. 77, for the main categories. Part of the fifth category now appears in table 1 as "Changes in the legal and human environment" and therefore is no longer included in miscellaneous determinants.

6. To the extent that they are not offsetting, some types of error in the estimates for other determinants also affect this estimate. This, of course, is not a matter of classification but of accuracy.

7. Estimates through 1975 were published in Edward F. Denison, "Effects of Selected Changes in the Institutional and Human Environment Upon Output Per Unit of Input," *SURVEY OF CURRENT BUSINESS*, vol. 58 (January 1978). The 1976 estimate assumes the changes analyzed in the article curtailed the annual increase in output per unit of input less in 1976 than in 1975.

8. For an explanation of the effect of variations in the calendar on productivity see *Accounting for Growth*, pp. 67-68 and 311-13. The fact that 1976 was a leap year that consisted of 52 weeks plus a Thursday and Friday probably raised the 1976 figure for the residual and for productivity series.

9. "Tax Policy and the Supply Side," address before the American Economic Association and the American Finance Association in Chicago, August 29, 1978. The Secretary also pointed to regulatory costs.

10. Thomas O'Toole, *The Washington Post*, June 21, 1978. The experts also referred to increased Government regulation and an outdated patent policy.

11. National Science Board, National Science Foundation, *Science Indicators, 1976* (GPO, 1977), p. 207, and unpublished current and revised data. In this terminology, the whole business sector is covered by the word "industry."

12. The conversion of R. & D. expenditures to a constant price basis is subject to considerable possible error. The National Science Foundation, whose data I cite, uses the GNP implicit deflator.

13. Private R. & D. expenditures for pollution abatement, which appear mainly in the industry total, were an unchanging \$0.5 billion a year from 1972, the first year for which estimates are available, through 1976. Current-dollar data are from *SURVEY*, vol. 58 (February 1978), p. 12. They were deflated by the GNP implicit deflator.

14. *Science Indicators, 1976*, p. 207, and unpublished current and revised data. Values in 1972 prices are current-dollar values divided by the GNP implicit deflator.

15. *Ibid.*, p. 206, and unpublished current and revised data.

16. John W. Kendrick, *The Formation and Stocks of Total Capital* (New York: National Bureau of Economic Research, 1976); and *idem.*, "Total Investment and Productivity Developments," paper prepared for the Joint Session of the American Finance Association and the American Economic Association, New York, December 30, 1977.

17. *Science Indicators, 1976*, pp. 5, 184.

18. I have discussed this important aspect of output measurement more extensively in earlier books. See especially *The Sources of Economic Growth in the United States and the Alternatives Before Us* (New York: Committee for Economic Development, 1962), pp. 155-57 and 231-46. Hereinafter cited as *The Sources of Economic Growth*.

19. *Ibid.*, pp. 239-46.

20. "Research Expenditures and Growth Accounting," in B. R. Williams, ed., *Science and Technology in Economic Growth* (New York: Halsted Press for the International Economic Association, 1973).

21. He also estimated that if R. & D. were capitalized instead of expensed, the growth rate of output and the contribution of R. & D. would both be 0.2 percentage points higher.

22. The largest sample of cases for rates of return has been built up by Edwin Mansfield of the University of Pennsylvania and his associates. See Edwin Mansfield and others, "Social and Private Rates of Return from Industrial Innovation," *Quarterly Journal of Economics*, vol. 91 (May 1977), pp. 221-40. See also Edwin Mansfield, "Research and Development, Productivity Change, and Public Policy," in *Relationships between R and D and Economic Growth/Productivity* (National Science Foundation, November 9, 1977).

23. Kendrick, "Total Investment and Productivity Developments."

24. In "Research Expenditures and Growth Accounting," p. 80, Griliches says that "if one expands the boundaries of the relevant concept of R. & D., one should probably adjust the

estimated rates of return downward accordingly. . . (Kendrick does not do so.) If one adopted this alternative, he would need to use a higher rate of return in the 1970's than in the 1960's because the proportion of R. & D. that is largely irrelevant declined. Kendrick actually uses a lower rate in 1966-73 than in 1948-66, and this contributes to the decline in his estimate of the contribution.

25. I disregard in this article attempts to ascertain the results of R. & D. spending on the economy as a whole by correlation analysis because results are too tenuous. Problems are described in Zvi Griliches, "Issues in Assessing the Contribution of Research and Development to Productivity Growth," Harvard Institute of Economic Research Discussion Paper 41 (August 1978). For a comprehensive discussion of efforts to arrive at results of R. & D., see all the papers (by Edwin Mansfield, M. Ishaq Nadiri, Nestor E. Terleckyj, George C. Eads, and John W. Kendrick) in *Relationship Between R & D and Economic Growth/Productivity*.

26. Roger Brinner, *Technology, Labor, and Economic Potential* (Lexington, Mass.: Data Resources, Inc., 1978), p. 102.

27. Whether obsolescence should be deducted at all in calculating the contribution of R. & D. to growth is a question that need not be resolved here, but I shall note that such a deduction seems questionable to me (except when obsolescence results from demand shifts rather than new knowledge). This is because the social rates of return used in such calculations are based on comparisons of the output obtained when the fruits of an R. & D. project are available with the output obtainable from the same inputs when the fruits of that project are not available but all other existing knowledge, including any made obsolete by the new knowledge, is available. If R. & D. expenditures are multiplied by such a net rate of return to obtain the increase in output that they permit, where is the overstatement that the obsolescence deduction is meant to eliminate?

28. See citations in note 22.

29. Orio Giarini, "Economics, Vulnerability and the Diminishing Returns of Technology," *The Geneva Papers on Risk and Insurance*, no. 6, (October 1977), p. 10. Dr. Giarini is secretary general of the International Association for Risk and Insurance Economics Research and formerly was a division head of the Battelle Institute of Geneva.

30. F. M. Scherer, "Technological Maturity and Waning Economic Growth," *Arts and Sciences*, (Northwestern University, Fall 1978), pp. 7-11. The accuracy of patents as an index of inventions, it should be noted, has been debated for many years.

31. Bradley Graham, *The Washington Post*, September 3, 1978.

32. Giarini, "Economics, Vulnerability and the Diminishing Returns of Technology," p. 18.

33. Margiloff says that a decline in the public's expectation of technological innovation has led society to seek to meet problems by turning to financial solutions (pouring in money) and to improvements in management technique. Technology, he laments, has been left to set its own goals without guidance from the public, with adverse effects on productivity. He argues that it is possible to identify desired rates of change of productivity, particularly in manufacturing and construction, and that a suitable structure of recognition for achievements in these directions would result in having professionals strive to meet these needs, rather than less socially important ones that often enjoy more public and professional acclaim. He contrasts the great advances in the art of construction during the 19th century with their absence in the 20th. He points to a lessened attraction of engineering for the brightest young people, relative to the sciences. He regrets the absence of awards for technology comparable to the Nobel prizes for science and reports that the American Institute of the City of New York "was founded to spur the development of what we now call civilian technology and did so for about a hundred years." About 50 years ago the institute dropped activities that related to technology and began to sponsor the high school science fairs, no longer participating "in spurring or rewarding in any way the development of technology, which was its original function." Other organizations acted in much the same way. But it seems clear that the developments Margiloff describes are very long run and would not have produced a sudden recent change in productivity. (Irwin B. Margiloff, "When Technology Falts," address to the 142nd Annual Meeting of the American Institute of the City of New York, February 4, 1970, and correspondence with the author.)

Tesar reports that companies had hired expert designers from central Europe to compensate for American inactivity in machine science during the first half of the 20th century but that they no longer do so. He states that machine science never enjoyed a significant portion of research funding even in periods of research expansion; the National Science Foundation supported little basic research in mechanical engineering and mechanics. According to Tesar, the weakness of U.S. mechanical technology is especially damaging currently in the field of high-quality consumer products and in light industry. (Delbert Tesar, "Mission Oriented Research for Light Machinery," *Science*, vol. 201 (September 8, 1978), pp. 880-87.)

34. *Accounting for Slower Growth*, chapter 6, provides details of the calculation.

35. See Edward F. Denison, assisted by Jean-Pierre Poulletier, *Why Growth Rates Differ: Postwar Experience in Nine Western Countries* (The Brookings Institution, 1967; hereinafter cited as *Why Growth Rates Differ*), pp. 145-46, and citations provided there.

36. Both the Ford and Carter administrations have been well aware of these effects and tried to minimize them when legislation permitted. For a brief discussion of some of the steps taken or recommended, see *Economic Report of the President*, January 1979, pp. 85-91, 94, 130-31, and 162.

37. The costs of regulation of motor vehicles, aside from recalls, do not affect the residual. See citation in note 7.

38. Robert W. Crandall, "Federal Government Initiatives to Reduce the Price Level," in Arthur M. Okun and George L. Perry, eds., *Curing Chronic Inflation* (The Brookings Institution, 1978), p. 183.

39. Arthur Andersen and Company, *Costs of Government Regulation Study for the Business Roundtable* (Business Roundtable and Arthur Andersen and Co., 1979). The concept of incremental costs differs from mine in the case of capital costs; capital outlays are counted instead of the sum of depreciation and the net opportunity cost of invested capital.

40. Commission on Federal Paperwork, *A Report of the Commission on Federal Paperwork, no. 6: Final Summary Report* (GPO, 1977), pp. 5, 66. The estimate, the sum of estimates for small and large firms, is based on small samples. Though crude, it is apparently the best available. Inclusion of an additional \$354 million estimated to be spent by farms (p. 64) would not change the rounded aggregate.

41. A report by Peat, Marwick, Mitchell and Co., commissioned by OMB, indicated that

one-third of the government paperwork burden on small businessmen comes from State and local governments. A survey of small Wisconsin foundries found that 21 percent of costs allocable by level of government were for State and local governments and 70 percent for the Federal Government; the amount allocated excludes 34 percent of cost that was for consultants to ensure compliance and not divided by level of government. *Efforts to Reduce Federal Paperwork*, Hearing before the Subcommittee on Oversight of the Senate Committee on Government Operations, 94th Congress, 1st Session [GPO, 1976], pp. 27, 53.

42. This is a rough estimate that I derived from *Paperwork and Red Tape: New Perspectives—New Directions*, A Report to the President and the Congress from the Office of Management and Budget (GPO, 1978). The page references in the description that follows refer to that report.

An estimate of 465 million hours as of March 31, 1977, was obtained as the sum of the following components: one-fourth, including farms (p. 15), of 126 million hours (p. 34) to complete forms for departments and agencies subject to OMB review; 95 percent (assumed) of 237 million hours (p. 14) for Internal Revenue Service (IRS) forms W-2 (wage and tax statements for employees), 941 (employers' Federal tax return for employees) and 1099 (recipients of interest and dividends); one-tenth (assumed) of 149 million hours (p. 14) for IRS form 1040 (individual income tax long form); none of 33 million hours (p. 14) for IRS form 1040A (individual income tax short form); three-fourths (assumed) of 184 million hours (pp. 14, 34) for other forms (including the corporate income tax) that are required by the IRS and other agencies that are exempt from review of forms; and all of 43 million hours (p. 34) for forms for independent regulatory commissions and agencies subject to General Accounting Office review.

Total hours per year required of all respondents fell from 870 million as of January 31, 1977, to 785 million as of March 31, 1978 (p. 34). If hours needed for business reports changed in the same proportion, their number was 530 million as of January 31, 1977.

43. In 1965 the Subcommittee on Census and Government Statistics of the Committee on Post Office and Civil Service of the House of Representatives stated that "the wide disparity between agency estimates for minimum time required to complete a report and respondents' estimates for the same report for the most part casts serious doubt on the realism of the agency estimates." Continuing, the subcommittee said that "it can only conclude that not only are some agencies completely unrealistic concerning the cost to the public of their paperwork undertakings but, also, that—ostrich like—they would prefer not to know such costs." (Committee on Post Office and Civil Service, *The Federal Paperwork Jungle: A Report on the Paperwork Requirements Placed Upon Business, Industry, and the Public by the Federal Departments and Agencies*, H. Rept. 52, 89th Congress, 1st Session (GPO, 1965), pp. 45-56.) Several instances of verified understatement are cited in Commission on Federal Paperwork, "Study of Federal Paperwork Impact on Small and Large Businesses" (July 1977), pp. 35, 36, 40.

44. Testimony of Robert H. Marik, Associate Director of OMB, in *Hearing on HR 1642, to Establish a Commission on Federal Paperwork*, Hearing before the House Committee on Government Operations, 93rd Congress, 2d Session (GPO, 1974), pp. 34-36. Marik gave a breakdown by source of the increase of 50 percent that occurred between December 1967 and June 1974 in the reporting burden on American business caused by required forms other than tax forms. Occupational safety and health programs, expanded social security (especially medicare and medicaid), manpower programs, aircraft and airport regulations, and equal opportunity led the list.

45. This fraction is based on the OMB data cited in note 42. Estimates from the Commission on Federal Paperwork, "Study of Federal Paperwork Impact on Small and Large Businesses," imply a smaller fraction, since they show IRS forms to be responsible for 75 percent of the costs to small business (tables 6 and I-3) and apparently much less for large business (p. 46). (Small business costs are about three-fifths of the estimated total.)

46. *Paperwork and Red Tape*, p. 30.

47. Herbert Kaufman, *Red Tape: Its Origins, Uses, and Abuses* (The Brookings Institution, 1977), p. 4.

48. *Notes from the Joint Economic Committee*, vol. 4 (May 16, 1978).

49. Francis A. Allen of the University of Michigan School of Law states that "criminal provisions are routinely included in most pieces of regulatory legislation" and that "there are few, if any, regulatory areas of importance in which the possibility of criminal punishment is lacking." *Regulation by Indictment; The Criminal Law as an Instrument of Economic Control*, William K. McInally Memorial Lecture, Graduate School of Business Administration, the University of Michigan (1978), p. 9.

50. The number of proposed and final actions that affected the iron and steel industry and that were published in the *Federal Register* in a 2-year period (1974 and 1975) came to 19,464. They consisted of 333 proposed new agency regulations, 581 final agency regulations, and 13,160 final amendments to existing regulations. Many of these also affected many or most other industries. The data are from Council on Wage and Price Stability, "Catalog of Federal Regulations Affecting the Iron and Steel Industry," in Commission on Federal Paperwork, "Study of Federal Paperwork Impact on Small and Large Businesses," p. 15.

51. Manufacturers Hanover Trust, *Business Report*, Autumn 1977, p. 2.

52. McLaughlin rates the regulatory burden second to the tax legislation of 1969 and subsequent years (relating to capital gains taxes and qualified stock options) as a source of productivity slowdown. The quotation is from a letter to the author, dated March 7, 1978.

53. George C. Eads, "Achieving 'Appropriate' Levels of Investment in Technological Change: What Have We Learned?" *Relationships Between R. & D. and Economic Growth/Productivity*.

54. Murray L. Weidenbaum, *Government-Mandated Price Increases* (American Enterprise Institute for Public Policy Research, 1975), p. 100.

55. Weidenbaum believes there has been not only a spread of regulation but also a lengthening of "regulatory lag" for old types of regulation. (Murray L. Weidenbaum, *The Costs of Government Regulation of Business*, A Study Prepared for the Use of the Subcommittee on Economic Growth and Stabilization of the Joint Economic Committee (GPO, 1978), p. 15.)

56. John K. Evans, president of the Hampton Roads Energy Company, planned to build a \$500 million oil refinery in Hampton Roads. He was unable to obtain any decision concerning a permit (the last he needed) from the Corps of Engineers for more than 3 years after filing an environmental impact statement, and his project was placed in jeopardy because his marine resources and air permits were both about to expire. (Statement submitted to the Energy and

Power Subcommittee of the House Committee on Interstate and Foreign Commerce; letter to the Department of Energy on June 14, 1978, and letter to the author dated June 21, 1978.)

57. See also the section headed "Capital Gains Provisions of the Revenue Act of 1969."

58. See Carol J. Loomis, "A.T.&T. in the Throes of Equal Employment," *Fortune*, January 15, 1979, pp. 44-57, for an examination of telephone industry experience under a consent decree.

59. *The Annual Report of the Council of Economic Advisers*, January 1977, pp. 163-65. Discrimination from the investment tax credit is discussed at greater length in *Accounting for Slower Growth*, chapter 4.

60. *Tax Reductions, Economists Comments on H.R. 8353 and S. 1860*, prepared for the House Committee on Ways and Means, 95th Congress, 2d Session (GPO, 1978), p. 85.

61. Colin Clark, "Public Finance and Changes in the Value of Money," *Economic Journal*, vol. 45 (December 1945), pp. 370-89.

62. Herbert Stein, "Spending and Getting," in William Fellner, ed., *Contemporary Economic Problems, 1977* (American Enterprise Institute for Public Policy Research, 1977), p. 74.

The "more recent version" to which Stein refers is that developed by Robert Bacon and Walter Eltis with respect to Great Britain. Eltis applies it to the United States and Canada as well. See Walter Eltis, "Are Canada and the United States Following Great Britain?" *New International Politics*, vol. 2 (July 1977).

63. Output per hour would be reduced if investment were impaired.

64. *Ibid.*, pp. 74, 77.

65. These are based on national income and product account definitions. Percentages for 1948 and 1973 are from Stein, "Spending and Getting," p. 65. Those for 1976 and 1978 were computed from the SURVEY, vol. 58 (July 1978) and vol. 59 (March 1979).

66. Organization for Economic Cooperation and Development, "Public Expenditure Trends" (February 2, 1978), p. 13.

67. A temporary surtax raised the percentage to 26.875 in 1968 and 27.5 in 1969.

68. Both the old and new laws permitted capital losses to be deducted from capital gains. But only a token amount of capital losses could be deducted against other income (and this small benefit was halved by the 1969 act). Losses exceeding gains in one year could be used to offset gains in a future year. The government paid no interest on a backlog of capital losses waiting to be deducted from the future gains. Since there was no negative income tax, the Government made no payment to a taxpayer whose cumulated total income (including capital gains and losses) was negative. Consequently, the Government is said to share in gains but not in losses.

69. John Cobbs, "The Tax That is Killing Investment," *Business Week*, January 16, 1978.

70. William F. Ballhaus, "Personal Investment is Necessary for R. & D. Growth," *Industrial Research/Development*, April 1978, pp. 84-87.

71. Despite claims during the 1978 tax debate that repeal of capital gains taxes would raise stock values, and hence cut the cost of equity financing, by enormous amounts it really is not clear that capital gains taxation curtails total investment by business in real assets more than other taxes. In a 1978 U.S. Chamber of Commerce survey of businessmen, 48 percent said they would increase investment if capital gains taxes were reduced; 82 percent said they would do so if the investment tax credit were increased, 78 percent if the corporate tax rate were reduced, 78 percent if faster depreciation write-offs were allowed, and 71 percent if the investment tax credit were extended to structures. ("Fear of Recession Grows Stronger," *Nation's Business*, October 1978, p. 45.)

72. "The Significance of Our Productivity Lag," May 14, 1977.

73. As evidence of "a lessened sense of industriousness on the part of our work force," the speech cited only high and rising absenteeism and an increase in time paid for but not worked. Neither bears directly on effort while at the work place, although they may be indicative of a change in attitudes.

74. Denison, *The Sources of Economic Growth*, Committee for Economic Development, December 1961, p. 166. For a history of the survival of the work ethic despite changes in the character of work as factories spread, and of the perceived need constantly to denounce laziness and profligacy, see David T. Rodgers, *The Work Ethic in Industrial America, 1850-1920* (University of Chicago Press, 1978).

75. "Tax Revolt: The Lady or the Tiger," *Public Opinion*, vol. 1, (July-August 1978), p. 60.

76. *Special Study on Economic Change*, Hearings before the Joint Economic Committee, 95th Congress, 2d Session (GPO 1978), pt. 2, p. 535.

77. *Accounting for Growth*, p. 79.

78. *Ibid.*

79. F. Stafford and G. Duncan, "The Use of Time and Technology by Households in the United States," (July 1977), table 4. A much larger decline was reported for married women.

80. *Why Growth Rates Differ*, pp. 112-14.

81. I briefly discussed effort and incentives in the context of economic growth in *The Sources of Economic Growth*, pp. 166-69, and *Why Growth Rates Differ*, pp. 112-14. The literature on the general topic of influences affecting work effort is limitless. It has apparently burgeoned in the past decade as "quality of working life" has become a popular catch phrase and as the relationship between work satisfaction and productivity has received renewed interest. Two studies of interest, both of which summarize broad experience, are Raymond A. Katzell and Daniel Yankelovich, with others, *Work, Productivity, and Job Satisfaction* (Psychological Corporation, January 1975); and Swedish Employers' Confederation, *Job Reform in Sweden* (Stockholm: Grofsk Reproduktion, 1975). Whatever the relationship, work satisfaction seems not to have changed. Bernard J. White reported that "survey results over the last forty years have been remarkably consistent in finding that from 80% to 90% of working people report moderate to high satisfaction with their jobs. Only 10% to 20% report actual dissatisfaction." ("Does Bureaucracy Deserve Its Bad Reputation?" *Dividend*, the Magazine of the Graduate School of Business Administration, University of Michigan, Winter 1977, p. 8.)

82. For example, Robert C. Turner of Indiana University, a former member of the President's Council of Economic Advisers, considers inflation "the most serious economic threat to economic expansion in the United States" because it reduces investment incentives and may reduce the propensity of individuals to save. (Committee on Ways and Means, *Tax Reductions—Economists Comments*, p. 97.) George Terborgh, a leading expert on the investment process, stresses the adverse effect that inflation exerts on business earnings after tax because business, in his opinion, does not usually base prices on replacement costs and be-

cause of its effects on tax liabilities. (George Terborgh, *Corporate Earning Power in the Seventies: A Disaster* [Machinery and Allied Products Institute, August 1977]). Arthur M. Okun says "the gap (created by inflation) between actual, historical costs of old plant and equipment and current or predicted costs of new facilities creates agonies in capital budgeting and weakens investment." (Arthur M. Okun, "The Great Stagflation Swamp," address to the Economics Club of Chicago, October 6, 1977.)

83. Arthur M. Okun, "Inflation: Its Mechanics and Welfare Costs," *Brookings Papers on Economic Activity*, 1975:2, pp. 351-401.

84. Bank for International Settlements, *47th Annual Report* (Basle, Switzerland: June 13, 1977), p. 48.

85. Arthur M. Okun and George L. Perry, "Editors' Summary," *Brookings Papers on Economic Activity*, 1975:2, p. 252.

86. For an extended discussion, see Henry J. Aaron, ed., *Inflation and the Income Tax* (The Brookings Institution, 1976).

87. Milton Friedman, "Nobel Lecture: Inflation and Unemployment," *Journal of Political Economy*, vol. 85 (June 1977), p. 466.

88. *Ibid.*, pp. 466-67.

89. *Why Growth Rates Differ*, pp. 289-95; and Edward F. Denison and William K. Chung, *How Japan's Economy Grew So Fast: The Sources of Postwar Expansion* (The Brookings Institution, 1976), pp. 110-11.

90. *Why Growth Rates Differ*, p. 292.

91. Eleanor M. Hadley, *Anti-Trust in Japan* (Princeton University Press, 1970), pp. 438, 442.

92. *The Sources of Economic Growth*, pp. 193-95.

93. Data are from the forthcoming revised edition of F. M. Scherer, *Industrial Market Structure and Economic Performance*, first published by the Rand Corporation in 1971. The first text table excludes newspapers and ordinance, and the second also excludes the numerous industries for which data conforming to constant definitions were not available.

94. Peter O. Steiner, *Mergers, Motives, Effects, Policies* (University of Michigan Press, 1975), pp. 320-22. Federal Trade Commission data for mergers are summarized in Bureau of the Census, *Statistical Abstract of the United States 1978* (GPO, 1978), p. 580, and preceding issues of the *Abstract*. After an extended period of low activity, conglomerate mergers again increased in the last half of the 1970's.

95. Burton H. Klein, *Dynamic Economics* (Harvard University Press, 1977). The quotations that follow are from pp. 182-83.

96. I am reminded that Erik Lundberg, the Swedish economist, ascribed this role to engineers, though only those above 40 years of age. In recent years Lundberg, describing Sweden, has written about a tendency for business to select "managers that correspond to a soft type—not strong in maximizing profits and enforcing efficiency—but good at dealing with trade unions, caring for stable employment and not least in getting money (soft loans and subsidies) from Government." (Letter from Lundberg to author, February 26, 1979.)

97. Alfred Rappaport, "Executive Incentives vs Corporate Growth," *Harvard Business Review*, vol. 56 (July-August 1978), pp. 81-88.

98. This was observed in the *Economic Report of the President, January 1977*, p. 55.

99. As explained in *Accounting for Slower Growth*, chapter 2, this is because imports and exports are deflated separately.

100. The high price of energy and government controls presumably forced some existing capital out of use. In the absence of information about this, no reduction was made in the Bureau of Economic Analysis (BEA) capital stock series so, if this happened, the effect was to reduce growth of the residual rather than of capital input.

101. "Energy inputs represent only approximately 5 percent of total factor costs." Roger Brinner, *Technology, Labor, and Economic Potential* (Data Resources, Inc., 1978), p. 74.

102. It estimated primary energy use at 70 quads (a quad is 10¹⁵ British thermal units) and the average price of energy at \$1.00 per million BTU. (*Nuclear Power Issues and Choices*, Report of the Nuclear Energy Policy Study Group sponsored by the Ford Foundation [Ballinger, 1977], p. 49.) The Bureau of Mines and the Energy Information Administration put the average price of domestically produced mineral fuels at 85.4 cents per million BTU. (Department of Energy, Energy Information Administration, Annual Report to Congress, vol. 3: *Statistics and Trends of Energy Supply, Demand, and Prices* [GPO, 1978], p. 19.) Inclusion of imported fuel and hydro and nuclear power and exclusion of exports would probably bring this figure to \$1.00.

103. "The Energy Connection," *Resources*, no. 53 (Fall 1976), p. 5.

104. See also citations given in notes 110 and 111 to articles by Ridker, Watson, and Shapanko of Resources for the Future and by Hogan and Manne of Stanford University, which give 4 or 5 percent as the energy share.

105. See Jack Alterman, *The Energy/Real Gross Domestic Product Ratio: An Analysis of Changes During the 1966-1970 Period in Relation to Long-Run Trends*, BEA Staff Paper 30 (BEA, October 1977). See also Sam H. Schurr, "Energy, Economic Growth, and Human Welfare," *EPRI Journal*, May 1978, pp. 14-18.

106. Noteworthy is the absence of any such series in Department of Energy, Energy Information Administration, *Annual Report to Congress*, 1978.

107. George L. Perry, "Potential Output: Recent Issues and Present Trends," in Center for the Study of American Business, U.S. Productive Capacity: *Estimating the Utilization Gap*, Working Paper 23 (1977), pp. 6-13 (Also, Reprint 336 of The Brookings Institution).

108. His reason for averaging relative prices before and after the increase is the same as mine for averaging share weights at the beginning and end of a period when I compute the percentage change in total factor output.

109. Perry, "Potential Output," pp. 11-12.

110. "Economic, Energy, and Environmental Consequences of Alternative Energy Regimes, An Application of the RFF/SEAS Modeling System," in Charles J. Hitch, ed., *Modeling Energy-Economy Interactions: Five Approaches* (Resources for the Future, 1977).

111. "Energy-Economy Interactions: The Fable of the Elephant and the Rabbit?" in Hitch, *Modeling Energy-Economy Interactions*, p. 248.

112. *Economic Report of the President, January 1979*, p. 71.

113. Robert H. Rasche and John A. Tatom, "The Effects of the New Energy Regime on Economic Capacity, Production, and Prices," *Federal Reserve Bank of St. Louis Review*,

vol. 59 (May 1977), pp. 2-12; and *idem.*, "Energy Resources and Potential GNP," *Federal Reserve Bank of St. Louis Review*, vol. 59 (June 1977), pp. 10-24. The range cited is from the introduction to the first article. Slightly different results based on different periods and data are provided elsewhere in these articles.

In the same articles Rasche and Tatom present a potential output series. To avoid misunderstanding, I stress that my disagreement with them is not over their conclusion that growth of potential output was sharply curtailed after 1973, but with their attribution of the change to the higher price of oil.

114. The particular use made of the estimate by Rasche and Tatom is in an analysis of manufacturing, but the manufacturing results are applied to the whole economy.

115. An interesting feature of the Rasche-Tatom analytical framework is that the output reduction is the result of a change—not of an *increase*—in the relative price of oil. A decrease in the price of oil would have had the same effect. A change in the relative prices of labor and capital, in either direction, also reduces output in this framework, as the authors clearly realize, since they calculate the cost of such a change. All this is rather baffling because the authors do not have in mind temporary costs of adjustment. On the contrary, they insist that the impact of the oil price increase on the American economy is "profound and permanent." Given that any change in either direction reduces output, one might expect that productivity would drop again if the price of oil were now to fall, but in another puzzling sentence the authors state that the only way potential output could be restored is for the relative price of oil to return to its old level, a statement that in another context would seem entirely reasonable.

116. Edward A. Hudson and Dale W. Jorgenson, "Energy Prices and the U.S. Economy, 1972-1976," *Data Resources U.S. Review* (September 1978), pp. 1.24-1.37.

117. Quotations appear in *ibid.*, p. 1.25.

118. In the Hudson-Jorgenson calculations, the 3.2-percent drop in GNP would in itself cause a proportional 3.2-percent drop in the demand for and use of "capital services," and therefore a 3.2-percent drop in capital stock. The drop in capital services from this cause is valued at \$15.5 billion. However, the higher energy price induces changes in the composition of demand and substitutions among labor, capital, and energy that provide a small offset, reducing the drop in capital services to \$14.5 billion. Hence the percentage drop in capital services and capital stock was 3.2 percent \times 14.5 ÷ 15.5, or 3.0 percent.

119. The calculation is $(0.72 \times 0.54) + (0.28 \times 3) = 1.23$. If the percentage reduction in capital refers only to fixed residential and nonresidential capital, which seems likely, the reduction in total factor input in the economy as a whole is less.

120. Edward F. Denison, "The Shift to Services and the Rate of Productivity Change," *SURVEY*, (vol. 53, October 1973), pp. 20-35.

121. Jerome A. Mark, "Productivity Trends and Prospects," *Special Study on Economic Change*, Hearings before the Joint Economic Committee, 95th Congress, 2d Session (GOP, 1978), pt. 2, p. 485.

122. *Ibid.*, p. 34. The reasoning applies equally to a comparison of two past periods.

123. *Ibid.* "Both (W. E. G.) Salter and (John) Kendrick found that industries that reduced factor input per unit of output most also reduced materials input per unit of output most. This is important in explaining the finding, because factor inputs are only part of the total costs of an industry and a given percentage reduction in factor input costs alone would yield a much smaller percentage reduction in price."

124. Denison, "The Shift to Services," p. 34. In the same article I explain why it is a mistake to suppose that within nonresidential business the accuracy of series for commodity-producing industries is greater than that for service-producing industries.

125. The inventory valuation adjustment is the difference between (1) the change in the physical volume of inventories valued in prices of the current period and (2) the change in the value of inventories reported by business.

126. A discussion of other potential biases in prices series used in deflation that might have caused overstatement of the decline in real output in 1974-75 is found in the appendix to

Victor Zarnowitz and Geoffrey H. Moore, "The Recession and Recovery of 1973-1976," *Explorations in Economic Research*, Occasional Papers of the National Bureau of Economic Research, vol. 4 (Fall 1977), pp. 471-557. To affect the 1973-76 movement of the residual, such a bias would have to affect the output series differently than in previous cyclical swings (otherwise it would be picked up in the series for intensity of utilization) and, to have an appreciable effect, would also have to affect price movements in the downswing without being offset in the recovery. None of the suggestions offered seem likely to qualify.

127. The GNP series includes all "goods" components, personal consumption expenditures for electricity and gas, and 40 percent of structures, minus gross farm product and margins on the sale of used cars.

128. The relative position of the intervening years differs substantially, with industrial production showing 1974 higher and 1975 lower relative to 1973 and 1976 than does the GNP series.

129. See *Accounting for Growth*, pp. 164-65.

130. The depth of the 1974-75 recession dropped my index for intensity of utilization due to fluctuations in demand below the previous range of experience (in the period for which it has been calculated). If its drop was underestimated, this would cause the residual to be underestimated in those years. But if that were the cause of the 1974-75 drop, it should have been followed by an exceptionally strong advance in the recovery period, which did not happen.

131. Edward F. Renshaw used the same body of data to reach a similar conclusion in "A Note on the Aggregate Learning Curve for the U.S. Economy and the Persistent Gap Between Actual and Potential GNP" (1978).

132. Government and government enterprises; finance, insurance, and real estate; and private households are excluded because the data have no independent meaning and are chiefly outside nonresidential business. Nonprofit institutions were not eliminated, and this accounts for the low 1948-73 growth rate in services.

133. By dividing the postwar period at 1967 instead of 1973 and comparing 1950-67 with 1967-77, the Council on Wage and Price Stability concluded from the same data source that a reduction in the growth rate of productivity did not occur in manufacturing, but was confined to construction and most of the service divisions. (Council on Wage and Price Stability, *Executive Office of the President News*, October 4, 1978.) Even if one were concerned with longer periods such as those the Council examined, the Council's conclusion would be questionable because the result was entirely dependent on the exact choice of periods. If the Council had divided the period at 1965, 1966, or 1968 instead of 1967, it would have obtained a decline in the growth rate of manufacturing productivity, and the declines would have been larger if the period had begun in 1948 instead of 1950. To illustrate with an extreme case, the growth rate of output per hour in manufacturing dropped by 0.74 percentage points from 1948-65 to 1965-77 according to the series the Council used.

Jerome Mark has shown that the decline in the rate of growth of output per hour from 1947-66 to 1966-76 was general among 62 detailed industries for which the Bureau of Labor Statistics published series. Forty-six had lower growth rates of output per hour in 1966-76 than in 1947-66, one had the same rate, and 15 had higher rates. (Mark, "Productivity Trends and Prospects," p. 484.) An unpublished compilation provided by Mark in February 1979 also shows that 53 of 74 industries had lower growth rates from 1973 to 1977 (or 1976 if 1977 was not available) than from 1947 (or the earliest subsequent date for which the series was available) to 1973. The proportion was the same, three-fourths, in manufacturing and nonmanufacturing industries.

134. My study for eight Western European countries ended with 1962 (*Why Growth Rates Differ*), that for Canada by Dorothy Walters with 1967 (*Canadian Growth Revisited, 1950-67*, Staff Study 28 [Economic Council of Canada, 1970]), and that for Japan by William Chung and me with 1971 (*How Japan's Economy Grew So Fast*).

135. The adjustment for intensity of utilization is likely to be very difficult in several countries because it has become increasingly difficult or expensive to lay off unneeded workers. A decline in demand is likely to be matched to a lesser extent by a drop in input and to a greater extent by a drop in output per unit of input than was formerly the case or is now the case in the United States.

State Differences in Per Capita Personal Income Growth in the Seventies

Table 1.—Per Capita Personal Income, 1969–78

Rank in 1969		Percent of U.S. average, 1969	Change, 1969–78		Percent of U.S. average, 1978
			Percent	Index: U.S. percent change—100	
	United States	100	113.7	100	100
	High-income States:				
1	Connecticut.....	127	92.0	81	114
2	New Jersey.....	119	101.3	89	112
	District of Columbia.....	118	123.0	113	127
3	New York.....	118	90.0	79	105
4	Delaware.....	116	100.0	88	109
5	Nevada.....	116	122.0	107	120
6	Illinois.....	115	111.0	98	114
7	Alaska.....	115	160.7	141	140
8	California.....	115	112.4	99	114
9	Hawaii.....	114	102.3	90	108
10	Massachusetts.....	109	98.1	86	101
11	Maryland.....	109	109.8	97	107
12	Michigan.....	108	114.1	100	108
13	Washington.....	107	117.4	103	108
14	Ohio.....	103	107.9	95	100
	Average	114	111.3	98	112
	Low-income States:				
15	Rhode Island.....	99	105.1	92	95
16	Pennsylvania.....	99	112.9	99	99
17	Indiana.....	98	113.4	100	98
18	Minnesota.....	97	122.5	108	101
19	New Hampshire.....	96	108.1	95	94
20	Colorado.....	96	129.5	114	103
21	Wisconsin.....	96	114.6	101	96
22	Oregon.....	95	132.7	117	103
23	Kansas.....	95	127.1	112	101
24	Nebraska.....	95	118.6	104	97
25	Iowa.....	94	132.5	117	102
26	Florida.....	94	120.3	106	97
27	Missouri.....	93	114.0	100	93
28	Wyoming.....	93	153.5	135	110
29	Virginia.....	93	125.6	110	98
30	Arizona.....	90	122.7	108	94
31	Texas.....	89	136.0	120	99
32	Vermont.....	89	101.8	90	84
33	Montana.....	85	115.6	102	86
34	Georgia.....	84	116.6	103	86
35	Oklahoma.....	84	132.4	116	91
36	Maine.....	82	110.1	97	80
37	North Carolina.....	82	119.6	105	84
38	Idaho.....	82	134.5	118	89
39	Utah.....	80	124.2	109	84
40	North Dakota.....	80	143.4	126	92
41	South Dakota.....	79	137.2	121	88
42	Tennessee.....	78	127.6	112	84
43	Kentucky.....	78	130.4	115	84
44	Louisiana.....	77	136.6	120	86
45	New Mexico.....	77	133.1	117	84
46	South Carolina.....	75	128.8	113	80
47	West Virginia.....	75	142.1	125	85
48	Alabama.....	73	133.4	117	80
49	Arkansas.....	70	132.3	116	76
50	Mississippi.....	63	137.6	121	71
	Average	86	125.8	111	91

IN the seventies, State differences in per capita personal income narrowed, as they have in every decade since 1930. From 1969 to 1978, per capita personal income increased at a rate that was 15 percentage points slower in the high-income States than in the low-income States.¹ In the high-income States (which include the District of Columbia), per capita personal income relative to the national average declined from 114 to 112 percent, while in the low-income States, it increased from 86 to 91 percent. The sharply reduced disparity among States in per capita personal income during the seventies reflected the surge in industrial growth of the South and West relative to the Northeast-Great Lakes manufacturing belt. Charts 2 and 3 show State per capita personal incomes for 1969 and 1978, respectively.

Among the 14 high-income States, 11—including 9 States in the Northeast-Great Lakes manufacturing belt—had below-average increases in per capita income, or, as in Michigan, an average increase (table 1). In the nine manufacturing-belt States, per capita income relative to the national average declined substantially—from 114 to 108 percent. The largest declines were in New York and Connecticut. Each of the nine had below-average increases in

1. The timespan is from the national cyclical peak year nearest 1970 to the most recent year for which State per capita personal income estimates are available. States are divided into high-income and low-income groups based on per capita personal income relative to the national average in 1969 (see table 1).

both components of the per capita income quotient—personal income and population. Manufacturing employment declined, and employment growth in other industries with relatively high earnings per worker slowed.

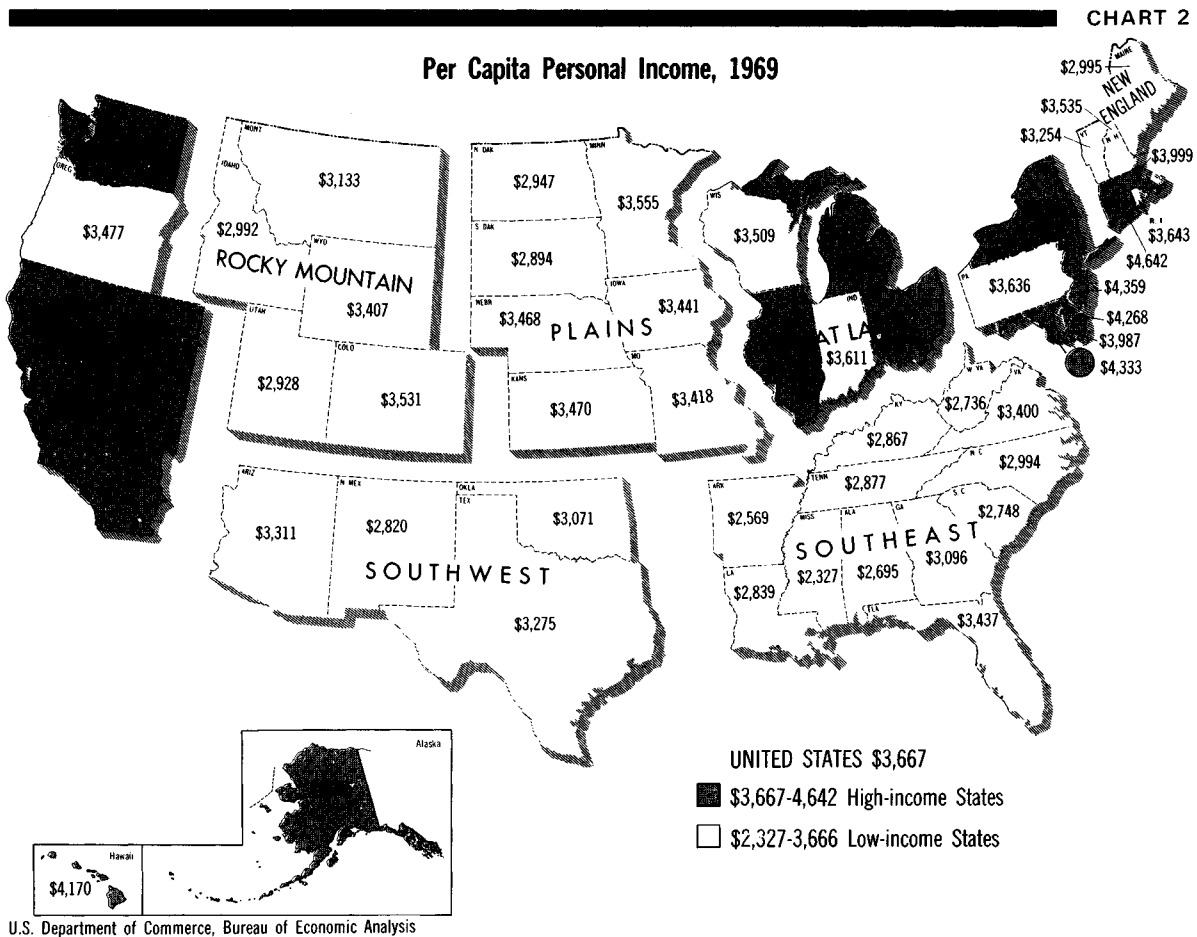
Three high-income States and the District of Columbia had above-average increases in per capita income. Alaska, Nevada, and Washington had above-average increases in both personal income and population; employment growth was strong in construction, services, and manufacturing. The District of Columbia had a below-average increase in total personal income but a more than offsetting decline in population.

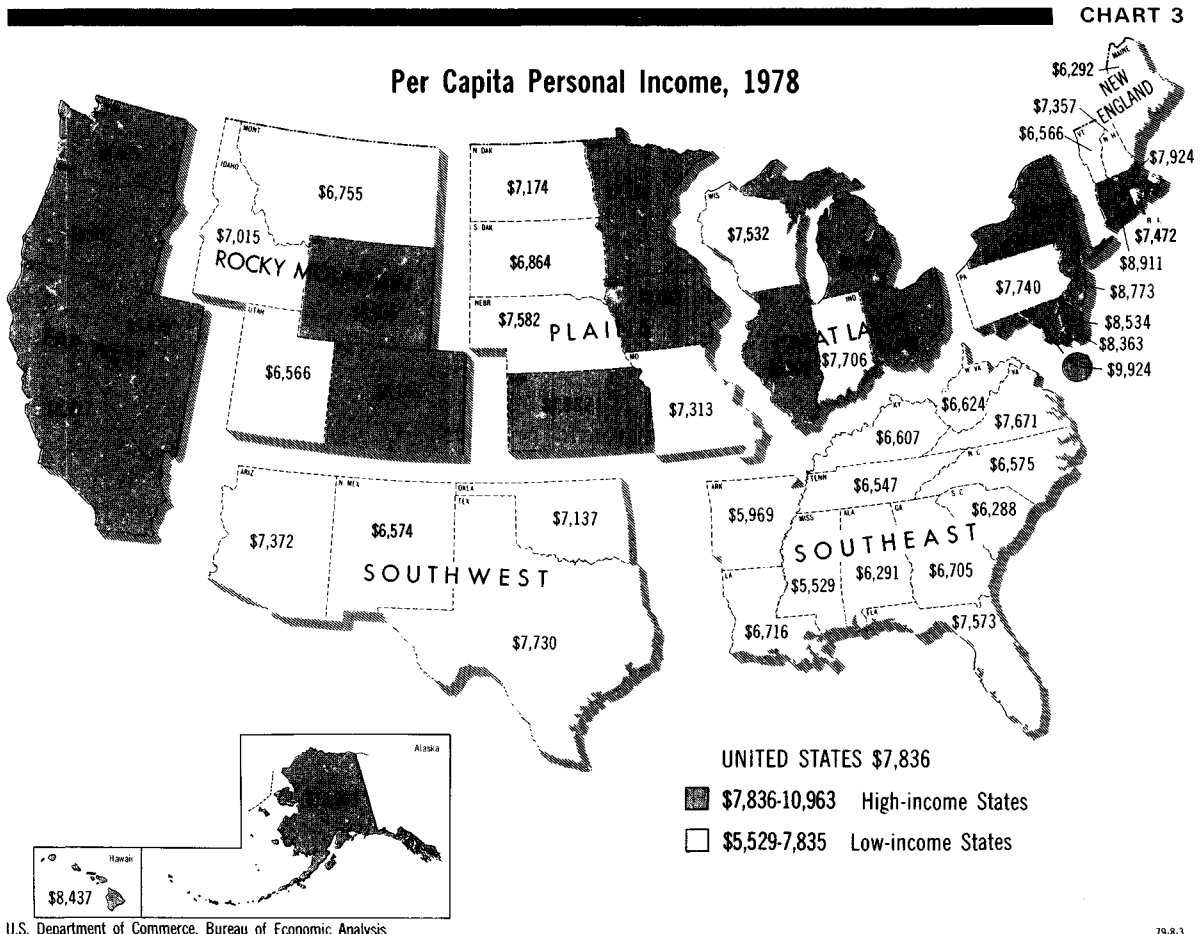
Among the 36 low-income States, 31—including all of the States in the Southeast, Southwest, Rocky Moun-

tain, and Plains regions—had above-average increases in per capita income or, as in Indiana and Missouri, an average increase. All of the Southwest, Rocky Mountain, and Southeast States except West Virginia had above-average increases in both personal income and population. Employment increased rapidly in construction, coal mining, and manufacturing, where earnings per worker are relatively high. Moreover, rapid increases in property income—specifically, in the imputed rental income on owner-occupied dwellings—reflected the large increases in both the number of housing units and their values in the fast-growing population centers of the South and West. All of the Plains States except Missouri had above-average increases in personal income and below-average increases in

population. Continued technological change in agriculture increased income per worker in the Plains and reduced agricultural employment; this reduction was only partially offset by an increase in nonagricultural employment, and net population outmigration ensued.

Five low-income States—including four in New England—had below-average increases in per capita income. Reflecting the migration of workers from central and southern New England to northern New England, New Hampshire, Vermont, and Maine had unusually large increases in population. Relative to the U.S., the growth of population outpaced the growth of personal income, thereby dampening the growth of per capita income in these three northern New England States.





State Personal Income, 1958-78

ANNUAL estimates of State personal income are presented in this article on a consistent basis for the 21-year period 1958-78. Revised 1978 estimates and estimates for 1958-70 that incorporate the 1976 national benchmark revisions are presented for the first time. Previously State estimates incorporating the benchmark revisions were available only back to 1971. Estimates for 1973-77 which had been presented previously, are revised. A discussion of the State benchmark revisions appears in the August 1977 SURVEY OF CURRENT BUSINESS, and discussion of the benchmark revisions of the national income and product accounts appears in Part I of the January 1976 SURVEY.

Personal income is the current income received by residents of an area from all sources. It is measured after deduction of personal contributions for social security, government retirement, and other social insurance programs but before deduction of income and other personal taxes. It includes income received from business, governments (Federal, State, local and foreign), private households, and institutions. It consists of wage and salary disbursements, various types of supplementary earnings termed "other labor income," proprietors' income, rental income of persons, dividends, personal interest income, and government and business transfer payments. Per capita personal income is the total personal income of residents divided by the resident population.

The definitions underlying the State series are, for the most part, the same as those underlying the personal income series in the national income and product accounts. The major difference is in the treatment of U.S. citizens temporarily working on assignment abroad. The national series includes not only Federal personnel—civilian and military—stationed abroad but also—since the 1976 benchmark revisions—U.S. residents employed by private U.S. firms on temporary foreign assignment. The State series includes only persons working and/or residing in the 50 States and the District of Columbia.

Tables 1 and 2 present the estimates of total and per capita personal income, respectively, for the United States, regions, States, and the District of Columbia on a consistent basis, for the entire period 1958-78. In these tables the income flows are assigned to the State in which the individual receiving the income resides.

Table 3 presents estimates of personal income by type and labor and proprietors' income by industry, for the United States, regions, States, and the District of Columbia, for the years 1958, 1963, 1968, 1973, 1976, 1977, and 1978. (Estimates for the years not shown are available from the Regional Economic Measurement Division, Bureau of Economic Analysis, Washington, D.C. 20230.) Table 3 also shows the derivation of personal income by place of residence. The estimates of labor and proprietors' income are reported by industry at the point of

Table 1.—Total Personal Income,

(Millions)

Line	State and region	1958	1959	1960
1	United States ¹	356,939	380,014	396,086
2	New England.....	22,927	24,482	25,481
3	Connecticut.....	6,493	6,945	7,219
4	Maine.....	1,631	1,701	1,789
5	Massachusetts.....	11,284	12,071	12,563
6	New Hampshire.....	1,148	1,246	1,315
7	Rhode Island.....	1,735	1,832	1,869
8	Vermont.....	637	686	725
9	Mideast.....	88,735	93,998	97,962
10	Delaware.....	1,124	1,173	1,228
11	District of Columbia.....	2,017	2,081	2,159
12	Maryland.....	6,495	6,878	7,221
13	New Jersey.....	14,553	15,655	16,477
14	New York.....	41,130	43,632	45,515
15	Pennsylvania.....	23,416	24,579	25,361
16	Great Lakes.....	77,632	82,811	85,891
17	Illinois.....	24,077	25,592	26,387
18	Indiana.....	8,989	9,570	10,046
19	Michigan.....	16,520	17,520	18,225
20	Ohio.....	20,346	21,770	22,602
21	Wisconsin.....	7,700	8,359	8,631
22	Plains.....	28,869	29,652	31,182
23	Iowa.....	5,098	5,233	5,403
24	Kansas.....	4,327	4,384	4,550
25	Minnesota.....	6,410	6,653	7,071
26	Missouri.....	8,300	8,776	9,045
27	Nebraska.....	2,637	2,664	2,846
28	North Dakota.....	1,027	956	1,066
29	South Dakota.....	1,070	986	1,200
30	Southeast.....	56,863	60,862	63,133
31	Alabama.....	4,502	4,741	4,945
32	Arkansas.....	2,205	2,394	2,430
33	Florida.....	8,497	9,397	9,832
34	Georgia.....	5,819	6,214	6,504
35	Kentucky.....	4,412	4,642	4,794
36	Louisiana.....	5,044	5,276	5,377
37	Mississippi.....	2,343	2,571	2,610
38	North Carolina.....	6,367	6,822	7,213
39	South Carolina.....	2,941	3,169	3,336
40	Tennessee.....	5,116	5,477	5,634
41	Virginia.....	6,804	7,254	7,509
42	West Virginia.....	2,813	2,906	2,949
43	Southwest.....	24,551	26,001	26,914
44	Arizona.....	2,174	2,407	2,634
45	New Mexico.....	1,567	1,684	1,731
46	Oklahoma.....	3,952	4,116	4,322
47	Texas.....	16,858	17,794	18,227
48	Rocky Mountain.....	8,105	8,541	9,027
49	Colorado.....	3,464	3,721	3,974
50	Idaho.....	1,130	1,186	1,215
51	Montana.....	1,324	1,295	1,347
52	Utah.....	1,535	1,645	1,759
53	Wyoming.....	653	695	732
54	Far West.....	47,606	51,845	54,441
55	California.....	37,325	40,844	43,020
56	Nevada.....	675	741	812
57	Oregon.....	3,488	3,771	3,888
58	Washington.....	6,119	6,489	6,720
59	Alaska.....	507	542	628
60	Hawaii.....	1,145	1,280	1,429
	Addenda			
61	New England.....	22,927	24,482	25,481
62	Middle Atlantic.....	79,099	83,866	87,354
63	East North Central.....	77,632	82,811	85,891
64	West North Central.....	28,869	29,652	31,182
65	South Atlantic.....	42,877	45,893	47,951
66	East South Central.....	16,374	17,431	17,983
67	West South Central.....	28,058	29,580	30,357
68	Mountain.....	12,521	13,373	14,204
69	Pacific.....	48,583	52,926	55,685

by States and Regions, Revised 1958-78

of dollars]

1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	Line
411,301	436,894	459,075	491,341	532,022	579,158	620,020	677,786	738,233	793,485	851,952	935,463	1,045,303	1,147,257	1,248,631	1,374,265	1,523,631	1,708,545	1
26,620	28,169	29,404	31,381	33,725	36,790	39,768	43,255	46,870	50,419	53,079	57,478	62,806	68,453	73,477	80,067	87,613	96,820	2
7,602	8,095	8,537	9,147	9,860	10,860	11,867	12,866	13,926	14,802	15,344	16,496	18,088	19,716	21,066	22,763	25,041	27,612	3
1,803	1,872	1,931	2,080	2,251	2,419	2,541	2,729	2,971	3,240	3,435	3,746	4,216	4,717	5,038	5,739	6,208	6,867	4
13,138	13,865	14,420	15,337	16,403	17,750	19,110	20,851	22,596	24,392	25,778	27,882	30,204	32,860	35,319	38,185	41,621	45,751	5
1,879	1,472	1,530	1,639	1,770	1,961	2,127	2,342	2,559	2,760	2,948	3,261	3,688	4,061	4,417	4,995	5,626	6,409	6
1,948	2,080	2,174	2,311	2,484	2,705	2,931	3,166	3,396	3,687	3,930	4,291	4,626	4,956	5,313	5,805	6,312	6,984	7
750	785	813	867	957	1,095	1,192	1,302	1,422	1,539	1,645	1,802	1,983	2,144	2,324	2,579	2,805	3,197	8
101,414	106,959	111,641	119,260	127,708	137,704	147,283	160,474	173,001	186,413	198,756	214,103	231,771	252,661	272,216	293,056	316,503	347,485	9
1,260	1,332	1,428	1,542	1,706	1,818	1,932	2,113	2,305	2,459	2,652	2,899	3,239	3,507	3,808	4,131	4,453	4,972	10
2,239	2,337	2,443	2,557	2,697	2,838	2,947	3,161	3,301	3,506	3,805	4,116	4,364	4,734	5,189	5,628	6,140	6,684	11
7,652	8,259	8,841	9,640	10,560	11,651	12,650	13,993	15,420	16,805	18,181	20,071	22,239	24,309	26,383	29,117	31,536	34,646	12
17,250	18,502	19,415	20,782	22,400	24,269	26,107	28,536	30,930	33,680	36,181	39,029	42,532	46,225	49,762	53,625	58,121	64,291	13
47,272	49,762	51,741	55,113	58,563	62,811	67,027	73,195	78,353	84,144	89,452	95,097	101,440	109,982	117,904	124,975	133,714	145,963	14
25,741	26,768	27,772	29,626	31,782	34,317	36,619	39,476	42,692	45,819	48,485	52,892	57,958	63,904	69,171	75,579	82,540	90,939	15
87,523	92,742	97,131	104,396	114,417	124,838	131,608	143,120	155,222	163,276	175,207	190,831	213,380	231,050	247,678	273,283	304,189	339,119	16
27,283	28,787	29,951	32,006	34,820	37,906	40,256	43,123	46,579	49,462	53,030	56,928	63,562	69,376	75,400	81,827	90,340	100,091	17
10,304	11,024	11,588	12,369	13,717	14,893	15,665	16,981	18,572	19,299	20,829	22,784	26,158	27,776	29,816	33,180	36,949	41,412	18
18,169	19,450	20,770	22,768	25,386	27,723	29,016	32,097	34,803	35,955	39,191	43,432	48,467	51,850	54,737	61,645	69,480	77,943	19
22,898	24,115	25,121	26,809	29,126	31,881	33,503	36,775	39,905	42,133	44,552	48,434	53,614	58,380	61,955	68,527	75,959	84,432	20
8,870	9,366	9,702	10,444	11,368	12,435	13,137	14,142	15,363	16,427	17,606	19,253	21,579	23,667	25,771	28,104	31,461	35,241	21
32,214	34,371	35,839	37,429	41,376	44,714	47,205	50,967	55,504	59,788	63,877	70,817	83,754	87,774	95,502	101,937	114,288	130,194	22
5,663	5,924	6,295	6,615	7,441	8,118	8,349	8,822	9,653	10,306	10,774	12,059	14,839	15,226	16,898	17,597	19,859	23,170	23
4,747	4,964	5,112	5,395	5,805	6,282	6,630	7,152	7,758	8,374	9,044	10,092	11,685	12,477	13,577	14,814	16,333	18,505	24
7,986	7,798	8,256	8,581	9,494	10,319	11,085	12,150	13,358	14,571	15,415	16,870	19,882	21,178	22,686	24,603	28,214	31,703	25
9,295	9,791	10,293	10,877	11,870	12,758	13,650	14,850	15,860	17,119	18,363	19,873	22,261	23,905	26,098	28,363	31,658	35,538	26
2,913	3,159	3,265	3,364	3,761	4,040	4,238	4,528	5,112	5,442	5,864	6,638	7,834	8,009	9,087	9,396	10,374	11,868	27
995	1,353	1,280	1,277	1,508	1,553	1,592	1,645	1,830	1,904	2,158	2,676	3,875	3,740	3,755	3,728	3,828	4,677	28
1,213	1,381	1,337	1,321	1,498	1,645	1,703	1,820	1,933	2,072	2,259	2,610	3,378	3,240	3,401	3,436	4,022	4,733	29
66,220	70,623	75,329	81,410	88,826	97,924	106,281	117,438	129,513	141,055	154,489	174,173	198,045	220,801	239,863	267,115	296,936	334,155	30
5,084	5,349	5,704	6,199	6,764	7,315	7,765	8,485	9,272	9,978	10,891	12,081	13,596	15,141	16,753	18,837	20,906	23,540	31
2,628	2,810	2,989	3,250	3,470	3,886	4,137	4,525	4,914	5,387	5,879	6,611	7,770	8,836	9,552	10,468	11,779	13,047	32
10,333	11,132	11,937	13,047	14,340	15,837	17,577	19,997	22,824	25,317	28,340	32,964	38,661	43,256	46,632	50,903	56,963	65,084	33
6,760	7,256	7,874	8,531	9,429	10,448	11,343	12,624	14,092	15,198	16,617	18,764	21,218	24,798	27,492	30,535	34,087	38,087	34
5,075	5,375	5,646	5,918	6,428	7,042	7,621	8,359	9,170	9,937	10,744	11,891	13,396	15,174	16,537	18,536	20,656	23,114	35
5,573	5,871	6,274	6,739	7,362	8,198	8,957	9,764	10,275	11,034	11,914	13,040	14,515	16,451	18,297	20,927	23,537	26,638	36
2,805	2,946	3,237	3,372	3,679	4,033	4,360	4,763	5,167	5,657	6,215	7,057	7,995	8,816	9,460	10,716	11,994	13,290	37
7,603	8,173	8,617	9,350	10,151	11,350	12,277	13,537	15,061	16,317	17,709	19,965	22,633	24,865	26,899	29,884	32,691	36,671	38
3,489	3,752	3,975	4,287	4,737	5,338	5,775	6,415	7,062	7,668	8,382	9,452	10,775	12,229	13,133	14,732	16,267	18,346	39
5,940	6,300	6,688	7,196	7,872	8,727	9,361	10,314	11,210	12,121	13,283	14,968	16,908	18,737	20,124	22,626	25,212	28,527	40
7,950	8,561	9,152	10,070	10,897	11,822	12,902	14,199	15,689	17,135	18,737	20,941	23,514	26,212	28,738	31,954	35,277	39,492	41
2,978	3,099	3,235	3,451	3,697	3,928	4,207	4,456	4,777	5,307	5,778	6,439	7,064	7,903	8,939	10,039	11,120	12,318	42
28,283	29,783	31,125	33,375	36,020	39,267	42,904	47,528	52,556	57,587	62,209	69,610	79,188	89,319	99,934	113,116	128,187	146,478	43
2,842	3,074	3,237	3,459	3,693	4,051	4,433	5,016	5,751	6,498	7,389	8,546	9,869	11,071	11,865	13,220	14,871	17,352	44
1,803	1,882	1,945	2,087	2,196	2,322	2,410	2,611	2,851	3,116	3,434	3,857	4,341	4,840	5,532	6,233	7,014	7,969	45
4,466	4,665	4,837	5,188	5,612	6,042	6,596	7,139	7,784	8,574	9,122	10,113	11,446	12,832	14,206	15,902	18,056	20,556	46
19,172	20,162	21,106	22,671	24,525	26,853	29,465	32,762	36,171	39,410	42,264	47,094	53,533	60,835	68,331	77,760	88,247	100,601	47
9,536	10,244	10,580	11,021	11,858	12,644	13,446	14,628	16,124	17,832	19,591	22,333	25,795	28,817	31,714	35,189	39,421	45,343	48
4,268	4,482	4,702	4,956	5,307	5,733	6,182	6,884	7,648	8,537	9,522	10,829	12,448	13,832	15,264	16,836	18,890	21,645	49
1,282	1,399	1,397	1,437	1,634	1,673	1,775	1,888	2,115	2,326	2,526	2,929	3,459	4,004	4,233	4,797	5,305	6,156	50
1,346	1,588	1,558	1,581	1,704	1,840	1,899	2,002	2,175	2,367	2,486	2,885	3,422	3,670	4,018	4,289	4,665	5,299	51
1,873	2,031	2,112	2,214	2,345	2,501	2,634	2,827	3,065	3,377	3,747	4,185	4,710	5,262	5,897	6,620	7,487	8,585	52
767	794	812	832	867	897	957	1,028	1,121	1,226	1,309	1,506	1,756	2,049	2,302	2,647	3,074	3,658	53
57,335	61,724	65,596	70,417	75,202	82,112	88,068	96,549	105,100	112,195	119,429	130,310	143,973	160,776	178,978	200,104	225,430	257,072	54
45,379	48,802	52,111	56,171	59,855	64,913	69,540	76,114	82,828	88,554	94,206	102,539	112,641	125,579	139,472	155,626	175,155	199,010	55
896	1,077	1,211	1,309	1,409	1,492	1,581	1,785	2,041	2,261	2,476	2,769	3,157	3,481	3,917	4,483	5,232	6,229	56
4,019	4,265	4,499	4,831	5,207	5,723	6,045	6,587	7,169	7,722	8,430	9,467	10,689	11,977	13,166	14,938	17,201	19,775	57
7,041	7,581	7,776	8,107	8,731	9,984	10,902	12,063	13,062	13,658	14,317	15,534	17,485	19,739	22,422	25,057	27,842	32,058	

Table 2.—Per Capita Personal Income, by States and Regions, Revised 1958-78

[Dollars]

Line	State and Region	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
1	United States	2,050	2,145	2,201	2,248	2,353	2,436	2,572	2,750	2,963	3,142	3,401	3,667	3,893	4,132	4,493	4,931
2	New England	2,244	2,346	2,419	2,496	2,608	2,677	2,805	2,977	3,219	3,440	3,717	3,994	4,245	4,416	4,747	5,167
3	Connecticut.....	2,654	2,753	2,838	2,939	3,058	3,131	3,269	3,451	3,741	4,043	4,341	4,642	4,871	4,998	5,353	5,873
4	Maine.....	1,728	1,777	1,835	1,812	1,883	1,945	2,095	2,257	2,421	2,531	2,745	2,995	3,250	3,396	3,636	4,059
5	Massachusetts.....	2,252	2,359	2,435	2,517	2,634	2,698	2,815	2,981	3,207	3,416	3,711	3,999	4,276	4,469	4,816	5,203
6	New Hampshire.....	1,975	2,061	2,160	2,231	2,329	2,358	2,472	2,619	2,880	3,051	3,303	3,535	3,720	3,876	4,193	4,637
7	Rhode Island.....	2,022	2,138	2,186	2,271	2,389	2,481	2,611	2,782	3,009	3,224	3,433	3,643	3,878	4,105	4,433	4,766
8	Vermont.....	1,676	1,774	1,864	1,924	1,996	2,047	2,174	2,369	2,650	2,818	3,028	3,254	3,447	3,630	3,906	4,264
9	Mideast	2,352	2,461	2,538	2,592	2,704	2,785	2,941	3,113	3,329	3,539	3,828	4,108	4,384	4,635	4,985	5,419
10	Delaware.....	2,596	2,660	2,735	2,733	2,839	2,957	3,102	3,364	3,523	3,681	3,957	4,268	4,468	4,732	5,085	5,648
11	District of Columbia.....	2,665	2,735	2,823	2,878	2,966	3,062	3,205	3,384	3,587	3,726	4,063	4,333	4,644	5,064	5,523	5,928
12	Maryland.....	2,178	2,243	2,320	2,409	2,531	2,611	2,761	2,933	3,153	3,367	3,668	3,987	4,267	4,539	4,949	5,459
13	New Jersey.....	2,471	2,603	2,700	2,753	2,902	2,973	3,120	3,310	3,542	3,768	4,074	4,359	4,684	4,967	5,326	5,807
14	New York.....	2,478	2,615	2,703	2,771	2,876	2,963	3,133	3,302	3,520	3,737	4,055	4,328	4,605	4,859	5,178	5,700
15	Pennsylvania.....	2,118	2,188	2,239	2,260	2,357	2,431	2,572	2,735	2,942	3,135	3,362	3,636	3,879	4,086	4,451	4,890
16	Great Lakes	2,182	2,305	2,367	2,390	2,511	2,600	2,757	2,979	3,205	3,345	3,610	3,890	4,050	4,318	4,679	5,225
17	Illinois.....	2,435	2,563	2,616	2,693	2,800	2,879	3,025	3,256	3,498	3,677	3,922	4,219	4,446	4,744	5,075	5,687
18	Indiana.....	1,961	2,074	2,149	2,179	2,328	2,415	2,547	2,787	2,979	3,100	3,334	3,611	3,709	3,974	4,314	4,935
19	Michigan.....	2,155	2,256	2,326	2,302	2,452	2,578	2,781	3,038	3,257	3,366	3,691	3,963	4,041	4,371	4,804	5,311
20	Ohio.....	2,120	2,251	2,322	2,324	2,429	2,516	2,660	2,855	3,086	3,217	3,497	3,778	3,949	4,153	4,512	4,974
21	Wisconsin.....	2,004	2,148	2,178	2,212	2,313	2,359	2,508	2,686	2,909	3,053	3,255	3,509	3,712	3,945	4,295	4,739
22	Plains	1,925	1,951	2,022	2,069	2,195	2,281	2,371	2,616	2,814	2,961	3,176	3,426	3,657	3,878	4,274	5,037
23	Iowa.....	1,883	1,917	1,960	2,055	2,154	2,292	2,409	2,714	2,939	2,989	3,147	3,441	3,643	3,788	4,218	5,136
24	Kansas.....	2,020	2,029	2,084	2,143	2,225	2,306	2,442	2,631	2,855	3,018	3,227	3,470	3,725	4,017	4,470	5,154
25	Minnesota.....	1,935	1,977	2,064	2,129	2,220	2,338	2,412	2,643	2,853	3,030	3,281	3,555	3,819	3,999	4,358	5,113
26	Missouri.....	1,983	2,061	2,091	2,137	2,247	2,344	2,449	2,657	2,821	2,998	3,251	3,418	3,654	3,887	4,185	4,672
27	Nebraska.....	1,907	1,907	2,009	2,015	2,158	2,212	2,270	2,556	2,775	2,909	3,087	3,468	3,657	3,904	4,364	5,113
28	North Dakota.....	1,695	1,547	1,681	1,553	2,125	1,988	1,968	2,323	2,401	2,543	2,650	2,947	3,077	3,448	4,235	6,117
29	South Dakota.....	1,631	1,478	1,758	1,750	1,959	1,889	1,885	2,164	2,400	2,538	2,720	2,894	3,108	3,371	3,847	6,965
30	Southeast	1,519	1,597	1,624	1,675	1,758	1,849	1,969	2,122	2,317	2,494	2,728	2,981	3,208	3,458	3,823	4,279
31	Alabama.....	1,423	1,480	1,510	1,533	1,610	1,698	1,826	1,965	2,112	2,245	2,462	2,695	2,892	3,131	3,439	3,840
32	Arkansas.....	1,277	1,363	1,358	1,455	1,516	1,594	1,713	1,832	2,046	2,176	2,379	2,569	2,791	2,999	3,302	3,822
33	Florida.....	1,835	1,954	1,965	1,971	2,040	2,121	2,257	2,408	2,595	2,816	3,109	3,437	3,698	4,007	4,461	4,988
34	Georgia.....	1,530	1,606	1,644	1,684	1,776	1,887	2,004	2,177	2,386	2,573	2,817	3,096	3,300	3,550	3,953	4,403
35	Kentucky.....	1,490	1,548	1,576	1,662	1,746	1,824	1,891	2,047	2,238	2,403	2,616	2,867	3,076	3,278	3,613	4,032
36	Louisiana.....	1,599	1,645	1,649	1,696	1,755	1,858	1,956	2,106	2,309	2,501	2,710	2,839	3,023	3,227	3,493	3,875
37	Mississippi.....	1,123	1,202	1,196	1,272	1,313	1,443	1,505	1,638	1,796	1,957	2,146	2,327	2,547	2,770	3,094	3,451
38	North Carolina.....	1,455	1,530	1,577	1,631	1,736	1,817	1,947	2,087	2,318	2,479	2,705	2,994	3,200	3,431	3,810	4,263
39	South Carolina.....	1,277	1,350	1,394	1,448	1,549	1,616	1,732	1,889	2,118	2,280	2,507	2,748	2,951	3,169	3,519	3,957
40	Tennessee.....	1,474	1,555	1,576	1,640	1,715	1,799	1,908	2,073	2,283	2,426	2,660	2,877	3,079	3,333	3,696	4,131
41	Virginia.....	1,738	1,836	1,884	1,941	2,048	2,140	2,311	2,471	2,653	2,862	3,115	3,400	3,677	3,973	4,346	4,848
42	West Virginia.....	1,525	1,566	1,592	1,629	1,713	1,801	1,920	2,070	2,213	2,378	2,527	2,736	3,038	3,287	3,612	3,962
43	Southwest	1,805	1,874	1,891	1,941	1,995	2,060	2,185	2,337	2,522	2,727	2,971	3,219	3,465	3,669	4,023	4,482
44	Arizona.....	1,822	1,909	1,994	2,020	2,090	2,128	2,223	2,332	2,510	2,693	2,982	3,311	3,614	3,928	4,319	4,745
45	New Mexico.....	1,769	1,832	1,814	1,868	1,922	1,966	2,045	2,164	2,306	2,410	2,627	2,820	3,045	3,265	3,596	3,951
46	Oklahoma.....	1,743	1,798	1,850	1,877	1,922	1,983	2,121	2,300	2,462	2,650	2,852	3,071	3,341	3,509	3,841	4,305
47	Texas.....	1,822	1,892	1,894	1,952	2,006	2,078	2,208	2,363	2,559	2,780	3,028	3,275	3,507	3,700	4,053	4,525
48	Rocky Mountain	1,958	2,021	2,075	2,121	2,237	2,284	2,358	2,523	2,670	2,811	3,005	3,262	3,540	3,794	4,189	4,701
49	Colorado.....	2,078	2,176	2,247	2,314	2,360	2,428	2,516	2,673	2,857	3,011	3,247	3,531	3,838	4,167	4,540	5,021
50	Idaho.....	1,749	1,804	1,811	1,875	1,979	2,045	2,114	2,283	2,428	2,580	2,716	2,992	3,243	3,434	3,872	4,476
51	Montana.....	1,987	1,936	1,983	1,934	2,246	2,216	2,239	2,414	2,602	2,709	2,860	3,133	3,395	3,503	4,013	4,699
52	Utah.....	1,817	1,891	1,954	2,002	2,120	2,168	2,264	2,366	2,479	2,585	2,747	2,928	3,169	3,427	3,719	4,082
53	Wyoming.....	2,072	2,171	2,210	2,275	2,384	2,416	2,455	2,612	2,778	2,971	3,172	3,407	3,672	3,847	4,352	4,977
54	Far West	2,424	2,552	2,619	2,669	2,782	2,868	3,006	3,142	3,375	3,554	3,842	4,106	4,310	4,530	4,908	5,362
55	California.....	2,508	2,641	2,711	2,751	2,859	2,949	3,095	3,221	3,442	3,626	3,925	4,202	4,423	4,647	5,022	5,458
56	Nevada.....	2,509	2,657	2,791	2,845	3,059	3,050	3,072	3,174	3,346	3,521	3,848	4,252	4,583	4,825	5,167	5,723
57	Oregon.....	2,030	2,160	2,194	2,249	2,346	2,428	2,559	2,688	2,907	3,054	3,287	3,477	3,677	3,944	4,338	4,815
58	Washington.....	2,207	2,300	2,354	2,443	2,577	2,631	2,738	2,943	3,266	3,435	3,689	3,907	3,997	4,161	4,555	5,087
59	Alaska.....	2,262	2,422	2,743	2,619	2,647	2,765	3,020	3,164	3,419	3,655	3,895	4,205	4,638	4,939	5,294	6,046
60	Hawaii.....	1,925	2,099	2,289	2,382	2,491	2,568	2,739	2,912	3,210	3,448	3,779	4,170				

1974	1975 ¹	1976	1977	1978	Line
5,428	5,861	6,402	7,042	7,836	1
5,635	6,027	6,560	7,159	7,900	2
6,389	6,795	7,338	8,059	8,911	3
4,495	4,762	5,357	5,724	6,292	4
5,666	6,071	6,593	7,204	7,924	5
5,024	5,441	6,040	6,618	7,357	6
5,283	5,705	6,204	6,734	7,472	7
4,584	4,923	5,403	5,819	6,566	8
5,924	6,378	6,876	7,452	8,230	9
6,074	6,573	7,100	7,649	8,534	10
6,568	7,292	8,039	8,965	9,924	11
5,944	6,401	7,058	7,623	8,363	12
6,313	6,786	7,288	7,921	8,773	13
6,076	6,523	6,922	7,457	8,224	14
5,397	5,832	6,404	6,997	7,740	15
5,649	6,049	6,679	7,407	8,224	16
6,216	6,734	7,310	8,046	8,903	17
5,228	5,612	6,245	6,906	7,706	18
5,687	6,008	6,765	7,595	8,483	19
5,433	5,771	6,410	7,102	7,855	20
5,183	5,616	6,097	6,775	7,532	21
5,270	5,722	6,069	6,761	7,650	22
5,330	5,907	6,123	6,877	8,002	23
5,506	5,955	6,444	7,040	7,882	24
5,424	5,785	6,222	7,088	7,910	25
5,010	5,475	5,925	6,565	7,313	26
5,198	5,887	6,054	6,672	7,582	27
5,883	5,896	5,781	5,887	7,174	28
4,755	4,995	5,011	5,850	6,864	29
4,692	5,031	5,541	6,089	6,773	30
4,236	4,634	5,156	5,664	6,291	31
4,274	4,527	4,945	5,473	5,969	32
5,341	5,634	6,094	6,728	7,573	33
4,753	5,029	5,517	6,058	6,705	34
4,524	4,882	5,395	5,957	6,607	35
4,373	4,808	5,401	5,989	6,716	36
3,777	4,042	4,530	5,028	5,529	37
4,626	4,943	5,471	5,928	6,575	38
4,407	4,665	5,190	5,653	6,288	39
4,516	4,823	5,344	5,874	6,547	40
5,339	5,770	6,325	6,924	7,671	41
4,429	4,968	5,480	6,000	6,624	42
4,968	5,458	6,020	6,703	7,527	43
5,126	5,364	5,878	6,453	7,372	44
4,325	4,836	5,318	5,864	6,574	45
4,786	5,233	5,741	6,409	7,137	46
5,041	5,583	6,172	6,891	7,730	47
5,157	5,584	6,082	6,656	7,478	48
5,500	6,006	6,537	7,196	8,105	49
5,032	5,205	5,759	6,197	7,015	50
4,982	5,387	5,679	6,092	6,755	51
4,465	4,903	5,373	5,895	6,566	52
5,662	6,127	6,775	7,571	8,636	53
5,911	6,477	7,128	7,885	8,812	54
6,015	6,580	7,231	8,003	8,927	55
6,065	6,636	7,318	8,213	9,439	56
5,311	5,764	6,422	7,214	8,092	57
5,649	6,300	6,939	7,564	8,495	58
7,138	9,673	10,275	10,458	10,963	59
6,130	6,711	7,127	7,673	8,437	60

5,635	6,027	6,560	7,159	7,900	61
5,907	6,355	6,830	7,402	8,179	62
5,649	6,049	6,679	7,407	8,224	63
5,270	5,722	6,069	6,761	7,650	64
5,125	5,482	6,008	6,569	7,296	65
4,315	4,652	5,166	5,693	6,319	66
4,808	5,290	5,855	6,525	7,296	67
5,107	5,509	6,021	6,614	7,473	68
5,929	6,522	7,169	7,908	8,816	69

disbursement (establishment location). Industry definitions are not entirely consistent throughout the 1958-78 period. Estimates for 1975-78 are based on the 1972 Standard Industrial Classification (SIC). Estimates for the years preceding 1975 are based on the 1967 SIC. A consistent set of reliable estimates on the 1972 SIC basis is not possible because of problems in recon-

ciling differences in the underlying data from the unemployment insurance system for the overlap year 1975. A review of the industrial coding for employers (refiling) coincided in many States with the change in the SIC classification system. It is not possible for BEA to distinguish between the code changes due to refiling and those mandated by the change in the classification system.

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Estimates of private nonfarm wages and salaries and other labor income were prepared under the supervision of Elizabeth H. Queen, Chief of the Private Wage and Income Branch. She was assisted principally by: David J. Albright, Carl J. Carlson, Sharon C. Carnevale, Carol E. Evans, Kevin O'Brien, Michael G. Pilot, William E. Reid, Jr., and Victor Sahadachny.

Estimates of farm income, government wages and salaries, government other labor income, proprietors' income, property income, transfer payments, and contributions for social insurance were prepared under the supervision of Kenneth P. Berkman, Chief of the Government, Proprietary, and Investment Income Branch. He was assisted principally by: Vivian G. Conklin, Andrew E. Weiser, Gary V. Kennedy, and Jeanne O'Neill.

Residence adjustments, disclosure-avoidance, and final preparation of the State personal income estimates were performed under the supervision of David W. Cartwright, Chief of the Regional Economic Information System Branch. He was assisted principally by Wallace K. Bailey and Paul M. Levit.

Table 3.—Personal Income by Major

(Millions)

Line	Item	United States						New England							
		1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978
Income by place of work															
1	Total labor and proprietors income ¹	294,904	373,812	550,547	835,195	1,049,386	1,167,975	1,317,680	18,243	23,188	33,676	48,262	58,511	64,503	71,651
By type															
2	Wage and salary disbursements.....	238,690	310,122	462,435	695,024	884,082	976,917	1,096,462	15,507	19,899	28,877	41,476	50,001	54,783	60,682
3	Other labor income.....	9,432	13,955	25,016	48,670	77,376	91,713	106,408	613	917	1,603	2,970	4,491	5,203	5,976
4	Proprietors income ²	46,782	49,735	63,096	91,501	87,928	99,345	114,810	2,124	2,373	3,196	3,816	4,019	4,517	4,993
5	Farm.....	12,370	10,994	11,692	30,878	16,900	18,827	25,630	203	149	162	272	256	205	225
6	Nonfarm ³	34,412	38,741	51,404	60,623	71,028	80,518	89,180	1,921	2,223	3,034	3,545	3,763	4,313	4,768
By industry															
7	Farm.....	15,281	14,316	15,324	35,925	23,948	26,254	33,341	334	262	276	400	415	386	417
8	Nonfarm.....	279,623	359,496	535,223	799,270	1,025,438	1,141,721	1,284,774	17,909	22,926	33,400	47,853	58,096	64,117	71,219
9	Private.....	238,098	302,402	444,848	654,515	838,921	941,547	1,067,878	15,549	19,817	28,752	40,374	49,193	54,477	60,883
10	Agricultural services, forestry, fisheries, and other ³	997	1,201	1,826	2,951	3,919	4,568	5,426	83	94	115	191	242	290	342
11	Agricultural services.....	739	953	1,532	2,456	3,174	3,689	4,373	45	52	83	138	154	177	198
12	Forestry, fisheries, and other ³	257	248	294	495	745	899	1,053	37	33	33	53	88	113	144
13	Mining.....	4,596	4,547	5,759	8,403	15,756	17,556	20,552	22	25	31	41	52	82	87
14	Coal mining.....	1,232	1,052	1,268	2,418	4,472	5,428	5,864	(*)	(*)	(*)	(*)	(D)	21	22
15	Oil and gas extraction.....	2,163	2,145	2,775	3,431	7,905	8,449	10,444	(*)	(*)	(D)	1	5	8	11
16	Metal mining.....	557	597	766	1,101	1,628	1,765	2,076	1	1	30	1	(D)	1	(*)
17	Nonmetallic minerals, except fuels.....	644	753	950	1,393	1,751	1,914	2,168	21	24	30	38	45	51	53
18	Construction.....	17,855	22,940	34,101	53,547	61,301	68,886	79,777	1,078	1,379	2,088	3,166	2,831	3,046	3,369
19	Manufacturing.....	86,160	109,520	159,999	219,562	271,624	306,582	345,419	6,729	8,387	11,738	14,721	18,006	20,130	22,436
20	Nondurable goods.....	34,811	42,360	58,666	79,353	100,031	110,347	121,450	2,753	3,164	4,087	5,006	5,861	6,350	6,873
21	Food and kindred products.....	8,885	10,251	13,007	16,982	22,097	23,997	26,170	392	423	521	630	735	773	830
22	Textile mill products.....	3,241	3,799	5,597	7,721	8,693	9,343	9,993	481	494	566	636	665	710	755
23	Apparel and other textile products.....	4,013	4,880	6,945	8,711	10,219	10,877	11,927	283	314	387	447	521	548	592
24	Paper and allied products.....	3,070	4,091	5,662	8,088	10,361	11,608	12,792	370	447	597	796	969	1,085	1,191
25	Printing and publishing.....	4,977	6,198	8,607	11,823	14,442	15,819	17,579	327	428	587	792	980	1,064	1,162
26	Chemicals and allied products.....	5,168	6,680	9,783	13,416	18,203	20,248	22,321	191	248	341	512	643	695	776
27	Petroleum and coal products.....	1,898	1,928	2,246	2,968	4,420	4,980	5,579	16	16	19	(D)	49	57	63
28	Tobacco manufactures.....	380	456	565	796	1,033	1,099	1,221	4	4	4	6	8	9	10
29	Rubber and misc. plastics products.....	1,905	2,644	4,360	6,877	8,374	10,122	11,428	299	381	527	715	783	894	937
30	Leather and leather products.....	1,273	1,433	1,894	1,971	2,199	2,254	2,440	389	419	540	(D)	502	515	558
31	Durable goods.....	51,349	67,160	101,333	140,209	171,593	196,235	223,969	3,977	5,223	7,651	9,715	12,145	13,781	15,563
32	Lumber and wood products.....	2,535	3,056	4,120	6,226	8,304	9,631	11,097	126	147	190	269	305	338	401
33	Furniture and fixtures.....	1,619	2,006	2,949	4,347	4,500	5,080	5,789	87	106	137	190	205	218	242
34	Primary metal industries.....	7,411	9,091	12,832	18,188	21,826	24,831	28,081	356	398	539	646	710	763	895
35	Fabricated metal products.....	6,182	7,635	11,581	16,788	22,250	24,991	28,159	505	614	915	1,341	1,864	2,015	2,244
36	Machinery, except electrical.....	8,243	11,232	17,876	25,632	32,835	37,401	43,200	810	1,101	1,538	1,940	2,426	2,902	3,245
37	Electric and electronic equipment.....	6,905	10,315	15,850	21,873	25,096	28,570	33,033	678	970	1,455	1,954	2,342	2,654	3,016
38	Transportation equipment exc. motor vehicles.....	6,340	8,815	11,219	12,126	15,777	17,484	20,248	616	820	1,258	1,293	1,908	2,138	2,366
39	Motor vehicles and equipment.....	4,402	6,257	9,749	15,651	19,101	23,349	26,215	43	62	92	139	138	183	207
40	Ordnance ⁴	973	2,310	3,245	2,224				102	208	332	289			
41	Stone, clay, and glass products.....	3,032	3,789	5,061	7,721	9,191	10,367	11,895	127	168	247	352	386	432	513
42	Instruments and related products.....	1,956	2,585	3,981	5,601	8,184	9,521	10,706	236	316	496	720	1,180	1,326	1,517
43	Miscellaneous manufacturing industries.....	1,751	2,069	2,870	3,832	4,529	5,010	5,546	291	315	451	580	782	812	917
44	Transportation and public utilities.....	22,921	27,335	38,562	61,644	78,475	88,730	100,648	1,081	1,288	1,770	2,942	3,525	3,948	4,333
45	Railroad transportation.....	5,724	5,404	5,967	8,206	9,577	10,413	11,197	184	162	162	195	226	241	258
46	Trucking and warehousing.....	4,656	6,335	9,332	15,467	18,213	21,295	24,405	241	321	473	749	792	902	1,004
47	Water transportation.....	1,317	1,565	2,165	2,493	3,110	3,380	3,957	26	29	37	64	66	64	74
48	Other transportation.....	3,057	3,831	6,264	9,628	12,594	14,532	16,454	123	155	239	377	481	578	647
49	Communication.....	4,394	5,493	8,421	15,635	21,701	24,318	27,953	278	341	474	974	1,266	1,403	1,534
50	Electric, gas, and sanitary services.....	3,773	4,707	6,413	10,215	13,280	14,852	16,682	229	280	384	583	694	760	814
51	Wholesale trade.....	18,424	23,242	32,936	50,591	69,784	76,380	86,231	1,024	1,254	1,789	2,818	3,556	3,865	4,260
52	Retail trade.....	34,666	41,507	59,610	86,855	107,601	117,605	131,721	2,096	3,645	5,033	6,014	6,505	7,172	7,172
53	Finance, insurance, and real estate.....	15,054	19,946	30,117	43,414	57,308	66,548	76,165	1,045	1,345	1,973	2,826	3,658	4,089	4,609
54	Banking.....	3,058	4,215	6,446	10,999	15,415	16,921	18,990	222	285	428	723	959	1,035	1,102
55	Other finance, insurance, and real estate.....	11,996	15,731	23,671	32,415	41,893	49,627	57,175	823	1,059	1,544	2,103	2,699	3,034	3,507
56	Services.....	37,426	52,164	81,938	127,548	173,153	194,692	221,939	2,392	3,471	5,603	8,576	11,308	12,521	14,275
57	Hotels and other lodging places.....	1,698	2,116	3,323	4,399	6,125	6,830	7,882	92	112	172	237	293	331	369
58	Personal services.....	4,104	4,985	6,749	7,158	8,228	9,096	10,024	243	298	400	400	440	487	530
59	Private households.....	3,494	3,791	4,801	5,326	6,337	6,759	7,435	191	205	252	273	325	347	382
60	Business and repair services.....	6,074	9,211	14,966	24,124	33,216	38,520	45,542	320	587	962	1,448	1,832	2,096	2,500
61	Amusement and recreation incl. motion pictures.....	2,072	2,635	3,888	5,316	6,908	8,060	9,171	85	111	166	242	278	328	353
62	Professional, social, and related services.....	19,982	29,426	48,211	80,725	112,339	125,427	141,885	1,461	2,158	3,651	5,976	8,140	8,932	10,142
63	Government and government enterprises.....	41,525	57,094	90,375	144,755	186,517	200,174	216,431	2,360	3,109	4,648	7,479	8,903	9,641	10,351
64	Federal, civilian.....	12,181	16,111	23,877	34,848	45,073	48,294	52,250	602	778	1,060	1,476	1,796	1,939	2,108
65	Federal, military.....	7,836	8,674	12,581	16,810	18,352	18,854	19,847	494	487	578	697	573	592	652
66	State and local.....	21,507	32,309	53,917	93,097	123,092	133,026	144,364	1,264	1,845	3,010	5,306	6,534	7,110	7,591
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	294,904	373,812	550,547	835,195	1,049,386	1,167,975	1,317,680	18,243	23,188	33,676	48,262	58,511	64,503	71,651
68	Less: Personal contributions for social insurance by place of work.....	6,836	11,684	22,634	41,949										

Sources, Selected Years 1958-78

of dollars]

Connecticut							Maine							Massachusetts							Line
1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	
5,006	6,531	9,658	13,578	16,375	18,128	20,139	1,329	1,571	2,197	3,255	4,256	4,575	5,075	9,138	11,605	16,542	23,700	28,382	31,264	34,447	1
4,192	5,536	8,204	11,630	13,990	15,414	17,103	1,095	1,334	1,859	2,653	3,481	3,757	4,176	7,906	10,082	14,321	20,618	24,499	26,742	29,348	2
185	279	487	878	1,316	1,525	1,744	30	47	90	184	308	353	406	317	468	792	1,447	2,142	2,465	2,822	3
629	716	967	1,070	1,068	1,189	1,293	204	190	248	418	467	465	493	916	1,055	1,429	1,635	1,741	2,056	2,277	4
46	35	38	40	24	37	16	59	34	31	124	117	73	59	39	32	29	32	28	28	38	5
583	681	928	1,029	1,045	1,152	1,277	145	155	216	294	350	392	434	877	1,022	1,396	1,606	1,709	2,028	2,239	6
72	66	71	85	76	96	79	101	61	55	149	149	109	97	72	64	66	72	78	78	94	7
4,934	6,465	9,587	13,493	16,300	18,031	20,060	1,229	1,510	2,141	3,107	4,108	4,466	4,978	9,066	11,540	16,476	23,628	28,304	31,184	34,353	8
4,483	5,844	8,521	11,759	14,244	15,827	17,652	988	1,182	1,707	2,461	3,291	3,588	4,022	7,855	9,953	14,202	19,917	23,855	26,329	29,208	9
18	19	29	47	51	59	68	15	13	16	28	39	53	61	40	43	54	86	116	134	162	10
17	17	28	46	48	56	64	4	4	7	10	12	14	15	18	22	35	59	67	77	84	11
1	1	1	1	3	3	4	11	9	10	17	27	40	46	23	20	19	27	49	57	78	12
6	6	8	13	17	45	45	1	1	2	2	3	3	2	8	8	10	12	15	16	17	13
(*)	(*)	(*)	(*)	(D)	(D)	(D)	(*)	(*)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(D)	(D)	(D)	14
(*)	(*)	(D)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(D)	(D)	(D)	15
(*)	(*)	(D)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(D)	(D)	(D)	16
5	6	12	14	14	18	16	78	85	1	1	334	299	314	7	8	10	12	13	15	16	17
341	424	607	903	742	820	937	78	126	216	384	299	314	502	502	656	985	1,519	1,239	1,328	1,399	18
2,136	2,821	4,084	4,925	5,986	6,614	7,245	397	487	705	871	1,111	1,246	1,422	3,239	3,890	5,212	6,565	7,935	8,906	9,895	19
486	597	786	1,076	1,299	1,414	1,523	277	349	492	564	722	806	892	1,516	1,677	2,085	2,486	2,832	3,022	3,226	20
68	82	107	127	165	173	184	40	47	68	78	(D)	107	119	227	232	271	334	366	378	402	21
66	67	88	111	114	119	120	46	52	65	66	(D)	89	93	206	208	229	271	300	316	332	22
64	67	75	86	93	96	107	7	8	12	20	26	29	37	188	213	263	294	340	356	373	23
42	50	74	105	134	150	172	95	118	154	208	279	321	345	179	220	285	362	408	449	493	24
82	111	151	207	269	294	325	11	13	17	26	33	36	42	192	243	329	431	519	561	601	25
65	97	133	217	270	298	350	3	4	10	10	(D)	14	16	20	114	132	171	235	297	316	26
4	4	8	(D)	23	22	23	(*)	1	1	3	3	3	3	11	10	9	14	(D)	30	35	27
1	1	2	5	(D)	8	10	(*)	(*)	(*)	(*)	(*)	(*)	(*)	3	2	1	1	(D)	(*)	(*)	28
85	106	133	186	210	241	219	4	9	13	28	39	40	46	166	197	271	343	361	398	429	29
9	12	14	(D)	(D)	13	12	71	98	152	125	153	165	187	230	219	256	203	218	218	228	30
1,650	2,224	3,249	3,849	4,686	5,200	5,723	120	138	213	306	389	440	530	1,723	2,213	3,126	4,079	5,103	5,884	6,670	31
(D)	(D)	(D)	(D)	23	25	32	54	60	82	118	140	155	183	26	31	37	52	55	62	72	32
(D)	(D)	33	51	60	64	64	(D)	(D)	(D)	(D)	9	11	12	52	60	70	88	86	90	103	33
174	190	245	309	357	368	418	(D)	6	7	5	6	6	126	144	195	210	203	238	295	34	
245	304	465	675	913	985	1,090	10	10	18	25	47	50	55	197	238	337	498	708	772	853	35
327	459	616	728	873	1,036	1,085	16	10	18	26	34	43	55	356	480	684	886	1,147	1,356	1,540	36
177	268	372	464	562	634	743	3	10	25	47	56	65	80	442	574	775	1,065	1,266	1,435	1,582	37
452	662	1,003	1,037	1,315	1,437	1,561	25	25	35	41	57	70	90	131	125	201	180	444	509	591	38
8	15	(D)	(D)	28	30	28	(*)	5	(D)	11	9	12	30	40	64	95	83	124	144	144	39
46	53	119	88	110	124	146	(*)	1	6	13	17	18	20	56	150	206	192	182	221	41	
29	44	72	110	110	302	333	4	6	9	13	17	18	20	60	75	109	153	165	182	221	
88	119	181	211	302	333	378	1	1	1	(D)	5	5	9	126	165	265	433	687	832	950	42
78	84	111	130	145	163	177	3	3	4	6	9	10	8	121	131	185	226	260	285	319	43
256	306	439	714	862	985	1,098	96	105	132	216	275	296	320	562	677	931	1,568	1,863	2,095	2,274	44
46	42	44	49	60	66	70	33	29	31	40	46	44	47	74	66	66	78	89	98	105	45
57	73	112	179	186	216	246	19	24	34	58	69	77	89	126	168	244	378	396	450	492	46
(D)	(D)	(D)	(D)	(D)	(D)	(D)	2	3	3	6	10	8	8	(D)	(D)	(D)	(D)	(D)	(D)	(D)	47
(D)	(D)	(D)	(D)	(D)	(D)	(D)	6	7	9	12	17	21	23	(D)	(D)	(D)	(D)	(D)	(D)	(D)	48
64	83	127	225	298	334	368	19	24	31	62	86	96	98	155	184	246	542	687	768	837	49
60	74	106	164	194	215	233	17	19	24	39	46	50	55	112	140	192	286	343	375	396	50
221	283	428	727	988	1,066	1,238	74	86	109	160	229	247	273	593	718	1,014	1,554	1,833	1,981	2,117	51
560	683	960	1,315	1,540	1,663	1,852	148	170	249	377	467	507	571	1,059	1,328	1,843	2,537	2,960	3,197	3,483	52
326	411	595	920	1,220	1,388	1,589	47	61	88	129	171	192	215	544	706	1,041	1,417	1,793	1,969	2,187	53
62	69	104	176	237	258	290	12	16	24	42	56	61	69	121	164	242	403	523	557	561	54
264	342	491	744	982	1,130	1,299	35	45	65	87	115	131	146	423	542	798	1,014	1,271	1,412	1,626	55
619	892	1,420	2,196	2,838	3,167	3,579	137	175	280	464	662	744	842	1,306	1,927	3,113	4,659	6,102	6,702	7,692	56
15	18	29	37	41	45	50	12	14	19	30	38	43	45	53	57	79	99	127	142	161	57
63	78	107	109	118	129	143	14	16	23	30	34	37	40	158	207	198	217	241	260	58	
61	66	83	91	108	115	127	19	20	25	27	32	34	38	85	101	106	126	135	148	59	
83	139	221	384	498	609	729	13	19	27	50	68	78	89	190	370	617	850	1,044	1,149	1,379	60

Table 3.—Personal Income by Major Sources,

[Millions

Line	Item	New Hampshire							Rhode Island						
		1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978
Income by place of work															
1	Total labor and proprietors income ¹	869	1,128	1,713	2,661	3,406	3,886	4,497	1,374	1,696	2,520	3,513	4,169	4,555	5,066
By type															
2	Wage and salary disbursements.....	717	948	1,446	2,244	2,868	3,252	3,770	1,198	1,483	2,195	3,063	3,609	3,927	4,345
3	Other labor income.....	25	40	77	165	267	324	386	42	61	111	207	323	377	430
4	Proprietors income ²	127	140	189	252	270	310	342	134	152	214	243	237	251	292
5	Farm.....	13	11	14	18	15	11	6	6	4	4	2	3	2	16
6	Nonfarm.....	114	129	175	234	256	299	331	128	148	210	241	235	250	276
By industry															
7	Farm.....	24	19	21	25	22	19	19	9	7	8	6	7	7	22
8	Nonfarm.....	845	1,108	1,691	2,636	3,384	3,867	4,463	1,366	1,689	2,512	3,508	4,162	4,548	5,044
9	Private.....	731	948	1,464	2,225	2,859	3,291	3,848	1,064	1,364	2,007	2,789	3,422	3,752	4,189
10	Agricultural services, forestry, fisheries, and other ³	3	3	5	11	11	12	14	5	5	8	13	18	21	25
11	Agricultural services.....	(*)	(*)	(*)	9	9	10	12	3	4	6	9	10	11	12
12	Forestry, fisheries, and other ³	(*)	(*)	(*)	2	2	2	3	2	2	2	4	8	10	13
13	Mining.....	1	2	2	4	6	6	7	1	1	2	2	2	2	4
14	Coal mining.....	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(D)	(D)	(D)	(D)
15	Oil and gas extraction.....	(*)	(*)	(*)	(*)	(*)	(D)	(D)	(*)	(*)	(*)	(D)	(D)	(D)	(D)
16	Metal mining.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
17	Nonmetallic minerals, except fuels.....	(D)	(D)	(D)	4	6	(D)	(D)	1	1	2	2	2	2	3
18	Construction.....	56	74	125	213	212	264	326	71	96	153	193	188	204	231
19	Manufacturing.....	327	418	638	854	1,083	1,258	1,479	489	589	841	1,097	1,375	1,524	1,700
20	Nondurable goods.....	196	227	311	374	433	492	548	227	255	330	397	442	471	519
21	Food and kindred products.....	14	16	21	(D)	(D)	41	47	26	32	36	(D)	(D)	45	47
22	Textile mill products.....	45	45	51	53	(D)	51	59	114	110	130	130	123	130	144
23	Apparel and other textile products.....	7	8	13	17	23	25	26	12	13	17	22	30	32	36
24	Paper and allied products.....	36	37	51	76	89	98	104	8	10	17	23	31	34	39
25	Printing and publishing.....	15	21	29	44	54	61	70	20	27	39	53	67	72	79
26	Chemicals and allied products.....	2	2	3	(D)	11	11	11	7	11	20	33	43	46	54
27	Petroleum and coal products.....	(*)	(*)	(*)	1	1	1	1	1	1	1	(D)	(D)	(*)	(*)
28	Tobacco manufactures.....	1	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
29	Rubber and misc. plastics products.....	5	16	40	70	83	112	132	34	46	59	74	81	87	91
30	Leather and leather products.....	73	81	103	76	91	91	100	4	6	12	(D)	(D)	25	28
31	Durable goods.....	131	191	327	480	650	766	930	262	333	511	700	933	1,053	1,181
32	Lumber and wood products.....	23	25	32	46	48	53	61	(D)	(D)	(D)	(D)	5	5	6
33	Furniture and fixtures.....	7	9	(D)	(D)	16	18	21	3	4	5	9	11	11	14
34	Primary metal industries.....	9	11	20	30	36	40	50	43	49	65	86	105	105	119
35	Fabricated metal products.....	7	10	21	43	78	80	99	43	49	70	93	109	116	131
36	Machinery, except electrical.....	36	50	74	116	172	242	310	42	61	91	116	124	138	153
37	Electric and electronic equipment.....	34	66	137	177	185	197	226	15	35	67	91	116	140	160
38	Transportation equipment exc. motor vehicles.....	(D)	(D)	(D)	7	7	8	10	(D)	(D)	(D)	8	61	88	77
39	Motor vehicles and equipment.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	4	6	9	12	16	19	22
40	Ordnance ⁴	(D)	(D)	(D)	5	5	5	5	(D)	(D)	(D)	(D)	30	34	39
41	Stone, clay, and glass products.....	7	8	12	18	29	34	40	12	15	22	30	34	39	50
42	Instruments and related products.....	1	4	7	(D)	65	78	92	16	23	34	50	57	61	68
43	Miscellaneous manufacturing industries.....	6	7	10	12	14	16	21	81	87	139	202	296	329	380
44	Transportation and public utilities.....	50	61	87	155	193	217	248	78	93	121	187	209	217	234
45	Railroad transportation.....	6	5	5	6	7	7	8	9	7	8	9	11	13	14
46	Trucking and warehousing.....	13	18	27	45	50	58	68	19	26	38	58	55	60	64
47	Water transportation.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2	2	3	(D)	6	5	6
48	Other transportation.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	10	11	12	(D)	19	23	25
49	Communication.....	14	18	26	57	81	91	103	18	22	29	56	72	69	74
50	Electric, gas, and sanitary services.....	13	15	21	34	42	46	50	21	24	30	42	45	48	51
51	Wholesale trade.....	34	45	68	123	180	205	241	79	95	132	194	238	253	282
52	Retail trade.....	111	136	204	320	410	458	531	153	187	269	370	427	454	499
53	Finance, insurance, and real estate.....	40	53	80	123	170	197	228	65	84	123	171	222	249	283
54	Banking.....	8	11	18	32	45	50	59	14	18	28	49	70	77	87
55	Other finance, insurance, and real estate.....	33	42	62	91	125	147	169	51	66	94	122	152	172	196
56	Services.....	110	158	255	423	596	674	773	153	214	359	562	743	828	931
57	Hotels and other lodging places.....	10	12	20	30	37	41	45	5	6	8	9	11	13	15
58	Personal services.....	12	15	21	24	28	33	36	18	24	32	32	33	35	37
59	Private households.....	10	11	15	18	21	23	25	12	13	15	16	19	20	22
60	Business and repair services.....	10	18	31	55	80	96	114	19	28	50	87	112	129	145
61	Amusement and recreation incl. motion pictures.....	5	7	12	18	26	29	33	7	10	14	20	22	24	27
62	Professional, social, and related services.....	63	94	156	278	403	452	520	92	134	240	398	546	607	685
63	Government and government enterprises.....	114	160	227	411	524	576	630	272	325	505	718	739	796	856
64	Federal, civilian.....	23	33	48	79	98	113	117	71	83	131	168	159	161	176
65	Federal, military.....	29	37	28	51	54	54	58	114	106	152	161	61	63	69
66	State and local.....	61	91	151	282	372	409	455	87	136	221	389	520	571	611
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	869	1,128	1,713	2,661	3,406	3,886	4,497	1,374	1,696	2,520	3,513	4,169	4,555	5,066
68	Less: Personal contributions for social insurance by place of work.....	20	36	73	138	191	215	252	40	62	115	200	257	277	310
69	Net labor and proprietors income by place of work.....	849	1,091	1,639	2,523	3,215	3,670	4,245	1,335	1,634	2,405	3,313	3,912	4,278	4,756
70	Plus: Residence adjustment.....	60	104	183	271	374	403	435	20	29	44	100	135	155	169
71	Net labor and proprietors income by place of residence.....	909	1,196	1,822	2,794	3,589	4,073	4,680	1,355	1,663	2,449	3,413	4,047	4,434	4,925
72	Plus: Dividends, interest, and rent ⁵	146	207	315	472	724	817	928	219	312	396	573	741	803	906
73	Plus: Transfer payments.....	93	128	205	422	682	736	803	161	199	320	640	1,017	1,076	1,155
74	Personal income by place of residence.....	1,148	1,530	2,342	3,688	4,995	5,626	6,409	1,735	2,174	3,166	4,626	5,805	6,312	6,984
75	Per capita income (dollars).....	1,975	2,358	3,303	4,637	6,040	6,618	7,357	2,022	2,481	3,433	4,766	6,204	6,734	7,472
76	Total population (thousands).....	581	649	709	795	827	850	871	858	876	922	971	936	937	935

See footnotes on pp. 32-33.

Selected Years 1958-78—Continued

of dollars]

Vermont							Midwest							Delaware							Line	
1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978		
527	658	1,047	1,555	1,923	2,096	2,427	73,561	91,168	130,559	185,371	223,300	240,825	264,966	925	1,155	1,725	2,713	3,305	3,536	3,979	1	
399	516	851	1,267	1,553	1,691	1,941	62,622	78,451	112,502	161,466	193,172	207,745	227,434	782	994	1,496	2,311	2,808	3,024	3,356	2	
14	22	45	88	135	159	189	2,565	3,610	6,012	10,822	16,043	18,582	21,088	40	54	93	177	263	306	350	3	
114	120	150	199	235	246	297	8,374	9,108	12,045	13,082	14,086	14,498	16,444	103	107	136	226	234	206	273	4	
41	32	42	59	66	54	85	591	676	1,077	848	848	615	1,100	27	19	21	90	85	61	112	5	
73	88	108	141	168	192	212	7,554	8,516	11,370	12,006	13,238	13,883	15,344	76	88	115	136	149	145	161	6	
57	44	54	74	84	74	106	1,109	887	965	1,490	1,408	1,215	1,704	37	28	29	100	96	73	125	7	
470	614	993	1,481	1,839	2,022	2,321	72,452	90,281	129,593	183,881	221,892	239,610	263,562	888	1,127	1,696	2,613	3,209	3,463	3,854	8	
398	525	850	1,222	1,520	1,690	1,965	62,900	77,332	109,001	150,285	180,639	196,210	216,787	779	979	1,460	2,227	2,718	2,936	3,283	9	
2	2	3	6	8	10	12	(D)	(D)	(D)	512	613	690	761	(D)	(D)	(D)	7	10	10	(D)	10	
(*)	(*)	(*)	5	8	9	11	(D)	(D)	403	459	513	565	(D)	(D)	(D)	(D)	(*)	9	(D)	(D)	11	
(*)	(*)	(*)	1	(*)	1	1	40	48	65	109	154	177	196	(D)	(D)	(D)	(D)	(*)	(*)	(*)	12	
(*)	(*)	(*)	8	(*)	9	11	358	265	279	(D)	800	1,224	1,381	(D)	(D)	(D)	(*)	(*)	(*)	(*)	13	
(*)	(*)	(*)	(D)	(*)	(*)	(*)	38	37	(D)	81	189	166	198	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14	
(*)	(*)	(*)	(D)	(*)	(*)	(*)	37	37	(D)	41	(D)	65	66	(*)	(*)	(*)	(*)	(*)	(*)	(*)	15	
6	6	7	8	9	10	11	(D)	(D)	133	191	190	199	210	(*)	(*)	(*)	(*)	(*)	(*)	(*)	16	
34	44	92	122	115	130	162	3,975	5,113	7,171	10,839	10,022	10,694	11,992	64	82	118	198	208	213	243	17	
143	184	307	409	517	582	695	24,026	28,657	38,841	48,683	57,011	62,563	68,887	399	491	724	1,016	1,249	1,376	1,525	19	
51	59	83	109	133	145	166	10,636	12,436	16,318	20,164	23,586	25,598	27,875	304	386	545	731	935	1,023	1,102	20	
16	16	17	21	26	28	31	2,013	2,317	2,788	3,315	3,950	4,196	4,516	26	29	48	63	81	(D)	(D)	21	
4	3	3	5	5	6	6	783	822	1,067	1,363	1,308	1,365	1,437	10	10	10	9	(D)	(D)	(D)	22	
6	5	6	7	9	10	12	2,207	2,484	3,153	3,357	3,516	3,659	3,975	14	15	19	11	36	(D)	(D)	23	
10	12	16	22	29	33	38	774	974	1,261	1,672	2,018	2,265	2,501	(D)	(D)	(D)	(D)	10	16	48	24	
8	12	23	31	38	41	46	1,728	2,097	2,855	3,653	4,272	4,614	4,995	8	10	13	(D)	(D)	(D)	25		
1	2	4	7	8	8	10	1,789	2,260	3,193	4,260	5,474	(D)	(D)	217	283	396	(D)	(D)	687	762	823	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	482	470	529	715	1,013	1,137	1,321	(D)	(D)	10	20	(D)	(D)	31	30	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	76	77	91	96	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	28	
5	6	11	13	14	16	20	393	556	872	1,227	1,421	1,632	1,829	(D)	(D)	(D)	(D)	(D)	(D)	48	55	
2	3	3	3	3	3	4	390	429	529	505	(D)	542	572	(D)	(D)	(D)	(D)	(D)	(D)	4	2	
91	125	224	300	384	437	529	13,390	16,221	22,523	28,519	33,425	36,965	41,012	95	105	179	285	314	353	422	31	
13	16	19	26	34	38	46	205	235	297	396	(D)	589	660	3	3	3	4	(D)	(D)	7	9	
(D)	(D)	(D)	23	20	24	28	346	397	534	665	586	640	731	(*)	(*)	1	2	(D)	(D)	3	3	
2	3	4	4	4	6	7	2,610	2,988	4,042	(D)	6,108	6,760	7,396	(D)	(D)	(D)	(D)	(D)	(D)	38	34	
32	41	55	68	76	87	102	1,573	1,776	2,432	3,168	4,017	4,298	4,687	13	16	18	23	29	29	29	35	
7	23	79	110	158	184	225	2,042	2,608	3,864	4,969	6,096	6,723	7,736	(D)	(D)	8	25	23	(D)	(D)	36	
7	5	12	20	25	27	36	2,247	2,983	4,134	5,071	5,776	6,244	6,949	(D)	(D)	(D)	8	11	14	12	37	
(*)	(*)	(*)	(*)	(*)	1	1	1,091	1,499	1,999	(D)	(D)	2,330	2,535	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	39
15	18	23	28	30	33	37	235	268	317	252	(D)	2,396	2,686	5	5	8	9	10	10	12	40	
4	5	9	15	18	18	20	1,009	1,307	1,913	2,505	3,143	3,460	3,788	(D)	(D)	(D)	17	25	32	39	42	
2	2	3	5	8	9	12	688	786	1,029	1,223	1,380	1,491	1,568	2	1	1	1	1	1	1	2	43
38	46	60	102	124	139	158	6,151	7,227	9,797	14,588	17,748	19,683	21,874	60	67	93	148	192	208	230	44	
15	13	9	12	14	15	15	1,151	1,130	1,152	1,420	1,682	1,838	1,972	18	16	17	25	33	36	39	45	
7	12	18	31	35	40	45	1,044	1,415	2,045	3,211	3,498	3,943	4,427	11	16	24	37	48	50	56	46	
(*)	(*)	(*)	1	1	1	1	635	735	932	946	1,087	1,163	1,343	(D)	(D)	(D)	(D)	7	8	(D)	47	
2	3	5	7	9	11	13	1,005	1,249	1,896	2,645	3,212	3,596	3,962	(D)	(D)	(D)	(D)	11	18	20	21	
7	10	15	31	42	46	54	1,263	1,531	2,260	4,036	5,385	5,949	6,678	10	11	17	31	42	46	50	49	
6	8	11	19	24	27	29	954	1,167	1,512	2,331	2,855	3,195	3,493	9	13	18	36	44	(D)	(D)	50	
22	27	39	61	88	94	107	5,089	6,173	8,433	12,022	15,066	16,037	17,698	26	36	54	96	130	(D)	(D)	51	
65	80	121	174	209	225	255	8,040	9,443	13,086	17,862	20,883	21,906	23,926	93	117	181	280	327	331	368	52	
23	30	47	83	94	107	127	4,502	5,727	8,816	11,920	15,292	16,835	18,646	33	44	60	116	143	156	173	53	
6	8	12	21	29	32	37	979	1,287	1,955	3,281	4,542	4,851	5,341	10	13	21	38	(D)	(D)	(D)	54	
17	23	35	45	54	62	71	3,524	4,441	6,862	8,648	10,751	11,984	13,304	23	30	47	78	(D)	(D)	(D)	55	
65	107	176	273	368	407	457	10,410	14,328	22,080	33,050	42,760	46,421	51,556	100	138	216	363	453	488	560	56	
6	9	18	32	41	46	52	459	549	725	986	1,044	1,099	1,229	(D)	(D)	5	(D)	(D)	(D)	(D)	57	
5	7	10	11	13	15	17	1,037	1,231	1,570	1,554	1,658	1,759	1,899	10	12	17	26	(D)	(D)	24	25	
9	10	14	15	18	20	22	848	909	1,114	1,204	1,432	1,528	1,681	13	15	22	31	33	36	36	58	
4	12	16	23	31	36	44	1,912	2,844	4,630	6,926	8,666	9,777	11,209	(D)	(D)	34	69	74	82	100	60	
2	5	10	6	8	9	10	582	733	1,010	1,260	1,514	1,693	1,882	5	7	10	14	15	17	17	61	
39	64	109	186	256	280	313	5,572	8,061	12,981	21,120	28,446	30,566	33,656	52	78	127	222	(D)	(D)	(D)	62	
72	88	142	259	319																		

Table 3.—Personal Income by Major

(Millions)

Line	Item	District of Columbia						Maryland							
		1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978
Income by place of work															
1	Total labor and proprietors income ¹	2,612	3,535	5,116	7,337	9,533	10,377	11,337	4,918	6,484	10,183	16,080	20,249	21,755	23,858
By type															
2	Wage and salary disbursements.....	2,431	3,297	4,809	6,917	8,890	9,628	10,499	4,138	5,552	8,786	13,917	17,488	18,801	20,432
3	Other labor income.....	41	83	136	256	404	555	601	143	226	417	816	1,293	1,499	1,681
4	Proprietors income ²	140	155	171	164	180	214	236	636	706	980	1,347	1,469	1,455	1,745
5	Farm.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	89	48	70	188	158	91	236
6	Nonfarm ³	140	155	171	164	180	214	236	548	658	910	1,159	1,311	1,365	1,509
By industry															
7	Farm.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	120	83	100	231	227	159	314
8	Nonfarm.....	2,612	3,535	5,116	7,337	9,533	10,377	11,337	4,798	6,401	10,082	15,850	20,022	21,596	23,543
9	Private.....	1,353	1,856	2,564	3,396	4,446	4,856	5,308	3,718	4,868	7,430	11,485	14,386	15,747	17,322
10	Agricultural services, forestry, fisheries, and other ⁴	(D)	(D)	(D)	45	65	(D)	(D)	19	17	32	56	60	63	65
11	Agricultural services.....	(D)	(D)	(D)	2	2	(D)	(D)	13	12	27	48	55	(D)	(D)
12	Forestry, fisheries, and other ⁵	(D)	(D)	(D)	43	63	(D)	(D)	7	5	6	8	5	(D)	(D)
13	Mining.....	(D)	(D)	(D)	1	3	(D)	2	14	17	15	21	22	26	28
14	Coal mining.....	(D)	(D)	(D)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	5	11	16	16
15	Oil and gas extraction.....	(D)	(D)	(D)	(D)	2	2	2	(D)	(D)	(*)	1	1	1	1
16	Metal mining.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(*)
17	Nonmetallic minerals, except fuels.....	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(D)	(D)	(D)	15	10	9	10
18	Construction.....	106	162	171	276	278	252	258	326	453	662	1,270	1,351	1,472	1,596
19	Manufacturing.....	120	147	191	224	278	282	310	1,362	1,641	2,231	2,831	3,379	3,756	4,114
20	Nondurable goods.....	104	128	167	201	248	251	279	493	615	852	1,090	1,282	1,398	1,511
21	Food and kindred products.....	31	32	36	(D)	19	20	20	163	185	237	(D)	353	(D)	(D)
22	Textile mill products.....	(*)	(*)	(*)	(*)	(*)	(D)	(D)	24	11	15	12	(D)	12	14
23	Apparel and other textile products.....	1	1	1	1	(*)	1	1	72	88	121	136	133	(D)	(D)
24	Paper and allied products.....	(D)	(D)	(D)	(*)	5	6	6	40	52	74	101	132	142	160
25	Printing and publishing.....	67	88	125	(D)	213	213	239	69	98	149	218	271	309	328
26	Chemicals and allied products.....	1	1	3	4	6	(D)	(D)	68	108	139	(D)	216	(D)	(D)
27	Petroleum and coal products.....	(D)	(D)	(*)	(*)	(D)	4	4	8	9	11	14	18	17	18
28	Tobacco manufactures.....	(*)	(*)	(*)	(*)	(D)	(*)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
29	Rubber and misc. plastics products.....	(D)	(D)	(D)	(D)	(D)	(*)	(*)	41	55	93	104	127	141	156
30	Leather and leather products.....	(D)	(D)	(D)	(*)	(*)	(*)	(*)	8	8	14	14	(D)	(D)	(D)
31	Durable goods.....	16	20	24	23	30	31	31	869	1,026	1,379	1,742	2,098	2,359	2,603
32	Lumber and wood products.....	1	1	(D)	1	(D)	1	1	(D)	(D)	(D)	(D)	46	55	55
33	Furniture and fixtures.....	1	1	1	(*)	(D)	(*)	(*)	21	25	(D)	(D)	38	42	47
34	Primary metal industries.....	(*)	(*)	(D)	2	2	6	7	(D)	(D)	398	527	607	675	751
35	Fabricated metal products.....	3	3	2	(D)	3	3	3	77	87	113	148	174	195	197
36	Machinery, except electrical.....	(D)	(D)	1	1	7	(D)	(D)	63	87	133	186	213	233	367
37	Electric and electronic equipment.....	(D)	(D)	(D)	4	3	6	6	74	99	159	158	403	451	526
38	Transportation equipment exc. motor vehicles.....	2	4	4	4	6	4	3	235	96	129	144	173	194	215
39	Motor vehicles and equipment.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	26	65	116	181	230	284	196
40	Ordnance ⁶	(D)	(D)	(D)	(*)	3	3	3	28	145	139	125	147	154	168
41	Stone, Clay, and glass products.....	(D)	(D)	(D)	5	1	46	61	46	84	135	147	147	154	168
42	Instruments and related products.....	(D)	(D)	(D)	1	2	2	2	11	16	21	29	32	38	41
43	Miscellaneous manufacturing industries.....	1	2	2	2	1	1	2	15	19	27	30	35	38	40
44	Transportation and public utilities.....	185	229	312	407	499	564	617	388	455	642	1,003	1,255	1,426	1,589
45	Railroad transportation.....	37	33	30	27	47	66	71	106	98	111	139	156	169	182
46	Trucking and warehousing.....	14	16	15	15	15	14	15	77	104	162	273	332	379	425
47	Water transportation.....	(D)	(D)	(D)	1	1	(D)	(D)	27	32	41	71	93	93	111
48	Other transportation.....	(D)	(D)	(D)	86	66	72	78	46	54	70	73	97	119	130
49	Communication.....	51	75	133	208	288	325	361	65	83	145	265	351	411	455
50	Electric, gas, and sanitary services.....	31	40	54	67	81	(D)	(D)	67	83	114	181	226	255	286
51	Wholesale trade.....	127	161	219	207	227	(D)	(D)	228	307	489	835	1,133	1,231	1,350
52	Retail trade.....	235	284	355	391	448	474	499	581	747	1,209	1,905	2,408	2,532	2,764
53	Finance, insurance, and real estate.....	118	157	241	323	422	465	515	212	301	500	785	1,028	1,163	1,296
54	Banking.....	22	28	45	76	(D)	(D)	(D)	36	52	80	144	210	234	266
55	Other finance, insurance, and real estate.....	96	129	196	247	(D)	(D)	(D)	176	249	420	641	818	928	1,031
56	Services.....	451	697	1,048	1,520	2,226	2,504	2,770	589	930	1,649	2,778	3,750	4,077	4,520
57	Hotels and other lodging places.....	(D)	(D)	51	(D)	80	90	104	(D)	(D)	27	51	65	(D)	(D)
58	Personal services.....	38	45	52	(D)	42	45	70	87	130	144	172	180	196	
59	Private households.....	47	51	65	72	86	92	101	68	75	99	113	134	143	157
60	Business and repair services.....	(D)	(D)	166	243	298	348	408	(D)	(D)	418	671	860	964	1,100
61	Amusement and recreation incl. motion pictures.....	14	17	23	30	28	29	31	31	42	66	86	105	119	124
62	Professional, social, and related services.....	263	442	690	1,071	(D)	1,904	2,081	329	526	909	1,714	2,414	(D)	(D)
63	Government and government enterprises.....	1,259	1,679	2,552	3,941	5,088	5,521	6,029	1,080	1,533	2,652	4,365	5,637	5,849	6,221
64	Federal, civilian.....	1,008	1,376	2,072	3,070	4,097	4,396	4,835	520	753	1,216	1,879	2,478	2,513	2,559
65	Federal, military.....	135	129	160	227	257	255	256	211	225	374	510	464	465	479
66	State and local.....	117	174	320	644	734	870	938	349	556	1,062	1,976	2,695	2,871	3,183
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	2,612	3,535	5,116	7,337	9,533	10,377	11,337	4,918	6,484	10,183	16,080	20,249	21,755	23,858
68	Less: Personal contributions for social insurance by place of work.....	96	153	255	410	513	549	602	128	223	436	819	1,084	1,164	1,283
69	Net labor and proprietors income by place of work.....	2,516	3,382	4,861	6,927	9,020	9,828	10,735	4,790	6,262	9,747	15,261	19,165	20,591	22,574
70	Plus: Residence adjustment.....	-991	-1,598	-2,581	-4,015	-5,516	-5,971	-6,544	566	951	1,597	2,527	3,384	3,690	4,085
71	Net labor and proprietors income by place of residence.....	1,525	1,784	2,279	2,912	3,504	3,856	4,191	5,355	7,212	11,344	17,789	22,550	24,281	26,660
72	Plus: Dividends, interest, and rent ⁷	310	414	480	636	918	1,017	1,146	759	1,071	1,641	2,327	3,100	3,506	3,935
73	Plus: Transfer payments.....	182	246	401	815	1,207	1,266	1,349	381	557	1,008	2,123	3,468	3,749	4,060
74	Personal income by place of residence.....	2,017	2,443	3,161	4,364	5,628	6,140	6,684	6,495	8,841	13,993	22,239	29,117	31,536	34,646
75	Per capital income (dollars).....	2,665	3,062	4,063	5,928	8,039	8,965	9,924	2,178	2,611	3,668	5,459	7,058	7,623	8,363
76	Total population (thousands).....	757	798	778	736	700	685	674	2,982	3,386	3,815	4,074	4,125	4,137	4,143

See footnotes on pp. 32-33.

Sources, Selected Years 1958-78—Continued

of dollars]

New Jersey							New York							Pennsylvania							Line
1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	
11,127	14,465	20,791	30,733	37,198	40,531	45,203	34,725	42,943	60,318	82,289	95,344	101,708	110,993	19,254	22,586	32,426	46,219	57,671	62,919	69,596	1
9,335	12,316	17,729	26,572	31,904	34,733	38,623	29,811	37,155	52,165	72,317	83,314	88,685	96,345	16,124	19,136	27,517	39,433	48,769	52,874	58,180	2
449	644	1,078	1,953	2,842	3,270	3,767	1,159	1,627	2,610	4,605	6,610	7,504	8,482	733	976	1,677	3,016	4,571	5,469	6,206	3
1,343	1,505	1,984	2,208	2,452	2,528	2,813	3,755	4,160	5,543	5,367	5,419	5,519	6,166	2,397	2,474	3,232	3,770	4,332	4,576	5,211	4
96	63	54	71	52	39	60	300	256	298	344	238	130	211	308	205	232	383	315	295	481	5
1,247	1,442	1,980	2,137	2,400	2,490	2,754	3,455	3,904	5,244	5,023	5,181	5,388	5,955	2,088	2,269	3,000	3,387	4,016	4,281	4,730	6
149	113	106	129	118	113	132	416	373	406	500	426	352	452	387	289	324	531	541	517	680	7
10,978	14,352	20,685	30,604	37,080	40,418	45,371	34,309	42,570	59,912	81,789	94,918	101,355	110,541	18,867	22,297	32,103	45,689	57,130	62,402	68,916	8
9,757	12,653	17,975	25,979	31,191	34,093	38,223	30,340	37,172	51,389	67,848	78,734	84,572	92,810	16,953	19,805	28,184	39,351	49,165	54,006	59,840	9
31	37	59	90	109	125	140	70	91	145	213	247	278	306	37	39	60	100	123	142	159	10
26	33	54	84	95	110	124	54	71	117	166	179	200	218	37	38	59	96	119	137	152	11
5	4	4	6	13	16	16	15	20	28	47	69	78	88	1	1	2	3	4	5	7	12
25	28	29	48	48	49	53	70	76	96	145	185	189	201	1	1	1	1	1	1	1	13
(D)	(D)	(*)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	355	261	273	(D)	764	(D)	96	14
(*)	(*)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	26	23	23	26	29	(D)	80	15
19	24	26	43	35	37	40	38	40	48	66	75	74	82	34	40	46	65	74	77	85	16
648	900	1,302	1,903	1,708	1,805	2,145	1,770	2,322	2,924	4,225	3,255	3,425	3,825	1,061	1,194	1,995	2,967	3,221	3,527	3,925	17
4,360	5,464	7,433	9,695	11,328	12,364	13,621	10,430	12,157	16,023	18,931	21,598	23,598	25,947	7,354	8,757	12,239	15,986	19,179	21,186	23,370	19
1,929	2,445	3,430	4,688	5,742	6,234	6,785	5,150	5,711	7,167	8,153	9,139	9,844	10,701	2,656	3,141	4,157	5,302	6,242	6,849	7,497	20
335	443	554	678	811	812	876	924	988	1,107	1,249	1,406	1,528	1,646	534	640	786	1,008	1,280	1,371	1,485	21
161	161	223	309	293	315	305	345	437	564	519	546	552	283	294	381	469	467	503	547	22	
263	295	411	473	512	533	571	1,377	1,440	1,784	1,788	1,850	1,933	2,104	480	595	817	948	983	1,038	1,127	23
158	218	290	447	504	554	612	362	429	524	602	740	817	898	208	267	365	512	621	698	773	24
176	227	330	490	612	688	759	1,057	1,260	1,683	2,021	2,286	2,442	2,615	353	414	555	729	866	937	1,029	25
568	745	1,139	1,671	2,230	2,488	2,714	612	700	938	1,095	1,355	1,476	1,582	324	423	579	754	980	1,118	1,227	26
101	100	118	166	266	294	318	147	149	160	227	317	366	491	219	203	229	287	379	425	460	27
7	7	3	(D)	(D)	(D)	(D)	25	28	38	45	51	57	66	43	42	50	48	38	37	42	28
116	202	294	379	432	487	536	116	138	209	301	351	402	451	108	140	246	395	463	554	631	29
45	56	69	73	(D)	(D)	(D)	225	233	286	260	265	276	296	104	123	148	151	165	167	175	30
2,431	3,009	4,003	5,007	5,587	6,131	6,836	5,280	6,446	8,856	10,778	12,459	13,753	15,246	4,698	5,616	8,082	10,684	12,937	14,338	15,874	31
(D)	(D)	(D)	(D)	(D)	(D)	(D)	84	95	117	146	158	171	187	69	80	107	158	247	281	321	32
43	54	(D)	(D)	94	102	123	180	198	248	276	252	267	297	101	119	178	247	200	226	261	33
241	278	363	(D)	(D)	437	486	475	571	741	1,018	1,114	1,213	1,266	1,616	1,819	2,523	3,279	3,935	4,391	4,839	34
296	381	552	797	957	1,112	1,112	569	610	793	952	1,123	1,251	1,382	615	680	954	1,245	1,734	1,825	1,964	35
363	458	704	918	1,106	1,201	1,404	955	1,215	1,825	2,215	2,647	2,955	3,388	648	839	1,193	1,624	2,101	2,306	2,547	36
683	859	1,086	1,250	1,328	1,468	1,608	842	1,127	1,569	1,936	2,177	2,379	2,712	644	893	1,308	1,715	1,853	1,927	2,085	37
190	187	159	118	105	114	114	452	510	727	639	771	827	868	214	293	479	597	706	900	1,071	38
102	117	165	229	275	362	384	223	378	496	633	753	942	1,075	97	118	213	339	415	547	640	39
(D)	(D)	(D)	10	516	557	612	151	108	63	47	601	663	756	51	21	104	70	912	1,009	1,135	40
174	233	320	458	577	622	674	271	350	431	568	626	716	826	365	401	517	758	482	549	627	41
176	257	333	425	475	539	591	674	833	1,242	1,656	2,126	2,301	2,490	146	198	306	377	377	425	482	42
132	152	195	221	256	289	316	405	457	603	693	784	826	866	133	155	201	276	350	378	383	43
858	1,108	1,555	2,510	3,106	3,499	4,021	3,035	3,558	4,842	6,987	8,308	9,052	9,958	1,625	1,809	2,353	3,533	4,387	4,935	5,458	44
147	134	122	142	142	155	166	438	403	387	450	507	554	594	504	445	485	636	797	857	920	45
224	339	527	857	953	1,040	1,159	393	515	707	1,014	1,006	1,130	1,263	324	425	610	1,010	1,146	1,329	1,509	46
68	105	150	211	242	256	291	463	506	632	532	584	623	717	72	87	104	124	159	183	212	47
108	141	221	329	421	463	523	631	799	1,279	1,850	2,236	2,482	2,722	162	185	235	294	373	435	487	48
153	192	274	577	887	1,069	1,315	730	877	1,265	2,220	2,819	3,009	3,297	253	293	425	735	998	1,090	1,200	49
158	197	261	393	462	515	567	380	459	572	920	1,157	1,249	1,364	309	375	493	734	916	1,040	1,131	50
626	827	1,204	2,018	2,732	2,985	3,377	2,908	3,534	4,675	6,287	7,476	7,859	8,552	1,174	1,308	1,791	2,579	3,388	3,574	3,998	51
1,261	1,524	2,177	3,184	3,813	4,027	4,397	3,681	4,399	5,876	7,471	8,271	8,534	9,288	2,189	2,371	3,289	4,631	5,616	5,988	6,611	52
543	689	999	1,444	1,862	2,091	2,341	2,765	3,505	5,502	7,150	9,053	9,838	10,789	831	1,032	1,505	2,111	2,785	3,123	3,531	53
99	128	185	334	435	465	510	617	819	1,264	2,102	2,933	3,118	3,421	196	246	359	587	804	863	956	54
445	561	814	1,110	1,427	1,626	1,831	2,148	2,686	4,238	5,048	6,120	6,720	7,368	636	786	1,146	1,524	1,981	2,260	2,575	55
1,405	2,074	3,217	5,086	6,484	7,147	8,129	5,611	7,530	11,305	16,440	20,341	21,780	23,944	2,255	2,960	4,594	6,864	9,506	10,424	11,633	56
44	54	85	125	126	135	172	286	338	416	486	489	514	565	82	96	140	250	275	280	304	57
167	205	262	266	289	307	333	499	595	736	696	688	723	776	254	287	373	386	447	453	523	58
108	116	144	156	186	199	218	427	456	553	594	707	754	829	186	196	231	243	289	308	339	59
326	524	811	1,282	1,645	1,858	2,223	1,128	1,578	2,499	3,526	4,300	4,819	5,454	303	435	701	1,136	1,490	1,707	1,924	60
57	74	103	134	175	193	206	388	494	661	794	926										

Table 3.—Personal Income by Major

[Millions of

Line	Item	Great Lakes						Illinois							
		1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978
Income by place of work															
1	Total labor and proprietors income ¹	64,863	80,291	118,583	174,199	214,244	240,210	269,236	20,204	24,512	35,231	51,108	63,330	70,218	78,371
By type															
2	Wage and salary disbursements	53,254	67,252	100,256	146,545	180,413	200,605	224,609	16,633	20,519	29,988	43,041	53,619	58,838	65,323
3	Other labor income	2,503	3,423	6,124	11,736	17,974	21,339	24,544	691	966	1,652	3,054	4,846	5,724	6,595
4	Proprietors income ²	9,107	9,617	12,203	15,918	15,857	18,265	20,082	2,881	3,028	3,591	5,013	4,865	5,736	6,453
5	Farm	2,181	1,966	2,098	4,715	3,441	4,131	4,449	730	658	578	1,643	1,024	1,305	1,536
6	Nonfarm ³	6,926	7,651	10,104	11,204	12,416	14,134	15,633	2,150	2,370	3,014	3,370	3,841	4,431	4,917
By industry															
7	Farm	2,490	2,373	2,491	5,289	4,316	5,056	5,475	817	765	672	1,779	1,264	1,585	1,813
8	Nonfarm	62,373	77,919	116,092	168,911	209,928	235,154	263,761	19,386	23,747	34,559	49,330	62,066	68,713	76,558
9	Private	55,912	69,063	102,074	146,215	181,117	204,636	230,543	17,440	21,076	30,351	42,498	53,411	59,614	66,807
10	Agricultural services, forestry, fisheries, and other ³	141	163	246	358	439	523	610	42	49	75	105	124	150	174
11	Agricultural services	135	158	240	346	425	504	587	41	47	73	102	120	146	169
12	Forestry, fisheries, and other ³	6	5	6	12	14	19	24	1	2	3	4	5	5	
13	Mining	486	508	628	952	1,676	1,810	1,983	203	200	236	340	619	687	719
14	Coal mining	167	167	213	415	(D)	899	925	79	78	102	195	344	411	412
15	Oil and gas extraction	111	113	126	144	(D)	433	399	462	66	59	60	51	153	151
16	Metal mining	60	59	77	102	(D)	140	175	3	2	1	1	(*)	(*)	(*)
17	Nonmetallic minerals, except fuels	149	168	212	291	337	372	420	56	61	74	94	121	140	156
18	Construction	3,858	4,442	7,470	9,944	11,055	12,720	14,745	1,283	1,432	2,324	3,101	3,527	3,943	4,471
19	Manufacturing	25,394	31,963	46,631	65,688	78,780	89,989	101,152	6,772	8,200	11,701	15,936	18,993	21,180	23,662
20	Nondurable goods	7,310	8,698	11,953	16,041	19,863	22,050	24,292	2,434	2,850	3,913	5,139	6,322	6,890	7,577
21	Food and kindred products	2,183	2,363	2,939	3,841	5,009	5,414	5,901	806	879	1,107	1,445	1,822	1,962	2,151
22	Textile mill products	133	145	172	208	219	246	247	(D)	(D)	(D)	(D)	(D)	(D)	(D)
23	Apparel and other textile products	352	428	607	757	872	979	1,060	166	178	219	234	231	248	263
24	Paper and allied products	818	1,070	1,440	1,970	2,448	2,706	3,010	177	242	328	443	562	602	67,167
25	Printing and publishing	1,350	1,640	2,254	2,981	3,492	3,779	4,163	617	741	1,022	1,306	1,498	1,624	1,792
26	Chemicals and allied products	1,084	1,348	2,069	2,795	3,702	4,077	4,534	310	393	631	810	1,091	1,202	1,339
27	Petroleum and coal products	334	340	402	576	801	893	981	121	125	167	276	411	448	470
28	Tobacco manufactures	13	12	9	10	11	11	13	(D)	(D)	(D)	(D)	(D)	(D)	(D)
29	Rubber and misc. plastics products	833	1,117	1,777	2,500	2,997	3,623	4,068	121	170	313	486	584	673	762
30	Leather and leather products	209	235	282	314	315	320	337	73	81	90	102	80	83	79
31	Durable goods	18,084	23,265	34,678	49,647	58,917	67,939	76,859	4,338	5,350	7,788	10,797	12,671	14,290	16,085
32	Lumber and wood products	277	329	448	659	918	1,059	1,228	67	72	94	120	143	166	185
33	Furniture and fixtures	483	538	746	1,034	1,079	1,193	1,338	139	161	221	286	295	322	346
34	Primary metal industries	2,832	3,718	5,271	7,790	9,115	10,413	11,815	596	776	1,071	1,538	1,759	1,972	2,355
35	Fabricated metal products	2,439	3,108	4,740	6,646	8,359	9,664	10,791	750	865	1,285	1,756	2,120	2,404	2,688
36	Machinery, except electrical	3,645	4,896	7,517	10,325	12,448	14,143	16,104	1,033	1,420	2,149	3,006	3,733	4,218	4,726
37	Electric and electronic equipment	2,394	3,115	4,565	6,171	6,610	7,591	8,673	884	1,067	1,551	2,107	2,171	2,433	2,691
38	Transportation equipment exc. motor vehicles	900	846	1,366	1,644	1,959	2,253	2,673	145	130	215	326	421	491	560
39	Motor vehicles and equipment	3,325	4,598	7,042	11,463	13,893	16,545	18,604	133	143	241	363	443	534	652
40	Ordnance ⁴	158	181	359	228	259	261	291	15	23	37	36	36	601	659
41	Stone, clay, and glass products	859	1,004	1,319	1,946	2,359	2,611	2,916	213	250	317	448	562	609	737
42	Instruments and related products	358	449	678	923	1,253	1,447	1,592	193	242	342	458	612	699	737
43	Miscellaneous manufacturing industries	415	485	628	816	925	1,021	1,126	170	201	264	353	413	451	486
44	Transportation and public utilities	4,764	5,543	7,619	11,790	14,475	16,276	18,393	1,723	1,983	2,637	4,056	4,994	5,567	6,266
45	Railroad transportation	1,366	1,310	1,465	1,968	2,253	2,439	2,624	583	562	585	779	864	930	999
46	Trucking and warehousing	1,188	1,588	2,328	3,755	4,272	4,992	5,749	392	508	732	1,134	1,312	1,506	1,709
47	Water transportation	100	108	138	151	181	200	238	22	26	42	39	49	57	63
48	Other transportation	415	524	819	1,156	1,468	1,728	1,993	178	252	422	646	836	953	1,093
49	Communication	834	979	1,469	2,622	3,548	3,908	4,415	291	328	465	638	1,150	1,263	1,454
50	Electric, gas, and sanitary services	862	1,035	1,400	2,138	2,754	3,009	3,375	258	308	400	620	783	858	947
51	Wholesale trade	3,830	4,690	6,800	10,016	13,423	14,787	16,525	1,505	1,833	2,614	3,658	5,015	5,569	6,138
52	Retail trade	7,352	8,557	12,401	17,235	20,830	22,767	25,234	2,271	2,671	3,776	5,075	6,176	6,727	7,477
53	Finance, insurance, and real estate	2,913	3,705	5,450	7,545	9,971	11,388	12,938	1,098	1,384	2,015	2,827	3,843	4,347	4,942
54	Banking	559	735	1,120	1,832	2,551	2,799	3,136	203	271	400	673	956	1,059	1,182
55	Other finance, insurance, and real estate	2,354	2,971	4,330	5,713	7,420	8,589	9,803	894	1,113	1,614	2,154	2,887	3,288	3,760
56	Services	7,175	9,492	14,828	22,687	30,468	34,377	38,962	2,543	3,324	4,973	7,400	10,120	11,443	12,958
57	Hotels and other lodging places	277	315	470	648	750	842	943	114	130	181	243	261	306	335
58	Personal services	890	1,027	1,404	1,446	1,598	1,769	1,932	316	355	458	438	463	515	561
59	Private households	492	524	629	671	798	851	936	141	150	179	190	227	242	266
60	Business and repair services	1,208	1,642	2,583	4,027	5,389	6,231	7,270	490	644	973	1,485	2,071	2,397	2,707
61	Amusement and recreation incl. motion pictures	335	377	566	761	957	1,102	1,185	118	129	194	252	319	368	384
62	Professional, social, and related services	3,973	5,607	9,172	15,134	20,976	23,582	26,695	1,365	1,915	2,988	4,798	6,778	7,616	8,705
63	Government and government enterprises	6,461	8,856	14,018	22,696	28,811	30,518	33,218	1,946	2,671	4,209	6,832	8,655	9,099	9,751
64	Federal, civilian	1,477	1,934	2,790	3,972	4,934	5,200	5,612	505	637	917	1,288	1,508	1,657	1,744
65	Federal, military	556	572	815	983	1,107	1,125	1,144	212	221	353	393	477	496	498
66	State and local	4,428	6,350	10,414	17,740	22,769	24,192	26,462	1,229	1,813	2,938	5,151	6,870	6,947	7,509
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work	64,863	80,291	118,583	174,199	214,244	240,210	269,236	20,204	24,512	35,231	51,108	63,330	70,298	78,371
68	Less: Personal contributions for social insurance by place of work	1,394	2,358	4,651	8,327	10,827	12,003	13,566	438	734	1,393	2,440	3,246	3,553	3,983
69	Net labor and proprietors income by place of work	63,469	77,933	113,932	165,872	203,417	228,207	255,670	19,766	23,779	33,838	48,669	60,084	66,746	74,388
70	Plus: Residence adjustment	46	106	208	446	642									

Sources, Selected Years 1958-78—Continued

dollars]

Indiana							Michigan							Ohio							Line
1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	
7,652	9,782	14,317	21,683	26,409	29,457	33,157	13,717	17,320	26,886	40,230	48,610	55,532	62,832	16,972	20,788	30,684	44,049	54,232	60,397	67,332	1
6,152	8,061	11,957	17,540	21,643	24,248	27,299	11,280	14,578	22,778	34,184	41,076	46,543	52,552	14,310	17,783	26,266	37,800	46,148	51,148	57,052	2
311	427	776	1,478	2,235	2,644	3,051	674	862	1,631	3,245	4,834	5,849	6,735	609	858	1,528	2,896	4,382	5,142	5,871	3
1,189	1,294	1,583	2,665	2,532	2,565	2,807	1,764	1,880	2,476	2,801	2,701	3,140	3,544	2,052	2,148	2,890	3,352	3,703	4,107	4,409	4
404	405	368	1,161	888	625	662	286	251	238	469	344	446	565	363	283	363	590	611	606	544	5
785	890	1,216	1,505	1,643	1,940	2,145	1,478	1,628	2,239	2,332	2,357	2,695	2,979	1,689	1,864	2,527	2,762	3,092	3,501	3,865	6
448	470	424	1,254	1,044	783	836	344	332	325	585	482	588	716	428	369	444	713	813	792	782	7
7,204	9,312	13,892	20,429	25,365	28,674	32,321	13,373	16,988	26,561	39,644	48,128	54,945	62,115	16,544	20,420	30,240	43,336	53,419	59,605	66,550	8
6,475	8,278	12,232	17,956	22,209	25,258	28,566	11,916	15,005	23,315	34,237	41,212	47,581	54,040	14,849	18,138	26,785	37,779	46,453	52,205	58,497	9
15	18	26	30	48	57	66	23	28	48	77	91	107	127	42	46	64	89	106	128	148	10
(*)	(*)	(*)	1	1	1	2	2	1	2	3	4	5	6	1	1	1	2	3	4	5	11
58	63	70	95	179	195	213	87	91	116	173	266	263	314	117	136	185	312	572	620	688	12
28	25	(D)	53	99	123	132	(*)	(*)	(D)	(*)	(*)	(D)	(D)	60	64	81	166	321	364	380	13
12	12	(*)	5	(D)	(D)	(D)	11	11	(D)	25	80	78	87	22	32	45	63	164	158	196	14
1	2	(*)	(*)	(*)	(*)	(*)	48	51	68	90	(D)	120	153	2	2	7	8	11	12	14	15
18	24	29	37	(D)	(D)	(D)	28	29	37	58	(D)	(D)	(D)	33	39	52	74	76	85	98	16
452	523	901	1,236	1,430	1,705	1,980	708	865	1,489	2,107	2,088	2,522	3,050	1,042	1,151	2,006	2,489	2,800	3,126	3,626	17
3,145	4,162	6,081	8,927	10,664	12,187	13,877	6,032	7,827	11,965	17,298	20,686	24,375	27,413	7,041	8,738	12,703	17,481	20,788	23,681	26,398	19
809	996	1,314	1,784	2,175	2,430	2,680	1,148	1,395	1,929	2,633	3,273	3,707	4,071	2,054	2,444	3,413	4,545	5,555	6,217	6,824	20
246	283	322	402	515	557	604	331	346	434	573	757	828	896	463	496	625	795	1,026	1,111	1,208	21
(D)	(D)	(D)	(D)	(D)	(D)	(D)	11	17	23	22	47	60	47	50	58	76	93	71	74	81	22
38	47	63	81	95	101	109	49	95	179	260	325	394	431	75	107	135	163	174	189	23	
58	85	117	162	202	222	249	165	205	246	317	381	426	454	210	257	367	492	584	647	716	24
109	147	209	285	357	387	427	173	198	272	396	435	473	522	331	412	558	715	846	911	989	25
148	188	269	404	496	546	599	281	347	495	647	859	938	1,017	309	369	571	806	1,101	1,220	1,381	26
99	90	89	96	97	109	120	25	29	32	47	59	66	71	85	91	109	151	226	262	291	27
(D)	(D)	(D)	(D)	(D)	(D)	(D)	3	3	1	(*)	(*)	(*)	(*)	5	5	4	3	3	3	3	28
95	140	225	330	386	479	541	94	134	217	337	370	481	590	483	632	939	1,297	1,477	1,760	1,902	29
9	11	13	17	18	19	21	15	22	29	34	39	42	43	44	46	57	58	59	56	63	30
2,336	3,166	4,767	7,142	8,490	9,757	11,196	4,884	6,431	10,036	14,666	17,413	20,668	23,341	4,987	6,295	9,290	12,936	15,213	17,464	19,574	31
45	61	83	126	229	267	322	51	60	82	132	161	181	200	48	55	83	123	158	182	215	32
84	110	161	232	219	238	271	109	120	179	246	274	301	354	108	110	133	182	191	215	236	33
580	750	1,101	1,626	2,042	2,351	2,730	473	715	1,046	1,605	1,838	2,155	2,373	1,042	1,291	1,774	2,617	3,071	3,473	3,815	34
208	296	441	674	842	975	1,075	562	808	1,304	1,764	2,145	2,558	2,841	742	918	1,382	1,940	2,470	2,837	3,158	35
276	387	587	895	1,088	1,283	1,451	827	1,151	1,772	2,227	2,458	2,946	3,448	986	1,286	2,015	2,827	3,360	3,687	4,140	36
406	617	944	1,521	1,660	1,819	2,011	246	249	404	550	593	717	1,026	624	822	1,231	1,589	1,545	1,869	2,064	37
213	233	387	517	582	693	845	90	84	122	120	204	240	306	423	371	596	639	643	709	810	38
320	453	638	1,068	1,268	1,504	1,764	2,208	2,935	4,700	7,465	9,142	10,875	12,015	471	737	1,144	2,010	2,339	2,894	3,360	39
13	36	121	53	333	371	425	76	38	53	43	344	401	447	17	78	101	60	992	1,090	1,220	40
133	144	186	272	333	371	425	102	129	188	301	344	401	447	374	435	565	822	992	1,090	1,220	41
18	20	42	67	112	136	161	65	65	100	103	143	165	193	55	82	124	196	264	306	336	42
40	50	76	91	114	142	174	74	77	87	109	111	129	138	96	109	142	176	179	202	222	43
548	642	895	1,382	1,745	1,985	2,230	821	965	1,419	2,185	2,654	2,999	3,437	1,259	1,458	2,003	3,112	3,765	4,244	4,798	44
166	160	192	253	312	332	358	154	153	195	261	300	329	355	365	344	386	521	598	648	697	45
148	199	287	470	565	655	758	218	291	429	683	740	855	1,046	314	435	664	1,108	1,233	1,462	1,676	46
2	2	4	8	11	12	14	15	15	15	19	24	26	30	57	59	77	73	84	88	114	47
46	51	69	84	103	137	156	53	70	123	158	192	236	282	102	110	145	187	227	269	310	48
89	103	167	289	396	444	492	176	204	319	559	750	822	921	205	252	384	696	933	1,080	1,160	49
98	127	174	278	359	405	451	204	233	338	505	649	701	803	216	258	348	527	690	746	841	50
364	456	646	984	1,432	1,568	1,726	691	850	1,360	2,121	2,468	2,708	3,149	918	1,129	1,580	2,368	3,216	3,535	3,953	51
871	1,044	1,499	2,112	2,538	2,810	3,130	1,518	1,747	2,645	3,821	4,523	4,952	5,518	1,895	2,183	3,175	4,397	5,393	5,866	6,427	52
315	415	611	848	1,106	1,258	1,399	550	679	1,047	1,403	1,812	2,095	2,401	697	894	1,291	1,755	2,213	2,582	2,872	53
60	83	131	210	294	322	351	118	142	238	377	518	568	648	126	159	244	396	545	589	658	54
255	332	480	638	811	935	1,049	432	537	809	1,026	1,293	1,527	1,753	571	725	1,047	1,358	1,668	1,943	2,214	55
706	954	1,504	2,332	3,066	3,494	3,943	1,458	1,954	3,225	5,052	6,620	7,554	8,626	1,836	2,403	3,777	5,776	7,618	8,469	9,582	56
25	32	46	70	89	100	111	49	52	92	112	142	167	190								

Table 3.—Personal Income by Major

[Millions of

Line	Item	Wisconsin							Plains						
		1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978
Income by place of work															
1	Total labor and proprietors income ¹	6,318	7,889	11,466	17,129	21,663	24,524	27,544	23,932	29,073	41,039	67,291	77,698	87,963	101,404
By type															
2	Wage and salary disbursements.....	4,880	6,311	9,267	13,980	17,929	19,827	22,383	16,893	21,809	31,991	47,746	62,972	69,437	78,054
3	Other labor income.....	218	310	537	1,063	1,677	1,981	2,292	618	942	1,704	3,342	5,522	6,513	7,570
4	Proprietors income ²	1,221	1,268	1,662	2,086	2,057	2,717	2,869	6,422	6,323	7,344	16,203	9,204	12,013	15,780
5	Farm.....	398	369	552	851	573	1,150	1,142	3,286	2,874	3,007	10,940	2,791	4,939	7,975
6	Nonfarm ²	823	899	1,110	1,235	1,484	1,567	1,727	3,136	3,448	4,338	5,263	6,412	7,073	7,805
By industry															
7	Farm.....	452	437	626	958	713	1,307	1,327	3,596	3,259	3,410	11,569	3,677	5,848	8,973
8	Nonfarm.....	5,866	7,452	10,840	16,171	20,950	23,217	26,217	20,337	25,814	37,629	55,722	74,021	82,115	92,581
9	Private.....	5,233	6,566	9,392	13,744	17,832	19,978	22,633	17,395	21,780	31,471	45,906	61,259	68,448	77,763
10	Agricultural services, forestry, fisheries, and other ³	15	21	30	45	63	70	82	85	104	155	212	232	270	317
11	Agricultural services.....	14	20	29	42	60	66	77	83	103	153	208	227	263	309
12	Forestry, fisheries, and other ³	1	1	2	3	3	4	5	1	1	2	4	5	7	8
13	Mining.....	20	18	22	33	40	45	49	314	296	382	484	875	841	1,071
14	Coal mining.....	(*)	(*)	(D)	(*)	(D)	(D)	(D)	14	15	17	35	52	72	92
15	Oil and gas extraction.....	(*)	(*)	(D)	(*)	(D)	(D)	(D)	116	96	106	94	320	292	359
16	Metal mining.....	7	2	2	4	6	8	8	125	115	169	233	346	316	437
17	Nonmetallic minerals, except fuels.....	14	16	20	29	31	34	39	60	70	91	123	157	161	183
18	Construction.....	373	470	750	1,010	1,210	1,424	1,619	1,402	1,880	2,654	3,772	5,113	5,661	6,651
19	Manufacturing.....	2,405	3,036	4,180	6,046	7,670	8,566	9,803	5,065	6,484	9,900	13,933	17,871	20,192	22,895
20	Nondurable goods.....	366	1,013	1,353	1,940	2,539	2,806	3,140	2,422	2,995	4,064	5,520	7,161	7,812	8,649
21	Food and kindred products.....	337	360	450	626	889	957	1,040	1,201	1,381	1,732	2,217	2,896	3,108	3,406
22	Textile mill products.....	26	29	36	54	56	63	68	(D)	(D)	37	53	59	63	68
23	Apparel and other textile products.....	24	30	38	47	58	62	68	164	190	243	342	382	399	433
24	Paper and allied products.....	208	281	382	556	717	810	919	152	282	431	670	860	938	1,057
25	Printing and publishing.....	120	142	193	280	356	384	433	377	468	652	950	1,238	1,359	1,514
26	Chemicals and allied products.....	37	52	104	127	155	171	198	243	322	485	606	852	940	1,039
27	Petroleum and coal products.....	3	4	5	5	8	9	9	67	77	87	(D)	158	173	202
28	Tobacco manufactures.....	1	(*)	(*)	(*)	(*)	(*)	(*)	(D)	(D)	1	(*)	(*)	(*)	(*)
29	Rubber and misc. plastics products.....	40	42	84	142	181	229	273	68	114	220	383	499	611	685
30	Leather and leather products.....	68	74	92	104	119	121	131	129	131	169	(D)	217	221	248
31	Durable goods.....	1,539	2,023	2,797	4,105	5,131	5,760	6,663	2,643	3,489	5,836	8,413	10,710	12,380	14,246
32	Lumber and wood products.....	66	80	107	156	226	262	306	105	112	151	256	382	443	519
33	Furniture and fixtures.....	43	36	51	88	100	116	132	69	78	120	203	(D)	242	276
34	Primary metal industries.....	141	186	280	404	405	463	541	152	197	282	434	541	642	770
35	Fabricated metal products.....	177	220	328	512	783	890	1,029	318	389	618	956	1,440	1,629	1,848
36	Machinery, except electrical.....	521	652	994	1,371	1,808	2,008	2,339	512	747	1,394	2,313	3,029	3,511	3,962
37	Electric and electronic equipment.....	234	359	434	593	640	753	881	278	447	865	1,230	1,442	1,649	1,908
38	Transportation equipment exc. motor vehicles.....	29	28	45	96	109	121	152	479	546	857	1,020	1,278	1,323	1,649
39	Motor vehicles and equipment.....	193	330	318	558	702	738	814	178	301	522	834	1,044	1,423	1,548
40	Ordnance ⁴	37	5	47	36	62	62	104	104	153	320	167	167	167	167
41	Stone, clay, and glass products.....	36	47	63	103	128	148	166	234	235	313	448	582	656	770
42	Instruments and related products.....	27	31	69	98	122	142	166	124	169	247	317	(D)	558	655
43	Miscellaneous manufacturing industries.....	34	48	60	89	108	119	139	92	114	147	230	277	305	342
44	Transportation and public utilities.....	414	496	666	1,055	1,317	1,481	1,662	2,120	2,431	3,241	5,151	6,661	7,536	8,526
45	Railroad transportation.....	99	92	107	154	180	199	214	736	709	798	1,141	1,334	1,446	1,554
46	Trucking and warehousing.....	117	155	217	359	422	485	561	417	602	856	1,442	1,753	2,065	2,393
47	Water transportation.....	3	6	8	12	14	17	17	12	14	23	68	85	85	102
48	Other transportation.....	36	42	60	82	109	133	152	244	290	433	645	926	1,072	1,151
49	Communication.....	73	92	134	239	319	349	387	334	402	573	1,021	1,478	1,641	1,973
50	Electric, gas, and sanitary services.....	86	110	140	208	272	299	332	322	414	557	833	1,085	1,229	1,353
51	Wholesale trade.....	351	423	600	886	1,292	1,407	1,559	1,632	2,011	2,669	4,011	6,248	6,803	7,622
52	Retail trade.....	796	912	1,307	1,830	2,199	2,411	2,682	2,990	3,496	4,937	7,043	8,484	9,210	10,246
53	Finance, insurance, and real estate.....	253	333	487	712	998	1,157	1,324	1,171	1,539	2,182	3,039	4,175	4,902	5,612
54	Banking.....	52	70	108	175	237	261	297	257	353	500	782	1,090	1,192	1,333
55	Other finance, insurance, and real estate.....	201	263	379	536	760	896	1,027	914	1,186	1,682	2,257	3,085	3,710	4,280
56	Services.....	607	857	1,349	2,127	3,043	3,417	3,853	2,617	3,538	5,352	8,280	11,600	13,033	14,822
57	Hotels and other lodging places.....	28	33	53	64	85	96	108	119	141	205	288	401	466	526
58	Personal services.....	78	96	128	138	169	186	204	321	382	507	547	660	726	810
59	Private households.....	43	46	57	62	73	78	86	211	227	282	310	368	393	432
60	Business and repair services.....	83	119	186	303	431	499	587	389	543	795	1,289	1,892	2,150	2,532
61	Amusement and recreational incl. motion pictures.....	27	33	48	68	90	107	116	107	130	189	260	344	396	438
62	Professional, social, and related services.....	348	529	877	1,492	2,195	2,452	2,753	1,472	2,115	3,374	5,566	7,936	8,903	10,084
63	Government and government enterprises.....	633	886	1,448	2,427	3,118	3,239	3,584	2,942	4,034	6,158	9,817	12,762	13,667	14,668
64	Federal, civilian.....	102	140	198	291	396	399	449	750	999	1,420	2,077	2,645	2,880	3,062
65	Federal, military.....	50	38	36	51	55	54	58	452	512	664	982	1,067	1,061	1,083
66	State and local.....	481	709	1,214	2,084	2,667	2,787	3,077	1,740	2,523	4,074	6,758	9,050	9,727	10,523
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	6,318	7,889	11,466	17,129	21,663	24,524	27,544	23,932	29,073	41,039	67,291	77,698	87,963	101,404
68	Less: Personal contributions for social insurance by place of work.....	137	242	468	872	1,136	1,237	1,410	517	875	1,711	3,096	4,237	4,672	5,320
69	Net labor and proprietors income by place of work.....	6,182	7,647	10,997	16,257	20,526	23,288	26,134	23,415	28,198	39,328	64,195	73,461	83,291	96,084
70	Plus: Residence adjustment.....	43	73	156	263	325	368	415	-125	-203	-362	-564	-707	-789	-892
71	Net labor and proprietors income by place of residence.....	6,224	7,720	11,154	16,520	20,851	23,656	26,550	23,290	27,995	38,966	63,631	72,754	82,502	95,192
72	Plus: Dividends, interest, and rent ⁵	936	1,256	1,782	2,734	3,586	3,857	4,357	3,491	4,982	7,319	11,398	15,711	17,341	19,449
73	Plus: Transfer payments.....	540	726	1,206	2,324	3,067	3,948	4,343	2,087	2,862	4,				

Sources, Selected Years 1958-78—Continued

dollars]

Iowa							Kansas							Minnesota							Line
1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	
4,216	5,035	6,966	11,619	12,981	14,745	17,538	3,386	3,828	5,258	8,669	10,554	11,726	13,484	5,271	6,734	9,926	16,346	19,216	22,440	25,418	1
2,611	3,352	4,971	7,420	10,193	11,337	12,548	2,374	2,868	4,061	6,061	8,331	9,210	10,436	3,926	5,239	7,987	12,173	15,912	17,566	20,067	2
94	142	263	522	896	1,063	1,217	90	129	227	426	744	884	1,041	152	236	432	871	1,439	1,701	2,008	3
1,510	1,541	1,732	3,677	1,892	2,346	3,774	922	831	970	2,182	1,479	1,633	2,007	1,193	1,260	1,507	3,302	1,865	3,173	3,343	4
863	824	866	2,600	658	1,023	2,318	456	325	315	1,373	413	504	760	533	533	585	2,226	574	1,633	1,641	5
647	716	867	1,077	1,233	1,323	1,456	466	506	654	809	1,066	1,128	1,247	660	726	922	1,077	1,291	1,540	1,702	6
932	912	956	2,742	887	1,271	2,572	497	379	371	1,463	543	643	894	584	608	657	2,341	754	1,809	1,834	7
3,284	4,123	6,010	8,877	12,094	13,474	14,967	2,889	3,449	4,887	7,205	10,011	11,083	12,740	4,687	6,127	9,268	14,005	18,462	20,631	23,584	8
2,866	3,541	5,127	7,494	10,181	11,417	12,786	2,352	2,770	3,920	5,744	8,126	9,060	10,394	4,081	5,265	7,923	11,704	15,496	17,449	20,120	9
23	28	40	46	43	49	56	9	15	25	35	32	39	46	18	20	31	44	57	71	82	10
23	28	40	45	43	48	55	9	15	24	35	32	39	45	18	19	30	42	55	68	79	11
(*)	(*)	(*)	1	1	1	1	(*)	(*)	(*)	(*)	(*)	1	1	(*)	(*)	1	2	2	3	3	12
19	20	28	35	37	40	44	105	90	96	95	273	249	299	104	101	137	188	292	258	392	13
(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3	7	(D)	11	16	(*)	(*)	(*)	(D)	(D)	(*)	(*)	14
1	(*)	(*)	(D)	(D)	(D)	(D)	94	80	86	76	246	219	262	(*)	1	1	(D)	(D)	7	7	15
(*)	(*)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	97	89	121	170	262	226	16
(D)	(D)	(D)	25	31	36	40	9	7	8	12	(D)	19	21	8	11	15	17	24	26	30	17
226	283	447	598	900	1,006	1,154	204	247	335	476	698	792	896	337	451	705	971	1,252	1,375	1,673	18
883	1,144	1,757	2,609	3,413	3,911	4,362	673	777	1,166	1,631	2,250	2,521	2,942	1,197	1,590	2,553	3,692	4,705	5,332	6,118	19
421	518	720	966	1,263	1,396	1,536	266	314	422	600	814	923	1,029	573	765	1,063	1,528	1,977	2,172	2,400	20
282	334	434	567	737	790	860	114	132	139	211	298	329	348	309	344	441	536	687	747	812	21
2	3	6	9	13	14	14	(*)	(*)	(*)	1	(*)	(*)	(*)	10	12	17	25	28	32	36	22
12	14	20	22	29	32	36	9	12	20	27	32	30	32	28	29	35	61	61	65	69	23
14	16	20	41	53	60	68	10	14	21	33	42	47	50	68	175	273	444	570	620	695	24
58	70	95	131	175	191	216	39	47	75	125	163	181	204	103	129	175	267	360	407	454	25
29	37	60	78	120	134	147	42	48	89	83	125	140	162	31	33	50	76	96	105	119	26
1	2	2	(D)	3	4	5	38	40	43	48	75	82	102	9	16	21	24	33	37	41	27
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	28
22	39	70	112	128	165	183	13	20	34	70	78	112	128	11	19	40	73	115	134	149	29
1	2	3	(D)	6	6	7	1	1	1	1	1	2	2	6	8	11	20	25	28	28	30
462	627	1,037	1,643	2,149	2,515	2,826	407	463	744	1,030	1,437	1,598	1,914	624	825	1,490	2,164	2,728	3,160	3,718	31
24	21	28	50	65	69	75	7	8	9	16	43	51	61	34	35	50	93	139	167	202	32
11	14	26	46	51	58	69	6	9	14	19	20	23	25	13	16	24	42	38	41	49	33
32	52	74	115	134	165	198	8	9	17	37	38	45	63	34	41	61	82	90	103	140	34
49	58	87	159	243	286	314	32	38	61	109	171	186	203	77	102	163	260	485	559	646	35
180	251	412	741	988	1,191	1,329	35	48	103	201	278	308	336	154	255	531	827	1,022	1,192	1,378	36
78	128	207	255	335	365	400	9	15	24	56	88	104	122	61	117	233	313	303	350	422	37
15	6	19	44	55	53	64	247	228	354	361	483	506	696	7	7	28	64	55	57	70	38
6	8	14	53	70	91	107	26	41	61	88	147	177	178	19	28	46	73	103	129	148	39
9	14	35	35	35	35	35	1	14	23	10	10	10	10	37	35	91	70	70	70	70	40
31	39	52	74	108	122	136	33	45	63	91	112	130	153	75	42	59	92	122	139	168	41
10	12	21	23	32	38	43	1	3	10	24	34	42	52	89	117	155	175	288	333	394	42
17	23	32	49	68	77	91	4	5	7	18	22	26	25	23	30	50	73	82	89	100	43
303	344	442	699	890	1,014	1,131	303	342	429	696	914	1,052	1,198	474	541	742	1,215	1,544	1,734	1,979	44
98	96	95	139	163	177	190	135	135	155	233	253	277	298	170	155	178	257	274	297	319	45
77	99	145	241	284	333	379	50	72	101	183	247	298	348	95	120	179	305	375	435	500	46
(*)	(*)	(*)	1	2	2	2	(*)	(*)	(*)	1	1	1	1	3	4	6	35	35	33	38	47
18	18	24	31	42	50	54	24	24	27	39	75	96	110	68	86	131	211	301	342	338	48
54	61	87	150	212	234	265	41	47	66	122	181	202	242	70	82	118	211	305	342	469	49
57	70	91	137	187	219	240	52	63	80	119	157	177	198	69	93	129	197	254	285	314	50
258	302	379	556	1,034	1,089	1,186	159	202	275	448	791	866	989	410	521	725	1,097	1,652	1,784	2,020	51
535	596	858	1,212	1,413	1,535	1,695	421	473	661	961	1,151	1,210	1,359	646	806	1,158	1,657	2,031	2,275	2,579	52
197	259	349	485	681	808	921	141	179	253	362	531	642	727	291	379	546	761	1,043	1,245	1,434	53
41	58	82	128	178	195	217	36	45	63	102	148	164	183	64	85	119	187	258	283	319	54
156	202	267	357	503	613	704	106	134	190	260	383	479	544	227	294	427	573	785	962	1,115	55
421	564	828	1,254	1,769	1,964	2,236	335	445	679	1,040	1,485	1,689	1,937	602	858	1,327	2,080	2,919	3,375	3,843	56
16	18	26	42	52	60	65	12	14	21	24	37	44	50	31	38	58	78	113	131	144	57
52	64	81	90	113	119	131	42	49	68	76	93	103	112	71	85	118	124	147	167	186	58
35	38	48	54	64	68	75	30	33	42	46	55	59	64	45	48	56	59	70	75	83	59
57	81	109	178	259	287	347	49	63	94	162											

Table 3.—Personal Income by Major

[Millions of

Line	Item	Missouri						Nebraska							
		1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978
Income by place of work															
1	Total labor and proprietors income¹	7,075	8,701	12,689	18,575	22,581	25,529	28,833	2,212	2,625	3,537	6,163	7,094	7,764	8,995
By type															
2	Wage and salary disbursements	5,549	7,092	10,540	15,111	18,963	20,915	23,349	1,428	1,910	2,656	4,172	5,613	6,121	6,769
3	Other labor income	217	323	578	1,092	1,685	1,995	2,296	43	71	130	270	465	530	608
4	Proprietors income ²	1,309	1,286	1,571	2,372	1,933	2,619	3,188	741	643	751	1,720	1,016	1,113	1,618
5	Farm	484	379	402	1,068	294	724	1,092	436	305	334	1,169	350	454	893
6	Nonfarm ²	825	907	1,169	1,304	1,639	1,895	2,096	305	338	417	551	666	659	726
By industry															
7	Farm	542	435	467	1,159	394	805	1,213	475	360	389	1,271	486	612	1,062
8	Nonfarm	6,533	8,266	12,221	17,416	22,186	24,723	27,620	1,736	2,264	3,148	4,892	6,608	7,151	7,933
9	Private	5,738	7,206	10,448	14,648	18,652	20,936	23,661	1,422	1,823	2,547	3,913	5,381	5,775	6,432
10	Agricultural services, forestry, fisheries, and other ³	16	20	30	44	54	63	74	9	12	15	22	24	25	31
11	Agricultural services	16	20	30	43	54	62	72	9	12	15	22	23	25	31
12	Forestry, fisheries, and other ³	(*)	(*)	(*)	1	1	2	2	(*)	(*)	(*)	(*)	1	(*)	(*)
13	Mining	44	47	75	105	149	158	162	14	13	12	17	31	31	34
14	Coal mining	7	7	9	19	(D)	(D)	(D)	(*)	(*)	(*)	(D)	(D)	(*)	(*)
15	Oil and gas extraction	1	1	2	2	(D)	9	6	8	6	6	4	19	16	18
16	Metal mining	17	14	32	43	(D)	(D)	(D)	(*)	(*)	(*)	(D)	(D)	(*)	(*)
17	Nonmetallic minerals, except fuels	19	25	32	41	48	48	55	5	7	7	12	14	15	16
18	Construction	399	561	777	1,062	1,303	1,445	1,719	125	184	241	391	524	569	633
19	Manufacturing	1,916	2,454	3,651	4,832	5,901	6,702	7,528	301	395	602	881	1,146	1,244	1,404
20	Nondurable goods	895	1,079	1,444	1,854	2,321	2,498	2,757	196	237	305	413	559	574	660
21	Food and kindred products	297	341	433	531	658	717	793	144	168	204	263	361	358	418
22	Textile mill products	(D)	(D)	13	14	13	12	12	(*)	(*)	(*)	4	3	3	3
23	Apparel and other textile products	111	129	164	214	236	244	264	4	6	8	10	13	15	16
24	Paper and allied products	56	72	100	137	175	190	215	4	8	8	15	19	20	27
25	Printing and publishing	138	174	245	342	430	462	512	26	33	43	58	74	79	84
26	Chemicals and allied products	130	189	263	339	476	522	567	10	15	21	27	29	33	38
27	Petroleum and coal products	18	17	18	18	33	35	41	1	1	2	(D)	3	3	4
28	Tobacco and manufactures	(D)	(D)	1	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
29	Rubber and misc. plastics products	15	25	53	91	118	132	148	7	10	18	34	55	60	67
30	Leather and leather products	121	120	154	168	181	183	205	(*)	(*)	(*)	(D)	2	2	2
31	Durable goods	1,021	1,375	2,207	2,978	3,580	4,204	4,771	105	158	297	468	587	670	744
32	Lumber and wood products	31	38	52	72	90	104	123	4	6	7	12	26	28	31
33	Furniture and fixtures	34	31	45	70	77	94	103	5	7	12	26	22	24	27
34	Primary metal industries	73	87	119	188	254	301	335	4	8	11	11	24	28	33
35	Fabricated metal products	138	162	252	337	430	471	531	19	24	47	77	90	103	124
36	Machinery, except electrical	121	167	285	408	509	556	633	18	19	46	95	150	177	185
37	Electrical and electronic equipment	108	145	326	477	571	666	787	21	42	70	116	126	145	153
38	Transportation equipment exc. motor vehicles	204	293	440	512	634	664	772	7	11	15	36	26	31	37
39	Motor vehicles and equipment	121	214	385	593	668	970	1,048	5	9	15	19	42	42	50
40	Ordnance ⁴	56	76	99	37				1	2	33	12			
41	Stone, clay, and glass products	78	86	111	143	178	197	236	11	16	18	29	36	40	45
42	Instruments and related products	17	29	47	68	82	90	104	6	7	14	23	34	38	42
43	Miscellaneous manufacturing industries	41	48	46	73	87	91	99	5	7	9	11	12	14	17
44	Transportation and public utilities	700	811	1,132	1,732	2,212	2,508	2,841	215	245	309	560	697	771	853
45	Railroad transportation	188	175	206	274	315	340	365	100	103	118	176	249	269	289
46	Trucking and warehousing	175	222	316	489	58	677	794	47	54	71	138	172	197	220
47	Water transportation	9	9	17	31	47	49	60	(*)	(*)	(*)	(*)	(*)	(*)	(*)
48	Other transportation	112	135	219	324	452	521	576	15	18	21	25	33	36	42
49	Communication	110	134	191	343	490	540	631	37	48	67	123	183	203	230
50	Electric, gas, and sanitary services	107	135	183	271	339	382	415	16	22	32	43	60	65	71
51	Wholesale trade	556	677	906	1,302	1,722	1,936	2,186	136	173	218	330	592	642	692
52	Retail trade	874	1,019	1,450	2,009	2,459	2,677	2,963	276	331	459	690	799	846	917
53	Finance, insurance, and real estate	367	480	704	950	1,234	1,408	1,620	115	157	215	321	450	517	587
54	Banking	75	103	150	230	312	339	380	23	35	48	78	109	118	130
55	Other finance, insurance, and real estate	292	377	554	720	922	1,069	1,240	91	122	167	243	341	400	457
56	Services	865	1,137	1,723	2,612	3,618	4,038	4,566	231	314	476	755	1,054	1,128	1,280
57	Hotels and other lodging places	39	45	66	89	120	133	161	12	14	18	28	37	43	46
58	Personal services	109	126	165	173	206	229	263	28	34	44	49	60	64	69
59	Private households	64	70	90	101	120	128	141	19	20	25	27	32	34	37
60	Business and repair services	138	193	279	441	665	730	816	34	50	69	123	177	188	228
61	Amusement and recreation incl. motion pictures	36	44	65	97	129	147	161	10	10	17	21	25	30	33
62	Professional, social, and related services	479	660	1,059	1,711	2,378	2,671	3,025	129	185	304	508	722	769	867
63	Government and government enterprises	796	1,060	1,773	2,768	3,535	3,788	3,960	315	441	601	979	1,290	1,378	1,501
64	Federal, civilian	262	352	561	799	1,000	1,115	1,160	84	111	131	192	244	256	267
65	Federal, military	132	126	196	256	294	262	237	61	94	92	143	161	172	186
66	State and local	403	582	1,017	1,713	2,241	2,410	2,562	169	237	378	644	884	951	1,047
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work	7,075	8,701	12,689	18,575	22,581	25,529	28,833	2,212	2,625	3,537	6,163	7,094	7,764	8,995
68	Less: personal contributions for social insurance by place of work	154	261	536	864	1,187	1,310	1,485	47	83	149	287	381	415	467
69	Net labor and proprietors income by place of work	6,921	8,441	12,153	17,712	21,394	24,219	27,349	2,165	2,542	3,388	5,876	6,713	7,348	8,528
70	Plus: Residence adjustment	-290	-433	-717	-1,034	-1,250	-1,369	-1,516	-45	-55	-72	-90	-130	-125	-138
71	Net labor and proprietors income by place of residence	6,631	8,008	11,436	16,678	20,144	22,851	25,832	2,120	2,487	3,316	5,777	6,582	7,224	8,390
72	Plus: Dividends, interest, and rent ⁶	1,026	1,410	2,023	2,958	4,077	4,408	4,892	347	533	792	1,294	1,667	1,911	2,124
73	Plus: Transfer payments	643	875	1,391	2,624	4,142	4,400	4,736	171	245	420	763	1,147	1,239	1,359
74	Personal income by place of residence	8,300	10,293	14,850	22,261	28,363	31,658	35,538	2,637	3,265	4,528	7,834	9,396	10,374	11,868
75	Per capita income (dollars)	1,983	2,344	3,251	4,672	5,925	6,565	7,313	1,907	2,212	3,087	5,113			

Sources, Selected Years 1958-78—Continued

dollars]

North Dakota							South Dakota							Southeast							Line
1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978	
876	1,072	1,277	3,222	2,809	2,776	3,539	897	1,078	1,386	2,697	2,464	2,983	3,596	46,843	60,801	94,517	156,676	200,381	223,262	253,116	1
496	671	890	1,435	2,081	2,239	2,561	509	675	887	1,374	1,878	2,050	2,323	36,735	49,094	78,569	129,440	167,321	186,101	210,042	2
10	18	34	75	143	162	192	12	23	40	86	150	178	209	1,265	2,025	4,119	8,910	14,555	17,219	20,043	3
370	383	354	1,712	585	375	786	376	379	459	1,237	435	755	1,064	8,842	9,681	11,829	18,326	18,505	19,941	23,032	4
255	259	206	1,496	335	121	508	258	248	298	1,008	167	481	763	2,953	3,009	2,821	6,260	4,691	4,366	5,765	5
115	123	148	216	249	254	278	118	131	161	228	268	274	302	5,889	6,672	9,008	12,065	13,814	15,575	17,267	6
286	292	244	1,542	403	179	581	280	273	325	1,050	210	528	817	3,599	3,791	3,710	7,394	6,168	5,913	7,481	7
590	780	1,034	1,680	2,406	2,596	2,958	617	804	1,061	1,647	2,254	2,456	2,779	43,244	57,010	90,807	149,281	194,212	217,349	245,635	8
472	574	730	1,196	1,798	1,953	2,257	465	601	777	1,207	1,689	1,861	2,112	34,968	45,720	72,502	119,856	154,952	174,521	198,554	9
4	3	5	9	11	11	14	5	6	9	12	10	11	13	212	254	386	625	801	916	1,128	10
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	127	174	295	502	623	707	884	11
15	11	15	17	52	61	90	13	15	19	28	41	44	50	85	80	91	123	178	209	244	12
2	2	3	5	13	17	23	(*)	(*)	(*)	(*)	(*)	(*)	(*)	1,210	1,186	1,601	2,557	4,741	5,379	6,028	13
12	7	11	10	35	40	61	(*)	(*)	(*)	(*)	(*)	(*)	(*)	649	572	722	1,387	2,614	(D)	(D)	14
(D)	(D)	(*)	(*)	-1	-1	(*)	10	12	15	20	(D)	(D)	(D)	378	407	594	755	1,592	1,665	2,009	15
(D)	(D)	2	3	4	4	6	3	3	4	8	(D)	(D)	(D)	34	25	(D)	34	37	(D)	(D)	16
58	78	77	147	258	274	345	51	76	72	127	177	199	231	149	182	381	498	551	625	625	17
33	43	60	110	199	197	220	61	81	110	178	257	284	320	10,714	14,822	24,184	37,483	47,577	53,914	60,696	19
24	25	35	54	78	88	100	47	57	75	104	148	160	167	6,462	8,561	13,351	19,825	25,727	28,427	31,301	20
17	16	22	32	47	52	58	38	46	59	77	109	115	117	1,211	1,492	2,097	2,982	4,014	4,399	4,805	21
(D)	(D)	(*)	(*)	(D)	(D)	(D)	(D)	(D)	(*)	(*)	(D)	(D)	(D)	616	1,014	1,782	2,565	3,259	3,462	3,811	22
(D)	(D)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(D)	(D)	(D)	(D)	603	817	1,203	1,887	2,547	2,874	3,231	23
7	8	10	14	19	20	23	7	8	10	13	18	19	22	426	545	844	1,356	1,754	1,960	2,216	24
(*)	(*)	1	1	2	2	2	1	1	1	1	3	4	4	1,169	1,559	2,396	3,424	4,744	5,318	5,796	25
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	187	216	308	465	529	624	624	26
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	105	192	455	1,015	1,428	1,831	2,125	27
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(D)	1	1	1	104	159	279	373	431	426	467	28
9	18	25	56	121	109	120	14	23	35	74	108	124	153	4,252	6,260	10,833	17,658	21,850	25,488	29,395	31
(*)	(*)	1	3	3	4	5	4	4	4	10	16	19	21	718	886	1,233	1,871	2,358	2,680	3,114	32
(*)	(*)	(*)	(*)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	379	561	955	1,531	1,621	1,853	2,102	33
2	2	3	5	7	9	11	3	3	4	10	14	15	19	697	867	1,312	2,016	2,686	3,120	3,589	34
(*)	(*)	(*)	(*)	7	56	62	2	2	6	13	25	31	39	476	640	1,097	1,995	2,675	3,082	3,534	35
(*)	(*)	(*)	(*)	4	7	6	(*)	1	5	12	12	13	18	321	558	1,154	2,178	2,985	3,484	4,024	36
(*)	(*)	(*)	(*)	23	6	6	1	1	5	12	12	13	18	406	748	1,474	2,747	3,316	3,951	4,679	37
(*)	(*)	(*)	(*)	9	8	8	1	1	1	5	2	2	2	482	704	1,385	1,984	2,354	2,629	2,967	38
(*)	(*)	1	2	4	3	4	1	(*)	(*)	6	10	10	13	136	206	417	763	1,041	1,417	1,632	39
(*)	(*)	6	(*)	4	3	4	(*)	(*)	(*)	3	3	3	4	44	241	457	265	2,042	2,370	2,701	40
(*)	(*)	8	8	13	15	17	3	4	6	11	13	14	16	454	625	903	1,515	1,782	2,042	2,370	41
1	1	2	3	4	4	5	(*)	(*)	(*)	4	(D)	16	19	41	79	180	361	532	672	745	42
72	81	102	161	216	244	280	52	66	85	141	188	213	243	99	145	266	432	499	558	639	43
33	32	33	45	56	61	65	12	12	13	17	24	26	28	3,555	4,347	6,546	11,623	15,149	17,321	19,802	44
12	14	19	34	42	48	60	15	20	26	52	64	76	91	1,036	996	1,150	1,686	2,007	2,187	2,355	45
(*)	(*)	(*)	(*)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(D)	(D)	(D)	193	243	402	550	790	878	1,086	46
4	4	6	7	(D)	(D)	(D)	4	4	6	9	(D)	(D)	(D)	474	594	1,024	1,777	2,277	2,660	2,982	47
12	16	23	39	58	64	72	11	15	20	33	49	55	63	609	810	1,378	2,895	4,150	4,717	5,432	48
11	16	21	35	49	58	68	10	15	21	31	39	42	46	563	726	1,048	1,852	2,484	2,812	3,237	49
61	74	90	161	250	269	306	52	62	77	118	206	217	243	2,700	3,578	5,377	9,163	12,879	14,154	16,075	51
120	134	172	254	317	334	359	117	137	180	260	315	333	373	5,710	6,782	10,399	16,938	21,335	23,406	26,393	52
30	42	55	79	118	142	163	30	42	61	80	118	140	160	2,071	2,872	4,446	7,466	9,707	11,344	12,988	53
9	12	17	26	39	44	49	10	15	21	31	45	50	55	385	566	946	1,754	2,452	2,705	3,049	54
22	30	37	54	79	98	115	20	27	41	50	73	90	105	1,686	2,306	3,500	5,712	7,255	8,639	9,939	55
79	107	156	257	376	420	480	83	115	163	263	379	419	479	5,889	8,109	13,226	21,966	29,800	33,494	38,442	56
5	6	9	17	22	29	33	5	6	7	11	19	24	27	286	352	669	1,123	1,446	1,599	1,828	57
9	11	15	17	20	21	24	10	12	16	18	22	23	25	677	824	1,210	1,416	1,652	1,815	2,006	58
7	8	9	10	12	12	14	9	10	12	13	15	16	18	1,003	1,101	1,441	1,637	1,948	2,078	2,285	59
8	11	15	26	38	40	48	9	14	18	29	41	46	56	747	1,136	1,958	3,707	5,194	6,060	7,261	60
3	3	5	6	7	7	8	3	5	7	8	11	12	14	205	283	454	775	992	1,150	1,333	61
47	68	103	182	278	311	354	46	68	103	184	272	297	339	2,971	4,413	7,494	13,328	18,568	20,792	23,729	62
118	206	304	484	608	643	701	152	203	284	440	565	595	666	8,276	11,290	18,304	29,426	39,260	42,828	47,081	63
34	49	68	104	135	142	150	45	63	79	116	157	172	190	2,429	3,273	4,941	7,553	10,155	10,996	12,031	64
8	50	77	135	147	146	151	30	33	37	69	77	80	90	2,373	2,760	4,187	5,532	6,311	6,603	7,015	65
76	108	159	244	326	356	400	77	108	168	254	331	344	387	3,474	5,256	9,176	16,342	22,794	25,229	28,036	66
876	1,072	1,277	3,222	2,809	2,776	3,539	897	1,078	1,386	2,697	2,464	2,983	3,596	46,843	60,801	94,517	156,676	200,381	223,262	253,116	67
20	32	56	110	164	180	207	18	33	54	108	155	171	194	1,061	1,874	3,862	7,959	10,673	11,812	13,449	68
856	1,040	1,221	3,112	2,645	2,596	3,332	879	1,045	1,332	2,589	2,309	2,812	3,402	45,781	58,927	90,654	148,717	189,708	211,450	239,668	69
-20	-28	-34	-58	-97	-102	-119															

Table 3.—Personal Income by Major

[Millions of

Line	Item	Alabama							Arkansas						
		1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978
Income by place of work															
1	Total labor and proprietors income ¹	3,805	4,684	6,909	10,868	14,457	16,058	18,228	1,814	2,388	3,485	6,005	7,622	8,677	9,648
By type															
2	Wage and salary disbursements.....	2,995	3,798	5,764	8,956	11,998	13,402	15,180	1,289	1,765	2,676	4,367	5,881	6,652	7,507
3	Other labor income.....	102	155	319	643	1,082	1,290	1,501	44	74	154	341	567	684	800
4	Proprietors income ²	707	730	827	1,269	1,377	1,367	1,546	481	549	655	1,298	1,174	1,341	1,342
5	Farm.....	263	238	201	494	381	344	409	210	237	258	739	511	640	565
6	Nonfarm ²	444	492	626	776	997	1,023	1,137	271	312	397	559	663	702	777
By industry															
7	Farm.....	297	275	243	545	442	407	487	287	318	329	831	591	735	665
8	Nonfarm.....	3,508	4,408	6,666	10,323	14,015	15,651	17,740	1,528	2,070	3,157	5,174	7,030	7,942	8,984
9	Private.....	2,773	3,448	5,254	8,141	11,076	12,431	14,106	1,241	1,714	2,624	4,327	5,821	6,634	7,553
10	Agricultural services, forestry, fisheries, and other ³	15	16	23	43	53	54	69	7	10	21	32	30	36	49
11	Agricultural services.....	10	10	16	25	32	32	41	6	9	19	28	26	30	41
12	Forestry, fisheries, and other ³	6	6	7	18	23	22	29	1	2	4	4	4	5	7
13	Mining.....	68	53	66	112	243	285	328	33	28	37	43	94	92	98
14	Coal mining.....	43	35	46	90	193	233	266	2	1	1	2	(D)	10	9
15	Oil and gas extraction.....	(D)	(D)	(D)	(D)	(D)	24	30	20	15	19	19	(D)	51	61
16	Metal mining.....	15	6	5	1	(D)	(D)	(D)	4	4	6	6	9	10	7
17	Nonmetallic minerals, except fuels.....	(D)	(D)	(D)	(D)	27	(D)	(D)	7	8	11	16	(D)	21	21
18	Construction.....	202	241	391	693	972	1,105	1,219	99	167	238	373	492	566	639
19	Manufacturing.....	1,011	1,287	2,033	3,039	3,985	4,530	5,154	331	516	886	1,545	2,010	2,359	2,695
20	Nondurable goods.....	433	571	932	1,426	1,894	2,109	2,306	168	252	432	859	924	1,047	1,186
21	Food and kindred products.....	83	104	151	205	266	292	319	53	79	123	190	257	301	345
22	Textile mill products.....	120	137	217	346	423	445	473	6	8	18	41	45	47	47
23	Apparel and other textile products.....	51	90	167	246	345	359	394	17	30	58	82	104	107	110
24	Paper and allied products.....	59	88	149	233	335	372	410	29	41	65	117	173	200	236
25	Printing and publishing.....	27	34	50	79	102	117	126	14	22	36	55	75	86	95
26	Chemicals and allied products.....	48	61	103	143	232	262	289	21	27	47	60	106	119	137
27	Petroleum and coal products.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	15	15	18	(D)	24	27	32
28	Tobacco manufacturers.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
29	Rubber and misc. plastics products.....	35	45	74	140	153	222	252	2	2	30	58	83	103	119
30	Leather and leather products.....	(D)	(D)	(D)	10	9	9	8	10	8	36	48	62	57	64
31	Durable goods.....	579	716	1,100	1,613	2,091	2,422	2,848	163	265	454	886	1,086	1,313	1,510
32	Lumber and wood products.....	72	89	129	(D)	266	308	365	64	87	116	(D)	205	239	276
33	Furniture and fixtures.....	9	14	(D)	54	62	79	92	22	33	60	(D)	102	116	125
34	Primary metal industries.....	268	313	443	615	781	870	1,008	(D)	(D)	35	66	88	115	138
35	Fabricated metal products.....	59	70	119	202	284	320	362	12	20	39	93	140	166	187
36	Machinery, except electrical.....	23	41	70	108	148	169	215	6	14	31	67	120	155	184
37	Electric and electronic equipment.....	17	21	44	91	141	173	220	12	31	63	172	201	260	299
38	Transportation equipment exc. motor vehicles.....	77	80	108	170	191	193	218	4	7	(D)	42	32	42	55
39	Motor vehicles and equipment.....	11	11	25	46	65	103	128	1	3	(D)	26	34	42	50
40	Ordnance ⁴	(*)	23	59	3				(*)	11	13	13			
41	Stone, clay, and glass products.....	37	39	57	99	118	140	159	15	20	27	47	59	63	73
42	Instruments and related products.....	(D)	(D)	(D)	15	30	43	50	5	8	20	57	70	76	81
43	Miscellaneous manufacturing industries.....	(D)	(D)	15	23	33	41	44	(D)	(D)	20	34	36	39	41
44	Transportation and public utilities.....	260	310	436	731	983	1,135	1,342	153	179	249	435	579	659	759
45	Railroad transportation.....	78	73	89	128	149	174	203	63	52	62	104	125	136	147
46	Trucking and warehousing.....	48	69	107	181	234	277	321	29	49	72	133	161	189	224
47	Water transportation.....	23	25	31	35	47	51	62	(*)	1	(D)	(D)	3	3	4
48	Other transportation.....	19	22	25	32	40	47	56	10	10	(D)	(D)	31	35	40
49	Communication.....	43	57	99	200	305	359	414	22	28	47	92	147	168	196
50	Electric, gas, and sanitary services.....	49	64	85	155	209	239	316	29	39	57	82	112	128	149
51	Wholesale trade.....	204	261	366	594	896	988	1,085	87	121	169	282	459	493	565
52	Retail trade.....	419	484	696	1,069	1,396	1,516	1,676	294	422	661	890	911	911	1,018
53	Finance, insurance, and real estate.....	147	194	293	445	628	747	832	73	102	155	248	335	404	453
54	Banking.....	26	38	67	117	173	193	220	16	24	41	70	105	120	135
55	Other finance, insurance, and real estate.....	121	156	226	329	455	554	612	57	78	115	179	230	284	318
56	Services.....	447	602	950	1,416	1,920	2,070	2,402	212	296	447	708	932	1,115	1,278
57	Hotels and other lodging places.....	11	15	27	38	55	62	70	10	13	19	29	41	46	53
58	Personal services.....	49	57	80	89	108	118	130	26	33	46	54	62	67	75
59	Private households.....	94	102	128	141	168	179	197	37	40	49	54	64	69	75
60	Business and repair services.....	63	92	188	264	312	332	416	26	41	60	112	152	175	202
61	Amusement and recreation incl. motion pictures.....	10	13	19	28	37	40	47	7	10	14	21	28	32	35
62	Professional, social, and related services.....	219	324	510	855	1,240	1,340	1,541	106	160	258	439	644	726	837
63	Government and government enterprises.....	735	960	1,413	2,182	2,939	3,220	3,634	287	356	533	847	1,210	1,307	1,431
64	Federal, civilian.....	317	447	529	774	1,017	1,086	1,161	75	94	134	207	278	291	319
65	Federal, military.....	139	128	221	299	328	337	344	77	70	104	141	141	141	149
66	State and local.....	280	385	663	1,109	1,595	1,798	2,129	135	191	328	537	791	875	963
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	3,805	4,684	6,909	10,868	14,457	16,058	18,228	1,814	2,388	3,485	6,005	7,622	8,677	9,648
68	Less: Personal contributions for social insurance by place of work.....	90	155	296	567	819	908	1,028	41	72	149	302	424	477	543
69	Net labor and proprietors income by place of work.....	3,715	4,529	6,613	10,301	13,638	15,150	17,200	1,774	2,316	3,337	5,704	7,197	8,200	9,105
70	Plus: Residence adjustment.....	35	59	116	194	243	270	304	3	7	29	20	9	9	12
71	Net labor and proprietors income by place of residence.....	3,750	4,588	6,729	10,495	13,881	15,420	17,504	1,777	2,323	3,366	5,724	7,207	8,209	9,117
72	Plus: Dividends, interest, and rent ⁵	380	575	873	1,295	1,893	2,179	2,466	204	333	596	910	1,377	1,535	1,719
73	Plus: Transfer payments.....	373	540	883	1,806	3,062	3,307	3,576	224	334	563	1,136	1,884	2,035	2,216
74	Personal income by place of residence.....	4,502	5,704	8,485	13,596	18,837	20,906	23,540	2,205	2,989	4,525	7,770	10,468	11,779	13,047
75	Per capita income (dollars).....	1,423	1,698	2,462	3,840	5,156	5,664	6,291	1,277	1,594	2,379	3,822	4,945	5,473	5,969
76	Total population (thousands).....	3,163	3,358	3,446	3,541	3,653	3,691	3,742	1,726	1,875	1,902	2,083	2,117	2,152	2,186

See footnotes on pp. 32-33.

Sources, Selected Years 1958-78—Continued

Florida							Georgia							Kentucky							Line
1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978	
6,545	8,943	14,819	28,106	33,747	37,761	43,673	4,972	6,661	10,663	17,744	21,843	24,422	27,351	3,551	4,510	6,698	10,566	14,072	15,729	17,743	1
5,168	7,224	12,279	23,514	28,589	31,737	36,463	3,932	5,438	8,979	14,761	18,609	20,841	22,968	2,652	3,462	5,349	8,400	11,179	12,479	14,117	2
157	281	605	1,547	2,346	2,793	3,325	117	198	439	972	1,544	1,844	2,115	111	165	310	689	1,237	1,435	1,667	3
1,221	1,438	1,935	3,044	2,812	3,232	3,885	923	1,025	1,246	2,012	1,690	1,736	2,268	788	883	1,039	1,478	1,656	1,815	1,959	4
250	302	347	595	559	505	865	299	319	272	725	425	241	612	323	350	328	551	527	537	543	5
970	1,135	1,588	2,449	2,254	2,727	3,020	624	706	974	1,287	1,265	1,495	1,656	465	533	710	927	1,129	1,279	1,415	6
374	414	548	872	934	923	1,363	357	395	349	834	582	401	800	360	405	391	625	629	645	682	7
6,171	8,529	14,272	27,234	32,813	36,838	42,310	4,615	6,266	10,314	16,911	21,260	24,022	26,551	3,191	4,105	6,307	9,941	13,443	15,084	17,061	8
5,090	6,885	11,488	22,207	26,007	29,435	34,262	3,720	4,991	8,187	13,688	16,985	19,266	21,428	2,649	3,345	5,072	8,131	11,053	12,520	14,272	9
46	73	117	192	275	314	397	30	37	46	66	74	83	94	10	11	16	27	37	42	50	10
30	50	99	175	249	281	361	13	16	27	46	47	52	58	10	11	15	26	36	40	48	11
17	14	18	18	26	34	37	17	21	20	20	27	31	35	(*)	(*)	(*)	1	1	1	2	12
41	48	63	110	137	134	162	22	27	44	71	88	104	114	188	176	224	447	922	1,144	1,284	13
(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	14
(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	15
35	40	52	86	98	112	137	22	27	42	68	85	99	109	10	15	19	28	37	38	41	16
628	700	1,132	3,205	2,305	2,589	3,117	263	352	620	1,200	1,123	1,305	1,458	204	307	487	717	868	979	1,223	17
807	1,317	2,270	3,605	4,299	4,981	5,937	1,200	1,681	2,810	4,201	5,238	5,902	6,462	806	1,067	1,702	2,863	3,635	4,161	4,664	19
420	589	914	1,495	1,985	2,199	2,480	762	1,040	1,679	2,537	3,239	3,586	3,896	387	490	731	1,096	1,464	1,612	1,774	20
141	197	280	437	572	635	694	158	203	295	443	596	665	726	133	147	180	235	311	339	356	21
(D)	(D)	(D)	(D)	(D)	(D)	(D)	293	370	627	937	1,151	1,265	1,348	8	9	15	44	61	68	69	22
24	39	90	179	213	230	270	111	172	284	390	489	514	559	48	70	124	161	197	210	222	23
74	94	141	199	253	274	305	86	131	195	297	392	448	508	8	16	27	59	93	105	115	24
70	97	150	286	359	407	469	49	64	106	162	209	241	260	50	55	83	127	155	166	189	25
(D)	(D)	(D)	(D)	(D)	(D)	(D)	5	6	8	16	3	(D)	(D)	8	10	13	25	68	83	91	26
22	19	25	27	26	25	25	2	3	3	3	(D)	(D)	(D)	52	67	95	151	190	199	220	27
2	8	30	77	114	138	167	4	10	37	104	136	161	176	3	12	37	74	94	115	152	28
(D)	(D)	(D)	(D)	(D)	(D)	(D)	10	13	20	22	20	19	21	7	10	23	31	36	33	36	29
388	728	1,357	2,111	2,315	2,782	3,457	438	641	1,131	1,664	1,998	2,316	2,566	419	577	971	1,766	2,171	2,549	2,890	31
57	65	84	140	179	222	268	83	104	142	220	265	300	344	31	36	52	88	111	117	136	32
29	33	55	98	76	86	114	26	32	(D)	77	74	86	98	22	28	39	57	58	67	71	33
9	13	24	50	48	61	67	21	29	(D)	128	193	227	265	57	78	121	227	312	355	411	34
66	82	139	285	323	390	473	28	53	107	176	201	243	272	71	84	136	211	256	305	335	35
24	51	126	221	292	343	419	37	54	97	167	207	250	260	69	113	204	391	531	589	673	36
31	126	258	386	519	585	800	20	35	69	139	182	210	256	105	145	253	450	472	571	634	37
71	148	308	409	505	613	749	105	155	310	268	252	243	274	4	5	(D)	(D)	19	24	26	38
3	4	9	15	17	23	28	61	93	159	257	344	431	427	25	38	74	172	228	308	368	39
31	114	190	158	211	252	317	(*)	1	13	6	6	13	16	(*)	(*)	(*)	(D)	81	109	131	40
49	65	100	241	91	140	141	38	61	87	153	183	216	250	24	34	49	81	109	131	149	41
9	13	35	64	91	140	141	4	6	14	25	37	45	47	3	7	(D)	34	36	40	42	42
10	14	29	45	54	66	81	16	20	32	49	60	65	73	7	9	20	36	39	43	46	43
510	659	1,130	2,323	2,939	3,312	3,793	377	499	809	1,491	1,950	2,254	2,539	297	348	474	782	1,026	1,184	1,330	44
105	88	115	172	209	231	249	116	113	133	202	222	243	261	122	128	143	204	272	293	315	45
72	106	169	361	398	484	587	79	118	190	356	418	483	539	51	70	107	201	252	305	349	46
20	28	50	87	106	116	149	5	8	13	20	26	31	37	6	6	11	16	26	31	34	47
144	190	376	670	797	922	1,027	52	88	180	351	488	576	660	27	31	44	56	62	74	81	48
99	149	267	705	980	1,085	1,263	72	101	179	366	506	582	668	41	50	81	152	232	267	306	49
69	98	154	327	449	464	518	53	72	115	196	290	339	373	49	62	89	154	182	214	244	50
454	595	925	1,848	2,337	2,527	2,849	386	526	797	1,383	1,911	2,160	2,421	162	206	300	482	780	829	959	51
977	1,242	2,022	3,755	4,579	5,041	5,750	586	708	1,146	1,952	2,296	2,541	2,814	444	502	745	1,092	1,393	1,503	1,716	52
436	620	980	1,918	2,318	2,744	3,284	240	340	546	984	1,225	1,406	1,570	144	183	267	376	531	616	704	53
60	96	161	337	452	497	566	48	67	116	228	292	307	331	28	40	63	108	165	186	216	54
376	524	819	1,581	1,866	2,248	2,667	192	273	430	756	933	1,099	1,239	116	143	204	268	366	430	488	55
1,130	1,631	2,848	5,341	6,817	7,791	9,022	616	820	1,370	2,340	3,080	3,512	3,958	394	544	856	1,345	1,861	2,062	2,341	56
122	139	254	429	473	513	590	20	26	60	103	163	184	204	14	16	30	44	60	65	78	57
117	144	216	286	317	354	396	69	85	128	151	167	185	201	51	62	90	99	117	127	140	58
170	191	265	313	373	398	437	132	144	184	206	245	261	287	42	47	62	70	84	89	98	59
159	222	428	936	1,166	1,395	1,702	78	116	201	434	591	703	832	47	67	105	183	238	287	347	60
59	87	146	326	395	456	535															

Table 3.—Personal Income by Major Sources,

[Millions]

Line	Item	Louisiana							Mississippi						
		1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978
	Income by place of work														
1	Total labor and proprietors income¹	4,131	5,007	7,886	11,440	16,308	18,274	20,949	1,948	2,644	3,885	6,422	8,109	9,109	10,121
	By type														
2	Wage and salary disbursements	3,319	4,050	6,523	9,433	13,528	15,154	17,502	1,417	1,915	3,032	4,954	6,465	7,221	8,168
3	Other labor income	154	208	390	708	1,271	1,494	1,773	44	76	162	361	582	697	806
4	Proprietors income ²	658	748	972	1,299	1,509	1,626	1,673	487	653	691	1,107	1,062	1,190	1,146
5	Farm	152	207	229	437	284	312	213	223	360	298	574	372	464	341
6	Nonfarm ²	506	542	743	862	1,225	1,315	1,461	264	294	392	533	689	726	805
	By industry														
7	Farm	194	264	296	507	356	380	288	275	429	375	671	508	609	479
8	Nonfarm	3,937	4,743	7,590	10,933	15,953	17,894	20,661	1,673	2,215	3,510	5,751	7,601	8,500	9,642
9	Private	3,288	3,907	6,272	8,954	13,345	15,028	17,533	1,341	1,738	2,763	4,514	6,046	6,795	7,746
10	Agricultural services, forestry, fisheries, and other ³	22	22	29	50	69	80	100	12	14	17	24	34	36	50
11	Agricultural services	9	10	16	29	34	40	50	5	7	12	17	20	24	38
12	Forestry, fisheries, and other ³	13	13	13	21	34	41	50	7	6	5	6	14	12	12
13	Mining	298	325	500	648	1,216	1,357	1,628	32	42	50	61	136	139	171
14	Coal mining	(*)	(*)	(*)	(D)	(D)	(D)	(D)	(*)	(*)	(D)	(D)	(D)	(*)	(*)
15	Oil and gas extraction	278	304	467	612	1,154	1,293	1,563	29	38	44	50	124	126	155
16	Metal mining	(*)	(*)	(*)	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
17	Nonmetallic minerals, except fuels	20	21	32	36	61	64	65	3	4	(D)	(D)	(D)	13	16
18	Construction	330	347	779	925	1,633	1,764	2,126	108	143	216	383	492	554	651
19	Manufacturing	738	904	1,394	1,953	2,815	3,199	3,630	407	560	1,005	1,689	2,217	2,521	2,827
20	Nondurable goods	519	555	782	1,119	1,583	1,788	2,022	207	298	454	651	857	932	1,035
21	Food and kindred products	133	152	203	248	316	338	372	51	67	97	137	185	203	224
22	Textile mill products	3	2	3	(D)	(D)	(D)	(D)	13	18	32	40	51	55	59
23	Apparel and other textile products	16	18	33	52	69	75	82	58	92	149	207	264	276	297
24	Paper and allied products	90	102	135	207	253	287	322	44	55	56	80	99	115	134
25	Printing and publishing	29	33	47	68	91	98	109	10	12	17	26	37	44	56
26	Chemicals and allied products	116	131	232	364	580	682	766	18	25	39	59	86	97	112
27	Petroleum and coal products	131	115	126	165	237	266	319	3	7	13	19	33	34	39
28	Tobacco manufactures	2	1	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
29	Rubber and misc. plastics products	(*)	(*)	(D)	(D)	(D)	(D)	(D)	6	13	37	70	86	93	98
30	Leather and leather products	1	1	(D)	1	1	1	2	4	8	13	12	16	16	16
31	Durable goods	219	349	612	834	1,232	1,411	1,608	200	262	551	1,039	1,360	1,590	1,792
32	Lumber and wood products	59	62	89	131	176	199	217	60	72	127	196	234	267	311
33	Furniture and fixtures	5	5	7	9	10	11	12	17	30	65	122	142	160	174
34	Primary metal industries	24	30	43	77	113	132	160	(D)	(D)	(D)	22	34	37	45
35	Fabricated metal products	32	48	79	119	219	241	280	10	26	51	90	102	118	147
36	Machinery, except electrical	20	27	42	71	120	140	170	11	21	48	94	121	145	184
37	Electric and electronic equipment	1	1	22	76	118	158	179	13	28	60	141	190	241	288
38	Transportation equipment exc. motor vehicles	36	60	132	215	336	368	411	60	41	106	257	381	420	428
39	Motor vehicles and equipment	1	2	4	6	6	9	5	3	6	(D)	12	22	47	42
40	Ordnance ⁴	1	66	118	41				(D)	(D)	14	(*)			
41	Stone, clay, and glass products	33	40	63	72	109	125	144	17	24	34	61	84	94	108
42	Instruments and related products	1	3	3	6	11	12	16	(*)	1	7	10	14	19	19
43	Miscellaneous manufacturing industries	5	5	8	11	14	15	15	4	11	19	34	37	42	46
44	Transportation and public utilities	424	495	727	1,118	1,562	1,765	2,100	125	154	223	391	524	606	694
45	Railroad transportation	78	74	78	120	142	154	167	37	36	45	61	81	89	96
46	Trucking and warehousing	51	67	107	184	238	282	340	24	33	46	96	114	139	169
47	Water transportation	107	133	220	277	427	470	591	3	6	13	23	30	34	40
48	Other transportation	56	62	89	134	183	221	258	6	7	9	17	25	32	36
49	Communication	56	67	111	222	336	381	454	24	33	54	109	161	183	208
50	Electric, gas, and sanitary services	76	92	122	180	237	258	291	30	39	55	86	113	129	145
51	Wholesale trade	261	319	504	772	1,136	1,278	1,510	90	122	175	280	461	500	568
52	Retail trade	506	568	865	1,245	1,717	1,930	2,197	247	285	413	660	807	884	1,016
53	Finance, insurance, and real estate	187	240	360	527	744	865	1,005	65	96	154	243	337	389	450
54	Banking	35	49	79	134	197	220	257	17	25	42	71	106	118	135
55	Other finance, insurance, and real estate	152	191	281	393	547	645	748	48	71	112	172	231	271	315
56	Services	523	686	1,115	1,716	2,452	2,789	3,236	254	323	509	783	1,038	1,163	1,318
57	Hotels and other lodging places	22	24	45	70	95	103	118	9	12	21	31	47	50	57
58	Personal services	54	62	87	92	116	131	146	27	33	48	54	64	70	77
59	Private households	97	106	136	152	180	192	212	65	70	85	91	108	116	127
60	Business and repair services	68	99	182	322	542	629	759	21	32	68	103	151	173	196
61	Amusement and recreation incl. motion pictures	21	25	35	46	65	76	89	5	6	10	14	15	19	23
62	Professional, social, and related services	261	371	629	1,035	1,454	1,658	1,914	128	169	277	489	653	735	838
63	Government and government enterprises	649	837	1,318	1,979	2,608	2,866	3,128	332	477	747	1,237	1,555	1,705	1,896
64	Federal, civilian	124	162	239	355	483	526	583	89	118	176	269	362	399	464
65	Federal, military	141	150	214	271	274	294	335	80	118	160	245	248	254	265
66	State and local	384	524	865	1,353	1,850	2,047	2,209	163	241	411	722	944	1,052	1,167
	Derivation of personal income by place of residence														
67	Total labor and proprietors income by place of work	4,131	5,007	7,886	11,440	16,308	18,274	20,949	1,948	2,644	3,885	6,422	8,109	9,109	10,121
68	Less: Personal contributions for social insurance by place of work	86	141	296	530	817	911	1,055	42	73	158	312	453	503	574
69	Net labor and proprietors income by place of work	4,045	4,866	7,589	10,909	15,492	17,362	19,894	1,096	2,571	3,727	6,110	7,655	8,606	9,547
70	Plus: Residence adjustment	-10	-9	-6	-5	23	17	11	12	18	25	50	58	64	76
71	Net labor and proprietors income by place of residence	4,035	4,857	7,584	10,905	15,515	17,379	19,905	1,918	2,589	3,752	6,159	7,714	8,670	9,624
72	Plus: Dividends, interest, and rent ⁶	602	849	1,277	1,814	2,558	3,009	3,373	204	329	475	735	1,160	1,308	1,475
73	Plus: Transfer payments	407	568	904	1,797	2,854	3,149	3,369	221	319	536	1,101	1,842	2,016	2,196
74	Personal income by place of residence	5,044	6,274	9,764	14,515	20,927	23,537	26,638	2,343	3,237	4,763	7,995	10,716	11,994	13,290
75	Per capita income (dollars)	1,599	1,858	2,710	3,875	5,401	5,989	6,716	1,123	1,442	2,146	3,451	4,530	5,028	5,529
76	Total population (thousands)	3,155	3,377	3,603	3,746	3,875	3,930	3,966	2,086	2,244	2,219	2,317	2,365	2,386	2,40

Selected Years 1958-78—Continued

of dollars]

North Carolina							South Carolina							Tennessee							Line
1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	
5,437	7,264	11,475	19,104	23,727	26,042	29,421	2,511	3,348	5,403	8,855	11,483	12,727	14,469	4,318	5,610	8,658	14,047	17,958	20,065	22,943	1
4,115	5,812	9,579	15,652	10,704	21,749	24,124	2,032	2,784	4,604	7,524	9,861	10,844	12,226	3,308	4,484	7,155	11,572	14,873	16,701	19,068	2
122	219	469	1,011	1,550	1,829	2,100	54	97	217	467	756	895	1,048	120	192	404	842	1,334	1,576	1,840	3
1,201	1,234	1,427	2,442	2,473	2,464	3,197	425	467	582	865	866	988	1,196	889	934	1,098	1,634	1,751	1,788	2,035	4
531	482	417	1,101	1,012	777	1,327	146	145	115	265	158	119	233	277	245	197	419	301	256	337	5
670	752	1,010	1,341	1,461	1,687	1,870	279	321	467	600	707	869	963	612	689	901	1,214	1,450	1,532	1,698	6
611	599	540	1,246	1,242	1,013	1,551	186	195	164	330	236	199	319	314	297	248	484	375	341	422	7
4,826	6,666	10,935	17,859	22,485	25,029	27,869	2,325	3,153	5,239	8,525	11,247	12,528	14,150	4,004	5,313	8,409	13,563	17,583	19,723	22,520	8
4,003	5,486	8,990	14,688	18,259	20,416	22,789	1,817	2,485	4,124	6,716	8,743	9,872	11,238	3,397	4,482	7,099	11,385	14,619	16,364	18,673	9
21	21	35	65	72	85	97	12	12	20	33	43	54	65	10	12	22	34	40	46	54	10
15	17	29	53	55	64	75	5	7	13	21	26	30	38	9	12	20	31	37	42	49	11
6	5	6	12	16	20	21	6	5	8	12	18	24	27	1	1	2	3	4	4	5	12
12	14	24	38	50	60	70	6	7	10	17	19	22	25	34	37	50	77	120	155	190	13
(D)	(D)	(*)	1	-2	(*)	(*)	(D)	(D)	(D)	(*)	(*)	(D)	(D)	(*)	13	12	15	29	56	85	14
(D)	(*)	(*)	1	1	(D)	(D)	(*)	(*)	(D)	(*)	(*)	(D)	(D)	(*)	7	9	14	17	18	22	15
2	14	24	36	52	59	69	(D)	(D)	10	16	19	22	25	14	17	19	30	39	42	49	16
11	381	656	1,232	1,277	1,395	1,562	142	184	347	652	734	838	967	227	325	528	886	1,026	1,140	1,335	17
1,651	2,308	3,904	6,242	7,595	8,526	9,442	785	1,147	1,901	2,955	3,876	4,327	4,867	1,246	1,708	2,857	4,423	5,479	6,213	6,998	19
1,178	1,607	2,633	3,963	4,901	5,375	5,815	688	920	1,428	2,119	2,760	3,012	3,337	782	1,040	1,628	2,393	3,038	3,362	3,702	20
116	148	218	311	427	448	489	40	49	76	102	137	151	168	141	167	229	343	490	529	565	21
674	872	1,451	2,052	2,289	2,471	2,604	423	557	844	1,190	1,449	1,541	1,652	93	114	170	234	244	256	287	22
74	142	280	401	528	588	674	62	108	164	224	298	312	362	90	153	266	383	470	498	534	23
67	85	122	209	297	341	369	38	61	94	149	208	231	261	46	62	100	162	219	254	291	24
41	56	90	136	184	198	226	16	20	30	52	65	71	80	59	74	116	182	232	257	290	25
60	103	192	384	499	566	606	79	108	195	354	460	519	580	277	342	533	715	945	1,026	1,121	26
1	2	2	2	2	2	6	2	2	2	4	5	6	7	3	4	6	10	13	13	14	27
133	179	299	295	420	452	484	5	6	6	3	4	4	5	4	5	7	12	17	20	22	28
10	14	52	147	221	273	315	4	8	15	39	132	175	221	27	49	88	193	232	329	383	29
3	6	16	25	34	37	42	(*)	1	1	1	2	2	2	43	70	114	159	176	179	195	30
473	701	1,271	2,279	2,693	3,150	3,627	117	227	473	836	1,116	1,315	1,530	463	667	1,230	2,030	2,442	2,852	3,296	31
96	123	161	242	314	349	398	47	59	79	(D)	141	159	188	58	74	95	131	177	201	232	32
134	207	350	572	634	744	838	12	14	23	40	41	44	52	44	71	134	191	208	230	254	33
11	16	46	71	89	105	124	(D)	(D)	(D)	42	66	79	101	70	102	166	210	271	326	361	34
31	45	85	187	283	321	365	6	19	44	91	137	167	197	87	102	174	286	381	429	484	35
42	74	200	373	473	551	603	13	41	93	207	306	365	424	40	60	130	294	386	463	537	36
100	138	257	466	488	573	670	6	26	67	135	165	204	229	54	98	191	344	375	449	518	37
13	12	20	72	36	40	46	2	4	42	(D)	33	37	41	15	22	79	115	109	128	166	38
7	8	19	47	61	95	135	(*)	1	6	8	12	14	19	9	16	35	108	151	184	240	39
32	50	88	149	184	204	244	20	37	72	111	129	149	171	54	77	108	191	222	261	297	40
1	7	23	56	94	123	145	1	9	15	28	49	58	68	10	13	25	39	60	71	82	41
8	10	24	44	38	44	59	3	12	22	33	36	39	45	16	24	47	80	100	109	125	42
304	409	669	1,203	1,489	1,717	1,915	125	154	249	473	627	734	873	300	356	510	894	1,171	1,355	1,576	44
61	60	72	110	127	141	152	33	34	41	65	75	85	92	101	100	111	156	189	206	222	45
109	161	272	473	541	624	688	27	36	65	131	167	194	230	86	119	185	364	446	535	634	46
3	4	15	14	13	16	17	3	5	9	14	22	24	32	2	3	(D)	(D)	13	.15	19	47
27	38	66	103	127	150	164	10	11	16	25	33	37	45	31	36	(D)	(D)	132	151	186	48
57	80	144	287	390	445	505	27	37	66	134	192	220	255	63	75	120	224	327	374	433	49
47	66	99	215	291	341	388	24	31	53	105	138	173	220	18	23	33	53	63	75	82	50
318	437	679	1,063	1,382	1,532	1,770	103	142	224	387	556	616	702	308	412	611	968	1,349	1,460	1,630	51
611	748	1,161	1,852	2,342	2,558	2,847	295	398	531	851	1,092	1,209	1,370	517	597	898	1,459	1,961	2,022	2,305	52
203	300	476	779	998	1,130	1,266	88	125	199	339	451	528	607	194	276	418	652	874	1,006	1,141	53
39	63	109	204	278	303	327	15	23	40	79	111	123	139	35	52	88	166	235	258	292	54
164	238	368	574	720	828	938	73	102	160	260	340	404	468	158	224	329	487	639	748	849	55
618	867	1,385	2,214	3,054	3,412	3,821	263	375	642	1,009	1,344	1,544	1,762	561	760	1,205	1,992	2,698	2,967	3,444	56
19	26	49	77	100	116	124	9	13	26	52	74	87	101	17	24	53	99	126	141	168	57
78	101	154	179	201	215	233	32	38	62	71	87	99	109	69	81	118	142	169	182	201	58
112	122	159	180	214	228	251	67	74	99	114	136	145	159	81	88	110	121	144	154	169	59
60	105	154	330	520	573	651	23	52	96	170	200	234	279	83	121	187	328	452	517	604	60
16	24	41	57	78	89	99	6	9	17	27	36	45	49	18	23	34	63	81	98	117	61
333	490	829	1,390	1,942	2,191	2,462	127	189	342	575	811	934	1,064	293	423	704	1,238	1,727	1,876	2,185	62
823	1,180	1,945	3,171	4,226	4,613	5,080	508	668	1,115	1,809	2,504	2,656	2,913	607	830	1,311	2,178	2,963	3,359	3,847	63
148	203	322	506	695	733	783	123	163	265	361	555	554	590	200	257	357	630	922	1,067	1,291	64
278	346	560	796	941	982	1,085	202	242	391	549	695	680	668	96	133	134	134	162	154	166	65
397	631	1,063	1,869	2,590	2,899	3,212	183	263	459	898	1,254	1,423	1,654	312	478	821	1,414	1,880	2,138	2,390	66
5,437	7																				

Table 3.—Personal Income by Major

(Millions)

Line	Item	Virginia						West Virginia							
		1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978
Income by place of work															
1	Total labor and proprietors income ¹	5,429	7,095	11,000	18,058	23,390	25,854	29,121	2,381	2,647	3,635	5,460	7,666	8,544	9,450
By type															
2	Wage and salary disbursements.....	4,507	6,105	9,543	15,681	20,240	22,205	24,853	2,000	2,257	3,086	4,628	6,394	7,117	7,866
3	Other labor income.....	127	218	427	925	1,559	1,847	2,135	112	142	223	406	728	836	933
4	Proprietors income ²	794	772	1,030	1,453	1,591	1,802	2,132	269	248	326	426	544	591	651
5	Farm.....	226	103	140	325	161	163	310	52	22	17	35	1	10	8
6	Nonfarm ³	568	669	890	1,128	1,430	1,639	1,822	217	226	309	391	544	581	643
By industry															
7	Farm.....	282	167	200	400	259	240	401	63	34	28	50	15	20	24
8	Nonfarm.....	5,147	6,928	10,800	17,658	23,131	25,614	28,720	2,318	2,613	3,607	5,410	7,651	8,524	9,426
9	Private.....	3,643	4,945	7,519	12,396	16,413	18,445	20,845	2,066	2,293	3,111	4,618	6,586	7,316	8,109
10	Agricultural services, forestry, fisheries, and other ³	22	22	34	51	64	73	89	3	3	5	8	11	13	15
11	Agricultural services.....	12	14	25	44	52	59	71	3	3	5	8	10	12	14
12	Forestry, fisheries, and other ³	10	8	9	8	11	14	18	(*)	(*)	(*)	(*)	1	1	1
13	Mining.....	83	88	113	216	349	447	458	392	341	421	717	1,368	1,441	1,501
14	Coal mining.....	70	71	92	187	311	406	410	368	313	386	675	1,235	(D)	(D)
15	Oil and gas extraction.....	(*)	(*)	1	(D)	5	4	4	19	20	25	26	116	91	109
16	Metal mining.....	2	2	2	(D)	2	3	4	(*)	(*)	(*)	(*)	(*)	(*)	(*)
17	Nonmetallic minerals, except fuels.....	10	14	18	25	31	34	40	5	8	10	16	17	(D)	(D)
18	Construction.....	324	498	704	1,335	1,541	1,716	1,959	117	125	240	413	498	641	749
19	Manufacturing.....	1,073	1,510	2,363	3,590	4,573	5,157	5,757	658	817	1,059	1,379	1,855	2,038	2,261
20	Nondurable goods.....	665	860	1,343	1,862	2,376	2,628	2,903	272	339	397	506	707	777	845
21	Food and kindred products.....	122	141	197	281	392	427	469	40	40	47	50	64	72	79
22	Textile mill products.....	114	144	227	324	394	439	530	(D)	(D)	(D)	(D)	(D)	(D)	(D)
23	Apparel and other textile products.....	56	84	144	207	240	250	264	10	14	23	33	42	43	44
24	Paper and allied products.....	57	73	109	159	204	230	260	6	8	10	15	21	17	18
25	Printing and publishing.....	46	61	93	146	198	226	260	16	18	26	36	46	49	55
26	Chemicals and allied products.....	181	240	392	439	519	574	576	181	240	261	326	467	519	562
27	Petroleum and coal products.....	3	4	4	4	7	7	8	5	5	6	12	19	25	28
28	Tobacco manufacturers.....	60	76	106	183	250	264	309	(D)	(D)	(D)	(D)	(D)	(D)	(D)
29	Rubber and misc. plastics products.....	9	20	46	95	143	184	196	2	3	(D)	(D)	(D)	(D)	(D)
30	Leather and leather products.....	16	17	27	24	29	28	30	3	3	8	12	18	20	22
31	Durable goods.....	408	649	1,021	1,728	2,197	2,529	2,855	385	478	662	873	1,148	1,261	1,416
32	Lumber and wood products.....	69	88	123	192	238	266	314	22	27	36	45	53	55	66
33	Furniture and fixtures.....	55	90	137	206	213	237	275	4	5	8	13	9	10	9
34	Primary metal industries.....	37	56	92	133	192	227	262	175	206	271	377	520	585	647
35	Fabricated metal products.....	45	55	74	182	243	276	312	30	36	50	74	106	107	125
36	Machinery, except electrical.....	18	33	71	128	181	200	228	17	30	43	58	101	116	126
37	Electric and electronic equipment.....	27	73	147	305	412	463	515	19	28	39	43	53	62	73
38	Transportation equipment exc. motor vehicles.....	90	159	231	356	416	477	502	6	10	23	32	43	44	52
39	Motor vehicles and equipment.....	11	19	34	54	87	141	170	4	5	34	12	15	19	19
40	Ordnance ⁴	4	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
41	Stone, clay, and glass products.....	33	52	74	121	145	163	187	103	126	144	198	227	244	270
42	Instruments and related products.....	6	8	(D)	(D)	34	38	45	(D)	(D)	(D)	(D)	7	8	10
43	Miscellaneous manufacturing industries.....	14	16	22	27	38	41	44	5	4	9	17	14	12	17
44	Transportation and public utilities.....	437	517	738	1,282	1,667	1,877	2,083	244	267	333	500	633	722	797
45	Railroad transportation.....	147	146	164	239	269	290	312	93	91	98	124	146	158	170
46	Trucking and warehousing.....	75	108	165	281	345	399	454	30	42	60	101	128	156	174
47	Water transportation.....	16	18	26	46	61	66	78	6	7	8	11	16	21	22
48	Other transportation.....	77	85	137	259	337	386	399	13	13	16	19	23	27	30
49	Communication.....	69	94	154	302	436	488	556	35	39	57	102	137	155	175
50	Electric, gas, and sanitary services.....	53	66	91	155	218	248	284	67	75	95	144	182	206	228
51	Wholesale trade.....	227	322	467	838	1,222	1,342	1,534	100	114	159	266	387	429	482
52	Retail trade.....	613	758	1,139	1,813	2,337	2,540	2,840	251	258	360	531	685	751	844
53	Finance, insurance, and real estate.....	226	315	485	789	1,037	1,250	1,431	68	80	112	165	229	258	296
54	Banking.....	50	68	108	187	259	289	326	16	21	32	53	79	91	104
55	Other finance, insurance, and real estate.....	176	246	376	602	778	961	1,105	52	59	81	112	150	167	191
56	Services.....	638	916	1,476	2,482	3,623	4,042	4,694	233	288	422	640	920	1,025	1,165
57	Hotels and other lodging places.....	22	31	66	127	174	184	209	11	12	19	26	38	47	57
58	Personal services.....	74	97	142	152	189	206	229	29	31	40	47	56	62	69
59	Private households.....	86	97	136	162	192	205	226	20	22	29	33	39	42	46
60	Business and repair services.....	92	160	246	444	750	905	1,112	28	30	42	78	122	136	160
61	Amusement and recreation incl. motion pictures.....	20	26	38	58	91	100	115	9	12	17	21	25	30	34
62	Professional, social, and related services.....	344	505	849	1,538	2,227	2,442	2,804	136	181	274	434	640	707	799
63	Government and government enterprises.....	1,504	1,984	3,281	5,261	6,719	7,169	7,875	252	321	496	792	1,065	1,208	1,317
64	Federal, civilian.....	615	807	1,242	1,990	2,557	2,742	2,990	51	69	98	162	212	232	244
65	Federal, military.....	520	623	994	1,369	1,479	1,568	1,665	21	11	14	21	21	22	23
66	State and local.....	370	554	1,045	1,903	2,683	2,860	3,221	180	240	384	608	832	954	1,049
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	5,429	7,095	11,000	18,058	23,390	25,854	29,121	2,381	2,647	3,635	5,460	7,666	8,544	9,450
68	Less: Personal contributions for social insurance by place of work.....	134	235	462	935	1,267	1,397	1,577	54	82	153	296	411	453	505
69	Net labor and proprietors income by place of work.....	5,296	6,860	10,538	17,123	22,123	24,457	27,544	2,327	2,565	3,482	5,164	7,255	8,091	8,945
70	Plus: Residence adjustment.....	421	630	943	1,422	2,030	2,165	2,337	-86	-85	-79	-90	-117	-137	-144
71	Net labor and proprietors income by place of residence.....	5,717	7,490	11,481	18,545	24,154	26,622	29,881	2,241	2,480	3,402	5,074	7,138	7,954	8,801
72	Plus: Dividends, interest, and rent ⁶	668	1,023	1,571	2,463	3,572	4,005	4,517	257	360	482	734	1,050	1,171	1,305
73	Plus: Transfer payments.....	419	640	1,147	2,505	4,229	4,650	5,106	315	395	572	1,256	1,851	1,995	2,215
74	Personal income by place of residence.....	6,804	9,152	14,199	23,514	31,954	35,277	39,492	2,813	3,235	4,456	7,064	10,039	11,120	12,318
75	Per capita income (dollars).....	1,738	2,140	3,115	4,848	6,325	6,924	7,671	1,525	1,801	2,527	3,962	5,480	6,000	6,624
76	Total population (thousands).....	3,914	4,276	4,558	4,850	5,052	5,095	5,148	1,845	1,796	1,763	1,783	1,832	1,853	1,860

See footnotes on pp. 32-33.

Sources, Selected Years 1958-78—Continued

of dollars]

Southwest							Arizona							New Mexico							Line	
1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978		
20,460	25,043	38,277	62,350	85,900	97,691	113,043	1,816	2,612	4,016	7,775	9,688	11,021	13,064	1,372	1,643	2,130	3,395	4,722	5,359	6,139	1	
15,791	20,286	31,431	50,650	71,563	80,817	93,760	1,466	2,190	3,358	6,620	8,274	9,382	11,135	1,107	1,365	1,784	2,813	3,967	4,495	5,111	2	
633	918	1,719	3,605	6,415	7,694	9,145	38	75	148	440	696	833	1,000	34	51	83	174	322	386	456	3	
4,035	3,838	5,127	8,094	7,923	9,180	10,183	312	347	510	716	718	806	929	231	227	263	408	433	477	572	4	
1,261	829	1,027	2,899	1,330	1,465	1,571	68	60	114	164	231	184	234	80	57	73	154	113	109	162	5	
2,774	3,009	4,100	5,195	6,593	7,715	8,566	244	287	396	552	487	622	694	151	170	191	254	320	368	410	6	
1,682	1,201	1,495	3,367	1,015	2,132	2,231	136	111	187	252	339	307	368	112	88	103	192	161	160	220	7	
18,827	23,841	36,852	58,983	83,985	95,559	110,812	1,680	2,501	3,829	7,523	9,349	10,713	12,696	1,260	1,555	2,027	3,203	4,561	5,199	5,919	8	
15,240	19,065	29,322	46,779	67,538	77,813	91,474	1,326	1,970	2,943	5,877	7,060	8,255	9,938	904	1,094	1,377	2,179	3,171	3,685	4,276	9	
80	83	140	237	316	378	499	8	12	18	36	43	52	77	4	6	9	13	14	17	20	10	
48	72	124	206	271	325	439	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	11	
12	11	16	31	46	52	60	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	12	
1,439	1,448	1,777	2,359	4,880	5,378	6,607	94	125	155	351	462	458	450	119	127	142	188	403	464	541	13	
6	5	8	22	56	85	122	(*)	(*)	(*)	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14	
1,239	1,208	1,481	1,802	4,070	4,479	5,626	1	1	2	(D)	(D)	(D)	(D)	64	60	61	70	158	196	223	15	
121	160	204	409	586	620	645	88	121	150	336	429	418	407	30	36	50	70	158	196	223	16	
72	75	84	126	168	193	214	5	3	3	(D)	(D)	(D)	(D)	24	29	26	32	48	55	59	17	
1,378	1,740	2,646	4,760	6,534	7,753	9,428	180	239	284	881	666	883	1,253	112	119	142	258	352	435	518	18	
3,402	4,316	7,354	10,949	15,641	17,985	20,849	236	394	693	1,172	1,464	1,734	2,054	85	106	129	221	320	378	431	19	
1,669	2,012	2,880	4,358	6,419	7,260	8,115	63	88	127	229	312	348	396	34	39	49	83	126	146	162	20	
471	537	714	1,004	1,453	1,604	1,748	34	41	53	84	113	119	130	16	20	22	33	48	53	56	21	
27	26	(D)	(D)	(D)	90	94	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(D)	(D)	(D)	4	4	6	8	22	
114	169	297	510	670	710	781	6	9	18	31	(D)	(D)	(D)	1	1	3	12	(D)	21	22	23	
57	83	(D)	227	331	389	440	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(*)	1	24	
196	251	365	581	758	862	991	16	25	36	69	89	104	121	7	9	11	18	24	27	32	25	
299	421	644	933	1,482	1,679	1,917	4	6	8	15	24	27	33	2	3	3	10	11	11	9	26	
453	449	532	698	1,158	1,332	1,446	(*)	(*)	(*)	(*)	(*)	(*)	(*)	7	5	8	10	18	23	28	27	
(*)	(*)	(*)	(D)	(D)	1	1	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	28
39	63	121	284	415	519	615	1	2	5	(D)	20	24	29	(*)	1	1	(D)	1	1	1	29	
12	13	26	46	69	75	81	(*)	(*)	(*)	2	3	4	4	(*)	(*)	1	2	3	4	4	30	
1,733	2,303	4,475	6,590	9,222	10,725	12,734	173	305	566	943	1,151	1,386	1,658	52	67	80	138	193	232	269	31	
101	129	178	308	454	553	656	17	22	25	44	55	73	88	9	10	14	18	29	35	38	32	
53	65	107	175	192	214	246	(D)	(D)	5	11	13	15	21	(D)	(D)	1	2	2	2	2	33	
186	222	355	595	834	1,050	1,199	(D)	(D)	37	67	124	150	176	(D)	(D)	2	6	11	23	23	34	
217	282	531	926	1,462	1,599	1,895	9	19	34	59	61	73	94	3	3	5	10	14	17	19	35	
288	408	751	1,296	2,152	2,537	3,177	17	43	87	136	182	236	294	3	4	6	21	22	25	29	36	
122	281	690	1,105	1,374	1,666	2,023	49	57	176	306	309	360	418	1	6	16	27	33	39	49	37	
482	429	1,050	1,001	1,325	1,438	1,600	40	48	95	129	229	269	306	10	8	18	16	25	30	39	38	
48	77	137	201	293	354	386	1	4	6	14	19	23	26	1	1	2	1	7	6	8	39	
24	111	195	117	179	214	246	(*)	45	35	48	67	91	117	15	20	3	(*)	23	29	37	40	
152	213	300	518	679	796	973	9	23	26	73	67	91	117	6	10	10	20	23	29	37	41	
31	55	118	225	288	327	367	3	15	35	42	68	73	91	1	1	1	3	2	2	3	42	
30	38	61	124	174	191	213	2	3	5	13	24	25	28	2	2	4	11	26	23	22	43	
1,677	1,990	2,818	4,837	6,725	7,845	9,097	133	176	242	489	658	763	897	107	127	158	270	371	429	499	44	
378	352	390	593	724	793	855	35	34	35	53	58	63	67	31	32	34	44	50	55	59	45	
337	434	655	1,127	1,457	1,771	2,089	22	33	45	86	103	126	154	20	24	27	51	69	86	103	46	
58	90	128	199	264	301	371	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(D)	(D)	(D)	(D)	47	
277	324	515	825	1,188	1,412	1,614	29	42	62	144	197	228	276	8	10	15	27	35	45	57	48	
282	363	538	1,111	1,697	1,939	2,277	35	51	67	186	186	213	257	19	25	35	75	100	111	129	49	
344	427	592	983	1,396	1,630	1,939	35	51	67	186	186	213	257	29	36	45	79	123	141	166	50	
1,298	1,669	2,490	4,150	6,423	7,194	8,480	91	130	187	371	504	579	705	53	67	82	140	226	255	297	51	
2,569	3,065	4,445	7,071	9,577	10,794	12,452	255	351	500	933	1,167	1,312	1,550	158	189	246	399	539	605	690	52	
952	1,328	2,045	3,277	4,477	5,471	6,470	93	147	219	436	535	648	786	49	69	90	140	186	224	267	53	
200	294	443	790	1,150	1,297	1,511	18	31	51	123	166	181	208	10	15	21	39	57	63	74	54	
751	1,034	2,487	3,328	4,174	4,959	5,845	74	117	168	313	369	466	578	39	54	69	101	129	161	193	55	
2,465	3,425	5,606	9,139	12,963	15,016	17,593	235	397	645	1,207	1,560	1,826	2,164	217	284	379	550	758	877	1,013	56	
111	145	248	378	566	663	781	19	28	48	87	113	121	140	11	14	20	32	47	51	57	57	
299	373	529	607	736	845	946	26	38	55	71	83	96	108	17	21	24	29	33	38	42	58	
294	327	439	508	605	645	710	22	25	35	42	50	54	59	13	14	18	20	24	25	28	59	
389	570	1,029	1,826	2,791	3,308	4																

Table 3.—Personal Income by Major

[Millions

Line	Item	Oklahoma						Texas							
		1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978
Income by place of work															
1	Total labor and proprietors income ¹	3,187	3,753	5,500	8,709	11,355	12,812	14,883	14,086	17,035	26,630	42,470	60,135	68,499	78,957
By type															
2	Wage and salary disbursements.....	2,404	2,998	4,454	6,784	9,401	10,576	12,137	10,814	13,733	21,835	34,434	49,920	56,364	65,377
3	Other labor income.....	95	134	246	485	836	996	1,178	466	658	1,241	2,506	4,561	5,478	6,511
4	Proprietors income ²	687	620	799	1,440	1,118	1,240	1,569	2,805	2,644	3,554	5,529	5,654	6,657	7,068
5	Farm.....	268	174	171	679	179	121	328	845	538	669	1,902	807	1,051	847
6	Nonfarm ²	419	447	628	761	939	1,119	1,241	1,960	2,105	2,885	3,628	4,847	5,607	6,221
By industry															
7	Farm.....	307	215	218	742	284	247	437	1,078	788	916	2,181	1,131	1,418	1,207
8	Nonfarm.....	2,880	3,538	5,281	7,967	11,071	12,565	14,447	13,007	16,247	25,714	40,289	59,004	67,081	77,750
9	Private.....	2,261	2,752	4,041	6,157	8,721	10,037	11,700	10,750	13,249	20,962	32,566	48,586	55,836	65,559
10	Agricultural services, forestry, fisheries, and other. ³	10	13	21	32	31	38	43	37	52	92	155	227	270	357
11	Agricultural services.....	10	13	21	32	30	37	42	25	41	76	127	183	220	300
12	Forestry, fisheries, and other ³	(*)	(*)	(*)	(*)	1	1	2	11	11	16	29	44	50	57
13	Mining.....	303	299	383	433	945	1,054	1,282	923	897	1,098	1,387	3,070	3,401	4,333
14	Coal mining.....	6	3	4	(D)	16	28	38	(*)	(*)	(*)	(*)	(*)	4	13
15	Oil and gas extraction.....	289	286	368	410	913	1,007	1,221	886	861	1,050	1,315	2,976	3,285	4,182
16	Metal mining.....	2	1	2	1	-1	-1	(*)	2	2	3	3	1	7	16
17	Nonmetallic minerals, except fuels.....	7	8	9	(D)	17	20	23	35	35	46	69	93	105	123
18	Construction.....	188	246	319	551	686	821	996	898	1,137	1,901	3,069	4,830	5,613	6,661
19	Manufacturing.....	446	547	925	1,447	1,997	2,283	2,615	2,635	3,269	5,607	8,109	11,860	13,590	15,749
20	Nondurable goods.....	205	236	328	532	756	842	919	1,367	1,649	2,375	3,514	5,224	5,925	6,638
21	Food and kindred products.....	75	81	101	144	192	207	225	346	395	538	743	1,100	1,225	1,337
22	Textile mill products.....	3	1	7	(D)	(D)	17	15	24	25	41	(D)	(D)	67	70
23	Apparel and other textile products.....	9	15	31	63	85	89	98	143	245	404	527	559	619	619
24	Paper and allied products.....	4	5	8	(D)	(D)	35	39	52	73	119	192	279	331	373
25	Printing and publishing.....	29	34	50	76	101	111	122	144	182	267	419	545	620	716
26	Chemicals and allied products.....	8	10	11	20	46	54	59	283	403	623	895	1,403	1,587	1,816
27	Petroleum and coal products.....	64	72	91	109	167	183	194	382	372	433	578	970	1,121	1,219
28	Tobacco manufactures.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(D)	(D)	1	1
29	Rubber and misc. plastics products.....	11	17	28	78	112	142	166	27	43	86	190	282	352	418
30	Leather and leather products.....	1	1	2	4	4	4	5	11	12	23	39	59	63	68
31	Durable goods.....	241	311	597	916	1,241	1,441	1,696	1,268	1,620	3,232	4,594	6,636	7,665	9,111
32	Lumber and wood products.....	8	10	14	30	42	52	60	66	86	125	215	327	393	470
33	Furniture and fixtures.....	5	5	10	19	22	24	25	45	54	91	143	155	173	198
34	Primary metal industries.....	16	22	34	51	69	83	96	145	177	282	471	630	704	904
35	Fabricated metal products.....	44	54	112	168	269	295	343	160	206	380	689	1,118	1,214	1,439
36	Machinery, except electrical.....	50	68	127	240	352	424	524	219	287	532	809	1,596	1,852	2,331
37	Electric and electronic equipment.....	8	36	66	139	141	175	204	64	182	433	633	891	1,092	1,351
38	Transportation equipment exc. motor vehicles.....	63	42	92	112	111	128	142	370	332	846	744	960	1,010	1,113
39	Motor vehicles and equipment.....	4	9	18	39	65	71	84	42	62	112	147	202	254	269
40	Ordnance ⁴	(*)	11	51	(*)	131	146	169	9	34	106	69	459	530	651
41	Stone, clay, and glass products.....	33	43	57	95	102	127	169	104	137	208	330	459	530	651
42	Instruments and related products.....	6	5	9	10	22	21	27	21	34	74	190	191	231	246
43	Miscellaneous manufacturing industries.....	3	5	9	13	18	21	23	23	28	43	85	106	122	139
44	Transportation and public utilities.....	257	301	438	705	951	1,108	1,271	1,180	1,287	1,980	3,373	4,744	5,545	6,430
45	Railroad transportation.....	41	36	45	62	75	83	89	272	250	277	433	541	593	639
46	Trucking and warehousing.....	52	71	118	200	248	301	348	243	307	467	790	1,037	1,259	1,485
47	Water transportation.....	(D)	(D)	(D)	(*)	1	(D)	(D)	58	90	128	198	262	300	370
48	Other transportation.....	(D)	(D)	(D)	157	210	(D)	(D)	195	222	356	578	835	995	1,145
49	Communication.....	48	54	79	150	232	257	300	186	242	362	740	1,167	1,343	1,572
50	Electric, gas, and sanitary services.....	54	65	87	135	185	219	248	226	276	391	633	902	1,056	1,220
51	Wholesale trade.....	185	232	308	484	733	834	991	968	1,239	1,913	3,154	4,960	5,526	6,486
52	Retail trade.....	379	444	623	949	1,248	1,399	1,607	1,777	2,081	3,076	4,790	6,623	7,479	8,606
53	Finance, insurance, and real estate.....	134	187	269	408	556	658	767	676	824	1,466	2,293	3,200	3,941	4,650
54	Banking.....	33	49	72	117	171	193	224	140	200	298	512	756	860	1,005
55	Other finance, insurance, and real estate.....	102	139	198	292	385	466	542	536	724	1,168	1,781	2,444	3,081	3,645
56	Services.....	357	481	754	1,147	1,574	1,842	2,129	1,656	2,263	3,828	6,235	9,071	10,471	12,288
57	Hotels and other lodging places.....	13	15	23	34	45	50	60	67	87	157	225	316	344	406
58	Personal services.....	43	53	74	83	92	106	117	213	261	375	424	528	605	679
59	Private households.....	34	38	52	61	73	78	86	226	250	334	384	458	498	537
60	Business and repair services.....	60	73	97	184	272	337	412	280	373	673	1,229	1,997	2,368	2,974
61	Amusement and recreation incl. motion pictures.....	14	17	22	30	36	44	50	67	83	128	190	248	299	345
62	Professional, social, and related services.....	193	285	486	754	1,057	1,228	1,404	823	1,209	2,162	3,783	5,524	6,367	7,346
63	Government and government enterprises.....	619	787	1,240	1,810	2,350	2,528	2,747	2,258	2,997	4,753	7,723	10,419	11,245	12,191
64	Federal, civilian.....	219	286	445	628	755	776	827	599	783	1,275	1,904	2,469	2,668	2,834
65	Federal, military.....	148	152	238	280	345	356	368	697	766	1,074	1,568	1,674	1,687	1,768
66	State and local.....	253	349	556	903	1,250	1,396	1,552	962	1,449	2,405	4,251	6,275	6,890	7,589
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	3,187	3,753	5,500	8,709	11,355	12,812	14,883	14,086	17,035	26,630	42,470	60,135	68,499	78,957
68	Less: Personal contributions for social insurance by place of work.....	74	122	246	453	603	677	788	319	523	1,058	2,045	3,010	3,396	3,973
69	Net labor and proprietors income by place of work.....	3,113	3,631	5,254	8,256	10,752	12,135	14,095	13,766	16,512	25,573	40,425	57,125	65,103	74,984
70	Plus: Residence adjustment.....	5	16	39	74	173	148	144	-79	-52	-76	-115	66	-115	-208
71	Net labor and proprietors income by place of residence.....	3,118	3,648	5,293	8,330	10,925	12,283	14,239	13,688	16,460	25,496	40,310	57,192	64,988	74,776
72	Plus: Dividends, interest, and rent ⁵	487	694	1,042	1,637	2,556	3,146	3,492	2,170	3,136	4,638	7,841	11,717	13,561	15,239
73	Plus: Transfer payments.....	347	495	804	1,479	2,421	2,627	2,831	1,000	1,509	2,628	5,382	8,512	9,698	10,625
74	Personal income by place of residence.....	3,952	4,837	7,139	11,446	15,902	18,056	20,556	16,858	21,106	32,762	53,533	77,760	88,247	100,601

Sources, Selected Years 1958-78—Continued

(of dollars)

Rocky Mountain							Colorado							Idaho							Line	
1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978		
6,676	8,639	11,742	20,820	27,347	30,611	35,646	2,805	3,783	5,491	10,118	13,096	14,698	17,025	945	1,143	1,535	2,775	3,688	4,019	4,758	1	
5,095	6,917	9,557	16,463	22,705	25,556	29,478	2,197	3,086	4,546	8,364	11,076	12,410	14,321	680	860	1,180	1,959	2,928	3,254	3,720	2	
158	260	439	1,001	1,774	2,123	2,550	65	113	202	484	830	995	1,200	20	31	57	131	239	281	334	3	
1,423	1,463	1,746	3,356	2,868	2,932	3,617	543	584	744	1,270	1,189	1,294	1,504	246	252	298	684	521	485	704	4	
530	444	490	1,635	674	391	779	131	98	160	458	230	171	247	120	112	118	432	175	82	255	5	
893	1,018	1,256	1,721	2,193	2,541	2,838	412	486	583	811	959	1,123	1,257	126	140	180	252	346	403	449	6	
690	633	703	1,938	1,065	774	1,214	178	144	219	547	318	275	362	161	175	181	517	333	223	412	7	
5,986	8,006	11,040	18,882	26,282	29,837	34,432	2,627	3,639	5,272	9,571	12,778	14,423	16,663	784	969	1,353	2,257	3,355	3,796	4,346	8	
4,793	6,253	8,342	14,479	20,349	23,424	27,480	2,105	2,854	4,006	7,396	9,856	11,300	13,333	641	773	1,082	1,798	2,679	3,067	3,544	9	
18	28	42	75	97	114	137	10	15	19	33	42	51	63	3	5	10	17	25	29	34	10	
16	27	40	69	92	107	129	10	15	19	32	42	50	62	2	4	9	15	23	26	31	11	
1	1	2	5	5	7	7	(*)	(*)	(*)	1	(*)	1	1	1	1	1	2	2	3	3	12	
311	318	401	632	1,279	1,536	1,960	92	92	128	199	437	521	679	23	22	30	36	48	55	75	13	
34	25	27	67	192	261	346	12	10	14	24	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14	
116	107	150	226	559	632	805	42	41	60	101	250	276	352	(*)	(*)	(*)	(*)	1	2	3	15	
141	161	183	268	389	492	629	32	37	49	62	113	149	196	21	20	24	27	34	41	53	16	
20	25	41	71	138	150	179	7	4	4	13	(D)	(D)	(D)	2	2	5	8	12	13	20	17	
530	663	811	1,777	2,198	2,593	2,935	235	290	390	935	924	1,077	1,311	78	75	102	201	325	375	417	18	
936	1,381	1,754	2,954	4,068	4,689	5,488	427	639	869	1,555	2,067	2,403	2,832	141	187	265	448	665	753	875	19	
418	528	668	1,052	1,493	1,660	1,864	195	253	340	552	776	858	966	63	93	113	183	272	302	337	20	
193	247	319	484	667	727	800	89	117	148	245	336	357	396	35	51	80	124	178	198	219	21	
2	1	2	5	6	8	8	(D)	(D)	(D)	1	3	(D)	(D)	(*)	(*)	(*)	(D)	3	3	3	22	
12	15	25	51	75	84	94	5	7	9	21	28	34	36	1	(*)	(D)	(D)	1	1	1	23	
10	17	23	45	61	69	79	(D)	(D)	(D)	15	23	27	29	(D)	(D)	8	14	20	22	26	24	
65	89	117	189	256	284	330	36	52	68	114	147	165	194	(D)	(D)	10	16	25	27	31	25	
43	53	48	81	168	193	228	13	14	19	27	83	91	112	17	27	14	22	38	41	47	26	
51	53	49	64	96	104	115	7	7	9	13	(D)	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	27	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	28
32	38	60	99	123	141	158	30	35	54	86	101	116	129	(*)	(*)	(*)	(*)	(*)	(*)	(*)	29	
10	15	26	35	42	49	52	10	15	25	34	41	48	50	(D)	(D)	(*)	(*)	(*)	(*)	(*)	30	
517	853	1,085	1,902	2,575	3,030	3,624	232	386	529	1,002	1,291	1,545	1,865	78	94	152	265	393	451	538	31	
110	142	202	317	466	551	648	10	14	19	33	41	50	63	59	69	101	165	252	290	336	32	
9	11	20	38	40	46	56	5	7	14	23	22	26	30	(*)	1	1	(D)	6	(D)	(D)	33	
150	156	203	286	396	453	518	55	62	77	108	152	180	204	(D)	(D)	12	(D)	24	(D)	(D)	34	
36	46	75	150	254	281	329	16	22	42	95	155	171	196	3	4	7	11	19	24	31	35	
46	61	161	297	510	473	620	30	39	114	198	327	265	389	3	5	6	10	46	54	70	36	
13	31	62	198	179	213	266	9	22	44	165	130	155	186	(*)	(*)	1	8	10	12	17	37	
66	123	91	145	225	262	318	55	22	27	34	121	143	182	1	3	11	30	11	13	13	38	
4	6	13	26	40	46	60	4	5	9	18	22	25	32	(*)	(*)	(D)	1	3	3	3	39	
19	187	129	164	217	283	333	12	144	103	148	122	172	201	(D)	(D)	(D)	3	18	21	24	40	
47	68	84	178	217	283	333	24	35	47	107	122	172	201	3	5	7	14	18	21	24	41	
4	8	25	51	182	346	390	2	6	21	40	158	315	353	(D)	(D)	(D)	(*)	(*)	(*)	(*)	42	
13	14	22	52	65	75	86	8	8	13	33	40	45	50	1	1	2	3	5	6	6	43	
634	745	982	1,673	2,318	2,648	3,097	254	315	434	784	1,051	1,206	1,432	81	92	114	188	266	308	357	44	
237	233	248	350	440	479	514	65	65	64	90	111	123	132	35	35	35	51	65	70	76	45	
131	169	226	407	532	619	732	65	81	104	175	211	245	289	16	21	26	50	70	85	102	46	
(*)	1	1	1	2	2	3	(D)	(D)	(D)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	47
65	83	137	223	311	367	454	(D)	(D)	(D)	158	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	48	
109	137	201	407	620	707	845	50	67	101	226	330	375	453	13	15	24	42	69	80	96	49	
92	123	169	284	411	474	549	39	53	75	135	183	207	238	13	16	23	35	49	56	64	50	
391	504	683	1,154	1,789	1,947	2,253	190	249	357	609	893	952	1,098	45	56	73	132	247	266	298	51	
861	1,051	1,418	2,378	3,104	3,459	3,952	388	465	657	1,180	1,504	1,677	1,905	129	153	203	322	415	462	526	52	
306	418	593	979	1,337	1,652	1,972	160	224	327	578	742	914	1,093	34	47	64	100	157	200	240	53	
64	96	141	251	368	414	487	27	42	65	123	172	188	220	9	12	18	33	53	61	71	54	
243	323	453	728	970	1,238	1,485	133	182	262	456	570	725	873	26	34	45	67	105	139	169	55	
806	1,144	1,657	2,857	4,160	4,786	5,600	367	564	824	1,525	2,196	2,499	2,919	108	136	221	353	529	619	721	56	
55	71	107	154	226	256	310	21	33	48	69	101	119	149	6	7	13	20	28	30	36	57	
89	109	138	165	204	231	260	42	54	69	86	104	119	134	11	13	17	20	26	30	33	58	
54	57	67	70	84	89	98	25	27	(D)	36	43	46	50	9	9	(D)	10	12	13	14	59	
130	178	287	561	776	935	1,140	58	87	139	309	399	481	594	26	28	63	89	135	169	200	60	
35	46	62	108	144	167	210	(D)	(D)	(D)	62	88	(D)	(D)</									

Table 3.—Personal Income by Major

[Millions of

Line	Item	Montana						Utah							
		1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978
Income by place of work															
1	Total labor and proprietors income ¹	1,083	1,269	1,556	2,727	3,195	3,444	3,953	1,300	1,787	2,354	3,831	5,288	6,031	6,969
By type															
2	Wage and salary disbursements.....	736	927	1,184	1,837	2,476	2,786	3,149	1,073	1,524	1,995	3,227	4,501	5,099	5,871
3	Other labor income.....	23	34	55	113	198	233	276	37	61	95	209	373	444	526
4	Proprietors income ²	325	307	317	777	521	425	528	190	201	264	395	415	488	572
5	Farm.....	190	164	135	530	213	83	148	37	28	48	114	56	55	89
6	Nonfarm ²	134	144	182	247	308	342	380	153	174	216	282	359	433	483
By industry															
7	Farm.....	226	202	178	602	286	147	226	53	45	65	133	80	83	119
8	Nonfarm.....	857	1,066	1,378	2,126	2,910	3,297	3,727	1,247	1,742	2,289	3,698	5,208	5,948	6,849
9	Private.....	692	816	1,046	1,597	2,223	2,524	2,895	982	1,354	1,650	2,759	3,976	4,604	5,361
10	Agricultural services, forestry, fisheries, and other ³	2	3	6	11	11	13	16	1	3	5	7	10	11	14
11	Agricultural services.....	2	3	5	10	(D)	12	14	1	3	4	7	10	11	13
12	Forestry, fisheries, and other ³	1	(*)	1	1	(D)	2	2	(*)	(*)	(*)	(*)	(*)	(*)	(*)
13	Mining.....	52	50	50	83	122	125	160	88	87	98	159	261	305	359
14	Coal mining.....	1	(*)	1	7	19	24	37	19	13	11	25	(D)	(D)	(D)
15	Oil and gas extraction.....	18	14	19	18	49	49	65	12	10	8	27	54	59	77
16	Metal mining.....	30	30	22	49	41	39	43	52	58	68	98	133	159	187
17	Nonmetallic minerals, except fuels.....	3	6	7	10	13	13	14	5	6	12	9	(D)	(D)	(D)
18	Construction.....	70	101	117	184	247	298	336	98	130	134	297	450	544	609
19	Manufacturing.....	112	141	179	251	333	385	442	214	364	389	618	882	1,012	1,181
20	Nondurable goods.....	47	53	62	89	110	124	138	82	95	120	179	257	292	331
21	Food and kindred products.....	20	24	28	37	44	53	57	42	48	54	67	92	101	111
22	Textile mill products.....	(*)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(*)	(D)	(*)	1	1
23	Apparel and other textile products.....	1	(*)	(*)	(D)	2	2	2	6	7	15	27	42	45	53
24	Paper and allied products.....	(D)	(*)	(D)	12	(D)	(D)	(D)	1	2	2	(D)	7	8	10
25	Printing and publishing.....	9	10	12	16	21	23	26	12	16	22	37	51	57	66
26	Chemicals and allied products.....	(D)	(D)	3	5	8	9	11	7	8	10	23	34	44	50
27	Petroleum and coal products.....	11	13	13	17	22	(D)	(D)	12	11	11	12	19	20	23
28	Tobacco manufactures.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
29	Rubber and misc. plastics products.....	(*)	(*)	1	1	1	(*)	(*)	2	3	5	7	12	15	16
30	Leather and leather products.....	(*)	(*)	(*)	(*)	(D)	(*)	(*)	(D)	(D)	(*)	1	1	1	1
31	Durable goods.....	65	88	117	162	223	262	304	132	269	269	439	624	720	850
32	Lumber and wood products.....	33	49	68	91	126	154	182	3	5	7	15	32	39	48
33	Furniture and fixtures.....	(*)	1	1	(D)	1	(D)	(D)	3	3	4	10	11	12	16
34	Primary metal industries.....	(D)	(D)	31	41	59	(D)	(D)	65	65	83	120	162	189	213
35	Fabricated metal products.....	2	2	3	5	7	8	9	14	18	23	37	68	74	87
36	Machinery except electrical.....	1	2	2	2	5	5	6	11	16	37	80	125	139	160
37	Electric and electronic equipment.....	(*)	(*)	(*)	(D)	1	2	3	3	8	16	24	37	44	61
38	Transportation equipment exc. motor vehicles.....	(*)	(*)	1	4	2	2	2	10	97	51	77	90	102	121
39	Motor vehicles and equipment.....	(*)	(*)	(D)	(*)	(*)	(*)	(*)	7	1	3	6	15	18	24
40	Ordinance ²	(D)	(D)	(D)	2	17	19	23	13	18	18	35	48	56	65
41	Stone, clay, and glass products.....	4	6	7	12	1	1	1	1	1	3	10	22	29	34
42	Instruments and related products.....	(D)	(D)	(D)	(*)	1	1	1	1	1	3	10	22	29	34
43	Miscellaneous manufacturing industries.....	1	1	1	2	3	4	5	3	4	6	13	17	20	24
44	Transportation and public utilities.....	109	116	151	236	329	370	418	126	147	194	320	456	519	606
45	Railroad transportation.....	53	49	58	90	116	126	135	52	52	57	71	86	91	98
46	Trucking and warehousing.....	16	20	28	48	64	73	87	25	35	52	104	140	163	189
47	Water transportation.....	(*)	(*)	(*)	(*)	(D)	(*)	(*)	(*)	(*)	(D)	(D)	1	1	1
48	Other transportation.....	10	9	12	16	16	25	27	11	13	(D)	(D)	46	52	66
49	Communication.....	17	19	28	45	73	84	96	20	25	36	68	102	115	136
50	Electric, gas, and sanitary services.....	14	18	24	36	54	62	72	19	22	30	48	81	96	116
51	Wholesale trade.....	50	59	74	119	202	222	250	86	118	151	250	364	407	483
52	Retail trade.....	142	158	203	305	383	418	476	156	199	261	424	580	648	748
53	Finance, insurance, and real estate.....	37	47	66	91	132	160	186	58	78	107	169	238	294	351
54	Banking.....	11	16	22	33	48	55	63	12	18	25	45	68	79	95
55	Other finance, insurance, and real estate.....	26	31	44	58	83	105	123	46	61	82	124	170	215	256
56	Services.....	117	141	201	316	465	531	611	156	229	312	515	735	865	1,012
57	Hotels and other lodging places.....	10	12	16	23	33	38	43	8	9	12	18	31	35	42
58	Personal services.....	13	13	16	19	24	26	29	16	22	27	30	37	42	47
59	Private households.....	8	9	10	10	12	12	14	7	8	9	9	11	11	12
60	Business and repair services.....	14	19	24	44	61	67	79	22	34	48	95	136	164	198
61	Amusement and recreation incl. motion pictures.....	4	5	6	8	10	12	13	(D)	(D)	(D)	25	(D)	(D)	(D)
62	Professional, social, and related services.....	68	84	129	212	325	375	433	(D)	(D)	(D)	338	(D)	(D)	(D)
63	Government and government enterprises.....	165	250	332	529	687	773	832	265	388	639	939	1,232	1,344	1,488
64	Federal, civilian.....	48	71	94	142	152	200	208	140	193	330	409	525	543	581
65	Federal, military.....	24	47	50	69	76	73	75	20	25	38	63	68	75	82
66	State and local.....	93	132	188	318	459	500	548	105	170	272	468	639	726	826
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	1,083	1,269	1,556	2,727	3,195	3,444	3,953	1,300	1,787	2,354	3,831	5,288	6,031	6,969
68	Less: Personal contributions for social insurance by place of work.....	27	44	73	135	192	224	255	33	63	112	204	306	347	401
69	Net labor and proprietors income by place of work.....	1,057	1,225	1,483	2,592	3,003	3,220	3,698	1,266	1,724	2,242	3,627	4,982	5,684	6,568
70	Plus: Residence adjustment.....	-1	-1	-1	-2	-4	-5	-6	(*)	(*)	2	1	2	2	3
71	Net labor and proprietors income by place of residence.....	1,056	1,224	1,482	2,591	2,999	3,215	3,693	1,265	1,724	2,243	3,629	4,984	5,686	6,571
72	Plus: Dividends, interest, and rent ⁶	161	201	313	446	683	781	879	165	242	337	556	795	871	995
73	Plus: transfer payments.....	107	134	207	385	607	668	730	105	146	247	526	841	930	1,021
74	Personal income by place of residence.....	1,324	1,558	2,002	3,422	4,289	4,665	5,299	1,535	2,112	2,827	4,710	6,620	7,487	8,585
75	Per capita income (dollars).....	1,987	2,216	2,860	4,699	5,679	6,092	6,755	1,817	2,168	2,747	4,082	5,373	5,895	6,566
76	Total population (thousands).....	666	703	700	728	755	760	785	845	974	1,029	1,154	1,232	1,270	1,307

See footnotes on pp. 32-33.

Sources, Selected Years 1958-78—Continued

dollars]

Wyoming								Far West							California							Line
1958	1963	1968	1973	1976	1977	7 1978		1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978	
543	657	806	1,369	2,079	2,419	2,941	38,840	53,453	78,788	114,649	152,438	173,252	198,536	30,441	42,441	62,094	89,888	118,693	134,802	153,361	1	
409	520	653	1,076	1,725	2,007	2,418	31,486	44,508	66,240	96,241	127,361	143,391	163,652	24,767	35,434	52,264	75,726	99,148	111,352	126,336	2	
13	20	30	63	134	170	214	1,044	1,806	3,187	6,036	10,077	12,431	14,802	877	1,514	2,621	4,849	8,058	9,812	11,655	3	
120	118	123	230	221	241	309	6,310	7,138	9,361	12,373	15,000	17,430	20,061	4,798	5,494	7,209	9,313	11,487	13,637	15,370	4	
51	43	29	101	(*)	(*)	(*)	1,124	1,114	1,397	3,054	2,832	2,680	3,716	818	810	1,034	2,070	2,128	2,183	2,666	5	
69	75	94	129	221	241	269	5,186	6,024	7,964	9,319	12,167	14,750	16,365	3,980	4,684	6,175	7,243	9,359	11,455	12,704	6	
72	67	58	139	47	46	94	1,768	1,822	2,244	4,333	4,827	4,768	5,658	1,330	1,346	1,698	3,079	3,690	3,812	4,127	7	
471	590	748	1,230	2,032	2,373	2,847	37,073	51,631	76,544	110,316	147,610	168,484	192,877	29,112	41,095	60,396	86,809	115,003	130,990	149,234	8	
374	456	560	929	1,615	1,929	2,348	30,523	42,163	61,397	87,216	117,162	135,441	157,632	24,004	33,583	48,348	68,591	91,167	105,094	121,852	9	
1	2	3	6	8	9	10	211	259	389	693	1,108	1,321	1,567	159	203	310	543	878	1,008	1,195	10	
(*)	2	3	5	(D)	8	9	150	205	329	572	902	1,048	1,241	132	179	283	492	794	919	1,081	11	
56	67	95	155	410	530	685	267	293	397	537	892	968	1,121	228	246	337	447	775	822	943	13	
2	2	2	12	55	86	119	1	1	10	11	17	20	(*)	(*)	(*)	3	-1	3	2	14		
43	42	62	80	205	245	308	164	167	235	294	608	635	737	163	166	233	293	598	627	723	15	
6	17	19	32	69	105	150	33	36	56	61	58	82	93	12	14	27	27	23	31	41	16	
4	7	12	31	82	94	111	69	88	105	172	215	234	272	53	66	76	125	154	162	177	17	
50	68	160	253	298	348	348	2,585	3,778	4,607	6,720	8,621	10,496	12,608	2,019	2,963	3,450	5,054	6,300	7,618	8,960	18	
42	50	52	82	121	136	158	9,762	13,331	19,361	24,806	32,187	36,593	42,434	7,714	10,718	15,306	19,527	25,102	28,400	32,806	19	
31	34	34	49	78	84	92	3,030	3,824	5,170	7,144	9,575	10,816	12,058	2,419	3,072	4,194	5,777	7,673	8,661	9,742	20	
6	8	9	16	18	18	18	1,137	1,392	1,802	2,368	3,166	3,550	3,902	894	1,107	1,418	1,848	2,468	2,756	3,014	21	
(*)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	83	150	186	210	237	27	39	65	125	157	178	201	22	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	257	308	433	663	901	1,012	1,156	233	279	391	598	809	912	1,046	23	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	559	800	1,098	1,244	1,247	144	206	301	440	598	673	724	24	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	405	663	910	1,284	1,644	1,843	2,148	412	560	766	1,060	1,354	1,518	1,777	25	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	348	465	601	795	1,121	1,242	1,401	255	349	509	696	950	1,047	1,177	26	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	308	341	410	457	667	741	831	295	325	391	424	613	682	762	27	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	135	184	328	562	701	868	1,010	132	177	313	528	645	796	921	28	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	29	31	43	64	93	(D)	(D)	26	29	39	60	87	(D)	29		
10	16	17	33	43	52	66	6,732	9,507	14,191	17,662	22,612	25,777	30,376	5,295	7,646	11,112	13,750	17,424	19,739	23,064	31	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	886	1,066	1,396	2,104	2,837	3,354	3,810	304	357	432	617	880	1,040	1,177	32	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	190	246	326	506	669	869	1,038	163	215	278	433	495	591	706	33	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	429	544	826	1,130	1,431	1,628	1,894	318	411	608	791	960	1,081	1,233	34	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	616	777	1,169	1,598	2,168	2,410	2,819	546	696	1,030	1,391	1,821	2,024	2,354	35	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	580	857	1,495	2,312	3,184	3,623	4,321	517	762	1,319	2,009	2,788	3,154	3,761	36	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	768	1,737	2,605	3,395	4,058	4,601	5,519	741	1,680	2,492	3,190	3,905	4,413	5,275	37	
(*)	(*)	(*)	(D)	(D)	(D)	(D)	2,220	2,253	3,707	3,523	4,961	5,397	6,387	1,755	1,628	2,473	2,540	3,733	4,030	4,571	38	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	189	278	427	681	804	1,051	1,242	173	251	382	595	710	924	1,082	39	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	288	960	1,136	743	969	1,112	1,294	288	427	667	784	899	1,041	1,41	41	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	292	417	516	801	962	1,132	1,294	241	346	427	667	784	899	1,041	41	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	153	202	324	499	1,177	1,384	1,651	145	192	304	461	975	1,127	1,324	42	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	122	170	263	370	469	548	646	105	148	231	313	393	456	540	43	
64	75	89	145	215	245	284	2,838	3,593	5,512	8,550	11,001	12,534	14,461	2,169	2,764	4,302	6,657	8,472	9,627	11,122	44	
32	32	35	48	62	68	73	535	511	600	851	908	987	1,060	353	333	384	544	561	609	654	45	
10	12	16	30	47	52	64	459	810	1,173	1,860	2,308	2,738	3,168	419	628	900	1,394	1,700	2,008	2,322	46	
(*)	(*)	(*)	(*)	(*)	(*)	(*)	271	320	473	677	974	1,307	1,670	201	223	328	318	379	408	441	47	
6	7	9	11	15	19	23	418	557	1,104	1,785	2,400	2,758	3,199	341	457	933	1,511	1,986	2,267	2,633	48	
8	10	13	26	46	52	63	672	886	1,445	2,426	3,328	3,792	4,495	538	716	1,179	1,959	2,666	3,023	3,591	49	
7	14	17	30	44	53	59	393	510	717	1,151	1,484	1,652	1,868	316	407	577	931	1,180	1,311	1,480	50	
20	21	27	43	84	100	124	2,398	3,264	4,550	7,018	10,009	11,200	12,909	1,859	2,567	3,547	5,490	7,713	8,609	9,910	51	
16	17	21	34	68	85	103	4,907	6,333	8,962	12,684	16,525	18,624	21,298	3,819	4,985	7,013	9,880	12,718	14,322	16,314	52	
5	8	10	16	27	32	38	2,038	2,916	4,448	6,076	8,245	10,337	12,315	1,610	2,335	3,557	4,916	6,634	8,288	9,853	53	
11	15	19	24	41	53	65	1,657	2,337	3,566	4,553	6,047	7,831	9,416	1,309	1,870	2,857	3,699	4,870	6,280	7,541	55	
58	74	100	149	235	272	337	5,516	8,395	13,171	20,132	28,573	33,368	38,918	4,426	6,803	10,519	16,076	22,575	26,401	30,749	56	
7	10	11	18	24	33	41	286	405	658	936	1,220	1,419	1,732	186	259	389	528	661	771	94	57	
7	9	10	13	15	17	18	535	720	961	1,230	1,407	1,578	1,822	423	584	765	944	1,082	1,215	1,58	58	
5	5	6	6	7	7	8	388	426	559	633	753	804	884	313	347	464	532	633	676	743	59</	

Table 3.—Personal Income by Major

[Millions]

Line	Item	Nevada							Oregon						
		1958	1963	1968	1973	1976	1977	7 1978	1958	1963	1968	1973	1976	1977	7 1978
Income by place of work															
1	Total labor and proprietors income ¹	584	1,061	1,540	2,687	3,591	4,220	5,131	2,842	3,669	5,347	8,540	11,416	13,212	15,404
By type															
2	Wage and salary disbursements.....	487	929	1,362	2,370	3,189	3,714	4,528	2,210	2,984	4,399	6,980	9,422	10,723	12,407
3	Other labor income.....	10	24	40	103	175	218	268	52	92	178	450	772	1,119	1,341
4	Proprietors income ²	88	108	137	214	227	288	334	580	594	770	1,110	1,222	1,371	1,656
5	Farm.....	15	12	8	43	18	10	22	129	98	113	297	213	115	262
6	Nonfarm ²	73	96	129	171	209	278	312	451	495	657	813	1,009	1,255	1,394
By industry															
7	Farm.....	23	21	22	59	39	34	49	183	174	190	409	363	328	482
8	Nonfarm.....	562	1,041	1,518	2,628	3,552	4,186	5,082	2,659	3,495	5,157	8,131	11,052	12,885	14,922
9	Private.....	452	874	1,226	2,126	2,875	3,452	4,249	2,263	2,919	4,284	6,684	9,052	10,717	12,529
10	Agricultural services, forestry, fisheries, and other ³	1	2	3	7	10	13	15	16	18	27	47	71	94	121
11	Agricultural services.....	1	2	3	7	9	(D)	(D)	7	10	16	28	37	(D)	(D)
12	Forestry, fisheries, and other ³	(*)	(*)	(*)	(*)	(*)	(D)	(D)	9	8	11	20	34	(D)	(D)
13	Mining.....	19	23	32	43	54	71	75	9	10	14	21	24	31	44
14	Coal mining.....	(D)	(D)	(*)	(D)	(*)	-1	(*)	(D)	(D)	(*)	(D)	(*)	1	3
15	Oil and gas extraction.....	(D)	(D)	2	(D)	5	5	8	(D)	(D)	(*)	(D)	(D)	1	1
16	Metal mining.....	14	17	23	30	30	44	40	3	1	2	1	(*)	1	2
17	Nonmetallic minerals, except fuels.....	5	6	7	13	19	22	27	6	8	12	20	23	28	38
18	Construction.....	46	142	111	280	285	394	551	183	266	356	556	719	897	1,089
19	Manufacturing.....	32	50	61	126	174	218	275	733	925	1,383	2,164	2,858	3,390	3,948
20	Nondurable goods.....	14	21	26	46	63	74	86	202	245	345	510	684	781	848
21	Food and kindred products.....	5	7	9	14	17	21	24	98	115	155	218	281	318	351
22	Textile mill products.....	(D)	(D)	(D)	1	(D)	(*)	(*)	10	11	14	19	21	23	25
23	Apparel and other textile products.....	(*)	(*)	(*)	1	(*)	2	2	10	12	15	22	28	32	34
24	Paper and allied products.....	(D)	(D)	(D)	(*)	(*)	(*)	(*)	41	51	(D)	126	181	212	209
25	Printing and publishing.....	4	7	10	19	25	28	34	31	36	49	76	102	117	133
26	Chemicals and allied products.....	5	6	6	10	15	15	16	8	12	19	26	37	39	45
27	Petroleum and coal products.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	2	3	(D)	8	(D)	9	12
28	Tobacco manufactures.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
29	Rubber and misc. plastics products.....	(D)	(D)	(*)	1	(D)	2	7	(D)	(D)	6	13	22	29	35
30	Leather and leather products.....	(D)	(D)	(D)	(*)	(D)	(*)	(*)	(D)	(D)	(D)	2	(D)	3	3
31	Durable goods.....	17	29	35	80	111	144	189	531	681	1,039	1,654	2,174	2,608	3,101
32	Lumber and wood products.....	3	3	2	4	7	10	14	365	434	587	905	1,172	1,388	1,582
33	Furniture and fixtures.....	(*)	1	1	3	1	2	3	10	14	(D)	36	(D)	38	42
34	Primary metal industries.....	7	8	14	18	21	23	29	34	41	70	113	163	205	241
35	Fabricated metal products.....	1	2	2	6	11	14	23	30	38	67	105	154	187	231
36	Machinery, except electrical.....	(*)	(*)	1	8	14	14	20	31	45	83	143	188	241	294
37	Electric and electronic equipment.....	(*)	2	2	13	21	25	33	16	38	72	121	47	59	84
38	Transportation equipment exc. motor vehicles.....	(D)	(D)	(D)	(D)	(D)	(*)	(*)	(D)	(D)	(D)	(D)	(D)	101	139
39	Motor vehicles and equipment.....	(*)	(*)	(*)	(D)	(D)	1	2	6	12	28	56	(D)	83	108
40	Ordnance ⁴	(*)	1	(*)	(*)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
41	Stone, clay, and glass products.....	4	10	9	18	21	33	37	16	22	27	44	56	66	80
42	Instruments and related products.....	(D)	(D)	(D)	(D)	2	2	6	(D)	(D)	15	26	167	214	271
43	Miscellaneous manufacturing industries.....	1	2	3	9	12	19	23	6	9	13	19	22	26	28
44	Transportation and public utilities.....	47	76	106	204	292	344	407	260	315	442	698	889	1,036	1,186
45	Railroad transportation.....	17	16	17	24	28	30	33	73	72	85	121	134	147	158
46	Trucking and warehousing.....	7	12	16	29	41	51	61	55	79	123	220	273	330	378
47	Water transportation.....	(D)	(D)	(D)	(*)	1	1	2	(D)	(D)	(D)	43	50	52	57
48	Other transportation.....	(D)	21	47	77	96	119	119	(D)	(D)	(D)	53	75	92	109
49	Communication.....	10	32	66	92	106	125	148	58	88	158	220	256	304	344
50	Electric, gas, and sanitary services.....	6	12	19	37	54	60	68	41	53	69	103	137	159	179
51	Wholesale trade.....	17	35	49	90	135	153	187	184	245	373	599	846	965	1,133
52	Retail trade.....	81	122	178	304	422	480	581	387	484	660	1,012	1,346	1,543	1,778
53	Finance, insurance, and real estate.....	23	48	65	113	146	192	235	138	184	283	399	561	723	869
54	Banking.....	5	10	15	30	39	46	54	29	41	64	108	142	160	189
55	Other finance, insurance, and real estate.....	18	38	50	84	107	146	181	109	143	219	290	419	563	680
56	Services.....	186	376	621	958	1,358	1,588	1,923	352	471	746	1,189	1,739	2,038	2,362
57	Hotels and other lodging places.....	55	88	175	290	394	449	602	16	24	39	51	71	90	106
58	Personal services.....	10	18	24	31	39	44	53	38	44	62	75	93	108	119
59	Private households.....	5	5	7	8	10	11	11	26	28	33	35	41	44	48
60	Business and repair services.....	22	81	137	141	187	215	256	55	76	116	195	298	359	429
61	Amusement and recreation incl. motion pictures.....	(D)	(D)	(D)	275	412	490	560	15	17	27	34	44	55	63
62	Professional, social, and related services.....	(D)	(D)	(D)	212	317	379	440	203	282	470	799	1,192	1,382	1,598
63	Government and government enterprises.....	110	167	292	501	677	734	833	397	576	873	1,447	2,000	2,167	2,393
64	Federal, civilian.....	34	48	76	111	153	150	175	107	151	210	321	405	450	500
65	Federal, military.....	30	36	54	87	108	113	120	30	34	37	44	55	58	67
66	State and local.....	45	83	162	304	416	471	539	259	392	626	1,082	1,540	1,659	1,825
Derivation of personal income by place of residence															
67	Total labor and proprietors income by place of work.....	584	1,061	1,540	2,687	3,591	4,220	5,131	2,842	3,669	5,347	8,540	11,416	13,212	15,404
68	Less: Personal contributions for social insurance by place of work.....	12	29	54	123	169	194	235	63	116	232	444	645	728	849
69	Net labor and proprietors income by place of work.....	572	1,033	1,486	2,564	3,422	4,025	4,896	2,780	3,554	5,115	8,096	10,771	12,484	14,555
70	Plus: Residence adjustment.....	-14	-26	-34	-65	-84	-102	-131	-11	-29	-58	-109	-127	-164	-203
71	Net labor and proprietors income by place of residence.....	558	1,007	1,452	2,499	3,338	3,923	4,765	2,769	3,525	5,057	7,986	10,643	12,320	14,352
72	Plus: Dividends, interest, and rent ⁶	76	138	204	360	581	683	793	415	571	877	1,386	2,094	2,469	2,807
73	Plus: Transfer payments.....	41	66	130	298	564	625	673	304	402	653	1,316	2,201	2,412	2,626
74	Personal income by place of residence.....	675	1,211	1,785	3,157	4,483	5,232	6,229	3,488	4,499	6,587	10,689	14,938	17,201	19,775
75	Per capita income (dollars).....	2,509	3,050	3,848	5,723	7,318	8,213	9,439	2,030	2,428	3,287	4,815	6,422	7,214	8,092
76	Total population (thousands).....	269	397	464	552	613	637	660	1,718	1,853	2,004	2,220	2,326	2,385	2,444

See footnotes on pp. 32-33.

Sources, Selected Years 1958-78—Continued

of dollars]

Washington							Alaska							Hawaii							Line
1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	1958	1963	1968	1973	1976	1977	1978	
4,972	6,281	9,808	13,534	18,738	21,018	24,640	506	696	1,062	1,794	4,726	4,365	4,207	980	1,459	2,284	3,783	4,842	5,293	5,876	1
4,022	5,162	8,215	11,164	15,602	17,603	20,381	461	622	979	1,622	4,283	3,844	3,626	847	1,284	2,033	3,375	4,292	4,633	5,124	2
105	176	348	624	1,072	1,282	1,538	7	19	33	74	244	285	320	27	36	77	173	281	323	371	3
845	943	1,245	1,736	2,064	2,134	2,721	39	55	71	98	199	236	262	106	139	175	235	269	333	391	4
162	194	242	644	474	372	767	1	(*)	1	1	3	3	3	12	17	13	26	33	32	48	5
683	749	1,003	1,091	1,590	1,762	1,954	38	55	69	97	196	233	259	95	123	161	209	236	301	333	6
232	281	335	787	735	595	1,001	2	1	2	2	4	5	6	63	86	98	134	152	158	181	7
4,740	6,000	9,473	12,748	18,003	20,423	23,639	505	695	1,060	1,792	4,722	4,360	4,201	918	1,373	2,187	3,649	4,690	5,135	5,694	8
3,805	4,788	7,539	9,814	14,067	16,178	19,002	257	367	606	1,002	3,632	3,160	2,909	560	843	1,382	2,405	3,081	3,416	3,854	9
35	36	49	95	150	206	236	14	14	19	35	48	41	43	(D)	(D)	(D)	14	23	25	22	10
10	13	26	44	62	71	88	1	1	1	(D)	3	4	4	(D)	(D)	(D)	(D)	19	21	17	11
26	23	22	51	88	135	149	13	13	18	(D)	45	38	4	(D)	(D)	(D)	(D)	4	5	5	12
11	15	15	25	40	45	59	10	15	41	(D)	138	182	248	(D)	(D)	(D)	(*)	(*)	(*)	(*)	13
1	1	(*)	7	12	13	15	3	3	2	(D)	4	(D)	(D)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	14
1	1	(*)	(*)	5	3	5	2	8	36	(D)	35	128	172	(*)	(*)	(*)	(*)	(*)	(*)	(*)	15
4	4	4	3	4	6	9	5	3	2	(D)	4	(D)	(D)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	16
5	8	11	15	19	23	30	(*)	1	1	1	3	3	3	(D)	(D)	(D)	(*)	(*)	(*)	(*)	17
337	406	680	830	1,317	1,588	2,009	72	63	118	177	1,585	955	538	68	112	197	378	379	376	420	18
1,283	1,638	2,610	2,990	4,054	4,586	5,405	33	49	70	121	197	226	261	98	130	167	225	285	300	322	19
394	487	605	810	1,151	1,300	1,383	26	36	45	74	126	149	180	84	106	130	168	219	226	243	20
140	163	219	288	404	455	512	19	20	25	42	74	86	110	65	78	90	100	134	140	153	21
(D)	(D)	(D)	5	(D)	9	(*)	(*)	(*)	(*)	(*)	(D)	(*)	(*)	(D)	(D)	(D)	(D)	1	1	1	22
14	17	26	42	61	66	73	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(D)	(D)	(D)	(D)	23	23	25	23
96	130	178	233	318	359	313	4	12	12	19	29	33	33	(D)	(D)	(D)	3	3	4	4	24
48	59	85	120	162	181	204	2	3	5	8	12	14	16	9	14	18	29	36	39	42	25
80	97	67	74	119	141	163	(*)	1	2	4	7	(D)	(D)	2	3	5	7	10	7	6	26
11	13	(D)	26	(D)	49	55	(*)	(*)	(*)	(*)	3	(*)	(*)	(*)	(*)	(*)	(*)	10	11	9	27
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	28
2	3	(D)	20	32	37	49	(*)	(*)	(*)	(*)	1	(D)	1	(*)	(*)	(*)	(*)	1	1	1	29
(D)	(D)	(D)	3	(D)	3	4	(*)	(*)	(*)	(*)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	1	1	1	30
889	1,151	2,005	2,180	2,903	3,286	4,022	7	13	25	47	71	77	81	14	24	36	57	66	73	79	31
215	271	375	578	798	916	1,037	4	9	20	37	51	59	55	2	3	4	10	(D)	6	6	32
17	16	34	42	(D)	39	42	(*)	(*)	(*)	(*)	(*)	(D)	(D)	3	4	3	5	(D)	(D)	(D)	33
71	84	133	208	287	318	391	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	1	2	(D)	5	4	4	34
40	40	70	96	182	185	212	(*)	(*)	(*)	(*)	4	4	5	2	3	5	5	7	8	8	35
31	50	92	152	194	214	245	(*)	(*)	(*)	(*)	3	3	9	1	1	1	2	2	2	2	36
12	17	39	71	84	104	127	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	3	3	(*)	(*)	(*)	(*)	37
452	605	1,180	899	1,116	1,265	1,676	(*)	1	1	1	1	1	1	(*)	1	4	4	8	10	10	38
10	15	18	(D)	(D)	42	50	(*)	(*)	(*)	(*)	(D)	(*)	(*)	(*)	(*)	(*)	(D)	(*)	(*)	(*)	39
(D)	(D)	(D)	72	100	115	137	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	27	30	32	40
31	38	54	(D)	33	41	50	(*)	(*)	(*)	(*)	(D)	(D)	(D)	(*)	(*)	(*)	(*)	1	(D)	(D)	41
(D)	(D)	(D)	30	42	47	55	(*)	(*)	(*)	(*)	1	1	1	1	1	2	(*)	3	7	9	42
10	12	16	30	42	47	55	(*)	(*)	(*)	(*)	1	1	1	1	1	2	(*)	7	7	9	43
362	438	663	991	1,348	1,527	1,746	31	70	96	170	441	455	520	71	101	182	320	431	485	547	44
93	90	113	161	185	200	215	1	1	1	3	3	4	4	(*)	1	(*)	(*)	(*)	(*)	(*)	45
68	90	134	218	293	348	407	7	8	13	23	122	97	85	6	10	18	30	37	43	49	46
47	66	103	115	146	166	169	4	9	10	12	31	45	33	17	18	21	24	31	35	38	47
50	63	114	175	262	302	338	15	20	31	59	133	137	193	23	36	65	136	199	226	258	48
76	91	146	243	350	408	476	2	26	30	53	114	131	157	12	18	54	91	117	130	147	49
29	38	53	80	113	122	141	3	6	11	21	39	41	47	12	18	24	39	48	51	55	50
337	417	582	838	1,315	1,472	1,679	12	18	31	54	150	149	149	52	82	114	184	221	244	260	51
621	743	1,111	1,487	2,040	2,280	2,625	37	56	89	150	296	326	357	104	139	228	401	553	608	691	52
266	349	543	648	904	1,134	1,359	11	19	29	55	130	159	181	45	76	135	222	315	370	433	53
45	63	104	169	252	293	345	3	6	10	19	43	51	56	7	15	22	44	63	70	76	54
221	287	439	479	652	841	1,013	8	13	19	36	87	109	125	37	61	113	178	252	300	357	55
552	745	1,285	1,909	2,901	3,341	3,884	37	64	113	199	647	666	611	119	198	351	661	874	1,009	1,159	56
29	34	55	67	94	110	131	3	5	10	15	35	37	38	13	21	61	134	191	215	243	57
64	74	109	114	155	173	192	4	5	7	9	14	16	18	10	16	23	29	35	40	45	58
44	46	55	58	69	74	81	1	2	3	4	4	5	5	12	13	15	15	18	20	22	59
86	120	242	344	630	753	901	5	14	28	32	286	255	151	15	30	55	102	140	158	182	60
(D)	(D)	(D)	61	89	108	128	2	2	3	4	5	7	9	7	10	18	32	41	47	52	61
(D)	(D)	(D)	1,266	1,865	2,124	2,452	21	35	63	135	302	346	390	62	108	180	348	448	529	614	62
935	1,212	1,934	2,933	3,936	4,245	4,637	247	328	474	790	1,090	1,200	1,292	357	531	805	1,244	1,609	1,719	1,841	63
280	327	497	694	984	1,050	1,148	102	127	166	239	322	364	373	130	187	304	402	512	519	574	64
227	236	360	431	540	564	588	115	125	171	241	264	273	288	140	198	248	418	490	499	555	65
428	649	1,077	1,808	2,403	2,632	2,901	30	76	137	311	504	563	631	87	145	253	424	607	701	712	66
4,972	6,281	9,808	13,534	18,738	21,018	24,640	506	696	1,062	1,794	4,726	4,365	4,207	980	1,459	2,284	3,783	4,842	5,293	5,876	67
119	200	409	718	1,066	1,178	1,372	14	22	42	100	204	232	224	29	52	102	206	281	304	340	68
4,853	6,081	9,399	12,817	17,672	19,840	23,268	492	675	1,040	1,694	4,522	4,133	3,984	952	1,408	2,182	3,576	4,561	4		

SEASONALLY UNADJUSTED NIPA ESTIMATES

Table 1.22.—Gross National Product: Quarterly Totals Not Seasonally Adjusted

[Billions of dollars]

	1975	1976				1977				1978			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Gross national product	418.9	398.6	418.1	426.0	459.5	435.9	467.0	480.9	515.7	483.9	522.8	537.9	582.8
Personal consumption expenditures	267.5	252.9	267.1	272.7	297.2	278.8	296.6	303.3	331.3	309.9	330.9	339.9	370.1
Durable goods.....	39.0	34.5	39.0	38.4	45.4	39.3	44.4	43.5	51.7	42.8	50.4	49.1	58.1
Nondurable goods.....	114.7	99.4	108.5	110.9	125.0	106.2	117.9	120.3	136.9	116.2	129.0	133.5	151.9
Services.....	113.8	118.9	119.5	123.3	126.8	133.2	134.3	139.5	142.8	150.9	151.5	157.3	160.1
Gross private domestic investment	55.7	56.2	58.6	62.2	66.0	66.9	73.3	80.0	83.1	77.6	86.0	90.5	97.4
Fixed investment.....	54.2	49.7	58.9	60.7	63.7	58.3	71.8	74.8	76.4	67.6	84.5	87.2	89.8
Nonresidential.....	40.2	37.0	41.4	41.5	44.9	42.1	47.6	47.7	52.1	47.5	55.9	55.8	61.9
Structures.....	14.4	12.8	14.2	15.0	15.3	13.1	15.4	16.7	17.4	15.0	18.6	20.6	22.2
Producers' durable equipment.....	25.7	24.3	27.2	26.5	29.6	29.0	32.1	31.0	34.6	32.5	37.2	35.2	39.7
Residential.....	14.0	12.6	17.5	19.2	18.7	16.3	24.2	27.1	24.4	20.1	23.6	31.4	27.8
Nonfarm structures.....	13.4	12.1	17.0	18.6	18.0	15.6	23.4	26.2	23.7	19.3	27.7	30.3	26.9
Farm structures.....	.4	.3	.2	.3	.3	.3	.4	.5	.3	.3	.4	.6	.5
Producers' durable equipment.....	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.5	.5	.5
Change in business inventories.....	1.5	6.7	-.3	1.4	2.3	8.6	1.5	5.2	6.6	9.9	1.5	3.3	7.6
Nonfarm.....	.5	6.9	.6	1.8	2.8	8.8	1.3	4.7	6.0	9.7	1.3	2.9	7.3
Farm.....	1.0	-.3	-.9	-.4	-.5	-.2	.3	.5	.7	.2	.1	.4	.3
Net exports of goods and services	6.5	3.5	2.7	-.8	2.5	-2.0	-1.1	-4.0	-2.8	-5.2	-1.3	-4.6	.9
Exports.....	39.3	38.6	41.0	39.8	43.8	42.0	45.8	43.1	44.9	45.4	52.9	51.0	57.9
Imports.....	32.9	35.1	38.3	40.6	41.4	44.0	46.9	47.1	47.7	50.6	54.2	55.7	57.0
Government purchases of goods and services	89.2	85.9	89.7	91.9	93.8	92.2	98.3	101.6	104.1	101.8	107.3	112.1	114.4
Federal.....	33.0	31.1	31.9	32.1	34.7	33.8	35.5	36.3	38.8	37.0	36.8	38.1	40.6
National defense.....	22.1	21.3	21.7	21.4	22.0	22.9	23.6	23.5	23.8	24.4	24.8	24.8	25.0
Nondefense.....	10.9	9.8	10.1	10.7	12.7	10.9	11.9	12.9	14.9	12.6	12.0	13.3	15.7
State and local.....	56.2	54.9	57.8	59.9	59.1	58.5	62.7	65.2	65.4	64.7	70.5	74.0	73.7

Table 2.5.—Personal Consumption Expenditures by Major Type of Product: Quarterly Totals Not Seasonally Adjusted

[Billions of dollars]

	1975	1976				1977				1978			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Personal consumption expenditures	267.5	252.9	267.1	272.7	297.2	278.8	296.6	303.3	331.3	309.9	330.9	339.9	370.1
Durable goods	39.0	34.5	39.0	38.4	45.4	39.3	44.4	43.5	51.7	42.8	50.4	49.1	58.1
Motor vehicles and parts.....	14.6	16.3	18.0	17.2	18.5	19.7	21.2	19.7	20.9	21.4	24.4	22.4	23.0
Furniture and household equipment.....	17.9	13.4	15.3	15.6	19.7	14.5	16.9	17.4	22.2	15.4	18.5	19.0	24.7
Other.....	6.5	4.8	5.7	5.6	7.2	5.1	6.3	6.4	8.6	6.0	7.4	7.7	10.4
Nondurable goods	114.7	99.4	108.5	110.9	125.0	106.2	117.9	120.3	136.9	116.2	129.0	133.5	151.9
Food.....	55.7	52.0	56.4	58.5	60.1	55.1	61.9	63.8	65.9	60.6	67.5	70.6	72.9
Clothing and shoes.....	22.8	14.8	17.9	18.1	25.1	15.7	18.9	19.6	28.2	17.2	21.1	21.9	31.0
Gasoline and oil.....	10.3	9.8	10.8	11.3	11.1	10.7	12.0	12.2	11.7	11.4	12.6	13.4	13.5
Fuel oil and coal.....	3.0	4.0	2.2	1.9	3.9	4.7	2.4	2.1	3.8	5.2	2.8	2.1	3.9
Other.....	22.8	18.9	21.3	21.0	24.9	20.0	22.6	22.6	27.3	21.9	25.0	25.4	30.6
Services	113.8	118.9	119.5	123.3	126.8	133.2	134.3	139.5	142.8	150.9	151.5	157.3	160.1
Housing.....	39.1	40.0	40.9	42.2	43.1	44.6	46.1	47.7	48.9	50.5	52.3	54.0	55.4
Household operation.....	16.4	19.3	16.9	17.4	19.2	22.7	18.7	19.8	20.9	25.4	21.1	21.9	23.0
Electricity and gas.....	7.3	9.8	7.1	7.3	8.8	12.1	7.9	8.8	9.5	13.6	9.0	9.5	10.4
Other.....	9.1	9.5	9.8	10.1	10.4	10.5	10.8	11.0	11.4	11.8	12.0	12.4	12.6
Transportation.....	8.7	9.0	9.3	9.7	9.9	10.0	10.8	11.2	11.6	11.9	12.2	12.5	12.6
Other.....	49.7	50.6	52.4	54.1	54.6	55.9	58.8	60.9	61.3	63.1	66.0	69.0	69.1

Table 3.4.—Corporate Profits With Inventory Valuation Adjustment and Without Capital Consumption Adjustment: Quarterly Totals Not Seasonally Adjusted

[Billions of dollars]

	1975	1976				1977				1978			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Corporate profits with inventory valuation adjustment and without capital consumption adjustment	32.5	32.9	37.2	36.2	35.0	33.6	42.5	43.5	42.4	34.4	47.5	48.0	50.9
Profits before tax	34.6	35.6	41.5	39.7	39.2	38.3	46.8	45.8	46.2	40.4	54.7	53.4	57.5
Profits tax liability.....	14.1	14.6	17.4	16.4	15.5	15.5	19.5	18.9	18.7	15.8	22.6	22.4	23.7
Profits after tax.....	20.6	21.1	24.1	23.3	23.7	22.8	27.3	26.9	27.6	24.6	32.1	31.1	33.8
Inventory valuation adjustment	-2.2	-2.8	-4.3	-3.4	-4.2	-4.6	-4.4	-2.3	-3.9	-6.0	-7.2	-5.5	-6.5

SEASONALLY UNADJUSTED NIPA ESTIMATES—Continued

Table 3.3.—Federal Government Receipts and Expenditures: Quarterly Totals Not Seasonally Adjusted

[Billions of dollars]

	1975	1976				1977				1978			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Receipts	71.1	76.7	89.5	86.3	78.9	87.6	103.6	95.9	88.2	95.3	119.6	111.5	105.6
Personal tax and nontax receipts.....	32.6	29.6	39.0	41.0	37.5	36.2	47.6	44.7	41.2	37.8	54.7	52.7	49.7
Corporate profits tax accruals.....	12.0	12.5	14.9	14.0	13.2	13.1	16.6	16.1	15.9	13.4	19.3	19.1	20.3
Indirect business tax and nontax accruals.....	6.5	5.5	6.0	6.0	5.9	5.8	6.2	6.6	6.4	6.4	7.2	7.3	7.3
Contributions for social insurance.....	19.9	29.1	29.6	25.3	22.3	32.5	33.1	28.5	24.8	37.8	38.5	32.4	28.3
Expenditures	93.9	94.4	94.2	95.8	100.6	101.2	103.0	106.6	110.9	111.8	112.5	114.8	120.6
Purchases of goods and services.....	33.0	31.1	31.9	32.1	34.7	33.8	35.5	36.3	38.8	37.0	36.8	38.1	40.6
National defense.....	22.1	21.3	21.7	21.4	22.0	22.9	23.6	23.5	23.8	24.4	24.8	24.8	25.0
Nondefense.....	10.9	9.8	10.1	10.7	12.7	10.9	11.9	12.9	14.9	12.6	12.0	13.3	15.7
Transfer payments.....	38.5	40.9	39.6	40.0	41.1	43.4	42.3	42.9	44.2	46.1	45.5	46.2	47.6
To persons.....	37.8	40.2	38.8	39.1	40.3	42.7	41.5	41.9	43.4	45.3	44.5	45.3	46.5
To foreigners.....	.7	.8	.8	.9	.8	.7	.8	.9	.8	.8	1.0	.9	1.0
Grants-in-aid to State and local governments.....	14.6	14.3	14.7	15.4	16.7	15.3	16.4	18.0	17.9	18.2	19.2	19.4	20.6
Net interest paid.....	6.2	6.6	6.6	6.6	7.0	7.1	7.1	7.2	7.6	8.3	8.4	8.8	9.3
Interest paid.....	7.4	7.7	7.9	8.0	8.5	8.5	8.7	8.8	9.5	10.1	10.5	11.0	11.8
To persons and business.....	6.3	6.7	6.8	6.9	7.3	7.3	7.4	7.4	7.8	8.2	8.5	8.9	9.3
To foreigners.....	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.4	1.7	1.9	2.1	2.1	2.5
Less: Interest received by government.....	1.2	1.2	1.3	1.4	1.5	1.4	1.6	1.6	1.8	1.9	2.1	2.2	2.5
Subsidies less current surplus of government enterprises.....	1.5	1.6	1.4	1.6	1.2	1.7	1.7	2.3	2.4	2.3	2.6	2.3	2.5
Subsidies.....	1.3	1.5	1.2	1.4	1.5	1.6	1.5	1.8	2.6	2.1	2.1	2.1	2.9
Less: Current surplus of government enterprises.....	-.3	-.1	-.2	-.2	.3	-.1	-.2	-.5	.2	-.2	-.5	-.2	.4
Less: Wage accruals less disbursements.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Surplus or deficit (-), national income and product accounts	-22.8	-17.7	-4.7	-9.4	-21.7	-13.6	.6	-10.8	-22.7	-16.5	7.1	-3.3	-15.0

Table 3.5.—State and Local Government Receipts and Expenditures: Quarterly Totals Not Seasonally Adjusted

[Billions of dollars]

	1975	1976				1977				1978			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Receipts	67.2	62.7	65.8	63.8	75.7	69.3	73.5	72.0	83.9	77.5	83.4	80.1	90.1
Personal tax and nontax receipts.....	11.2	11.8	13.0	12.0	13.1	13.7	14.6	13.9	14.6	14.8	16.9	15.8	16.6
Corporate profits tax accruals.....	2.0	2.1	2.5	2.4	2.3	2.3	2.9	2.8	2.8	2.4	3.3	3.3	3.5
Indirect business tax and nontax accruals.....	35.0	29.8	30.7	29.0	38.5	32.5	33.9	31.3	42.3	35.6	37.2	34.7	42.4
Contributions for social insurance.....	4.3	4.6	4.8	5.0	5.2	5.5	5.8	6.0	6.3	6.5	6.7	6.9	7.0
Federal grants-in-aid.....	14.6	14.3	14.7	15.4	16.7	15.3	16.4	18.0	17.9	18.2	19.2	19.4	20.6
Expenditures	60.3	59.2	62.4	64.6	63.9	63.5	67.8	70.1	70.5	69.9	75.5	79.0	79.1
Purchases of goods and services.....	56.2	54.9	57.8	59.9	59.1	58.5	62.7	65.2	65.4	64.7	70.5	74.0	73.7
Transfer payments to persons.....	6.5	6.6	6.7	6.9	7.1	7.3	7.4	7.6	7.8	8.1	8.2	8.4	8.6
Net interest paid.....	-1.2	-1.1	-1.0	-1.0	-1.0	-1.1	-1.1	-1.3	-1.5	-1.6	-1.8	-1.8	-1.9
Subsidies less current surplus of government enterprises.....	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.5	-1.2	-1.3	-1.4	-1.5	-1.3
Subsidies.....	0	0	0	0	0	.1	.1	.1	.1	.1	.1	.1	.1
Less: Current surplus of government enterprises.....	1.2	1.3	1.2	1.3	1.3	1.3	1.3	1.5	1.2	1.3	1.5	1.6	1.3
Less: Wages accruals less disbursements.....	0	0	0	0	0	0	0	0	0	0	0	.1	.1
Surplus or deficit (-), national income and product accounts	6.8	3.5	3.4	-.8	11.8	5.8	5.7	1.9	13.4	7.6	7.8	1.0	11.0

Table 4.2.—Foreign Transactions in the National Income and Product Accounts: Quarterly Totals Not Seasonally Adjusted

[Billions of dollars]

	1975	1976				1977				1978			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Receipts from foreigners	39.3	38.6	41.0	39.8	43.8	42.0	45.8	43.1	41.9	45.4	52.9	51.0	57.9
Exports of goods and services.....	39.3	38.6	41.0	39.8	43.8	42.0	45.8	43.1	41.9	45.4	52.9	51.0	57.9
Capital grants received by the United States (net).....	0	0	0	0	0	0	0	0	0	0	0	0	0
Payments to foreigners	39.3	38.6	41.0	39.8	43.8	42.0	45.8	43.1	44.9	45.4	52.9	51.0	57.9
Imports of goods and services.....	32.9	35.1	38.3	40.6	41.4	44.0	46.9	47.1	47.7	50.6	54.2	55.7	57.0
Transfer payments (net).....	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.1	1.0	1.0	1.2	1.1	1.3
From persons (net).....	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
From government (net).....	.7	.8	.8	.9	.8	.7	.8	.9	.8	.8	1.0	.9	1.0
Interest paid by government to foreigners.....	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.4	1.7	1.9	2.1	2.1	2.5
Net foreign investment.....	4.4	1.5	.7	-3.1	.3	-4.1	-3.5	-6.5	-5.5	-8.2	-4.6	-7.8	-2.9

Summary National Income

Table A.—Gross National Product

[Billions of dollars]

Year	Current dollars							Constant (1972) dollars							Final sales		GNP implicit price deflator (Index numbers, 1972=100)	Year-to-year percent change		
	GNP	PCE	Gross private domestic investment			Net exports	Government purchases	GNP	PCE	Gross private domestic investment			Net exports	Government purchases	Current dollars	Constant (1972) dollars		Current dollar GNP	Constant dollar GNP	GNP implicit price deflator
			Total	Fixed investment	CBI					Total	Fixed investment	CBI								
1929	103.4	77.3	16.2	14.5	1.7	1.1	8.8	314.6	215.6	55.9	51.3	4.6	2.2	40.9	101.7	310.0	32.87	6.6	6.6	0.0
1930	90.7	69.9	10.2	10.6	-4	1.0	9.5	285.2	200.0	38.6	39.1	-5	2.0	44.7	91.1	285.7	31.80	-12.3	-9.3	-3.3
1931	76.1	60.5	5.6	6.8	-1.1	.5	9.5	263.3	192.1	23.7	26.7	-3.0	1.3	46.2	77.2	266.3	28.89	-16.1	-7.7	-9.1
1932	58.3	48.6	1.0	3.4	-2.5	.4	8.3	227.1	174.1	7.9	15.1	-7.2	.9	44.2	60.8	234.2	25.67	-23.4	-13.8	-11.2
1933	55.8	45.8	1.4	3.0	-1.6	.4	8.2	222.1	170.7	8.4	13.3	-4.9	.2	42.8	57.4	226.9	25.14	-4.2	-2.2	-2.1
1934	65.3	51.3	3.3	4.1	-7	.6	10.0	239.0	177.2	13.1	16.4	-3.3	.5	48.2	66.0	242.3	27.32	17.0	7.6	8.7
1935	72.5	55.8	6.4	5.3	1.1	.1	10.2	260.5	188.1	24.0	21.1	2.9	-1.1	49.5	71.4	257.5	27.83	11.0	9.0	1.9
1936	82.7	62.0	8.5	7.2	1.3	.1	12.2	295.4	206.8	32.2	28.4	3.8	-1.3	57.8	81.5	291.6	28.01	14.1	13.4	.6
1937	90.7	66.6	11.8	9.2	2.5	.3	12.0	309.2	214.3	39.8	33.5	6.3	-.7	55.7	88.2	302.9	29.34	9.7	4.7	4.7
1938	85.0	64.0	6.5	7.4	-9	1.3	13.2	296.4	209.2	24.0	26.6	-2.6	2.6	60.6	85.9	299.0	28.66	-6.4	-4.2	-2.3
1939	90.8	67.0	9.3	8.8	.4	1.1	13.5	318.8	220.3	33.6	32.0	1.6	2.0	62.9	90.4	317.2	28.48	6.9	7.6	-7
1940	100.0	71.0	13.1	10.9	2.2	1.7	14.2	343.3	230.4	44.6	38.4	6.2	3.0	65.2	97.8	337.1	29.13	10.1	7.7	2.3
1941	124.9	80.8	17.9	13.4	4.5	1.3	24.9	398.5	244.1	55.8	43.8	12.0	.8	97.7	120.4	386.4	31.34	24.9	16.1	7.6
1942	158.3	88.6	9.9	8.1	1.8	.0	59.8	460.3	241.7	29.6	24.4	5.2	-2.5	191.5	156.5	455.1	34.39	26.8	15.5	9.7
1943	192.0	99.4	5.8	6.4	-6	-2.0	88.9	530.6	248.7	18.1	18.0	.1	-7.3	271.2	192.6	530.5	36.18	21.3	15.3	5.2
1944	210.5	108.2	7.2	8.1	-1.0	-1.8	97.0	568.6	255.7	19.8	22.1	-2.3	-7.2	300.3	211.5	570.9	37.03	9.6	7.1	2.3
1945	212.3	119.5	10.6	11.7	-1.0	-6	82.8	560.0	271.4	27.8	31.4	-3.6	-4.5	265.3	213.4	563.6	37.92	.9	-1.5	2.4
1946	209.6	143.8	30.7	24.3	6.4	7.6	27.5	476.9	301.4	71.0	58.8	12.2	11.6	93.0	203.2	464.7	43.95	-1.3	-14.8	15.9
1947	232.8	161.7	34.0	34.4	-5	11.6	25.5	408.3	306.2	70.1	70.4	-2	16.6	75.4	233.2	468.5	49.70	11.1	-1.8	13.1
1948	259.1	174.7	45.9	41.1	4.7	6.5	32.0	487.7	312.8	82.3	76.8	5.5	8.5	84.1	254.4	482.2	53.13	11.3	4.1	6.9
1949	258.0	178.1	35.3	38.4	-3.1	6.2	38.4	490.7	320.0	65.6	70.0	-4.4	8.8	96.2	261.1	495.1	52.59	-4	.6	-1.0
1950	286.2	192.0	53.8	47.0	6.8	1.9	38.5	533.5	338.1	93.7	83.2	10.6	4.0	97.7	279.4	522.9	53.64	10.9	8.7	2.0
1951	330.2	207.1	59.2	48.9	10.3	3.8	60.1	576.5	342.3	94.1	59.4	13.7	7.4	132.7	319.9	562.8	57.27	15.4	8.1	6.8
1952	347.2	217.2	52.1	49.0	3.1	2.4	75.6	598.5	350.9	83.2	78.9	4.3	4.9	159.5	344.0	594.2	54.00	5.1	3.8	1.3
1953	366.1	229.1	53.3	52.9	.4	.6	82.5	621.8	364.2	85.6	84.1	1.5	2.0	170.0	365.7	620.3	58.88	5.5	3.9	1.5
1954	366.3	235.8	52.7	54.3	-1.5	2.0	75.8	613.7	370.9	83.4	85.6	-2.2	4.5	154.9	367.8	615.8	59.69	.0	-1.3	1.4
1955	399.3	253.7	68.4	62.4	6.0	2.2	75.0	654.8	395.1	104.1	96.3	7.7	4.7	150.9	393.3	647.1	60.98	9.0	6.7	2.2
1956	420.7	266.0	71.0	66.3	4.7	4.3	79.4	668.8	406.3	102.9	97.1	5.8	7.3	152.4	416.0	633.0	62.90	5.4	2.1	3.2
1957	442.8	280.4	69.2	67.9	1.3	6.1	87.1	680.9	414.7	97.2	95.7	1.5	8.9	160.1	441.4	679.4	65.02	5.2	1.8	3.4
1958	448.9	289.5	61.9	63.4	-1.5	2.5	95.0	679.5	419.0	87.7	89.6	-1.8	3.5	169.3	450.4	681.3	66.06	1.4	-2	1.6
1959	486.5	310.8	77.6	72.3	5.2	.6	97.6	720.4	441.5	107.4	101.0	6.5	.9	170.7	481.2	714.0	67.52	8.4	6.0	2.2
1960	506.0	324.9	76.4	72.7	3.8	4.4	100.3	736.8	453.0	105.4	101.0	4.4	5.5	172.9	502.2	732.4	68.67	4.0	2.3	1.7
1961	523.3	335.0	74.3	72.1	2.2	5.8	108.2	755.3	462.2	103.6	100.7	2.9	6.7	182.8	521.1	752.4	69.28	3.4	2.5	.9
1962	563.8	355.2	85.2	78.7	6.5	5.4	118.0	799.1	482.9	117.4	109.3	8.1	5.8	193.1	557.3	791.0	70.55	7.7	5.8	1.8
1963	594.7	374.6	90.2	84.2	6.0	6.3	123.7	830.7	501.4	124.5	116.8	7.8	7.3	197.6	588.8	823.0	71.59	5.5	4.0	1.5
1964	635.7	400.4	96.6	90.8	5.8	8.9	129.8	874.4	528.7	132.1	124.8	7.3	10.9	202.7	629.9	867.1	72.71	6.9	5.3	1.6
1965	688.1	430.2	112.0	102.5	9.5	7.6	138.4	925.9	558.1	150.1	138.8	11.3	8.2	209.6	678.6	914.6	74.32	8.2	5.9	2.2
1966	753.0	464.8	124.5	110.2	14.3	5.1	158.7	981.0	586.1	161.3	144.6	16.7	4.3	229.3	738.7	964.3	76.76	9.4	5.9	3.3
1967	796.3	490.4	120.8	110.7	10.1	4.9	180.2	1,007.7	603.2	152.7	140.7	12.0	3.5	248.3	786.2	995.7	79.02	5.8	2.7	2.9
1968	868.5	535.9	131.5	123.8	7.7	2.3	198.7	1,051.8	633.4	159.5	150.8	8.7	-4	259.2	860.8	1,043.1	82.57	9.1	4.4	4.5
1969	935.5	579.7	146.2	136.8	9.4	1.8	207.9	1,078.8	655.4	168.0	157.5	10.6	-1.3	256.7	926.2	1,068.2	86.72	7.7	2.6	5.0
1970	982.4	618.8	140.8	137.0	3.8	3.9	218.0	1,075.3	668.9	154.7	150.4	4.3	1.4	250.2	978.6	1,071.0	91.36	5.0	-3	5.4
1971	1,063.4	668.2	160.0	153.6	6.4	1.6	233.7	1,107.5	691.9	166.8	160.2	6.6	-6	249.4	1,057.1	1,100.9	96.02	8.2	3.0	5.1
1972	1,171.1	733.0	188.3	178.8	9.4	-3.3	253.1	1,171.1	733.0	188.3	178.8	9.4	-3.3	253.1	1,161.7	1,161.7	100.00	10.1	5.7	4.1
1973	1,306.6	809.9	220.0	202.1	17.9	7.1	269.5	1,235.0	767.7	207.2	190.7	16.5	7.6	252.5	1,288.6	1,218.5	105.80	11.6	5.5	5.8
1974	1,412.9	889.6	214.6	205.7	8.9	6.0	302.7	1,217.8	760.7	183.6	175.6	8.0	15.9	257.7	1,404.0	1,209.9	116.02	8.1	-1.4	9.7
1975	1,528.8	979.1	190.9	201.6	-10.7	20.4	338.4	1,202.3	774.6	142.6	152.4	-9.8	22.6	262.6	1,539.6	1,212.1	127.15	8.2	-1.3	9.6
1976	1,702.2	1,089.9	243.0	233.0	10.0	8.0	361.3	1,273.0	820.6	173.4	166.8	6.6	15.8	263.3	1,692.1	1,266.4	133.71	11.3	5.9	5.2
1977	1,899.5	1,210.0	303.3	281.3	21.9	-9.9	396.2	1,340.5	861.7	200.1	186.9	13.1	10.3	268.5	1,877.6	1,327.4	141.70	11.6	5.3	6.0
1978	2,127.6	1,350.8	351.5	329.1	22.3	-10.3	435.6	1,399.2	900.8	214.3	200.2	14.1	11.0	273.2	2,105.2	1,385.1	152.05	12.0	4.4	7.3

NOTE.—PCE=Personal consumption expenditures; CBI=Change in business inventories.

and Product Series, 1929-78

Table B.—National Income and Disposition of Personal Income

[Billions of dollars]

Year	National income	Compensation of employees	Proprietors' income with IVA and CCAdj.			Rental income of persons with CCAdj.	Corporate profits with IVA and CCAdj.					Net interest	Personal income	Less: Personal tax and nontax payments	Equals: DPI	Less: Personal outlays	Equals: Personal saving	Saving as percentage of DPI	DPI in constant (1972) dollars	
			Total	Farm	Non-farm		Total	Profits before tax	Profits after tax		IVA									CC Adj.
									Total	Undistributed										
1929	84.8	51.1	14.9	6.2	8.8	4.9	9.2	10.0	8.6	2.8	0.5	-1.3	4.7	84.9	2.6	82.3	79.1	3.1	3.8	229.8
1930	73.8	46.8	11.7	4.3	7.4	4.4	5.9	3.7	2.9	-2.6	3.3	-1.0	4.9	76.2	2.5	73.7	71.1	2.6	3.5	210.6
1931	58.6	39.7	9.1	3.4	5.6	3.6	1.3	-4	-9	-4.9	2.4	-7	5.0	65.4	1.8	63.5	61.4	2.1	3.3	201.7
1932	42.4	31.1	5.6	2.1	3.5	2.9	-1.7	-2.3	-2.7	-5.2	1.0	-5	4.6	50.0	1.4	48.6	49.3	-7	-1.4	174.3
1933	39.9	29.5	5.8	2.6	3.2	2.2	-1.7	1.0	.4	-1.6	-2.1	-5	4.1	45.9	1.4	44.5	46.5	-1.0	-2.2	169.7
1934	48.7	34.3	7.5	3.0	4.6	1.7	1.0	2.3	1.6	-1.0	-6	-7	4.1	53.7	1.6	52.1	52.0	.1	.2	179.7
1935	56.5	37.3	10.7	5.3	5.4	1.8	2.6	3.6	2.6	-2	-2	-8	4.1	60.3	1.9	58.4	56.4	2.0	3.4	196.6
1936	64.3	42.9	10.9	4.3	6.6	1.8	4.9	6.3	4.9	.4	-7	-7	3.8	68.4	2.2	66.2	62.8	3.4	5.2	220.7
1937	72.3	47.9	13.1	6.0	7.1	1.9	5.6	6.8	5.3	.6	0	-1.2	3.7	73.8	2.9	70.9	67.5	3.4	4.7	227.8
1938	66.0	45.0	11.2	4.4	6.8	2.4	3.8	4.0	2.9	-2	1.0	-1.1	3.6	68.0	2.8	65.1	64.9	.3	.4	212.8
1939	71.3	48.1	11.7	4.4	7.3	2.6	5.3	7.0	5.6	1.8	-7	-1.0	3.6	72.4	2.4	69.9	67.8	2.1	3.0	230.1
1940	79.7	52.1	12.9	4.5	8.4	2.7	8.7	10.0	7.2	3.2	-2	-1.1	3.3	77.8	2.6	75.2	72.0	3.3	4.4	244.3
1941	102.6	64.8	17.4	6.4	10.9	3.1	14.1	17.7	10.1	5.7	-2.5	-1.1	3.3	95.3	3.3	92.0	81.8	10.2	11.1	278.1
1942	135.7	85.3	24.0	9.8	14.3	4.0	19.3	21.5	10.1	5.9	-1.2	-1.0	3.1	122.4	5.9	116.5	89.4	27.0	23.2	317.3
1943	169.1	109.5	29.0	11.7	17.3	4.4	23.5	25.1	11.1	6.6	-8	-8	2.7	150.7	17.8	132.9	100.1	32.7	24.6	332.2
1944	181.9	121.2	30.2	11.6	18.6	4.5	23.6	24.1	11.2	6.5	-3	-2	2.4	164.4	18.9	145.5	109.0	36.5	25.1	343.9
1945	180.6	123.1	31.7	12.2	19.4	4.6	19.0	19.7	9.0	4.4	-6	-1	2.2	169.8	20.8	149.0	120.4	28.5	19.2	338.6
1946	178.3	118.1	36.6	14.9	21.6	5.5	16.6	24.6	15.5	9.9	-5.3	-2	1.6	177.3	18.7	158.6	145.2	13.4	8.5	324.4
1947	194.6	129.2	35.8	15.2	20.6	5.3	22.2	31.5	20.2	13.9	-5.9	-3.4	2.1	189.8	21.4	168.4	163.5	4.9	2.9	318.8
1948	219.0	141.4	40.7	17.5	23.2	5.7	29.1	35.2	22.7	15.7	-2.2	-3.9	2.1	208.5	21.0	187.4	176.9	10.6	5.7	335.5
1949	212.7	141.3	36.1	12.7	23.5	6.1	26.9	28.9	18.7	11.5	1.9	-3.8	2.2	205.6	18.5	187.1	180.4	6.7	3.6	336.1
1950	236.2	154.8	38.4	13.5	24.9	7.1	33.7	42.6	24.7	15.9	-5.0	-4.0	2.3	226.1	20.6	205.5	194.7	10.8	5.3	361.9
1951	272.3	181.0	42.8	15.8	27.0	7.7	38.1	43.9	21.3	12.8	-1.2	-4.6	2.7	253.7	28.9	224.8	210.0	14.8	6.6	371.6
1952	285.8	195.7	42.9	14.9	28.0	8.8	35.4	38.9	19.5	11.0	1.0	-4.5	3.0	270.4	34.0	236.4	220.4	16.0	6.8	382.1
1953	299.7	209.6	41.3	12.9	28.4	10.0	35.5	40.5	20.2	11.5	-1.0	-4.1	3.4	286.1	35.5	250.7	233.7	17.0	6.8	397.5
1954	299.1	208.4	40.8	12.3	28.5	11.0	34.6	38.1	20.5	11.4	-3	-3.2	4.3	288.2	32.5	255.7	240.1	15.6	6.1	402.1
1955	328.0	224.9	42.5	11.3	31.2	11.3	44.6	48.4	26.4	16.1	-1.7	-2.1	4.8	308.8	35.4	273.4	258.5	14.9	5.4	425.9
1956	346.9	243.5	43.6	11.2	32.4	11.6	42.9	48.6	26.6	15.5	-2.7	-3.0	5.2	330.9	39.7	291.3	271.6	19.7	6.8	444.9
1957	362.3	256.5	45.0	11.0	33.9	12.2	42.1	46.9	25.5	14.0	-1.5	-3.3	6.5	349.3	42.4	306.9	286.4	20.6	6.7	453.9
1958	364.0	258.2	47.4	13.1	34.3	12.9	37.5	41.1	22.1	10.8	-3	-3.4	8.0	359.3	42.1	317.1	295.4	21.7	6.8	459.0
1959	397.1	279.6	47.2	10.7	36.6	13.2	48.2	51.6	28.0	15.8	-5	-2.9	8.8	382.1	46.0	336.1	317.3	18.8	5.6	477.4
1960	412.0	294.9	47.0	11.4	35.6	13.8	46.6	48.5	25.8	13.0	.3	-2.3	9.8	399.7	50.4	349.4	332.3	17.1	4.9	487.3
1961	424.2	303.6	48.3	11.8	36.4	14.3	46.9	48.6	25.8	12.5	.1	-1.8	11.2	415.0	52.1	362.9	342.7	20.2	5.6	500.6
1962	457.4	325.1	49.6	11.9	37.7	15.0	54.9	53.6	29.6	15.2	.1	1.2	12.8	440.7	56.8	383.9	363.5	20.4	5.3	521.6
1963	482.8	342.9	50.3	11.6	38.7	15.7	59.6	57.7	31.5	16.0	-2	2.1	14.3	458.1	60.3	402.8	384.0	18.8	4.7	539.2
1964	519.2	368.0	52.2	10.3	42.0	16.1	67.0	64.7	36.7	19.4	-5	2.8	15.9	495.7	58.6	437.0	410.9	26.1	6.0	577.3
1965	566.0	396.5	56.7	12.6	44.1	17.1	77.1	75.2	44.3	25.2	-1.9	3.8	18.5	537.0	64.9	472.2	441.9	30.3	6.4	612.4
1966	622.2	439.3	60.3	13.6	43.7	18.2	82.5	80.7	47.1	27.6	-2.1	3.9	21.9	584.9	74.5	510.4	477.4	33.0	6.5	643.6
1967	655.8	471.9	61.0	12.1	48.9	19.4	79.3	77.3	44.9	24.7	-1.7	3.7	24.3	626.6	82.1	544.5	503.7	40.9	7.5	689.8
1968	714.4	519.8	63.4	12.0	51.4	18.6	85.8	85.6	46.2	24.2	-3.4	3.7	26.8	685.2	97.1	588.1	550.1	38.1	6.5	695.2
1969	767.9	571.4	66.2	13.9	52.3	18.1	81.4	83.4	43.8	21.2	-5.5	3.5	30.8	745.8	115.4	630.4	595.3	35.1	5.6	712.3
1970	798.4	609.2	65.1	13.9	51.2	18.6	87.9	71.5	37.0	14.1	-5.1	1.5	37.5	801.3	115.3	685.9	635.4	50.6	7.4	741.6
1971	858.1	650.3	67.7	14.3	53.4	20.1	77.2	82.0	44.3	21.3	-5.0	.3	42.8	859.1	116.3	742.8	685.5	57.3	7.7	769.0
1972	951.9	715.1	76.1	18.0	58.1	21.5	92.1	96.2	54.6	30.0	-6.6	2.5	47.0	942.5	141.2	801.3	751.9	49.4	6.2	801.3
1973	1,064.6	799.2	92.4	32.0	60.4	21.6	99.1	115.8	67.1	39.3	-18.6	1.9	52.3	1,052.4	150.8	901.7	831.3	70.3	7.8	854.7
1974	1,136.0	875.8	86.2	25.4	60.9	21.4	83.6	126.9	74.5	43.6	-40.4	-2.9	69.0	1,154.9	170.3	984.6	913.0	71.7	7.3	842.0
1975	1,215.0	931.1	87.0	23.5	63.5	22.4	95.9	120.4	70.6	38.7	-12.4	-12.0	78.6	1,255.5	168.8	1,086.7	1,003.0	83.6	7.7	859.7
1976	1,359.8	1,037.8	89.3	18.3	71.0	22.1	126.8	156.0	92.2	54.7	-14.6	-14.5	83.8	1,381.6	197.1	1,184.5	1,115.9	68.6	5.8	891.8
1977	1,525.8	1,156.9	100.2	19.6	80.5	24.7	150.0	177.1	104.5	62.4	-15.2	-12.0	94.0	1,531.6	228.4	1,303.1	1,240.2	65.0	5.0	929.5
1978	1,724.3	1,304.5	116.8	27.7	89.1	25.9	167.7	206.0	121.5	74.3	-25.2	-13.1	109.5	1,717.4	259.0	1,458.4	1,388.4	72.0	4.9	972.5

Note.—IVA=Inventory valuation adjustment; CCAdj.=Capital consumption adjustment; DPI=Disposal personal income.

Alternative Estimates of Capital Consumption and Profits of Nonfinancial Corporations, 1975-78

Estimates of capital consumption and profits of nonfinancial corporations for 1975-78, based on alternative depreciation formulas and service lives and valued at historical and current cost, are shown below. The estimates for 1976-78 incorporate the revised and updated national income and product account (NIPA) estimates that appeared in the July 1979 SURVEY OF CURRENT BUSINESS. Estimates for 1929-72 appeared in the March 1976 SURVEY; estimates for 1973 appeared in the August 1976 SURVEY; and estimates for 1974 appeared in the August 1977 SURVEY. Service lives used for nonresidential structures and equipment are 100 percent of Internal Revenue Service Bulletin F (F), 85 percent of Bulletin F (.85F), 75 percent of Bulletin F (.75F), and 100 percent of Bulletin F through 1940 with a gradual decrease to 75 percent of Bulletin F in 1960 (F to .75F); for residential structures, the lives are 80 and 65 years for new 1-to-4 and 5-or-more unit structures, respectively, with lives half as long as these for additions and alterations.

Table 1.—Capital Consumption Allowances, Nonfinancial Corporations: National Income and Product Account Estimates and Estimates Based on Alternative Methods of Depreciation

[Billions of dollars]					
Line		1975	1976	1977	1978
1	Capital consumption allowances, NIPA ¹	84.9	92.4	104.2	114.3
2	Capital consumption allowances with capital consumption adjustment, NIPA ²	96.8	106.8	116.0	126.9
	Capital consumption allowances with capital consumption adjustment, alternative methods of depreciation:				
	Historical-cost valuation:				
	Straight-line depreciation:				
3	F service lives.....	60.3	66.2	71.2	77.3
4	.85F service lives.....	64.5	70.8	76.3	83.1
5	.75F service lives.....	67.8	74.4	80.4	87.8
6	F to .75F service lives.....	68.5	75.1	81.0	88.4
	Double-declining balance depreciation:				
7	F service lives.....	69.0	75.6	82.2	90.3
8	.85F service lives.....	72.9	79.9	87.0	96.0
9	.75F service lives.....	75.9	83.2	90.8	100.5
10	F to .75F service lives.....	76.5	83.7	91.3	100.9
	Current-cost valuation:				
	Straight-line depreciation:				
11	F service lives.....	92.7	102.4	111.3	121.7
12	.75F service lives.....	100.0	110.2	119.6	130.9
13	F to .75F service lives.....	102.9	113.0	122.4	133.7
	Double-declining balance depreciation:				
14	F service lives.....	99.7	109.0	118.2	129.6
15	.85F service lives.....	103.2	112.5	121.9	133.8
16	.75F service lives.....	105.8	115.1	124.7	137.0
17	F to .75F service lives.....	107.8	117.1	128.7	139.1

1. Tax return-based capital consumption allowances.

2. Based on current cost valuation, straight-line depreciation, and .85F service lives.

Table 2.—Capital Consumption Adjustment, Nonfinancial Corporations: National Income and Product Account Estimates and Estimates Based on Alternative Methods of Depreciation

[Billions of dollars]					
Line		1975	1976	1977	1978
1	Capital consumption adjustment, NIPA ¹	-11.9	-14.4	-11.8	-12.6
	Capital consumption adjustment, alternative methods of depreciation: ²				
	Historical-cost valuation:				
	Straight-line depreciation:				
2	F service lives.....	24.6	26.2	33.0	37.0
3	.85F service lives.....	20.4	21.6	27.9	31.2
4	.75F service lives.....	17.1	18.0	23.8	26.5
5	F to .75F service lives.....	16.4	17.3	23.2	25.9
	Double-declining balance depreciation:				
6	F service lives.....	16.0	16.8	22.1	24.0
7	.85F service lives.....	12.1	12.5	17.2	18.4
8	.75F service lives.....	9.0	9.2	13.4	13.8
9	F to .75F service lives.....	8.5	8.7	12.9	13.4
	Current-cost valuation:				
	Straight-line depreciation:				
10	F service lives.....	-7.8	-10.0	-7.1	-7.4
11	.75F service lives.....	-15.1	-17.8	-15.4	-16.5
12	F to .75F service lives.....	-17.9	-20.6	-18.1	-19.4
	Double-declining balance depreciation:				
13	F service lives.....	-14.8	-16.6	-14.0	-15.3
14	.85F service lives.....	-18.2	-20.1	-17.7	-19.5
15	.75F service lives.....	-20.8	-22.7	-20.5	-22.7
16	F to .75F service lives.....	-22.9	-24.7	-22.5	-24.7

1. Equals line 1, table 1, minus line 2, table 1.

2. Lines 2 through 16 are equal to tax return-based capital consumption allowances (line 1, table 1) minus the capital consumption allowances based on the designated valuation, depreciation formula, and service lives (lines 3 through 17, table 1). For example, line 2 equals line 1, table 1, minus line 3, table 1.

Table 3.—Corporate Profits With Inventory Valuation Adjustment, Nonfinancial Corporations: National Income and Product Account Estimates and Estimates Based on Alternative Methods of Depreciation

[Billions of dollars]					
Line		1975	1976	1977	1978
1	Corporate profits before deduction of capital consumption allowances, with inventory valuation adjustment, NIPA.....	173.8	207.7	232.5	255.2
2	Corporate profits with inventory valuation adjustment and without capital consumption adjustment, NIPA ²	88.9	115.3	128.3	140.9
3	Corporate profits with inventory valuation and capital consumption adjustments, NIPA ³	76.9	100.9	116.5	128.3
	Corporate profits with inventory valuation and capital consumption adjustments, alternative methods of depreciation: ⁴				
	Historical-cost valuation:				
	Straight-line depreciation:				
4	F service lives.....	113.5	141.5	161.3	177.9
5	.85F service lives.....	109.3	136.9	156.2	172.1
6	.75F service lives.....	106.0	133.3	152.1	167.5
7	F to .75F service lives.....	105.3	132.6	151.5	166.8
	Double-declining balance depreciation:				
8	F service lives.....	104.8	132.1	150.4	164.9
9	.85F service lives.....	100.9	127.8	145.5	159.3
10	.75F service lives.....	97.9	124.5	141.7	154.7
11	F to .75F service lives.....	97.3	124.0	141.2	154.3
	Current-cost valuation:				
	Straight-line depreciation:				
12	F service lives.....	81.1	105.3	121.2	133.5
13	.75F service lives.....	73.8	97.6	112.9	124.4
14	F to .75F service lives.....	70.9	94.7	110.2	121.5
	Double-declining balance depreciation:				
15	F service lives.....	74.1	98.7	114.3	125.7
16	.85F service lives.....	70.6	95.2	110.6	121.4
17	.75F service lives.....	68.0	92.7	107.8	118.2
18	F to .75F service lives.....	66.0	90.6	105.8	116.2

1. Excludes profits originating in the rest of the world.

2. Equals line 1, table 3, minus line 1, table 1.

3. Equals line 2, table 3, plus line 1, table 2.

4. Lines 4 through 18 are equal to NIPA profits with inventory valuation adjustment and

without capital consumption adjustment (line 2, table 3) plus the capital consumption adjustment based on the designated valuation, depreciation formula, and service lives (lines 2 through 16, table 2). For example, line 4 equals line 2, table 3, plus line 2, table 2.

Durable Goods Owned by Consumers in the United States, 1975-78

Estimates of durable goods owned by consumers in the United States for 1975-78 are shown below. The estimates for 1976-78 incorporate the revised and updated national income and product account estimates of personal consumption expenditures for durable goods that appeared in the July 1979 SURVEY OF CURRENT BUSINESS. Estimates for 1925-74 appeared in the March 1979 SURVEY.

Table 1.—Current-Dollar Gross Stock of Durable Goods Owned by Consumers, by Type

[Billions of dollars]

Yearend	Total	Motor vehicles ¹		Furniture and household equipment					Other			
		Autos	Other	Furniture, including mattresses and bedsprings	Kitchen and other household appliances ²	China, glassware, tableware, and utensils	Other durable house furnishings ³	Radio and television receivers, records, and musical instruments	Jewelry and watches	Ophthalmic products and orthopedic appliances	Books and maps	Wheel goods, durable toys, sports equipment, boats, and pleasure aircraft
1975.....	1,109.7	382.6	40.2	153.8	97.6	57.4	113.8	95.5	56.9	10.9	29.7	71.2
1976.....	1,219.7	424.6	48.1	163.5	106.4	60.7	125.9	105.4	61.5	11.6	32.2	79.9
1977.....	1,347.2	475.9	58.5	176.0	115.5	65.0	138.2	115.4	66.5	12.4	35.3	88.6
1978.....	1,512.8	526.9	70.7	198.2	128.3	72.7	155.1	130.1	77.2	13.3	39.3	100.8

Table 2.—Current-Dollar Net Stock of Durable Goods Owned by Consumers, by Type

[Billions of dollars]

1975.....	591.2	184.8	22.7	84.2	54.7	30.6	64.3	55.8	31.9	5.5	15.9	40.8
1976.....	644.7	202.4	27.3	89.3	59.1	31.9	70.5	61.3	34.4	5.8	17.2	45.4
1977.....	710.7	226.6	33.5	96.2	63.7	34.0	77.1	66.9	37.2	6.3	19.0	50.2
1978.....	799.1	251.2	40.7	108.5	70.3	38.0	86.3	75.1	43.4	6.8	21.5	57.3

Table 3.—Constant-Dollar Gross Stock of Durable Goods Owned by Consumers, by Type

[Billions of 1972 dollars]

1975.....	925.3	321.3	33.8	124.0	81.4	39.5	95.0	90.0	47.6	8.8	24.7	59.1
1976.....	978.8	339.0	38.3	128.1	85.0	40.4	100.8	99.0	50.3	8.9	25.6	63.4
1977.....	1,036.6	356.4	43.8	132.8	89.0	41.4	107.2	108.7	53.3	9.0	26.8	68.2
1978.....	1,097.8	373.4	50.1	137.8	92.8	42.4	113.9	118.7	56.9	9.2	28.5	74.0

Table 4.—Constant-Dollar Net Stock of Durable Goods Owned by Consumers, by Type

[Billions of 1972 dollars]

1975.....	493.3	155.2	19.1	67.9	45.7	21.1	53.6	52.5	26.6	4.4	13.2	34.0
1976.....	518.2	161.6	21.8	70.0	47.2	21.3	56.5	57.6	28.1	4.5	13.6	36.1
1977.....	548.4	169.8	25.1	72.6	49.1	21.6	59.8	63.0	29.8	4.5	14.4	38.6
1978.....	581.6	178.1	28.8	75.4	50.9	22.1	63.3	68.5	32.0	4.7	15.6	42.1

1. Includes tires, tubes, accessories, and other parts.
2. Consists of refrigerators and freezers, cooking ranges, dishwashers, laundry equipment, stoves, air conditioners, sewing machines, vacuum cleaners, and other appliances.
3. Includes such house furnishings as floor coverings, comforters, quilts, blankets, pillows,

picture frames, mirrors, art products, portable lamps, and clocks. Also includes writing equipment and hand, power, and garden tools.

NOTE.—The stock estimates are based on straight-line depreciation and service lives given in table F of the March 1979 SURVEY article.

Table 5.—Personal Consumption Expenditures for Durable Goods, Depreciation, and Personal Consumption Expenditures for Durable Goods Net of Depreciation, in Current and Constant Dollars

Year	Billions of dollars			Billions of 1972 dollars		
	Expenditures	Depreciation	Expenditures net of depreciation	Expenditures	Depreciation	Expenditures net of depreciation
1975.....	132.6	106.0	26.6	112.7	91.0	21.7
1976.....	157.4	116.9	40.5	126.6	95.8	30.8
1977.....	178.8	128.2	50.6	138.2	101.2	37.0
1978.....	200.3	142.9	57.4	146.7	106.9	39.8

Fixed Nonresidential Business and Residential Capital in the United States, 1975-78

Estimates of fixed nonresidential business and residential capital in the United States for 1975-78 are shown below. The estimates for 1976-78 incorporate the revised and updated national income and product account estimates of fixed investment that appeared in the July 1979 SURVEY OF CURRENT BUSINESS. Estimates for 1925-72 appeared in the April 1976 SURVEY; estimates for 1973 appeared in the August 1976 SURVEY; and estimates for 1974 appeared in the August 1977 SURVEY.

Table 1.—Current-Dollar Gross Stocks of Fixed Nonresidential Business Capital, by Major Industry Group and Legal Form of Organization

[Billions of dollars]

Year-end	Total			By major industry group									By legal form of organization									
				Farm			Manufacturing			Nonfarm nonmanu- facturing			Corporate						Noncorporate			
	Equip- ment and struc- tures	Equip- ment	Struc- tures	Equip- ment and struc- tures	Equip- ment	Struc- tures	Equip- ment and struc- tures	Equip- ment	Struc- tures	Equip- ment and struc- tures	Equip- ment	Struc- tures	Equip- ment and struc- tures	Total			Nonfinancial			Equip- ment and struc- tures	Equip- ment	Struc- tures
														Equip- ment	Struc- tures	Equip- ment	Struc- tures	Equip- ment	Struc- tures			
1975...	2,392.4	1,104.8	1,287.6	164.1	95.9	68.3	527.8	307.0	220.8	1,700.5	701.9	998.5	1,768.5	880.8	878.7	1,603.7	858.2	835.5	623.9	215.0	408.9	
1976...	2,600.0	1,215.4	1,384.5	180.0	106.8	73.2	566.8	341.1	225.7	1,853.2	767.6	1,085.6	1,933.3	979.3	954.0	1,850.3	943.5	906.8	666.7	236.1	430.6	
1977...	2,871.3	1,348.6	1,522.6	198.3	118.1	80.1	625.3	383.0	242.3	2,047.7	847.5	1,200.2	2,139.6	1,089.0	1,050.6	2,045.3	1,048.6	996.7	731.6	259.6	472.0	
1978...	3,206.6	1,491.2	1,715.4	220.3	130.2	90.1	695.7	426.1	269.6	2,290.6	934.9	1,355.7	2,389.9	1,206.0	1,183.9	2,280.2	1,159.4	1,120.8	816.7	285.3	531.5	

Table 2.—Current-Dollar Net Stocks of Fixed Nonresidential Business Capital, by Major Industry Group and Legal Form of Organization

1975...	1,378.6	605.2	773.4	91.3	51.3	39.9	280.4	165.3	115.1	1,006.9	388.6	618.3	1,005.1	491.2	513.9	953.5	471.8	481.7	373.5	114.0	259.5
1976...	1,485.0	660.8	824.2	99.9	57.3	42.5	301.1	184.2	116.9	1,084.1	419.2	664.9	1,089.9	535.4	554.4	1,033.3	513.7	519.6	395.1	125.4	269.8
1977...	1,631.8	731.6	900.2	109.3	63.0	46.3	332.5	208.2	124.3	1,190.0	460.4	729.6	1,201.5	593.7	607.8	1,137.8	569.4	588.4	430.3	137.9	292.4
1978...	1,816.7	807.0	1,009.7	120.7	68.9	51.8	369.6	231.4	138.2	1,326.4	506.7	819.7	1,339.2	655.3	683.9	1,265.8	627.6	638.2	477.5	151.7	325.8

Table 3.—Constant-Dollar Gross Stocks of Fixed Nonresidential Business Capital, by Major Industry Group and Legal Form of Organization

[Billions of 1972 dollars]

1975...	1,701.7	806.9	894.7	115.4	65.5	49.9	380.6	223.0	157.6	1,205.6	518.4	687.2	1,255.5	652.5	603.0	1,199.3	627.2	572.2	446.2	154.5	291.7
1976...	1,748.2	832.8	915.4	118.7	67.5	51.2	389.7	231.9	157.8	1,239.8	533.3	706.4	1,290.7	674.0	616.7	1,230.4	646.7	583.7	457.5	158.8	298.7
1977...	1,805.2	867.6	937.6	121.3	69.0	52.4	401.3	242.9	158.4	1,282.6	555.7	726.8	1,336.1	704.3	631.8	1,271.6	675.0	596.6	469.1	163.3	305.8
1978...	1,866.7	908.0	963.7	124.0	70.4	53.7	413.5	253.1	160.5	1,329.1	579.5	749.6	1,385.2	734.7	650.4	1,315.9	703.0	612.9	481.5	168.2	313.3

Table 4.—Constant-Dollar Net Stocks of Fixed Nonresidential Business Capital, by Major Industry Group and Legal Form of Organization

1975...	981.2	442.3	539.0	64.6	35.4	29.2	202.2	120.0	82.2	714.5	286.9	427.6	714.0	360.2	353.8	675.6	344.8	330.8	267.3	82.1	185.2
1976...	1,000.8	453.4	547.4	66.3	36.6	29.7	206.8	125.2	81.7	727.7	291.7	436.0	728.9	368.8	360.1	683.1	352.4	335.7	272.0	84.6	187.4
1977...	1,029.0	472.1	556.8	67.4	37.1	30.3	213.3	132.0	81.2	745.3	303.0	445.3	752.1	385.0	367.1	709.0	367.6	341.4	276.9	87.2	189.7
1978...	1,060.2	490.7	569.6	68.4	37.5	30.8	219.9	137.6	82.3	771.9	315.5	456.5	778.0	400.7	377.3	732.1	382.0	350.1	282.2	90.0	192.3

NOTE.—Capital stock estimates are based on straight-line depreciation and .85F service lives.

Table 5.—Current-Dollar Gross Stocks of Residential Capital, by Legal Form of Organization and Tenure Group

[Billions of dollars]

Yearend	Total	By legal form of organization							By tenure group ¹			
		Business				Government			Owner occupied		Tenant occupied	
		Total	Corporate		Non-corporate	Total	Federal	State and local	Farm	Nonfarm	Farm	Nonfarm
			Total	Non-financial								
1975.....	2,043.9	1,998.4	74.4	71.2	1,924.1	45.4	13.9	31.5	58.7	1,392.7	16.9	524.0
1976.....	2,289.6	2,289.2	82.6	78.7	2,156.6	50.4	15.4	35.0	64.4	1,573.2	18.0	577.3
1977.....	2,639.4	2,581.9	94.2	89.3	2,487.7	57.5	17.4	40.1	72.5	1,829.8	19.7	653.3
1978.....	3,026.4	2,961.1	107.2	101.0	2,853.9	65.3	19.6	45.7	81.0	2,115.2	21.4	736.9

Table 6.—Current-Dollar Net Stocks of Residential Capital, by Legal Form of Organization and Tenure Group

1975.....	1,327.8	1,295.1	52.5	50.3	1,242.6	32.7	9.3	23.4	26.5	956.4	4.4	306.3
1976.....	1,483.3	1,447.6	57.5	54.7	1,390.1	35.7	10.1	25.6	29.0	1,077.4	4.6	335.3
1977.....	1,710.5	1,670.4	64.9	61.2	1,605.5	40.1	11.3	28.9	32.9	1,253.4	4.9	378.5
1978.....	1,961.6	1,916.6	73.1	68.4	1,843.5	45.0	12.5	32.5	36.7	1,448.6	5.2	426.0

Table 7.—Constant-Dollar Gross Stocks of Residential Capital, by Legal Form of Organization and Tenure Group

[Billions of 1972 dollars]

1975.....	1,476.9	1,444.1	53.9	51.6	1,390.2	32.8	10.0	22.7	42.4	1,005.6	12.2	379.5
1976.....	1,510.3	1,477.2	54.7	52.1	1,422.5	33.1	10.1	23.0	42.4	1,036.8	11.9	382.0
1977.....	1,562.4	1,518.7	55.7	52.7	1,463.0	33.7	10.2	23.5	42.6	1,074.9	11.5	385.9
1978.....	1,595.6	1,561.3	56.8	53.5	1,504.5	34.3	10.3	24.0	42.6	1,113.6	11.2	390.4

Table 8.—Constant-Dollar Net Stocks of Residential Capital, by Legal Form of Organization and Tenure Group

1975.....	959.3	935.7	38.0	36.4	897.7	23.6	6.7	16.9	19.2	690.5	3.1	221.8
1976.....	978.2	954.7	38.0	36.2	916.7	23.5	6.6	16.8	19.1	709.9	3.0	221.8
1977.....	1,005.6	982.1	38.3	36.1	943.8	23.5	6.6	16.9	19.3	736.1	2.9	223.4
1978.....	1,033.5	1,009.9	38.7	36.1	971.2	23.6	6.6	17.0	19.3	762.2	2.7	225.6

1. Excludes stocks of nonhousekeeping residential capital, such as hotels, motels, and dormitories.

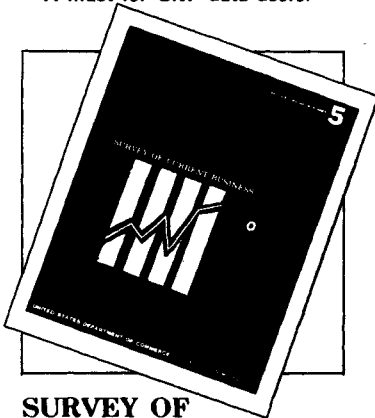
NOTE.—Capital stock estimates are based on straight-line depreciation and service lives given in the text of the April 1976 SURVEY article.

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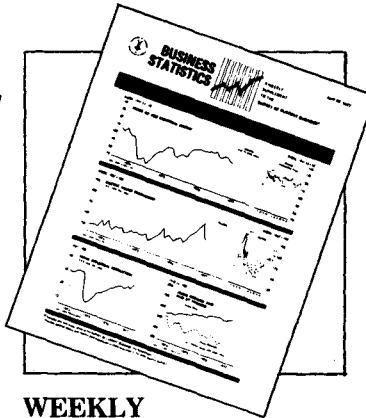


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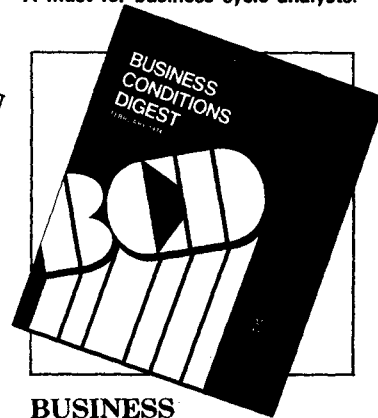
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Subject	Release Date*	Subject	Release Date*
Personal Income, July 1979.....	Aug. 16	Merchandise Trade (balance of payments basis), 3d quarter 1979.....	Nov. 1
Gross National Product (1st revision), 2d quarter 1979...	Aug. 17	Personal Income, October 1979.....	Nov. 19
Corporate Profits (preliminary), 2d quarter 1979.....	Aug. 17	Gross National Product (1st revision), 3d quarter 1979...	Nov. 20
Federal Receipts and Expenditures, 2d quarter 1979...	Aug. 20	Corporate Profits (preliminary), 3d quarter 1979.....	Nov. 20
Selected International Transactions, 2d quarter 1979..	Aug. 22	Selected International Transactions, 3d quarter 1979..	Nov. 20
Composite Indexes of Leading, Coincident, and Lagging Indicators, July 1979.....	Aug. 29	Federal Receipts and Expenditures, 3d quarter 1979...	Nov. 21
Plant and Equipment Expenditures, 2d quarter 1979..	Sept. 6	Composite Indexes of Leading, Coincident, and Lagging Indicators, October 1979.....	Nov. 30
Personal Income, August 1979.....	Sept. 18		
Gross National Product (2d revision), 2d quarter 1979..	Sept. 19	Plant and Equipment Expenditures, 3d quarter 1979..	Dec. 6
Corporate Profits (revised), 2d quarter 1979.....	Sept. 19	Personal Income, November 1979.....	Dec. 18
Summary of International Transactions, 2d quarter 1979.....	Sept. 20	Gross National Product (2d revision), 3d quarter 1979..	Dec. 19
Composite Indexes of Leading, Coincident, and Lagging Indicators, August 1979.....	Sept. 28	Corporate Profits (revised), 3d quarter 1979.....	Dec. 19
Personal Income, September 1979.....	Oct. 17	Summary of International Transactions, 3d quarter 1979.....	Dec. 20
Gross National Product (preliminary), 3d quarter 1979..	Oct. 19	Composite Indexes of Leading, Coincident, and Lagging Indicators, November 1979.....	Dec. 31
Composite Indexes of Leading, Coincident, and Lagging Indicators, September 1979.....	Oct. 30		

* These are target dates; estimates may occasionally be released a day or two earlier or later.

For information, call (202) 523-0777, Bureau of Economic Analysis, U.S. Department of Commerce.