

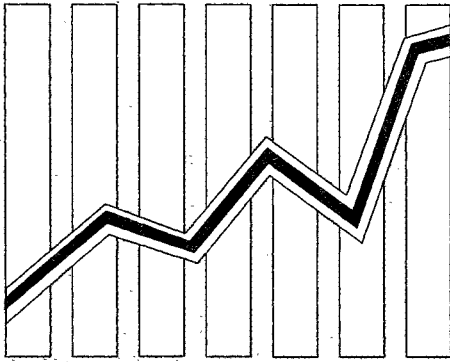
# SURVEY of CURRENT BUSINESS



IN THIS ISSUE . . .

- *Alternative Measures of Change in Real Output and Prices*
- *Economic Theory and BEA's Alternative Quantity and Price Indexes*

U.S. DEPARTMENT OF COMMERCE ≈ ECONOMICS AND STATISTICS ADMINISTRATION  
BUREAU OF ECONOMIC ANALYSIS



# SURVEY of CURRENT BUSINESS

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**NOTE.**—This issue of the SURVEY went to the printer on May 8, 1992.

It incorporates data from the following monthly BEA news releases:

Gross Domestic Product (Apr. 28),  
Personal Income and Outlays (Apr. 29), and  
Composite Indexes of Leading, Coincident, and Lagging  
Indicators (Apr. 30).

# THE BUSINESS SITUATION

This article was prepared by Daniel Larkins, Larry R. Moran, and Ralph W. Morris.

ACCORDING TO advance estimates of the national income and product accounts (NIPA's), real gross domestic product (GDP) increased 2.0 percent in the first quarter of 1992 after increasing 0.4 percent in the fourth quarter of 1991 (chart 1).

Real gross domestic purchases increased 1.7 percent in the first quarter after decreasing 0.4 percent in the fourth, and real final sales to domestic purchasers increased 4.5 percent after decreasing 1.0 percent. The difference between the increase in final sales to domestic purchasers and the increase in gross domestic purchases reflected a sizable decrease in inventory investment (that is, change in business inventories) in the first quarter. Roughly four-fifths of the first-quarter increase in final sales to domestic purchasers was accounted for by personal consumption expenditures.

The fixed-weighted price index for gross domestic purchases increased 2.7 percent in the first quarter after increasing 2.2 percent in the fourth. Most of the step-up was accounted for by a pay raise for Federal military and civilian personnel.

*Motor vehicles.*—Real motor vehicle output increased 8.1 percent in the first quarter after falling 8.8 percent in the fourth; trucks accounted for most of the increase. Real final sales of motor vehicles jumped 12.6 percent after no change; a sharp increase in car sales accounted for the jump. Because the increase in output was smaller than that in final sales, inventory investment decreased. (Auto and truck output, sales, and

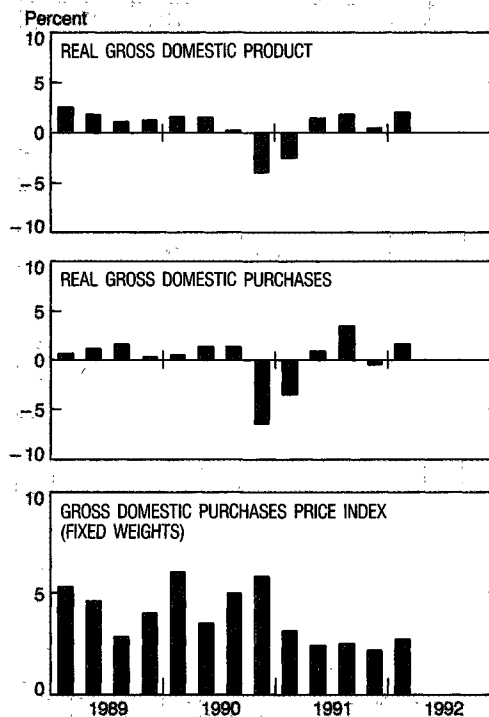
inventories are shown in tables 8.3–8.6 of the "Selected NIPA Tables.")

In terms of units, domestic car production declined to 5.3 million units (seasonally adjusted annual rate) in the first quarter after declining to 5.6 million in the fourth. Sales increased modestly. Sales of imported cars increased to 2.3 million from 2.1 million, but sales of domestic cars edged down to 6.0 million from 6.1 million. Production and sales in the past four quarters have been lower than in any four consecutive quarters since 1982–83.

Most of the difference between the sharp increase in the NIPA measure of car sales and the much smaller increase in unit car sales is ex-

CHART 1

### Selected Measures: Change From Preceding Quarter



Note.—Percent change at annual rate from preceding quarter based on seasonally adjusted estimates.  
U.S. Department of Commerce, Bureau of Economic Analysis

#### Looking Ahead...

• *Foreign Direct Investment in the United States.* The results of projects to link detailed Census Bureau and Bureau of Labor Statistics establishment, or plant, level data with BEA data for foreign-owned U.S. business enterprises will be available this summer. The linked data will make it possible to analyze the contribution of foreign-owned companies to the U.S. economy at a more detailed level by industry and by State.

NOTE.—Quarterly estimates in the national income and product accounts are expressed at seasonally adjusted annual rates, and quarterly changes are differences between these rates. Quarter-to-quarter percent changes are annualized. Real, or constant-dollar, estimates are expressed in 1987 dollars. The advance GDP estimate for the first quarter is based on the following major source data, some of which are subject to revision. (The number of months for which data were available is shown in parentheses.)

*Personal consumption expenditures:* Sales of retail stores (3), and unit auto and truck sales (3);

*Nonresidential fixed investment:* Unit auto and truck sales (3), construction put in place (2), manufacturers' shipments of machinery and equipment (2), and exports and imports of machinery and equipment (2);

*Residential investment:* Construction put in place (2), and housing starts (3);

*Change in business inventories:* Manufacturing and trade inventories (2), and unit auto inventories (3);

*Net exports of goods and services:* Merchandise exports and merchandise imports (2);

*Government purchases:* Federal outlays (2), and State and local construction put in place (2);

*GDP prices:* Consumer Price Index (3), Producer Price Index (3), nonpetroleum merchandise export and import price indexes (3), and values and quantities of petroleum imports (2).

plained by an increase in the consumer share of unit sales (to 58.9 percent in the first quarter from 56.3 percent in the fourth). Because the average expenditure per car by consumers in recent years has been more than \$1,500 above that by business, an increase in the consumer share results in an increase in total expenditures. In the third quarter of 1991, the consumer share fell to a record low of 51.5 percent, primarily reflecting manufacturers' aggressive fleet-marketing programs; in the fourth and first quarters, these programs were cut back, and the consumer share increased sharply.

A first-quarter pickup in consumer car sales was consistent with a 3.0-percent increase—the largest in 2 years—in real disposable personal income after small increases in the third and fourth quarters. However, other factors that underlie consumer spending remained weak. The unemployment rate rose to 7.2 percent, the highest rate since 1986, and the Index of Consumer Sentiment (prepared by the University of Michigan's Survey Research Center) slid further.

Factors specific to the motor vehicle industry also were mixed. Interest rates on loans for new cars were lower in the first quarter than in the fourth, but manufacturers' sales-incentive programs were modest in comparison with those offered most of last year.

Domestic car inventories edged down at the end of the first quarter, the sixth consecutive quarter of decline. The publication of the unit inventory level and the inventory-sales ratio that are usually included in this article has been temporarily suspended to correct inconsistencies in the source data; BEA hopes to begin publishing these estimates again in July. A different measure that provides information on inventories is "days' supply," that is, the number of days that would be required to liquidate inventories at the

current rate of sales. As reported in *Ward's Automotive Reports*, days' supply at the end of the first quarter fell to 63—close to the industry's historical target of about 60—from 73 at the end of the fourth quarter (not seasonally adjusted).

### Prices

The fixed-weighted price index for gross domestic purchases increased 2.7 percent in the first quarter after increasing 2.2 percent in the fourth (table 1). Most of the first-quarter step-up was accounted for by a 4.2-percent pay raise for Federal military and civilian personnel. (Increases in Federal employee compensation are treated in the NIPA's as an increase in the price of employee services purchased by the Federal Government.)

**Table 1.—Price Indexes (Fixed Weights): Change From Preceding Quarter**

[Percent change at annual rates; based on seasonally adjusted index numbers (1987 = 100)]

	1991			1992
	II	III	IV	I
<b>Gross domestic product</b> .....	<b>3.3</b>	<b>2.6</b>	<b>2.1</b>	<b>3.1</b>
<i>Less:</i> Exports of goods and services .....	-4	-2.4	3.0	0
<i>Plus:</i> Imports of goods and services .....	-7.7	-2.0	3.6	-2.6
<b>Equals: Gross domestic purchases</b> .....	<b>2.4</b>	<b>2.5</b>	<b>2.2</b>	<b>2.7</b>
<i>Less:</i> Change in business inventories .....				
<b>Equals: Final sales to domestic purchasers</b> .....	<b>2.4</b>	<b>2.5</b>	<b>2.2</b>	<b>2.7</b>
Personal consumption expenditures .....	2.9	2.8	2.8	3.1
Food .....	4.5	-7	1.1	2.2
Energy .....	-12.1	-3.3	5.7	-5.1
Other personal consumption expenditures .....	3.8	4.0	2.9	3.9
Nonresidential structures .....	1.9	2.4	-1.0	-1.2
Producers' durable equipment .....	0	.7	1.7	1.7
Residential investment .....	2.5	3.6	-9	-1.4
Government purchases .....	1.6	2.0	2.3	3.6
<b>Addenda:</b>				
Merchandise imports .....	-8.9	-1.4	4.0	-3.2
Petroleum and products .....	-47.4	-1.1	21.9	-46.8
Other merchandise .....	-3.1	-1.2	2.4	2.8

NOTE.—Percent changes in major aggregates are found in table 8.1 of the "Selected NIPA Tables." Most index number levels are found in tables 7.1 and 7.2.

Prices of gross domestic purchases less food and energy, which may be viewed as a measure of the underlying inflation rate in the U.S. economy, increased 3.3 percent, up from a 2.4-percent increase (chart 2).

Prices of personal consumption expenditures (PCE) increased 3.1 percent in the first quarter after increasing 2.8 percent in the fourth. Prices of the services components of PCE (except electricity and gas) increased more in the first quarter than in the fourth, as did prices of food, of clothing and shoes, and of furniture and household equipment. Prices of the energy components of PCE decreased in the first quarter after increasing in the fourth. Prices of motor vehicles and parts increased less in the first quarter than in the fourth.

Prices of both residential and nonresidential structures decreased a little more in the first quarter than in the fourth. Prices of nonresidential producers' durable equipment increased 1.7 percent in both the first and the fourth quarters.

Reflecting the Federal pay raise, prices of government purchases increased 3.6 percent after increasing 2.3 percent; prices paid by the Federal Government increased 6.8 percent after increasing 3.7 percent. Prices paid by State and local governments increased 1.1 percent, about the same as in the fourth quarter.

The price index for GDP, which measures the prices paid for goods and services produced in the United States, increased 3.1 percent in the first quarter after increasing 2.1 percent in the fourth. This index differs from the price index

for gross domestic purchases by including prices of exports and excluding prices of imports. Prices of exports were unchanged in the first quarter after increasing in the fourth, and prices of imports decreased, mostly due to a large drop in petroleum prices.

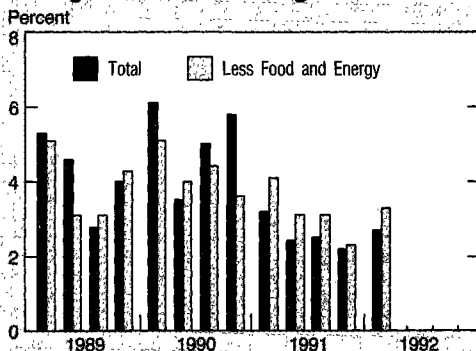
**Personal income**

Real disposable personal income (DPI) increased 3.0 percent in the first quarter after increasing 0.9 percent in the fourth (chart 3). The acceleration reflected a pickup in current-dollar disposable personal income, a downswing in personal tax and nontax payments, and a slowdown in the implicit price deflator for PCE.

In current dollars, personal income increased \$60.8 billion in the first quarter after increasing \$42.0 billion in the fourth (table 2). The step-up was accounted for by transfer payments, which increased \$41.9 billion after increasing \$21.7 billion. The first-quarter increase in transfer

**CHART 2**

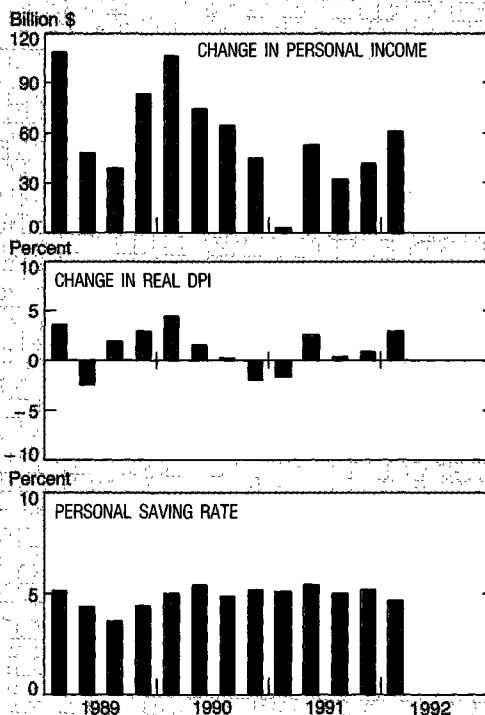
**Gross Domestic Purchases Prices (Fixed Weights): Change From Preceding Quarter**



Note.—Percent change at an annual rate from preceding quarter based on seasonally adjusted index numbers (1987=100). U.S. Department of Commerce, Bureau of Economic Analysis

**CHART 3**

**Selected Personal Income and Saving Measures**



Based on Seasonally Adjusted Annual Rates. Note.—Changes are from preceding quarter. U.S. Department of Commerce, Bureau of Economic Analysis

payments was boosted by the following special factors:

- Cost-of-living adjustments to the benefits paid under social security and under several other Federal employee retirement and income support programs.
- An increase in unemployment insurance benefits resulting from the emergency unemployment compensation program, which provided for an additional 13 to 20 weeks of benefits to individuals who had exhausted their regular unemployment benefits.
- A speedup of life insurance dividend payments to veterans (these payments are usually spread evenly through the year).
- An increase in Earned Income Tax Credit payments resulting from the expansion of the basic credit rate.

Wage and salary disbursements increased \$23.7 billion in the first quarter, \$6.8 billion more than in the fourth. Government wages and salaries—boosted by the pay raise for Federal civilian and military personnel—accounted for most of the acceleration.

Proprietors' income increased \$11.1 billion in the first quarter after increasing \$9.5 billion in the fourth. Farm proprietors' income increased \$0.9 billion after increasing \$4.1 billion; the slowdown was more than accounted for by a downswing in Federal farm subsidy payments. Subsidy payments decreased \$0.4 billion after jumping \$8.4 billion in the fourth quarter, when Conservation Reserve payments and deficiency payments increased strongly. (Conservation Reserve payments compensate land owners who devote their land to conservation uses under a long-term commitment; deficiency payments are made when the market price of a crop is, or is projected to be, below the Federal target price.) Farm proprietors' income excluding subsidies increased \$1.2 billion after decreasing for two quarters; the turnabout largely reflected higher farm prices.

Nonfarm proprietors' income increased more in the first quarter than in the fourth, reflecting pickups in retail trade and services and a turnaround in real estate.

Among the remaining components of personal income, personal interest income decreased \$17.6 billion after decreasing \$11.0 billion; the decreases

**Table 2.—Personal Income and Its Disposition**

[Billions of dollars; seasonally adjusted at annual rates]

	Level 1992: I	Change from preceding quarter					Level 1992: I	Change from preceding quarter				
		1991			1992			1991			1992	
		II	III	IV	I			II	III	IV	I	
Wage and salary disbursements .....	2,863.0	29.7	21.8	16.9	23.7	<b>Addenda: Special factors in personal income:</b>						
Commodity-producing industries .....	738.1	1.8	7.1	1.8	-6.0							
Manufacturing .....	559.7	3.0	7.6	4.4	-4.6		In wages and salaries:					
Other .....	178.4	-1.2	-5	-2.6	-1.4		Federal Government and Postal					
Distributive industries .....	648.3	6.9	2.0	-1	4.4		Service pay adjustments .....		.1	1.0	-5	4.6
Service industries .....	924.0	16.5	11.4	12.8	16.8		In farm proprietors' income:					
Government and government enterprises .....	552.6	4.7	1.3	2.4	8.4		Agricultural subsidy payments .....		.7	-7.4	8.4	-4
Other labor income .....	301.1	4.3	4.3	4.2	4.1		In rental income of persons with CCAAdj:					
Proprietors' income with IVA and CCAAdj ..	403.1	15.8	2.5	9.5	11.1		Uninsured losses due to Oakland, California, fire .....		0	0	-2.1	2.1
Farm .....	37.0	6.8	-7.6	4.1	.9		In transfer payments to persons:					
Nonfarm .....	366.2	9.0	10.1	5.4	10.3		Social security retroactive payments .....		.3	0	.9	-5
Rental income of persons with CCAAdj .....	-10.7	.2	-2.5	1.1	2.4		Cost-of-living increases in Federal transfer payments .....		0	0	1.4	12.9
Personal dividend income .....	129.4	-1.3	1.3	.7	0		Emergency Unemployment Compensation payments .....		0	0	3.1	9.9
Personal interest income .....	688.1	-8.3	-5.1	-11.0	-17.6		Veteran's Life Insurance dividends ..		0	0	0	1.5
Transfer payments to persons .....	827.3	14.3	12.2	21.7	41.9		Earned Income Credit payments .....		0	0	0	2.8
Less: Personal contributions for social insurance .....	245.1	1.6	2.3	1.1	4.7		Japanese-American World War II internee payments .....		-1	0	1.8	-1.7
<b>Personal income .....</b>	<b>4,956.1</b>	<b>53.1</b>	<b>32.2</b>	<b>42.0</b>	<b>60.8</b>		In personal contributions for social insurance:					
Less: Personal tax and nontax payments .....	617.0	-3.5	1.5	3.3	-1.4		Social security rate and base changes and increase in premium for supplementary medical insurance .....		0	0	0	2.8
<b>Equals: Disposable personal income ..</b>	<b>4,339.1</b>	<b>56.5</b>	<b>30.7</b>	<b>38.6</b>	<b>62.3</b>		In personal tax and nontax payments:					
Less: Personal outlays .....	4,133.6	40.3	47.0	27.8	80.1		March 1992 change in withholding tables .....		0	0	0	-8.3
<b>Equals: Personal saving .....</b>	<b>205.6</b>	<b>16.2</b>	<b>-16.3</b>	<b>10.9</b>	<b>-17.8</b>							

NOTE.—Most dollar levels are found in table 2.1 of the "Selected NIPA Tables."  
IVA Inventory valuation adjustment

CCAAdj Capital consumption adjustment

reflected lower interest rates. Rental income of persons increased \$2.4 billion in the first quarter after increasing \$1.1 billion in the fourth; the fourth-quarter increase had been held down by \$2.1 billion in uninsured losses that resulted from the brush fire in Oakland, California, in October. Reduced mortgage interest payments, which reflect the effects of lower interest rates and are deducted in measuring rental income, were offset by increased payments for points and related fees. In the NIPA's, these costs are deducted when a mortgage is refinanced even when they are added to the mortgage principal.

Personal contributions for social insurance, which are subtracted in deriving the personal income total, increased \$4.7 billion in the first quarter after increasing \$1.1 billion in the fourth. The first-quarter increase was largely due to the following special factors:

- An increase in the social security taxable wage base for employees from \$53,400 to \$55,500,
- Increases in the social security taxable earning base for the self-employed,
- An increase in the medicare taxable wage base for employees from \$125,000 to \$130,200, and
- An increase in the monthly premium for supplementary medical insurance.

Personal tax and nontax payments decreased \$1.4 billion in the first quarter after increasing \$3.3 billion in the fourth. A reduction in personal income tax withholding that was implemented by executive action in March reduced first-quarter payments by \$8.3 billion at an annual rate.

In the first quarter, personal outlays—mainly PCE—increased substantially more than current-dollar DPI; thus, personal saving decreased \$17.8 billion. The personal saving rate fell 0.5 percentage point to 4.7 percent.

### Corporate Profits and Property Income in 1991

Profits from current production—profits before tax plus inventory valuation adjustment (IVA) and capital consumption adjustment (CCAdj)—decreased \$12.2 billion in 1991 after decreasing \$32.7 billion in 1990 (table 3). At \$306.8 billion, profits in 1991 were 15.9 percent below their peak in 1988.

Profits of domestic nonfinancial corporations decreased \$19.1 billion after decreasing \$36.7 billion. Both decreases reflected drops in unit

profits that resulted from increases in costs that were larger than those in prices. Unit costs increased 3.4 percent in 1991 and 4.9 percent in 1990; in contrast, unit prices increased 2.5 percent in 1991 and 3.3 percent in 1990.

Profits of domestic financial corporations increased \$1.0 billion after decreasing \$2.4 billion.

Profits from the rest of the world increased \$5.9 billion after increasing \$6.3 billion. Much of the change in both years reflected drops in profits earned by U.S. affiliates of foreign corporations, which are subtracted in calculating rest-of-the-world profits.

Cash flow from current production, a profits-related measure of internally generated funds available to corporations for investment, increased \$12.8 billion in 1991 after decreasing \$20.9 billion in 1990. As a percentage of nonresidential fixed investment, cash flow was 77.8 percent in 1991, up from 70.8 percent in 1990.

Current-production measures of industry profits are not available because estimates of the CCAdj by industry do not exist; profits before tax (PBT) with IVA is the best available measure of industry profits. For domestic nonfinancial industries, this measure fell \$10.6 billion in 1991

Table 3.—Corporate Profits

	Level		Change
	1991	1990	1991
Billions of dollars			
<b>Profits from current production</b> .....	<b>306.8</b>	<b>-32.7</b>	<b>-12.2</b>
Domestic .....	240.7	-39.0	-18.1
Financial .....	35.5	-2.4	1.0
Nonfinancial .....	205.2	-36.7	-19.1
Rest of the world .....	66.1	6.3	5.9
IVA .....	3.1	3.3	17.3
CCAdj .....	-8.7	-23.9	-9.5
Profits before tax .....	312.4	-12.2	-19.9
Profits tax liability .....	124.5	-2.7	-10.8
Profits after tax .....	187.9	-9.6	-9.1
<b>Profits by industry:</b>			
Profits before tax with IVA .....	315.5	-8.8	-2.7
Domestic .....	249.5	-15.1	-8.5
Financial .....	41.7	.4	2.1
Nonfinancial .....	207.7	-15.6	-10.6
Manufacturing .....	81.7	-17.9	-14.0
Trade .....	45.8	-3.0	6.0
Transportation and public utilities .....	45.8	-5	1.3
Other .....	34.4	5.8	-4.0
Rest of the world .....	66.1	6.3	5.9
Receipts (inflows) .....	63.8	.3	-1.1
Payments (outflows) .....	-2.3	-6.0	-7.0
Dollars			
<b>Unit prices, costs, and profits of domestic nonfinancial corporations:</b>			
Unit price .....	1.135	.035	.028
Unit labor cost .....	.763	.037	.018
Unit nonlabor cost .....	.295	.013	.015
Unit profits from current production .....	.076	-.013	-.007

NOTE.—Levels of these and other profits series are found in tables 1.14, 1.16, 6.16C, and 7.15 of the "Selected NIPA Tables."  
 IVA Inventory valuation adjustment  
 CCAdj Capital consumption adjustment

after falling \$15.6 billion in 1990. In both years, the drop was more than accounted for by manufacturing industries. Within manufacturing, decreases were widespread; motor vehicle manufacturers posted the largest decreases, and food manufacturers posted the largest increases.

*Related measures.*—PBT is more closely related to the measure on which corporate income taxes are based than is profits from current production.<sup>1</sup> PBT decreased \$19.9 billion in 1991 after decreasing \$12.2 billion in 1990. The difference between the decrease in PBT and that in profits from current production in 1991 reflected an increase in the IVA that more than offset a decrease in the CCAdj.

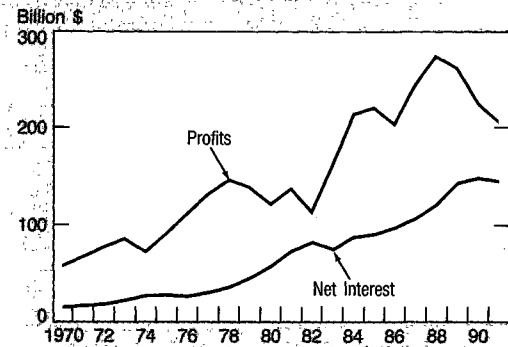
The IVA is an estimate, with the sign reversed, of the inventory profits that are included in PBT. Inventory profits decreased \$17.3 billion in 1991 after decreasing \$3.3 billion in 1990. The decreases reflected a slowing in the rate of increase of prices of inventoried goods held by corporations using non-LIFO inventory methods. For

example, the increase in the Producer Price Index, a major source of information on inventory prices, slowed to 0.2 percent in 1991 from 3.7 percent in 1990.

The CCAdj is the difference between the predominantly tax-based depreciation measure that

CHART 4

### Profits From Current Production and Net Interest, Domestic Nonfinancial Corporations, 1970-91



U.S. Department of Commerce, Bureau of Economic Analysis

1. For detail on the major differences between PBT and the measure on which corporate income taxes are based, see table 8.22 in the "Selected NIPA Tables," in the January 1992 SURVEY.

Table 4.—Property Income and Related Series for Domestic Nonfinancial Corporations, 1959-91

[Billions of dollars]

Year	Property income				Net interest	Domestic income	Net reproducible assets <sup>1</sup>
	Total	Profits from current production		Net interest			
		Total	Profits tax liability				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1959	45.8	42.6	20.7	21.9	3.1	217.2	392.0
1960	43.4	40.0	19.2	20.8	3.5	224.6	406.9
1961	44.7	40.8	19.5	21.3	4.0	230.1	417.7
1962	52.7	48.2	20.6	27.5	4.5	252.8	431.0
1963	58.6	53.8	22.8	31.0	4.8	269.7	448.6
1964	65.4	60.0	24.0	36.1	5.3	292.0	471.0
1965	76.4	70.3	27.2	43.1	6.1	322.8	503.4
1966	82.3	74.9	29.5	45.4	7.4	356.2	551.0
1967	80.5	71.8	27.8	43.9	8.8	372.8	603.9
1968	86.1	76.0	33.6	42.4	10.1	409.3	660.4
1969	84.4	71.3	33.3	37.9	13.2	443.3	729.3
1970	74.2	57.1	27.2	29.9	17.1	452.8	800.2
1971	85.3	67.2	29.9	37.2	18.1	487.3	871.0
1972	96.1	77.0	33.8	43.2	19.2	543.2	955.2
1973	106.0	83.6	40.2	43.4	22.5	612.0	1,076.2
1974	98.9	70.6	42.2	28.4	28.3	655.7	1,273.1
1975	120.2	91.5	41.5	50.0	28.7	700.6	1,468.0
1976	139.0	111.5	53.0	58.5	27.5	795.7	1,612.9
1977	162.6	132.0	59.9	72.1	30.6	904.2	1,779.3
1978	182.4	146.1	67.1	79.0	36.3	1,033.3	2,000.4
1979	183.2	138.1	69.6	68.5	45.1	1,148.7	2,283.1
1980	178.9	120.7	67.0	53.7	58.2	1,234.3	2,606.0
1981	208.9	136.9	63.9	73.0	71.9	1,376.3	2,938.1
1982	194.0	111.5	46.3	65.2	82.5	1,407.2	3,180.3
1983	236.6	159.9	59.4	100.4	76.7	1,512.3	3,300.2
1984	302.2	214.3	73.7	140.7	87.9	1,716.6	3,435.8
1985	312.1	221.4	69.9	151.5	90.7	1,821.0	3,606.7
1986	302.0	203.8	75.6	128.2	98.3	1,889.9	3,744.1
1987	350.0	244.2	93.5	150.8	105.8	2,026.1	3,889.6
1988	396.0	274.4	101.7	172.6	121.6	2,210.3	4,101.4
1989	403.0	261.0	99.2	161.8	142.0	2,325.9	4,314.6
1990	372.8	224.3	96.1	128.2	148.5	2,396.1	4,486.8
1991	350.5	205.2	84.1	121.1	145.3	2,403.3	4,599.7

1. Structures, equipment, and inventories, valued at current replacement cost. Data are averages of end-of-year values for adjacent years.

NOTE.—Property income is profits from current production plus net interest. Profits from current production is corporate profits with inventory valuation adjustment and capital consumption adjustment.

Profits after tax is also shown with inventory valuation adjustment and capital consumption adjustment. Current data on most series are shown in table 1.16 of the "Selected NIPA Tables." The value of structures and equipment through 1990 are from the January 1992 SURVEY OF CURRENT BUSINESS, pages 121 and 125; structures and equipment for 1991 and all data on inventories are unpublished BEA estimates.



underlies PBT, on the one hand, and BEA's estimate of economic depreciation, on the other. The CCAdj decreased \$9.5 billion in 1991 after decreasing \$23.9 billion in 1990. The decreases in the CCAdj in recent years reflected the longer service lives that the Tax Reform Act of 1986 (TRA) mandated for calculating tax-based depreciation. As assets subject to the TRA replaced assets with shorter tax service lives in the stock of depreciable assets, the CCAdj decreased. Most of the assets in the stock of depreciable assets are now subject to the TRA, and the downtrend in the CCAdj appears to be reversing itself.

**Corporate property income**

Corporate property income consists of net interest payments as well as profits from current production. For domestic nonfinancial corporations, net interest payments decreased \$3.2 billion in 1991 after increasing \$6.5 billion in 1990.

Chart 4 and table 4 provide a perspective on the recent movements in both types of property income. (The chart and table reflect the results of the comprehensive NIPA revision re-

leased in December 1991.) From 1970 to 1991, both types trended up, but the upward trend in net interest—an average annual rate of increase of 10.7 percent—was stronger than that in profits—an average annual rate of increase of 6.3 percent. As a result, the share of net interest in property income rose from 23.0 percent in 1970 to 41.4 percent in 1991. It is also worth noting that profits was more sensitive to the business cycle than net interest was: Profits decreased markedly in the recession years of 1974, 1980, 1982, as well as in 1989–91; in contrast, net interest increased in each of these years except 1991.

Perspective can also be gained by examining property income in relation to the net reproducible assets and the domestic income of domestic nonfinancial corporations. Net reproducible assets consist of fixed capital stock and inventories, both measured at current replacement cost. Domestic income is property income plus compensation of employees.

The ratio of property income to the value of net reproducible assets is the rate of return on these assets—that is, the rate of return, or

**Table 5.—Selected Ratios, Domestic Nonfinancial Corporations, 1959–91**  
[Percent]

Year	Rate of return					Share of domestic income			Average product of capital
	Property income				Net interest	Property income			
	Total	Profits from current production				Total	Profits from current production	Net interest	
		Total	Profits tax liability	Profits after tax					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1959	11.7	10.9	5.3	5.6	0.8	21.1	19.6	1.4	0.555
1960	10.7	9.8	4.7	5.1	.9	19.3	17.8	1.5	.554
1961	10.7	9.8	4.7	5.1	.9	19.4	17.7	1.7	.552
1962	12.2	11.2	4.8	6.4	1.1	20.8	19.1	1.8	.587
1963	13.1	12.0	5.1	6.9	1.1	21.5	19.9	1.8	.609
1964	13.9	12.7	5.1	7.7	1.1	22.4	20.3	1.8	.621
1965	15.2	14.0	5.4	8.6	1.2	23.7	21.8	1.9	.641
1966	14.9	13.6	5.4	8.2	1.3	23.1	21.0	2.1	.645
1967	13.3	11.9	4.6	7.3	1.5	21.6	19.2	2.4	.616
1968	13.0	11.5	5.1	6.4	1.5	21.0	18.6	2.5	.619
1969	11.6	9.8	4.6	5.2	1.8	18.7	16.1	3.0	.620
1970	9.3	7.1	3.4	3.7	2.1	16.4	12.6	3.8	.567
1971	9.8	7.7	3.4	4.3	2.1	17.5	13.8	3.7	.560
1972	10.1	8.1	3.5	4.5	2.0	17.7	14.2	3.5	.571
1973	9.9	7.8	3.7	4.0	2.1	17.3	13.7	3.7	.572
1974	7.8	5.5	3.3	2.2	2.2	15.1	10.8	4.3	.517
1975	8.2	6.2	2.8	3.4	2.0	17.2	13.1	4.1	.477
1976	8.6	6.9	3.3	3.6	1.7	17.5	14.0	3.4	.491
1977	9.1	7.4	3.4	4.1	1.7	18.0	14.6	3.4	.506
1978	9.1	7.3	3.4	3.9	1.8	17.7	14.1	3.5	.514
1979	8.0	6.0	3.0	3.0	2.0	15.9	12.0	3.9	.503
1980	6.9	4.6	2.6	2.1	2.2	14.5	9.8	4.7	.476
1981	7.1	4.7	2.2	2.5	2.4	15.2	9.9	5.2	.467
1982	6.1	3.5	1.5	2.1	2.6	13.8	7.9	5.9	.442
1983	7.2	4.8	1.8	3.0	2.3	15.6	10.6	5.1	.462
1984	8.8	6.2	2.1	4.1	2.6	17.6	12.5	5.1	.500
1985	8.7	6.1	1.9	4.2	2.5	17.1	12.2	5.0	.509
1986	8.1	5.4	2.0	3.4	2.6	16.7	10.8	5.2	.485
1987	9.0	6.3	2.4	3.9	2.7	17.3	12.1	5.2	.520
1988	9.7	6.7	2.5	4.2	3.0	17.9	12.4	5.2	.542
1989	9.3	6.0	2.3	3.7	3.3	17.3	11.2	6.1	.538
1990	8.3	5.0	2.1	2.9	3.3	15.6	9.4	6.2	.532
1991	7.6	4.5	1.8	2.6	3.2	14.6	8.5	6.0	.521

Source: Table 4.

NOTE.—Columns 1–5 are percentages of the stock of net reproducible assets (structures, equip-

ment, and inventories) valued at current replacement cost. Columns 6–8 are percentages of domestic income. Column 9 is calculated as the ratio of column 1 to column 6.

yield, on "capital." A rate of return calculated in this way is an estimate of the profitability of new investment (assuming that the mix of new investment is the same as that of net re-

producible assets). The use of property income, rather than just profits, as the numerator of this ratio reflects the assumption that a corporation's decision to invest in plant, equipment, and inventories depends on its estimate of the income stream that will flow from that investment. Given that estimate, the decision on whether to finance the investment out of equity or debt—that is, whether the income stream will take the form of profits or of interest—is a separate question, one presumably determined by financial considerations.<sup>2</sup>

The ratio of property income to domestic income is property income's share of domestic income—that is, the portion of domestic income that is not used to compensate labor. Property income's share is related to the rate of return by a third ratio—the ratio of domestic income to the value of net reproducible assets, which measures the average annual product per dollar of capital. (It should be noted that this ratio is not appropriate for use in productivity analysis; for productivity analysis, the denominator should measure capital services, not capital stock.)


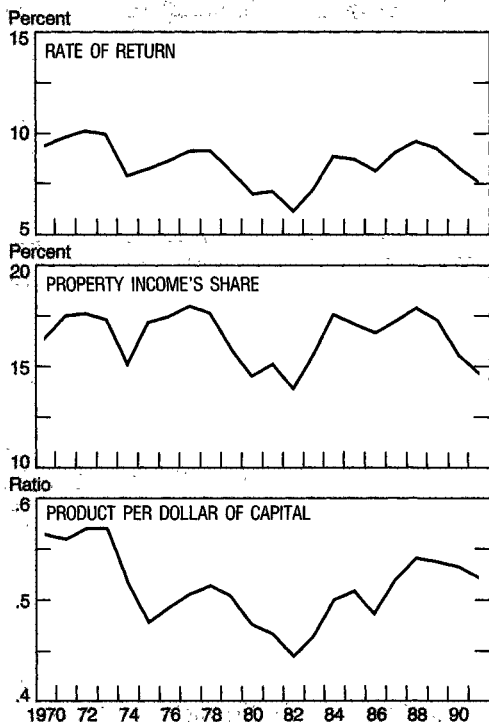
The three ratios are plotted for 1970–91 in chart 5 and are reported, along with related ratios, for 1959–91 in table 5. In 1991, property income's rate of return (column 1) and its share of domestic income (column 6) fell to the lowest levels since 1983 and 1982, respectively. Lower profits were primarily responsible for the decreases. 

CHART 5

### Selected Ratios, Domestic Nonfinancial Corporations, 1970-91



U.S. Department of Commerce, Bureau of Economic Analysis

2. Rates of return can be calculated in many other ways; several are discussed in some detail in the April 1989 "Business Situation."

# NATIONAL INCOME AND PRODUCT ACCOUNTS

## Selected NIPA Tables

New estimates in this issue: First quarter 1992, advance.

The selected set of national income and product accounts (NIPA) tables shown in this section presents quarterly estimates, which are updated monthly. (In most tables, the annual estimates are also shown.) Alternative quantity and price measures and a few series for tables 1.10 and 1.16 are not yet available; leaders are shown for these parts.

The tables shown are available on the day of the gross domestic product (GDP) news release on printouts and diskettes on a subscription basis or from the Commerce Department's Economic Bulletin Board. Most shown in this section are available, beginning with 1959, on diskette or magnetic tape. For order information, write to the National Income and Wealth Division (BE-54), Bureau of Economic Analysis, Washington, DC 20230, or call (202) 523-0669.

NOTE.—This section of the SURVEY is prepared by the National Income and Wealth Division and the Government Division.

**Table 1.1.—Gross Domestic Product**

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
				IV	I	II	III	
<b>Gross domestic product</b> .....	5,513.8	5,672.6	5,557.5	5,589.0	5,652.6	5,709.2	5,739.7	5,809.3
<b>Personal consumption expenditures</b> .....	3,742.6	3,889.1	3,812.0	3,827.7	3,868.5	3,916.4	3,943.7	4,023.5
Durable goods .....	465.9	445.2	451.9	440.7	440.0	452.9	447.3	468.3
Nondurable goods .....	1,217.7	1,251.9	1,246.4	1,246.3	1,252.9	1,257.4	1,251.1	1,270.8
Services .....	2,059.0	2,191.9	2,113.6	2,140.7	2,175.6	2,206.1	2,245.2	2,284.5
<b>Gross private domestic investment</b> .....	802.6	726.7	750.9	709.3	708.8	740.9	747.9	712.4
Fixed investment .....	802.7	745.2	787.4	748.4	745.8	744.5	742.0	745.0
Nonresidential .....	587.0	550.1	585.2	560.0	554.6	546.8	539.0	535.3
Structures .....	198.7	174.6	191.2	184.0	180.0	169.0	165.2	161.1
Producers' durable equipment .....	388.3	375.5	394.0	375.9	374.7	377.8	373.8	374.2
Residential .....	215.7	195.1	202.2	188.4	191.2	197.7	203.0	209.8
Change in business inventories .....	0	-18.5	-36.5	-39.2	-37.1	-3.6	6.0	-32.7
Nonfarm .....	-2.0	-15.0	-28.9	-35.0	-34.0	-3.2	12.1	-29.5
Farm .....	2.0	-3.5	-7.6	-4.2	-3.1	-4	-6.1	-3.2
<b>Net exports of goods and services</b> .....	-74.4	-30.7	-76.6	-36.8	-17.2	-37.3	-31.4	-22.7
Exports .....	550.4	591.3	572.6	565.9	589.8	597.0	612.5	613.6
Imports .....	624.8	622.0	649.2	602.7	607.0	634.3	643.8	636.3
<b>Government purchases</b> .....	1,042.9	1,087.5	1,071.2	1,088.8	1,092.5	1,089.1	1,079.5	1,096.1
Federal .....	424.9	445.1	434.5	451.5	452.1	444.9	432.0	441.8
National defense .....	313.4	323.5	320.6	332.3	328.4	322.3	311.0	315.0
Nondefense .....	111.5	121.6	113.9	119.2	123.7	122.6	121.0	126.8
State and local .....	618.0	642.4	636.7	637.3	640.4	644.2	647.5	654.3

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

**Table 1.2.—Gross Domestic Product in Constant Dollars**

[Billions of 1987 dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
				IV	I	II	III	
<b>Gross domestic product</b> .....	4,884.9	4,848.8	4,855.1	4,824.0	4,840.7	4,862.7	4,868.0	4,891.9
<b>Personal consumption expenditures</b> .....	3,262.6	3,259.0	3,251.8	3,241.1	3,252.4	3,271.2	3,271.1	3,313.8
Durable goods .....	438.9	412.5	424.0	410.8	408.9	418.3	412.2	429.9
Nondurable goods .....	1,050.8	1,043.0	1,044.7	1,043.9	1,046.2	1,046.1	1,035.8	1,047.6
Services .....	1,773.0	1,803.4	1,783.1	1,786.3	1,797.2	1,806.8	1,823.1	1,836.3
<b>Gross private domestic investment</b> .....	744.5	673.7	696.6	657.0	656.3	686.5	694.9	666.1
Fixed investment .....	744.2	687.6	727.8	689.8	686.8	686.5	687.2	692.2
Nonresidential .....	548.8	512.4	544.5	519.1	514.8	510.0	505.6	503.7
Structures .....	177.9	154.0	170.4	163.3	158.9	148.4	145.4	142.2
Producers' durable equipment .....	370.8	358.3	374.0	355.8	355.8	361.6	360.1	361.5
Residential .....	195.5	175.2	183.3	170.7	172.0	176.5	181.7	188.5
Change in business inventories .....	.2	-13.9	-31.2	-32.8	-30.4	.1	7.6	-26.1
Nonfarm .....	-1.5	-13.9	-25.7	-31.1	-30.8	-2.8	9.2	-26.0
Farm .....	1.7	0	-5.5	-1.7	.4	2.9	-1.6	-.1
<b>Net exports of goods and services</b> .....	-51.3	-20.9	-31.2	-18.6	-12.3	-31.1	-21.3	-17.8
Exports .....	505.7	537.8	522.5	512.5	535.7	545.2	558.0	559.4
Imports .....	557.0	558.7	553.7	531.1	548.0	576.3	579.3	577.1
<b>Government purchases</b> .....	929.1	937.1	937.9	944.5	944.3	936.1	923.3	929.8
Federal .....	380.9	384.9	382.6	391.7	392.7	384.5	370.7	372.8
National defense .....	281.3	281.4	282.0	289.4	287.0	280.4	268.7	267.6
Nondefense .....	99.6	103.5	100.6	102.3	105.7	104.1	102.0	105.2
State and local .....	548.2	552.2	555.3	552.7	551.7	551.6	552.7	557.1

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.3.—Gross Domestic Product by Major Type of Product

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Gross domestic product</b> .....	<b>5,513.8</b>	<b>5,672.6</b>	<b>5,557.5</b>	<b>5,589.0</b>	<b>5,652.6</b>	<b>5,709.2</b>	<b>5,739.7</b>	<b>5,809.3</b>
Final sales of domestic product .....	5,513.8	5,691.1	5,594.0	5,628.2	5,689.6	5,712.8	5,733.8	5,842.0
Change in business inventories .....	0	-18.5	-36.5	-39.2	-37.1	-3.6	6.0	-32.7
<b>Goods</b> <sup>1</sup> .....	<b>2,167.6</b>	<b>2,193.2</b>	<b>2,158.0</b>	<b>2,169.4</b>	<b>2,186.1</b>	<b>2,210.5</b>	<b>2,206.8</b>	<b>2,218.4</b>
Final sales .....	2,167.6	2,211.7	2,194.5	2,208.6	2,223.2	2,214.1	2,200.8	2,251.1
Change in business inventories .....	0	-18.5	-36.5	-39.2	-37.1	-3.6	6.0	-32.7
Durable goods .....	927.7	901.3	897.7	873.0	906.1	920.3	906.1	918.0
Final sales .....	934.6	926.5	927.2	916.4	939.5	929.4	920.5	941.7
Change in business inventories .....	-7.0	-25.1	-29.4	-43.5	-33.5	-9.2	-14.5	-23.7
Nondurable goods .....	1,239.9	1,291.9	1,260.2	1,296.4	1,280.1	1,290.3	1,300.7	1,300.4
Final sales .....	1,233.0	1,285.2	1,267.3	1,292.1	1,283.7	1,284.7	1,280.3	1,309.3
Change in business inventories .....	6.9	6.7	-7.1	4.3	-3.6	5.6	20.4	-9.0
<b>Services</b> <sup>1</sup> .....	<b>2,834.0</b>	<b>3,012.9</b>	<b>2,905.5</b>	<b>2,951.7</b>	<b>2,999.0</b>	<b>3,035.1</b>	<b>3,065.7</b>	<b>3,118.1</b>
<b>Structures</b> .....	<b>512.2</b>	<b>466.5</b>	<b>494.0</b>	<b>467.9</b>	<b>467.4</b>	<b>463.5</b>	<b>467.3</b>	<b>472.9</b>

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services.

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.5.—Relation of Gross Domestic Product, Gross Domestic Purchases, and Final Sales to Domestic Purchasers

[Billions of dollars]

<b>Gross domestic product</b> .....	<b>5,513.8</b>	<b>5,672.6</b>	<b>5,557.5</b>	<b>5,589.0</b>	<b>5,652.6</b>	<b>5,709.2</b>	<b>5,739.7</b>	<b>5,809.3</b>
Less: Exports of goods and services .....	550.4	591.3	572.6	565.9	589.8	597.0	612.5	613.6
Plus: Imports of goods and services .....	624.8	622.0	649.2	602.7	607.0	634.3	643.8	636.3
<b>Equals: Gross domestic purchases</b> <sup>1</sup> .....	<b>5,588.2</b>	<b>5,703.3</b>	<b>5,634.0</b>	<b>5,625.8</b>	<b>5,669.8</b>	<b>5,746.5</b>	<b>5,771.1</b>	<b>5,832.0</b>
Less: Change in business inventories .....	0	-18.5	-36.5	-39.2	-37.1	-3.6	6.0	-32.7
<b>Equals: Final sales to domestic purchasers</b> <sup>2</sup> .....	<b>5,588.2</b>	<b>5,721.8</b>	<b>5,670.6</b>	<b>5,665.0</b>	<b>5,706.8</b>	<b>5,750.1</b>	<b>5,765.1</b>	<b>5,864.7</b>

1. Purchases by U.S. residents of goods and services wherever produced.

2. Final sales to U.S. residents of goods and services wherever produced.

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.7.—Gross Domestic Product by Sector

[Billions of dollars]

<b>Gross domestic product</b> .....	<b>5,513.8</b>	<b>5,672.6</b>	<b>5,557.5</b>	<b>5,589.0</b>	<b>5,652.6</b>	<b>5,709.2</b>	<b>5,739.7</b>	<b>5,809.3</b>
<b>Business</b> .....	<b>4,699.4</b>	<b>4,803.3</b>	<b>4,722.3</b>	<b>4,734.7</b>	<b>4,786.8</b>	<b>4,835.0</b>	<b>4,856.8</b>	<b>4,909.8</b>
Nonfarm .....	4,605.6	4,703.9	4,640.4	4,640.1	4,687.2	4,730.1	4,758.0	4,809.3
Nonfarm less housing .....	4,155.8	4,230.9	4,180.6	4,175.7	4,217.6	4,256.0	4,274.3	4,323.5
Housing .....	449.8	472.9	459.8	464.3	469.7	474.1	483.7	485.9
Farm .....	85.7	80.4	79.8	76.6	83.1	82.9	79.2	80.9
Statistical discrepancy .....	8.1	19.0	2.1	18.0	16.5	22.0	19.6	19.6
<b>Households and institutions</b> .....	<b>225.1</b>	<b>246.4</b>	<b>233.3</b>	<b>237.5</b>	<b>243.7</b>	<b>249.9</b>	<b>254.3</b>	<b>259.3</b>
Private households .....	9.1	9.5	9.1	9.2	9.5	9.6	9.8	9.9
Nonprofit institutions .....	216.1	236.8	224.2	228.3	234.2	240.2	244.5	249.4
<b>General government</b> .....	<b>589.2</b>	<b>622.9</b>	<b>601.9</b>	<b>616.8</b>	<b>622.0</b>	<b>624.3</b>	<b>628.6</b>	<b>640.2</b>
Federal .....	179.4	188.8	181.0	189.4	188.7	188.4	188.6	195.5
State and local .....	409.8	434.1	420.9	427.4	433.2	435.9	440.0	444.7
<b>Addendum:</b>								
Gross domestic business product less housing .....	4,245.1							

Table 1.4.—Gross Domestic Product by Major Type of Product in Constant Dollars

[Billions of 1987 dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Gross domestic product</b> .....	<b>4,884.9</b>	<b>4,848.8</b>	<b>4,855.1</b>	<b>4,824.0</b>	<b>4,840.7</b>	<b>4,862.7</b>	<b>4,868.0</b>	<b>4,891.9</b>
Final sales of domestic product .....	4,884.7	4,862.7	4,886.3	4,856.8	4,871.2	4,862.6	4,860.3	4,918.0
Change in business inventories .....	.2	-13.9	-31.2	-32.8	-30.4	.1	7.6	-26.1
<b>Goods</b> <sup>1</sup> .....	<b>1,958.0</b>	<b>1,929.0</b>	<b>1,928.6</b>	<b>1,917.0</b>	<b>1,922.0</b>	<b>1,940.5</b>	<b>1,936.4</b>	<b>1,939.5</b>
Final sales .....	1,957.8	1,942.9	1,959.8	1,949.8	1,952.4	1,940.4	1,928.8	1,965.6
Change in business inventories .....	.2	-13.9	-31.2	-32.8	-30.4	.1	7.6	-26.1
Durable goods .....	886.2	850.1	857.5	827.0	852.8	865.5	855.1	866.6
Final sales .....	892.9	873.0	884.8	866.4	883.3	873.9	868.6	887.9
Change in business inventories .....	-6.7	-22.9	-27.3	-39.4	-30.5	-8.4	-13.4	-21.3
Nondurable goods .....	1,071.8	1,078.8	1,071.1	1,090.0	1,069.2	1,074.9	1,081.3	1,072.9
Final sales .....	1,065.0	1,069.8	1,075.0	1,083.4	1,069.1	1,066.5	1,060.2	1,077.7
Change in business inventories .....	6.9	9.0	-3.9	6.6	.1	8.4	21.1	-4.8
<b>Services</b> <sup>1</sup> .....	<b>2,464.8</b>	<b>2,504.6</b>	<b>2,481.8</b>	<b>2,487.6</b>	<b>2,502.7</b>	<b>2,511.8</b>	<b>2,516.2</b>	<b>2,529.6</b>
<b>Structures</b> .....	<b>462.0</b>	<b>415.3</b>	<b>444.6</b>	<b>419.4</b>	<b>416.1</b>	<b>410.4</b>	<b>415.3</b>	<b>422.8</b>

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services.

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.6.—Relation of Gross Domestic Product, Gross Domestic Purchases, and Final Sales to Domestic Purchasers in Constant Dollars

[Billions of 1987 dollars]

<b>Gross domestic product</b> .....	<b>4,884.9</b>	<b>4,848.8</b>	<b>4,855.1</b>	<b>4,824.0</b>	<b>4,840.7</b>	<b>4,862.7</b>	<b>4,868.0</b>	<b>4,891.9</b>
Less: Exports of goods and services .....	505.7	537.8	522.5	512.5	535.7	545.2	558.0	559.4
Plus: Imports of goods and services .....	557.0	558.7	553.7	531.1	548.0	576.3	579.3	577.1
<b>Equals: Gross domestic purchases</b> <sup>1</sup> .....	<b>4,936.2</b>	<b>4,869.7</b>	<b>4,886.3</b>	<b>4,842.6</b>	<b>4,853.1</b>	<b>4,893.8</b>	<b>4,889.3</b>	<b>4,909.7</b>
Less: Change in business inventories .....	.2	-13.9	-31.2	-32.8	-30.4	.1	7.6	-26.1
<b>Equals: Final sales to domestic purchasers</b> <sup>2</sup> .....	<b>4,936.0</b>	<b>4,883.6</b>	<b>4,917.5</b>	<b>4,875.4</b>	<b>4,883.5</b>	<b>4,893.7</b>	<b>4,881.7</b>	<b>4,935.8</b>

1. Purchases by U.S. residents of goods and services wherever produced.

2. Final sales to U.S. residents of goods and services wherever produced.

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.8.—Gross Domestic Product by Sector in Constant Dollars

[Billions of 1987 dollars]

<b>Gross domestic product</b> .....	<b>4,884.9</b>	<b>4,848.8</b>	<b>4,855.1</b>	<b>4,824.0</b>	<b>4,840.7</b>	<b>4,862.7</b>	<b>4,868.0</b>	<b>4,891.9</b>
<b>Business</b> .....	<b>4,180.4</b>	<b>4,134.7</b>	<b>4,145.1</b>	<b>4,111.4</b>	<b>4,126.4</b>	<b>4,148.6</b>	<b>4,152.4</b>	<b>4,175.0</b>
Nonfarm .....	4,101.9	4,045.1	4,071.2	4,024.6	4,040.1	4,055.6	4,060.2	4,082.1
Nonfarm less housing .....	3,711.3	3,650.4	3,678.3	3,631.2	3,645.9	3,660.4	3,664.0	3,684.9
Housing .....	390.6	394.8	392.9	393.4	394.2	395.2	396.3	397.2
Farm .....	71.4	73.2	72.0	71.1	72.1	74.1	75.4	76.2
Statistical discrepancy .....	7.2	16.4	1.9	15.7	14.3	18.9	16.8	16.7
<b>Households and institutions</b> .....	<b>195.7</b>	<b>202.1</b>	<b>197.9</b>	<b>198.8</b>	<b>201.1</b>	<b>203.1</b>	<b>205.4</b>	<b>207.5</b>
Private households .....	8.6	8.6	8.4	8.4	8.6	8.6	8.6	8.7
Nonprofit institutions .....	187.1	193.5	189.4	190.4	192.6	194.5	196.7	198.8
<b>General government</b> .....	<b>508.8</b>	<b>512.0</b>	<b>512.1</b>	<b>513.9</b>	<b>513.2</b>	<b>511.0</b>	<b>510.2</b>	<b>509.4</b>
Federal .....	155.7	155.1	156.2	157.0	155.5	154.4	153.5	152.2
State and local .....	353.1	356.9	356.0	356.9	357.7	356.6	356.6	357.2
<b>Addendum:</b>								
Gross domestic business product less housing .....	3,785.8							

**Table 1.9.—Relation of Gross Domestic Product, Gross National Product, Net National Product, National Income, and Personal Income**

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Gross domestic product</b> .....	5,513.8	5,672.6	5,557.5	5,589.0	5,652.6	5,709.2	5,739.7	5,809.3
Plus: Receipts of factor income from the rest of the world <sup>1</sup> .....	147.7	135.0	158.3	147.9	131.6	132.0	128.6	.....
Less: Payments of factor income to the rest of the world <sup>2</sup> .....	137.0	121.8	132.6	125.2	123.5	121.0	117.6	.....
<b>Equals: Gross national product</b> .....	5,524.5	5,685.8	5,583.2	5,611.7	5,660.6	5,720.1	5,750.7	.....
Less: Consumption of fixed capital .....	594.8	622.9	605.4	615.4	620.0	623.7	632.7	625.2
Capital consumption allowances .....	548.5	562.4	547.0	550.8	556.2	564.6	577.8	586.8
Less: Capital consumption adjustment .....	-46.2	-60.6	-58.4	-64.5	-63.8	-59.1	-54.9	-38.5
<b>Equals: Net national product</b> .....	4,929.8	5,062.8	4,977.8	4,996.3	5,040.6	5,096.4	5,118.0	.....
Less: Indirect business tax and nontax liability .....	439.2	471.0	451.2	461.6	464.5	475.6	482.3	488.9
Business transfer payments .....	27.7	31.2	28.5	29.6	30.7	31.8	32.8	33.7
Statistical discrepancy .....	8.1	19.0	2.1	18.0	16.5	22.0	19.6	.....
Plus: Subsidies less current surplus of government enterprises .....	4.8	.6	10.8	2.7	1.9	-7.1	4.9	4.4
<b>Equals: National income</b> .....	4,459.6	4,542.2	4,506.8	4,489.8	4,530.8	4,559.8	4,588.3	.....
Less: Corporate profits with inventory valuation and capital consumption adjustments .....	319.0	306.8	296.1	302.1	303.5	306.1	315.6	.....
Net interest .....	490.1	480.2	506.4	492.6	481.6	480.1	466.5	453.5
Contributions for social insurance .....	501.7	527.4	509.3	522.9	525.7	529.5	531.5	540.7
Wage accruals less disbursements .....	.1	-.1	.2	.2	-.4	0	0	0
Plus: Personal interest income .....	721.3	718.6	736.9	730.1	721.8	716.7	705.7	688.1
Personal dividend income .....	124.8	128.5	127.0	128.7	127.4	128.7	129.4	129.4
Government transfer payments to persons .....	661.7	733.2	682.2	712.5	725.7	736.8	757.6	798.5
Business transfer payments to persons .....	23.2	26.3	23.6	24.7	25.8	26.9	27.8	28.7
<b>Equals: Personal income</b> .....	4,679.8	4,834.4	4,764.7	4,768.0	4,821.1	4,853.3	4,895.3	4,956.1
<b>Addenda:</b>								
Net domestic product .....	4,919.0	5,049.7	4,952.1	4,973.6	5,032.6	5,085.5	5,107.1	5,184.1
Domestic income .....	4,448.9	4,529.0	4,481.1	4,467.1	4,522.8	4,548.9	4,577.3	.....
Gross national income .....	5,516.5	5,666.7	5,581.1	5,593.7	5,644.1	5,698.1	5,731.1	.....

1. Consists largely of receipts by U.S. residents of interest and dividends and reinvested earnings of foreign affiliates of U.S. corporations.  
 2. Consists largely of payments to foreign residents of interest and dividends and reinvested earnings of U.S. affiliates of foreign corporations.

**Table 1.10.—Relation of Gross Domestic Product, Gross National Product, Net National Product, and National Income in Constant Dollars**

[Billions of 1987 dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Gross domestic product</b> .....	4,884.9	4,848.8	4,855.1	4,824.0	4,840.7	4,862.7	4,868.0	4,891.9
Plus: Receipts of factor income from the rest of the world <sup>1</sup> .....	130.2	114.5	137.4	126.8	111.8	111.4	108.0	.....
Less: Payments of factor income to the rest of the world <sup>2</sup> .....	120.4	103.1	114.7	107.0	104.7	102.2	98.6	.....
<b>Equals: Gross national product</b> .....	4,894.6	4,860.2	4,877.7	4,843.7	4,847.8	4,872.0	4,877.3	.....
Less: Consumption of fixed capital .....	550.5	568.4	556.7	561.9	565.3	569.0	577.2	574.9
<b>Equals: Net national product</b> .....	4,344.2	4,291.8	4,321.0	4,281.8	4,282.5	4,303.0	4,300.1	.....
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises .....	.....	.....	.....	.....	.....	.....	.....	.....
Statistical discrepancy .....	7.2	16.4	1.9	15.7	14.3	18.9	16.8	.....
<b>Equals: National income</b> .....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Addenda:</b>								
Net domestic product .....	4,334.4	4,280.5	4,298.3	4,262.0	4,275.4	4,293.7	4,290.7	4,317.1
Domestic income .....	.....	.....	.....	.....	.....	.....	.....	.....
Gross national income .....	4,887.5	4,843.9	4,875.9	4,828.2	4,833.7	4,853.2	4,860.7	.....

1. Consists largely of receipts by U.S. residents of interest and dividends and reinvested earnings of foreign affiliates of U.S. corporations.  
 2. Consists largely of payments to foreign residents of interest and dividends and reinvested earnings of U.S. affiliates of foreign corporations.

**Table 1.11.—Command-Basis Gross National Product in Constant Dollars**

[Billions of 1987 dollars]

<b>Gross national product</b> .....	4,894.6	4,860.2	4,877.7	4,843.7	4,847.8	4,872.0	4,877.3	.....
Less: Exports of goods and services and receipts of factor income from the rest of the world .....	635.8	652.3	659.9	639.3	647.5	656.6	666.0	.....
Plus: Command-basis exports of goods and services and receipts of factor income <sup>1</sup> .....	620.8	646.2	625.0	625.8	644.5	654.7	659.8	.....
<b>Equals: Command-basis gross national product</b> .....	4,879.7	4,854.1	4,842.8	4,830.2	4,844.9	4,870.1	4,871.1	.....
<b>Addendum:</b>								
Terms of trade <sup>2</sup> .....	97.6	99.1	94.7	97.9	99.6	99.7	99.1	.....

1. Exports of goods and services and receipts of factor income deflated F011 by the implicit price deflator for imports of goods and services and payments of factor income.  
 2. Ratio of the implicit price deflator for exports of goods and services and receipts of factor income to the corresponding implicit price deflator for imports with the decimal point shifted two places to the right.  
 NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 1.14.—National Income by Type of Income

(Billions of dollars)

	1990	1991	Seasonally adjusted at annual rates					
			1990		1991			1992
			IV	I	II	III	IV	I
<b>National income</b> .....	4,459.6	4,542.2	4,506.8	4,489.8	4,530.8	4,559.8	4,588.3	.....
<b>Compensation of employees</b> .....	3,290.3	3,388.2	3,340.0	3,342.9	3,377.4	3,405.3	3,427.4	3,459.7
Wages and salaries .....	2,738.9	2,808.2	2,778.3	2,771.1	2,800.2	2,822.4	2,839.3	2,863.0
Government .....	514.0	540.5	525.4	536.0	540.1	541.8	544.2	552.6
Other .....	2,224.9	2,267.7	2,253.0	2,235.1	2,260.1	2,280.6	2,295.1	2,310.4
Supplements to wages and salaries .....	551.4	580.0	561.6	571.8	577.2	582.9	588.1	596.7
Employer contributions for social insurance ..	277.3	289.4	281.7	287.5	288.7	290.2	291.1	295.7
Other labor income .....	274.0	290.6	279.9	284.2	288.5	292.8	297.0	301.1
<b>Proprietors' income with IVA and CCAAdj</b> .....	373.2	379.7	373.9	364.2	380.0	382.5	392.0	403.1
Farm .....	42.5	35.1	41.2	32.8	39.6	32.0	36.1	37.0
Proprietors' income with IVA .....	50.3	42.7	49.0	40.5	47.1	39.6	43.6	44.3
CCAAdj .....	-7.9	-7.6	-7.8	-7.7	-7.6	-7.6	-7.5	-7.3
Nonfarm .....	330.7	344.5	332.7	331.4	340.4	350.5	355.9	366.2
Proprietors' income .....	308.9	325.4	313.0	312.5	321.6	331.5	335.8	345.6
IVA .....	-8	-3	-5	-3	-3	-5	-1	-4
CCAAdj .....	22.7	19.5	20.2	19.1	19.2	19.4	20.1	21.0
<b>Rental income of persons with CCAAdj</b> .....	-12.9	-12.7	-9.5	-11.9	-11.7	-14.2	-13.1	-10.7
Rental income of persons ..	40.6	42.5	44.0	41.9	42.6	40.9	44.7	43.4
CCAAdj .....	-53.4	-55.2	-53.5	-53.8	-54.2	-55.1	-57.7	-54.1
<b>Corporate profits with IVA and CCAAdj</b> .....	319.0	306.8	296.1	302.1	303.5	306.1	315.6	.....
Corporate profits with IVA ..	318.2	315.5	304.9	315.7	316.1	313.4	316.9	.....
Profits before tax .....	332.3	312.4	326.1	309.1	306.2	318.2	316.1	.....
Profits tax liability .....	135.3	124.5	127.1	119.4	123.5	128.6	126.4	.....
Profits after tax .....	197.0	187.9	199.0	189.7	182.7	189.6	189.7	.....
Dividends .....	133.7	137.8	136.2	137.8	136.7	138.1	138.5	138.6
Undistributed profits .....	63.3	50.2	62.8	51.9	46.1	51.5	51.2	.....
IVA .....	-14.2	3.1	-21.2	6.7	9.9	-4.8	7	-3.7
CCAAdj .....	.8	-8.7	-8.8	-13.6	-12.6	-7.3	-1.3	10.4
<b>Net interest</b> .....	490.1	480.2	506.4	492.6	481.6	480.1	466.5	.....
<b>Addenda:</b>								
Corporate profits after tax with IVA and CCAAdj .....	183.6	182.3	169.0	182.7	180.0	177.5	189.1	.....
Net cash flow with IVA and CAdj .....	415.4	428.2	405.4	425.1	426.5	423.9	437.2	.....
Undistributed profits with IVA and CCAAdj .....	49.9	44.6	32.8	45.0	43.4	39.4	50.6	.....
Consumption of fixed capital .....	365.5	383.6	372.7	380.1	383.2	384.6	386.6	384.7
Less: IVA .....	-14.2	3.1	-21.2	6.7	9.9	-4.8	7	-3.7
Equals: Net cash flow .....	429.5	425.1	426.7	418.4	416.6	428.7	436.5	.....

CCAAdj Capital consumption adjustment  
IVA Inventory valuation adjustment

Table 1.16.—Gross Domestic Product of Corporate Business in Current Dollars and Gross Domestic Product of Nonfinancial Corporate Business in Current and Constant Dollars

	1990	1991	Seasonally adjusted at annual rates					
			1990		1991			1992
			IV	I	II	III	IV	I
<b>Gross domestic product of corporate business</b> .....	3,280.9	3,345.1	3,291.6	3,295.7	3,333.7	3,364.1	3,386.8	.....
Consumption of fixed capital ..	365.5	383.6	372.7	380.1	383.2	384.6	386.6	384.7
Net domestic product .....	2,915.5	2,961.5	2,919.0	2,915.6	2,950.5	2,979.6	3,000.2	.....
Indirect business tax and nontax liability plus business transfer payments less subsidies ..	307.2	331.3	315.4	324.0	325.9	335.6	339.7	344.8
<b>Domestic income</b> .....	2,608.3	2,630.2	2,603.5	2,591.6	2,624.6	2,643.9	2,660.5	.....
Compensation of employees .....	2,186.8	2,231.1	2,215.9	2,202.4	2,223.9	2,242.8	2,255.3	2,268.4
Wages and salaries ..	1,833.3	1,868.0	1,857.2	1,844.0	1,862.3	1,877.7	1,887.9	1,897.8
Supplements to wages and salaries .....	353.5	363.1	358.7	358.4	361.5	365.1	367.4	370.7
Corporate profits with IVA and CCAAdj .....	258.8	240.7	223.3	227.5	241.7	243.1	250.6	.....
Profits before tax .....	272.1	246.3	253.3	234.5	244.5	255.2	251.1	.....
Profits tax liability ..	135.3	124.5	127.1	119.4	123.5	128.6	126.4	.....
Profits after tax .....	136.8	121.9	126.3	115.1	121.0	126.6	124.7	.....
Dividends .....	116.7	125.3	126.8	120.7	121.9	124.0	134.5	.....
Undistributed profits .....	20.1	-3.4	-6	-5.5	-9	2.6	-9.8	.....
IVA .....	-14.2	3.1	-21.2	6.7	9.9	-4.8	7	-3.7
CCAAdj .....	.8	-8.7	-8.8	-13.6	-12.6	-7.3	-1.3	10.4
Net interest .....	162.7	158.4	164.4	161.7	159.0	158.1	154.6	.....
<b>Gross domestic product of financial corporate business</b> ..	272.0	290.8	277.5	283.9	289.8	294.0	295.7	.....
<b>Gross domestic product of nonfinancial corporate business</b> ..	3,008.9	3,054.2	3,014.2	3,011.8	3,043.9	3,070.1	3,091.1	.....
Consumption of fixed capital ..	327.3	342.9	333.1	339.6	342.5	343.8	345.5	343.1
Net domestic product .....	2,681.6	2,711.4	2,681.1	2,672.2	2,701.4	2,726.3	2,745.6	.....
Indirect business tax and nontax liability plus business transfer payments less subsidies ..	285.5	308.1	293.2	301.3	303.0	312.2	315.8	320.5
<b>Domestic income</b> .....	2,396.1	2,403.3	2,387.9	2,370.9	2,398.5	2,414.1	2,429.8	.....
Compensation of employees .....	2,023.3	2,052.8	2,043.8	2,028.0	2,046.1	2,063.5	2,073.5	2,080.9
Wages and salaries ..	1,694.5	1,716.7	1,710.9	1,696.0	1,711.5	1,725.5	1,733.6	1,738.7
Supplements to wages and salaries .....	328.8	336.1	332.8	332.0	334.7	338.0	339.9	342.1
Corporate profits with IVA and CCAAdj .....	224.3	205.2	193.3	194.4	206.4	205.5	214.4	.....
Profits before tax .....	232.5	204.6	216.9	194.4	202.4	211.7	209.8	.....
Profits tax liability ..	96.1	84.1	89.0	79.9	83.6	87.2	85.7	.....
Profits after tax .....	136.4	120.5	127.9	114.5	118.9	124.5	124.1	.....
Dividends .....	112.2	118.6	119.9	114.1	115.3	117.3	127.8	.....
Undistributed profits .....	24.2	1.9	8.0	4	3.6	7.2	-3.7	.....
IVA .....	-14.2	3.1	-21.2	6.7	9.9	-4.8	7	-3.7
CCAAdj .....	5.9	-2.5	-2.4	-6.6	-5.9	-1.4	3.9	14.8
Net interest .....	148.5	145.3	150.9	148.4	145.9	145.1	141.9	.....
Billions of 1987 dollars								
<b>Gross domestic product of nonfinancial corporate business</b> ..	2,717.4	2,691.8	2,697.6	2,668.1	2,682.1	2,699.0	2,717.9	.....
Consumption of fixed capital ..	303.0	312.3	305.7	309.1	311.3	313.6	315.1	316.4
Net domestic product .....	2,414.4	2,379.5	2,391.8	2,359.0	2,370.7	2,385.4	2,402.9	.....
Indirect business tax and nontax liability plus business transfer payments less subsidies ..	.....	.....	.....	.....	.....	.....	.....	.....
<b>Domestic income</b> .....	.....	.....	.....	.....	.....	.....	.....	.....

CCAAdj Capital consumption adjustment  
IVA Inventory valuation adjustment

Table 2.1.—Personal Income and Its Disposition

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990		1991			1992
			IV	I	II	III	IV	I
<b>Personal income</b> .....	4,679.8	4,834.4	4,764.7	4,768.0	4,821.1	4,853.3	4,895.3	4,956.1
<b>Wage and salary disbursements</b> .....	2,738.9	2,808.3	2,778.2	2,770.9	2,800.6	2,822.4	2,839.3	2,863.0
Commodity-producing industries .....	745.4	738.7	745.2	733.4	735.2	742.3	744.1	738.1
Manufacturing .....	555.8	556.5	557.3	549.3	552.3	559.9	564.3	559.7
Distributive industries .....	634.6	641.2	639.0	635.1	642.0	644.0	643.9	648.3
Service industries .....	845.0	887.8	868.8	866.5	883.0	894.4	907.2	924.0
Government .....	514.0	540.6	525.2	535.8	540.5	541.8	544.2	552.6
<b>Other labor income</b> .....	274.0	290.6	279.9	284.2	288.5	292.8	297.0	301.1
<b>Proprietors' income with inventory valuation and capital consumption adjustments</b> .....	373.2	379.7	373.9	364.2	380.0	382.5	392.0	403.1
Farm .....	42.5	35.1	41.2	32.8	39.6	32.0	36.1	37.0
Nonfarm .....	330.7	344.5	332.7	331.4	340.4	350.5	355.9	366.2
<b>Rental income of persons with capital consumption adjustment</b> .....	-12.9	-12.7	-9.5	-11.9	-11.7	-14.2	-13.1	-10.7
<b>Personal dividend income</b> .....	124.8	128.5	127.0	128.7	127.4	128.7	129.4	129.4
<b>Personal interest income</b> .....	721.3	718.6	736.9	730.1	721.8	716.7	705.7	688.1
<b>Transfer payments to persons</b> .....	684.9	759.5	705.8	737.2	751.5	763.7	785.4	827.3
Old-age, survivors, disability, and health insurance benefits .....	352.0	380.0	358.4	373.1	377.2	381.7	388.1	403.5
Government unemployment insurance benefits .....	17.9	26.6	20.5	23.6	27.0	26.5	29.4	38.6
Veterans benefits .....	17.8	18.4	17.9	18.0	18.7	18.4	18.3	20.6
Government employees retirement benefits .....	93.1	99.7	94.6	100.3	98.9	99.3	100.3	104.6
Other transfer payments .....	203.9	234.8	214.4	222.2	229.7	237.8	249.4	260.0
Aid to families with dependent children .....	19.8	21.8	20.5	20.9	21.7	22.1	22.6	22.6
Other .....	184.2	212.9	193.9	201.2	208.0	215.7	226.8	237.4
<b>Less: Personal contributions for social insurance</b> .....	224.3	238.0	227.5	235.4	237.0	239.3	240.4	245.1
<b>Less: Personal tax and nontax payments</b> .....	621.0	616.1	627.2	617.1	613.6	615.1	618.4	617.0
<b>Equals: Disposable personal income</b> .....	4,058.8	4,218.4	4,137.5	4,151.0	4,207.5	4,238.2	4,276.8	4,339.1
<b>Less: Personal outlays</b> .....	3,853.1	3,999.1	3,922.5	3,938.4	3,978.7	4,025.7	4,053.5	4,133.6
Personal consumption expenditures .....	3,742.6	3,889.1	3,812.0	3,827.7	3,868.5	3,916.4	3,943.7	4,023.5
Interest paid by persons .....	107.5	106.8	107.6	107.5	107.1	106.3	106.3	106.5
Personal transfer payments to rest of the world (net) .....	2.9	3.2	2.9	3.1	3.1	2.9	3.5	3.5
<b>Equals: Personal saving</b> .....	205.8	219.3	215.0	212.6	228.8	212.5	223.4	205.6
<b>Addenda:</b>								
Disposable personal income: Total, billions of 1987 dollars .....	3,538.3	3,534.9	3,529.5	3,514.8	3,537.4	3,539.9	3,547.5	3,573.7
Per capita: Current dollars .....	16,236	16,695	16,479	16,492	16,678	16,752	16,855	17,058
1987 dollars .....	14,154	13,990	14,058	13,965	14,022	13,992	13,981	14,049
Population (mid-period, millions) .....	250.0	252.7	251.1	251.7	252.3	253.0	253.7	254.4
<b>Personal saving as percentage of disposable personal income</b> .....	5.1	5.2	5.2	5.1	5.4	5.0	5.2	4.7

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

Table 2.2.—Personal Consumption Expenditures by Major Type of Product

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990		1991			1992
			IV	I	II	III	IV	I
<b>Personal consumption expenditures</b> .....	3,742.6	3,889.1	3,812.0	3,827.7	3,868.5	3,916.4	3,943.7	4,023.5
<b>Durable goods</b> .....	465.9	445.2	451.9	440.7	440.0	452.9	447.3	468.3
Motor vehicles and parts .....	203.7	184.1	192.5	180.7	179.3	188.4	188.0	196.7
Furniture and household equipment .....	173.2	172.0	170.4	171.1	172.8	173.9	170.0	178.9
Other .....	89.0	89.2	89.1	88.9	87.8	90.7	89.4	92.6
<b>Nondurable goods</b> .....	1,217.7	1,251.9	1,246.4	1,246.3	1,252.9	1,257.4	1,251.1	1,270.8
Food .....	595.8	619.3	604.8	616.3	620.5	620.4	620.0	629.9
Clothing and shoes .....	208.7	211.0	206.8	208.2	212.8	214.6	208.4	217.0
Gasoline and oil .....	106.8	102.8	123.2	105.0	102.0	101.7	102.5	98.0
Fuel oil and coal .....	12.5	11.7	13.1	12.2	11.4	11.7	11.2	11.2
Other .....	293.9	307.2	298.6	304.5	306.2	309.0	308.9	314.7
<b>Services</b> .....	2,059.0	2,191.9	2,113.6	2,140.7	2,175.6	2,206.1	2,245.2	2,284.5
Housing .....	547.1	574.7	559.3	565.7	571.7	577.0	584.2	591.7
Household operation .....	212.7	225.4	216.5	218.6	225.4	226.5	230.9	225.6
Electricity and gas .....	97.2	103.0	99.6	99.8	103.7	102.4	106.1	99.5
Other household operation .....	115.6	122.3	116.9	118.8	121.6	124.1	124.8	126.1
Transportation .....	147.6	155.9	151.7	152.2	153.9	157.4	160.1	163.6
Medical care .....	523.1	576.9	543.4	555.9	570.0	583.5	598.1	614.3
Other .....	628.4	659.1	642.8	648.2	654.7	661.6	671.9	689.2

Table 2.3.—Personal Consumption Expenditures by Major Type of Product in Constant Dollars

[Billions of 1987 dollars]

	1990	1991	1992	1993	1994	1995	1996	1997
<b>Personal consumption expenditures</b> .....	3,262.6	3,259.0	3,251.8	3,241.1	3,252.4	3,271.2	3,271.1	3,313.8
<b>Durable goods</b> .....	438.9	412.5	424.0	410.8	408.9	418.3	412.2	429.9
Motor vehicles and parts .....	191.4	167.9	179.8	166.7	164.2	170.9	169.7	177.4
Furniture and household equipment .....	170.6	170.5	168.0	168.9	171.1	172.5	169.4	177.3
Other .....	76.9	74.2	76.2	75.1	73.6	74.9	73.1	75.3
<b>Nondurable goods</b> .....	1,050.8	1,043.0	1,044.7	1,043.9	1,046.2	1,046.1	1,035.8	1,047.6
Food .....	515.8	517.2	515.9	518.7	517.0	517.4	515.6	520.9
Clothing and shoes .....	187.4	182.9	184.1	181.7	186.1	184.7	179.0	184.7
Gasoline and oil .....	85.0	83.0	84.0	81.8	83.0	83.6	83.6	81.4
Fuel oil and coal .....	10.0	9.6	8.9	9.3	9.8	10.1	9.4	9.9
Other .....	252.6	250.3	251.7	252.5	250.3	250.3	248.2	250.6
<b>Services</b> .....	1,773.0	1,803.4	1,783.1	1,786.3	1,797.2	1,806.8	1,823.1	1,836.3
Housing .....	474.5	478.9	476.9	477.3	478.3	479.4	480.7	481.8
Household operation .....	202.1	206.8	203.7	201.7	207.1	208.0	210.4	203.9
Electricity and gas .....	92.2	94.9	93.5	91.7	95.6	95.2	96.9	90.9
Other household operation .....	109.9	112.0	110.2	110.0	111.5	112.9	113.5	113.0
Transportation .....	129.0	128.3	128.7	127.0	127.9	128.9	129.5	129.2
Medical care .....	424.3	439.6	429.6	432.9	436.9	441.7	447.0	453.4
Other .....	543.0	549.7	544.3	547.5	547.1	548.9	555.5	568.0

Table 3.2.—Federal Government Receipts and Expenditures

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Receipts</b> .....	<b>1,104.8</b>	<b>1,120.1</b>	<b>1,110.7</b>	<b>1,115.2</b>	<b>1,114.3</b>	<b>1,124.6</b>	<b>1,126.2</b>	.....
Personal tax and nontax receipts .....	482.2	470.4	485.5	473.9	468.8	469.9	469.0	466.8
Income taxes .....	469.7	458.4	474.0	462.1	457.2	457.0	457.2	455.0
Estate and gift taxes .....	11.6	11.0	10.7	10.9	10.6	11.8	10.7	10.7
Nontaxes .....	.9	1.0	.8	.9	1.0	1.0	1.1	1.1
Corporate profits tax accruals .....	112.1	102.9	105.7	99.0	102.0	106.2	104.4	.....
Federal Reserve banks .....	23.6	22.8	24.0	23.3	22.6	23.0	22.6	.....
Other .....	88.5	80.1	81.7	75.7	79.5	83.2	81.8	.....
Indirect business tax and nontax accruals .....	65.8	78.8	68.5	78.2	77.1	78.7	81.2	80.5
Excise taxes .....	36.2	46.3	39.0	46.6	46.4	46.0	46.1	46.5
Customs duties .....	17.5	17.2	17.4	16.6	16.1	17.1	18.9	18.0
Nontaxes .....	12.2	15.3	12.1	15.0	14.6	15.6	16.2	16.0
Contributions for social insurance .....	444.7	468.0	451.1	464.1	466.3	469.9	471.6	480.2
<b>Expenditures</b> .....	<b>1,270.1</b>	<b>1,321.7</b>	<b>1,304.4</b>	<b>1,261.6</b>	<b>1,321.0</b>	<b>1,334.8</b>	<b>1,369.3</b>	<b>1,421.8</b>
Purchases .....	424.9	445.1	434.5	451.5	452.1	444.9	432.0	441.8
National defense .....	313.4	323.5	320.6	332.3	328.4	322.3	311.0	315.0
Nondefense .....	111.5	121.6	113.9	119.2	123.7	122.6	121.0	126.8
Transfer payments (net) .....	510.8	513.5	523.8	457.5	505.1	534.9	556.6	598.5
To persons .....	498.2	546.6	511.1	535.3	543.0	547.4	560.9	594.3
To rest of the world (net) ..	12.6	-33.1	12.7	-77.8	-37.9	-12.5	-4.3	4.2
Grants-in-aid to State and local governments .....	132.2	152.8	137.3	143.7	151.0	153.3	163.3	168.5
Net interest paid .....	177.5	188.7	177.7	185.7	189.7	187.9	191.4	187.2
Interest paid .....	209.2	220.1	216.5	217.4	220.3	220.4	222.3	219.3
To persons and business ..	171.4	181.1	177.4	178.2	181.2	181.4	183.7	182.5
To rest of the world (net) ..	37.9	39.0	39.1	39.3	39.1	39.0	38.6	36.9
Less: Interest received by government .....	31.8	31.5	38.8	31.7	30.6	32.5	31.0	32.1
Subsidies less current surplus of government enterprises ..	24.7	21.5	31.2	23.4	22.7	13.9	26.0	25.8
Subsidies .....	27.5	27.8	33.0	28.6	29.7	20.6	32.4	31.9
Less: Current surplus of government enterprises ..	2.8	6.3	1.9	5.1	7.0	6.8	6.4	6.2
Less: Wage accruals less disbursements .....	.1	-1	.2	.2	-4	0	0	0
<b>Surplus or deficit (-), national income and product accounts</b> .....	<b>-165.3</b>	<b>-201.6</b>	<b>-193.6</b>	<b>-146.4</b>	<b>-206.7</b>	<b>-210.2</b>	<b>-243.1</b>	.....
Social insurance funds .....	60.6	43.4	58.2	47.9	44.6	44.4	36.7	15.6
Other .....	-225.9	-245.0	-251.8	-194.4	-251.3	-254.6	-279.9	.....

Table 3.3.—State and Local Government Receipts and Expenditures

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Receipts</b> .....	<b>724.5</b>	<b>771.7</b>	<b>741.3</b>	<b>749.4</b>	<b>764.1</b>	<b>777.4</b>	<b>795.8</b>	.....
Personal tax and nontax receipts .....	138.8	145.7	141.8	143.2	144.9	145.2	149.5	150.2
Income taxes .....	106.1	110.8	108.2	109.1	110.3	110.0	113.7	113.8
Nontaxes .....	15.5	16.7	15.9	16.2	16.5	16.8	17.2	17.5
Other .....	17.3	18.2	17.6	17.9	18.1	18.4	18.6	18.9
Corporate profits tax accruals .....	23.2	21.6	21.4	20.4	21.4	22.4	22.0	.....
Indirect business tax and nontax accruals .....	373.4	392.2	382.6	383.4	387.3	397.0	401.1	408.4
Sales taxes .....	181.4	188.8	185.0	183.9	186.3	192.4	192.7	196.6
Property taxes .....	152.1	162.1	156.1	158.6	161.0	163.3	165.7	168.1
Other .....	39.8	41.2	41.5	40.9	40.0	41.2	42.7	43.7
Contributions for social insurance .....	57.0	59.4	58.2	58.8	59.4	59.6	59.9	60.5
Federal grants-in-aid .....	132.2	152.8	137.3	143.7	151.0	153.3	163.3	168.5
<b>Expenditures</b> .....	<b>698.8</b>	<b>741.7</b>	<b>723.3</b>	<b>729.0</b>	<b>736.5</b>	<b>745.6</b>	<b>755.6</b>	<b>768.7</b>
Purchases .....	618.0	642.4	636.7	637.3	640.4	644.2	647.5	654.3
Compensation of employees .....	409.8	434.1	420.9	427.4	433.2	435.9	440.0	444.7
Other .....	208.2	208.2	215.7	209.9	207.2	208.3	207.5	209.6
Transfer payments to persons .....	163.5	186.5	171.0	177.2	182.7	189.4	196.7	204.2
Net interest paid .....	-53.7	-57.1	-54.8	-55.7	-56.7	-57.6	-58.4	-59.2
Interest paid .....	61.1	64.5	62.4	63.2	64.0	64.9	65.8	66.7
Less: Interest received by government .....	114.9	121.6	117.2	118.9	120.7	122.5	124.2	125.9
Less: Dividends received by government <sup>1</sup> .....	9.0	9.2	9.2	9.1	9.2	9.4	9.1	9.2
Subsidies less current surplus of government enterprises ..	-20.0	-20.9	-20.4	-20.8	-20.8	-21.0	-21.1	-21.3
Subsidies .....	.4	.4	.4	.4	.4	.4	.4	.4
Less: Current surplus of government enterprises ..	20.3	21.3	20.8	21.1	21.2	21.4	21.5	21.7
Less: Wage accruals less disbursements .....	0	0	0	0	0	0	0	0
<b>Surplus or deficit (-), national income and product accounts</b> .....	<b>25.7</b>	<b>30.0</b>	<b>18.0</b>	<b>20.4</b>	<b>27.6</b>	<b>31.8</b>	<b>40.3</b>	.....
Social insurance funds .....	63.8	65.3	64.9	65.0	65.6	65.6	65.1	65.2
Other .....	-38.1	-35.3	-46.9	-44.7	-38.0	-33.8	-24.8	.....







**Table 5.1.—Gross Saving and Investment**

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Gross saving</b> .....	<b>710.9</b>	<b>715.2</b>	<b>677.5</b>	<b>746.9</b>	<b>713.1</b>	<b>697.2</b>	<b>703.8</b>	.....
<b>Gross private saving</b> .....	<b>850.4</b>	<b>886.8</b>	<b>853.1</b>	<b>873.0</b>	<b>892.1</b>	<b>875.5</b>	<b>906.6</b>	.....
Personal saving .....	205.8	219.3	215.0	212.6	228.8	212.5	223.4	205.6
Undistributed corporate profits with inventory valuation and capital consumption adjustment .....	49.9	44.6	32.8	45.0	43.4	39.4	50.6	.....
Undistributed profits .....	63.3	50.2	62.8	51.9	46.1	51.5	51.2	.....
Inventory valuation adjustment .....	-14.2	3.1	-21.2	6.7	9.9	-4.8	.7	-3.7
Capital consumption adjustment .....	.8	-8.7	-8.8	-13.6	-12.6	-7.3	-1.3	10.4
Corporate consumption of fixed capital .....	365.5	383.6	372.7	380.1	383.2	384.6	386.6	384.7
Noncorporate consumption of fixed capital .....	229.3	239.3	232.7	235.3	236.8	239.1	246.1	240.6
Wage accruals less disbursements .....	0	0	0	0	0	0	0	0
<b>Government surplus or deficit (-), national income and product accounts</b> .....	<b>-139.5</b>	<b>-171.6</b>	<b>-175.6</b>	<b>-126.1</b>	<b>-179.1</b>	<b>-178.4</b>	<b>-202.9</b>	.....
Federal .....	-165.3	-201.6	-193.6	-146.4	-206.7	-210.2	-243.1	.....
State and local .....	25.7	30.0	18.0	20.4	27.6	31.8	40.3	.....
<b>Capital grants received by the United States (net)</b> .....	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Gross investment</b> .....	<b>719.0</b>	<b>734.3</b>	<b>679.6</b>	<b>764.9</b>	<b>729.6</b>	<b>719.1</b>	<b>723.4</b>	<b>688.0</b>
Gross private domestic investment .....	802.6	726.7	750.9	709.3	708.8	740.9	747.9	712.4
Net foreign investment .....	-83.6	7.6	-71.3	55.7	20.8	-21.8	-24.5	.....
<b>Statistical discrepancy</b> .....	<b>8.1</b>	<b>19.0</b>	<b>2.1</b>	<b>18.0</b>	<b>16.5</b>	<b>22.0</b>	<b>19.6</b>	.....

**Table 5.4.—Fixed Investment by Type**

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Fixed investment</b> .....	<b>802.7</b>	<b>745.2</b>	<b>787.4</b>	<b>748.4</b>	<b>745.8</b>	<b>744.5</b>	<b>742.0</b>	<b>745.0</b>
<b>Nonresidential</b> .....	<b>587.0</b>	<b>550.1</b>	<b>585.2</b>	<b>560.0</b>	<b>554.6</b>	<b>546.8</b>	<b>539.0</b>	<b>535.3</b>
<b>Structures</b> .....	<b>198.7</b>	<b>174.6</b>	<b>191.2</b>	<b>184.0</b>	<b>180.0</b>	<b>169.0</b>	<b>165.2</b>	<b>161.1</b>
Nonresidential buildings, including farm .....	148.2	124.5	140.7	134.2	128.6	119.0	116.4	111.2
Utilities .....	30.4	31.7	31.7	31.4	31.9	31.8	31.7	32.4
Mining exploration, shafts, and wells .....	11.3	9.5	10.4	10.3	10.0	9.2	8.5	7.5
Other structures .....	8.8	8.8	8.4	8.2	9.5	9.1	8.7	10.1
<b>Producers' durable equipment</b> .....	<b>388.3</b>	<b>375.5</b>	<b>394.0</b>	<b>375.9</b>	<b>374.7</b>	<b>377.8</b>	<b>373.8</b>	<b>374.2</b>
Information processing and related equipment .....	129.2	132.0	132.8	129.9	129.5	132.3	136.2	139.1
Computers and peripheral equipment <sup>1</sup> .....	37.3	37.7	38.7	36.6	36.7	37.6	39.9	41.3
Other .....	91.9	94.3	94.1	93.3	92.8	94.6	96.3	97.7
Industrial equipment .....	91.6	84.1	92.2	87.4	84.0	82.0	82.8	80.4
Transportation and related equipment .....	83.5	84.8	83.6	82.1	85.5	89.2	82.1	79.8
Other .....	84.0	74.7	85.4	76.5	75.6	74.3	72.6	74.9
<b>Residential</b> .....	<b>215.7</b>	<b>195.1</b>	<b>202.2</b>	<b>188.4</b>	<b>191.2</b>	<b>197.7</b>	<b>203.0</b>	<b>209.8</b>
<b>Structures</b> .....	<b>208.8</b>	<b>188.4</b>	<b>195.4</b>	<b>181.7</b>	<b>184.4</b>	<b>190.9</b>	<b>196.4</b>	<b>202.7</b>
Single family .....	108.7	95.8	98.2	87.5	88.9	100.9	105.8	111.5
Multifamily .....	19.3	15.3	18.5	17.5	15.5	14.1	13.9	12.9
Other structures .....	80.8	77.3	78.8	76.8	80.0	75.9	76.7	78.3
<b>Producers' durable equipment</b> .....	<b>6.9</b>	<b>6.7</b>	<b>6.8</b>	<b>6.7</b>	<b>6.8</b>	<b>6.8</b>	<b>6.6</b>	<b>7.1</b>

1. Includes new computers and peripheral equipment only.

**Table 5.5.—Fixed Investment by Type in Constant Dollars**

[Billions of 1987 dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Fixed investment</b> .....	<b>744.2</b>	<b>687.6</b>	<b>727.8</b>	<b>689.8</b>	<b>686.8</b>	<b>686.5</b>	<b>687.2</b>	<b>692.2</b>
<b>Nonresidential</b> .....	<b>548.8</b>	<b>512.4</b>	<b>544.5</b>	<b>519.1</b>	<b>514.8</b>	<b>510.0</b>	<b>505.6</b>	<b>503.7</b>
<b>Structures</b> .....	<b>177.9</b>	<b>154.0</b>	<b>170.4</b>	<b>163.3</b>	<b>158.9</b>	<b>148.4</b>	<b>145.4</b>	<b>142.2</b>
Nonresidential buildings, including farm .....	133.6	110.9	126.2	120.1	114.7	105.5	103.3	99.0
Utilities .....	26.8	27.4	27.9	27.4	27.6	27.4	27.3	27.8
Mining exploration, shafts, and wells .....	9.5	7.8	8.7	8.5	8.2	7.5	7.0	6.2
Other structures .....	8.0	7.9	7.6	7.3	8.4	8.1	7.8	9.1
<b>Producers' durable equipment</b> .....	<b>370.8</b>	<b>358.3</b>	<b>374.0</b>	<b>355.8</b>	<b>355.8</b>	<b>361.6</b>	<b>360.1</b>	<b>361.5</b>
Information processing and related equipment .....	137.1	146.4	141.8	140.4	141.9	148.4	155.1	159.8
Computers and peripheral equipment <sup>1</sup> .....	48.8	57.2	52.1	51.6	53.9	58.9	64.3	68.1
Other .....	88.3	89.2	89.7	88.7	88.0	89.5	90.8	91.7
Industrial equipment .....	80.9	71.4	79.8	74.7	71.6	69.5	69.6	67.4
Transportation and related equipment .....	76.9	74.8	76.1	73.0	75.7	78.5	71.9	69.2
Other .....	75.9	65.8	76.2	67.7	66.7	65.2	63.4	65.2
<b>Residential</b> .....	<b>195.5</b>	<b>175.2</b>	<b>183.3</b>	<b>170.7</b>	<b>172.0</b>	<b>176.5</b>	<b>181.7</b>	<b>188.5</b>
<b>Structures</b> .....	<b>188.9</b>	<b>168.7</b>	<b>176.9</b>	<b>164.3</b>	<b>165.4</b>	<b>170.0</b>	<b>175.3</b>	<b>181.7</b>
Single family .....	98.1	86.4	88.8	79.5	80.6	90.5	95.0	100.7
Multifamily .....	17.4	13.7	16.6	15.8	13.9	12.5	12.4	11.5
Other structures .....	73.4	68.7	71.4	69.0	70.9	66.9	67.9	69.5
<b>Producers' durable equipment</b> .....	<b>6.6</b>	<b>6.5</b>	<b>6.5</b>	<b>6.4</b>	<b>6.6</b>	<b>6.5</b>	<b>6.4</b>	<b>6.8</b>

1. Includes new computers and peripheral equipment only.



**Table 6.1C.—National Income Without Capital Consumption Adjustment by Industry**

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>National income without capital consumption adjustment</b> .....	<b>4,497.5</b>	<b>4,594.2</b>	<b>4,556.7</b>	<b>4,545.8</b>	<b>4,586.1</b>	<b>4,610.4</b>	<b>4,634.6</b>	.....
<b>Domestic industries</b> .....	<b>4,486.7</b>	<b>4,581.1</b>	<b>4,531.0</b>	<b>4,523.1</b>	<b>4,578.0</b>	<b>4,599.4</b>	<b>4,623.7</b>	.....
<b>Private industries</b> .....	<b>3,828.9</b>	<b>3,886.0</b>	<b>3,858.2</b>	<b>3,834.7</b>	<b>3,884.3</b>	<b>3,902.3</b>	<b>3,922.6</b>	.....
Agriculture, forestry, and fisheries .....	97.1	90.2	95.8	87.7	94.6	87.1	91.5	.....
Mining .....	38.1	38.2	41.9	40.4	38.0	38.1	36.5	.....
Construction .....	234.4	221.4	230.0	219.7	217.5	223.7	224.7	.....
Manufacturing .....	846.9	835.7	834.1	820.9	831.9	842.4	847.7	.....
Durable goods .....	484.3	466.1	471.3	457.7	465.9	469.2	471.7	.....
Nondurable goods .....	362.6	369.6	362.8	363.1	366.0	373.3	376.0	.....
Transportation and public utilities .....	328.7	333.2	326.7	332.2	336.9	333.1	330.7	.....
Transportation .....	139.4	140.4	140.1	139.8	141.9	139.9	139.9	.....
Communications .....	96.4	98.5	97.5	98.3	98.2	99.5	97.8	.....
Electric, gas, and sanitary services .....	92.9	94.4	89.0	94.0	96.8	93.7	93.0	.....
Wholesale trade .....	263.6	269.8	265.9	268.7	271.2	270.2	269.2	.....
Retail trade .....	392.1	397.8	391.5	392.5	398.3	398.5	402.0	.....
Finance, insurance, and real estate .....	679.8	697.2	694.3	695.5	700.0	698.7	694.6	.....
Services .....	948.3	1,002.3	978.2	977.0	995.9	1,010.6	1,025.8	.....
<b>Government</b> .....	<b>657.9</b>	<b>695.1</b>	<b>672.8</b>	<b>688.4</b>	<b>693.8</b>	<b>697.2</b>	<b>701.1</b>	.....
<b>Rest of the world</b> .....	<b>10.8</b>	<b>13.2</b>	<b>25.7</b>	<b>22.7</b>	<b>8.1</b>	<b>10.9</b>	<b>10.9</b>	.....

**Table 6.16C.—Corporate Profits by Industry**

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Corporate profits with inventory valuation and capital consumption adjustments</b> .....	<b>319.0</b>	<b>306.8</b>	<b>296.1</b>	<b>302.1</b>	<b>303.5</b>	<b>306.1</b>	<b>315.6</b>	.....
<b>Domestic industries</b> .....	<b>258.8</b>	<b>240.7</b>	<b>223.3</b>	<b>227.5</b>	<b>241.7</b>	<b>243.1</b>	<b>250.6</b>	.....
Financial .....	34.5	35.5	30.0	33.1	35.3	37.5	36.1	.....
Nonfinancial .....	224.3	205.2	193.3	194.4	206.4	205.5	214.4	.....
<b>Rest of the world</b> .....	<b>60.2</b>	<b>66.1</b>	<b>72.8</b>	<b>74.6</b>	<b>61.7</b>	<b>63.0</b>	<b>65.0</b>	.....
Receipts from the rest of the world .....	64.9	63.8	67.2	70.7	59.5	62.9	61.9	.....
Less: Payments to the rest of the world .....	4.7	-2.3	-5.6	-3.9	-2.2	-1.1	-3.1	.....
<b>Corporate profits with inventory valuation adjustment</b> .....	<b>318.2</b>	<b>315.5</b>	<b>304.9</b>	<b>315.7</b>	<b>316.1</b>	<b>313.4</b>	<b>316.9</b>	.....
<b>Domestic industries</b> .....	<b>258.0</b>	<b>249.5</b>	<b>232.1</b>	<b>241.2</b>	<b>254.4</b>	<b>250.4</b>	<b>251.9</b>	.....
Financial .....	39.6	41.7	36.4	40.1	42.1	43.5	41.3	.....
Federal Reserve banks .....	21.3	20.7	21.7	21.0	20.4	20.8	20.5	.....
Other .....	18.3	21.1	14.7	19.1	21.7	22.7	20.8	.....
Nonfinancial .....	218.3	207.7	195.7	201.0	212.3	206.9	210.5	.....
Manufacturing .....	95.7	81.7	78.9	75.0	82.9	84.1	84.7	.....
Durable goods .....	37.2	23.7	24.6	20.4	26.5	24.0	23.9	.....
Primary metal industries .....	4.6	2.1	4.3	2.9	1.7	1.1	2.8	.....
Fabricated metal products .....	5.6	4.6	3.7	3.0	4.9	4.9	5.4	.....
Industrial machinery and equipment .....	10.2	8.7	9.3	9.5	9.4	6.8	9.2	.....
Electronic and other electric equipment .....	7.9	6.6	5.7	7.2	7.0	5.3	6.9	.....
Motor vehicles and equipment .....	-7.1	-11.0	-12.3	-14.9	-11.4	-8.3	-9.5	.....
Other .....	16.0	12.8	14.0	12.7	14.9	14.2	9.2	.....
Nondurable goods .....	58.5	57.9	54.2	54.5	56.4	60.0	60.7	.....
Food and kindred products .....	12.6	15.4	13.9	15.0	15.8	17.1	13.8	.....
Chemicals and allied products .....	20.3	20.2	17.0	16.6	18.7	21.5	24.2	.....
Petroleum and coal products .....	6.5	3.9	8.0	8.7	2.9	.8	3.2	.....
Other .....	19.2	18.4	15.4	14.2	19.1	20.6	19.5	.....
Transportation and public utilities .....	44.5	45.8	37.5	45.7	49.2	44.3	44.0	.....
Wholesale and retail trade .....	39.8	45.8	36.2	45.3	46.9	44.6	46.4	.....
Other .....	38.4	34.4	41.1	35.1	33.3	33.9	35.5	.....
<b>Rest of the world</b> .....	<b>60.2</b>	<b>66.1</b>	<b>72.8</b>	<b>74.6</b>	<b>61.7</b>	<b>63.0</b>	<b>65.0</b>	.....



**Table 7.1.—Fixed-Weighted and Alternative Quantity and Price Indexes—Continued**

[Index numbers, 1987=100]

	1990	1991	Seasonally adjusted					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Government purchases:</b>								
Current dollars .....	118.3	123.4	121.5	123.5	123.9	123.6	122.5	124.3
Quantity indexes:								
Fixed 1987 weights .....	105.4	106.3	106.4	107.1	107.1	106.2	104.7	105.5
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	112.4	116.3	114.3	115.5	116.0	116.5	117.2	118.3
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	112.2	116.1	114.2	115.3	115.7	116.4	116.9	117.9
<b>Federal:</b>								
Current dollars .....	110.4	115.6	112.9	117.3	117.4	115.6	112.2	114.8
Quantity indexes:								
Fixed 1987 weights .....	99.0	100.0	99.4	101.8	102.0	99.9	96.3	96.8
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	112.1	116.4	113.8	115.9	116.0	116.4	117.4	119.4
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	111.6	115.7	113.6	115.3	115.1	115.7	116.5	118.5
<b>National defense:</b>								
Current dollars .....	107.3	110.8	109.8	113.8	112.4	110.4	106.5	107.9
Quantity indexes:								
Fixed 1987 weights .....	96.3	96.3	96.6	99.1	98.3	96.0	92.0	91.6
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	112.2	116.3	114.1	116.0	115.8	116.1	117.3	119.1
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	111.4	115.0	113.7	114.8	114.4	114.9	115.8	117.7
<b>Nondefense:</b>								
Current dollars .....	120.1	131.0	122.7	128.3	133.2	132.1	130.2	136.6
Quantity indexes:								
Fixed 1987 weights .....	107.2	111.5	108.4	110.2	113.8	112.1	109.8	113.2
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	111.5	116.8	113.0	115.8	116.6	117.1	117.6	120.0
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	112.0	117.5	113.2	116.5	117.1	117.9	118.6	120.6
<b>State and local:</b>								
Current dollars .....	124.4	129.4	128.2	128.3	129.0	129.7	130.4	131.8
Quantity indexes:								
Fixed 1987 weights .....	110.4	111.2	111.8	111.3	111.1	111.1	111.3	112.2
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	112.7	116.2	114.6	115.2	116.0	116.7	117.1	117.4
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	112.7	116.3	114.7	115.3	116.1	116.8	117.2	117.5

NOTE.—The quantity and price indexes in this table are calculated from weighted averages of the detailed output and prices used to prepare each aggregate and component. The fixed weighted measures use as weights the composition of output in 1987. For the alternative indexes, the chain-type indexes with annual weights use weights for the preceding and current years, and the indexes with benchmark-years weights use weights of 1959, 1963, 1967, 1972, 1977, 1982, and 1987 and the most recent year. Percent changes from preceding period for selected items in this table are shown in table 8.1.

**Table 7.2.—Fixed-Weighted and Alternative Quantity and Price Indexes for Domestic Product, Final Sales, and Purchases**

[Index numbers, 1987=100]

	1990	1991	Seasonally adjusted					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Gross domestic product:</b>								
Current dollars .....	121.5	124.9	122.4	123.1	124.5	125.8	126.4	128.0
Quantity indexes:								
Fixed 1987 weights .....	107.6	106.8	106.9	106.3	106.6	107.1	107.2	107.8
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	113.1	117.6	114.8	116.3	117.3	118.0	118.7	119.6
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	112.9	117.0	114.5	115.9	116.8	117.4	117.9	118.8
<b>Final sales of domestic product<sup>1</sup>:</b>								
Current dollars .....	122.2	126.1	123.9	124.7	126.1	126.6	127.0	129.4
Quantity indexes:								
Fixed 1987 weights .....	108.2	107.7	108.3	107.6	107.9	107.7	107.7	109.0
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	113.2	117.6	114.9	116.4	117.4	118.1	118.7	119.6
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	112.9	117.0	114.5	115.9	116.8	117.5	118.0	118.8
<b>Gross domestic purchases<sup>2</sup>:</b>								
Current dollars .....	119.3	121.8	120.3	120.1	121.1	122.7	123.2	124.5
Quantity indexes:								
Fixed 1987 weights .....	105.4	104.0	104.3	103.4	103.6	104.5	104.4	104.8
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	113.4	117.6	115.6	116.5	117.2	117.9	118.6	119.4
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	113.2	117.1	115.3	116.2	116.8	117.4	118.0	118.8
<b>Final sales to domestic purchasers<sup>3</sup>:</b>								
Current dollars .....	120.0	122.9	121.8	121.7	122.5	123.5	123.8	125.9
Quantity indexes:								
Fixed 1987 weights .....	106.0	104.9	105.6	104.7	104.9	105.1	104.8	106.0
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	113.5	117.6	115.7	116.6	117.3	118.0	118.7	119.5
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	113.2	117.2	115.3	116.2	116.9	117.5	118.1	118.8

1. Equals GDP less change in business inventories.  
 2. Equals GDP less net exports of goods and services or the sum of personal consumption expenditures, gross private domestic investment, and government purchases.  
 3. Equals gross domestic purchases less change in business inventories or the sum of personal consumption expenditures, gross private domestic fixed investment, and government purchases.  
 NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

**Table 7.3.—Fixed-Weighted and Alternative Quantity and Price Indexes for Gross National Product and Command-Basis Gross National Product**

[Index numbers, 1987=100]

	1990	1991	Seasonally adjusted					
			1990	1991				1992
				IV	I	II	III	
<b>Gross national product:</b>								
Current dollars .....	121.6	125.1	122.9	123.5	124.6	125.9	126.5	
Quantity indexes:								
Fixed 1987 weights .....	107.7	106.9	107.3	106.6	106.7	107.2	107.3	
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	113.1	117.6	114.8	116.3	117.3	118.0	118.7	
Chain-type annual weights .....								
Benchmark-years weights .....								
Implicit price deflator .....	112.9	117.0	114.5	115.9	116.8	117.4	117.9	
<b>Less: Exports of goods and services and receipts of factor income:</b>								
Current dollars .....	148.9	154.9	155.8	152.2	153.8	155.4	158.0	
Quantity index, fixed 1987 weights .....	135.5	139.1	140.7	136.3	138.0	140.0	142.0	
<b>Plus: Command-basis exports of goods and services and receipts of factor income:</b>								
Current dollars .....	151.2	162.5	157.3	155.5	162.1	164.0	168.3	
Quantity index, fixed 1987 weights .....	132.4	137.8	133.3	133.4	137.4	139.6	140.7	
<b>Equals: Command-basis gross national product:</b>								
Current dollars .....	121.6	125.1	122.9	123.5	124.6	125.9	126.5	
Quantity index, fixed 1987 weights .....	107.4	106.8	106.6	106.3	106.6	107.2	107.2	

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

**Table 7.4.—Price Indexes for Personal Consumption Expenditures by Major Type of Product, Fixed 1987 Weights**

[Index numbers, 1987=100]

<b>Personal consumption expenditures</b> .....	115.0	119.7	117.6	118.5	119.3	120.1	121.0	121.9
<b>Durable goods</b> .....	106.8	109.4	107.4	108.4	109.0	109.9	110.2	110.8
Motor vehicles and parts .....	106.4	109.8	107.1	108.6	109.4	110.4	110.8	111.0
Furniture and household equipment ..	102.4	102.9	102.5	102.7	102.8	103.2	102.9	103.7
Other .....	115.9	120.5	117.2	118.6	119.4	121.2	122.8	123.5
<b>Nondurable goods</b> .....	116.2	120.5	119.8	119.8	120.2	120.6	121.2	121.7
Food .....	115.7	120.1	117.4	119.1	120.4	120.2	120.6	121.2
Clothing and shoes .....	111.4	115.4	112.3	114.6	114.4	116.3	116.5	117.5
Gasoline and oil .....	125.6	123.8	146.5	128.3	122.9	121.6	122.6	120.4
Fuel oil and coal .....	125.5	121.0	149.1	132.7	116.6	115.6	119.2	112.3
Other .....	117.4	123.5	120.7	122.0	122.9	124.0	125.3	126.2
<b>Services</b> .....	116.3	121.8	118.7	120.1	121.4	122.4	123.5	124.8
Housing .....	115.3	120.1	117.3	118.7	119.6	120.5	121.6	122.9
Household operation .....	105.7	109.6	106.8	109.0	109.4	109.6	110.4	111.3
Electricity and gas .....	105.4	108.5	106.5	108.8	108.3	107.6	109.5	109.4
Other household operation .....	106.0	110.6	107.2	109.2	110.5	111.5	111.3	113.0
Transportation .....	114.5	122.0	118.1	120.4	120.8	122.6	124.2	127.6
Medical care .....	123.6	131.8	127.0	129.0	131.0	132.8	134.5	136.3
Other .....	115.9	120.3	118.3	118.8	120.1	120.9	121.4	122.0
<b>Addenda:</b>								
Price indexes for personal consumption expenditures:								
Chain-type annual weights .....								
Benchmark-years weights .....								

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

**Table 7.6.—Price Indexes for Fixed Investment by Type, Fixed 1987 Weights**

[Index numbers, 1987=100]

	1990	1991	Seasonally adjusted					
			1990	1991				1992
				IV	I	II	III	
<b>Fixed Investment</b> .....	108.7	110.5	109.4	110.0	110.3	110.9	110.9	
<b>Nonresidential</b> .....	107.9	110.2	108.9	109.8	110.0	110.3	110.5	
Structures .....	111.9	113.6	112.4	112.9	113.4	114.1	113.8	
Nonresidential buildings, including farm .....	111.0	112.3	111.5	111.7	112.1	112.8	112.6	
Utilities .....	113.3	115.6	113.7	114.6	115.3	116.2	116.5	
Mining exploration, shafts, and wells .....	118.7	122.1	119.6	121.4	122.3	123.0	121.6	
Other structures .....	109.9	112.2	110.5	111.5	112.8	112.7	112.0	
Producers' durable equipment .....	105.9	108.1	107.1	107.9	107.9	108.1	108.5	
Information processing and related equipment .....	96.0	94.2	95.9	95.2	94.6	93.7	93.4	
Computers and peripheral equipment <sup>1</sup> .....	78.0	68.8	75.9	73.0	70.3	66.7	65.2	
Other <sup>1</sup> .....	100.4	105.7	104.9	105.3	105.6	105.9	106.2	
Industrial equipment .....	113.5	117.9	115.9	117.2	117.5	118.2	118.8	
Transportation and related equipment .....	108.0	112.7	109.6	111.8	112.1	112.9	114.1	
Other .....	111.0	114.3	112.6	113.6	113.9	114.6	115.2	
<b>Residential</b> .....	110.4	111.4	110.4	110.4	111.1	112.1	111.8	
Structures .....	110.6	111.6	110.5	110.6	111.3	112.3	112.1	
Single family .....	110.9	110.8	110.5	110.0	110.3	111.5	111.4	
Multifamily .....	110.7	111.7	111.4	110.9	111.2	112.4	112.3	
Other structures .....	110.2	112.6	110.3	111.3	112.8	113.4	112.9	
Producers' durable equipment .....	104.1	104.2	104.9	104.3	103.6	105.5	103.6	
<b>Addenda:</b>								
Price indexes for fixed investment:								
Chain-type annual weights .....								
Benchmark-years weights .....								

1. Includes new computers and peripheral equipment only. Prior to 1982, all computers and peripheral equipment are included in other information processing and related equipment (line 11).

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

**Table 7.9.—Price Indexes for Exports and Imports of Goods and Services and for Receipts and Payments of Factor Income, Fixed 1987 Weights**

[Index numbers, 1987=100]

<b>Exports of goods and services</b> .....	109.8	111.6	110.6	111.8	111.7	111.0	111.9	111.9
Merchandise <sup>1</sup> .....	109.1	109.6	109.3	110.2	109.8	108.8	109.5	109.3
Durable .....	106.8	108.3	106.2	108.2	108.3	108.1	108.6	109.1
Nondurable .....	113.0	111.8	114.6	113.8	112.3	110.0	111.1	109.6
Services <sup>1</sup> .....	111.7	116.5	113.6	115.7	116.3	116.4	117.7	118.3
<b>Receipts of factor income</b> <sup>2</sup> .....	113.5	118.0	115.2	116.7	117.7	118.4	119.0	
<b>Imports of goods and services</b> .....	113.3	113.6	119.0	115.3	113.0	112.5	113.5	112.7
Merchandise <sup>1</sup> .....	111.8	111.5	118.0	113.4	110.8	110.4	111.5	110.6
Durable .....	110.3	111.8	111.6	112.2	111.5	111.5	112.2	113.2
Nondurable .....	114.5	111.0	129.0	115.4	109.5	108.6	110.4	106.2
Services <sup>1</sup> .....	119.9	123.2	123.9	124.0	123.2	121.6	122.2	122.0
<b>Payments of factor income</b> <sup>3</sup> .....	113.8	118.3	115.6	117.0	118.0	118.7	119.3	
<b>Addenda:</b>								
Price indexes for exports of goods and services:								
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes for imports of goods and services:								
Chain-type annual weights .....								
Benchmark-years weights .....								

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services.

2. Consists largely of receipts by U.S. residents of interest and dividends and reinvested earnings of foreign affiliates of U.S. corporations.

3. Consists largely of payments to foreign residents of interest and dividends and reinvested earnings of U.S. affiliates of foreign corporations.

NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.



**Table 7.10.—Price Indexes for Exports and Imports of Merchandise by End-Use Category, Fixed 1987 Weights**  
[Index numbers, 1987=100]

	1990	1991	Seasonally adjusted						
			1990	1991					1992
				IV	I	II	III	IV	
<b>Exports of merchandise</b> .....	<b>109.1</b>	<b>109.6</b>	<b>109.3</b>	<b>110.2</b>	<b>109.8</b>	<b>108.8</b>	<b>109.5</b>	<b>109.3</b>	
Foods, feeds, and beverages .....	115.2	114.9	110.0	112.5	115.4	113.5	118.1	117.4	
Industrial supplies and materials .....	113.2	110.9	116.6	115.1	111.3	108.9	108.2	106.7	
Durable goods .....	114.4	115.1	112.4	116.6	115.1	114.9	113.9	115.5	
Nondurable goods .....	112.6	108.9	118.6	114.5	109.5	106.2	105.6	102.8	
Capital goods, except automotive .....	104.0	105.1	104.4	104.8	105.2	104.8	105.5	105.8	
Civilian aircraft, engines, and parts ...	113.9	118.4	115.6	116.3	117.6	119.6	120.0	121.0	
Computers, peripherals, and parts ....	77.7	68.2	74.8	72.1	70.1	66.2	64.3	62.9	
Other .....	109.8	113.3	110.9	112.2	113.1	113.2	114.9	115.5	
Automotive vehicles, engines, and parts .....	107.3	111.1	103.6	110.0	110.8	111.3	112.2	112.6	
Consumer goods, except automotive .....	110.3	114.1	110.3	113.4	114.9	113.9	114.2	115.4	
Durable goods .....	109.4	111.6	110.1	111.5	112.4	111.2	111.4	113.7	
Nondurable goods .....	111.0	116.2	110.4	114.9	117.1	116.3	116.6	116.9	
Other .....	111.3	112.4	112.7	112.8	112.3	111.8	112.6	112.6	
Durable goods .....	111.3	112.4	112.7	112.8	112.3	111.8	112.6	112.6	
Nondurable goods .....	111.3	112.4	112.7	112.8	112.3	111.8	112.6	112.6	
<b>Imports of merchandise</b> .....	<b>111.8</b>	<b>111.5</b>	<b>118.0</b>	<b>113.4</b>	<b>110.8</b>	<b>110.4</b>	<b>111.5</b>	<b>110.6</b>	
Foods, feeds, and beverages .....	104.2	108.5	105.8	107.8	109.1	108.2	108.7	108.6	
Industrial supplies and materials, except petroleum and products .....	116.4	114.5	116.8	117.4	115.3	113.0	112.3	112.8	
Durable goods .....	117.7	114.5	117.7	116.2	115.3	113.7	112.7	115.0	
Nondurable goods .....	115.0	114.5	115.9	118.8	115.3	112.2	111.8	110.5	
Petroleum and products .....	120.9	106.0	168.8	118.0	100.5	100.2	105.3	89.9	
Capital goods, except automotive .....	104.9	106.4	107.0	107.6	105.9	106.0	105.9	106.8	
Civilian aircraft, engines, and parts ...	114.0	118.4	115.6	116.3	117.7	119.6	120.0	121.0	
Computers, peripherals, and parts ....	79.4	71.9	77.7	74.6	72.8	70.9	69.3	67.6	
Other .....	110.9	114.4	113.8	115.3	113.6	114.1	114.4	115.9	
Automotive vehicles, engines, and parts .....	110.5	113.6	111.5	112.7	113.1	113.5	115.2	115.7	
Consumer goods, except automotive .....	113.2	114.2	114.6	114.9	113.6	113.4	114.9	116.5	
Durable goods .....	112.0	113.9	113.9	114.6	113.2	113.1	114.7	115.7	
Nondurable goods .....	114.6	114.5	115.6	115.2	114.0	113.9	115.1	117.4	
Other .....	111.3	113.1	112.8	113.7	112.9	112.6	113.3	114.1	
Durable goods .....	111.3	113.1	112.8	113.7	112.9	112.6	113.3	114.1	
Nondurable goods .....	111.3	113.1	112.8	113.7	112.9	112.6	113.3	114.1	
<b>Addenda:</b>									
Exports of agricultural products <sup>1</sup> .....	113.9	113.0	109.3	111.7	114.2	111.5	114.6	113.9	
Exports of nonagricultural products ...	108.4	109.1	109.3	110.0	109.2	108.4	108.9	108.7	
Imports of nonpetroleum products .....	110.8	112.2	112.1	112.9	112.0	111.6	112.3	113.0	

1. Includes parts of line 2 and line 5.

**Table 7.11.—Price Indexes for Government Purchases by Type, Fixed 1987 Weights**  
[Index numbers, 1987=100]

	1990	1991	Seasonally adjusted							
			1990	1991	1991					1992
					IV	I	II	III	IV	
<b>Government purchases</b> .....	<b>112.4</b>	<b>116.3</b>	<b>114.3</b>	<b>115.5</b>	<b>116.0</b>	<b>116.5</b>	<b>117.2</b>	<b>118.3</b>		
<b>Federal</b> .....	<b>112.1</b>	<b>116.4</b>	<b>113.8</b>	<b>115.9</b>	<b>116.0</b>	<b>116.4</b>	<b>117.4</b>	<b>119.4</b>		
<b>National defense</b> .....	<b>112.2</b>	<b>116.3</b>	<b>114.1</b>	<b>116.0</b>	<b>115.8</b>	<b>116.1</b>	<b>117.3</b>	<b>119.1</b>		
Durable goods .....	109.4	111.1	110.6	111.1	110.9	110.3	112.2	112.3		
Nondurable goods .....	124.7	119.1	143.3	125.8	115.2	115.7	119.6	112.6		
Services .....	112.8	118.1	114.0	117.0	117.6	118.3	119.4	122.6		
Compensation of employees .....	115.2	121.6	115.8	120.4	121.2	121.8	122.8	128.3		
Military .....	114.9	120.9	115.2	119.8	120.4	121.2	122.2	127.7		
Civilian .....	115.9	122.9	116.9	121.7	122.6	123.2	124.0	129.6		
Other services .....	109.3	113.1	111.4	112.1	112.6	113.4	114.5	114.5		
Structures .....	115.7	129.1	116.3	134.2	128.2	130.1	124.0	123.8		
<b>Nondefense</b> .....	<b>111.5</b>	<b>116.8</b>	<b>113.0</b>	<b>115.8</b>	<b>116.6</b>	<b>117.1</b>	<b>117.6</b>	<b>120.0</b>		
Durable goods .....	104.1	106.5	104.6	107.6	106.6	106.1	105.7	103.2		
Nondurable goods .....	.....	.....	.....	.....	.....	.....	.....	.....		
Commodity Credit Corporation inventory change .....	.....	.....	.....	.....	.....	.....	.....	.....		
Other nondurables .....	109.2	110.5	109.1	108.3	109.9	111.7	112.0	110.5		
Services .....	113.2	119.1	114.6	118.0	118.7	119.3	120.4	123.9		
Compensation of employees .....	115.4	122.3	116.3	121.4	122.2	122.6	123.2	128.9		
Other services .....	110.2	114.7	112.3	113.4	113.9	114.8	116.6	117.0		
Structures .....	110.6	113.2	111.3	112.4	113.3	113.6	113.4	113.0		
<b>State and local</b> .....	<b>112.7</b>	<b>116.2</b>	<b>114.6</b>	<b>115.2</b>	<b>116.0</b>	<b>116.7</b>	<b>117.1</b>	<b>117.4</b>		
Durable goods .....	108.2	111.2	109.4	110.7	110.9	111.2	112.0	112.6		
Nondurable goods .....	115.6	115.3	121.5	116.7	114.4	115.2	115.1	113.9		
Services .....	113.3	117.8	115.1	116.4	117.4	118.3	118.9	119.8		
Compensation of employees .....	116.1	121.7	118.3	119.8	121.2	122.3	123.5	124.6		
Other services .....	82.1	74.5	80.0	78.1	76.3	74.2	69.6	67.5		
Structures .....	109.4	111.0	109.8	110.3	111.5	111.5	110.7	109.2		
<b>Addenda:</b>										
Price indexes for government purchases:										
Chain-type annual weights .....	.....	.....	.....	.....	.....	.....	.....	.....		
Benchmark-years weights .....	.....	.....	.....	.....	.....	.....	.....	.....		
Price indexes for Federal national defense purchases:										
Chain-type annual weights .....	.....	.....	.....	.....	.....	.....	.....	.....		
Benchmark-years weights .....	.....	.....	.....	.....	.....	.....	.....	.....		
Price indexes for Federal nondefense purchases:										
Chain-type annual weights .....	.....	.....	.....	.....	.....	.....	.....	.....		
Benchmark-years weights .....	.....	.....	.....	.....	.....	.....	.....	.....		
Price indexes for State and local purchases:										
Chain-type annual weights .....	.....	.....	.....	.....	.....	.....	.....	.....		
Benchmark-years weights .....	.....	.....	.....	.....	.....	.....	.....	.....		

**Table 7.12.—Price Indexes for National Defense Purchases, Fixed 1987 Weights**

[Index numbers, 1987=100]

	1990	1991	Seasonally adjusted					
			1990	1991				1992
				IV	I	II	III	
<b>National defense purchases</b> .....	<b>112.2</b>	<b>116.3</b>	<b>114.1</b>	<b>116.0</b>	<b>115.8</b>	<b>116.1</b>	<b>117.3</b>	<b>119.1</b>
<b>Durable goods</b> .....	<b>109.4</b>	<b>111.1</b>	<b>110.6</b>	<b>111.1</b>	<b>110.9</b>	<b>110.3</b>	<b>112.2</b>	<b>112.3</b>
Military equipment .....	109.4	111.3	110.7	111.3	111.0	110.5	112.5	112.6
Aircraft .....	112.4	111.6	113.1	111.2	111.6	109.9	113.8	114.0
Missiles .....	101.0	104.9	104.5	108.9	104.2	103.7	102.6	102.6
Ships .....	110.0	116.8	111.0	114.8	117.2	117.2	118.0	118.3
Vehicles .....	110.5	115.4	112.1	112.5	113.7	115.9	119.5	119.8
Electronic equipment .....	105.9	107.0	106.2	106.8	106.8	107.1	107.6	107.8
Other .....	113.0	115.8	113.8	114.7	115.6	116.3	116.6	116.8
Other durable goods .....	108.8	109.2	109.7	109.4	109.3	108.5	109.5	108.6
<b>Nondurable goods</b> .....	<b>124.7</b>	<b>119.1</b>	<b>143.3</b>	<b>125.8</b>	<b>115.2</b>	<b>115.7</b>	<b>119.6</b>	<b>112.6</b>
Petroleum products .....	146.3	133.2	198.5	152.6	120.1	125.0	135.3	114.2
Ammunition .....	112.1	109.5	111.5	109.3	112.4	108.0	108.2	110.0
Other nondurable goods .....	113.2	112.8	113.5	112.4	112.7	112.9	113.3	113.3
<b>Services</b> .....	<b>112.8</b>	<b>118.1</b>	<b>114.0</b>	<b>117.0</b>	<b>117.6</b>	<b>118.3</b>	<b>119.4</b>	<b>122.6</b>
Compensation of employees .....	115.2	121.6	115.8	120.4	121.2	121.8	122.8	128.3
Military .....	114.9	120.9	115.2	119.8	120.4	121.2	122.2	127.7
Civilian .....	115.9	122.9	116.9	121.7	122.6	123.2	124.0	129.6
Other services .....	109.3	113.1	111.4	112.1	112.6	113.4	114.5	114.5
Contractual research and development .....	106.2	108.9	107.2	107.8	108.9	109.8	109.0	109.0
Installation support <sup>1</sup> .....	110.7	113.1	112.8	112.5	112.2	113.6	114.3	113.9
Weapons support <sup>2</sup> .....	109.7	114.1	111.4	111.9	113.0	113.8	117.5	116.9
Personnel support <sup>3</sup> .....	117.9	126.0	123.1	124.0	125.6	125.3	129.1	129.7
Transportation of material .....	96.3	105.4	97.9	102.4	104.9	105.2	109.2	109.3
Travel of persons .....	107.4	109.1	109.8	112.6	108.3	108.1	107.3	108.4
Other .....								
<b>Structures</b> .....	<b>115.7</b>	<b>129.1</b>	<b>116.3</b>	<b>134.2</b>	<b>128.2</b>	<b>130.1</b>	<b>124.0</b>	<b>123.8</b>
Military facilities .....	107.3	110.5	108.1	108.2	109.9	111.8	112.3	113.3
Other .....	131.0	163.3	131.4	182.1	161.9	163.6	145.5	143.1
<b>Addenda:</b>								
Price indexes for national defense purchases:								
Chain-type annual weights .....								
Benchmark-years weights .....								

1. Includes utilities, communications, rental payments, maintenance and repair, and payments to contractors to operate installations.  
 2. Includes depot maintenance and contractual services for weapons systems, other than research and development.  
 3. Includes compensation of foreign personnel, consulting, training, and education.

**Table 7.13.—Implicit Price Deflators for the Relation of Gross Domestic Product, Gross National Product, Net National Product, and National Income**

[Index numbers, 1987=100]

<b>Gross domestic product</b> .....	<b>112.9</b>	<b>117.0</b>	<b>114.5</b>	<b>115.9</b>	<b>116.8</b>	<b>117.4</b>	<b>117.9</b>	<b>118.8</b>
Plus: Receipts of factor income from the rest of the world <sup>1</sup> .....	113.5	117.9	115.2	116.7	117.7	118.4	119.0	.....
Less: Payments of factor income to the rest of the world <sup>2</sup> .....	113.8	118.2	115.6	117.0	118.0	118.5	119.3	.....
<b>Equals: Gross national product</b> .....	<b>112.9</b>	<b>117.0</b>	<b>114.5</b>	<b>115.9</b>	<b>116.8</b>	<b>117.4</b>	<b>117.9</b>	.....
Less: Consumption of fixed capital .....	108.0	109.6	108.7	109.5	109.7	109.6	109.6	108.8
<b>Equals: Net national product</b> .....	<b>113.5</b>	<b>118.0</b>	<b>115.2</b>	<b>116.7</b>	<b>117.7</b>	<b>118.4</b>	<b>119.0</b>	.....
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises .....								
Statistical discrepancy .....	112.4	116.2	113.9	115.2	116.0	116.5	117.0	.....
<b>Equals: National income</b> .....								
<b>Addenda:</b>								
Net domestic product .....	113.5	118.0	115.2	116.7	117.7	118.4	119.0	120.1
Domestic income .....								

1. Consists largely of receipts by U.S. residents of interest and dividends and reinvested earnings of foreign affiliates of U.S. corporations.  
 2. Consists largely of payments to foreign residents of interest and dividends and reinvested earnings of U.S. affiliates of foreign corporations.

**Table 7.14.—Implicit Price Deflators for Gross Domestic Product by Sector**

[Index numbers, 1987=100]

	1990	1991	Seasonally adjusted					
			1990	1991				1992
				IV	I	II	III	
<b>Gross domestic product</b> .....	<b>112.9</b>	<b>117.0</b>	<b>114.5</b>	<b>115.9</b>	<b>116.8</b>	<b>117.4</b>	<b>117.9</b>	<b>118.8</b>
<b>Business</b> .....	<b>112.4</b>	<b>116.2</b>	<b>113.9</b>	<b>115.2</b>	<b>116.0</b>	<b>116.5</b>	<b>117.0</b>	<b>117.6</b>
Nonfarm .....	112.3	116.3	114.0	115.3	116.0	116.6	117.2	117.8
Nonfarm less housing .....	112.0	115.9	113.7	115.0	115.7	116.3	116.7	117.3
Housing .....	115.2	119.8	117.0	118.0	119.1	120.0	122.1	122.3
Farm .....	120.1	109.9	110.8	107.7	115.3	111.9	105.0	106.1
Statistical discrepancy .....	112.4	116.2	113.9	115.2	116.0	116.5	117.0	117.6
<b>Households and institutions</b> .....	<b>115.1</b>	<b>121.9</b>	<b>117.9</b>	<b>119.5</b>	<b>121.2</b>	<b>123.0</b>	<b>123.8</b>	<b>125.0</b>
Private households .....	106.0	111.4	108.6	109.8	110.9	111.8	113.2	113.8
Nonprofit institutions .....	115.5	122.4	118.3	119.9	121.6	123.5	124.3	125.5
<b>General government</b> .....	<b>115.8</b>	<b>121.7</b>	<b>117.5</b>	<b>120.0</b>	<b>121.2</b>	<b>122.2</b>	<b>123.2</b>	<b>125.7</b>
Federal .....	115.2	121.7	115.9	120.6	121.4	122.0	122.9	128.4
State and local .....	116.1	121.6	118.3	119.8	121.1	122.3	123.4	124.5
<b>Addendum:</b>								
Gross domestic business product less housing .....	112.1	.....	.....	.....	.....	.....	.....	.....

**Table 7.15.—Current-Dollar Cost and Profit Per Unit of Constant-Dollar Gross Domestic Product of Nonfinancial Corporate Business**

[Dollars]

<b>Current-dollar cost and profit per unit of constant-dollar gross domestic product<sup>1</sup></b> .....	<b>1.107</b>	<b>1.135</b>	<b>1.117</b>	<b>1.129</b>	<b>1.135</b>	<b>1.138</b>	<b>1.137</b>	.....
<b>Consumption of fixed capital</b> .....	<b>.120</b>	<b>.127</b>	<b>.123</b>	<b>.127</b>	<b>.128</b>	<b>.127</b>	<b>.127</b>	.....
<b>Net domestic product</b> .....	<b>.987</b>	<b>1.007</b>	<b>.994</b>	<b>1.002</b>	<b>1.007</b>	<b>1.010</b>	<b>1.010</b>	.....
Indirect business tax and nontax liability plus business transfer payments less subsidies .....	.105	.114	.109	.113	.113	.116	.116	.....
Domestic income .....	.882	.893	.885	.889	.894	.894	.894	.....
Compensation of employees .....	.745	.763	.758	.760	.763	.765	.763	.....
Corporate profits with inventory valuation and capital consumption adjustments .....	.083	.076	.072	.073	.077	.076	.079	.....
Profits tax liability .....	.035	.031	.033	.030	.031	.032	.032	.....
Profits after tax with inventory valuation and capital consumption adjustments .....	.047	.045	.039	.043	.046	.044	.047	.....
Net interest .....	.055	.054	.056	.056	.054	.054	.052	.....

1. Equals the deflator for gross domestic product of nonfinancial corporate business with the decimal point shifted two places to the left.



Table 8.1.—Percent Change From Preceding Period in Selected Series—Continued

[Percent]

	1990	1991	Seasonally adjusted at annual rates					
			1990		1991			1992
			IV	I	II	III	IV	I
<b>Nondefense:</b>								
Current dollars .....	9.9	9.1	1.1	20.0	16.0	-3.5	-5.1	20.6
Quantity indexes:								
Fixed 1987 weights .....	5.5	3.9	.8	6.9	14.0	-5.9	-7.8	13.2
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	4.3	4.8	4.0	10.4	2.8	1.7	1.7	8.4
Chain-type annual weights .....								
Benchmark-years weights .....								
<b>State and local:</b>								
Current dollars .....	8.4	3.9	10.2	.4	2.0	2.4	2.1	4.3
Quantity indexes:								
Fixed 1987 weights .....	4.4	.7	4.6	-1.9	-7	-1	.8	3.2
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	3.9	3.2	5.5	2.2	2.7	2.5	1.3	1.1
Chain-type annual weights .....								
Benchmark-years weights .....								
<b>Addenda:</b>								
<b>Final sales of domestic product:</b>								
Current dollars .....	5.9	3.2	2.7	2.5	4.4	1.6	1.5	7.8
Quantity indexes:								
Fixed 1987 weights .....	1.7	-5	-3	-2.4	1.2	-7	-2	4.8
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	4.3	3.9	3.0	5.4	3.4	2.6	2.1	3.1
Chain-type annual weights .....								
Benchmark-years weights .....								
<b>Gross domestic purchases:</b>								
Current dollars .....	4.9	2.1	-1.3	-6	3.2	5.5	1.7	4.3
Quantity indexes:								
Fixed 1987 weights .....	.5	-1.3	-6.5	-3.5	.9	3.4	-4	1.7
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	4.5	3.6	5.8	3.2	2.4	2.5	2.2	2.7
Chain-type annual weights .....								
Benchmark-years weights .....								
<b>Final sales to domestic purchasers:</b>								
Current dollars .....	5.6	2.4	2.3	-4	3.0	3.1	1.0	7.1
Quantity indexes:								
Fixed 1987 weights .....	1.1	-1.1	-3.0	-3.4	.7	.8	-1.0	4.5
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	4.5	3.6	5.6	3.2	2.4	2.5	2.2	2.7
Chain-type annual weights .....								
Benchmark-years weights .....								
<b>Gross national product:</b>								
Current dollars .....	5.3	2.9	.5	2.1	3.5	4.3	2.2	.....
Quantity indexes:								
Fixed 1987 weights .....	1.1	-7	-2.5	-2.8	.3	2.0	.4	.....
Chain-type annual weights .....								
Benchmark-years weights .....								
Price indexes:								
Fixed 1987 weights .....	4.3	3.9	3.2	5.4	3.3	2.6	2.1	.....
Chain-type annual weights .....								
Benchmark-years weights .....								
<b>Command-basis gross national product:</b>								
Quantity index, fixed 1987 weights ..	.8	-5	-4.7	-1.0	1.2	2.1	.1	.....
<b>Disposable personal income:</b>								
Current dollars .....	7.1	3.9	4.5	1.3	5.6	3.0	3.7	6.0
1987 dollars .....	1.9	-1	-2.0	-1.7	2.6	.3	.9	3.0

NOTE.—Except for disposable personal income, the quantity and price indexes in this table are calculated from weighted averages of the detailed output and prices used to prepare each aggregate and component. The fixed weighted measures use as weights the composition of output in 1987. For the alternative indexes, the chain-type indexes with annual weights use weights for the preceding and current years, and the indexes with benchmark-years weights use weights of 1959, 1963, 1967, 1972, 1977, 1982, and 1987 and the most recent year.

Table 8.2.—Selected Per Capita Product and Income Series in Current and Constant Dollars and Population of the United States

[Dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990		1991			1992
			IV	I	II	III	IV	I
<b>Current dollars:</b>								
Gross domestic product .....	22,056	22,450	22,135	22,206	22,406	22,567	22,620	22,837
Gross national product .....	22,099	22,502	22,237	22,296	22,438	22,610	22,664	.....
Personal income .....	18,720	19,133	18,977	18,944	19,110	19,184	19,292	19,483
Disposable personal income .....	16,236	16,695	16,479	16,492	16,678	16,752	16,855	17,058
Personal consumption expenditures ..	14,971	15,392	15,183	15,208	15,334	15,481	15,542	15,817
Durable goods .....	1,864	1,762	1,800	1,751	1,744	1,790	1,763	1,841
Nondurable goods .....	4,871	4,955	4,964	4,952	4,966	4,970	4,931	4,996
Services .....	8,236	8,675	8,418	8,505	8,624	8,720	8,849	8,980
<b>Constant (1987) dollars:</b>								
Gross domestic product .....	19,540	19,190	19,337	19,166	19,188	19,221	19,185	19,231
Gross national product .....	19,579	19,235	19,428	19,245	19,216	19,258	19,222	.....
Disposable personal income .....	14,154	13,990	14,058	13,965	14,022	13,992	13,981	14,049
Personal consumption expenditures ..	13,051	12,898	12,952	12,877	12,892	12,930	12,891	13,027
Durable goods .....	1,756	1,633	1,689	1,632	1,621	1,653	1,624	1,690
Nondurable goods .....	4,203	4,128	4,161	4,148	4,147	4,135	4,082	4,118
Services .....	7,092	7,137	7,102	7,097	7,124	7,142	7,185	7,219
<b>Population (mid-period, thousands) .....</b>	<b>249,992</b>	<b>252,676</b>	<b>251,074</b>	<b>251,689</b>	<b>252,281</b>	<b>252,990</b>	<b>253,742</b>	<b>254,381</b>

**Table 8.3.—Auto Output**

[Billions of dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Auto output</b> .....	<b>130.3</b>	<b>118.0</b>	<b>118.5</b>	<b>109.8</b>	<b>115.5</b>	<b>125.2</b>	<b>121.4</b>	<b>122.2</b>
<b>Final sales</b> .....	<b>135.0</b>	<b>121.1</b>	<b>126.2</b>	<b>117.6</b>	<b>121.5</b>	<b>122.6</b>	<b>122.7</b>	<b>129.5</b>
Personal consumption expenditures ..	132.4	115.5	125.4	115.0	112.1	117.7	117.1	123.4
New autos .....	96.6	79.5	89.7	78.4	78.2	79.0	82.4	88.5
Net purchases of used autos .....	35.8	36.0	35.7	36.7	33.9	38.7	34.7	34.8
Producers' durable equipment .....	35.5	37.3	36.1	35.3	37.4	39.9	36.5	35.7
New autos .....	55.0	59.3	55.8	55.5	59.6	64.7	57.2	54.7
Net purchases of used autos .....	-19.6	-22.0	-19.7	-20.2	-22.2	-24.7	-20.7	-18.9
Net exports .....	-35.4	-33.7	-38.3	-35.7	-29.9	-36.8	-32.6	-31.4
Exports .....	10.5	12.4	9.0	10.5	11.7	14.3	12.9	13.0
Imports .....	45.9	46.1	47.3	46.3	41.5	51.1	45.4	44.4
Government purchases .....	2.5	2.1	3.0	3.0	1.9	1.8	1.6	1.8
<b>Change in business inventories of new and used autos</b> .....	<b>-4.7</b>	<b>-3.1</b>	<b>-7.7</b>	<b>-7.8</b>	<b>-6.0</b>	<b>2.5</b>	<b>-1.3</b>	<b>-7.3</b>
New .....	-4.2	-3.8	-6.9	-7.0	-8.2	2.1	-2.0	-6.1
Used .....	-6	.7	-7	-7	2.2	.4	.7	-1.3
<b>Addenda:</b>								
Domestic output of new autos <sup>1</sup> .....	99.7	94.0	89.1	86.8	89.4	102.1	97.7	95.6
Sales of imported new autos <sup>2</sup> .....	59.3	54.0	58.5	50.4	55.8	57.8	51.9	54.8

1. Consists of final sales and change in business inventories of new autos assembled in the United States.  
 2. Consists of personal consumption expenditures, producers' durable equipment, and government purchases.

**Table 8.4.—Auto Output in Constant Dollars**

[Billions of 1987 dollars]

	1990	1991	Seasonally adjusted at annual rates					
			1990	1991				1992
			IV	I	II	III	IV	I
<b>Auto output</b> .....	<b>121.1</b>	<b>106.0</b>	<b>110.7</b>	<b>99.3</b>	<b>104.5</b>	<b>112.3</b>	<b>107.8</b>	<b>108.9</b>
<b>Final sales</b> .....	<b>126.5</b>	<b>109.4</b>	<b>119.3</b>	<b>108.0</b>	<b>109.7</b>	<b>109.8</b>	<b>110.2</b>	<b>116.3</b>
Personal consumption expenditures ..	124.9	105.8	118.0	106.8	103.1	107.3	106.2	112.0
New autos .....	91.5	72.6	84.7	72.2	71.5	71.9	74.8	80.1
Net purchases of used autos .....	33.4	33.2	33.4	34.5	31.6	35.3	31.4	32.0
Producers' durable equipment .....	33.1	32.9	33.4	31.4	32.9	35.3	32.2	31.1
New autos .....	52.1	54.1	52.6	51.2	54.5	58.9	51.9	49.4
Net purchases of used autos .....	-19.0	-21.2	-19.2	-19.8	-21.6	-23.6	-19.7	-18.4
Net exports .....	-33.8	-31.1	-34.9	-32.6	-27.9	-34.4	-29.6	-28.4
Exports .....	9.7	10.9	8.9	9.3	10.3	12.5	11.3	11.3
Imports .....	43.6	42.0	43.8	41.9	38.2	46.9	40.9	39.7
Government purchases .....	2.3	1.8	2.8	2.5	1.7	1.6	1.4	1.6
<b>Change in business inventories of new and used autos</b> .....	<b>-5.3</b>	<b>-3.5</b>	<b>-8.6</b>	<b>-8.7</b>	<b>-5.2</b>	<b>2.5</b>	<b>-2.4</b>	<b>-7.4</b>
New .....	-4.8	-4.2	-8.0	-8.1	-7.4	2.0	-3.2	-6.4
Used .....	-5	.7	-6	-6	2.2	.5	.8	-1.1
<b>Addenda:</b>								
Domestic output of new autos <sup>1</sup> .....	93.5	84.9	83.5	78.4	81.2	92.6	87.6	85.4
Sales of imported new autos <sup>2</sup> .....	56.2	49.3	55.2	46.4	51.0	52.6	47.1	49.6

1. Consists of final sales and change in business inventories of new autos assembled in the United States.  
 2. Consists of personal consumption expenditures, producers' durable equipment, and government purchases.

**Table 8.5.—Truck Output**

[Billions of dollars]

<b>Truck output</b> <sup>1</sup> .....	<b>72.8</b>	<b>67.7</b>	<b>67.1</b>	<b>56.8</b>	<b>68.2</b>	<b>72.3</b>	<b>73.6</b>	<b>76.9</b>
<b>Final sales</b> .....	<b>73.8</b>	<b>69.2</b>	<b>69.6</b>	<b>65.6</b>	<b>69.3</b>	<b>70.8</b>	<b>71.1</b>	<b>70.6</b>
Personal consumption expenditures ..	39.5	35.7	35.9	32.8	34.2	38.3	37.5	38.0
Producers' durable equipment .....	33.4	31.4	32.7	29.4	30.4	31.4	34.5	32.9
Net exports .....	-5.4	-3.8	-4.2	-3.5	-2.6	-4.2	-5.0	-6.1
Exports .....	4.2	5.3	4.5	4.5	5.8	5.3	5.3	4.6
Imports .....	9.6	9.1	8.7	8.0	8.4	9.5	10.3	10.7
Government purchases .....	6.3	5.9	5.3	6.8	7.3	5.4	4.1	5.8
<b>Change in business inventories</b> .....	<b>-1.0</b>	<b>-1.5</b>	<b>-2.5</b>	<b>-8.8</b>	<b>-1.1</b>	<b>1.4</b>	<b>2.5</b>	<b>6.3</b>

1. Includes new trucks only.

**Table 8.6.—Truck Output in Constant Dollars**

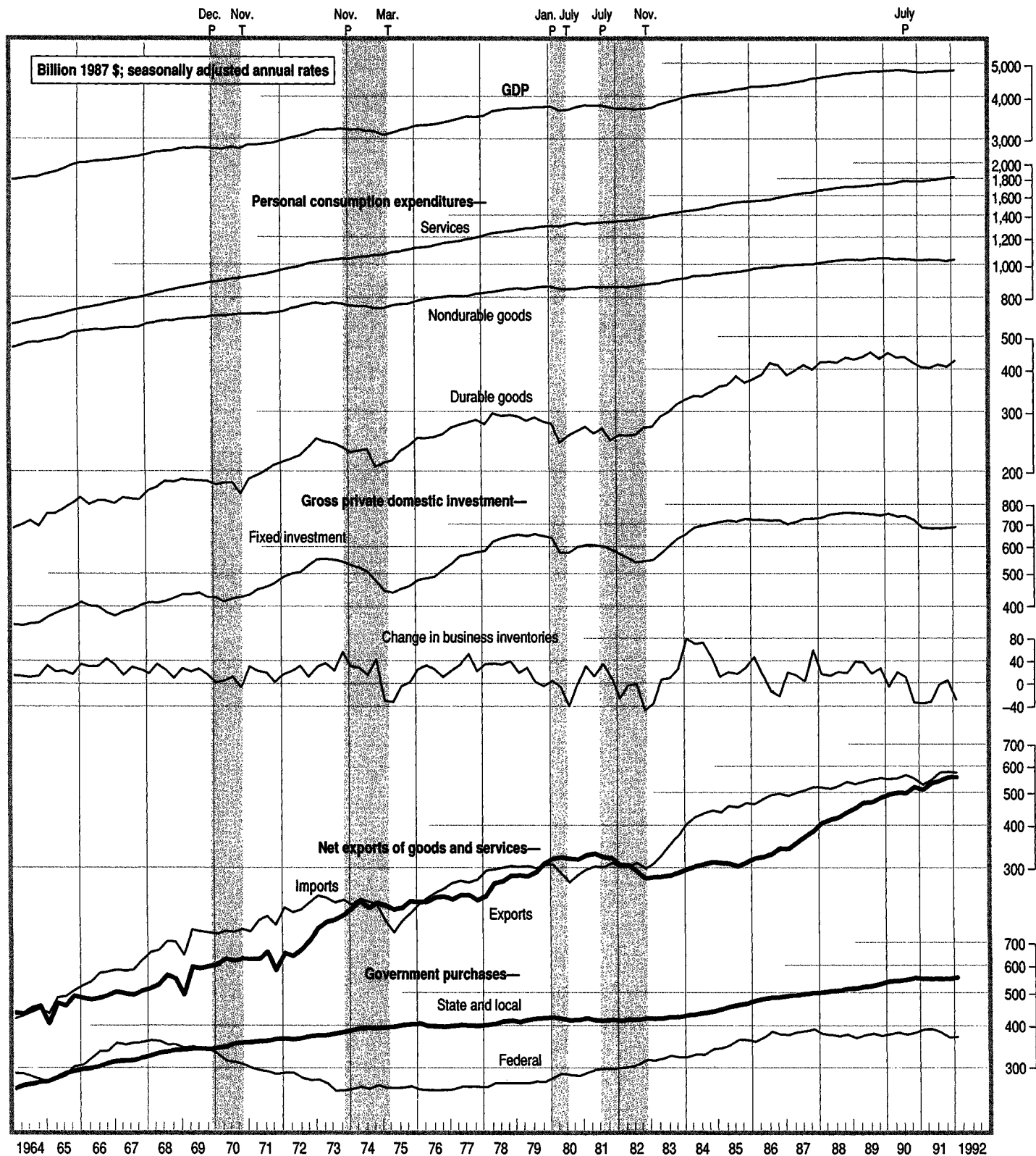
[Billions of 1987 dollars]

<b>Truck output</b> <sup>1</sup> .....	<b>67.4</b>	<b>60.4</b>	<b>61.2</b>	<b>51.2</b>	<b>61.7</b>	<b>64.1</b>	<b>64.6</b>	<b>66.9</b>
<b>Final sales</b> .....	<b>68.3</b>	<b>61.8</b>	<b>63.5</b>	<b>59.2</b>	<b>62.6</b>	<b>62.9</b>	<b>62.4</b>	<b>61.5</b>
Personal consumption expenditures ..	36.5	31.5	32.7	29.3	30.4	33.6	32.8	33.0
Producers' durable equipment .....	30.9	28.1	29.9	26.6	27.6	28.1	30.3	28.7
Net exports .....	-5.0	-3.2	-3.9	-2.9	-2.0	-3.7	-4.3	-5.3
Exports .....	3.9	4.7	4.1	4.1	5.3	4.7	4.7	4.0
Imports .....	8.9	7.9	8.0	7.0	7.3	8.4	9.0	9.3
Government purchases .....	5.8	5.3	4.8	6.1	6.6	4.8	3.6	5.0
<b>Change in business inventories</b> .....	<b>-1.0</b>	<b>-1.3</b>	<b>-2.3</b>	<b>-7.9</b>	<b>-1.0</b>	<b>1.3</b>	<b>2.2</b>	<b>5.4</b>

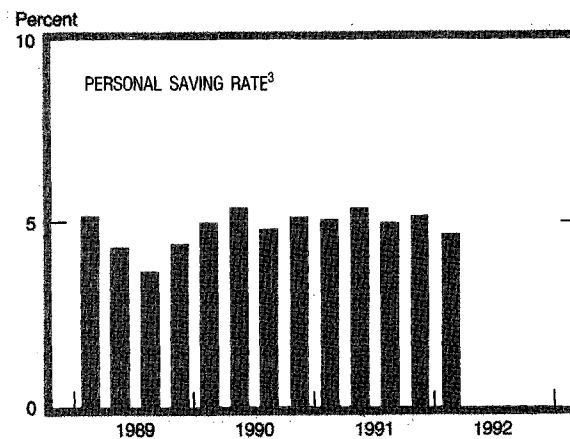
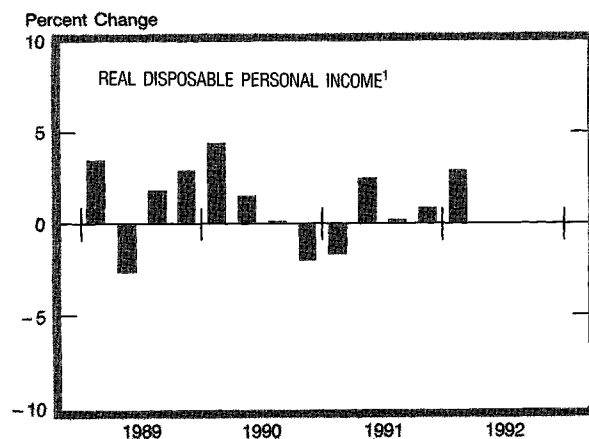
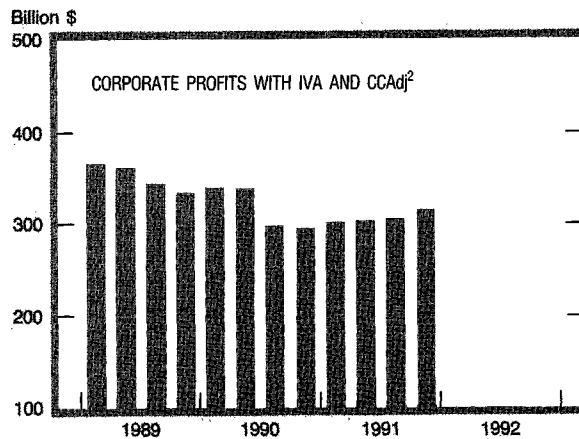
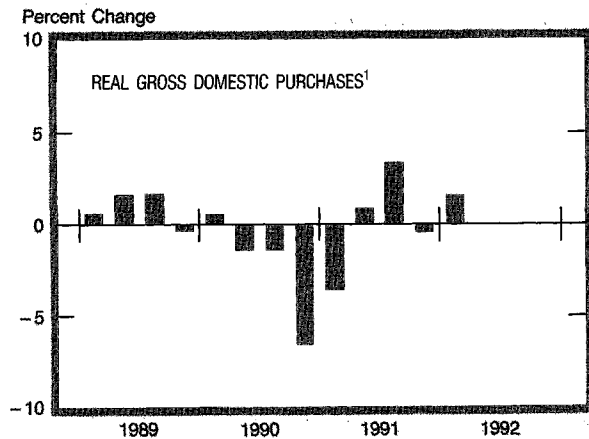
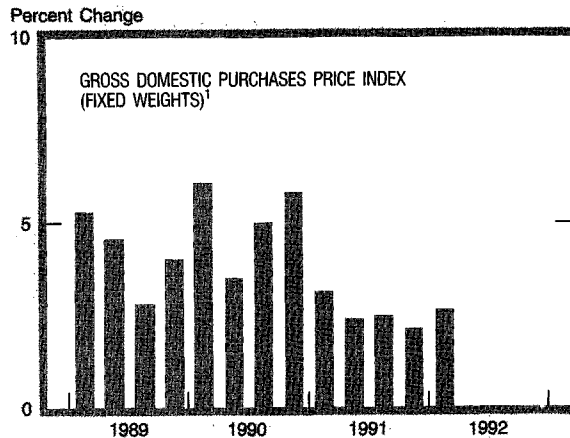
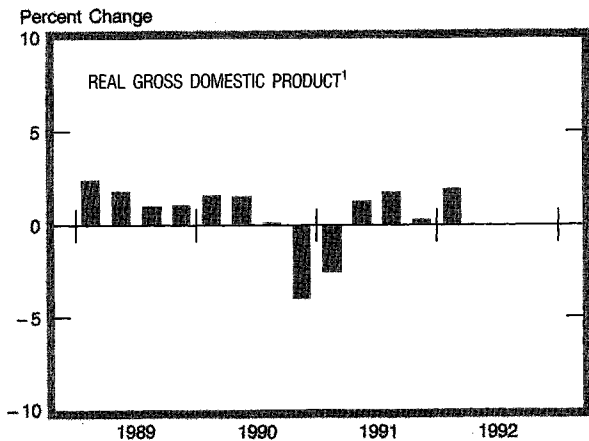
1. Includes new trucks only.

NIPA Charts

**REAL GDP AND ITS COMPONENTS: TRENDS AND CYCLES**



SELECTED SERIES: RECENT QUARTERS



1. Percent change at annual rate from preceding quarter; based on seasonally adjusted estimates.  
 2. Seasonally adjusted annual rate; IVA is inventory valuation adjustment, and CCAj is capital consumption adjustment.  
 3. Personal saving as percentage of disposable personal income; based on seasonally adjusted estimates.  
 U.S. Department of Commerce, Bureau of Economic Analysis

## Errata

### National Income and Product Accounts

"National Income and Product Accounts Tables, 1987-90," which appeared in the January 1992 SURVEY OF CURRENT BUSINESS, contained several errors in addition to those identified in the February 1992 SURVEY. The "Summary National Income and Product Series" that appeared in the February 1992 SURVEY also contained several errors. The corrected estimates are provided below.

*Corrections to tables in the January SURVEY:*

**Table 2.9.—Personal Income and Its Disposition**

Year and month	Billions of dollars			Personal saving as a percentage of disposable income <sup>1</sup>	Year and month	Billions of dollars			Personal saving as a percentage of disposable income <sup>1</sup>
	Personal outlays		Personal saving			Personal outlays		Personal saving	
	Total	Personal transfer payments to foreigners (net)				Total	Personal transfer payments to foreigners (net)		
1987 .....	3,147.5	3.0	142.0	4.3	<b>1989</b>				
1988 .....	3,392.5	2.7	155.7	4.4	January .....	3,531.6	2.6	160.9	4.6
1989 .....	3,622.4	2.9	166.1	4.4	February .....	3,538.7	2.6	198.6	5.2
1990 .....	3,853.1	2.9	205.8	5.1	March .....	3,539.2	2.6	219.6	5.1
<b>1987</b>					April .....	3,581.7	3.0	151.3	4.7
January .....	3,010.4	2.8	203.7	5.2	May .....	3,593.7	3.0	161.6	4.3
February .....	3,075.7	2.8	176.2	5.7	June .....	3,607.1	3.0	167.2	4.3
March .....	3,086.0	2.8	173.5	4.0	July .....	3,632.9	2.9	158.5	4.0
April .....	3,111.4	3.1	33.0	3.6	August .....	3,667.2	2.9	131.5	3.7
May .....	3,120.0	3.1	140.8	3.1	September .....	3,672.9	2.9	134.2	3.7
June .....	3,145.2	3.1	121.6	3.9	October .....	3,675.3	3.1	163.1	4.2
July .....	3,165.7	3.1	118.4	3.5	November .....	3,695.7	3.1	180.9	4.4
August .....	3,201.0	3.1	102.4	3.5	December .....	3,732.9	3.1	166.4	4.4
September .....	3,194.7	3.1	124.8	4.1	<b>1990</b>				
October .....	3,204.0	3.1	178.5	4.6	January .....	3,767.6	3.0	171.9	4.5
November .....	3,213.5	3.1	156.8	5.0	February .....	3,774.9	3.0	199.2	4.9
December .....	3,242.7	3.1	174.1	4.7	March .....	3,789.8	3.0	218.7	5.3
<b>1988</b>					April .....	3,796.4	2.6	218.0	5.4
January .....	3,278.1	2.9	150.4	4.8	May .....	3,805.4	2.6	217.8	5.4
February .....	3,285.2	2.9	172.8	4.7	June .....	3,846.7	2.6	211.8	5.2
March .....	3,321.1	2.9	162.9	4.6	July .....	3,871.6	3.3	205.1	5.0
April .....	3,324.0	2.4	148.5	4.5	August .....	3,893.3	3.3	192.2	4.8
May .....	3,355.7	2.4	155.0	4.3	September .....	3,923.6	3.3	189.6	4.7
June .....	3,387.5	2.4	152.0	4.3	October .....	3,917.8	2.9	196.4	4.9
July .....	3,406.0	2.6	152.5	4.2	November .....	3,922.9	2.9	215.4	5.2
August .....	3,427.8	2.6	146.9	4.3	December .....	3,926.8	2.9	233.1	5.5
September .....	3,434.7	2.6	157.9	4.4					
October .....	3,478.4	2.7	173.8	4.4					
November .....	3,491.5	2.7	145.5	4.3					
December .....	3,520.3	2.7	149.9	4.1					

1. Monthly estimates equal the 3-month moving average of personal saving as a percentage of the 3-month moving average of disposable personal income.

**Table 8.18.—Imputations in the National Income and Product Accounts**

(Billions of dollars)

	1987	1988	1989	1990
Line 69, Personal taxes, outlays, and saving .....	3,802.0	4,075.9	4,380.2	4,679.8
Line 71, Excluding imputations (69-70) .....	3,591.3	3,844.5	4,143.6	4,422.8
Line 78, Personal outlays .....	3,147.5	3,392.5	3,622.4	3,853.1
Line 80, Excluding imputations (78-79) .....	2,996.1	3,221.9	3,430.9	3,626.2
Line 81, Personal saving .....	142.0	155.7	166.1	205.8
Line 83, Excluding imputations (81-82) .....	25.9	34.9	53.6	103.4
Line 84, Gross investment, or gross saving and statistical discrepancy .....	594.2	675.6	740.7	719.0
Line 86, Excluding imputations (84-85) .....	384.4	454.6	516.5	502.8

**Table 9.5.—Foreign Transactions in the National Income and Product Accounts, Quarterly Totals Not Seasonally Adjusted**

(Billions of dollars)

	1987				1988				1989				1990			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Line 12, Transfer payments (net) .....	3.7	3.6	3.8	5.5	4.2	3.6	3.9	6.1	4.4	3.6	4.4	5.8	4.7	5.1	4.9	5.3
Line 13, From persons (net) .....	.8	.7	.8	.7	.9	.5	.7	.6	.8	.6	.8	.7	1.0	.5	.8	.6
Line 15, From business (net) .....	.7	.7	.8	1.0	1.2	1.2	1.0	1.5	1.1	1.2	1.0	1.2	1.0	1.2	1.1	1.2
Line 16, Net foreign investment .....	-32.9	-39.2	-43.3	-39.7	-26.4	-28.3	-32.3	-30.9	-20.1	-23.6	-29.3	-23.8	-16.1	-18.8	-29.2	-19.5



Corrections to tables in the February SURVEY: The corrections are to the constant (1987) dollar estimates for 1959 through 1971. Percent changes for 1972 and 1972:1 are also affected.

Table 2.—Gross Domestic Product in Constant Dollars

[Billions of dollars; quarterly data are seasonally adjusted at annual rates]

Year and quarter	GDP	Government purchases		Final sales of domestic product	Gross domestic purchases	Gross national product	Percent change from preceding period			
		Total	Federal				GDP	Final sales of domestic product	Gross domestic purchases	GNP
1959	1,928.8	475.3	265.7	1,915.2	1,950.6	1,939.6				
1960	1,970.8	476.9	259.0	1,962.7	1,978.5	1,982.8	2.2	2.5	1.4	2.2
1961	2,023.8	501.5	270.1	2,016.6	2,029.3	2,037.1	2.7	2.7	2.6	2.7
1962	2,128.1	524.2	287.3	2,112.5	2,138.6	2,143.3	5.2	4.8	5.4	5.2
1963	2,215.6	536.3	285.7	2,199.6	2,221.4	2,231.9	4.1	4.1	3.9	4.1
1964	2,340.6	549.1	281.8	2,324.9	2,338.1	2,358.2	5.6	5.7	5.3	5.7
1965	2,470.5	566.9	282.1	2,445.4	2,476.9	2,489.0	5.5	5.2	5.9	5.5
1966	2,616.2	622.4	319.3	2,579.5	2,634.2	2,633.2	5.9	5.5	6.4	5.8
1967	2,685.2	667.9	350.9	2,657.5	2,708.9	2,702.6	2.6	3.0	2.8	2.6
1968	2,796.9	686.8	353.1	2,773.2	2,834.4	2,815.7	4.2	4.4	4.6	4.2
1969	2,873.0	682.0	340.1	2,848.2	2,914.5	2,890.9	2.7	2.7	2.8	2.7
1970	2,873.9	665.8	315.0	2,868.0	2,909.1	2,891.6	0	.7	-2	0
1971	2,955.9	652.4	290.8	2,935.2	3,001.8	2,976.0	2.9	2.3	3.2	2.9
1972	3,107.1	653.0	284.4	3,084.5	3,163.6	3,128.8	5.1	5.1	5.4	5.1
1959: I	1,904.9	476.1	266.4	1,889.4	1,926.3	1,915.1				
1959: II	1,937.5	478.2	268.4	1,913.1	1,962.5	1,947.7	7.0	5.1	7.7	7.0
1959: III	1,930.8	474.9	265.0	1,930.3	1,951.1	1,941.8	-1.4	3.6	-2.3	-1.2
1959: IV	1,941.9	471.9	262.8	1,928.0	1,962.4	1,953.6	2.3	-5	2.3	2.5
1960: I	1,976.9	466.8	254.9	1,947.3	1,990.3	1,988.1	7.4	4.1	5.8	7.3
1960: II	1,971.7	473.7	257.3	1,964.5	1,982.1	1,983.3	-1.0	3.6	-1.6	-1.0
1960: III	1,973.7	479.9	259.5	1,962.1	1,979.3	1,985.8	.4	-5	-6	.5
1960: IV	1,961.1	487.2	264.3	1,977.0	1,962.3	1,974.0	-2.5	3.1	-3.4	-2.4
1961: I	1,977.4	493.7	263.8	1,985.9	1,978.2	1,991.1	3.4	1.8	3.3	3.5
1961: II	2,006.0	496.6	268.3	2,003.5	2,012.0	2,018.9	5.9	3.6	7.0	5.7
1961: III	2,035.2	500.7	269.7	2,016.7	2,041.9	2,048.4	6.0	2.7	6.1	6.0
1961: IV	2,076.5	515.1	278.6	2,060.2	2,084.9	2,090.1	8.4	8.9	8.7	8.4
1962: I	2,103.8	520.8	286.8	2,080.5	2,115.7	2,117.3	5.4	4.0	6.0	5.3
1962: II	2,125.7	524.4	289.1	2,111.5	2,133.5	2,140.6	4.2	6.1	3.4	4.5
1962: III	2,142.6	526.0	288.1	2,125.2	2,151.5	2,157.7	3.2	2.6	3.4	3.2
1962: IV	2,140.2	525.3	285.1	2,132.8	2,153.7	2,157.7	-4	1.4	.4	0
1963: I	2,170.9	528.1	283.4	2,149.6	2,181.3	2,187.4	5.9	3.2	5.2	5.6
1963: II	2,199.5	532.9	285.9	2,184.6	2,204.7	2,215.3	6.7	6.7	4.4	5.2
1963: III	2,237.6	543.6	290.0	2,220.9	2,243.6	2,253.6	7.1	6.8	7.2	7.1
1963: IV	2,254.5	540.6	283.4	2,243.3	2,256.1	2,271.1	3.1	4.1	2.2	3.1
1964: I	2,311.1	546.4	285.3	2,294.2	2,306.5	2,329.3	10.4	9.4	9.2	10.7
1964: II	2,329.9	551.6	285.1	2,314.5	2,328.8	2,347.3	3.3	3.6	3.9	3.1
1964: III	2,357.4	549.8	280.5	2,343.5	2,354.9	2,375.4	4.8	5.1	4.6	4.9
1964: IV	2,364.0	548.4	276.2	2,347.6	2,362.1	2,380.6	1.1	.7	1.2	.9
1965: I	2,410.1	546.6	272.3	2,376.1	2,417.6	2,429.2	8.0	4.9	9.7	8.4
1965: II	2,442.8	559.3	277.8	2,419.4	2,447.7	2,462.5	5.5	7.5	5.1	5.6
1965: III	2,485.5	572.1	282.7	2,460.9	2,493.3	2,503.8	7.2	7.0	7.7	6.9
1965: IV	2,543.8	589.6	295.8	2,525.1	2,549.1	2,560.3	9.7	10.9	9.3	9.3
1966: I	2,596.8	599.0	301.1	2,560.7	2,608.1	2,613.9	8.6	5.8	9.6	8.6
1966: II	2,601.4	615.4	315.3	2,569.3	2,617.4	2,618.5	.7	1.4	1.4	.7
1966: III	2,626.1	631.8	328.5	2,593.2	2,648.9	2,642.8	3.9	3.8	4.9	3.8
1966: IV	2,640.5	643.2	332.3	2,594.8	2,662.2	2,657.9	2.2	.2	2.0	2.3
1967: I	2,657.2	665.8	351.8	2,622.9	2,677.7	2,674.3	2.6	4.4	2.3	2.5
1967: II	2,689.0	663.2	347.7	2,651.2	2,690.1	2,685.5	1.8	4.4	1.9	1.7
1967: III	2,689.5	668.7	352.0	2,667.9	2,723.0	2,717.9	4.6	2.5	5.0	4.9
1967: IV	2,715.1	673.9	352.2	2,688.3	2,744.8	2,732.9	2.3	3.1	3.2	2.2
1968: I	2,752.1	682.9	356.4	2,732.1	2,788.8	2,770.3	5.6	6.7	6.6	5.6
1968: II	2,796.9	688.7	355.9	2,760.9	2,832.6	2,815.6	6.7	4.3	6.4	6.7
1968: III	2,816.8	686.7	350.3	2,790.3	2,854.2	2,836.0	2.9	4.3	3.1	2.9
1968: IV	2,821.7	688.8	349.7	2,809.6	2,861.8	2,840.7	.7	2.8	1.1	.7
1969: I	2,864.6	682.6	342.2	2,835.8	2,903.5	2,883.6	6.2	3.8	6.0	6.2
1969: II	2,867.8	686.3	343.5	2,844.1	2,912.0	2,886.0	.4	1.2	1.2	.3
1969: III	2,884.5	681.7	339.3	2,856.3	2,927.7	2,901.7	2.3	1.7	2.2	2.2
1969: IV	2,875.1	677.3	335.4	2,856.6	2,914.8	2,892.3	-1.3	0	-1.8	-1.3
1970: I	2,867.8	671.5	326.3	2,862.8	2,903.8	2,885.6	-1.0	.9	-1.5	-.9
1970: II	2,859.5	662.2	315.1	2,851.1	2,893.4	2,877.9	-1.2	-1.6	-1.4	-1.1
1970: III	2,895.0	665.3	310.9	2,880.6	2,929.4	2,913.1	5.1	4.2	5.1	5.0
1970: IV	2,873.3	664.4	307.5	2,877.3	2,909.7	2,889.7	-3.0	-5	-2.7	-3.2
1971: I	2,939.9	656.1	297.7	2,908.0	2,973.8	2,959.8	9.6	4.3	9.1	10.1
1971: II	2,944.2	653.3	292.7	2,920.5	2,993.0	2,965.4	.6	1.7	2.6	.8
1971: III	2,962.3	650.4	289.3	2,940.3	3,009.3	2,981.3	2.5	2.7	2.2	2.2
1971: IV	2,977.3	649.7	283.6	2,971.8	3,031.1	2,997.5	2.0	4.4	2.9	2.2
1972: I	3,037.3	657.9	290.7	3,018.9	3,098.5	3,058.4	8.3	6.5	9.2	8.4

NOTE.—GDP=Gross domestic product; GNP=Gross national product

# Alternative Measures of Change in Real Output and Prices

By Allan H. Young

*This article and the one that follows it, "Economic Theory and BEA's Alternative Quantity and Price Indexes," present results of BEA's work on alternative measures of production and prices. These measures, which are designed to supplement BEA's featured fixed-weighted measures, were first described in "Alternative Measures of Real GNP" in the April 1989 SURVEY OF CURRENT BUSINESS; in that article, BEA stated that it would develop the alternative measures as part of the next comprehensive revision of the national income and product accounts.*

A MAJOR INNOVATION in the recent comprehensive revision of the national income and product accounts (NIPA's) was the development of alternative measures of real gross domestic product (GDP) and of GDP prices. This article describes these measures and provides annual estimates for the period from 1959 to 1990. Later this year, BEA expects to provide quarterly estimates of the alternative measures.

BEA now features real GDP calculated in 1987 prices as its measure of real output.<sup>1</sup> Before the comprehensive revision, the featured measure was real gross national product (GNP) calculated in 1982 prices. However, for reasons set forth in this article, no single measure of real GDP can be considered sufficient for all analytical applications.

BEA first introduced an alternative measure of real output in 1989, when real GNP calculated in 1987 prices was presented as an alternative to real GNP calculated in 1982 prices.<sup>2</sup> This alternative provided a preview of the use of 1987 prices to value real output in the comprehensive revision. BEA also announced that it was conducting research into alternative measures that would not

1. Depending on the context, real GDP is described in this article in two different but equivalent ways: As the sum of detailed quantities valued in base-year prices, and as the weighted sum of detailed quantity relatives (indexes), where the weights, which are referred to as price weights, are shares of current-dollar output in the base year. Footnote 12 in the appendix to this article, "A Note on Alternative Measures of Real GDP" provides several equivalent algebraic formulations for real GDP.

2. See Allan H. Young, "Alternative Measures of Real GNP," SURVEY OF CURRENT BUSINESS 69 (April 1989): 27-34.

be based on the fixed price weights of a single year.

In general, a fixed-weighted measure of real output based on the prices of a more recent year increases less than one based on prices of an earlier year. This property, which has often been observed in index number construction, exists because the commodities for which output grows rapidly tend to be those for which prices increase slowly or decrease (and, conversely, the commodities for which output grows slowly tend to be those for which prices increase rapidly). Thus, when real output is recalculated using more recent prices, the commodities with strong output growth receive less weight, lowering the growth rate of the aggregate.<sup>3</sup>

This property has always been recognized as a problem in long-term comparisons of real output. However, until recently, the difference in the effect of using one set of prices rather than another in measuring real GDP in the United States

3. In considering whether the price of a commodity has increased more or less rapidly than prices of other commodities from one period to another, it is necessary to restate the price weights of the commodities for one of the two periods so that they reflect the same quantities as the weights for the other period. For example, to compare the price of a commodity in 1982 with the price in 1987, output shares in 1982 valued in 1982 and 1987 prices may be compared. It would be incorrect to compare the current-dollar output share in 1982 with the current-dollar output share in 1987 because such comparisons are affected by changes in both prices and quantities.

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had generally been considered small enough to be safely ignored. The simplicity of an output measure in which the prices of a single year were used to value real GDP for all years was considered to outweigh any advantage provided either by presenting alternative measures based on prices of other years or by using more complex approaches to weighting.

Two situations have contributed to a change in this view. First, beginning in the 1970's, changes in the prices and quantities of the energy and food components of GDP have been large enough in certain periods to make the measurement of the change in real GDP sensitive to the choice of price weights. However, to some extent these price and quantity movements reversed direction in later periods, moderating the effects on measured long-term growth.

Second, since the introduction of BEA's price index for computers in the 1985 comprehensive revision, changes in the prices and quantities of computers have been large enough to make the measurement of the change in real GDP quite sensitive to the choice of price weights. For example, over the period 1982 to 1987, business expenditures on computers and peripheral equipment in 1987 prices increased over 300 percent, while computer prices declined 60 percent. Consequently, computers receive a lower valuation when real GDP is calculated in 1987 prices than when calculated in 1982 prices; for this reason, they contribute about 1.5 percentage points less to the growth from 1982 to 1987 in real GDP in 1987 prices than in 1982 prices.

In addition, if improved measures of prices of high-tech goods other than computers (and of high-tech services) are developed in the future, they may show larger declines or smaller increases in prices than the price indexes now used in the deflation of these commodities. If so, the effect of the selection of price weights on the calculation of real GDP may become greater still.

### Real GDP Measures

In this article, BEA's featured measure of real GDP is shown as a fixed-weighted quantity index in which the weights are 1987 prices. This index multiplied by the 1987 value of current-dollar GDP is equal to real GDP in constant 1987 dollars—the form of real GDP customarily presented in the NIPA charts and tables. The two series are identical in terms of percent changes. Showing the featured measure in index form facilitates com-

parisons with the two alternative measures of real GDP introduced in this article.

Unlike the fixed-weighted measure, the two alternative measures of real GDP introduced in this article are not based on the price weights of a single base year: In one, the weights change each year; in the other, the weights change each benchmark year—that is, at about 5-year intervals. The first index is referred to as the *chain-type annual-weighted quantity index*; the second, as the *benchmark-years-weighted quantity index*.<sup>4</sup> (The alternative quantity indexes are presented in table 2 at the end of this article.)

These alternative indexes use the Fisher Ideal index formula to provide a measure of change between two periods.<sup>5</sup> A Fisher Ideal quantity index is a geometric mean of a Laspeyres and a Paasche quantity index. The Laspeyres quantity index uses the prices of the first of the two periods being compared to weight quantities. The Paasche quantity index uses the prices of the second period. Given that the Fisher Ideal index is a geometric mean, the change in the Fisher Ideal index falls between the changes in the Paasche and Laspeyres indexes.<sup>6</sup>

BEA expects to introduce a third alternative in 1993: A fixed-weighted quantity index with 1992 prices as weights. If, in the comprehensive revision of the mid-1990's, BEA continues to feature real GDP calculated in the prices of a given year, the price weights are likely to be those for 1992.

4. The concept of the benchmark-years-weighted quantity index was developed by Jack Triplett, Chief Economist at BEA. He has referred to such an index as the "Time-series Generalized Fisher Ideal Index." See Jack E. Triplett, "Superlative and Quasi-Superlative Indexes of Price and Output for Investment Goods: Office, Computer, and Accounting Machinery," BEA Discussion Paper No. 40 (presented at a National Bureau of Economic Research Summer Workshop, Boston, MA, July 1988). Copies may be obtained from the author.

5. The Fisher Ideal index was one of many index formulas examined by Irving Fisher in *The Making of Index Numbers*, New York: Houghton Mifflin Company, 1922.

6. The Fisher Ideal quantity index formula is  $Q^f = \sqrt{Q^l \times Q^p}$ , where  $Q^l$  is the Laspeyres quantity index and  $Q^p$  the Paasche quantity index. For the first period,  $Q_1^l = Q_1^p = \sum p_1 q_1 / \sum p_1 q_1 = 1.0$ , and  $Q_1^f = 1.0$ , where the  $p$ 's and  $q$ 's represent prices and quantities. For the second period,

$$Q_2^l = \frac{\sum p_1 q_2}{\sum p_1 q_1},$$

$$Q_2^p = \frac{\sum p_2 q_2}{\sum p_2 q_1}, \text{ and}$$

$$Q_2^f = \sqrt{\frac{\sum p_1 q_2}{\sum p_1 q_1} \times \frac{\sum p_2 q_2}{\sum p_2 q_1}}.$$

The growth rate from period 1 to period 2 is  $100(Q_2^f/Q_1^f - 1.0) = 100(Q_2^f - 1.0)$ .

### Gross Product by Industry: A Preview

When BEA revises the gross product by industry estimates to make them consistent with the comprehensive revision of the NIPA's, estimates of real gross product by industry will be calculated using fixed 1987 price weights. Updating the fixed weights from 1982 to 1987 will have the largest impact on manufacturing—specifically, on the nonelectrical machinery industry, in which computers and peripheral equipment are produced. BEA will also prepare alternative estimates of real gross product by industry using benchmark-years weights. (BEA does not plan to calculate chain-type annual-weighted indexes—the other alternative measure presented in the article—for real gross product by industry, because less product detail is available annually than for benchmark years.)

Because of the substantial change in the relative price structure—traceable largely to the declining prices of computers and

peripheral equipment—the use of fixed 1987 price weights for the gross product by industry series will not adequately portray the course of manufacturing in the late 1970's or early 1980's. Likewise, use of fixed 1977 or fixed 1982 price weights will not adequately portray manufacturing in the late 1980's. The benchmark-years-weighted index, which allows for change in the relative price structure, will present a more accurate picture.

Exhibit 1 shows the differences in growth rates for manufacturing that result from the use of prices of either 1977, 1982, or 1987 as fixed weights in calculating an index of real manufacturing gross product. The exhibit also shows the growth rates that result from the use of benchmark-year prices as weights. The index based on 1982 price weights essentially corresponds to the 1982 dollar series released in April 1991, before the comprehensive revision of the NIPA's (it incorporates small revisions that have little effect on the growth rates). The other three indexes are calculated from the same price and quantity information as used for the 1982 dollar series. When the gross product by industry indexes are revised, the growth rates may differ from those in the exhibit; however, the pattern of differences in growth rates will remain about the same.

The lack of additivity of the benchmark-years-weighted quantity index may present a problem to some users of the gross product by industry series. Within the framework of the benchmark-years-weighted quantity indexes, it may not be possible to calculate, in an exact sense, a time series for manufacturing as a share of total output. However, by comparing the growth rates of manufacturing with those of total GDP, it will be possible to determine whether manufacturing gross product increased more or less rapidly than total GDP.

**Exhibit 1.—Fixed-Weighted and Benchmark-Years-Weighted Indexes of Real Gross Product in Manufacturing: Average Annual Rate of Change Over Selected Periods**

	Fixed-weighted indexes			Benchmark-years-weighted index
	1977 weights	1982 weights	1987 weights	
1977-87 .....	4.7	2.6	1.6	2.6
1977-82 .....	.8	-.7	-1.3	.1
1982-87 .....	8.8	6.0	4.5	5.2

NOTE.—With fixed-weighted indexes, real gross product is obtained by the double deflation method as the difference between real gross output and real intermediate inputs. For the benchmark-years-weighted quantity index, the following relationship was used to obtain the gross product index:  $(I_{GPO})^{\theta_2} = I_{GO} / (I_{II})^{\theta_1}$ , where  $I_{GPO}$  is the derived benchmark-years-weighted index of gross product,  $I_{GO}$  is a benchmark-years-weighted quantity index of gross output,  $I_{II}$  is a benchmark-years-weighted quantity index of intermediate input, and  $\theta_1$  and  $\theta_2$  are the average current-dollar shares of gross output accounted for by intermediate inputs and value added. Use of this relationship provides a close approximation to a benchmark-years-weighted quantity index.

*Chain-type annual-weighted quantity index.*—For this alternative, a Fisher Ideal quantity index is used to calculate the change from year  $t - 1$  to year  $t$ . Thus, the annual change is provided by the geometric mean of the year  $t$  values of two fixed-weighted quantity indexes, one of which uses prices of year  $t - 1$  as weights and the other, prices of year  $t$  as weights. Annual changes computed in this manner are “chained” (multiplied) together to form a time series.

*Benchmark-years-weighted quantity index.*—For this alternative, the Fisher Ideal index formula is adapted to use weights from two adjacent benchmark years, which are customarily 5 years apart. For each pair of adjacent benchmark years and the interval between them, two fixed-weighted quantity indexes are computed: One with the prices of the first benchmark year as weights, and the other with the prices of the second benchmark year. The geometric mean of these indexes is the benchmark-years-weighted quantity index. Cumulation of the annual changes

in the benchmark-years-weighted index is equal to the Fisher Ideal change calculated directly from one benchmark to the next. Benchmark years are used as weighting periods because, for components of GDP that incorporate information from the quinquennial economic censuses, the benchmark-year price and quantity estimates are considered to be more accurate than those for other years.

For 1982-87, the benchmark-years-weighted quantity index is the geometric mean of the fixed-weighted quantity index that uses 1987 prices as weights and the fixed-weighted quantity index that uses 1982 prices as weights. (Except for statistical and definitional revisions, this latter index corresponds to the fixed-weighted GDP measure used before the comprehensive revision in 1991.) For years beyond the most recent benchmark year, the benchmark-years-weighted quantity index is calculated as the geometric mean of the fixed-weighted quantity index that uses prices of the most recent benchmark year and the fixed-weighted quantity index that uses prices of the

most recent year. Thus, at present, for years beyond 1987, the index is calculated with 1987 and 1990 prices. Following the annual NIPA revision, the index will be recalculated using 1987 and 1991 prices. When prices for the next benchmark year, 1992, become available, the index will be recalculated using prices of the two benchmark years.

### *Considerations in selecting an appropriate index*

A difference between two measures of real GDP is not evidence that one is wrong. A measure of real GDP is not composed of actual transactions that can, at least in principle, be added up from information obtained from transactors to obtain a single, correct total. A measure of real GDP is a construct in which transactions are valued by the compiler in terms of prices chosen, at least in part, arbitrarily. The worth of such a measure lies in whether or not it proves useful in analysis. Viewed in this way, there can be more than one useful measure.

The fixed-weighted quantity index has the advantage of simplicity. This simplicity is the result of three characteristics. First, the index formula itself is simple. Second, when the fixed-weight formula is applied to a fixed base year, it is possible to compare any two, or in fact any number of, periods on a consistent basis. Third, the index may be stated in terms of real dollars (by using only the numerator of the formula), making it possible to "add up" the components of real output and to compute "real dollar shares" of GDP for each component.

The disadvantage of a fixed-weighted quantity index lies in the fact that the relative price structure in the economy changes over time. For most purposes, a fixed-weighted quantity index can only be considered appropriate for comparisons in which both of the years being compared have relative price structures that are approximately the same as that of the base year. Thus, real GDP in 1987 prices may only be appropriate for assessing the performance of the economy in the years around 1987, when the relative price structure resembled that in 1987.

Whether the fixed-weighted index remains adequate for assessing the U.S. economy in the mid-1990's will depend on the extent to which the relative price structure changes. The two alternatives introduced in this article, as well as the rebased fixed-weighted measure to be introduced in 1993, will provide a basis for monitoring such changes; in the mid-1990's, each of them will re-

flect more recent price weights than the featured measure.

The two alternatives are designed to allow for change over time in the relative price structure of GDP. The annual chain-type index measures the performance of the economy from one year to the next in terms of the price structures of the 2 years involved in the comparison. The benchmark-years index measures the performance of the economy between benchmark years in a similar fashion. The alternatives have the advantage that they portray as accurately as possible, that is, as accurately as any other indexes that could be calculated, the year-to-year or benchmark-to-benchmark changes in the economy over the entire period covered by the indexes. The disadvantage of these alternatives is that, because of the use of geometric means, they lack the additive property of the fixed-weighted index. Real GDP cannot be obtained by "adding up" its components; consequently, the contribution of each component to a given change in real GDP is not readily apparent.

One of the most interesting uses of the alternatives will be in business cycle analysis. One would expect that more useful analytical relationships will emerge from using the alternatives for such analyses; for example, one may find a closer correspondence between declines in the alternative measures of real GDP and declines in employment.

In selecting an index, it is useful to keep in mind that the estimates of the change in real GDP are subject to several types of error. Particularly for current quarter-to-quarter changes, the net effect of such errors may be as large as, or larger than, differences arising from the use of one or another of the index formulas.

*Index numbers in practice.*—Other major indexes prepared by U.S. statistical agencies, such as the Bureau of Labor Statistics consumer price index and the Federal Reserve Board industrial production index, do not maintain the same fixed-weighted structure over all years. For example, in the consumer price index, the composition of the market basket is changed periodically. Although the index number formulas are not the same, the approaches to weighting taken in these other indexes tend to resemble that in the benchmark-years-weighted index.

In measuring real GDP, few countries follow the U.S. practice of using the Laspeyres index formula with the same fixed-weighted structure over all years. Among the countries surveyed for this article, Japan is the only one that essen-

tially follows the U.S. practice. Australia, Canada, Germany, and the United Kingdom update price weights at about 5-year intervals. Real GDP is calculated for the 5-year interval using the Laspeyres index formula. The series is then extended back by linking on the data for previous years that incorporate earlier price weights. The Netherlands and Norway calculate an annual chain index of real GDP using annual price weights and the Laspeyres index formula; Canada provides such a measure as an alternative. France prepares two measures: In one, the price weights are updated at 10-year intervals; the other is an annual chain index.

Thus, with the exception of Japan, the surveyed countries use a chain-type procedure with the Laspeyres index formula, updating weights at 5- or 10-year intervals or annually. A characteristic of such procedures, as mentioned earlier, is that additivity is not maintained over all periods—that is, the components do not add to the total as in the U.S. measure. In order to provide additive results, some countries that link at 5- or 10-year intervals adjust either the total or the components for the earlier periods; other countries include an adjusting entry so that the components add to the total. Some of the countries do not provide additive results.

#### *Why does BEA feature the fixed-weighted index?*

The choice between the fixed-weighted measure and the alternative measures may be viewed as a choice between simplicity and accuracy as one moves away from the base period, with the extent of the gain in accuracy depending on the degree of change in the relative price structure as one moves away from the base year. Given this choice, one may ask why BEA continues to feature the fixed-weighted index. Several practical considerations entered into the decision.

First, users of the NIPA's have a substantial investment in the fixed-weighted measure in terms of knowledge and experience. Although users may come to prefer another measure, it seems best for any such change to be evolutionary.

Second, the differences between the featured and alternative measures may not be large enough to affect many types of analysis. Consistent use of one measure may very well lead to the same analytical results as consistent use of another measure. If experience shows that the differences are generally insignificant, the simplicity of the fixed-weighted index would constitute a strong argument for its retention as the featured measure. It seems best for both users and BEA to

gain such experience before considering whether another measure should be featured.

Third, BEA cannot currently prepare the alternative measures on the same schedule as the fixed-weighted measures. The computations underlying the alternatives, which are described later in the article, are substantial. Initially, BEA will calculate the alternative measures for the preliminary and final GDP estimates of the current quarter and present them in the SURVEY OF CURRENT BUSINESS; eventually, BEA probably will be able to prepare them for the advance GDP estimates and also to prepare them on a schedule that permits their inclusion in the news releases.

As the previous paragraphs suggest, experience with the alternatives may lead to a decision to feature a different measure of real GDP in the next comprehensive revision. That measure could be one of the alternatives presented in this article or a different measure. BEA expects to do further research on the selection of weights for measuring real GDP. Both the use of quarterly price weights in the chain-type index and the use of business cycle peak years in place of benchmark years as weights will be explored.

#### *Comparison of real GDP measures*

For 1959–87, the alternative indexes of real GDP show somewhat more rapid growth than the fixed-weighted index (chart 1 and table A). Both alternatives increase at an average annual rate of 3.4 percent, compared with 3.1 percent in the fixed-weighted index. For intervals between benchmark years, the largest differences occur in 1963–67, when the chain-type annual-weighted index increases an average 0.4 percentage point per year more than the fixed-weighted index, and the benchmark-years-weighted index increases 0.5 percentage point per year more. The smallest differences occur in 1982–87, when both alterna-

**Table A.—Fixed-Weighted and Alternative Measures of Real GDP: Average Annual Rate of Change Over Selected Periods**

	[Percent]					
	Fixed-weighted index, 1987 weights	Chain-type annual-weighted index	Benchmark-years-weighted index	Col. 2–col. 1	Col. 3–col. 1	Col. 3–col. 2
1959–87 .....	3.1	3.4	3.4	0.3	0.3	0
1959–63 .....	3.5	3.8	3.8	.3	.3	0
1963–67 .....	4.9	5.3	5.4	.4	.5	.1
1967–72 .....	3.0	3.3	3.3	.3	.3	0
1972–77 .....	2.6	2.9	2.9	.3	.3	0
1977–82 .....	1.3	1.6	1.7	.3	.4	.1
1982–87 .....	3.8	4.0	4.0	.2	.2	0
1987–90 .....	2.5	2.5	2.4	0	–.1	–.1

tives increase 0.2 percentage point per year more than the fixed-weighted index.

On an annual basis, the differences between the changes in the fixed-weighted GDP index and the alternatives range up to 1.0 percentage point (see table 1 at the end of the article). The largest differences between the fixed-weighted index and the chain-type annual-weighted index occur in 1962 (0.9 percentage point), 1965 (0.9), 1973 (0.7), 1981 (0.7), and 1984 (0.8). The largest differences between the fixed-weighted index and the benchmark-years-weighted index occur in 1962

(0.9), 1965 (0.8), 1966 (0.7), 1977 (0.7), and 1981 (0.9).

For 1987-90, the benchmark-years-weighted index increases slightly less than the fixed-weighted index. The benchmark-years-weighted index increases at an average annual rate of 2.4 percent; both the fixed-weighted and the chain-type annual-weighted indexes increase 2.5 percent. On an annual basis, the differences are no larger than 0.1 percentage point.

For the major components of real GDP, the alternative indexes in general also show more rapid

**Table B.—Fixed-Weighted and Alternative Measures of Real GDP and Its Major Components: Average Annual Rates of Change Over Selected Periods**  
[Percent]

	1959-87	1982-87	1987-90	1987-88	1988-89	1989-90		1959-87	1982-87	1987-90	1987-88	1988-89	1989-90	
<b>Gross domestic product:</b>							<b>Merchandise:</b>							
Fixed 1987 weights .....	3.1	3.8	2.5	3.9	2.5	1.0	Fixed 1987 weights .....	5.5	3.4	12.7	19.3	11.8	7.4	
Chain-type annual weights ..	3.4	4.0	2.5	3.9	2.6	1.0	Chain-type annual weights ..	5.9	3.9	12.4	19.0	11.7	6.9	
Benchmark-years weights ....	3.4	4.0	2.4	3.8	2.5	1.0	Benchmark-years weights ....	6.1	4.2	12.5	19.0	11.8	7.1	
<b>Personal consumption expenditures:</b>							<b>Services:</b>							
Fixed 1987 weights .....	3.5	4.0	2.2	3.6	1.9	-1.6	Fixed 1987 weights .....	7.0	6.1	8.6	7.5	9.8	8.6	
Chain-type annual weights .....	3.6	4.1	2.2	3.6	1.9	-1.9	Chain-type annual weights ..	6.9	6.0	8.7	7.6	9.8	8.6	
Benchmark-years weights .....	3.6	4.2	2.2	3.5	1.9	-1.8	Benchmark-years weights ....	7.1	6.1	8.7	7.6	9.8	8.6	
<b>Durable goods:</b>							<b>Imports:</b>							
Fixed 1987 weights .....	4.6	9.0	2.8	6.2	2.8	-4	Fixed 1987 weights .....	6.1	10.8	3.2	3.7	3.7	2.2	
Chain-type annual weights .....	5.3	9.2	2.7	6.2	2.7	-6	Chain-type annual weights .....	5.9	10.4	2.9	3.5	3.3	2.0	
Benchmark-years weights .....	5.3	9.3	2.7	6.1	2.8	-5	Benchmark-years weights .....	6.1	10.9	3.0	3.6	3.4	2.1	
<b>Nondurable goods:</b>							<b>Merchandise:</b>							
Fixed 1987 weights .....	2.4	3.0	1.3	2.4	1.4	.1	Fixed 1987 weights .....	7.1	11.3	3.4	4.0	4.4	1.8	
Chain-type annual weights .....	2.6	3.0	1.3	2.4	1.3	.1	Chain-type annual weights ..	6.6	10.9	3.1	3.8	4.0	1.6	
Benchmark-years weights .....	2.6	3.0	1.2	2.3	1.3	.1	Benchmark-years weights ....	6.8	11.4	3.2	4.0	4.1	1.6	
<b>Services:</b>							<b>Services:</b>							
Fixed 1987 weights .....	4.0	3.6	2.7	3.7	2.0	2.3	Fixed 1987 weights .....	3.5	8.6	2.2	2.2	.2	4.2	
Chain-type annual weights .....	4.0	3.7	2.7	3.7	2.0	2.3	Chain-type annual weights ..	4.0	8.5	2.1	2.1	.1	4.0	
Benchmark-years weights .....	4.0	3.7	2.7	3.7	2.0	2.3	Benchmark-years weights ....	4.1	8.6	2.1	2.1	.2	4.1	
<b>Gross private domestic investment:</b>							<b>Government purchases:</b>							
Fixed 1987 weights .....	3.4	6.7	-2	3.2	2.0	-5.7	Fixed 1987 weights .....	2.2	4.0	1.8	.6	1.5	3.2	
Chain-type annual weights .....	4.1	6.9	-2	3.0	2.5	-5.9	Chain-type annual weights .....	2.3	4.2	1.8	.6	1.7	3.2	
Benchmark-years weights .....	4.3	7.0	-3	3.1	2.1	-5.8	Benchmark-years weights .....	2.3	4.2	1.7	.5	1.5	3.2	
<b>Fixed investment:</b>							<b>Federal:</b>							
Fixed 1987 weights .....	3.4	5.3	1.0	4.2	.4	-1.6	Fixed 1987 weights .....	1.3	4.7	-4	-2.0	-6	1.6	
Chain-type annual weights .....	4.0	5.4	.8	4.2	.3	-1.9	Chain-type annual weights .....	1.5	5.0	-3	-2.1	-3	1.5	
Benchmark-years weights .....	4.4	5.6	.8	4.1	.3	-1.8	Benchmark-years weights .....	1.5	4.9	-4	-2.2	-6	1.5	
<b>Nonresidential:</b>							<b>National defense:</b>							
Fixed 1987 weights .....	4.0	2.8	3.3	6.6	2.2	1.2	Fixed 1987 weights .....		5.7	-1.2	-1.7	-2.2	.2	
Chain-type annual weights ..	4.8	3.0	3.1	6.6	2.0	.8	Chain-type annual weights ..		6.0	-1.3	-1.8	-2.3	.1	
Benchmark-years weights ....	5.2	3.3	3.1	6.5	2.0	1.0	Benchmark-years weights .....		6.0	-1.4	-1.9	-2.3	.1	
<b>Structures:</b>							<b>Nondefense:</b>							
Fixed 1987 weights .....	3.0	-1.1	1.3	1.6	2.0	.3	Fixed 1987 weights .....		1.9	2.4	-2.8	4.6	5.5	
Chain-type annual weights .....	3.0	-1.6	1.2	1.6	1.8	.2	Chain-type annual weights ..		1.9	2.8	-3.2	6.1	5.7	
Benchmark-years weights .....	3.0	-1.7	1.2	1.6	1.9	.2	Benchmark-years weights ....		1.7	2.5	-3.0	5.0	5.6	
<b>Producers' durable equipment:</b>							<b>State and local:</b>							
Fixed 1987 weights .....	4.7	5.3	4.3	9.3	2.3	1.6	Fixed 1987 weights .....		3.1	3.5	3.4	2.6	3.1	4.4
Chain-type annual weights .....	5.9	6.0	4.1	9.3	2.1	1.1	Chain-type annual weights .....		3.2	3.6	3.4	2.6	3.1	4.4
Benchmark-years weights .....	6.5	6.5	4.1	9.2	2.0	1.3	Benchmark-years weights .....		3.2	3.6	3.4	2.6	3.1	4.4
<b>Residential:</b>							<b>Addenda:</b>							
Fixed 1987 weights .....	2.3	12.7	-4.6	-1.1	-3.8	-8.7	<b>Final sales of gross domestic product:</b>							
Chain-type annual weights ..	2.4	12.6	-4.6	-1.2	-3.8	-8.8	Fixed 1987 weights .....		3.1	3.6	2.5	4.1	2.2	1.7
Benchmark-years weights ....	2.4	12.7	-4.6	-1.1	-3.8	-8.7	Chain-type annual weights .....		3.4	3.8	2.5	4.1	2.3	1.6
							Benchmark-years weights .....		3.4	3.8	2.5	4.0	2.2	1.6
<b>Change in business inventories ..</b>							<b>Gross domestic purchases:</b>							
							Fixed 1987 weights .....		3.1	3.8	1.8	3.0	1.9	.5
							Chain-type annual weights .....		3.4	4.0	1.8	2.9	1.9	.5
							Benchmark-years weights .....		3.4	4.0	1.7	2.9	1.8	.5
<b>Net exports of goods and services</b>							<b>Gross national product:</b>							
<b>Exports:</b>							Fixed 1987 weights .....		3.1	3.7	2.5	4.0	2.4	1.1
Fixed 1987 weights .....	5.9	4.2	11.6	15.9	11.3	7.7	Chain-type annual weights .....		3.4	3.8	2.5	4.0	2.5	1.1
Chain-type annual weights .....	6.1	4.5	11.3	15.7	11.2	7.3	Benchmark-years weights .....		3.4	3.8	2.5	3.9	2.4	1.1
Benchmark-years weights .....	6.3	4.7	11.4	15.6	11.2	7.5								

growth before 1987 than their fixed-weighted counterparts (table B). For personal consumption expenditures and for government purchases, the alternative indexes increase an average 0.1 percentage point per year more than the fixed-weighted index. For exports, the differential for the chain-type annual-weighted index is 0.2 percentage point per year and for the benchmark-years-weighted index, 0.4 percentage point. For imports, the differential for the chain-type annual-weighted index is -0.2 percentage point per year.

The differentials for fixed investment (as well as for gross private domestic investment) are much larger than those for the other major components: 0.6 percentage point per year for the chain-type annual-weighted index, and 1.0 percentage point per year for the benchmark-years-weighted index. Thus, the alternative measures, particularly the benchmark-years-weighted index, show a higher rate of gross capital formation relative to output than do the fixed-weighted indexes. In terms of the fixed-weighted indexes, fixed investment increases at an average annual rate of 3.4 percent from 1959 to 1987, while GDP increases at a rate of 3.1 percent. In terms of the benchmark-years-weighted indexes, fixed investment increases at an annual rate of 4.4 percent, while GDP increases at a rate of 3.4 percent.

An analysis of the sources of the differences between the fixed-weighted indexes and the alter-

natives requires further work. It is clear, however, that changes in the prices and quantities of computers and peripheral equipment are the major source of the differences for total GDP, fixed investment, and exports. In addition to changes in the prices and quantities of computers, the differentials for imports reflect changes in the prices and quantities of imported petroleum. Imported petroleum behaved atypically during 1959-87 in that both quantities and relative prices increased; this behavior worked to offset the contribution of computers and peripheral equipment.

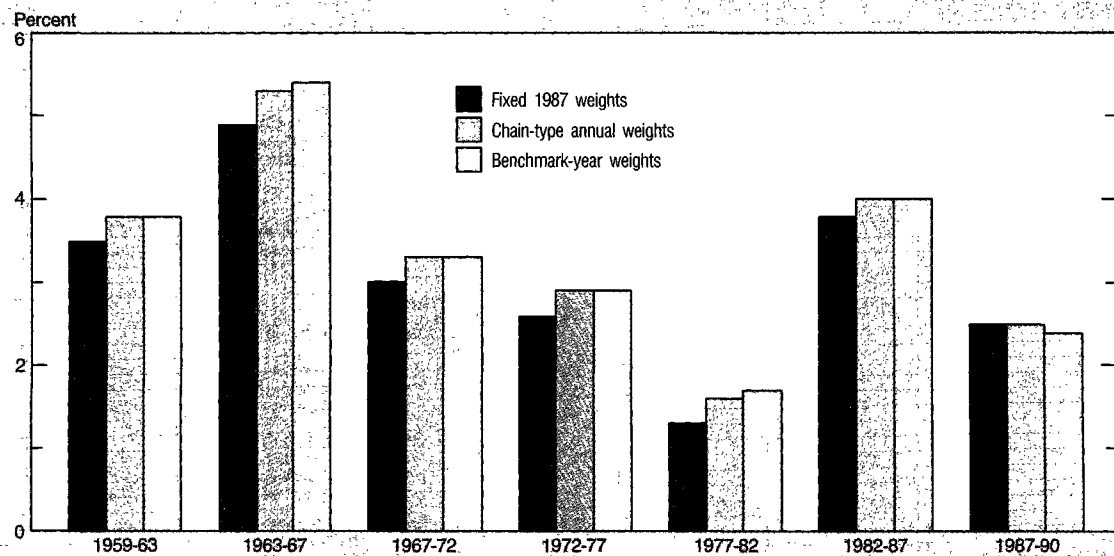
### GDP Price Measures

The featured measure of GDP prices is the fixed-weighted GDP price index with 1987 quantity weights.<sup>7</sup> The fixed-weighted GDP price index, like the fixed-weighted measure of real GDP, has the property that, when weights of a more recent year are substituted and the index recalculated, the index increases less than when the weights for an earlier year are used. For the reasons discussed earlier, this property exists because the commodities with strong (weak) price increases receive less

7. As part of the 1991 comprehensive revision, the fixed-weighted gross domestic purchases price index with 1987 quantity weights replaced the fixed-weighted GNP price index with 1982 quantity weights as the featured measure of price change in the U.S. economy. This section focuses on measures of GDP prices in order to provide a parallel discussion with the section on real GDP. The fixed-weighted and alternative price indexes for gross domestic purchases are shown as addenda to the tables in this article.

CHART 1

### Real Gross Domestic Product: Average Annual Rate of Change in Fixed-Weighted and Alternative Measures Over Selected Periods



U.S. Department of Commerce, Bureau of Economic Analysis



(more) weight, thus lowering the increase in the aggregate measure.

Two alternative measures of GDP prices are introduced in this article. They involve the use of the Fisher Ideal index formula and are analogues to the two alternative quantity measures discussed earlier; that is, the *p*'s and *q*'s are simply reversed in the index formulas. One alternative is referred to as the *chain-type annual-weighted price index*; the other, as the *benchmark-years-weighted price index*. (The alternative price indexes are presented in table 3 at the end of this article.)

One property of price and quantity indexes calculated with the Fisher Ideal index formula is that they fully account for the current-dollar change; that is, the product of the price change and the quantity change equals the current-dollar change. The featured Laspeyres fixed-weighted-price index and Laspeyres fixed-weighted quantity index do not have this property. This full accounting of the current-dollar change applies to annual changes in the chain-type annual-weighted index and to changes between adjacent benchmarks in the benchmark-years-weighted index.<sup>8</sup>

The fixed-weighted price indexes for several components of GDP—producers' durable equipment (PDE), exports, and imports—and for total GDP and the investment aggregates will not be shown in the NIPA tables for years before 1982, because the use of the relative quantity structure in 1987 to measure price change for those years is inappropriate. Before 1982, the combination of the high level and very rapid decline of the price index for computers and the large 1987 quantity weight for computers results in either very small

overall price increases or price declines for these components and for total GDP.<sup>9</sup> The affected entries are bold-italicized in the tables in this article; these bold-italicized entries should not be used as measures of price change.

*Comparison of GDP price measures*

The differences between the fixed-weighted GDP price index and the two alternative price indexes average 0.2 percentage point per year or less for 1982–87 and for 1987–90, the two periods shown in table C for which use of the fixed-weighted price index is appropriate. For 1982–87, the fixed-weighted GDP price index increases at an average annual rate of 3.3 percent, while the chain-type annual-weighted index increases at a 3.4-percent rate and the benchmark-years-weighted index, at a 3.5-percent rate. For 1987–90, the fixed-weighted and benchmark-years-weighted indexes increase at a 4.2-percent rate, compared with a 4.1-percent rate for the chain-type annual-weighted index. On an annual basis, the differences are no larger than 0.3 percentage point during 1982–87 and 0.1 percentage point during 1987–90 (see table 1 at the end of the article).

For 1959–87, the alternative price indexes grow more rapidly than the fixed-weighted indexes for personal consumption expenditures (PCE) and government purchases (table D). For PCE, the chain-type annual-weighted index increases at an average annual rate of 4.7 percent, the benchmark-years-weighted index at a 4.6-percent rate, and the fixed-weighted index at a 4.3-percent rate. For government purchases, the chain-

8. Using the notation in footnote 6, the Fisher Ideal price index is  $P^f = \sqrt{P^l \times P^p}$ , where  $P^l$  is the Laspeyres price index and  $P^p$  the Paasche price index. For the first period,  $P_1^l = P_1^p = \sum p_1 q_1 / \sum p_1 q_1 = 1.0$ , and  $P_1^f = 1.0$ . For the second period,

$$P_2^l = \frac{\sum p_2 q_1}{\sum p_1 q_1},$$

$$P_2^p = \frac{\sum p_2 q_2}{\sum p_1 q_2}, \text{ and}$$

$$P_2^f = \sqrt{\frac{\sum p_2 q_1}{\sum p_1 q_1} \times \frac{\sum p_2 q_2}{\sum p_1 q_2}}.$$

The current-dollar change from period 1 to period 2 expressed as a ratio is  $\frac{\sum p_2 q_2}{\sum p_1 q_1}$  and is equal to the product of the Fisher Ideal price and quantity indexes:

$$\frac{\sum p_2 q_2}{\sum p_1 q_1} = \sqrt{\frac{\sum p_2 q_1}{\sum p_1 q_1} \times \frac{\sum p_2 q_2}{\sum p_1 q_2}} \times \sqrt{\frac{\sum p_1 q_2}{\sum p_1 q_1} \times \frac{\sum p_2 q_2}{\sum p_2 q_1}}.$$

9. The fixed-weighted GNP price index published prior to the comprehensive revision of 1991 was not affected to the same extent, because the computer price index for PDE was carried back only to 1969 and was held at a constant level in earlier years. In the 1991 comprehensive revision, the computer price index for PDE was extended back to 1959. In addition, the relative quantity of computers increased greatly from 1982 to 1987.

**Table C.—Fixed-Weighted and Alternative Measures of GDP Prices: Average Annual Rate of Change Over Selected Periods**

	[Percent]					
	Fixed-weighted index, 1987 weights	Chain-type annual-weighted index	Benchmark-years-weighted index	Col. 2–col. 1	Col. 3–col. 1	Col. 3–col. 2
1959–87 .....	-5.3	4.7	4.6	.....	.....	-.1
1959–63 .....	-22.3	1.3	1.3	.....	.....	0
1963–67 .....	-22.8	2.3	2.3	.....	.....	0
1967–72 .....	-2.0	4.7	4.7	.....	.....	0
1972–77 .....	3.5	7.2	7.2	.....	.....	0
1977–82 .....	5.8	8.1	7.9	.....	.....	-.2
1982–87 .....	3.3	3.4	3.5	.1	.2	.1
1987–90 .....	4.2	4.1	4.2	-.1	0	.1

NOTE.—Bold-italicized entries should not be used as measures of price change. See the text for an explanation.

type index increases at a 5.6-percent rate, the benchmark-years index at a 5.7-percent rate, and the fixed-weighted index at a 5.1-percent rate.

Because use of the fixed-weighted price index for GDP for periods before 1982 is not appropriate, it is of interest to compare the alternative GDP price indexes with the fixed-weighted GNP price index calculated with 1982 quantity weights that was published before the comprehensive revision. As shown in the following tabulation, the previously published fixed-weighted GNP price index increases more slowly than the benchmark-years-weighted GDP price in-

dex over each benchmark interval from 1959 to 1977. Most of the difference is due to the different approaches to weighting and not to revised source data.

	Fixed 1982 weights, GNP prices	Benchmark-years weights, GDP prices	Difference
1959-63 .....	1.0	1.3	-0.3
1963-67 .....	1.9	2.3	-.4
1967-72 .....	3.6	4.7	-1.1
1972-77 .....	6.2	7.2	-1.0
1977-82 .....	7.9	7.9	0

Table D.—Fixed-Weighted and Alternative Measures of GDP Prices and Its Major Components: Average Annual Rates of Change Over Selected Periods  
[Percent]

	1959-87	1982-87	1987-90	1987-88	1988-89	1989-90		1959-87	1982-87	1987-90	1987-88	1988-89	1989-90
<b>Gross domestic product:</b>							<b>Imports:</b>						
Fixed 1987 weights .....	-5.3	3.3	4.2	3.9	4.4	4.4	Fixed 1987 weights .....	1.4	-2	4.2	5.4	3.1	4.3
Chain-type annual weights ..	4.7	3.4	4.1	3.9	4.3	4.2	Chain-type annual weights .....	5.6	4	4.1	5.2	3.1	4.2
Benchmark-years weights ....	4.6	3.5	4.2	3.9	4.3	4.3	Benchmark-years weights .....	5.4	-1	4.1	5.1	3.0	4.2
<b>Personal consumption expenditures:</b>							<b>Merchandise:</b>						
Fixed 1987 weights .....	4.3	3.8	4.8	4.3	4.8	2.3	Fixed 1987 weights .....	1.0	-9	3.8	5.1	3.1	3.1
Chain-type annual weights .....	4.7	3.9	4.7	4.2	4.8	2.1	Chain-type annual weights .....	5.6	-2	3.7	5.0	3.1	3.1
Benchmark-years weights .....	4.6	3.9	4.7	4.2	4.8	2.2	Benchmark-years weights .....	5.4	-7	3.6	4.8	3.0	3.1
<b>Durable goods:</b>							<b>Services:</b>						
Fixed 1987 weights .....	2.2	1.6	2.2	2.0	2.5	2.1	Fixed 1987 weights .....	4.7	3.0	6.2	6.3	3.0	9.3
Chain-type annual weights .....	2.9	1.9	2.1	2.0	2.4	1.9	Chain-type annual weights .....	5.4	3.2	6.1	6.2	3.0	9.3
Benchmark-years weights .....	2.9	1.9	2.1	1.9	2.4	2.0	Benchmark-years weights .....	5.3	3.0	6.1	6.1	3.0	9.3
<b>Nondurable goods:</b>							<b>Government purchases:</b>						
Fixed 1987 weights .....	4.2	2.4	5.1	3.8	5.5	6.2	Fixed 1987 weights .....	5.1	3.3	4.0	3.7	4.1	4.2
Chain-type annual weights .....	4.4	2.4	5.1	3.8	5.4	6.0	Chain-type annual weights .....	5.6	3.4	3.9	3.6	4.0	4.0
Benchmark-years weights .....	4.4	2.4	5.1	3.8	5.4	6.1	Benchmark-years weights .....	5.7	3.4	3.9	3.7	4.1	4.1
<b>Services:</b>							<b>Federal:</b>						
Fixed 1987 weights .....	5.2	5.2	5.2	5.1	5.0	5.4	Fixed 1987 weights .....	4.6	2.5	3.9	2.8	4.3	4.5
Chain-type annual weights .....	5.3	5.4	5.1	5.1	5.0	5.3	Chain-type annual weights .....	5.5	2.5	3.7	2.7	4.0	4.3
Benchmark-years weights .....	5.3	5.3	5.1	5.1	5.0	5.3	Benchmark-years weights .....	5.5	2.6	3.8	2.8	4.1	4.4
<b>Fixed investment:</b>							<b>National defense:</b>						
Fixed 1987 weights .....	-11.1	.9	2.8	3.3	3.0	2.3	Fixed 1987 weights .....		2.2	3.9	3.1	4.1	4.6
Chain-type annual weights .....	4.3	1.4	2.7	3.2	2.8	2.1	Chain-type annual weights ..		2.4	3.8	3.0	3.9	4.4
Benchmark-years weights .....	3.9	1.2	2.7	3.1	2.8	2.2	Benchmark-years weights ....		2.4	3.8	3.0	3.9	4.4
<b>Nonresidential:</b>							<b>Nondefense:</b>						
Fixed 1987 weights .....	-12.3	-1	2.6	2.8	2.7	2.2	Fixed 1987 weights .....		3.4	3.7	2.0	4.8	4.3
Chain-type annual weights .....	3.9	.7	2.5	2.8	2.6	2.0	Chain-type annual weights ..		3.1	3.4	1.7	4.6	4.0
Benchmark-years weights .....	3.4	.4	2.4	2.7	2.6	2.1	Benchmark-years weights ....		3.2	3.8	2.5	4.8	4.1
<b>Structures:</b>							<b>State and local</b>						
Fixed 1987 weights .....	5.2	1.5	3.8	4.6	4.2	2.6	Fixed 1987 weights .....	5.7	4.0	4.1	4.3	4.0	3.9
Chain-type annual weights ..	5.2	.7	3.8	4.6	4.2	2.7	Chain-type annual weights .....	5.8	4.1	4.1	4.3	4.0	3.9
Benchmark-years weights ....	5.2	.9	3.8	4.5	4.2	2.7	Benchmark-years weights .....	5.8	4.1	4.1	4.3	4.0	3.9
<b>Producers' durable equipment:</b>							<b>Addenda:</b>						
Fixed 1987 weights .....	-13.6	-8	2.0	1.9	1.9	2.0	<b>Final sales of gross domestic product:</b>						
Chain-type annual weights ..	3.1	.7	1.8	1.9	1.8	1.7	Fixed 1987 weights .....	-5.3	3.3	4.2	4.0	4.4	4.4
Benchmark-years weights ....	2.4	.3	1.7	1.7	1.7	1.8	Chain-type annual weights .....	4.7	3.5	4.1	4.0	4.3	4.2
<b>Residential:</b>							Benchmark-years weights .....	4.7	3.5	4.2	4.0	4.3	4.3
Fixed 1987 weights .....	5.1	3.2	3.4	4.3	3.4	2.4	<b>Gross domestic purchases:</b>						
Chain-type annual weights .....	5.2	3.3	3.4	4.2	3.5	2.4	Fixed 1987 weights .....	-5.3	3.3	4.3	3.9	4.4	4.6
Benchmark-years weights .....	5.2	3.2	3.4	4.2	3.4	2.4	Chain-type annual weights .....	4.7	3.4	4.2	3.9	4.3	4.4
<b>Exports:</b>							Benchmark-years weights .....	4.6	3.5	4.3	3.9	4.4	4.5
Fixed 1987 weights .....	.1	-1	3.2	5.7	2.3	1.6	<b>Gross national product:</b>						
Chain-type annual weights .....	4.4	.7	3.1	5.5	2.3	1.6	Fixed 1987 weights .....	-5.3	3.3	4.2	3.9	4.4	4.4
Benchmark-years weights .....	4.2	.4	3.0	5.3	2.2	1.6	Chain-type annual weights .....	4.7	3.4	4.1	3.9	4.3	4.1
<b>Merchandise:</b>							Benchmark-years weights .....	4.6	3.5	4.2	3.9	4.3	4.2
Fixed 1987 weights .....	-8	-1.3	2.9	6.5	2.1	.2							
Chain-type annual weights .....	4.2	-2	2.9	6.2	2.1	.3							
Benchmark-years weights .....	4.0	-5	2.7	6.0	2.0	.3							
<b>Services:</b>													
Fixed 1987 weights .....	4.6	3.2	3.8	3.6	2.7	5.0							
Chain-type annual weights .....	5.0	3.3	3.8	3.6	2.7	5.0							
Benchmark-years weights .....	4.8	3.2	3.8	3.6	2.7	5.0							

NOTE.—Bold-italicized entries should not be used as measures of price change. See the text for an explanation.

### How the Alternative Measures Are Calculated

With one exception, the alternative measures of real GDP and of GDP prices are calculated using the same level of detail as used in calculating real GDP in 1987 prices.<sup>10</sup> As shown in table E, the number of components increases from 765 in 1959 to 2,678 in 1987. Most of this increase came in producers' durable equipment and change in nonfarm business inventories. For 1990, the number of components falls to 1,088, mainly reflecting drops in these same two components. The drops occur because of a lag in the availability of detailed product and industry data for manufacturing; in the next annual NIPA revision, the number of components used for 1990 will increase to the level used for 1987.

For most of the detailed components, a current-dollar estimate and an associated price index are available to compute a quantity measure. For those components for which the quantity measure is obtained by extrapolation, a price measure is computed from the current- and constant-dollar estimates. Most of the detailed price indexes used in the calculations are components of the major price indexes com-

10. The exception is Federal Government purchases by the Departments of Defense and Veterans Affairs, for which BEA develops very detailed constant-dollar estimates from price and quantity information provided by these agencies. This information, which is available beginning in 1972, is aggregated to about 200 components for use in calculating the fixed-weighted price index and alternative measures.

**Table E.—Number of Detailed Components Used in Calculating Alternative Measures of Real GDP and GDP Prices, Selected Years**

	1959	1972	1977	1987	1990 <sup>1</sup>
<b>Gross domestic product</b> .....	765	992	2,260	2,678	1,088
<b>Personal consumption expenditures</b> .....	197	197	200	203	203
Durable goods .....	32	32	34	34	34
Nondurable goods .....	63	63	63	63	63
Services .....	102	102	103	106	106
<b>Gross private domestic investment</b> .....	346	348	1,603	1,831	241
Fixed investment .....	201	221	455	683	105
Nonresidential .....	201	203	437	665	87
Structures .....	18	20	20	20	20
Producers' durable equipment .....	183	183	417	645	67
Residential .....	18	18	18	18	18
Change in business inventories .....	127	127	1,148	1,148	136
<b>Net exports of goods and services</b> .....	51	83	91	278	278
Exports .....	25	42	48	135	135
Merchandise .....	5	11	11	98	98
Services .....	20	31	37	37	37
Imports .....	26	41	43	143	143
Merchandise .....	5	13	13	113	113
Services .....	21	28	30	30	30
<b>Government purchases</b> .....	171	364	366	366	366
Federal .....	68	261	261	261	261
National defense .....	.....	191	191	191	191
Nondefense .....	.....	70	70	70	70
State and local .....	103	103	105	105	105

1. See the text for an explanation of the drop in component detail for 1990.  
NOTE.—The level of detail shown in this table is also used in calculating the fixed-weighted GDP price index.

piled by the Bureau of Labor Statistics—that is, the consumer price index, the producer price index, and the international price indexes. Exceptions include the price indexes for computers and for national defense purchases, which are prepared by BEA; the construction price indexes, prepared by the Census Bureau and BEA; and agricultural commodity prices, prepared by the Department of Agriculture.<sup>11</sup> The prices for government employee compensation are computed from current- and constant-dollar estimates, where the latter are prepared by extrapolating base-year compensation for detailed categories by indexes of employment or hours worked.

BEA plans to make available the detailed current-dollar and price-index components used to prepare the alternative measures of real GDP and of GDP prices. Information on the availability of this database will appear in a subsequent issue of the SURVEY.

### Appendix: A Note on Alternative Measures of Real GDP

The effect of different approaches to weighting on the measurement of real GDP can perhaps best be illustrated using a hypothetical two-commodity economy. Exhibit 1 shows prices, quantities, and current-dollar values—that is, price times quantity—for two commodities (A and B) in years 1 to 6. An important characteristic of the example is that the price of A grows more than the price of B while the quantity of A grows less than the quantity of B.

*Fixed weighting.*—Using the entries in exhibit 1, fixed-weighted measures of real GDP are obtained

11. A summary of the price information used in preparing the constant-dollar estimates is provided in table 7 in "The U.S. National Income and Product Accounts: Revised Estimates," SURVEY 70 (July 1990): 30-33. See also the individual methodology papers listed on the inside back cover of this issue.

**Exhibit 1.—Hypothetical Two-Commodity Economy**

	Year						Ratio: Year 6 to year 1
	1	2	3	4	5	6	
<b>Price (dollars):</b>							
A .....	5	6	8	9	11	12	2.40
B .....	4	4	5	5	6	6	1.50
<b>Quantity (units):</b>							
A .....	6	7	7	8	8	7	1.17
B .....	5	7	8	10	11	11	2.20
<b>Value (dollars):</b>							
A .....	30	42	56	72	88	84	2.80
B .....	20	28	40	50	66	66	3.30
Total .....	50	70	96	122	154	150	3.00

by multiplying quantities in each year by prices in a designated base period. Thus, with year 1 as the base period, real GDP in year 1 is  $(5 \times 6) + (4 \times 5) = 50$ ; in year 2,  $(5 \times 7) + (4 \times 7) = 63$ ; and so on. Likewise, with year 2 as the base period, real GDP in year 1 is  $(6 \times 6) + (4 \times 5) = 56$ ; in year 2,  $(6 \times 7) + (4 \times 7) = 70$ ; and so on. Similarly, real GDP can be calculated using the other years as the base period.<sup>12</sup>

Thus, in principle there are as many measures of fixed-weighted real GDP as there are years that could be used as the base period. Exhibit 2 shows a matrix of real GDP measures calculated from exhibit 1, using each of the 6 years as the base period. The first six rows in the exhibit show real GDP in dollars; the next six rows show real GDP as indexes with the base period set equal to 100.0; the last six rows show period-to-period growth rates in the measures.<sup>13</sup>

In the exhibits, years 1, 3, and 5 are designated as benchmark years. Thus, the index of real GDP based on prices in year 5, the most recent benchmark year, corresponds to the fixed-weighted measure that is featured in practice.

In this example, selecting a later year as the base period produces a lower growth rate than selecting an earlier year because of the characteristic mentioned earlier—that the price of commodity A grows more than the price of commodity B, while the quantity of A grows less than the quantity of B. Therefore, commod-

ity A receives more weight (and commodity B less) when a later year is the base period. *It is true generally* that a later base period produces lower growth in real GDP because fast-growing quantities tend to be associated with relatively slow-growing prices and slow-growing quantities with relatively fast-growing prices.

Over long timespans, such inverse relationships in the growth of prices and quantities tend to be the rule. One explanation for such relationships is that as changes in technology or in market structure lower some relative prices and raise others, buyers respond by demanding relatively more of the low-priced goods and relatively less of the high-priced ones and that these responses outweigh any contrary effects arising from changes in taste or in income levels.

*Chain-type annual weighting.*—In this alternative, the Fisher Ideal index formula is used to calculate the annual change in real GDP. The Fisher Ideal index is the geometric mean of a Laspeyres and a Paasche index. In terms of the example, the year 2 value of the fixed-weighted measure based on prices in year 1 is a Laspeyres quantity index, while the year 2 value of the fixed-weighted measure based on prices in year 2 is a Paasche quantity index. The year 2 values of these indexes (in terms of percent changes) may be taken from the bottom panel of exhibit 2. The geometric mean of these two indexes is the Fisher Ideal index for year 2; that is, the Fisher

12. Because quantity data are not available for most components of real GDP, real GDP is obtained by deflating current-dollar values by price indexes that express the price of each period relative to that of the base period. This procedure yields results identical to those obtained directly from prices and quantities. For example, using prices and quantities directly with year 1 as the base year, commodity A in real terms in year 2 is  $(5 \times 7) = 35$ . The identical result is obtained by deflating the current-dollar value of 42 for commodity A in year 2 by the price index with year 1 as the base year for commodity A in year 2. The price index is  $(6 \div 5) = 1.20$ . Thus, commodity A in real terms is  $(42 \div 1.20) = 35$ .

Algebraically, these two procedures can be shown to be identical as follows: Using prices and quantities directly, real GDP is  $\sum p_o q_t$ , where  $p_o$  is the price in the base period and  $q_t$  is the quantity in year  $t$ . Deflating current-dollar values, the fixed-weighted measure of real GDP is  $\sum (p_t q_t / (p_t / p_o)) = \sum p_o q_t$ . Real GDP may also be expressed as a weighted sum of quantity relatives (indexes) scaled by the base-year value of GDP; that is,

$$\sum \frac{q_t}{q_o} (W_t) \times \sum p_o q_o = \sum p_o q_t, \text{ where}$$

$$W_t = \frac{p_o q_o}{\sum p_o q_o}$$

is the share of current-dollar output in the base year accounted for by the commodity, and  $\sum p_o q_o$  is the base-year value of GDP.

13. As shown in footnote 12, the fixed-weighted measure of real GDP in year  $t$  is  $\sum p_o q_t$ , where  $p_o$  is the price in base year  $o$ , and  $q_t$  is the quantity in year  $t$ . The growth rate in this measure from year  $t-1$  to year  $t$  is

$$100 \left( \frac{\sum q_t p_o}{\sum q_{t-1} p_o} - 1.0 \right).$$

Exhibit 2.—Fixed-Weighted Measures of Real GDP

	Year						Ratio: Year 6 to year 1
	1	2	3	4	5	6	
Real GDP in dollars, based on prices in year:							
1 .....	50	63	67	80	84	79	1.580
2 .....	56	70	74	88	92	86	1.536
3 .....	73	91	96	114	119	111	1.521
4 .....	79	98	10	122	127	118	1.494
5 .....	96	119	125	148	154	143	1.490
6 .....	102	126	132	156	162	150	1.471
Indexes of real GDP, based on prices in year:							
1 .....	100.0	126.0	134.0	160.0	168.0	158.0	1.580
2 .....	80.0	100.0	105.7	125.7	131.4	122.9	1.536
3 .....	76.0	94.8	100.0	118.8	124.0	115.6	1.521
4 .....	64.8	80.3	84.4	100.0	104.1	96.7	1.494
5 .....	62.3	77.3	81.2	96.1	100.0	92.9	1.490
6 .....	68.0	84.0	88.0	104.0	108.0	100.0	1.471
Percent change in real GDP, based on prices in year:							
1 .....	.....	26.0	6.3	19.4	5.0	-6.0	.....
2 .....	.....	25.0	5.7	18.9	4.5	-6.5	.....
3 .....	.....	24.7	5.5	18.8	4.4	-6.7	.....
4 .....	.....	24.1	5.1	18.4	4.1	-7.1	.....
5 .....	.....	24.0	5.0	18.4	4.1	-7.1	.....
6 .....	.....	23.5	4.8	18.2	3.8	-7.4	.....

Ideal index is  $\sqrt{1.260 \times 1.250} = 1.255$ , and the growth rate from year 1 to year 2 is 25.5 percent. Similarly, the Fisher Ideal index for year 3 is  $\sqrt{1.057 \times 1.055} = 1.056$ , and the growth rate is 5.6 percent. Thus, the growth rates in the chain-type annual-weighted index are computed from pairs of year-to-year changes (expressed as ratios) in the fixed-weighted quantity indexes moving diagonally down and across the bottom panel of exhibit 2. These growth rates are entered in the top panel of exhibit 3 and are chained together to provide the chain-type annual-weighted index (with year 5=100) in the bottom panel.<sup>14</sup>

**Benchmark-years weighting.**—In this alternative, the geometric means of the two fixed-weighted quantity indexes based on prices in adjacent benchmark years are used to calculate the annual change in real GDP. In the example, years 1 and 3 form the first pair of adjacent benchmark years, and the fixed-weighted quantity indexes used to calculate the growth rates in real GDP from year 1 to year 3 are based on prices in years 1 and 3. The growth rate from year 1 to year 2 is given by the

geometric mean of the year 2 values of the two fixed-weighted indexes. These values (in terms of percent changes) may be taken from the bottom panel of exhibit 2. For year 2, the index value is  $\sqrt{1.260 \times 1.247} = 1.253$ , and the growth rate is 25.3 percent. Similarly, the geometric mean for year 3 is  $\sqrt{1.063 \times 1.055} = 1.059$ , and the growth rate is 5.9 percent. The cumulated change from year 1 to year 3 of 32.7 percent is identical to the growth rate calculated with the Fisher Ideal index directly from year 1 to year 3—that is,  $\sqrt{1.340 \times 1.315} = 1.327$  (where  $134.0 \div 100.0 = 1.340$ , and  $100.0 \div 76.0 = 1.315$ ).<sup>15</sup>

Beyond the most recent benchmark year, only one set of benchmark weights is available, but the index formula requires two. Therefore, the most recently available year is used as if it were the next benchmark year. In the exhibit, this procedure provides the same annual change for year 6 as in the chain-type annual-weighted index. Once data for year 7 become available, the annual change for year 6 in the benchmark-years-weighted index would be recalculated.

The growth rates for the benchmark-years-weighted index are entered in the top panel of exhibit 3 and chained together to provide an index in the bottom panel. For comparison, exhibit 3 also shows the fixed-weighted quantity index based on prices in year 5, the most recent benchmark year.

Tables 1 through 3 follow.

14. The chain-type annual-weighted measure of real GDP growth from year  $t - 1$  to year  $t$  is

$$100 \left( \sqrt{\frac{\sum q_t p_{t-1}}{\sum q_{t-1} p_{t-1}} \times \frac{\sum q_t p_t}{\sum q_{t-1} p_t}} - 1.0 \right).$$

**Exhibit 3.—Alternative Measures of Real GDP Compared With Fixed-Weighted Measures Based on Prices in Year 5**

	Year						Ratio: Year 6 to year 1
	1	2	3	4	5	6	
Percent change in real GDP, based on:							
Chain-type annual weights .....	.....	25.5	5.6	18.6	4.1	-7.3	.....
Benchmark-years weights <sup>1</sup> .....	.....	25	5.9	18.6	4.3	-7.3	.....
Fixed weights, year 5 prices .....	.....	24.0	5.0	18.4	4.1	-7.1	.....
Indexes of real GDP (year 5 = 100), based on:							
Chain-type annual weights .....	61.1	76.7	81.0	96.1	100.0	92.7	1.517
Benchmark-years weights <sup>1</sup> .....	60.9	76.3	80.8	95.9	100.0	92.7	1.522
Fixed weights, year 5 prices .....	62.3	77.3	81.2	96.1	100.0	92.9	1.490

1. Years 1, 3, and 5 are benchmark years.

15. The benchmark-years-weighted measure of real GDP growth from year  $t - 1$  to year  $t$  is

$$100 \left( \sqrt{\frac{\sum q_t p_a}{\sum q_{t-1} p_a} \times \frac{\sum q_t p_b}{\sum q_{t-1} p_b}} - 1.0 \right), \text{ where}$$

$a$  and  $b$  are benchmark years and  $t = a + 1, a + 2, \dots, b$ . The cumulation of the benchmark-years-weighted index values for the years between  $a$  and  $b$  is equal to the Fisher Ideal index value calculated directly from year  $a$  to year  $b$ :

$$\sqrt{\frac{\sum q_{a+1} p_a}{\sum q_a p_a} \times \frac{\sum q_{a+1} p_b}{\sum q_a p_b}} \times \sqrt{\frac{\sum q_{a+2} p_a}{\sum q_{a+1} p_a} \times \frac{\sum q_{a+2} p_b}{\sum q_{a+1} p_b}} \times \dots \times \sqrt{\frac{\sum q_b p_a}{\sum q_{b-1} p_a} \times \frac{\sum q_b p_b}{\sum q_{b-1} p_b}} = \sqrt{\frac{\sum q_b p_a}{\sum q_a p_a} \times \frac{\sum q_b p_b}{\sum q_a p_b}}.$$

Table 1.—Fixed-Weighted and Alternative Quantity and Price Indexes for Gross Domestic Product, Percent Change from Preceding Period  
[Percent]

Index and year	GDP			Final sales of domestic product			Gross domestic purchases			GNP		
	Fixed-weighted index	Chain-type annual-weighted index	Benchmark-years-weighted index	Fixed-weighted index	Chain-type annual-weighted index	Benchmark-years-weighted index	Fixed-weighted index	Chain-type annual-weighted index	Benchmark-years-weighted index	Fixed-weighted index	Chain-type annual-weighted index	Benchmark-years-weighted index
<b>Quantity indexes</b>												
1960 .....	2.2	2.3	2.3	2.5	2.6	2.5	1.4	1.5	1.5	2.2	2.4	2.4
1961 .....	2.7	2.4	2.4	2.7	2.5	2.5	2.6	2.3	2.3	2.7	2.4	2.4
1962 .....	5.2	6.1	6.1	4.8	5.5	5.5	5.4	6.4	6.4	5.2	6.1	6.2
1963 .....	4.1	4.3	4.4	4.1	4.4	4.5	3.9	4.1	4.2	4.1	4.3	4.4
1964 .....	5.6	6.0	5.9	5.7	6.1	6.1	5.3	5.6	5.5	5.7	6.0	6.0
1965 .....	5.5	6.4	6.3	5.2	5.7	5.7	5.9	6.8	6.7	5.5	6.4	6.3
1966 .....	5.9	6.5	6.6	5.5	6.0	6.1	6.4	6.9	6.9	5.8	6.4	6.4
1967 .....	2.6	2.5	2.7	3.0	3.0	3.2	2.8	2.8	2.9	2.6	2.5	2.7
1968 .....	4.2	4.6	4.5	4.4	4.9	4.8	4.6	5.0	4.9	4.2	4.6	4.5
1969 .....	2.7	3.1	3.0	2.7	3.1	3.0	2.8	3.1	3.1	2.7	3.0	3.0
1970 .....	0	0	0	.7	.8	.7	-2	-3	-3	0	0	0
1971 .....	2.9	3.4	3.4	2.3	2.8	2.8	3.2	3.6	3.7	2.9	3.4	3.5
1972 .....	5.1	5.5	5.7	5.1	5.4	5.6	5.4	5.6	5.9	5.1	5.5	5.7
1973 .....	5.2	5.9	5.7	4.7	5.3	5.1	4.4	4.9	4.9	5.4	6.1	5.9
1974 .....	-6	-6	-6	-4	-3	-2	-1.5	-1.5	-1.5	-5	-5	-4
1975 .....	-8	-7	-9	.6	.7	.6	-1.6	-1.6	-1.7	-1.1	-9	-1.1
1976 .....	4.9	5.3	5.5	3.7	3.9	4.1	5.9	6.4	6.4	5.1	5.5	5.7
1977 .....	4.5	4.9	5.2	4.3	4.5	4.8	5.1	5.7	5.7	4.6	5.0	5.3
1978 .....	4.8	5.3	5.2	4.8	5.2	5.2	4.8	5.2	5.1	4.8	5.2	5.1
1979 .....	2.5	2.8	2.8	3.2	3.5	3.6	2.0	2.1	2.2	2.8	3.1	3.1
1980 .....	-5	-2	0	0	.6	.8	-1.6	-1.9	-1.6	-6	-2	0
1981 .....	1.8	2.5	2.7	.9	1.3	1.6	2.0	2.6	2.9	1.6	2.3	2.5
1982 .....	-2.2	-2.3	-1.9	-1.1	-1.0	-1.4	-1.6	-1.2	-1.2	-2.3	-2.4	-2.0
1983 .....	3.9	3.8	3.9	3.3	3.4	3.4	5.2	5.2	5.2	3.8	3.7	3.8
1984 .....	6.2	7.0	6.7	4.6	4.9	4.9	7.8	8.5	8.3	6.0	6.8	6.5
1985 .....	3.2	3.2	3.3	4.3	4.5	4.5	3.6	3.6	3.6	2.9	3.0	3.0
1986 .....	2.9	2.9	2.9	3.2	3.3	3.2	3.0	3.1	3.1	2.8	2.7	2.7
1987 .....	3.1	3.1	3.2	2.7	2.7	2.9	2.7	2.8	2.9	3.0	3.0	3.1
1988 .....	3.9	3.9	3.8	4.1	4.1	4.0	3.0	2.9	2.9	4.0	4.0	3.9
1989 .....	2.5	2.6	2.5	2.2	2.3	2.2	1.9	1.9	1.8	2.4	2.5	2.4
1990 .....	1.0	1.0	1.0	1.7	1.6	1.6	.5	.5	.5	1.1	1.1	1.1
<b>Price indexes</b>												
1960 .....		1.5	1.4		1.5	1.5		1.5	1.4		1.5	1.4
1961 .....		1.2	1.1		1.2	1.1		1.1	1.0		1.2	1.1
1962 .....		1.3	1.3		1.4	1.3		1.3	1.2		1.3	1.3
1963 .....		1.2	1.2		1.2	1.2		1.2	1.3		1.2	1.2
1964 .....		1.4	1.3		1.4	1.3		1.3	1.4		1.4	1.3
1965 .....		1.9	1.9		1.9	1.9		1.8	1.8		1.9	1.9
1966 .....		2.8	2.9		2.9	2.9		2.8	2.8		2.8	2.9
1967 .....		3.2	3.2		3.2	3.3		3.0	3.0		3.2	3.2
1968 .....		4.4	4.3		4.4	4.3		4.4	4.2		4.4	4.3
1969 .....		4.7	4.7		4.7	4.7		4.6	4.6		4.7	4.7
1970 .....		5.3	5.3		5.4	5.3		5.4	5.4		5.3	5.3
1971 .....		5.0	5.0		5.1	5.1		5.2	5.1		5.0	5.0
1972 .....		4.3	4.5		4.3	4.4		4.5	4.7		4.3	4.5
1973 .....		5.6	5.5		5.6	5.5		5.8	5.8		5.6	5.5
1974 .....		8.8	8.6		8.8	8.6		10.0	10.1		8.8	8.6
1975 .....		9.4	9.4		9.4	9.4		9.3	9.2		9.5	9.4
1976 .....		5.8	5.9		5.9	5.9		5.8	5.8		5.9	5.9
1977 .....		6.4	6.5		6.5	6.6		6.8	7.0		6.4	6.5
1978 .....		7.5	6.6		7.5	6.7		7.5	6.7		7.5	6.6
1979 .....		8.4	8.4		8.5	8.3		8.9	8.8		8.4	8.4
1980 .....		9.0	9.2		9.1	9.1		10.5	10.6		9.0	9.2
1981 .....		9.2	9.1		9.2	9.1		9.0	8.9		9.2	9.1
1982 .....		6.3	6.4		6.4	6.5		5.8	5.7		6.3	6.4
1983 .....	3.8	4.1	4.1	3.8	4.2	4.1	3.3	3.7	3.6	3.8	4.1	4.1
1984 .....	3.3	3.6	3.6	3.3	3.6	3.6	3.0	3.4	3.4	3.3	3.6	3.6
1985 .....	3.5	3.6	3.6	3.5	3.6	3.6	3.3	3.4	3.5	3.5	3.6	3.6
1986 .....	2.7	2.7	2.9	2.7	2.8	2.9	2.7	2.8	2.9	2.7	2.7	2.9
1987 .....	3.1	3.1	3.2	3.0	3.1	3.2	3.4	3.5	3.5	3.1	3.1	3.2
1988 .....	3.9	3.9	3.9	3.9	4.0	4.0	3.9	3.9	3.9	3.9	3.9	3.9
1989 .....	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.4	4.3	4.3	4.3
1990 .....	4.3	4.2	4.3	4.3	4.2	4.3	4.5	4.4	4.5	4.3	4.1	4.2

GDP=Gross domestic product; GNP=Gross national product



Table 2.—Fixed-Weighted and Alternative Quantity Indexes for Gross Domestic Product—Continued

[Index numbers, 1987=100]

Year	GDP	Personal consumption expenditures				Gross private domestic investment				Exports	Imports	Government purchases			Final sales of domestic product	Gross domestic purchases	Gross national product
		Total	Durable goods	Non-durable goods	Services	Total	Fixed investment					Total	Federal	State and local			
							Total	Non-residential	Residential								
Benchmark-years-weighted index																	
1959 .....	38.8	37.2	23.5	49.3	33.0	30.6	30.2	24.0	51.1	18.0	19.2	52.5	66.6	41.0	38.8	38.7	39.0
1960 .....	39.7	38.2	24.0	50.1	34.5	30.3	30.4	25.3	47.4	21.7	19.4	52.0	63.6	42.6	39.8	39.2	39.9
1961 .....	40.7	39.1	23.1	51.2	35.9	30.0	30.2	25.1	47.6	22.1	19.3	54.7	66.3	45.3	40.8	40.1	40.9
1962 .....	43.2	41.0	25.8	52.9	37.7	34.0	33.0	27.3	52.1	23.2	21.4	58.0	72.0	46.4	43.0	42.7	43.4
1963 .....	45.1	42.7	28.3	54.0	39.4	36.3	35.5	28.9	58.3	25.0	22.1	59.2	71.4	49.2	44.9	44.5	45.4
1964 .....	47.7	45.2	30.9	56.6	41.8	39.4	38.9	32.2	61.7	28.3	23.2	60.5	70.2	52.6	47.7	46.9	48.1
1965 .....	50.7	48.0	34.8	59.4	44.0	44.7	42.8	37.8	59.8	28.9	25.6	62.4	70.1	56.2	50.4	50.1	51.1
1966 .....	54.1	50.7	37.7	62.4	46.2	48.6	45.3	42.5	54.5	30.9	29.4	68.5	79.1	59.8	53.4	53.5	54.4
1967 .....	55.5	52.2	38.3	63.5	48.5	46.8	44.8	42.4	52.8	31.6	31.5	74.0	87.9	62.7	55.1	55.1	55.8
1968 .....	58.0	55.1	42.5	66.2	51.0	49.1	47.8	44.2	59.9	33.9	36.2	76.2	88.6	66.1	57.8	57.8	58.4
1969 .....	59.8	57.1	44.1	67.9	53.4	52.1	50.6	47.3	61.7	35.7	38.3	75.7	85.5	67.8	59.5	59.6	60.1
1970 .....	59.8	58.4	42.7	69.4	55.6	48.5	49.4	46.9	58.0	39.5	40.0	73.5	78.4	69.6	59.9	59.4	60.1
1971 .....	61.8	60.6	46.9	70.6	57.6	54.0	53.3	47.0	73.9	39.8	42.1	72.0	72.3	71.8	61.6	61.5	62.2
1972 .....	65.3	64.2	52.9	73.6	60.7	61.0	60.1	51.7	87.2	43.0	46.7	72.0	70.2	73.3	65.1	65.1	65.7
1973 .....	69.0	67.3	58.3	75.9	63.4	68.4	65.6	59.3	86.6	51.8	49.6	71.2	65.9	75.5	68.4	68.3	69.6
1974 .....	68.6	66.8	54.3	74.4	64.9	63.1	61.4	59.7	68.7	57.7	48.4	72.6	65.8	78.2	68.3	67.3	69.3
1975 .....	68.0	68.2	54.3	75.5	67.1	50.9	54.5	53.5	59.7	57.7	42.8	73.5	65.7	79.8	68.7	66.1	68.5
1976 .....	71.8	72.0	61.3	79.0	70.0	61.4	60.1	56.3	73.8	60.9	50.9	73.2	64.8	80.0	71.6	70.4	72.4
1977 .....	75.5	75.2	67.1	81.1	72.9	71.6	69.2	63.3	89.5	62.7	55.9	73.9	66.3	80.0	75.0	74.4	76.2
1978 .....	79.4	78.3	70.3	83.7	76.4	79.6	77.5	72.7	95.0	69.2	60.4	75.5	68.0	81.6	78.9	78.2	80.1
1979 .....	81.7	80.0	69.8	85.4	79.0	81.2	82.0	80.1	91.7	75.8	61.4	77.0	69.0	83.5	81.7	79.9	82.7
1980 .....	81.7	79.8	63.9	84.9	80.6	73.6	77.6	80.7	72.8	84.2	57.8	78.9	72.7	83.9	82.4	78.6	82.6
1981 .....	83.9	80.7	64.3	85.7	81.7	81.1	80.5	86.7	67.1	86.1	60.1	80.2	76.0	83.6	83.7	80.8	84.7
1982 .....	82.3	81.6	64.2	86.1	83.2	71.4	76.1	85.0	55.0	79.4	59.6	81.6	78.9	83.8	83.1	79.8	83.0
1983 .....	85.5	85.4	73.0	88.9	86.5	78.7	81.1	82.7	77.3	76.8	66.8	84.0	82.8	85.0	85.9	84.0	86.1
1984 .....	91.2	89.7	83.1	92.3	89.7	100.7	94.6	97.2	88.4	82.7	83.1	86.7	85.5	87.6	90.1	91.0	91.7
1985 .....	94.2	93.6	90.9	94.7	93.7	99.1	99.3	103.4	89.6	84.0	87.8	92.1	92.0	92.1	94.2	94.3	94.4
1986 .....	96.9	97.2	99.2	98.0	96.2	97.5	99.5	99.3	100.3	89.8	94.6	96.9	96.7	97.1	97.2	97.2	97.0
1987 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988 .....	103.8	103.5	106.1	102.3	103.7	103.1	104.1	106.5	98.9	115.6	103.6	100.5	97.8	102.6	104.0	102.9	103.9
1989 .....	106.4	105.5	109.0	103.7	105.8	105.2	104.4	108.7	95.1	128.6	107.1	102.1	97.3	105.8	104.8	106.4	106.4
1990 .....	107.5	106.8	108.4	103.8	108.2	99.1	102.5	109.7	86.8	138.3	109.3	105.3	98.7	110.4	108.0	105.3	107.6

GDP=Gross domestic product





Table 3.—Fixed-Weighted and Alternative Price Indexes for Gross Domestic Product—Continued

[Index numbers, 1987=100]

Year	GDP	Personal consumption expenditures				Fixed investment			Exports	Imports	Government purchases			Final sales of domestic product	Gross domestic purchases	Gross national product
		Total	Durable goods	Non-durable goods	Services	Total	Non-residential	Residential			Total	Federal	State and local			
Benchmark-years-weighted index																
1959 .....	28.0	28.0	45.0	29.8	23.5	34.2	38.8	24.4	31.4	23.1	21.4	22.3	20.5	28.0	27.4	28.0
1960 .....	28.4	28.5	44.8	30.2	24.0	34.4	38.9	24.6	31.8	23.3	21.8	22.7	21.0	28.4	27.8	28.4
1961 .....	28.8	28.8	44.9	30.4	24.5	34.2	38.7	24.6	32.3	23.3	22.2	23.0	21.5	28.7	28.1	28.7
1962 .....	29.1	29.1	45.1	30.6	24.9	34.2	38.6	24.7	32.3	23.0	22.9	23.6	22.3	29.1	28.4	29.1
1963 .....	29.5	29.5	45.3	31.0	25.3	34.1	38.7	24.5	32.2	23.4	23.4	24.2	22.8	29.5	28.8	29.5
1964 .....	29.9	29.9	45.5	31.4	25.7	34.1	38.6	24.7	32.4	23.9	24.1	25.0	23.3	29.9	29.2	29.9
1965 .....	30.4	30.3	45.1	32.0	26.3	34.6	38.8	25.4	33.5	24.3	24.8	25.7	23.9	30.4	29.7	30.4
1966 .....	31.3	31.1	44.9	33.0	27.0	35.2	39.3	26.3	34.5	24.9	25.8	26.6	25.1	31.3	30.6	31.3
1967 .....	32.3	32.0	45.7	33.8	27.9	36.3	40.4	27.2	36.0	25.0	28.9	27.4	26.6	32.3	31.5	32.3
1968 .....	33.7	33.2	47.1	35.1	29.1	37.6	41.5	28.6	36.7	25.4	28.5	29.1	28.1	33.7	32.8	33.7
1969 .....	35.2	34.6	48.4	36.7	30.3	39.4	43.1	30.6	37.9	26.1	30.3	30.7	30.1	35.3	34.3	35.2
1970 .....	37.1	36.2	49.5	38.5	31.9	41.0	45.1	31.6	39.6	27.6	32.9	33.4	32.6	37.1	36.2	37.1
1971 .....	39.0	37.8	51.3	39.7	33.9	43.1	47.2	33.4	40.9	29.3	35.3	36.0	34.9	39.0	38.1	39.0
1972 .....	40.7	39.2	51.9	41.0	35.4	45.1	49.0	35.5	42.3	31.4	38.1	39.6	37.0	40.8	39.8	40.7
1973 .....	43.0	41.3	52.7	44.2	37.0	47.4	50.6	38.6	47.8	36.8	41.0	42.5	39.8	43.0	42.2	43.0
1974 .....	46.7	45.4	56.0	50.5	39.9	52.0	55.4	42.6	58.7	52.5	45.0	46.3	44.0	46.7	46.4	46.7
1975 .....	51.1	49.2	61.2	54.4	43.2	58.3	62.8	46.6	64.6	57.0	49.7	51.2	48.5	51.0	50.7	51.1
1976 .....	54.1	51.9	64.6	56.4	46.3	61.7	66.4	49.6	66.7	58.8	52.9	54.3	51.7	54.0	53.6	54.1
1977 .....	57.6	55.4	67.5	59.8	50.1	66.6	70.8	54.7	69.6	64.3	56.5	58.0	55.4	57.6	57.4	57.6
1978 .....	61.4	59.4	71.2	63.9	54.1	69.7	72.7	61.4	73.0	68.3	60.7	62.1	59.5	61.4	61.2	61.4
1979 .....	66.6	64.8	75.9	70.9	58.5	75.5	78.0	68.2	81.6	79.3	65.9	67.4	64.7	66.6	66.6	66.6
1980 .....	72.7	71.8	82.2	79.5	64.7	82.0	84.5	75.2	89.6	98.2	72.9	74.8	71.5	72.6	73.6	72.7
1981 .....	79.3	78.3	87.7	86.0	71.3	89.6	92.7	81.2	95.9	103.8	79.2	82.0	77.1	79.2	80.2	79.3
1982 .....	84.3	82.7	91.2	88.7	77.1	94.3	97.8	85.2	97.8	100.4	84.5	87.8	82.0	84.4	84.8	84.3
1983 .....	87.7	86.4	92.9	91.0	82.1	93.9	96.4	87.3	98.1	97.1	88.0	91.5	85.3	87.8	87.8	87.8
1984 .....	90.9	89.7	94.2	93.6	86.3	94.2	95.9	89.9	99.2	96.6	91.8	94.9	89.5	90.9	90.8	90.9
1985 .....	94.2	93.2	95.4	96.1	90.8	95.7	97.0	92.2	97.8	94.5	95.1	97.4	93.4	94.2	93.9	94.2
1986 .....	96.9	96.0	96.8	96.1	95.7	98.0	98.8	95.8	96.9	93.2	97.3	98.5	96.4	96.9	96.6	96.9
1987 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988 .....	103.9	104.2	101.9	103.8	105.1	103.1	102.7	104.2	105.3	105.1	103.7	102.8	104.3	104.0	103.9	103.9
1989 .....	108.4	109.2	104.4	109.4	110.3	106.0	105.3	107.8	107.7	108.2	107.9	107.1	108.5	108.4	108.5	108.4
1990 .....	113.0	114.9	106.5	116.0	116.2	108.3	107.5	110.4	109.3	112.7	112.3	111.8	112.7	113.1	113.3	113.0

GDP=Gross domestic product

# Economic Theory and BEA's Alternative Quantity and Price Indexes

By Jack E. Triplett

**I**N THIS ISSUE, BEA is introducing new, alternative price and quantity indexes for the major components of the national income and product accounts (see "Alternative Measures of Change in Real Output and Prices" on page 32). This article describes the index number theory underlying these alternative indexes and discusses the interpretation of them.

## *Index number theory*

Economic theory has long been used to specify the construction of price and quantity index numbers. The modern treatment originated in an article published in the 1920's by the Russian mathematician and economist A.A. Konüs.<sup>1</sup> Konüs analyzed the measurement of consumer prices, the theory of which he named the "true index of the cost of living." Cost-of-living index theory was developed independently by English-language economists in the early 1930's. The theory was summarized by Ragnar Frisch in 1936 in a famous review article on index numbers.<sup>2</sup>

The theory of the cost-of-living index applies directly to the measurement of consumption prices, such as the price index for the personal consumption expenditures (PCE) component of gross domestic product (GDP). This article will summarize the theory of the cost-of-living index, which is the best known and best developed part of the economic theory of index numbers; with suitable changes in language and notation and in some conditions and assumptions, the principles can be extended to investment goods as well.

Cost-of-living index number theory proceeds from the proposition that a consumption price index should measure the change in the cost of maintaining a fixed, or constant, standard of living. If the price index holds the standard of living constant, then any increase in per capita consumption expenditures that exceeds the increase

in the price index can be interpreted as an increase in the standard of living. Conversely, if per capita consumption expenditures rise more slowly than the price index, the standard of living, or *real* per capita consumption, is falling. Real consumption, either per capita or in the aggregate, can be expressed as a quantity index, which is the counterpart of the consumption price index.

Thus, from the standard-of-living orientation, the price index measures the changing cost of a constant standard of living, and the quantity index measures increases or decreases in the standard of living. The same interpretation may also be given to conventional fixed-weighted indexes, such as the base-weighted indexes that traditionally have been employed in measuring real GDP. In the fixed-weighted PCE price index, one holds constant the collection of goods and services actually consumed in 1987, which is a way of holding constant the living standard that existed in 1987.

Cost-of-living index theory stresses, however, that consumers can reach the same standard of living in more than one way. Consumers may substitute between commodities that serve similar general purposes (for example, chicken or fish for beef) or even dissimilar ones (a new car for a vacation). Substitution implies that differing collections of goods and services may still represent equivalent standards of living.

Moreover, nationwide data indicate that consumers systematically substitute away from those goods and services whose prices rise the most rapidly and toward those goods and services whose prices rise less rapidly or decline. Commodities whose prices grow most rapidly show, on average, the slowest growth in consumption; commodities whose prices grow more slowly (or decline) show, on average, the most rapid growth in consumption. The same patterns also apply to many nonconsumption goods, such as investment or capital goods; for example, the prices of computer equipment have declined at

1. A.A. Konüs, "The Problem of the True Index of the Cost of Living," *Econometrica* 7 (January 1939): 10-29.

2. Ragnar Frisch, "Annual Survey of General Economic Theory: The Problem of Index Numbers," *Econometrica* 4 (January 1936): 1-38.

an extremely rapid rate over the past several decades, while the proportion of investment expenditures accounted for by computer equipment has increased dramatically.

Economic theory suggests that a consumption price index that truly tracks the cost of living should be based on the costs of collections of commodities that represent equivalent living standards and that this index should not, therefore, hold quantities fixed as consumers shift their expenditures. For example, when chicken is substituted for beef, one should look at meat consumption as a whole, rather than at fixed quantities of different kinds of meats, and perhaps one should even look at food consumption as a whole, rather than at fixed quantities of meat, vegetables, and so forth.

Economic theory also suggests that when consumers do substitute toward commodities whose prices rise less rapidly or decline, the cost of maintaining an equivalent standard of living rises less rapidly than the cost of the fixed basket of commodities that were consumed in a previous period, such as 1987. For example, when used to measure consumption prices between 1987 and 1992, a fixed basket of the commodities consumed in 1987 gives too much weight to the prices that rise rapidly over the timespan and too little weight to the prices that fall; as a result, using the 1987 fixed basket *overstates* the 1987–92 cost-of-living change. Conversely, because consumers substitute, a fixed basket of the commodities consumed in 1992 gives too much weight to the prices that have fallen over the timespan and too little to the prices that have risen; as a result, the 1992 fixed basket *understates* the 1987–92 cost-of-living change.

The difference between a fixed-weighted price index and a price index that accounts for substitution is often termed the “substitution bias” in fixed-weighted indexes.

### *Development of superlative indexes*

The theoretical cost-of-living index was for many years regarded as purely an abstraction, an idea that could not be implemented in actual price index calculations. To compute a constant standard of living, one would have to know how much consumers substitute among commodities in response to relative price changes. In other words, one would have to be able to separate changes in consumption spending that raise (or lower) the standard of living from changes in spending that merely represent alternative ways of achieving the same living standard. Even with

econometric methods, which have been applied to the problem,<sup>3</sup> the research task is enormous, and the research results still leave a range of uncertainties.

In 1976, W. Erwin Diewert published an article that suggested a relatively simple way to approximate the theoretical cost-of-living index.<sup>4</sup> Abandoning the attempt to find a formula for the “exact” cost-of-living index, Diewert showed that a class of index numbers, which he named “superlative index numbers,” would give good approximations to the “exact” formula. Some of these superlative index formulas turn out to be relatively simple to compute and use.

One of the most attractive of these superlative index numbers is the Fisher Ideal index, proposed by Irving Fisher in 1922. The Fisher Ideal index is simply the geometric mean of the fixed-weighted Paasche and Laspeyres indexes, the formulas for which have long been the primary ones used in constructing indexes for the U.S. national accounts.<sup>5</sup>

Another superlative index is the Tornqvist index, developed in the 1930’s at the Bank of Finland. This index is a logarithmically defined index that employs an average of the weights for the two periods being considered.<sup>6</sup>

Diewert showed that the Fisher Ideal index and the Tornqvist index are theoretically better measures of the cost of living than the traditional fixed-weighted Paasche or Laspeyres indexes. The superlative indexes accommodate substitution in consumer spending while holding living standards constant, something the Paasche and Laspeyres indexes do not do. From the view of theory, the Fisher Ideal formula and the Tornqvist formula are equally good; therefore, one can choose between the two on pragmatic grounds.

3. The major studies are by Steven D. Braithwait, “The Substitution Bias of the Laspeyres Price Index: An Analysis Using Estimated Cost-of-Living Indexes,” *American Economic Review* 70 (March 1980): 64–77; and Marilyn E. Manser and Richard J. McDonald, “An Analysis of Substitution Bias in Measuring Inflation, 1959–85,” *Econometrica* 56 (July 1988): 909–930.

4. W. Erwin Diewert, “Exact and Superlative Index Numbers,” *Journal of Econometrics* 46 (May 1976): 115–45.

5. Fisher Ideal quantity index =

$$\sqrt{\frac{\sum P_1 Q_2}{\sum P_1 Q_1} \times \frac{\sum P_2 Q_2}{\sum P_2 Q_1}}$$

6. Logarithm of Tornqvist quantity index =

$$\sum \ln \left( \frac{Q_2}{Q_1} \right) \frac{1}{2} \left( \frac{P_1 Q_1}{\sum P_1 Q_1} + \frac{P_2 Q_2}{\sum P_2 Q_2} \right)$$

The Fisher Ideal formula is somewhat easier to compute than the Tornqvist formula; modern computers make this only a marginal advantage. The Fisher Ideal index is also somewhat easier to interpret; a user can examine its component Laspeyres and Paasche indexes to gain a mechanical understanding of movements in the index, and such calculations assist in the analysis of price and quantity movements.

Finally, a major advantage of the Fisher Ideal formula is that it has a “dual” property that is not shared by the Tornqvist formula. A Fisher Ideal *price* index implies a Fisher Ideal *quantity* index, and the converse: That is, the product of a Fisher Ideal price index between two periods and a Fisher Ideal quantity index between the same two periods is equal to the total change in value (change in current-dollar expenditures) between those periods. In contrast, a Tornqvist price index multiplied by a Tornqvist quantity index does not equal the change in value between the two periods. In fact, the quantity index that corresponds to a Tornqvist price index does not have an explicit, algebraic formula (and likewise, the price index corresponding to a Tornqvist quantity index has no explicit formula).

*Constructing time series with superlative indexes*

Though economic theory indicates preferred index number formulas for making two-period comparisons, it gives less guidance on forming time series of index numbers covering three or more periods.

Consider the following table of annual price indexes that can be computed covering the years 1987–90:

Terminal year	Initial year			
	1987	1988	1989	1990
1987.....	<b>I<sub>87,87</sub></b>			
1988.....	<b>I<sub>87,88</sub></b>	I <sub>88,88</sub>		
1989.....	I <sub>87,89</sub>	<b>I<sub>88,89</sub></b>	I <sub>89,89</sub>	
1990.....	I <sub>87,90</sub>	I <sub>88,90</sub>	<b>I<sub>89,90</sub></b>	I <sub>90,90</sub>

Each entry in the table designates a superlative index (the Fisher Ideal, in these examples) that measures price change between 2 years with different quantity weights. For example, I<sub>87,88</sub> is a Fisher Ideal index number computed as the geometric mean of two indexes measuring price change between 1987 and 1988; the first uses weights from 1987 and the second, weights from

1988. Similarly, I<sub>87,90</sub> measures price change between 1987 and 1990 using a Fisher Ideal formula that is the geometric mean of one index having 1987 weights and a second having 1990 weights.

Starting with the index for 1987 (I<sub>87,87</sub>, which is, of course, equal to 1), there are two ways to measure price change between 1987 and 1990. One way is to use the “direct” index calculation procedure—that is, to go straight down the column labeled 1987 to compute the direct index number between 1987 and the year that is designated. The index I<sub>87,88</sub>, for example, uses weights for 1987 and 1988; the index I<sub>87,89</sub> uses weights for 1987 and 1989 (ignoring 1988), and the index I<sub>87,90</sub> uses weights for 1987 and 1990. In this time series of index numbers, each entry measures price change from the base year of 1987 directly to the designated year, without considering either prices or quantities of intervening years. A statistical table would then record the results of the computations indicated in the column headed “1987” in the table.

The disadvantage of the direct index procedure is that some relevant index calculations are not in the 1987 column. Suppose one wants to know the price change between 1988 and 1989. For most purposes, it is reasonable to specify that the weights for such a price index should be taken from 1988 and 1989 (that is, the index I<sub>88,89</sub> from the second column of the table). This index is not, of course, present in the 1987 column. For some purposes, therefore, the direct index procedure does not give the “best,” or most relevant, measure of *period-to-period* price change.

The second way to obtain price measures between 1987 and 1990 is to use the “chain” index calculation procedure. In terms of the table, the chain index uses the calculations that are indicated by the boldfaced diagonal; that is, starting with the I<sub>87,88</sub> index value, this value is multiplied by the indexes in the boldfaced diagonal, so that the chain index (1987–90) = I<sub>87,87</sub> × I<sub>87,88</sub> × I<sub>88,89</sub> × I<sub>89,90</sub>. With the chain index procedure, the price index for every adjacent pair of years has weights from exactly those 2 years.


The disadvantage of the chain index procedure is that for price comparisons over a whole period, such as 1987–90, the chain index incorporates all the intervening shifting weights. Thus, if one wants to know the change in the cost of a constant standard of living between 1987 and 1990, the answer is given by the direct index I<sub>87,90</sub>, which has weights only from 1987 and 1990.

It may be difficult to decide which calculation procedure to use. Neither one is best for

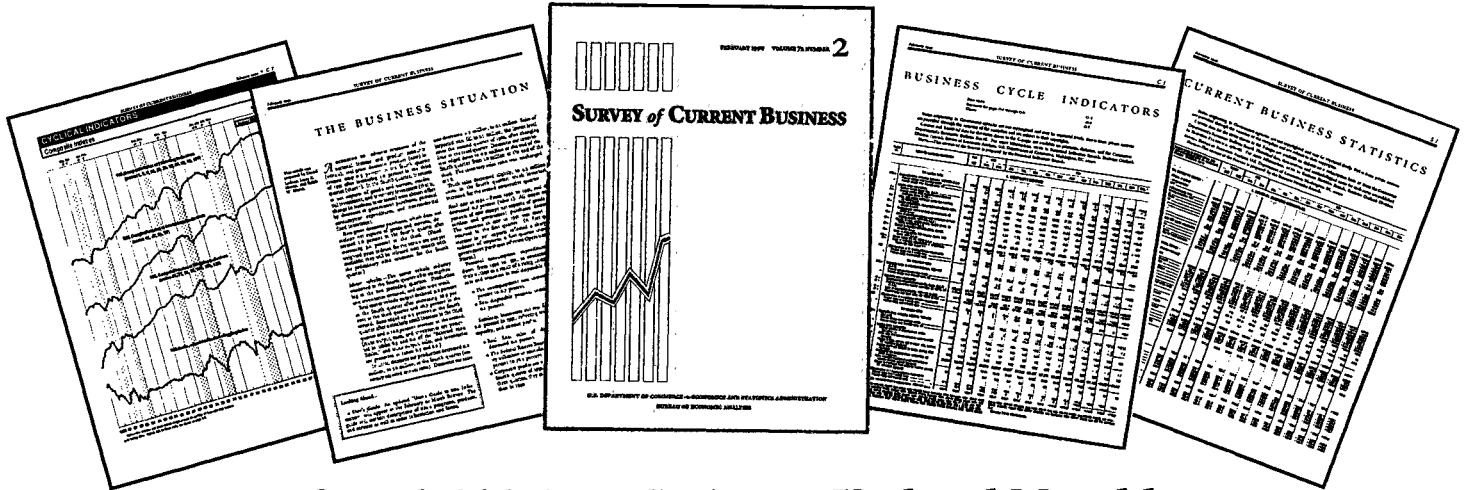
all purposes. For some purposes, one wants a measure of the total change between 1987 and 1990; this will generally be given by the direct index between 1987 and 1990. However, for other purposes, one wants the best measure for, say, 1989–90, which is obtained from one of the links in the chain index. Because there are different uses for price measures—and also for quantity measures—it is generally advantageous for users to have access both to chain indexes, which are preferable for year-to-year or quarter-to-quarter comparisons, and to some form of direct index, which is preferable for longer term comparisons (1982 to 1987, or 1987 to 1990). To provide measures for different purposes, the new BEA alternative price and quantity measures include both a chain-type index (the annual weighted index) and a form of direct index (the benchmark-years-weighted index), both of which are based on the Fisher Ideal index number formula.

One qualification needs to be stated. For *very* long intervals, the assumptions necessary to produce direct indexes become insupportable. Suppose, for example, one wished to compare the change in a fixed standard of living between 1930 and 1990. Such a question becomes conceptually problematic because over an interval of 60 years, too many changes have occurred in the economy, in the way people live, and in tastes and customs. It might be reasonable to assume that economic conditions are sufficiently constant over, say, 5 years, so that a meaningful cost-of-living index can be computed. Computing one over 10 years poses perhaps a few more problems (for example,

new goods are introduced or tastes change), but the calculations may still be useful because the assumptions necessary to make such calculations are not sufficiently implausible as to render the interpretation of the numbers meaningless. The problematical parts become increasingly of concern as the interval lengthens to 15, 20, or 25 years. As one pushes these comparisons back further in time, any economic measurement becomes increasingly uncertain. Measuring the cost of a constant standard living over an interval as long as 500 years or more (which has been tried in some studies in economic history) involves a very large range of uncertainty that cannot be eliminated by any refinements in the formula used for calculating the price index.

The new BEA alternative price and quantity indexes provide direct indexes (in the form of the benchmark-years-weighted indexes) that cover the intervals between benchmarks, usually 5 years. Indexes for longer intervals (10 or 15 years or more) are produced by chaining these benchmark-years-weighted indexes together. Using this procedure does not necessarily imply that chain indexes are preferred for long-term comparisons. Rather, it recognizes that time series of index numbers will always require compromise, and the compromise adopted seems a useful one. The benchmark-years-weighted index procedure could readily be adapted to provide direct indexes covering longer intervals (for example, 1977–87, which encompasses two benchmark intervals), and such indexes might be of interest for some purposes. 

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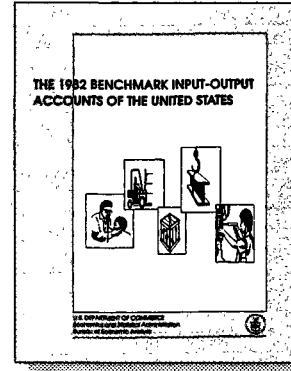
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## Annual Input-Output Accounts of the U.S. Economy, 1987

THIS REPORT PRESENTS the annual input-output (I-O) accounts of the U.S. economy for 1987, the first annual accounts based on the 1982 benchmark I-O accounts.<sup>1</sup> Unlike the 1982 benchmark I-O accounts, the 1987 annual accounts feature gross domestic product (GDP) in place of gross national product as the measure of U.S. production, a change introduced by BEA in last year's comprehensive revision of the national income and product accounts (NIPA's). (The replacement of GNP with GDP leads to a redefinition of net exports of goods and services to exclude net receipts of factor income.) The NIPA revision also introduced a number of definitional and classificational changes, but these changes have not yet been incorporated into the I-O accounts. The benchmark I-O accounts for 1982 and the annual accounts for 1987 will be revised later this year to reflect these changes.<sup>2</sup>

Because they are based on the 1982 benchmark I-O accounts, the annual I-O accounts for 1987 are not consistent with those for earlier years, which were based on earlier benchmark accounts. For example, the annual accounts for 1980-86 are based on relationships between industry output and commodity consumption from the 1977 benchmark accounts.

The procedure used to prepare annual I-O accounts is basically the same as that used for benchmark accounts; however, the annual accounts are based on less comprehensive and less reliable source data. The procedure for each tables has four steps: (1) Determine industry and commodity output totals, (2) estimate

the commodity composition of intermediate consumption for each industry based on benchmark relationships, (3) derive each final-use component of GDP and its commodity composition, and (4) balance the accounts.<sup>3</sup>

The 1987 annual I-O estimates of final use—that is, the estimates of GDP components—differ from the corresponding NIPA estimates for 1987 as published in the comprehensive revision for two reasons. First, the I-O estimates incorporate additional source data and are based on estimating methods that reflect these source data. Second, as previously noted, they do not reflect the definitional and classificational changes incorporated in the comprehensive NIPA revision.<sup>4</sup> Table A shows the difference between the NIPA and the I-O estimates of GDP and its components for 1987; in addition, column 4 quantifies the effect of the definitional and classificational changes on the NIPA estimates, and column 5 shows the effects of incorporating the additional source data into the I-O estimates.

The 1987 annual I-O accounts, at the two-digit industry/commodity level, are presented in five tables: (1) The make of commodities by industries, (2) the use of commodities by industries, (3) commodity-by-industry direct requirements, (4) commodity-by-commodity total requirements, and (5) industry-by-commodity total requirements. The structure of these tables is identical to that of the tables published for the two-digit industry/commodity benchmark I-O accounts except that tables 2 and 3 do not show the components of value added. This report presents only tables 1 and 2; see the next section, "Data availability", for information about obtaining the other tables.

### Data availability

The 1987 I-O accounts are available in magnetic tape, diskette, and computer printout forms. A magnetic tape containing data in tables 1 through 5 costs \$100 (accession no. 51-92-00-001), a diskette (5¼ inch only) costs \$20 (accession no. 51-92-40-001),

1. For a description of the 1982 benchmark I-O accounts, see "Benchmark Input-Output Accounts for the U.S. Economy, 1982," SURVEY OF CURRENT BUSINESS 71 (July 1991): 30-71. For the 1982 benchmark I-O accounts at the six-digit level for 541 industries and commodities, see U.S. Department of Commerce, Bureau of Economic Analysis, *The 1982 Benchmark Input-Output Accounts of the United States* (Washington, DC: U.S. Government Printing Office, December 1991).

2. For information about the comprehensive NIPA revision, see "A Preview of the Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes," SURVEY 71 (September 1991): 23-31; and "The Comprehensive Revision of the U.S. National Income and Product Accounts: A Review of Revisions and Major Statistical Changes," SURVEY 71 (December 1991): 24-42.

3. For more detailed information on the preparation of annual I-O accounts, see "Input-Output Accounts of the U.S. Economy, 1981," SURVEY 67 (January 1987): 42-58.

4. The change that recorded exports and imports of services in the NIPA's on a gross basis does not contribute to the difference between the I-O and the NIPA estimates, because the I-O accounts had previously recorded these series on a gross basis.

**Table A.—Comparison of GDP Estimates in the NIPA's and in the I-O Accounts, 1987**

[Billions of dollars]

	NIPA's <sup>1</sup>	I-O accounts	NIPA's less I-O accounts (col. 1 - col. 2)	Effect of NIPA definitional and classificational changes <sup>2</sup>	Difference (col. 3 - col. 4)
	(1)	(2)	(3)	(4)	(5)
Gross domestic product .....	4,539.9	4,531.3	8.6	10.6	-2.0
Personal consumption expenditures .....	3,052.2	2,996.5	55.7	° 58.6	-2.9
Gross private domestic investment .....	749.3	751.1	-1.8	-2.2	.4
Net exports of goods and services .....	-143.1	-143.5	.4	0	0
Government purchases .....	881.5	927.2	-45.6	-45.6	0

° Corrected.

1. The NIPA estimates are from table 1.1 on page 25 in the January 1992 SURVEY OF CURRENT BUSINESS.

2. The definitional and classificational changes are described in the September 1991 SURVEY and quantified in the December 1991 SURVEY.

### Acknowledgments


The 1987 annual I-O accounts were prepared under the direction of Mark A. Planting, Chief of the Auxiliary Studies Branch. Staff contributors were William A. Allen, Timothy D. Aylor, Alvin D. Blake, Cheryl L. Carlson, Esther M. Carter, Patricia L. Crellin, Sergio B. Delgado, Nicholas R. Dopuch, William McCarthy, Timothy C. Mooney, Edward T. Morgan, Diane E. Nisson, Robert S. Robinowitz, Courtney L. Slater, Sinclair L. Szebrat, Dominique P. Watkins, Patricia A. Washington, and Raquel T. Watson.

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In addition, some of the supplementary tables for the 1982 benchmark I-O accounts—the *personal consumption expenditures by NIPA category* table, the *gross private fixed investment by NIPA category* table, and the *I-O workfile* table—are now available on diskettes. These tables were described in the July 1991 SURVEY OF CURRENT BUSINESS article "Benchmark Input-Output Accounts for the U.S. Economy, 1982." For further information about these products or how to order them, call the Interindustry Economics Division at (202) 523-0792.

Tables 1 and 2 follow. 

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## Errata

### Benchmark Input-Output Accounts

The tables for the article "Benchmark Input-Output Accounts for the U.S. Economy, 1982," which appeared in the July 1991 SURVEY OF CURRENT BUSINESS, contained several errors.

Some of the headings for table 1 ("The Make of Commodities by Industries, 1982") and table 5 ("Industry-by-Commodity Total Requirements, 1982") were incorrect. In table 1, column 99 should have read "Total industry output." In table 5, on pages 62, 64, and 66, the table explanation should have read "Each entry represents the output required, directly and indirectly, of the industry named at the beginning of the row for each dollar of delivery to final demand of the commodity named at the head of the column."

Table 2 ("The Use of Commodities by Industries, 1982") contained errors in the values for "Other agricultural products" on page 42. The corrected inputs are shown below.

[Millions of dollars]

Commodity number	Industry number	Livestock and livestock products	Other agricultural products	Forestry and fishery products	Agricultural, forestry, and fishery services	Iron and ferroalloy ores mining	Non-ferrous metal ores mining	Coal mining	Crude petroleum and natural gas	Stone and clay mining and quarrying	Chemical and fertilizer mineral mining
		1	2	3	4	5	6	7	8	9	10
2	Other agricultural products .....	24,596	3,091	.....	1,128	.....	.....	.....	.....	.....	.....

**Table 1.—The Make of Commodities by Industries, 1987**  
 [Millions of dollars at producers' prices]

Industry number	For the distribution of industries producing a commodity, read the column for that commodity	Livestock and livestock products	Other agricultural products	Forestry and fishery products	Agricultural, forestry, and fishery services	Iron and ferroalloy ores mining	Non-ferrous metal ores mining	Coal mining	Crude petroleum and natural gas	Stone and clay mining and quarrying	Chemical and fertilizer mineral mining
	For the distribution of commodities produced by an industry, read the row for that industry										
	Commodity number	1	2	3	4	5	6	7	8	9	10
1	Livestock and livestock products .....	74,968		114	345						
2	Other agricultural products .....		80,836	1,657	1,080						
3	Forestry and fishery products .....			8,487							
4	Agricultural, forestry, and fishery services .....				16,582						
5	Iron and ferroalloy ores mining .....					1,520	1				1
6	Nonferrous metal ores mining .....					130	5,239			10	
7	Coal mining .....						3	26,004		8	
8	Crude petroleum and natural gas .....								1		
9	Stone and clay mining and quarrying .....							4	77,369	9,917	2
10	Chemical and fertilizer mineral mining .....									4	1,543
11	New construction .....										
12	Repair and maintenance construction .....										
13	Ordinance and accessories .....										
14	Food and kindred products .....										
15	Tobacco manufactures .....										
16	Broad and narrow fabrics, yarn and thread mills .....										
17	Miscellaneous textile goods and floor coverings .....										
18	Apparel .....										
19	Miscellaneous fabricated textile products .....										
20	Lumber and wood products, except containers .....										
21	Wood containers .....										
22	Household furniture .....										
23	Other furniture and fixtures .....										
24	Paper and allied products, except containers .....										
25	Paperboard containers and boxes .....										
26	Printing and publishing .....										
27	Chemicals and selected chemical products .....										
28	Plastics and synthetic materials .....									3	42
29	Drugs, cleaning and toilet preparations .....										
30	Paints and allied products .....										
31	Petroleum refining and related industries .....										
32	Rubber and miscellaneous plastics products .....										11
33	Leather tanning and finishing .....										
34	Footwear and other leather products .....										
35	Glass and glass products .....										
36	Stone and clay products .....										23
37	Primary iron and steel manufacturing .....										
38	Primary nonferrous metals manufacturing .....										2
39	Metal containers .....										
40	Heating, plumbing, and fabricated structural metal products .....										
41	Screw machine products and stampings .....										
42	Other fabricated metal products .....										
43	Engines and turbines .....										
44	Farm and garden machinery .....										
45	Construction and mining machinery .....										
46	Materials handling machinery and equipment .....										
47	Metaworking machinery and equipment .....										
48	Special industry machinery and equipment .....										
49	General industrial machinery equipment .....										
50	Miscellaneous machinery, except electrical .....										
51	Office, computing, and accounting machines .....										
52	Service industry machines .....										
53	Electric industrial equipment and apparatus .....										
54	Household appliances .....										
55	Electric lighting and wiring equipment .....										
56	Radio, TV, and communication equipment .....										
57	Electronic components and accessories .....										
58	Miscellaneous electrical machinery and supplies .....										
59	Motor vehicles and equipment .....										
60	Aircraft and parts .....										
61	Other transportation equipment .....										
62	Scientific and controlling instruments .....										
63	Optical, ophthalmic, and photographic equipment .....										
64	Miscellaneous manufacturing .....										
65	Transportation and warehousing .....										
66	Communications, except radio and TV .....										
67	Radio and television broadcasting .....										
68	Private electric, gas, water, and sanitary services .....										
69	Wholesale and retail trade .....										
70	Finance and insurance .....									59	
71	Real estate and rental .....										
72	Hotels; personal and repair services (except auto) .....										
73	Business services .....										
74	Eating and drinking places .....										
75	Automobile repair and services .....										
76	Amusements .....										
77	Health, educational, and social services and nonprofit organizations .....										
78	Federal Government enterprises .....										
79	State and local government enterprises .....										
82	Government industry .....										
83	Rest of the world industry .....										
84	Household industry .....										
85	Inventory valuation adjustment .....										
T	Total commodity output .....	74,968	80,836	10,258	18,006	1,649	5,245	26,008	77,432	9,975	1,588

\* Less than \$500,000.

Table 1.—The Make of Commodities

[Millions of dollars]

Industry number	For the distribution of industries producing a commodity, read the column for that commodity  For the distribution of commodities produced by an industry, read the row for that industry  Commodity number	New construction	Repair and maintenance construction	Ordnance and accessories	Food and kindred products	Tobacco manufactures	Broad and narrow fabrics, yarn and thread mill	Miscellaneous textile goods and floor coverings	Apparel	Miscellaneous fabricated textile products	Lumber and wood products, except containers
		11	12	13	14	15	16	17	18	19	20
1	Livestock and livestock products .....				3,072						
2	Other agricultural products .....				771						262
3	Forestry and fishery products .....										
4	Agricultural, forestry, and fishery services .....										
5	Iron and ferrous ores mining .....										
6	Nonferrous metal ores mining .....										
7	Coal mining .....										
8	Crude petroleum and natural gas .....										
9	Stone and clay mining and quarrying .....										
10	Chemical and fertilizer mineral mining .....										
11	New construction .....	430,911									
12	Repair and maintenance construction .....		166,047								
13	Ordnance and accessories .....			26,595							
14	Food and kindred products .....				327,548						1
15	Tobacco manufactures .....					26,364					
16	Broad and narrow fabrics, yarn and thread mills .....						34,483	165	153	1,742	1
17	Miscellaneous textile goods and floor coverings .....				1		448	15,221	78	117	12
18	Apparel .....						165	19	63,264	294	
19	Miscellaneous fabricated textile products .....				5		21	41	22	14,865	3
20	Lumber and wood products, except containers .....				1					8	66,348
21	Wood containers .....										69
22	Household furniture .....			1				(*)		48	133
23	Other furniture and fixtures .....			17						13	281
24	Paper and allied products, except containers .....				(*)	45	4	70	2	34	371
25	Paperboard containers and boxes .....				1			1			4
26	Printing and publishing .....						1	39		8	2
27	Chemicals and selected chemical products .....			1	146			2			8
28	Plastics and synthetic materials .....				20		85	653		2	
29	Drugs, cleaning and toilet preparations .....				123					21	
30	Paints and allied products .....						1				2
31	Petroleum refining and related industries .....										
32	Rubber and miscellaneous plastics products .....			1	11		36	150	117	36	318
33	Leather tanning and finishing .....						(*)		4	(*)	
34	Footwear and other leather products .....								49	3	9
35	Glass and glass products .....									2	23
36	Stone and clay products .....						2	34		1	57
37	Primary iron and steel manufacturing .....			11							
38	Primary nonferrous metals manufacturing .....								(*)		1
39	Metal containers .....										
40	Heating, plumbing, and fabricated structural metal products .....			47			1	1		2	283
41	Screw machine products and stampings .....			5						3	2
42	Other fabricated metal products .....			10			3	5		1	44
43	Engines and turbines .....			10							
44	Farm and garden machinery .....							1		2	1
45	Construction and mining machinery .....			1							
46	Materials handling machinery and equipment .....				(*)						1
47	Metalworking machinery and equipment .....			8							
48	Special industry machinery and equipment .....				(*)			(*)			11
49	General industrial machinery equipment .....			1					1	5	2
50	Miscellaneous machinery, except electrical .....			2						1	
51	Office, computing, and accounting machines .....			8							
52	Service industry machines .....			1	(*)					3	1
53	Electric industrial equipment and apparatus .....			1							
54	Household appliances .....			1						(*)	(*)
55	Electric lighting and wiring equipment .....			13							1
56	Radio, TV, and communication equipment .....			201				1			
57	Electronic components and accessories .....			1				8			
58	Miscellaneous electrical machinery and supplies .....										
59	Motor vehicles and equipment .....			96						3	
60	Aircraft and parts .....			1,090						8	
61	Other transportation equipment .....								(*)	2	3
62	Scientific and controlling instruments .....				(*)			24	55	63	(*)
63	Optical, ophthalmic, and photographic equipment .....				13					72	
64	Miscellaneous manufacturing .....				33			39	76	8	165
65	Transportation and warehousing .....										27
66	Communications, except radio and TV .....										
67	Radio and television broadcasting .....										
68	Private electric, gas, water, and sanitary services .....										
69	Wholesale and retail trade .....										
70	Finance and insurance .....										
71	Real estate and rental .....										
72	Hotels; personal and repair services (except auto) .....										
73	Business services .....										
74	Eating and drinking places .....										
75	Automobile repair and services .....										
76	Amusements .....										
77	Health, educational, and social services and nonprofit organizations .....										
78	Federal Government enterprises .....										
79	State and local government enterprises .....										
80	Government industry .....										
81	Rest of the world industry .....										
82	Household industry .....										
83	Inventory valuation adjustment .....										
84	Household industry .....										
85	Inventory valuation adjustment .....										
T	Total commodity output .....	430,911	166,047	28,168	331,699	26,409	35,313	16,539	63,762	17,462	68,280

\* Less than \$500,000.

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Wood con- tainers	Household furniture	Other furniture and fixtures	Paper and allied products, except containers	Paperboard containers and boxes	Printing and publishing	Chemicals and selected chemical products	Plastics and synthetic materials	Drugs, cleaning and toilet prepar- ations	Paints and allied products	Petroleum refining and related industries	Rubber and miscel- laneous plastics products	Leather tanning and finishing	Footwear and other leather products	Glass and glass products	Stone and clay products	Industry number
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
																1
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580	18,295	18,431	81,371	25,281	83,204	96,502	43,646	69,200	12,212	140,582	84,585	2,257	6,506	16,168	46,382	T

Table 1.—The Make of Commodities

[Millions of dollars]

Industry number	For the distribution of industries producing a commodity, read the column for that commodity  For the distribution of commodities produced by an industry, read the row for that industry  Commodity number	Primary iron and steel manufacturing	Primary nonferrous metals manufacturing	Metal containers	Heating, plumbing, and fabricated structural metal products	Screw machine products and stampings	Other fabricated metal products	Engines and turbines	Farm and garden machinery	Construction and mining machinery	Materials handling machinery and equipment
		37	38	39	40	41	42	43	44	45	46
1	Livestock and livestock products .....										
2	Other agricultural products .....										
3	Forestry and fishery products .....										
4	Agricultural, forestry, and fishery services .....										
5	Iron and ferroalloy ores mining .....										
6	Nonferrous metal ores mining .....										
7	Coal mining .....	1									
8	Crude petroleum and natural gas .....										
9	Stone and clay mining and quarrying .....										
10	Chemical and fertilizer mineral mining .....										
11	New construction .....										
12	Repair and maintenance construction .....										
13	Ordinance and accessories .....	7	7		32	10	5	23		(*)	
14	Food and kindred products .....			91		5			26		
15	Tobacco manufactures .....			2							
16	Broad and narrow fabrics, yarn and thread mills .....				(*)		2				
17	Miscellaneous textile goods and floor coverings .....		(*)		1	1	18				
18	Apparel .....						(*)				
19	Miscellaneous fabricated textile products .....				2	6	3		1		3
20	Lumber and wood products, except containers .....	(*)			70	42	96				2
21	Wood containers .....						(*)				
22	Household furniture .....				11	6	13				
23	Other furniture and fixtures .....	6			68	18	29	4	2		33
24	Paper and allied products, except containers .....				1	1	137				
25	Paperboard containers and boxes .....	(*)		28		24	3				
26	Printing and publishing .....	(*)	1		1	1	51				1
27	Chemicals and selected chemical products .....	29	33		3	2	1	1	2		
28	Plastics and synthetic materials .....	1					6				
29	Drugs, cleaning and toilet preparations .....	1					14				
30	Paints and allied products .....				1						
31	Petroleum refining and related industries .....		5				2				
32	Rubber and miscellaneous plastics products .....	9	63	79	42	115	127		3	1	15
33	Leather tanning and finishing .....										
34	Footwear and other leather products .....					1	3				
35	Glass and glass products .....		1		8		14				
36	Stone and clay products .....	4			38	6	29			7	
37	Primary iron and steel manufacturing .....	64,813	471		254	130	2,112		18	5	24
38	Primary nonferrous metals manufacturing .....	371	53,460	3	428	27	323		1	1	
39	Metal containers .....	(*)		11,336	1	24	11		(*)		
40	Heating, plumbing, and fabricated structural metal products .....	119	89	4	41,785	105	334	6	38	67	138
41	Screw machine products and stampings .....	28	17	102	94	29,758	121	8	85	23	16
42	Other fabricated metal products .....	406	162	8	214	241	41,585	2	9	43	111
43	Engines and turbines .....	6			53	6	43	12,868	4	10	26
44	Farm and garden machinery .....	66			24	40	18	302	10,080	189	35
45	Construction and mining machinery .....	56			72	2	97	120	208	14,553	891
46	Materials handling machinery and equipment .....	2	3		12	3	8	1	3	33	6,146
47	Metalworking machinery and equipment .....	67	10		21	85	117	25	36	58	40
48	Special industry machinery and equipment .....	11	10		36	8	38	5	27	19	78
49	General industrial machinery equipment .....	29	10		128	46	238	85	27	150	111
50	Miscellaneous machinery, except electrical .....	19	8		27	23	131	4	4	24	43
51	Office, computing, and accounting machines .....	12			1	5	11		1		
52	Service industry machines .....	3	12		371	18	129	1	3	1	59
53	Electric industrial equipment and apparatus .....	1	24		12	45	40	108		1	49
54	Household appliances .....		28	37	19	102	15		8		2
55	Electric lighting and wiring equipment .....	159	107		41	39	69		4		12
56	Radio, TV, and communication equipment .....	(*)	154		19	1	29		2	2	28
57	Electronic components and accessories .....	17	81		9	22	106				
58	Miscellaneous electrical machinery and supplies .....	6	801		4	238	2		5	32	
59	Motor vehicles and equipment .....	125	13	(*)	9	660	304	411	25	38	169
60	Aircraft and parts .....				9	1	21	509	2	1	26
61	Other transportation equipment .....	(*)			23	4	13	87	65	3	59
62	Scientific and controlling instruments .....	2	4		23	12	152			4	16
63	Optical, ophthalmic, and photographic equipment .....		14		1	7	6				
64	Miscellaneous manufacturing .....	(*)	12		7	20	65		(*)		1
65	Transportation and warehousing .....										
66	Communications, except radio and TV .....										
67	Radio and television broadcasting .....										
68	Private electric, gas, water, and sanitary services .....										
69	Wholesale and retail trade .....										
70	Finance and insurance .....										
71	Real estate and rental .....										
72	Hotels; personal and repair services (except auto) .....										
73	Business services .....										
74	Eating and drinking places .....										
75	Automobile repair and services .....										
76	Amusements .....										
77	Health, educational, and social services and nonprofit organizations .....										
78	Federal Government enterprises .....										
79	State and local government enterprises .....										
80	Government industry .....										
81	Rest of the world industry .....										
82	Household industry .....										
83	Inventory valuation adjustment .....										
84	Household industry .....										
85	Inventory valuation adjustment .....										
T	Total commodity output .....	66,377	55,600	11,688	43,968	31,668	46,922	14,569	10,687	15,264	8,134

\* Less than \$500,000.

by Industries, 1987—Continued  
at producers' prices]

Metalworking machinery and equipment	Special industry machinery and equipment	General industrial machinery and equipment	Miscellaneous machinery, except electrical	Office, computing, and accounting machines	Service industry machines	Electric industrial equipment and apparatus	Household appliances	Electric lighting and wiring equipment	Radio, TV, and communication equipment	Electronic components and accessories	Miscellaneous electrical machinery and supplies	Motor vehicles and equipment	Aircraft and parts	Other transportation equipment	Industry number
47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	
															1
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20,501	16,765	24,473	18,280	60,501	20,961	32,366	15,750	17,253	80,275	49,062	20,503	203,531	85,037	29,458	T

Table 1.—The Make of Commodities

[Millions of dollars]

Industry number	For the distribution of industries producing a commodity, read the column for that commodity  For the distribution of commodities produced by an industry, read the row for that industry  Commodity number	Scientific and controlling instruments	Optical, ophthalmic, and photographic equipment	Miscellaneous manufacturing	Transportation and warehousing	Communications, except radio and TV	Radio and TV broadcasting	Private electric, gas, water, and sanitary services	Wholesale and retail trade	Finance and insurance
		62	63	64	65	66	67	68	69	70
1	Livestock and livestock products .....				82					
2	Other agricultural products .....									
3	Forestry and fishery products .....									
4	Agricultural, forestry, and fishery services .....									
5	Iron and ferroalloy ores mining .....									
6	Nonferrous metal ores mining .....									
7	Coal mining .....									
8	Crude petroleum and natural gas .....							2,970		
9	Stone and clay mining and quarrying .....									
10	Chemical and fertilizer mineral mining .....									
11	New construction .....									
12	Repair and maintenance construction .....									
13	Ordnance and accessories .....	16	41							
14	Food and kindred products .....	2		1						
15	Tobacco manufactures .....			3						
16	Broad and narrow fabrics, yarn and thread mills .....	14		13						
17	Miscellaneous textile goods and floor coverings .....	10		9						
18	Apparel .....	21		21						
19	Miscellaneous fabricated textile products .....	23		84						
20	Lumber and wood products, except containers .....	34		277						
21	Wood containers .....	1								
22	Household furniture .....	16		41						
23	Other furniture and fixtures .....	95	1	56						
24	Paper and allied products, except containers .....	158	80	110						
25	Paperboard containers and boxes .....			210						
26	Printing and publishing .....	1	13	260						
27	Chemicals and selected chemical products .....	10	16	16						
28	Plastics and synthetic materials .....									
29	Drugs, cleaning and toilet preparations .....	643	53	94						
30	Paints and allied products .....			2						
31	Petroleum refining and related industries .....			1						
32	Rubber and miscellaneous plastics products .....	193	21	89						
33	Leather tanning and finishing .....									
34	Footwear and other leather products .....	5	1	26						
35	Glass and glass products .....	48	8	145						
36	Stone and clay products .....	6	67	6						
37	Primary iron and steel manufacturing .....	7		11				19		
38	Primary nonferrous metals manufacturing .....	21	1	(*)						
39	Metal containers .....									
40	Heating, plumbing, and fabricated structural metal products .....	45	1	90						
41	Screw machine products and stampings .....	44	(*)	25						
42	Other fabricated metal products .....	221		72						
43	Engines and turbines .....	1	(*)							
44	Farm and garden machinery .....	9		2						
45	Construction and mining machinery .....	7		(*)						
46	Materials handling machinery and equipment .....	1	1	(*)						
47	Metalworking machinery and equipment .....	39	11	19						
48	Special industry machinery and equipment .....	37	2	10						
49	General industrial machinery equipment .....	81	8	24						
50	Miscellaneous machinery, except electrical .....	10	3	8						
51	Office, computing, and accounting machines .....	143	66	182						
52	Service industry machines .....	26	2	6						
53	Electric industrial equipment and apparatus .....	237	68	24						
54	Household appliances .....	14		35						
55	Electric lighting and wiring equipment .....	37	6	24						
56	Radio, TV, and communication equipment .....	410	73	43						
57	Electronic components and accessories .....	111	123	358						
58	Miscellaneous electrical machinery and supplies .....	74	20	65						
59	Motor vehicles and equipment .....	131		3						
60	Aircraft and parts .....	79	2	1						
61	Other transportation equipment .....	2		2						
62	Scientific and controlling instruments .....	29,382	192	86						
63	Optical, ophthalmic, and photographic equipment .....	317	23,023	7						
64	Miscellaneous manufacturing .....	11	26	30,836						
65	Transportation and warehousing .....				247,751			2,603		
66	Communications, except radio and TV .....					132,898				
67	Radio and television broadcasting .....						1,752			
68	Private electric, gas, water, and sanitary services .....							210,425		
69	Wholesale and retail trade .....								838,685	
70	Finance and insurance .....									456,495
71	Real estate and rental .....									
72	Hotels; personal and repair services (except auto) .....									
73	Business services .....									
74	Eating and drinking places .....									
75	Automobile repair and services .....									
76	Amusements .....									
77	Health, educational, and social services and nonprofit organizations .....									
78	Federal Government enterprises .....							7,216	2,302	63
79	State and local government enterprises .....				6,273			35,520	1,007	76
82	Government industry .....									
83	Rest of the world industry .....									
84	Household industry .....									
85	Inventory valuation adjustment .....									
T	Total commodity output .....	32,790	23,927	33,394	254,105	132,898	1,752	258,752	841,993	456,634

\*Less than \$500,000.



by Industries, 1987—Continued  
at producers' prices]

Real estate and rental	Hotels; personal and repair services (exc. auto)	Business and professional services except medical	Eating and drinking places	Automobile repair and services	Amusements	Health, educational, and social services and nonprofit organizations	Federal Government enterprises	State and local government enterprises	Scrap and used goods	Government industry	Rest of the world industry	Household industry	Inventory valuation adjustment	Total industry output	Industry number	
71	72	73	74	75	76	77	78	79	81	82	83	84	85	99		
					33									78,532	1	
					85									84,772	2	
														8,487	3	
														16,582	4	
														1,522	5	
														5,378	6	
														26,016	7	
														84,755	8	
														10,342	9	
														2,730	10	
														430,911	11	
														166,047	12	
									9					31,387	13	
														328,702	14	
									26					26,420	15	
														38,383	16	
														16,260	17	
														63,858	18	
														15,294	19	
									47					70,959	20	
									2					544	21	
									3					18,367	22	
									7					17,993	23	
									65					81,454	24	
									78					25,522	25	
		52,491							52					135,366	26	
									273					89,515	27	
									36					40,557	28	
									2					68,832	29	
									(*)					11,910	30	
									15					145,987	31	
									92					81,561	32	
														2,203	33	
														6,291	34	
									7					15,835	35	
									7					45,869	36	
									381					68,778	37	
									370					56,294	38	
									50					11,522	39	
									102					44,185	40	
									212					31,862	41	
									120					45,324	42	
									12					14,050	43	
									10					11,063	44	
									21					16,559	45	
									2					6,458	46	
									13					19,768	47	
									4					15,965	48	
									15					24,288	49	
									3					18,314	50	
									45					65,138	51	
									49					22,750	52	
									39					31,789	53	
									10					15,619	54	
									19					17,329	55	
									71					74,122	56	
									95					50,814	57	
									24					22,747	58	
									104					201,860	59	
									10					83,211	60	
									11					29,323	61	
									79					31,743	62	
									69					25,136	63	
		818							22					33,257	64	
									87					250,441	65	
														132,898	66	
		28,284												30,036	67	
								191						210,916	68	
														638,685	69	
		1,904												458,568	70	
188														684,447	71	
684,447														113,719	72	
1,044	112,617													480,915	73	
		58												211,125	74	
		480,915							217					102,802	75	
			210,908											74,117	76	
				102,488										487,105	77	
					72,491									48,534	78	
						486,700								69,875	79	
							36,349							465,441	82	
								18,383							6,766	83
										465,441					6,766	84
												6,766				85
													-16,578			
														-16,578		
693,812	112,620	566,814	212,751	103,186	73,100	486,700	36,349	18,574	2,985	465,441		6,766		8,034,114	T	

Table 2.—The Use of Commodities

[Millions of dollars]

Commodity number	For the distribution of output of a commodity, read the row for that commodity  For the composition of inputs to an industry, read the column for that industry  Industry number	Livestock and livestock products	Other agricultural products	Forestry and fishery products	Agricultural, forestry, and fishery services	Iron and ferroalloy ores mining	Nonferrous metal ores mining	Coal mining	Crude petroleum and natural gas	Stone and clay mining and quarrying	Chemical and fertilizer mineral mining
		1	2	3	4	5	6	7	8	9	10
1	Livestock and livestock products .....	15,745	1,000	16	453	.....	.....	.....	.....	.....	.....
2	Other agricultural products .....	24,384	2,114	.....	1,705	.....	.....	.....	.....	.....	.....
3	Forestry and fishery products .....	.....	.....	126	75	.....	.....	.....	.....	.....	.....
4	Agricultural, forestry, and fishery services .....	2,731	6,154	1,014	6	.....	.....	.....	.....	.....	.....
5	Iron and ferroalloy ores mining .....	.....	.....	.....	.....	131	.....	.....	.....	.....	.....
6	Nonferrous metal ores mining .....	.....	.....	.....	.....	14	666	.....	.....	.....	.....
7	Coal mining .....	33	7	.....	.....	35	8	3,355	.....	.....	.....
8	Crude petroleum and natural gas .....	.....	.....	.....	.....	.....	.....	.....	3,818	.....	.....
9	Stone and clay mining and quarrying .....	1	141	.....	2	17	3	32	.....	206	31
10	Chemical and fertilizer mineral mining .....	.....	(*)	.....	.....	.....	.....	.....	.....	.....	37
11	New construction .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	Repair and maintenance construction .....	696	742	85	311	58	82	329	442	117	28
13	Ordnance and accessories .....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
14	Food and kindred products .....	10,692	.....	200	23	.....	1	(*)	5	1	(*)
15	Tobacco manufactures .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	Broad and narrow fabrics, yarn and thread mills .....	.....	45	.....	.....	.....	1	30	.....	.....	4
17	Miscellaneous textile goods and floor coverings .....	27	57	81	33	.....	.....	.....	.....	.....	.....
18	Apparel .....	.....	.....	.....	.....	.....	(*)	7	6	2	(*)
19	Miscellaneous fabricated textile products .....	.....	120	27	59	.....	.....	.....	1	.....	.....
20	Lumber and wood products, except containers .....	18	17	.....	.....	6	52	83	1	.....	4
21	Wood containers .....	2	219	.....	.....	.....	.....	.....	.....	.....	.....
22	Household furniture .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	Other furniture and fixtures .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	Paper and allied products, except containers .....	81	274	1	11	(*)	1	4	16	7	1
25	Paperboard containers and boxes .....	1	356	1	115	.....	(*)	.....	3	3	1
26	Printing and publishing .....	26	29	5	38	3	5	18	92	20	1
27	Chemicals and selected chemical products .....	202	5,821	31	2,243	63	215	274	485	106	90
28	Plastics and synthetic materials .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	Drugs, cleaning and toilet preparations .....	242	.....	.....	2	.....	.....	.....	.....	.....	1
30	Paints and allied products .....	.....	.....	3	.....	.....	.....	.....	10	.....	.....
31	Petroleum refining and related industries .....	565	2,556	247	561	95	113	434	501	182	55
32	Rubber and miscellaneous plastics products .....	80	258	3	69	51	117	364	25	91	15
33	Leather tanning and finishing .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	Footwear and other leather products .....	29	.....	.....	3	.....	.....	(*)	1	.....	.....
35	Glass and glass products .....	4	.....	1	6	1	2	(*)	22	4	1
36	Stone and clay products .....	2	18	.....	11	1	41	109	39	4	2
37	Primary iron and steel manufacturing .....	.....	.....	.....	.....	73	99	21	(*)	2	.....
38	Primary nonferrous metals manufacturing .....	.....	.....	.....	.....	10	12	21	.....	36	6
39	Metal containers .....	.....	.....	13	.....	.....	.....	.....	.....	.....	.....
40	Heating, plumbing, and fabricated structural metal products .....	14	16	.....	.....	23	79	109	511	60	62
41	Screw machine products and stampings .....	18	.....	.....	.....	21	52	233	.....	31	14
42	Other fabricated metal products .....	119	145	49	67	28	10	118	734	35	10
43	Engines and turbines .....	.....	.....	29	83	75	92	354	39	126	50
44	Farm and garden machinery .....	224	522	13	88	.....	.....	.....	.....	.....	.....
45	Construction and mining machinery .....	.....	.....	.....	.....	56	107	993	554	213	48
46	Materials handling machinery and equipment .....	.....	.....	.....	.....	25	48	97	.....	128	26
47	Metalworking machinery and equipment .....	74	81	(*)	1	4	7	5	35	10	1
48	Special industry machinery and equipment .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
49	General industrial machinery equipment .....	25	40	11	2	89	80	597	223	140	24
50	Miscellaneous machinery, except electrical .....	39	91	1	4	6	13	106	32	16	2
51	Office, computing, and accounting machines .....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
52	Service industry machines .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
53	Electric industrial equipment and apparatus .....	8	19	.....	.....	6	24	92	319	38	10
54	Household appliances .....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....
55	Electric lighting and wiring equipment .....	8	10	1	3	1	2	43	45	6	1
56	Radio, TV, and communication equipment .....	.....	.....	.....	1	.....	.....	(*)	1	.....	.....
57	Electronic components and accessories .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
58	Miscellaneous electrical machinery and supplies .....	26	59	1	21	3	9	7	9	11	2
59	Motor vehicles and equipment .....	70	163	4	64	10	19	12	18	4	(*)
60	Aircraft and parts .....	.....	.....	.....	(*)	.....	.....	.....	.....	.....	.....
61	Other transportation equipment .....	.....	.....	420	7	1	5	4	.....	.....	.....
62	Scientific and controlling instruments .....	.....	.....	13	1	1	8	4	1	.....	(*)
63	Optical, ophthalmic, and photographic equipment .....	.....	.....	1	9	1	2	3	24	2	(*)
64	Miscellaneous manufacturing .....	13	14	1	19	5	2	6	14	7	.....
65	Transportation and warehousing .....	1,935	663	36	450	73	93	188	345	109	13
66	Communications, except radio and TV .....	198	216	3	1	14	23	49	174	35	9
67	Radio and television broadcasting .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
68	Private electric, gas, water, and sanitary services .....	1,403	1,329	9	48	596	526	754	2,098	658	329
69	Wholesale and retail trade .....	1,696	2,933	149	1,024	112	205	1,007	706	276	71
70	Finance and insurance .....	1,909	2,274	247	271	54	165	339	707	149	161
71	Real estate and rental .....	2,659	5,532	.....	480	64	286	936	21,134	178	79
72	Hotels; personal and repair services (except auto) .....	71	116	21	167	11	19	12	71	120	18
73	Business services .....	701	995	374	808	91	238	539	3,415	332	84
74	Eating and drinking places .....	.....	.....	16	153	7	15	33	217	32	6
75	Automobile repair and services .....	334	607	39	407	86	150	89	128	12	3
76	Amusements .....	.....	.....	.....	282	.....	.....	(*)	5	2	1
77	Health, educational, and social services and nonprofit organizations .....	633	49	18	29	8	14	44	62	13	5
78	Federal Government enterprises .....	15	16	8	74	10	22	4	5	17	9
79	State and local government enterprises .....	15	35	4	25	4	8	5	8	1	2
80	Noncomparable imports .....	.....	.....	.....	37	10	21	19	831	5	5
81	Scrap, used and secondhand goods .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
82	Government industry .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
83	Rest of the world industry .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
84	Household industry .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
85	Inventory valuation adjustment .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
I	Total intermediate inputs .....	67,766	35,852	3,323	10,351	2,050	3,759	11,874	37,952	3,557	1,326
VA	Value added .....	10,766	48,920	5,164	6,231	-528	1,619	14,141	46,803	6,785	1,404
T	Total industry output .....	78,532	84,772	8,487	16,582	1,522	5,378	26,016	84,755	10,342	2,730

\* Less than \$500,000.



Table 2.—The Use of Commodities

[Millions of dollars]

Commodity number	For the distribution of output of a commodity, read the row for that commodity  For the composition of inputs to an industry, read the column for that industry	Plastics and synthetic materials	Drugs, cleaning and toilet preparations	Paints and allied products	Petroleum refining and related industries	Rubber and miscellaneous plastics products	Leather tanning and finishing	Footwear and other leather products	Glass and glass products	Stone and clay products
		28	29	30	31	32	33	34	35	36
1	Livestock and livestock products .....		66							
2	Other agricultural products .....		66	1						
3	Forestry and fishery products .....		21	76						
4	Agricultural, forestry, and fishery services .....	1	4	(*)	2	4		(*)	1	3
5	Iron and ferrous alloy ores mining .....		6							9
6	Nonferrous metal ores mining .....		60							23
7	Coal mining .....	118	22		22	18	1	(*)	2	379
8	Crude petroleum and natural gas .....	101		182	75,549	314				
9	Stone and clay mining and quarrying .....		25	52	415	21			190	3,286
10	Chemical and fertilizer mineral mining .....			6	17	13	2		9	38
11	New construction .....									
12	Repair and maintenance construction .....	122	141	36	590	317	5	13	127	329
13	Ordinance and accessories .....					(*)				5
14	Food and kindred products .....	37	544	137	30	7	869	7	1	23
15	Tobacco manufactures .....									
16	Broad and narrow fabrics, yarn and thread mills .....	124				658		196		125
17	Miscellaneous textile goods and floor coverings .....		26		56	870		235		1
18	Apparel .....	4	1	(*)	(*)	8	(*)	8	3	4
19	Miscellaneous fabricated textile products .....	1	3	(*)	(*)	12			1	
20	Lumber and wood products, except containers .....	5	10		69	220		81	201	145
21	Wood containers .....								100	
22	Household furniture .....									
23	Other furniture and fixtures .....									
24	Paper and allied products, except containers .....	630	269	6	92	771	(*)	6	20	516
25	Paperboard containers and boxes .....	337	1,334	58	348	1,037	13	78	654	173
26	Printing and publishing .....	26	445	93	28	117	1	10	39	43
27	Chemicals and selected chemical products .....	13,287	2,262	2,008	2,752	3,117	223	85	966	1,089
28	Plastics and synthetic materials .....	1,147	167	1,413	73	16,291		69		280
29	Drugs, cleaning and toilet preparations .....	209	7,141	69	387	31	62	26		71
30	Paints and allied products .....	85	71	129	7	54			25	81
31	Petroleum refining and related industries .....	339	429	96	9,966	314	15	7	77	357
32	Rubber and miscellaneous plastics products .....	1,792	2,214	27	469	3,994	(*)	297	222	148
33	Leather tanning and finishing .....					3	157	1,410		
34	Footwear and other leather products .....	(*)	(*)	(*)	4	3		241	4	(*)
35	Glass and glass products .....	33	593	15	327	534			1,613	91
36	Stone and clay products .....	21	63	97	201	169	6	4	168	5,658
37	Primary iron and steel manufacturing .....	(*)	2	47	29	233		2	7	107
38	Primary nonferrous metals manufacturing .....	6	6	100		122			4	172
39	Metal containers .....	35	602	499	167					(*)
40	Heating, plumbing, and fabricated structural metal products .....		37			24				7
41	Screw machine products and stampings .....		242	23		356		27	40	39
42	Other fabricated metal products .....	18	521	82	460	747	(*)	63	2	556
43	Engines and turbines .....					35				8
44	Farm and garden machinery .....									
45	Construction and mining machinery .....									93
46	Materials handling machinery and equipment .....					6	(*)			3
47	Metalworking machinery and equipment .....	23	14	3	20	140	1	7	82	34
48	Special industry machinery and equipment .....	17				179		5	15	
49	General industrial machinery and equipment .....	102	162	1	4	22		(*)	9	37
50	Miscellaneous machinery, except electrical .....	50	36	6	53	256	2	14	75	75
51	Office, computing, and accounting machines .....		(*)		(*)	(*)				
52	Service industry machines .....								36	11
53	Electric industrial equipment and apparatus .....								1	1
54	Household appliances .....					(*)		(*)	(*)	5
55	Electric lighting and wiring equipment .....	1	2	(*)	18	145	(*)	(*)	(*)	(*)
56	Radio, TV, and communication equipment .....	(*)	1	(*)	(*)	45				
57	Electronic components and accessories .....					4				
58	Miscellaneous electrical machinery and supplies .....		8		2	23			1	1
59	Motor vehicles and equipment .....	1	16	1	60	17	(*)		5	12
60	Aircraft and parts .....									
61	Other transportation equipment .....									
62	Scientific and controlling instruments .....	7	58	9	29	66	(*)	2	24	18
63	Optical, ophthalmic, and photographic equipment .....	7	24	3	7	19	(*)	2	5	15
64	Miscellaneous manufacturing .....	4	25	6	5	23		84	2	34
65	Transportation and warehousing .....	739	778	340	6,881	1,943	52	108	458	3,129
66	Communications, except radio and TV .....	120	267	47	213	753	5	18	331	206
67	Radio and television broadcasting .....									
68	Private electric, gas, water, and sanitary services .....	1,804	857	121	4,195	2,271	38	59	968	1,938
69	Wholesale and retail trade .....	2,115	4,030	634	4,137	4,675	202	356	864	1,386
70	Finance and insurance .....	237	830	83	2,175	638	13	121	159	497
71	Real estate and rental .....	75	365	35	496	504	5	37	70	167
72	Hotels; personal and repair services (except auto) .....	133	210	27	93	131	36	55	37	84
73	Business services .....	1,862	9,066	379	2,874	2,280	41	357	665	1,682
74	Eating and drinking places .....	92	286	60	91	314	5	50	66	205
75	Automobile repair and services .....	80	84	22	60	89	2	9	62	79
76	Amusements .....	1	8	1	3	7		(*)	1	1
77	Health, educational, and social services and nonprofit organizations .....	50	325	17	125	258	1	3	13	43
78	Federal Government enterprises .....	31	174	40	116	115	5	70	38	88
79	State and local government enterprises .....	20	67	4	20	30	12	(*)	10	13
80	Noncomparable imports .....	149	951	70	440	1,232	1	1	88	164
81	Scrap, used and secondhand goods .....					4			93	
82	Government industry .....									
83	Rest of the world industry .....									
84	Household industry .....									
85	Inventory valuation adjustment .....									
I	Total intermediate inputs .....	26,205	35,965	7,222	114,175	46,574	1,775	4,225	8,660	23,885
VA	Value added .....	14,353	32,867	4,688	31,813	34,987	427	2,067	7,176	21,984
T	Total industry output .....	40,557	68,832	11,910	145,987	81,561	2,203	6,291	15,835	45,869

\* Less than \$500,000.

by Industries, 1987—Continued

at producers' prices]

Primary iron and steel manufacturing	Primary nonferrous metals manufacturing	Metal containers	Heating, plumbing, and fabricated structural metal products	Screw machine products and stampings	Other fabricated metal products	Engines and turbines	Farm and garden machinery	Construction and mining machinery	Materials handling machinery and equipment	Metalworking machinery and equipment	Special industry machinery and equipment	General industrial machinery and equipment	Miscellaneous machinery, except electrical	Office, computing, and accounting machines	Service industry machines	Commodity number
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	
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49,005	42,007	7,938	28,354	17,358	24,048	7,923	6,537	8,804	3,560	8,081	8,593	13,714	8,633	44,848	13,344	
19,772	14,287	3,584	15,831	14,504	21,277	6,127	4,526	7,755	2,898	11,687	7,271	10,574	9,681	20,290	9,406	
68,778	56,294	11,522	44,185	31,862	45,324	14,050	11,063	16,559	6,458	19,768	15,865	24,288	18,314	65,138	22,750	

Table 2.—The Use of Commodities

[Millions of dollars]

Commodity number	For the distribution of output of a commodity, read the row for that commodity  For the composition of inputs to an industry, read the column for that industry  Industry number	Electric industrial equipment and apparatus	Household appliances	Electric lighting and wiring equipment	Radio, TV, and communication equipment	Electronic components and accessories	Miscellaneous electrical machinery and supplies	Motor vehicles and equipment	Aircraft and parts	Other transportation equipment
		53	54	55	56	57	58	59	60	61
1	Livestock and livestock products .....									
2	Other agricultural products .....									
3	Forestry and fishery products .....									
4	Agricultural, forestry, and fishery services .....	2	( <sup>1</sup> )	1	5	4	4	7	4	1
5	Iron and ferroalloy ores mining .....									
6	Nonferrous metal ores mining .....						180			
7	Coal mining .....	6	5	2	6	2	6	50	8	4
8	Crude petroleum and natural gas .....									
9	Stone and clay mining and quarrying .....							2		
10	Chemical and fertilizer mineral mining .....									
11	New construction .....									
12	Repair and maintenance construction .....	218	68	71	273	320	186	874	345	569
13	Ordnance and accessories .....				( <sup>1</sup> )			( <sup>1</sup> )	2	( <sup>1</sup> )
14	Food and kindred products .....	2	1	1	1	7	1	1	7	3
15	Tobacco manufactures .....									
16	Broad and narrow fabrics, yarn and thread mills .....		34	18				52	115	9
17	Miscellaneous textile goods and floor coverings .....	6					9	393		253
18	Apparel .....	2	1	1	16	19	1	9	6	4
19	Miscellaneous fabricated textile products .....				1	1	1	3,041	202	273
20	Lumber and wood products, except containers .....	45	126	48	76		23	209	54	1,174
21	Wood containers .....		3							
22	Household furniture .....				410	38			11	174
23	Other furniture and fixtures .....		5					350	506	137
24	Paper and allied products, except containers .....	160	38	4	86	88	15	115	17	49
25	Paperboard containers and boxes .....	145	302	247	153	133	190	143	10	17
26	Printing and publishing .....	54	17	21	282	79	99	94	91	24
27	Chemicals and selected chemical products .....	160	92	124	202	1,362	800	404	54	96
28	Plastics and synthetic materials .....	90	269	380	272	251	194	579	48	152
29	Drugs, cleaning and toilet preparations .....							14		2
30	Paints and allied products .....	65	154	44	45	2	23	1,154	107	209
31	Petroleum refining and related industries .....	202	17	49	74	106	104	506	187	123
32	Rubber and miscellaneous plastics products .....	444	477	248	2,343	4,537	735	8,133	859	370
33	Leather tanning and finishing .....									
34	Footwear and other leather products .....	( <sup>1</sup> )			1	1	1	6	1	( <sup>1</sup> )
35	Glass and glass products .....	21	220	834	64	454	6	990	22	214
36	Stone and clay products .....	279	147	44	41	88	39	753	206	316
37	Primary iron and steel manufacturing .....	1,203	1,168	704	276	294	319	9,146	1,473	1,014
38	Primary nonferrous metals manufacturing .....	1,633	502	903	1,016	2,579	1,523	3,025	2,043	556
39	Metal containers .....									
40	Heating, plumbing, and fabricated structural metal products .....	158			321	129	3	270	57	888
41	Screw machine products and stampings .....	355	327	559	606	673	358	10,796	807	283
42	Other fabricated metal products .....	298	577	284	776	1,917	611	3,111	714	573
43	Engines and turbines .....	156						3,543		778
44	Farm and garden machinery .....							( <sup>1</sup> )		184
45	Construction and mining machinery .....							30		3
46	Materials handling machinery and equipment .....							1,046	629	71
47	Metallurgical machinery and equipment .....	67	38	44	82	128	92			5
48	Special industry machinery and equipment .....									
49	General industrial machinery equipment .....	91	151	9	64	5	75	1,316	365	588
50	Miscellaneous machinery, except electrical .....	158	24	49	111	173	151	2,425	672	161
51	Office, computing, and accounting machines .....	42			193	57	( <sup>1</sup> )			( <sup>1</sup> )
52	Service industry machines .....		413		11			2,168		
53	Electric industrial equipment and apparatus .....	2,203	980	442	417	245	271	3,330	114	235
54	Household appliances .....		40					( <sup>1</sup> )		252
55	Electric lighting and wiring equipment .....	100	206	586	247	59	233	707	1	166
56	Radio, TV, and communication equipment .....	1	( <sup>1</sup> )	( <sup>1</sup> )	2,602	9	1	578	908	71
57	Electronic components and accessories .....	1,532	13	83	11,682	10,817	1,791	487	2,140	11
58	Miscellaneous electrical machinery and supplies .....	1	2	138	52	13	2,097	3,297	225	119
59	Motor vehicles and equipment .....	7		3	6		8	47,647	6	1,092
60	Aircraft and parts .....	41						38	10,387	73
61	Other transportation equipment .....							22		744
62	Scientific and controlling instruments .....	12	455	5	180	20	14	809	1,870	112
63	Optical, ophthalmic, and photographic equipment .....	12	4	6	64	23	24	32	294	6
64	Miscellaneous manufacturing .....	24	99	25	34	23	8	65	21	53
65	Transportation and warehousing .....	504	230	303	575	775	558	3,535	1,123	369
66	Communications, except radio and TV .....	522	63	99	630	503	152	329	396	116
67	Radio and television broadcasting .....									
68	Private electric, gas, water, and sanitary services .....	487	219	241	744	943	442	1,857	820	256
69	Wholesale and retail trade .....	2,251	1,475	1,337	4,587	4,567	2,083	16,214	2,110	1,864
70	Finance and insurance .....	434	179	263	592	837	427	1,090	1,418	194
71	Real estate and rental .....	162	32	93	511	354	111	183	273	379
72	Hotels; personal and repair services (except auto) .....	203	61	130	517	290	242	258	1,099	36
73	Business services .....	1,642	565	613	3,559	2,027	1,999	4,926	4,249	823
74	Eating and drinking places .....	169	54	85	291	299	471	402	244	91
75	Automobile repair and services .....	36	16	19	29	32	43	5,550	34	43
76	Amusements .....	2	( <sup>1</sup> )	1	9	26	41	20	26	21
77	Health, educational, and social services and nonprofit organizations .....	14	24	12	107	132	18	195	131	12
78	Federal Government enterprises .....	60	80	34	268	79	25	423	214	39
79	State and local government enterprises .....	11	9	7	20	27	10	98	22	7
80	Noncomparable imports .....	165	123	31	303	214	65	1,250	108	16
81	Scrap, used and secondhand goods .....	( <sup>1</sup> )	1	2			155	311		
82	Government industry .....									
83	Rest of the world industry .....									
84	Household industry .....									
85	Inventory valuation adjustment .....									
I	Total intermediate inputs .....	16,675	10,105	9,244	35,840	35,767	17,041	145,410	37,997	16,557
VA	Value added .....	15,113	5,514	8,085	38,282	15,046	5,706	56,450	45,214	12,766
T	Total industry output .....	31,789	15,619	17,329	74,122	50,814	22,747	201,860	83,211	29,323

\* Less than \$500,000.

by Industries, 1987—Continued

at producers' prices]

Table with 17 columns (62-77) representing industries and a 17th column for commodity numbers. Data points are numerical values for each industry across the years 1987-1992.

Table 2.—The Use of Commodities

(Millions of dollars)

Commodity number	For the distribution of output of a commodity, read the row for that commodity  For the composition of inputs to an industry, read the column for that industry	Federal Government enterprises	State and local government enterprises	Government industry	Rest of the world industry	Household industry	Inventory valuation adjustment	Total intermediate use
		78	79	82	83	84	85	
		Industry number						
1	Livestock and livestock products .....	2						72,602
2	Other agricultural products .....	589	(*)					57,883
3	Forestry and fishery products .....	9						11,358
4	Agricultural, forestry, and fishery services .....	3	52					16,553
5	Iron and ferroalloy ores mining .....							2,067
6	Nonferrous metal ores mining .....							6,063
7	Coal mining .....	614	773					22,604
8	Crude petroleum and natural gas .....							105,052
9	Stone and clay mining and quarrying .....							9,786
10	Chemical and fertilizer mineral mining .....		17					1,666
11	New construction .....							156
12	Repair and maintenance construction .....	586	15,959					114,176
13	Ordnance and accessories .....	(*)	(*)					2,381
14	Food and kindred products .....	5,744	3					121,876
15	Tobacco manufactures .....							3,795
16	Broad and narrow fabrics, yarn and thread mills .....	17						34,347
17	Miscellaneous textile goods and floor coverings .....	6	6					9,555
18	Apparel .....	1	14					14,417
19	Miscellaneous fabricated textile products .....	114	3					8,458
20	Lumber and wood products, except containers .....	-75						68,381
21	Wood containers .....							594
22	Household furniture .....							810
23	Other furniture and fixtures .....							2,556
24	Paper and allied products, except containers .....	45	32					69,625
25	Paperboard containers and boxes .....	25	(*)					24,475
26	Printing and publishing .....	499	134					46,451
27	Chemicals and selected chemical products .....	21	546					84,187
28	Plastics and synthetic materials .....							39,558
29	Drugs, cleaning and toilet preparations .....	45	36					20,848
30	Paints and allied products .....		(*)					11,117
31	Petroleum refining and related industries .....	928	2,441					77,549
32	Rubber and miscellaneous plastics products .....	33	133					75,555
33	Leather tanning and finishing .....	1						2,433
34	Footwear and other leather products .....	14	1					1,048
35	Glass and glass products .....	4	3					15,187
36	Stone and clay products .....	1	93					46,088
37	Primary iron and steel manufacturing .....		(*)					74,382
38	Primary nonferrous metals manufacturing .....	1						58,531
39	Metal containers .....							11,610
40	Heating, plumbing, and fabricated structural metal products .....	(*)	2					38,414
41	Screw machine products and stampings .....	16	2					29,664
42	Other fabricated metal products .....	16	33					44,307
43	Engines and turbines .....	126	69					11,111
44	Farm and garden machinery .....		126					2,731
45	Construction and mining machinery .....							4,134
46	Materials handling machinery and equipment .....	5						3,132
47	Metalworking machinery and equipment .....	7	9					8,683
48	Special industry machinery and equipment .....							3,926
49	General industrial machinery equipment .....	2	14					15,410
50	Miscellaneous machinery, except electrical .....	18	166					13,607
51	Office, computing, and accounting machines .....	15	3					16,550
52	Service industry machines .....	16	14					12,038
53	Electric industrial equipment and apparatus .....	(*)	489					19,755
54	Household appliances .....	1	31					3,035
55	Electric lighting and wiring equipment .....	51	65					15,757
56	Radio, TV, and communication equipment .....	1	1					14,299
57	Electronic components and accessories .....	1	21					46,878
58	Miscellaneous electrical machinery and supplies .....	17	77					10,232
59	Motor vehicles and equipment .....	437	147					68,336
60	Aircraft and parts .....							14,337
61	Other transportation equipment .....	3	109					2,847
62	Scientific and controlling instruments .....	9	4					12,173
63	Optical, ophthalmic, and photographic equipment .....	20	13					7,067
64	Miscellaneous manufacturing .....	84	30					10,610
65	Transportation and warehousing .....	3,290	678					138,432
66	Communications, except radio and TV .....	231	232					54,958
67	Radio and television broadcasting .....							537
68	Private electric, gas, water, and sanitary services .....	663	10,643					138,561
69	Wholesale and retail trade .....	656	2,843					250,363
70	Finance and insurance .....	93	572					218,909
71	Real estate and rental .....	1,072	461					219,864
72	Hotels; personal and repair services (except auto) .....	54	55					34,077
73	Business services .....	915	1,068					454,426
74	Eating and drinking places .....	179	120					59,009
75	Automobile repair and services .....	855	57					31,408
76	Amusements .....	8	2					28,716
77	Health, educational, and social services and nonprofit organizations .....	35	58					19,528
78	Federal Government enterprises .....	648	45					27,872
79	State and local government enterprises .....	38	5					4,321
80	Noncomparable imports .....	844						39,628
81	Scrap, used and secondhand goods .....		2					7,398
82	Government industry .....							
83	Rest of the world industry .....							
84	Household industry .....							
85	Inventory valuation adjustment .....							
I	Total intermediate inputs .....	19,649	38,508					3,502,812
VA	Value added .....	28,885	31,367	465,441		6,766	-16,578	
T	Total industry output .....	48,534	69,875	465,441		6,766	-16,578	

\* Less than \$500,000.





## Personal Income by Region and State

- Total Personal Income, Fourth Quarter 1991
- Per Capita Personal Income, Year 1991

### Total Personal Income

This article was written by Howard L. Friedenberg and Rudolph E. DePass. The estimates of State personal income were prepared by the Regional Economic Measurement Division.

**P**ERSONAL INCOME in the Nation grew slightly faster in the fourth quarter of 1991 than in the third quarter. It increased 0.9 percent after increasing 0.7 percent; it had increased 1.1 percent in the second quarter and 0.1 percent in the first.<sup>1</sup> Personal income growth picked up in 34 States. Particularly sharp upswings occurred in the farm States of North Dakota, Montana, South Dakota, Kansas, and Idaho. (See tables 1 and 2 at the end of this article.)

Despite the fourth-quarter pickup, personal income in the Nation grew more slowly in 1991 than in 1990. It increased only 3.2 percent in 1991 after increasing 6.5 percent in 1990.

1. These percent changes are not at annual rates.

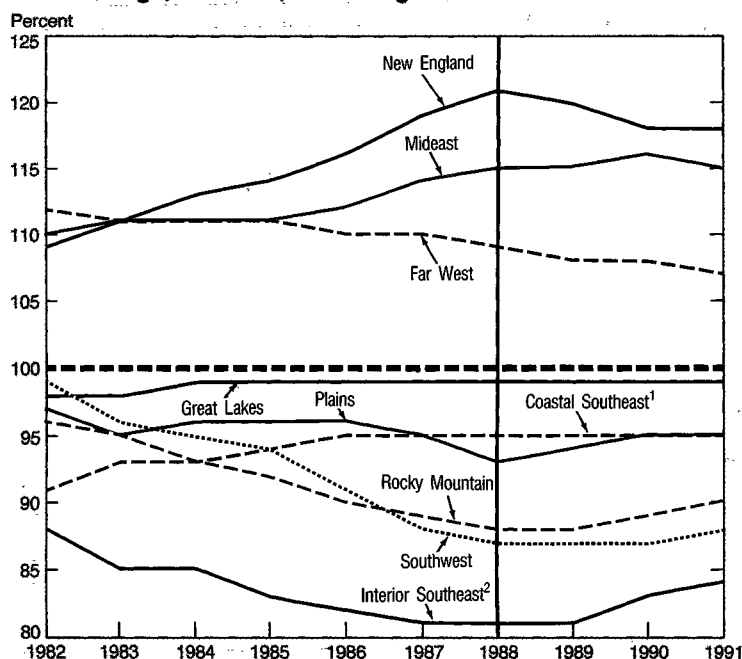
### Per Capita Personal Income

Per capita personal income growth in the Nation slowed in 1991 for the third consecutive year. Per capita income increased 2.1 percent in 1991 after increasing 5.4 percent in 1990, 6.9 percent in 1989, and 7.1 percent in 1988. The increase in 1991 was the smallest since 1958. Prices as measured by the personal consumption expenditures fixed-weighted price index increased 4.1 percent in 1991—the first year since 1982 in which per capita income increased less than prices.

The slowdown in per capita income growth in 1991 encompassed all 50 States; it had encompassed 40 States in 1990 and 25 States in 1989. Only Wyoming, Montana, North Dakota, Hawaii, and Louisiana had per capita income increases larger than the 4.1-percent increase in U.S. prices in 1991. (See tables 3, 4, and 5 at the end of this article.)

CHART 1

### Per Capita Personal Income as a Percent of the U.S. Average, 1982-91, BEA Regions



1. Coastal Southeast consists of Florida, Georgia, North Carolina, South Carolina, and Virginia.

2. Interior Southeast consists of Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Tennessee, and West Virginia.

U.S. Department of Commerce, Bureau of Economic Analysis

### Narrowing in regional and State differences

Regional differences in per capita personal income as a percentage of the U.S. average narrowed during 1988-91 after widening during 1982-88 (chart 1).<sup>2</sup> During 1988-91, per capita income converged toward the U.S. average in the high-income New England and Far West regions and in the low-income Interior Southeast, Southwest, Rocky Mountain, and Plains regions.<sup>3</sup> In contrast, during 1982-88, per capita income had diverged from the U.S. average in each of these regions except the Far West. In the high-income Mideast region, per capita income was unchanged as a percentage of the U.S. average during 1988-91 after diverging from the average during 1982-88.

State differences in per capita income also narrowed during 1988-91, in a pattern similar to that

2. For a discussion of the widening during 1982-88, see "Regional Perspectives," SURVEY OF CURRENT BUSINESS 69 (April 1989): 35-36.

3. "High-income" ("low-income") regions are those with per capita incomes above (below) the U.S. average in 1991. In this article, per capita income "convergence" ("divergence") over time means that per capita income in the ending year of a timespan was closer to (further from) the U.S. average, in percentage terms, than in the beginning year of the timespan. For example, per capita income in New England converged to 118 percent of the U.S. average in 1991 from 121 percent in 1988.

of regions. In most of the States with the highest and lowest per capita incomes in 1991, per capita income converged toward the U.S. average during 1988–91 after diverging from the average during 1982–88 (table A).

**Highest-income States.**—Per capita incomes in 9 of the 15 highest-income States converged during 1988–91; all nine except Virginia are in the New England, the Mideast, or the Far West region. In Connecticut, Massachusetts, New Hampshire, and New Jersey, slow growth in personal income led to below-average increases in per capita income despite slow growth in population; in these States, personal income growth was dampened by sharp declines in construction earnings and below-average gains in earnings in manufacturing and in most private service-type industries.<sup>4</sup> In Maryland, Delaware, California, and Nevada, fast growth in population led to below-average increases in per capita income despite near- or above-average growth in personal income.

**Lowest-income States.**—Per capita incomes in all of the 15 lowest-income States converged during 1988–91; all except South Carolina are in

the Interior Southeast, the Southwest, the Rocky Mountain, or the Plains region. In Mississippi, Arkansas, Louisiana, Kentucky, Alabama, and Tennessee, average or above-average growth in personal income combined with slow growth in population to produce above-average increases in per capita income. In most of these States, personal income growth was boosted by above-average gains in earnings in manufacturing, in construction, and in most private service-type industries.

In Utah, New Mexico, and Idaho, fast growth in personal income more than offset fast growth

**Changes in Per Capita Personal Income**

An area's per capita personal income can change in relation to the U.S. average because its total personal income, its population, or both may grow faster or slower than the U.S. average. For example, in Virginia, per capita income during 1988–91 converged from 106 to 105 percent of the U.S. average; the below-average increase in per capita income (4.2 percent, compared with the U.S. average of 4.8 percent) reflected slow growth in personal income (5.6 percent, compared with 5.8 percent) and fast growth in population (1.4 percent, compared with 1.0 percent).

**Table A.—Per Capita Personal Income and Its Components for Selected States and the United States, 1982, 1988, and 1991**

Rank in 1991	Selected States	Per capita personal income						Average annual percent change					
		Dollars			Percent of U.S. average			Per capita personal income		Total personal income		Population	
		1982	1988	1991	1982	1988	1991	1982–88	1988–91	1982–88	1988–91	1982–88	1988–91
	<b>Highest-income States:</b>												
1	Connecticut .....	14,411	22,958	25,881	125	138	136	8.1	4.1	8.8	4.3	0.7	0.2
2	New Jersey .....	13,965	22,200	25,372	121	134	133	8.0	4.6	8.7	4.8	.6	.2
3	Massachusetts .....	12,695	20,607	22,897	110	124	120	8.4	3.6	9.1	3.7	.6	.1
4	New York .....	12,692	19,403	22,456	110	117	118	7.3	5.0	7.7	5.2	.3	.2
5	Maryland .....	12,704	19,507	22,080	110	118	116	7.4	4.2	8.9	5.7	1.4	1.4
6	Alaska .....	17,213	18,635	21,932	150	112	115	1.3	5.6	4.5	7.4	3.2	1.7
7	Hawaii .....	11,805	17,014	21,306	103	102	112	6.3	7.8	7.8	9.6	1.4	1.7
8	California .....	13,216	18,695	20,952	115	113	110	6.0	3.9	8.4	6.1	2.3	2.2
9	New Hampshire .....	11,596	19,437	20,951	101	117	110	9.0	2.5	11.4	3.2	2.2	.7
10	Illinois .....	12,417	17,961	20,824	108	108	109	6.3	5.1	6.3	5.5	0	.4
11	Delaware .....	12,014	17,944	20,349	104	108	107	6.9	4.3	8.3	6.0	1.3	1.6
12	Virginia .....	11,622	17,675	19,976	101	106	105	7.2	4.2	8.9	5.6	1.6	1.4
13	Washington .....	12,024	16,451	19,442	105	99	102	5.4	5.7	6.8	8.5	1.4	2.6
14	Colorado .....	12,680	16,669	19,440	110	100	102	4.7	5.3	5.8	6.5	1.1	1.2
15	Nevada .....	12,428	17,176	19,175	108	103	100	5.5	3.7	9.1	10.1	3.4	6.1
	<b>United States .....</b>	<b>11,497</b>	<b>16,600</b>	<b>19,082</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>6.3</b>	<b>4.8</b>	<b>7.3</b>	<b>5.8</b>	<b>.9</b>	<b>1.0</b>
	<b>Lowest-income States:</b>												
36	South Dakota .....	9,543	12,906	16,392	83	78	86	5.2	8.3	5.4	8.6	.2	.2
37	Tennessee .....	9,248	14,118	16,325	80	85	86	7.3	5.0	8.0	5.9	.6	.9
38	North Dakota .....	10,568	12,488	16,088	92	75	84	2.8	8.8	2.5	7.6	-.3	-1.1
39	Montana .....	10,097	12,943	16,043	88	78	84	4.2	7.4	4.1	7.8	-.1	.3
40	Oklahoma .....	11,451	13,572	15,827	100	82	83	2.9	5.3	2.7	5.3	-.2	.1
41	Alabama .....	8,879	13,145	15,567	77	79	82	6.8	5.8	7.2	6.4	.4	.5
42	Kentucky .....	9,307	13,018	15,539	81	78	81	5.8	6.1	5.7	6.4	0	.3
43	South Carolina .....	8,744	13,222	15,420	76	80	81	7.1	5.3	8.2	6.7	1.0	1.4
44	Idaho .....	9,324	12,948	15,401	81	78	81	5.6	6.0	5.8	7.8	.2	1.8
45	Louisiana .....	10,307	12,611	15,143	90	76	79	3.4	6.3	3.2	6.0	-.2	-.3
46	New Mexico .....	9,541	12,693	14,844	83	76	78	4.9	5.4	6.4	6.7	1.5	1.3
47	Arkansas .....	8,654	12,469	14,753	75	75	77	6.3	5.8	6.6	6.2	.4	.4
48	Utah .....	9,042	12,220	14,529	79	74	76	5.1	5.9	6.6	7.6	1.4	1.6
49	West Virginia .....	9,064	11,973	14,174	79	72	74	4.7	5.8	3.7	5.2	-1.0	-1.5
50	Mississippi .....	8,038	11,321	13,343	70	68	70	5.9	5.6	6.0	5.8	.2	.1

4. "Private service-type industries" refers to transportation and public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services.

### Relation to the Revised National Estimates

The estimates of the components of State personal income reflect the 1991 comprehensive revision of the national income and product accounts (NIPA's) only to the extent that quarterly movements in the component NIPA series were used as extrapolators to derive national control totals for 1991.<sup>1</sup> The comprehensive revision of the NIPA estimates for 1991 and earlier years will be incorporated into the annual and quarterly State estimates later in 1992.

As noted in the January 1992 SURVEY OF CURRENT BUSINESS,<sup>2</sup> the quarterly NIPA estimates of wages and salaries are usually based on monthly data on employment, hours, and earnings from the Bureau of Labor Statistics establishment survey. For the quarters of 1991, the NIPA estimates incorporate adjustments to reflect the considerable divergence between the monthly employment data for the first quarter of 1991 from the establishment survey and the first-quarter tabulations of employment covered by unemployment insurance, which became available last September. The downward adjustments to NIPA wages and salaries (at annual rates) amounted to \$15 billion in the first quarter and \$10 billion in each of the remaining three quarters.

In preparing the 1991 State estimates, the adjustments to the national wage and salary estimates were reviewed in light of newly available data on unemployment insurance tabulations for the first three quarters of 1991. Based on this review, no changes were made to the adjustments.

1. For a description of the NIPA revision, see "The Comprehensive Revision of the U.S. National Income and Product Accounts: A Review of Revisions and Major Statistical Changes," SURVEY OF CURRENT BUSINESS 71 (December 1991): 24-42.

2. See boxes on pages 4 and 141 of the January 1992 SURVEY.

in population, producing above-average increases in per capita income. In these States, the fast growth in personal income reflected above-average gains in earnings in mining (except in Idaho), manufacturing, construction, and trade.

In North Dakota, South Dakota, and Montana, fast growth in personal income combined with

slow growth in population to produce above-average increases in per capita income. In these States, personal income growth was boosted by above-average gains in farm income and in earnings in construction and retail trade.

*Tables 1 through 5 follow.* 







Table 4.—Total and Per Capita Disposable Personal Income for States and Regions, 1986–91

Table with columns for Area name, Total (Millions of dollars, Percent change), and Per capita (Dollars, Rank in U.S.) for years 1986-1991. Includes rows for United States, New England, Mid-east, Great Lakes, Plains, Southeast, Southwest, Rocky Mountain, Far West, Alaska, and Hawaii, followed by a section for Census Divisions.

^ Revised.
P Preliminary.
1. Percent change was calculated from unrounded data.
2. Per capita disposable personal income was computed using midyear population estimates of the Bureau of

the Census. The 1986-89 population estimates have been adjusted to reflect both the 1980 and 1990 Census of Population counts for April; the 1990 midyear (July 1) estimates reflect the 1990 Census of Population count plus 3 months of estimated population change.



Table 5.—Percent Change in Selected Shares of Personal Income, 1990-91<sup>1</sup>

Area name	Total personal income	Earnings <sup>2</sup>										Government		
		Total	Nonfarm	Mining	Construction	Manufacturing	Transportation, public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services	Other	Federal, civilian	Military	State and local
United States	3.2	2.7	3.0	3.4	-6.6	.9	2.1	1.2	5.7	6.0	-1.1	3.5	2.1	6.1
<b>New England</b>	1.2	-1	0	-1.5	-17.5	-7	.8	-2.8	3.4	4.0	-5.2	1.2	-1.5	1.5
Connecticut	1.9	1.2	1.2	-2.9	-13.3	.4	1.8	-1.3	6.4	3.9	-8.1	0	-2.3	3.6
Maine	1.0	-1.1	-7	1.3	-25.7	-2.5	.3	-2.3	7.2	4.6	1.8	-2	2.9	6.3
Massachusetts	1.1	-2	-2	-2.0	-17.1	-8	.9	-3.5	1.1	3.8	-7.0	2.8	1.6	-2
New Hampshire	.3	-1.1	-1.1	-4	-19.3	-2.7	.2	-3.3	5.8	4.8	-7.2	-5.5	-38.9	4.1
Rhode Island	.1	-2.3	-2.3	-7	-24.1	-2.4	-4.9	-5.6	-1.4	4.8	-2.6	4.2	2.6	-5.9
Vermont	1.7	.7	1.2	4.2	-15.4	1.8	.8	-2	-1.0	5.5	-4.0	-2.4	5.0	6.3
<b>Mideast</b>	2.3	1.5	1.6	-3.1	-10.0	-1	1.1	-1.0	3.8	4.4	-5.6	4.0	3.7	3.7
Delaware	2.9	3.4	3.8	8.6	-4.8	4.3	.8	.9	7.5	5.4	-1.6	1.2	7.3	8.1
District of Columbia	3.0	3.4	3.4	18.3	-16.9	-6.8	1.4	-5.0	1.0	3.9	-24.8	7.5	6.9	1.6
Maryland	2.2	1.7	1.8	.5	-13.1	-1.6	3.9	.9	3.8	4.9	-4.4	5.5	3.8	6.0
New Jersey	2.3	1.7	1.7	-1.3	-12.0	-3	3.7	-9	2.4	5.1	-6.3	1.1	-1.8	6.6
New York	1.8	.6	.7	-4.9	-9.4	-5	-2	-2.3	3.7	2.9	-3.3	.1	5.3	1.1
Pennsylvania	3.0	2.4	2.6	-3.3	-7.8	.5	-1	.8	5.9	6.5	-2.7	2.4	2.5	6.7
<b>Great Lakes</b>	2.7	2.2	2.9	-1.7	-3.4	0	.8	2.2	7.6	5.9	1.1	1.8	1.5	6.4
Illinois	2.8	2.7	3.3	-1.0	-4.0	1	1.3	1.8	8.0	5.8	5.2	1.3	-1.2	8.2
Indiana	2.8	2.5	3.0	-6.8	5.0	1.2	1.4	2.8	7.5	7.6	0	1.3	3.9	5.9
Michigan	2.2	1.5	1.4	3.6	-6.9	-1.4	.5	1.4	5.2	4.6	-3	.8	3.5	5.3
Ohio	2.7	1.8	2.3	-3.6	-7.5	-2	-9	2.7	7.6	5.5	-3.0	3.1	3.2	5.7
Wisconsin	3.6	3.6	4.8	3.5	2.8	2.3	3.2	3.4	9.9	8.2	.7	2.4	2.9	6.3
<b>Plains</b>	2.8	2.4	4.1	3.1	-1.8	1.9	2.1	2.9	8.6	6.6	1.3	5.0	3.1	5.8
Iowa	1.7	.9	4.7	5.4	2.6	.8	.7	3.6	11.7	8.0	3.2	6.6	4.0	6.2
Kansas	2.8	2.6	4.5	4.0	1.3	3.6	1.6	2.8	7.7	6.9	-1.0	6.9	.5	5.7
Minnesota	3.0	2.9	4.3	2.5	-3.6	3.8	3.6	3.1	10.9	5.7	-1.2	4.2	3.9	4.9
Missouri	2.7	2.1	2.5	.7	-5.5	-9	1.4	2.0	4.8	5.9	1.9	5.0	1.3	5.9
Nebraska	2.9	2.7	5.4	10.3	3.6	3.7	1.9	3.4	8.0	5.4	1.6	3.6	5.6	6.9
North Dakota	4.4	4.4	5.3	2.4	2.7	8.4	3.1	3.5	11.7	7.5	1.6	1.2	6.5	4.6
South Dakota	4.2	4.5	7.3	2.9	2.4	8.2	5.7	5.5	12.8	9.2	.8	4.3	7.2	8.4
<b>Southeast</b>	3.9	3.5	3.6	.3	-7.9	2.2	2.5	1.8	6.1	7.1	2	4.2	2.3	6.9
Alabama	4.9	4.6	4.8	.5	1.0	2.5	2.7	2.7	6.0	7.5	1.9	3.6	1.2	10.5
Arkansas	4.9	4.9	5.3	1.9	-6.0	4.3	2.4	5.4	9.1	8.7	-4.0	5.4	3.4	8.8
Florida	3.7	3.3	3.2	2.5	-12.0	.6	2.4	.5	5.1	7.1	3.3	3.9	2.1	6.9
Georgia	3.7	3.2	3.1	-8.5	-13.5	2.3	2.4	1.4	7.3	6.8	-1.9	5.1	5.1	6.0
Kentucky	4.3	4.0	4.3	-5.1	-1.1	.9	4.6	3.4	7.5	8.4	-1	7.2	-9	10.2
Louisiana	5.2	5.3	5.8	6.0	7.4	5.9	2.4	4.0	6.7	6.6	-5	1.6	5.9	8.0
Mississippi	4.7	4.4	4.4	-1.0	-4.4	4.4	2.2	2.6	7.9	8.8	-9	3.4	2.1	4.5
North Carolina	3.6	3.1	3.2	2.7	-7.9	2.1	2.0	1.7	6.9	6.7	-8	4.3	.5	7.5
South Carolina	3.6	2.7	2.5	-9	-11.5	2.5	-4	.8	7.1	6.4	-4.1	1.0	1.8	7.3
Tennessee	4.3	4.0	4.2	-5.3	-3.2	3.0	3.2	2.5	8.4	8.1	-1.2	2.6	1.4	4.6
Virginia	2.6	2.3	2.5	-3	-12.9	1.0	3.1	1.2	3.2	6.4	-3.6	5.4	2.7	4.8
West Virginia	3.8	2.8	2.9	-6	.3	-2.4	1.6	3.5	6.5	7.7	1.3	-3	5.7	5.7
<b>Southwest</b>	5.0	5.0	5.4	8.1	2.8	4.3	3.9	4.2	7.0	7.5	4.2	2.9	-1.2	6.4
Arizona	4.4	3.9	3.9	11.5	-3.6	.8	1.8	3.0	4.0	7.0	4.7	6.0	-8	5.9
New Mexico	6.1	6.2	6.2	7.7	-4	1.8	.1	5.3	7.3	9.4	11.1	6.3	9.2	7.4
Oklahoma	3.4	2.7	4.1	1.5	-4.8	4.3	3.8	4.2	9.5	5.3	3.7	.4	.6	6.5
Texas	5.3	5.5	5.9	9.3	5.2	5.0	4.6	4.4	7.2	7.8	3.6	2.4	-3.3	6.4
<b>Rocky Mountain</b>	5.5	6.1	6.6	3.9	9.8	1.1	3.7	5.7	9.9	10.3	3.5	4.5	5.9	7.7
Colorado	5.4	6.2	6.5	2.9	7.6	-1.0	4.0	5.5	8.6	11.4	.6	7.2	6.0	6.7
Idaho	3.8	3.3	7.1	-8.3	5.5	3.9	3.4	6.6	11.3	9.7	9.6	6.7	.6	11.6
Montana	6.0	7.5	6.1	9.2	11.0	-6	4.4	6.3	11.7	7.6	.3	-8	6.7	7.4
Utah	6.3	6.9	7.4	2.1	18.4	3.9	4.0	5.6	13.6	9.9	3.1	1.4	8.2	8.4
Wyoming	6.8	7.4	5.6	6.9	9.9	6.9	.1	5.0	6.2	4.8	6.5	5.3	5.8	6.6
<b>Far West</b>	3.3	2.8	2.9	2.6	-9.8	.3	2.9	.3	5.3	6.2	-2.8	2.8	2.2	8.8
California	2.7	2.0	2.2	2.8	-12.8	2	2.6	-8	4.9	5.3	-4.9	2.1	1.8	8.1
Nevada	5.6	5.5	5.5	-1	-11.1	2.7	4.5	4.9	8.3	7.6	-1.2	11.8	7.4	13.7
Oregon	4.6	4.4	5.0	6.4	2.2	2.1	4.9	4.9	10.7	5.5	-2.5	2.9	3.7	8.8
Washington	5.8	6.4	6.4	7.4	4.5	-6	2.5	4.3	6.2	13.2	5.9	5.1	3.4	12.4
Alaska	4.8	4.6	4.6	9.4	-4.7	6.3	5.6	2.3	9.1	5.2	-1	5.9	3.3	6.5
Hawaii	6.7	6.7	6.9	34.2	8.9	5.7	5.7	3.5	8.8	8.5	15.5	3.3	3.4	10.8
Census Divisions														
<b>New England</b>	1.2	-1	0	-1.5	-17.5	-7	.8	-2.8	3.4	4.0	-5.2	1.2	-1.5	1.5
<b>Middle Atlantic</b>	2.2	1.3	1.4	-3.5	-9.5	-1	.8	-1.1	3.8	4.3	-3.9	1.1	2.6	3.5
<b>East North Central</b>	2.7	2.2	2.9	-1.7	-3.4	0	.8	2.2	7.6	5.9	1.1	1.8	1.5	6.4
<b>West North Central</b>	2.8	2.4	4.1	3.1	-1.8	1.9	2.1	2.9	8.6	6.6	1.3	5.0	3.1	5.8
<b>South Atlantic</b>	3.3	2.9	2.9	-4	-11.5	1.3	2.4	.9	5.2	6.3	-1.7	5.4	2.8	6.3
<b>East South Central</b>	4.5	4.2	4.4	-3.6	-1.7	2.6	3.3	2.8	7.5	8.1	-1	3.9	.7	7.6
<b>West South Central</b>	5.0	5.2	5.6	7.5	3.9	5.0	4.0	4.4	7.5	7.5	2.4	2.2	-1.0	6.8
<b>Mountain</b>	5.3	5.5	5.8	4.8	2.1	1.1	3.0	4.9	7.8	8.9	4.0	5.5	5.1	7.7
<b>Pacific</b>	3.3	2.8	3.0	4.9	-8.9	.3	3.0	.3	5.4	6.2	-2.3	2.8	2.3	8.7

1. Percent change was calculated from unrounded data.  
 2. Consists of wage and salary disbursements, other labor income, and proprietors' income.

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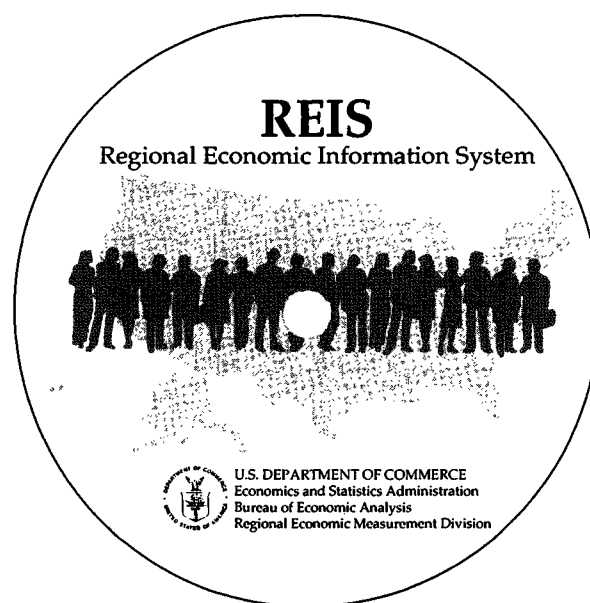
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## County and Metropolitan Area Personal Income, 1988–90

THIS REPORT PRESENTS summary estimates of total and per capita personal income for 1988–90 for metropolitan areas and counties. The 1990 estimates are presented for the first time; the 1988 and 1989 estimates are revised from those presented in the April 1991 SURVEY OF CURRENT BUSINESS. None of these estimates reflect the comprehensive revision of the national income and product accounts (NIPA's) that BEA released in December 1991. Revised estimates that incorporate the comprehensive NIPA revision will be released for the State level later in 1992 and for the local area level in 1993. The estimates of per capita personal income have been updated to reflect the 1990 Census of Population (see the section on definitions for further information).

Table 1 contains estimates for the county-based metropolitan areas that are defined for statistical purposes by the U.S. Office of Management and Budget. These areas consist of metropolitan statistical areas; primary metropolitan statistical areas (PMSA's); consolidated metropolitan statistical areas, which consist of two or more PMSA's; and the New England county metropolitan areas.<sup>1</sup> Table 2 contains estimates for 3,106 counties and county equivalents.<sup>2</sup> For Virginia, table 2 presents estimates for the larger independent cities and combined estimates for the smaller independent cities and their adjacent counties.

BEA's publication *Local Area Personal Income* will no longer be published annually; instead, it will be published only in conjunction with the release of a comprehensive revision of the metropolitan area and county estimates, next scheduled for 1993. The estimates in *Local Area Personal Income*—of personal income by major type and of labor and proprietors' earnings by industry—are now available in more detail on CD-ROM (see the section on "Data availability").

### Definition of total and per capita personal income

The personal income of an area is defined as the income received by, or for, all the residents of the area. It consists of the income received by persons from all sources—that is, from participation in production, from both government and business transfer payments, and from government interest; persons are defined as individuals, nonprofit institutions serving individuals, private noninsured welfare funds, and private trust funds. Personal income is measured as the sum of wage and salary disbursements, other labor income, proprietors' income, rental income of persons, personal dividend income, personal interest income, and transfer payments less personal contributions for social insurance.

1. BEA uses a county-based definition of metropolitan areas for the New England region rather than a definition in terms of cities and towns because insufficient data are available to prepare estimates of personal income for these cities and towns.

For additional information about the metropolitan area definitions and a list of the areas and their components, see U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States: 1992* (Washington, DC: U.S. Government Printing Office, 1992), Appendix II.

2. Because of the creation of new geographic entities—particularly of new boroughs from existing census areas in Alaska—the number of counties and county equivalents shown for any given year can vary.

The definitions underlying the local area estimates of personal income are essentially the same as those underlying the personal income estimates in the NIPA's before the 1991 comprehensive revision. Both the local area estimates and the national estimates include the income of persons residing in the 50 States and the District of Columbia. However, the national estimates also include the income of U.S. residents temporarily working abroad; specifically, the national personal income estimates include the income of Federal civilian employees and military personnel stationed abroad and of U.S. residents who are employed by U.S. firms and are on temporary foreign assignment. An "overseas" adjustment is made to the national estimates to exclude the labor earnings of these workers from the U.S. totals before the totals are allocated to the States and local areas.

Per capita personal income is computed by dividing the total personal income of an area by the population estimate for that area. Except for the college student population, which is measured on April 1, the population for all years is measured as of July 1. The estimates of per capita income for 1990 are calculated with midyear population estimates prepared by BEA as the sum of the April 1, 1990, population count from the 1990 Census of Population and approximations of the change in population

### Acknowledgments

The estimates of local area personal income were prepared by the Regional Economic Measurement Division under the direction of Linnea Hazen, Chief. The estimates were prepared through a divisionwide effort.

Estimates of nonfarm labor income (wages and salaries and other labor income) were prepared by the Regional Wage Branch under the supervision of Sharon C. Carnevale, Acting Chief. Major responsibilities were assigned to Michael G. Pilot, John A. Rusinko, and James M. Scott. Contributing staff members were E. Frances Bake, Christopher T. Berry, Elizabeth P. Cologer, Susan P. Den Herder, Elizabeth A. Freeman, Lela S. Lester, Russell C. Lusher, Richard A. Lutyk, Paul K. Medzerian, Lisa C. Ninomiya, Michael Phillips, Adrienne T. Pilot, William E. Reid, Jr., Dolores A. Rynn, Victor A. Sahadachny, Eugene L. Souder, and Jaime Zenzano.

Estimates of farm earnings (wages and salaries, other labor income, and proprietors' income) and the residence adjustments were prepared by the Quarterly Income Branch under the supervision of Robert L. Brown, Assistant Division Chief. Major responsibilities were assigned to James M. Zavrel. Contributing staff members were Elaine M. Briccetti, Daniel R. Corrin, Richard H. Grayson, and Daniel Zabronsky.

Estimates of nonfarm proprietors' income, dividends, interest, rent, transfer payments, and personal contributions for social insurance were prepared by the Proprietors' Income Branch under the supervision of Bruce Levine, Chief. Major responsibilities were assigned to Charles A. Jolley. Contributing staff members were Catherine A. George, Toan A. Ly, Michael S. Wagner, Ellen M. Wright, and Marianne A. Ziver.

The assembly of public use tabulations and data files and the preparation of the text and tables for this article were performed by the Regional Economic Information System Branch. Major responsibilities were assigned to Kathy A. Albetski, Wallace K. Bailey, Kenneth P. Berkman, and Gary V. Kennedy. Contributing staff members were Louise T. Johnson, Susan J. Lease-Trevathan, Jeffrey L. Newman, Michael J. Paris, Albert Silverman, Callan S. Swenson, Hilda G. Tolson, Monique B. Tyes, and Mary C. Williams.

from April 1 to July 1. The per capita measures for 1988 and 1989 are calculated with revised Census Bureau midyear population estimates for each year that reflect both the 1980 and 1990 population censuses. The per capita measures for 1981-87 have also been recalculated.

### Factors affecting the per capita estimates

The local area estimates of per capita personal income should be used cautiously for several reasons. In some instances, an unusually high or low per capita personal income is the temporary result of unusual conditions, such as a bumper crop or a hurricane. In other instances, the income levels of certain groups atypical of the resident population may cause a longer term high or low per capita personal income that is not indicative of the economic well-being of the area. For instance, a major construction project—such as a defense facility, power plant, or dam—may substantially raise the per capita personal income of an area for several years because it attracts highly paid workers whose income is measured at the construction site. This high per capita income is not indicative of the economic well-being of most of the residents of the area (or, in many cases, of the resident construction workers themselves, who may send a substantial portion of their wages to dependents living in other areas).

Conversely, the presence of a large institutional population, such as that of a college or prison, tends to keep the per capita personal income of an area at a lower level because the residents of these institutions have little income attributable to them at these institutions. This lower per capita personal income is not indicative of the economic well-being of most of the residents of the area (or, in some cases, of the institutional populations, because some of these populations, such as college students, typically receive support from their families living in other areas).

The per capita personal income estimates can also be misleading in areas where population changes rapidly. Population is measured at midyear, and income is measured as a flow over the year; therefore, a significant change in the population of an area during the year, particularly if it occurs around midyear, can distort the per capita estimates.

### Revision schedule for regional estimates

The annual estimates of State and local area personal income for a given year are subject to successive refinement. Preliminary State estimates, based on the current quarterly series, are released 4 months after the close of the reference year and published in the April SURVEY OF CURRENT BUSINESS. In the August SURVEY, more reliable annual State estimates are published; these estimates are developed independently of the quarterly series and are prepared in greater component detail, primarily from Federal and State government administrative records. These annual State estimates are subsequently revised to incorporate newly available information used to prepare the current local area estimates. These revised State estimates, together with the current local area estimates, are published in the following April SURVEY. The annual estimates emerging from this three-step process are further revised for several succeeding years (the State estimates in April and August and the local area estimates in April), as additional data become available. The routine revisions of the local

area estimates for a given year are normally completed with the third April release. After that, the estimates will be revised only to incorporate a comprehensive revision of the NIPA's, which takes place approximately every 5 years, or to make important improvements to the estimates by incorporating additional or more current State and local area data; for example, the local area estimates of per capita personal income have been revised this year to incorporate population counts from the 1990 Census of Population.

### Data availability

Personal income by type of payment and earnings by Standard Industrial Classification (SIC) division, as shown in table A, are available for metropolitan areas and counties for 1969-90. A version of this table that presents earnings by SIC two-digit industry

**Table A.—Example of Available Data for Local Areas: Personal Income by Major Source and Earnings by Major Industry, 1985-90<sup>1</sup>**

[Thousands of dollars]

	New London County, Connecticut					
	1985	1986	1987	1988	1989	1990
<b>Income by Place of Residence</b>						
Total personal income .....	3,684,327	4,038,570	4,394,249	4,691,484	5,015,491	5,168,391
Nonfarm personal income .....	3,854,425	4,000,385	4,354,986	4,649,457	4,971,275	5,119,367
Farm income <sup>2</sup> .....	29,902	38,185	39,263	42,027	44,216	49,024
Population (thousands) <sup>3</sup> .....	2,501	2,491	2,510	2,543	2,549	2,551
Per capita personal income (dollars) .....	15,532	16,210	17,510	18,451	19,679	20,259
<b>Derivation of total personal income:</b>						
Total earnings by place of work .....	3,046,348	3,044,324	3,332,359	3,535,282	3,735,022	3,786,714
Less: Personal contrib. for social insur. <sup>4</sup> .....	184,217	184,031	203,777	222,531	241,638	244,709
Plus: Adjustment for residence <sup>5</sup> .....	-75,655	9,992	21,804	63,409	48,463	48,747
Equals: Net earn. by place of residence .....	2,786,476	2,870,285	3,150,386	3,376,160	3,541,847	3,590,752
Plus: Dividends, interest, and rent <sup>6</sup> .....	615,435	653,755	697,196	737,932	838,991	867,299
Plus: Transfer payments .....	482,416	514,530	546,667	577,392	634,653	710,340
<b>Earnings by Place of Work</b>						
<b>Earnings by type:</b>						
Wages and salaries .....	2,598,705	2,582,388	2,807,064	2,966,875	3,131,908	3,162,614
Other labor income .....	264,314	258,388	275,511	288,537	312,713	319,864
Proprietors' income <sup>7</sup> .....	183,329	203,548	249,784	279,870	290,401	304,236
Farm .....	20,813	29,059	29,523	32,025	33,586	37,772
Nonfarm .....	162,516	174,489	220,261	247,845	256,815	266,464
<b>Earnings by industry:</b>						
Farm .....	29,902	38,185	39,263	42,027	44,216	49,024
Nonfarm .....	3,016,446	3,006,139	3,293,096	3,493,255	3,690,806	3,737,690
Private .....	2,357,958	2,323,652	2,549,919	2,699,629	2,843,201	2,843,639
Ag. serv., for., fish., and other <sup>8</sup> .....	7,250	8,247	11,736	14,978	14,141	14,706
Mining .....	9,191	3,512	4,158	5,965	6,437	7,344
Construction .....	303,952	171,244	189,801	236,529	246,883	186,516
Manufacturing .....	1,068,113	1,079,060	1,101,559	1,055,987	1,105,278	1,124,264
Nondurable goods .....	237,860	251,683	264,367	270,156	288,002	306,404
Durable goods .....	830,253	827,377	837,192	785,831	816,876	817,860
Transportation and public utilities .....	151,110	150,454	167,888	174,485	189,875	190,095
Wholesale trade .....	74,281	75,538	88,724	97,721	105,605	98,432
Retail trade .....	257,778	281,868	311,010	345,368	352,542	336,742
Finance, insurance, and real estate .....	51,216	61,118	102,003	96,139	90,361	94,803
Services .....	435,067	492,811	573,040	672,437	732,079	790,737
Government and government enterprises .....	658,488	682,287	743,177	793,626	847,605	894,051
Federal, civilian .....	119,037	119,773	132,847	140,862	144,323	157,696
Military .....	284,586	288,024	297,118	301,230	308,942	317,643
State and local .....	254,865	274,490	313,212	351,534	394,340	418,712

1. 1985-87 based on 1972 SIC. 1988-90 based on 1987 SIC.

2. Farm income consists of proprietors' net farm income, the wages of hired labor, the pay-in-kind of hired farm labor, and the salaries of officers of corporate farms.

3. Census Bureau midyear population estimates. 1981-89 are revised as of January 1992 to reflect 1980 and 1990 Census population counts. Midyear 1990 population estimates were prepared by BEA by adjusting the April 1990 population counts based on the Census Bureau July 1990 State estimates and the 1988-89 trend in the revised Census Bureau county estimates.

4. Personal contributions for social insurance are included in earnings by type and industry but excluded from personal income.

5. U.S. adjustment for residence consists of adjustments for border workers: income of U.S. residents commuting outside U.S. borders to work less income of foreign residents commuting inside U.S. borders to work plus certain Caribbean seasonal workers.

6. Includes the capital consumption adjustment for rental income of persons.

7. Includes the inventory valuation and capital consumption adjustments.

8. "Other" consists of wages and salaries of U.S. residents employed by international organizations and foreign embassies and consulates in the U.S.

<sup>9</sup> Not shown to avoid disclosure of confidential information.

<sup>10</sup> Less than \$50,000. Estimates are included in totals.

is also available. In addition, there are supplemental tables for employment by SIC division (the "one-digit" level), for transfer payments by program, and for major categories of farm income and expenses.

These tables are available on magnetic tapes, computer printouts, microcomputer diskettes, and a CD-ROM. Each table for all years of data for all the metropolitan areas or for all the counties is available on a single reel of magnetic tape, but the more detailed (SIC two-digit industry) table requires two reels at standard blocksize; the price of each reel of magnetic tape is \$100. The tables on computer printouts are priced by the page, and those on diskette, by diskette; the cost of an order depends on the number of table series, of areas, and of years of data ordered.

The entire set of these tables for all counties and metropolitan areas and for all years is available on a CD-ROM. This CD-ROM

also contains quarterly State estimates of personal income for 1969–91, gross state product for 1977–89, projections of State and metropolitan area personal income and employment to 2040, and a description of the sources and methods used to estimate local area personal income. The CD-ROM is designed for use with microcomputers equipped with the MS-DOS operating system; it is packaged with a floppy diskette that contains a program to help users select, display, print, and copy the tables. The price of the package is \$35.00.

For further information or to place an order, call (202) 254-6630 or write to the Regional Economic Information System, BE-55, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230.


*Tables 1 and 2 follow.* 









Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Area name	Total personal income				Per capita personal income <sup>3</sup>				Rank in State	Area name	Total personal income				Per capita personal income <sup>3</sup>			
	Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State			Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State
	1988	1989	1990		1988	1989	1990				1988	1989	1990		1988	1989	1990	
Miller	461	490	526	7.4	12,027	12,755	13,660	23	Tuolumne	617	672	725	7.9	13,543	14,220	14,824	46	
Mississippi	615	631	690	9.4	10,599	10,927	12,009	54	Ventura	12,586	13,521	14,428	6.7	19,710	20,604	21,420	13	
Monroe	127	132	140	6.2	10,789	11,425	12,414	45	Yolo	2,271	2,569	2,802	9.1	16,850	18,553	19,727	16	
Montgomery	79	88	91	4.1	10,051	11,199	11,645	62	Yuba	620	675	726	7.6	10,986	11,745	12,415	56	
Nevada	112	119	123	4.0	10,840	11,635	12,246	51	<b>Colorado</b>	<b>54,387</b>	<b>58,358</b>	<b>62,280</b>	<b>6.7</b>	<b>16,669</b>	<b>17,815</b>	<b>18,860</b>	.....	
Newton	66	71	75	5.6	8,535	9,225	9,780	73	<b>Metropolitan portion</b>	<b>46,016</b>	<b>49,286</b>	<b>52,559</b>	<b>6.6</b>	<b>17,321</b>	<b>18,462</b>	<b>19,515</b>	.....	
Ouachita	361	372	384	3.2	11,691	12,133	12,580	41	<b>Nonmetropolitan portion</b>	<b>8,372</b>	<b>9,072</b>	<b>9,721</b>	<b>7.2</b>	<b>13,812</b>	<b>14,963</b>	<b>15,963</b>	.....	
Perry	78	87	92	5.6	9,968	11,007	11,503	64	Adams	3,816	4,006	4,275	6.7	14,384	15,131	16,116	30	
Phillips	291	303	326	7.7	9,683	10,325	11,377	65	Alamosa	1,120	1,165	1,174	5.9	11,120	12,206	12,743	55	
Pike	115	128	133	3.9	11,417	12,721	13,165	29	Arapahoe	7,645	8,217	8,850	7.7	19,997	21,232	22,507	4	
Poinsett	286	295	304	2.9	11,396	11,904	12,354	48	Archuleta	54	59	64	7.1	10,455	11,296	11,814	60	
Polk	182	193	205	6.2	10,573	11,166	11,801	60	Baca	83	86	95	10.4	17,685	18,630	20,888	12	
Pope	523	567	628	10.6	11,697	12,506	13,623	25	Bent	61	70	77	10.0	11,490	13,600	15,369	39	
Prairie	104	109	113	3.8	10,753	11,381	11,919	57	Boulder	4,171	4,534	4,844	6.8	18,839	20,303	21,421	10	
Pulaski	5,551	5,966	6,376	6.9	15,875	17,070	18,225	1	Chaffee	165	171	182	6.2	12,840	13,450	14,363	46	
Randolph	163	169	179	5.6	9,775	10,201	10,794	67	Cheyenne	64	74	71	-3.2	26,605	30,783	29,747	3	
St. Francis	273	280	295	5.4	9,362	9,714	10,375	69	Clear Creek	111	116	122	5.3	14,502	15,264	16,063	32	
Saline	764	826	902	9.2	12,329	13,075	13,978	19	Conejos	62	69	73	6.6	8,226	9,233	9,854	63	
Scott	109	117	122	4.6	10,740	11,509	11,974	56	Costilla	35	41	40	-5	10,321	12,448	12,707	56	
Searcy	76	81	85	5.2	9,381	10,153	10,860	66	Crowley	39	45	48	7.8	10,444	11,583	12,149	59	
Sebastian	1,420	1,476	1,563	5.9	14,360	14,874	15,671	6	Custer	26	28	29	5.5	13,886	14,615	15,164	40	
Sevier	153	172	192	11.9	11,134	12,535	14,095	17	Delta	244	258	279	7.9	11,302	12,182	13,333	53	
Sharp	141	151	163	7.8	9,932	10,665	11,544	63	Denver	9,142	9,773	10,335	5.7	19,093	20,769	22,156	6	
Stone	87	97	102	5.8	8,964	9,942	10,467	68	Dolores	25	25	24	-6.1	15,784	16,561	15,870	34	
Union	665	715	762	6.5	14,089	15,252	16,326	2	Douglas	1,001	1,127	1,272	12.9	18,908	19,748	20,639	14	
Van Buren	150	165	174	6.0	10,753	11,785	12,437	43	E. Jule	359	413	458	10.9	17,546	19,408	20,652	13	
Washington	1,427	1,553	1,678	8.0	12,862	13,828	14,736	57	Elbert	156	169	179	6.0	17,098	17,956	18,424	20	
White	561	607	651	7.2	10,381	11,169	11,889	58	El Paso	6,036	6,412	6,705	4.6	15,617	16,361	16,807	26	
Woodruff	108	106	114	6.8	10,895	10,992	12,009	54	Fremont	377	395	418	5.7	11,779	12,307	12,927	54	
Yell	198	213	225	5.5	11,246	12,049	12,637	39	Garfield	392	434	487	12.1	13,616	14,756	16,128	29	
<b>California</b>	<b>532,217</b>	<b>576,597</b>	<b>619,762</b>	<b>7.5</b>	<b>18,695</b>	<b>19,734</b>	<b>20,689</b>	.....	Gilpin	38	42	45	7.2	12,712	13,738	14,448	45	
<b>Metropolitan portion</b>	<b>515,281</b>	<b>558,128</b>	<b>600,017</b>	<b>7.5</b>	<b>18,904</b>	<b>19,951</b>	<b>20,921</b>	.....	Grand	124	134	138	3.5	15,241	16,638	17,372	22	
<b>Nonmetropolitan portion</b>	<b>16,936</b>	<b>18,469</b>	<b>19,745</b>	<b>6.9</b>	<b>13,995</b>	<b>14,859</b>	<b>15,855</b>	.....	Gunnison	121	131	140	7.0	11,783	12,733	13,609	52	
Alameda	24,681	26,241	28,454	8.4	19,876	20,766	22,148	9	Hinsdale	8	8	9	5.7	16,244	17,887	18,874	18	
Alpine	21	25	26	1.6	18,840	22,308	23,000	7	Huerfano	67	71	75	5.4	10,850	11,723	12,561	57	
Amador	386	414	456	10.1	14,079	14,316	14,977	45	Jackson	25	25	26	2.6	14,973	15,654	16,318	27	
Butte	2,343	2,543	2,758	8.5	13,429	14,214	15,051	44	Jefferson	8,137	8,646	9,231	6.8	18,794	19,856	20,997	11	
Calaveras	376	414	442	6.9	12,590	13,312	13,680	54	Kiowa	46	49	54	10.1	26,363	28,643	31,874	2	
Colusa	241	273	278	1.9	15,404	17,051	17,011	27	Kit Carson	140	145	156	8.0	19,267	20,113	21,935	7	
Contra Costa	17,610	19,247	20,648	7.3	22,906	24,391	25,523	4	Lake	53	57	61	6.8	7,952	9,098	10,256	62	
Del Norte	226	248	276	11.0	10,169	10,828	11,650	58	La Plata	432	459	503	9.6	13,537	14,297	15,442	37	
El Dorado	1,974	2,226	2,452	10.2	16,870	18,213	19,250	19	Larimer	2,705	2,956	3,207	8.5	14,972	16,106	17,140	24	
Fresno	9,187	9,992	11,002	10.1	14,456	15,278	16,365	31	Las Animas	156	164	171	4.3	11,104	11,798	12,418	58	
Glenn	345	377	390	3.3	14,266	15,388	16,554	39	Lincoln	76	85	92	7.7	16,667	18,735	20,275	15	
Humboldt	1,693	1,818	1,928	6.1	14,523	15,394	16,138	35	Logan	253	267	281	5.1	13,864	14,997	16,065	31	
Imperial	1,385	1,509	1,595	5.7	13,106	13,991	14,523	48	Mesa	1,192	1,303	1,413	8.4	13,007	14,107	15,118	41	
Inyo	280	308	330	7.1	15,406	16,896	18,049	22	Mineral	8	8	9	10.2	12,405	13,446	15,543	36	
Kern	7,471	7,963	8,691	9.1	14,417	14,943	15,881	38	Moffat	156	160	166	3.5	13,121	13,835	14,664	44	
Kings	1,182	1,339	1,425	6.4	12,446	13,563	13,907	51	Montezuma	216	236	262	11.0	11,493	12,648	14,041	50	
Lake	670	736	789	7.3	13,813	14,789	15,492	40	Montrose	308	332	351	5.8	12,610	13,601	14,357	47	
Lassen	313	336	355	5.7	11,780	12,358	12,784	55	Morgan	279	302	325	7.4	12,611	13,749	14,798	43	
Los Angeles	161,167	173,871	185,131	6.5	18,805	19,891	20,786	14	Otero	259	268	280	4.6	12,468	13,117	13,910	51	
Madera	1,090	1,151	1,235	7.2	13,112	13,384	13,897	52	Ouray	34	36	37	3.6	15,215	15,959	16,812	28	
Marin	7,466	8,096	8,657	6.9	32,943	35,398	37,541	1	Park	95	105	111	5.2	13,685	14,898	15,375	38	
Mariposa	190	208	233	12.1	13,884	14,769	16,172	34	Phillips	71	78	77	-1.5	16,690	18,560	18,465	19	
Mendocino	1,099	1,214	1,301	7.2	14,121	15,304	16,119	36	Pitkin	351	379	413	8.8	28,979	30,592	32,360	7	
Merced	2,158	2,341	2,507	7.1	12,651	13,366	13,961	50	Prowers	184	203	211	4.1	13,584	15,100	15,819	35	
Modoc	125	133	138	4.3	13,072	13,771	14,274	49	Pueblo	1,536	1,636	1,746	6.7	12,383	13,273	14,197	48	
Mono	166	182	188	3.4	17,209	18,522	18,802	21	Rio Blanco	89	92	101	9.5	14,410	15,266	16,990	25	
Monterey	5,975	6,383	6,954	8.9	17,322	18,175	19,465	18	Rio Grande	138	158	152	-3.4	12,694	14,571	14,148	49	
Napa	2,139	2,367	2,520	6.5	19,792	21,586	22,668	8	Routt	230	259	285	10.0	16,350	18,419	20,191	16	
Nevada	1,179	1,300	1,421	9.3	16,009	16,996	17,924	23	Saguache	41	49	52	4.5	9,129	10,835	11,127	61	
Orange	51,327	55,462	59,191	6.7	22,233	23,424	24,400	6	San Juan	12	13	13	6.6	16,364				

Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Area name	Total personal income				Per capita personal income <sup>3</sup>				Area name	Total personal income				Per capita personal income <sup>3</sup>			
	Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State		Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State
	1988	1989	1990		1988	1989	1990			1988	1989	1990		1988	1989	1990	
New Castle	8,528	9,343	9,891	5.9	19,831	21,388	22,284	1	Bleckley	133	142	149	5.0	12,701	13,554	14,282	59
Sussex	1,651	1,801	1,889	4.9	15,061	16,120	16,599	2	Brantley	101	112	118	5.6	9,369	10,189	10,584	154
District of Columbia	13,137	13,783	14,196	3.0	20,835	22,083	23,603		Brooks	140	156	163	4.5	9,145	10,131	10,563	155
Florida	204,859	225,599	241,836	7.2	16,644	17,851	18,539		Bryan	177	196	202	3.2	12,416	13,115	12,954	95
Metropolitan portion	189,841	208,981	223,958	7.2	16,966	18,197	18,900		Bulloch	454	495	528	6.6	10,833	11,615	12,186	121
Nonmetropolitan portion	15,018	16,618	17,878	7.6	13,422	14,409	14,963		Burke	232	226	231	2.4	11,251	10,958	11,228	145
Alachua	2,494	2,718	2,932	7.9	14,182	15,211	16,058	23	Butts	190	204	221	8.4	12,530	13,334	14,391	54
Baker	213	224	243	8.5	11,910	12,304	13,056	43	Calhoun	62	65	72	10.9	11,960	12,694	14,409	53
Bay	1,607	1,732	1,893	9.3	13,117	13,882	14,814	30	Camden	276	313	344	10.0	10,418	10,939	11,186	146
Bradford	229	249	267	7.1	10,249	11,124	11,836	50	Candler	87	93	99	7.0	11,154	11,919	12,796	102
Brevard	5,999	6,618	7,117	7.5	15,953	17,047	17,668	16	Carroll	912	978	1,039	6.2	13,265	13,915	14,483	51
Broward	24,153	26,488	28,256	6.7	20,033	21,515	22,355	6	Catoosa	481	510	548	7.5	11,661	12,160	12,660	99
Calhoun	90	96	105	9.9	8,548	8,876	9,475	66	Charlton	92	97	102	5.3	11,207	11,557	11,934	127
Charlotte	1,481	1,702	1,846	8.4	14,807	16,062	16,362	22	Chatham	3,318	3,584	3,859	7.7	15,364	16,548	17,776	11
Citrus	1,085	1,203	1,302	8.3	12,634	13,355	13,740	38	Chattoohatchee	193	191	193	1.0	10,332	10,790	11,525	139
Clay	1,532	1,588	1,719	8.2	15,561	15,493	16,029	24	Chattooga	238	251	264	5.3	10,781	11,306	11,867	130
Collier	3,125	3,609	3,951	9.5	22,612	24,755	25,589	3	Cherokee	1,395	1,519	1,648	8.5	16,870	17,452	18,035	8
Columbia	472	506	537	6.3	11,442	12,061	12,538	47	Clarke	1,147	1,245	1,329	6.8	13,324	14,314	15,134	34
Dade	30,225	32,756	34,726	6.0	16,144	17,198	17,823	15	Clay	30	32	34	4.7	8,979	9,686	10,058	158
De Soto	251	274	293	6.9	10,933	11,697	12,185	51	Clayton	2,653	2,765	2,953	6.8	14,878	15,319	16,171	20
Dixie	92	103	110	6.6	9,207	9,986	10,279	64	Clinch	59	62	67	8.1	9,267	9,933	10,904	151
Duval	10,305	11,197	11,948	6.7	15,775	16,890	17,682	17	Cobb	8,755	9,240	9,905	7.2	20,713	21,137	21,933	3
Escambia	3,516	3,775	4,059	7.5	13,625	14,509	15,392	27	Coffee	333	368	396	7.8	11,358	12,462	13,372	83
Flagler	315	359	391	8.9	12,862	13,402	13,302	41	Colquitt	453	483	512	5.9	12,429	13,217	13,959	65
Franklin	91	98	105	7.1	10,402	11,099	11,678	54	Columbia	926	1,028	1,121	9.0	15,047	16,023	16,795	16
Gadsden	457	492	531	7.8	11,106	12,003	12,896	44	Cook	151	158	168	6.0	11,168	11,749	12,469	114
Gilchrist	97	104	113	8.3	10,912	11,242	11,548	57	Coweta	737	807	870	7.7	14,470	15,345	16,015	22
Gladies	61	66	70	5.9	8,273	8,865	9,170	67	Crawford	100	106	113	5.9	11,436	11,947	12,482	113
Gulf	128	135	144	6.0	11,418	11,914	12,429	49	Crisp	225	237	251	5.6	11,223	11,843	12,518	110
Hamilton	98	109	115	6.2	9,404	10,164	10,462	63	Dade	123	132	141	7.4	9,498	10,084	10,728	153
Hardee	256	271	278	2.6	13,031	13,903	14,261	32	Dawson	113	125	128	2.6	13,501	13,891	14,313	86
Hendry	338	366	376	2.6	13,805	14,566	14,454	31	Decatur	305	324	345	6.5	11,902	12,690	13,545	77
Hernando	1,205	1,328	1,434	8.0	13,426	13,826	13,919	36	De Kalb	10,441	10,988	11,493	4.5	19,437	20,280	21,005	4
Highlands	880	966	1,027	6.3	13,729	14,547	14,854	28	Dodge	189	207	221	7.0	10,807	11,786	12,564	109
Hillsborough	12,256	13,249	14,178	7.0	15,352	16,221	16,876	19	Dooly	123	129	132	2.3	12,201	12,892	13,316	85
Holmes	155	168	179	6.4	10,005	10,774	11,324	61	Dougherty	1,256	1,342	1,444	7.6	12,807	13,819	15,026	38
Indian River	1,685	1,949	2,213	13.5	19,871	22,230	24,292	5	Douglas	1,072	1,135	1,231	8.5	15,850	16,212	17,217	14
Jackson	443	479	523	9.3	10,791	11,640	12,616	46	Early	146	157	163	4.0	12,096	13,113	13,761	69
Jefferson	130	140	152	8.8	11,659	12,451	13,411	40	Echols	23	24	26	8.7	9,607	10,148	11,148	147
Lafayette	59	66	69	5.1	11,274	12,141	12,303	49	Effingham	271	295	324	9.9	11,218	11,755	12,488	112
Lake	2,313	2,553	2,688	5.3	16,193	17,279	17,496	18	Elbert	237	257	271	5.6	12,480	13,548	14,320	58
Lee	5,240	5,954	6,408	7.6	16,960	18,427	18,877	10	Emanuel	221	238	251	5.3	10,737	11,566	12,203	120
Leon	2,642	2,919	3,187	9.2	14,418	15,518	16,422	21	Evans	115	124	131	6.0	10,355	14,252	14,974	40
Levy	271	286	304	6.5	10,990	11,297	11,645	55	Fannin	180	187	197	5.6	11,466	11,762	12,313	119
Liberty	51	56	64	13.8	9,594	10,327	11,386	59	Fayette	1,184	1,334	1,479	10.9	21,141	22,345	23,311	1
Madison	159	169	182	8.2	9,800	10,294	10,955	62	Floyd	1,154	1,224	1,306	6.7	14,295	15,099	16,062	21
Manatee	3,186	3,610	3,849	6.6	16,027	17,555	17,997	12	Forsyth	750	852	911	7.0	18,265	19,894	20,455	5
Marion	2,288	2,528	2,721	7.6	12,631	13,409	13,802	37	Franklin	216	236	246	4.5	13,214	14,260	14,760	44
Martin	2,206	2,464	2,770	12.4	23,603	25,269	27,125	1	Fulton	13,153	13,975	14,844	6.2	20,584	21,672	22,819	2
Monroe	1,305	1,467	1,552	5.8	17,442	19,185	19,752	8	Gilmer	180	191	205	7.2	13,890	14,485	15,236	32
Nassau	684	739	801	8.5	16,330	17,194	18,090	11	Glascock	30	32	34	5.5	12,555	13,647	14,576	49
Okaloosa	1,968	2,125	2,288	7.6	14,258	15,073	15,803	25	Glynn	941	1,033	1,096	6.1	15,275	16,629	17,506	13
Okeechobee	320	351	383	9.1	11,462	12,174	12,805	45	Gordon	466	498	524	5.2	13,601	14,349	14,885	41
Orange	10,377	11,396	12,235	7.4	16,314	17,317	17,879	14	Grady	217	231	239	3.5	10,616	11,340	11,789	131
Osceola	1,466	1,800	1,800	8.5	15,049	16,113	16,451	20	Greene	140	151	161	6.2	11,893	12,834	13,611	75
Palm Beach	18,960	21,466	23,387	8.9	23,460	25,621	26,798	2	Gwinnett	5,998	6,494	7,117	9.6	18,801	19,183	19,961	6
Pasco	3,500	3,739	3,961	5.9	13,276	13,698	13,944	35	Habersham	369	399	419	5.0	13,515	14,505	15,125	35
Pinellas	15,672	17,397	18,484	6.2	18,846	20,685	21,610	7	Hall	1,418	1,538	1,625	5.7	15,342	16,330	16,943	15
Polk	5,283	5,766	6,056	5.0	13,589	14,514	14,835	29	Hancock	89	96	104	8.0	9,783	10,737	11,717	133
Putnam	666	704	751	6.7	10,716	11,048	11,455	58	Haralson	270	282	294	4.1	12,596	12,983	13,336	84
St. Johns	1,397	1,533	1,666	8.7	17,920	18,893	19,644	9	Harris	236	257	275	7.0	13,467	14,513	15,416	29
St. Lucie	1,803	2,014	2,154	6.9	13,166	13,974	14,137	33	Hart	269	291	302	4.0	13,720	14,788	15,313	31
Santa Rosa	960	1,031	1,120	8.7	12,641	13,048	13,565	39	Heard	84	90	97	7.0	10,286	10,708	11,132	148
Sarasota	5,722	6,552	6,990	6.7	21,721	24,181	24,948	4	Henry	881	982	1,071	9.1	16,324	17,304	18,007	9
Seminole	4,351	4,793	5,210	8.7	16,432	17,296	17,885	13	Houston	1,224	1,327	1,405	5.9	13,937	14,970	15,717	27
Sumter	334	367	389	6.1	11,101	11,887	12,228	50	Irwin	99	98	102	4.1	11,423	11,298	11,761	132
Suwannee	284	310	326	5.2	10,955	11,770	12,115	52	Jackson	390	438	462	5.5	13,395	14,786	15,328	30
Taylor	211	227	241	6.1	12,482	13,347	14,035	34	Jasper	109	116	124	6.8	13,301	13,855	14,564	50
Union	92	97	101	3.5	8,991	9,538	9,830	65	Jeff Davis	146	158	170	7.4	12,183	13,183	14,117	63
Volusia	5,036	5,494	5,861	6.7	14,494	15,266	15,448	26	Jefferson	199	208	221	6.3	11,210	11,851	12,741	106
Wakulla	156	172	187	8.7	11,434	12,380	13,090	42	Jenkins	90	94	96	1.2	10,844	11,420	11,606	137
Walton																	

Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Area name	Total personal income				Per capita personal income <sup>3</sup>				Area name	Total personal income				Per capita personal income <sup>3</sup>			
	Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State		Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State
	1988	1989	1990		1988	1989	1990			1988	1989	1990		1988	1989	1990	
Mitchell	211	223	236	5.7	10,239	10,935	11,658	135	Custer	55	65	70	7.4	12,843	15,590	16,986	10
Monroe	223	235	247	5.1	13,260	13,833	14,414	52	Elmore	243	274	286	4.6	11,580	13,006	13,454	28
Montgomery	80	84	92	9.0	11,130	11,771	12,816	100	Franklin	83	91	96	6.2	9,054	9,900	10,416	44
Morgan	181	198	210	5.7	14,264	15,520	16,240	19	Freemont (incl. Ylwstn. Natl. Pk.)	120	139	155	11.3	11,151	12,854	14,109	20
Murray	288	307	327	6.5	11,596	11,984	12,399	117	Gem	131	141	151	7.4	11,137	11,925	12,715	36
Muscookee	2,439	2,599	2,778	6.9	13,550	14,469	15,505	28	Gooding	137	155	166	7.0	11,790	13,361	14,249	19
Newton	580	620	664	7.1	14,319	15,020	15,805	25	Idaho	160	177	186	5.2	11,488	12,835	13,510	26
Oconee	248	272	289	6.4	14,837	15,784	16,288	18	Jefferson	172	195	212	8.8	10,662	11,960	12,760	35
Oglethorpe	113	125	134	7.9	11,685	12,807	13,754	70	Jerome	158	177	191	7.8	10,443	11,758	12,602	37
Paulding	496	530	573	8.1	12,908	13,179	13,613	74	Kootenai	869	955	1,047	9.7	12,815	13,896	14,924	16
Peach	305	325	353	8.7	14,673	15,442	16,600	17	Latah	357	401	428	6.7	11,933	13,276	13,919	22
Pickens	204	220	229	4.2	14,591	15,421	15,770	26	Lemhi	80	87	95	8.9	11,498	12,585	13,706	24
Pierce	133	145	152	5.0	10,124	10,917	11,377	140	Lewis	58	68	70	2.9	16,239	19,201	19,902	3
Pike	122	129	134	3.6	12,360	12,791	13,004	92	Lincoln	44	52	57	9.8	13,226	15,720	17,288	8
Polk	403	414	432	4.4	11,939	12,241	12,767	104	Madison	202	237	263	11.0	8,934	10,241	11,027	43
Pulaski	107	114	119	4.3	12,824	13,946	14,761	43	Minidoka	210	236	256	8.6	10,798	12,188	13,198	30
Furnam	144	159	171	7.7	10,684	11,490	12,029	124	Nez Perce	467	518	552	6.4	14,151	15,560	16,268	12
Quitman	25	27	28	6.0	11,229	12,044	12,800	101	Oneida	40	44	45	3.4	11,775	12,738	12,960	33
Rabun	127	137	148	7.5	11,039	11,866	12,657	107	Owyhee	89	101	105	3.7	10,830	12,156	12,428	38
Randolph	88	92	95	3.2	10,575	11,261	11,953	129	Payette	173	190	204	7.2	10,664	11,672	12,359	39
Richmond	2,601	2,776	3,024	8.9	13,670	14,609	15,941	23	Power	108	124	141	13.5	15,457	17,715	19,818	4
Rockdale	896	970	1,053	8.6	17,587	18,394	19,294	7	Shoshone	163	178	192	7.7	10,937	12,449	13,875	23
Schley	40	43	44	5	11,287	12,167	12,176	122	Teton	35	43	47	8.1	10,559	12,715	13,461	27
Screven	149	161	166	3.1	10,688	11,562	12,000	125	Twin Falls	697	785	843	7.4	13,171	14,783	15,680	15
Seminole	104	111	116	4.4	11,427	12,226	12,863	98	Valley	87	97	107	10.2	14,410	15,991	17,443	7
Spalding	717	758	805	6.1	13,357	14,029	14,733	45	Washington	93	107	112	5.3	10,998	12,581	13,075	32
Stephens	277	297	314	5.7	12,072	12,654	13,487	80	Illinois	204,610	220,607	233,824	6.0	17,961	19,335	20,433	.....
Stewart	56	58	61	5.3	8,760	9,199	10,782	152	Metropolitan portion	177,202	191,084	202,963	6.2	18,850	20,274	21,448	.....
Sumner	367	387	406	4.9	12,107	12,776	13,434	82	Nonmetropolitan portion	27,408	29,523	30,861	4.5	13,763	14,977	15,583	.....
Talbot	69	73	79	8.0	10,654	11,281	12,121	123	Adams	991	1,045	1,104	5.6	14,849	15,756	16,715	37
Taliaferro	27	28	30	8.6	13,844	14,336	15,829	24	Alexander	112	120	125	3.8	10,457	11,265	11,759	99
Tattnall	208	226	241	6.7	11,755	12,743	13,579	76	Bond	213	230	238	3.6	14,091	15,291	15,895	55
Taylor	87	94	99	5.3	11,266	12,277	13,045	91	Boone	498	530	536	1.0	16,473	17,365	17,330	25
Telfair	117	126	131	4.5	10,473	11,365	11,961	126	Brown	70	77	81	4.8	12,235	13,318	13,808	90
Terrill	106	110	116	4.9	9,728	10,281	10,911	150	Bureau	539	574	596	3.8	14,918	16,010	16,718	36
Thomas	522	547	577	5.6	13,498	14,062	14,786	42	Calhoun	71	78	82	5.1	13,203	14,566	15,371	65
Tift	455	495	532	7.5	13,102	14,197	15,195	33	Carroll	239	250	251	3	14,023	14,815	14,974	75
Toombs	306	328	354	8.0	12,776	13,655	14,709	46	Cass	168	189	203	7.6	12,291	13,972	15,157	72
Towns	71	77	84	8.8	10,901	11,586	12,368	118	Champaign	2,583	2,763	2,938	6.3	15,014	16,017	16,957	33
Treutlen	56	60	63	5.8	9,458	10,003	10,556	156	Christian	505	555	590	6.4	14,611	16,099	17,155	29
Troup	735	807	837	3.7	13,292	14,555	15,063	37	Clark	197	221	232	5.2	12,272	13,832	14,594	83
Turner	97	98	101	3.6	10,884	11,100	11,648	136	Clay	189	210	220	4.8	13,035	14,463	15,182	70
Twiggs	101	104	111	6.4	10,180	10,573	11,328	143	Clinton	507	549	577	5.1	15,065	16,247	16,981	32
Union	123	131	140	6.6	10,676	11,112	11,595	138	Colles	684	742	786	5.9	13,265	14,387	15,209	68
Upson	310	329	348	5.5	11,806	12,527	13,214	88	Cook	97,564	104,803	110,928	5.8	19,334	20,501	21,729	4
Walker	679	719	768	6.8	11,769	12,381	13,149	89	Crawford	287	297	313	5.5	14,569	15,154	16,086	50
Walton	470	500	530	6.1	12,683	13,170	13,659	72	Cumberland	123	137	145	5.2	11,555	12,879	13,549	91
Ware	431	459	488	6.4	11,994	12,854	13,784	68	De Kalb	1,125	1,221	1,286	5.4	14,683	15,780	16,456	43
Warren	62	64	69	7.2	10,157	10,516	11,270	144	De Witt	259	281	299	6.5	15,541	16,960	18,133	17
Washington	251	268	281	4.7	13,105	14,018	14,706	47	Douglas	243	267	284	6.3	12,519	13,752	14,587	84
Wayne	254	281	306	8.9	11,435	12,594	13,662	71	Du Page	17,894	19,451	21,043	8.2	23,690	25,256	26,772	2
Webster	29	31	32	3.2	12,765	13,432	13,936	66	Edgar	266	294	304	3.5	13,345	14,915	15,551	61
Wheeler	49	52	54	3.3	9,741	10,521	10,989	149	Edwards	100	110	115	4.4	13,217	14,626	15,440	63
White	168	184	197	7.2	13,543	14,439	15,078	36	Effingham	472	528	556	5.4	15,069	16,738	17,510	24
Whitfield	1,127	1,226	1,297	5.8	15,760	17,010	17,860	10	Fayette	238	261	270	3.6	11,351	12,460	12,931	97
Wilcox	83	89	93	4.6	11,724	12,599	13,296	87	Ford	226	237	246	3.8	15,707	16,528	17,205	27
Wilkes	140	148	159	6.9	13,026	13,932	14,992	39	Franklin	513	540	560	3.7	12,554	13,320	13,897	89
Wilkinson	130	140	147	5.4	12,618	13,612	14,380	55	Fulton	480	521	541	3.8	12,500	13,651	14,227	88
Worth	206	214	225	4.9	10,555	10,891	11,351	142	Gallatin	87	98	107	8.8	12,365	14,104	15,534	62
Hawaii	18,375	20,424	22,668	11.0	17,014	18,659	20,361	.....	Greene	182	198	205	3.6	11,851	12,902	13,384	94
Metropolitan portion	14,685	16,206	17,881	10.3	17,890	19,561	21,307	.....	Grundy	560	605	635	5.0	17,598	18,843	19,594	9
Nonmetropolitan portion	3,689	4,218	4,788	13.5	14,239	15,852	17,463	.....	Hamilton	98	109	114	4.9	11,387	12,743	13,447	93
Hawaii	1,553	1,770	2,027	14.5	13,462	14,999	16,728	4	Hancock	291	308	315	2.1	13,354	14,312	14,749	82
Honolulu	14,685	16,206	17,881	10.3	17,890	19,561	21,307	1	Hardin	52	56	59	5.0	9,989	10,879	11,420	100
Kauai	709	805	884	9.9	14,530	16,067	17,140	3	Henderson	110	115	121	4.8	13,413	14,139	14,902	78
Maui + Kalawao	1,427	1,643	1,877	14.2	15,032	16,771	18,504	2	Henry	736	780	814	4.3	14,081	15,110	15,951	53
Idaho	12,764	14,196	15,423	8.6	12,948	14,276	15,250	.....	Iroquois	423	470	475	1.1	13,609	15,207	15,439	64
Metropolitan portion	3,226	3,565	3,896	9.3	16,373	17,709	18,786	.....	Jackson	711	761	790	3.8	11,615	12,453	12,931	97
Nonmetropolitan portion	9,538	10,631	11,527	8.4	12,092	13,404	14,337	.....	Jasper	142	159	167	5.1	13,284	14,967	15,784	56
Ada	3,226	3,565	3,896	9.3	16,373	17,709	18,786	6	Jefferson	537	573	605	5.6	14,445	15,459	16,351	44
Adams	42	46	48	3.8	12,800	14,225	14,680	17	Jersey	269	293	312	6.4	13,260	14,335	15,153	73
Bannock	761	817	885	8.2	11,677	12,489	13,353	29	Jo Daviess	332	347	363	4.6	15,058	15,852	16,654	40
Bear Lake	66	70	73														

Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Area name	Total personal income				Per capita personal income <sup>3</sup>				Area name	Total personal income				Per capita personal income <sup>3</sup>			
	Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State		Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State
	1988	1989	1990		1988	1989	1990			1988	1989	1990		1988	1989	1990	
Macon	1,873	2,006	2,107	5.0	15,641	16,963	18,021	19	Johnson	1,431	1,541	1,660	7.7	16,725	17,702	18,754	7
Macoupin	655	720	762	5.9	13,705	15,085	15,981	52	Knox	514	556	577	3.7	12,745	13,870	14,473	67
Madison	3,997	4,274	4,487	5.0	16,112	17,190	17,980	21	Kosciusko	1,008	1,126	1,181	4.8	15,803	17,413	18,018	12
Marion	557	595	621	4.3	13,312	14,285	14,947	77	Lagrange	343	378	394	4.2	11,985	13,000	13,317	80
Marshall	192	211	218	2.9	14,801	16,381	16,950	34	Lake	6,829	7,380	7,759	5.1	14,239	15,456	16,327	28
Mason	221	243	249	2.3	13,308	14,843	15,341	67	La Porte	1,569	1,701	1,785	4.9	14,704	15,903	16,655	25
Massac	170	184	195	5.9	11,550	12,519	13,228	95	Lawrence	560	600	627	4.4	13,209	14,069	14,609	63
Menard	172	186	196	5.4	15,345	16,625	17,547	23	Madison	1,889	2,035	2,093	2.8	14,402	15,544	16,018	35
Mercer	242	258	270	4.7	13,810	14,839	15,641	59	Marion	13,130	14,396	15,297	6.3	16,679	18,151	19,148	3
Monroe	394	436	466	6.8	18,074	19,700	20,679	9	Marshall	580	625	655	4.7	13,968	14,924	15,479	47
Montgomery	410	446	466	4.6	13,251	14,472	15,179	71	Martin	120	129	136	5.4	11,565	12,430	13,086	85
Morgan	537	591	628	6.2	14,706	16,219	17,244	26	Miami	476	512	528	3.1	12,811	13,832	14,313	70
Moultrie	190	205	214	4.6	13,567	14,656	15,363	66	Monroe	1,340	1,460	1,560	6.9	12,585	13,530	14,266	71
Ogle	691	725	737	1.6	15,158	15,844	16,010	51	Montgomery	520	576	620	7.7	15,136	16,372	17,988	13
Peoria	2,947	3,175	3,352	5.6	16,001	17,321	18,342	14	Morgan	771	813	868	6.7	14,154	14,692	15,452	48
Perry	283	300	318	6.2	13,135	13,965	14,864	79	Newton	182	198	204	3.5	13,343	14,540	15,098	54
Piatt	247	273	284	4.1	15,794	17,494	18,259	16	Noble	503	537	563	4.8	13,571	14,310	14,805	62
Pike	215	239	251	5.0	12,135	13,573	14,306	86	Ohio	65	67	72	7.0	12,391	12,763	13,510	77
Pope	40	44	46	2.7	9,002	10,106	10,414	101	Orange	216	230	238	3.4	11,751	12,473	12,905	87
Pulaski	81	94	101	7.3	10,590	12,396	13,462	92	Owen	198	218	232	6.3	11,754	12,753	13,349	79
Putnam	93	100	105	5.1	16,032	17,335	18,318	15	Parke	600	625	629	6.2	12,882	13,930	14,866	61
Randolph	457	493	518	5.0	13,260	14,288	14,957	76	Perry	228	240	251	4.9	11,955	12,565	13,149	83
Richland	224	249	260	4.8	13,289	14,892	15,776	57	Pike	167	180	189	5.2	13,145	14,273	15,124	53
Rock Island	2,311	2,484	2,643	6.4	15,204	16,550	17,818	22	Porter	1,940	2,146	2,272	5.8	15,329	16,775	17,566	16
St. Clair	3,840	4,060	4,257	4.9	14,589	15,443	16,190	48	Posey	369	395	405	2.6	14,349	15,271	15,587	44
Saline	386	411	438	6.6	14,337	15,380	16,503	42	Pulaski	179	201	214	6.5	14,107	15,917	16,963	20
Sangamon	3,082	3,274	3,501	6.9	17,364	18,401	19,601	8	Putnam	382	414	435	5.0	12,695	13,705	14,326	69
Schuyler	92	105	107	2.4	12,104	13,916	14,318	85	Randolph	330	351	359	2.2	12,039	12,885	13,244	81
Scott	80	91	94	3.1	14,123	16,068	16,615	41	Ripley	344	366	385	5.2	14,009	14,890	15,648	42
Shelby	307	334	350	4.9	13,681	14,951	15,734	58	Rush	244	270	282	4.2	13,345	14,841	15,551	46
Stark	94	107	111	3.7	14,143	16,279	17,060	31	St. Joseph	3,831	4,074	4,261	4.6	15,688	16,568	17,211	18
Stephenson	789	844	871	3.2	16,364	17,541	18,122	18	Scott	233	242	255	5.4	11,305	11,616	12,129	89
Tazewell	1,947	2,101	2,228	6.0	15,680	16,962	18,008	20	Shelby	585	629	678	7.8	14,710	15,686	16,781	22
Union	221	240	252	4.8	12,505	13,646	14,293	87	Spencer	252	276	285	3.0	12,973	14,179	14,590	64
Vermilion	1,201	1,273	1,307	2.7	13,466	14,364	14,820	80	Starke	243	265	275	4.1	10,921	11,746	12,062	90
Wabash	198	212	225	6.1	14,950	16,154	17,200	28	Stauben	440	469	493	5.0	16,562	17,330	17,859	14
Warren	274	280	290	3.3	13,969	14,486	15,130	74	Sullivan	253	276	285	3.3	13,069	14,118	15,040	55
Washington	230	265	284	7.1	15,453	17,762	18,954	11	Switzerland	72	79	83	5.6	9,446	10,236	10,692	92
Wayne	237	254	262	2.9	13,605	14,682	15,194	69	Tipppecanoe	1,754	1,931	2,075	7.5	13,661	14,893	15,847	37
White	239	262	277	5.7	14,143	15,717	16,791	35	Tipton	263	281	292	4.0	16,358	17,462	18,112	10
Whiteside	901	935	982	5.1	14,803	15,465	16,334	45	Union	88	96	98	2.4	12,634	13,715	14,022	76
Will	5,819	6,361	6,738	5.9	16,847	17,976	18,787	12	Vanderburgh	2,638	2,807	2,988	6.5	15,987	17,005	18,093	11
Williamson	772	808	856	5.9	13,430	14,035	14,812	81	Vermilion	216	231	242	4.7	12,750	13,745	14,467	68
Winnebago	4,154	4,412	4,654	5.5	16,507	17,488	18,376	13	Vigo	1,391	1,517	1,594	5.1	13,009	14,243	15,036	56
Woodford	491	532	560	5.3	15,151	16,341	17,129	30	Wabash	475	516	541	4.9	13,624	14,740	15,421	50
<b>Indiana</b>	<b>82,315</b>	<b>89,062</b>	<b>93,978</b>	<b>5.5</b>	<b>14,987</b>	<b>16,124</b>	<b>16,921</b>		Warren	106	122	129	5.8	12,768	14,840	15,806	39
<b>Metropolitan portion</b>	<b>58,753</b>	<b>63,505</b>	<b>67,163</b>	<b>5.8</b>	<b>15,653</b>	<b>16,905</b>	<b>17,658</b>		Warrick	715	770	819	6.3	16,187	17,263	18,179	9
<b>Nonmetropolitan portion</b>	<b>23,562</b>	<b>25,557</b>	<b>26,815</b>	<b>4.9</b>	<b>13,549</b>	<b>14,648</b>	<b>15,321</b>		Washington	265	284	298	5.2	11,447	12,060	12,523	88
Adams	407	440	454	3.3	13,373	14,265	14,559	65	Wayne	983	1,059	1,103	4.1	13,665	14,724	15,321	51
Allen	5,127	5,529	5,769	4.3	17,326	18,503	19,123	4	Wells	374	402	422	5.0	14,884	15,698	16,177	33
Bartholomew	975	1,047	1,097	4.8	15,367	16,461	17,214	17	White	311	357	376	5.5	13,481	15,375	16,155	34
Benton	130	150	160	6.1	13,721	15,082	16,910	21	Whitley	399	431	451	4.6	14,735	15,737	16,270	31
Blackford	188	205	211	3.1	13,115	14,414	15,023	57	<b>Iowa</b>	<b>41,170</b>	<b>45,179</b>	<b>48,101</b>	<b>6.5</b>	<b>14,869</b>	<b>16,307</b>	<b>17,301</b>	
Boone	737	791	841	6.3	19,560	20,936	21,989	2	<b>Metropolitan portion</b>	<b>19,294</b>	<b>21,053</b>	<b>22,528</b>	<b>7.0</b>	<b>15,975</b>	<b>17,326</b>	<b>18,377</b>	
Brown	160	172	185	7.5	11,709	12,385	13,075	86	<b>Nonmetropolitan portion</b>	<b>21,876</b>	<b>24,126</b>	<b>25,573</b>	<b>6.0</b>	<b>14,013</b>	<b>15,510</b>	<b>16,453</b>	
Carroll	271	299	314	4.2	14,443	15,931	16,657	24	Adair	113	129	134	3.7	13,290	15,261	15,930	63
Cass	553	602	627	4.2	14,385	15,661	16,323	30	Adams	67	74	81	9.1	13,452	15,118	16,656	39
Clark	1,233	1,290	1,371	6.3	14,099	14,719	15,607	43	Allamakee	176	199	212	6.3	12,619	14,340	15,283	85
Clay	304	334	350	5.0	12,446	13,555	14,157	74	Appanoose	176	192	204	6.4	12,791	13,978	14,867	90
Clinton	435	478	508	6.3	14,179	15,477	16,359	27	Audubon	100	109	114	4.9	13,304	14,761	15,639	78
Crawford	102	108	114	5.6	10,303	10,922	11,533	91	Benton	314	357	384	7.6	14,089	15,995	17,111	26
Daviess	340	374	390	4.2	12,387	13,595	14,150	75	Black Hawk	1,742	1,917	2,058	7.4	13,944	15,438	16,632	42
Dearborn	527	564	594	5.3	13,912	14,688	15,242	52	Boone	348	394	402	2.1	13,893	15,694	15,952	61
Decatur	328	357	377	5.4	14,036	15,176	15,900	36	Bremer	314	353	380	7.7	13,636	15,436	16,667	38
De Kalb	497	531	556	4.6	14,441	15,206	15,662	41	Buchanan	264	297	324	9.1	12,611	14,236	15,529	83
Delaware	1,652	1,767	1,877	6.3	13,731	14,728	15,697	40	Buena Vista	289	321	322	.3	14,471	16,084	16,095	57
Dubois	594	645	688	6.7	16,513	17,727	18,732	8	Butler	202	226	245	8.6	12,707	14,301	15,617	79
Elkhart	2,374	2,548	2,632	3.3	15,659	16,514	16,770	23	Calhoun	170	179	182	2.0	14,599	15,459	15,841	68
Fayette	352	375	388	3.6	13,405	14,352	14,950	58	Carroll	321	350	362	3.2	14,968	16,363	16,864	31
Floyd	965	1,042	1,109	6.4	15,267	16,304	17,161	19	Cass	226	255	264	3.5	14,715	16,758	17,445	23
Fountain	227	252	265	5.2	12,657	14,100	14,906	59	Cedar								

Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Area name	Total personal income				Per capita personal income <sup>3</sup>				Area name	Total personal income				Per capita personal income <sup>3</sup>			
	Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State		Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State
	1988	1989	1990		1988	1989	1990			1988	1989	1990		1988	1989	1990	
Emmet	151	160	169	5.8	12,946	13,744	14,590	92	Cowley	515	553	569	2.9	13,965	14,967	15,414	72
Fayette	272	303	325	7.3	12,204	13,764	14,918	89	Crawford	490	521	555	6.4	13,547	14,547	15,642	68
Floyd	231	252	280	11.2	13,357	14,664	16,424	46	Decatur	84	89	103	16.0	20,160	21,813	25,816	4
Franklin	157	173	184	6.2	13,558	15,129	16,203	54	Dickinson	270	277	309	11.8	14,130	14,545	16,334	59
Fremont	132	140	143	2.2	15,862	16,992	17,450	22	Doniphan	101	108	114	5.8	12,080	13,107	14,110	98
Greene	154	174	171	-1.8	14,881	17,154	17,085	28	Douglas	993	1,096	1,163	6.1	12,598	13,597	14,136	96
Grundy	187	201	216	7.1	15,127	16,583	17,965	14	Edwards	79	68	77	-13.2	20,380	17,725	20,340	14
Guthrie	149	167	172	2.7	13,498	15,258	15,739	73	Elk	45	50	49	-3.0	13,233	14,870	14,674	87
Hamilton	265	299	315	5.1	16,443	18,613	19,576	2	Ellis	364	399	435	9.2	13,729	15,184	16,788	50
Hancock	176	191	204	6.8	13,888	15,090	16,106	56	Ellsworth	83	89	100	12.6	12,515	13,470	15,211	79
Hardin	287	313	334	6.5	14,707	16,275	17,510	19	Finney	455	481	510	6.0	14,272	14,763	15,340	75
Harrison	194	210	225	6.9	13,134	14,260	15,233	86	Ford	424	437	477	9.1	15,571	15,949	17,330	43
Henry	280	305	341	12.0	14,853	15,992	17,689	17	Franklin	292	310	318	2.6	13,356	14,108	14,437	92
Howard	135	153	165	7.8	13,669	15,553	16,840	32	Geary	319	359	370	3.2	10,509	11,789	12,161	105
Humboldt	157	185	188	1.6	14,380	17,090	17,478	21	Gove	519	62	68	10.5	15,699	18,770	21,166	13
Ia	125	127	130	2.5	14,790	15,155	15,590	80	Graham	51	53	58	9.7	13,652	14,476	16,388	58
Iowa	217	231	255	10.1	14,824	15,823	17,409	24	Grant	134	137	153	11.9	18,885	19,119	21,328	12
Jackson	261	293	316	7.7	12,930	14,625	15,843	67	Gray	95	88	99	-11.7	17,728	16,390	18,228	31
Jasper	544	606	634	4.7	15,768	17,480	18,191	10	Greeley	35	42	49	15.4	19,484	23,565	27,390	1
Jefferson	223	246	261	6.1	13,830	15,214	15,986	60	Greenwood	114	119	122	3.0	14,163	14,937	15,616	69
Johnson	1,447	1,632	1,747	7.0	15,645	17,278	18,057	12	Hamilton	59	49	56	14.0	23,869	20,205	23,426	8
Jones	236	267	287	7.6	12,199	13,759	14,752	91	Harper	117	124	134	8.1	16,060	17,211	18,835	23
Keokuk	164	175	189	8.2	13,969	14,992	16,297	51	Harvey	435	455	477	4.6	14,025	14,722	15,354	73
Kossuth	266	292	300	2.9	14,027	15,589	16,182	55	Haskell	90	72	74	-3.3	23,153	18,504	19,174	20
Lee	530	573	612	6.8	13,562	14,755	15,825	70	Hodgeman	37	31	39	23.4	16,653	14,285	17,829	35
Linn	2,774	3,051	3,241	6.2	16,693	18,215	19,148	4	Howard	157	163	172	5.7	13,544	14,125	14,972	82
Louisia	161	178	193	8.3	13,983	15,432	16,640	41	Jefferson	218	233	248	6.4	13,915	14,726	15,538	71
Lucas	127	138	145	5.2	13,814	15,108	15,998	59	Jewell	58	58	70	20.5	12,955	13,311	16,565	54
Lyon	154	181	187	3.3	12,823	15,154	15,675	75	Johnson	7,930	8,612	9,355	8.6	23,461	24,745	26,156	2
Madison	177	196	210	7.4	14,355	15,799	16,791	35	Kearny	74	73	90	23.8	18,698	18,273	22,362	10
Mahaska	286	313	336	7.1	13,354	14,602	15,579	82	Kiowa	118	118	132	12.3	14,026	14,110	16,009	63
Marion	462	496	527	6.2	15,680	16,679	17,497	20	Kingsman	66	62	71	14.1	17,404	16,836	19,556	18
Marshall	583	655	693	5.7	15,090	17,074	18,107	11	Labette	344	353	363	2.8	14,249	14,770	15,346	74
Mills	192	200	215	7.6	14,693	15,199	16,233	53	Lane	36	42	44	3.8	15,152	17,671	18,482	28
Mitchell	154	184	201	9.7	14,016	16,759	18,440	9	Leavenworth	809	884	929	5.1	12,997	13,914	14,366	94
Monona	145	151	154	2.1	14,237	14,929	15,342	84	Lincoln	49	49	60	21.8	13,053	13,234	16,395	57
Monroe	110	121	128	6.5	13,448	14,802	15,841	68	Linn	114	114	111	3.5	12,899	13,403	13,860	99
Montgomery	176	195	203	4.2	14,439	16,081	16,817	33	Logan	45	51	50	-2.3	14,081	16,316	16,257	60
Muscatine	637	705	750	6.3	16,073	17,740	18,750	6	Lyon	475	511	521	1.9	13,578	14,650	15,000	81
O'Brien	219	235	244	3.8	14,057	15,177	15,789	72	McPherson	415	440	475	8.0	15,107	16,074	17,443	40
Osceola	102	113	118	4.5	13,798	15,486	16,331	49	Mania	172	178	191	7.0	13,164	13,738	14,833	84
Page	229	262	276	5.2	13,391	15,458	16,349	47	Marshall	168	176	194	9.9	13,914	14,864	16,608	52
Palo Alto	158	166	177	6.7	14,398	15,349	16,620	43	Meade	71	76	76	12.1	16,329	15,774	17,980	32
Plymouth	322	369	391	5.9	13,885	15,863	16,689	37	Miami	321	343	361	5.0	13,975	14,756	15,322	76
Pocahontas	141	157	151	-3.6	14,288	16,261	15,932	62	Mitchell	103	103	126	22.4	13,907	14,091	17,539	38
Polk	5,731	6,183	6,621	7.1	18,026	19,152	20,139	1	Montgomery	512	552	562	5.5	12,962	14,097	15,026	80
Pottawattamie	1,205	1,278	1,377	7.7	14,621	15,496	16,645	40	Morris	79	82	90	9.7	12,796	13,254	14,558	90
Poweshiek	290	317	337	6.5	15,472	16,769	17,677	18	Morton	56	55	61	11.2	15,836	15,657	17,509	39
Ringgold	67	72	77	6.9	12,242	13,240	14,217	96	Nemaha	152	160	175	9.3	14,326	15,197	16,753	51
Sac	181	187	196	5.0	14,523	15,105	15,930	63	Neosho	232	253	266	5.2	13,295	14,671	15,650	67
Scott	2,466	2,692	2,901	7.7	16,338	17,853	19,197	3	Ness	75	77	88	14.6	17,825	18,699	21,946	11
Shelby	196	207	215	3.7	14,649	15,583	16,241	52	Norton	87	89	100	12.7	14,280	14,745	16,824	49
Sioux	367	447	474	6.0	12,329	15,008	15,822	71	Osage	203	212	223	5.5	13,379	13,894	14,628	89
Story	1,000	1,120	1,181	5.5	13,639	15,175	15,862	66	Osborne	72	74	85	16.1	14,150	14,833	17,659	37
Tama	245	263	279	6.3	13,876	15,018	16,049	58	Ottawa	82	70	82	17.8	14,179	12,363	14,653	88
Taylor	86	97	103	6.4	11,745	13,495	14,518	94	Pawnee	126	129	138	7.2	16,444	16,940	18,318	29
Union	174	189	199	5.3	13,553	14,780	15,585	81	Phillips	101	103	113	9.7	15,007	15,481	17,171	46
Van Buren	91	99	106	6.8	11,857	12,943	13,835	98	Pottawattamie	215	224	234	4.6	13,584	13,988	14,476	91
Wapello	464	507	540	6.4	12,763	14,125	15,143	88	Pratt	169	163	179	9.5	16,852	16,533	18,491	27
Warren	518	566	608	7.4	14,100	15,603	16,912	30	Rawlins	54	57	66	17.0	15,317	16,374	19,605	16
Washington	268	297	329	10.7	13,853	15,237	16,729	36	Reno	919	973	1,071	10.0	14,527	15,500	17,197	44
Wayne	89	99	102	2.8	12,319	13,913	14,455	95	Republic	103	101	104	3.6	15,469	15,331	16,183	62
Webster	573	640	663	3.6	14,035	15,788	16,444	45	Rice	157	157	175	11.5	14,368	14,575	16,522	56
Winnemac	198	206	219	6.5	16,335	16,960	18,054	63	Riley	786	838	880	5.0	11,693	12,470	13,108	103
Winneshiek	261	304	332	9.3	12,523	14,593	15,909	65	Rooks	83	83	92	10.4	13,019	13,430	15,288	78
Woodbury	1,426	1,558	1,655	6.2	14,642	15,930	16,804	34	Rush	56	59	71	23.1	13,726	14,602	18,583	25
Worth	120	136	147	8.3	14,740	16,941	18,481	8	Russell	124	129	139	8.0	15,156	16,133	17,900	34
Wright	236	264	265	5	16,249	18,362	19,590	7	Saline	810	864	937	8.4	16,398	17,509	19,002	22
Kansas	39,380	41,943	44,906	7.1	15,993	16,962	18,104	.....	Scott	96	98	121	24.1	17,542	18,178	23,066	9
Metropolitan portion	22,902	24,716	26,403	6.8	17,562	18,702	19,741	.....	Sedgewick	6,766	7,312	7,800	6.7	17,031	18,223	19,276	19
Nonmetropolitan portion	16,477	17,227	18,503	7.4	14,226	14,963	16,189	.....	Seward	287	293	322	9.7	15,300	15,624	17,160	47
Allen	178	193	199	3.2	11,875	13,004	13,637	101	Shawnee	2,770	2,985	3,152	5.6	17,343	18,589	19,558	17
Anderson	103	111	112	1.0	13,012	14,124	14,403	93	Sheridan	47	47	52	10.4	14			

Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Area name	Total personal income				Per capita personal income <sup>3</sup>				Area name	Total personal income				Per capita personal income <sup>3</sup>			
	Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State		Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State
	1988	1989	1990		1988	1989	1990			1988	1989	1990		1988	1989	1990	
<b>Kentucky</b> .....	47,914	51,561	55,319	7.3	13,018	14,021	14,992	.....	Monroe	122	131	139	5.8	10,535	11,486	12,208	68
<b>Metropolitan portion</b> .....	26,196	28,220	30,297	7.4	15,419	16,554	17,636	.....	Montgomery	221	238	259	8.5	11,203	12,171	13,215	47
<b>Nonmetropolitan portion</b> .....	21,718	23,341	25,023	7.2	10,960	11,833	12,689	.....	Morgan	91	97	111	14.1	7,708	8,293	9,497	108
Adair	156	166	181	9.0	10,116	10,831	11,803	74	Muhlenberg	338	357	381	6.8	10,647	11,341	12,172	69
Allen	154	163	170	4.2	10,540	11,185	11,633	77	Nelson	368	402	434	8.1	12,516	13,603	14,580	25
Anderson	183	197	212	7.6	12,850	13,699	14,500	28	Nicholas	77	82	90	9.6	11,335	12,176	13,363	42
Ballard	104	117	123	5.1	12,997	14,737	15,565	18	Ohio	214	225	241	6.7	10,047	10,657	11,400	82
Barren	394	418	446	6.6	11,397	12,377	13,063	52	Oldham	533	613	687	12.0	16,912	18,887	20,466	2
Bath	92	98	109	10.5	9,463	10,156	11,223	86	Owen	89	96	105	9.9	9,898	10,645	11,649	76
Bell	236	316	337	6.8	9,213	9,972	10,728	91	Owsley	38	39	43	9.8	7,317	7,692	8,551	115
Boone	970	984	1,061	10.1	15,962	17,111	18,275	5	Pendleton	125	136	146	7.3	10,649	11,478	12,089	71
Bourbon	266	271	285	5.3	13,782	14,078	14,797	21	Perry	353	370	410	10.8	11,348	12,086	13,563	40
Boyd	728	786	860	9.4	14,033	15,296	16,824	13	Pike	809	861	948	10.1	10,784	11,711	13,109	51
Boyle	320	345	373	8.3	12,596	13,505	14,527	27	Powell	103	108	116	7.4	8,887	9,260	9,883	105
Bracken	79	82	87	7.1	10,254	10,543	11,226	85	Pulaski	552	594	642	8.0	11,199	12,042	12,942	55
Breathitt	142	150	165	9.7	8,873	9,520	10,531	94	Roberson	18	20	21	7.4	8,535	9,259	9,961	101
Breckinridge	179	188	202	7.2	10,919	11,560	12,384	65	Rockcastle	131	139	157	12.7	8,877	9,458	10,600	92
Bullitt	578	621	670	7.8	12,400	13,201	14,030	35	Rowan	182	196	212	8.4	9,068	9,710	10,397	96
Butler	108	123	128	3.7	9,668	11,013	11,370	84	Russell	153	171	188	9.9	10,524	11,699	12,726	59
Caldwell	146	154	162	5.1	10,998	11,637	12,228	67	Scott	340	384	431	12.4	14,593	16,282	17,997	6
Calloway	380	411	434	5.7	12,724	13,552	14,046	34	Shelby	358	393	426	8.4	14,735	16,020	17,104	8
Campbell	1,171	1,254	1,346	7.3	14,064	15,030	16,017	15	Simpson	183	197	201	1.9	12,119	13,044	13,240	45
Carlisle	59	64	66	3.3	11,066	12,176	12,623	61	Spencer	71	79	88	11.2	10,778	11,794	12,844	58
Carroll	114	124	133	7.6	12,361	13,375	14,332	30	Taylor	247	265	280	5.6	11,741	12,588	13,236	46
Carter	218	233	252	8.4	8,879	9,553	10,370	97	Todd	112	124	126	2.0	10,164	11,322	11,536	79
Casey	122	133	145	9.6	8,469	9,289	10,241	99	Trigg	122	133	137	3.2	11,921	12,907	13,189	48
Christian	710	753	788	4.7	10,383	10,971	11,399	83	Trimble	74	84	86	2.7	12,126	13,759	14,087	33
Clark	399	404	436	7.8	13,687	13,802	14,739	23	Union	222	236	245	3.9	13,199	14,194	14,824	20
Clay	173	182	189	3.7	7,818	8,338	8,693	114	Warren	975	1,062	1,131	6.5	12,637	13,835	14,747	22
Clinton	72	76	81	7.1	7,778	8,240	8,875	111	Washington	115	125	137	9.3	11,128	12,030	13,053	54
Crittenden	88	97	103	5.8	9,560	10,569	11,157	87	Wayne	142	155	167	7.2	8,151	8,929	9,527	107
Cumberland	59	62	67	8.1	8,524	9,035	9,900	104	Webster	203	220	235	7.0	14,202	15,617	16,883	12
Daviess	1,175	1,298	1,382	6.4	13,534	14,944	15,822	17	Whitley	355	381	413	8.4	10,577	11,416	12,390	64
Edmonson	72	77	82	7.0	6,749	7,323	7,823	118	Wolfe	52	54	58	7.5	7,970	8,326	8,991	110
Elliott	44	47	51	8.5	6,843	7,264	7,880	119	Woodford	421	458	471	2.9	21,719	23,259	23,493	1
Estill	129	135	147	9.2	8,804	9,225	10,053	100	<b>Louisiana</b> .....	54,093	56,727	61,178	7.8	12,611	13,338	14,528	.....
Fayette	3,665	4,042	4,378	8.3	16,763	18,198	19,320	3	<b>Metropolitan portion</b> .....	40,746	42,987	46,330	7.8	13,686	14,564	15,814	.....
Fleming	125	133	142	6.5	10,156	10,826	11,511	80	<b>Nonmetropolitan portion</b> .....	13,347	13,740	14,849	8.1	10,171	10,588	11,586	.....
Floyd	468	502	546	8.7	10,376	11,380	12,571	62	Acadia	551	569	612	7.6	9,671	10,087	10,984	50
Franklin	653	690	745	7.9	15,036	15,852	16,377	9	Allen	183	192	207	8.0	8,464	8,947	9,783	59
Fulton	104	112	117	3.6	12,419	13,535	14,100	32	Ascension	676	716	782	9.3	11,677	12,309	13,425	16
Gallatin	59	68	75	11.4	11,999	12,759	13,882	37	Assumption	217	237	259	9.6	9,420	10,332	11,426	42
Garrard	132	143	155	8.1	11,453	12,383	13,328	43	Avoyelles	344	348	393	12.9	8,565	8,798	10,079	57
Grant	173	190	204	7.8	11,355	12,254	12,915	56	Beauregard	340	341	372	9.3	11,151	11,240	12,398	26
Graves	433	466	482	3.4	13,023	13,972	14,335	29	Bienville	172	181	193	6.7	10,570	11,210	12,081	34
Grayson	204	215	228	6.4	9,762	10,244	10,824	90	Bossier	1,088	1,123	1,206	7.4	12,503	12,976	14,023	12
Green	105	116	126	8.2	10,078	11,203	12,137	70	Caddo	3,616	3,807	4,046	6.3	14,289	15,197	16,337	6
Greenup	476	483	514	6.4	12,847	13,121	14,002	36	Calcasieu	2,162	2,275	2,514	10.5	12,756	13,475	14,968	8
Hancock	103	109	115	5.4	13,073	13,832	14,569	26	Caldwell	103	105	115	8.7	10,207	10,589	11,731	38
Hardin	1,061	1,131	1,193	5.5	11,267	12,391	13,459	41	Cameron	105	108	117	7.6	11,079	11,562	12,633	22
Harlan	370	394	423	7.4	9,700	10,585	11,610	78	Catahoula	115	99	111	12.8	10,005	8,766	10,113	56
Harrison	183	202	214	6.4	11,403	12,492	13,155	49	Claiborne	182	184	194	5.5	10,186	10,453	11,190	47
Hart	143	154	163	6.2	9,392	10,229	10,985	88	Concordia	234	236	259	9.8	10,779	11,131	12,516	24
Henderson	610	645	693	7.6	14,297	15,055	16,075	14	De Soto	280	284	298	4.9	10,747	11,070	11,801	36
Henry	155	165	176	7.1	12,106	12,883	13,744	38	East Baton Rouge	5,726	6,237	6,788	8.8	14,907	16,322	17,881	1
Hickman	64	71	73	2.4	11,152	12,625	13,072	53	East Carroll	105	99	105	5.7	10,431	10,063	10,876	51
Hopkins	688	734	782	6.6	14,901	15,925	16,934	11	East Feliciana	211	211	233	10.4	10,839	12,920	12,156	32
Jackson	87	93	100	7.6	7,281	7,804	8,391	116	Evangeline	324	333	372	11.7	9,545	9,906	11,197	46
Jefferson	11,178	11,944	12,732	6.6	16,742	17,961	19,140	4	Franklin	191	198	217	9.7	8,321	8,742	9,735	60
Jessamine	407	430	472	9.7	13,791	14,312	15,381	19	Grant	157	166	178	7.6	8,917	9,443	10,186	54
Johnson	243	259	285	9.9	10,191	11,029	12,273	66	Iberia	724	771	839	8.8	10,481	11,232	12,301	29
Kenton	2,093	2,244	2,412	7.5	14,936	15,912	16,935	10	Iberville	356	360	398	10.6	11,191	11,453	12,861	20
Knott	148	151	164	8.6	8,178	8,435	9,185	109	Jackson	173	179	189	5.9	10,672	11,210	12,106	33
Knox	257	273	295	8.1	8,649	9,212	9,941	102	Jefferson	6,842	7,168	7,650	6.7	15,007	15,863	17,101	3
Lane	139	151	160	6.4	11,797	12,868	13,727	39	Jefferson Davis	318	323	342	5.7				

Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Area name	Total personal income				Per capita personal income <sup>3</sup>				Area name	Total personal income				Per capita personal income <sup>3</sup>			
	Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State		Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State
	1988	1989	1990		1988	1989	1990			1988	1989	1990		1988	1989	1990	
St. Martin .....	403	426	475	11.5	9,084	9,636	10,805	52	Allegan .....	1,265	1,377	1,465	6.4	14,361	15,402	16,107	27
St. Mary .....	632	665	718	7.9	10,418	11,230	12,428	25	Alpena .....	403	423	450	6.4	13,213	13,868	14,691	39
St. Tammany .....	2,156	2,297	2,482	8.1	15,189	16,005	17,129	2	Antrim .....	221	246	264	7.4	12,550	13,716	14,428	46
Tangipahoa .....	893	929	1,002	7.9	10,324	10,786	11,704	39	Arenac .....	177	193	205	6.4	12,079	13,015	13,681	56
Tensas .....	84	74	85	14.3	11,319	10,247	12,049	35	Baraga .....	89	95	102	6.9	11,213	11,954	12,765	69
Terrebonne .....	1,070	1,127	1,223	8.4	10,845	11,532	12,633	22	Barry .....	716	776	829	6.8	14,672	15,684	16,477	24
Union .....	234	242	256	5.8	11,053	11,561	12,396	26	Bay .....	1,657	1,748	1,844	5.5	14,791	15,645	16,499	23
Vermilion .....	524	556	589	6.0	10,300	11,024	11,792	37	Benzie .....	144	154	164	6.4	12,134	12,810	13,402	60
Vernon .....	550	560	586	6.3	9,976	9,080	9,603	43	Berrien .....	2,361	2,500	2,623	4.9	14,667	15,522	16,232	26
Washington .....	456	461	490	6.4	10,351	10,564	11,383	61	Branch .....	499	534	558	4.5	12,197	12,953	13,403	59
Webster .....	503	517	550	6.3	11,726	12,204	13,134	18	Branch .....	1,939	2,056	2,171	5.6	14,326	15,166	15,944	29
West Baton Rouge .....	230	245	271	10.3	11,627	12,524	13,962	13	Calhoun .....	692	747	775	3.7	14,161	15,189	15,619	33
West Carroll .....	102	103	116	12.2	8,258	8,427	9,585	62	Cass .....	290	311	342	10.0	13,913	14,694	15,865	30
West Feliciana .....	119	115	126	10.1	9,175	8,858	9,793	58	Charlevoix .....	246	267	283	5.9	11,720	12,581	13,157	64
Winn .....	150	153	165	7.6	9,093	9,350	10,172	55	Cheboygan .....	322	348	378	8.6	9,682	10,252	10,864	81
Clare .....	268	286	307	7.3	10,965	11,593	12,269	72	Chippewa .....	811	886	927	4.7	14,306	15,452	15,953	28
Clinton .....	108	116	128	10.0	9,326	9,710	10,304	83	Crawford .....	108	116	128	10.0	9,326	9,710	10,304	83
Delta .....	469	506	546	8.0	12,386	13,389	14,451	44	Dickinson .....	399	452	500	10.6	14,941	16,887	18,605	8
Dickinson .....	399	452	500	10.6	14,941	16,887	18,605	8	Eaton .....	1,440	1,536	1,656	7.8	15,782	16,685	17,764	13
Eaton .....	1,440	1,536	1,656	7.8	15,782	16,685	17,764	13	Emmet .....	378	430	469	9.0	15,459	17,366	18,655	7
Emmet .....	378	430	469	9.0	15,459	17,366	18,655	7	Genesee .....	6,588	6,945	7,247	4.3	15,254	16,126	16,829	21
Genesee .....	6,588	6,945	7,247	4.3	15,254	16,126	16,829	21	Gladwin .....	242	261	279	7.0	11,340	12,077	12,698	70
Gladwin .....	242	261	279	7.0	11,340	12,077	12,698	70	Gogebic .....	208	219	234	7.0	11,356	12,046	12,986	67
Gogebic .....	208	219	234	7.0	11,356	12,046	12,986	67	Grand Traverse .....	938	1,021	1,088	6.6	15,214	16,179	16,808	22
Grand Traverse .....	938	1,021	1,088	6.6	15,214	16,179	16,808	22	Gratiot .....	503	534	570	6.7	12,922	13,718	14,599	41
Gratiot .....	503	534	570	6.7	12,922	13,718	14,599	41	Hillsdale .....	559	609	645	5.8	13,043	14,127	14,810	37
Hillsdale .....	559	609	645	5.8	13,043	14,127	14,810	37	Houghton .....	402	424	461	8.6	11,126	11,889	13,021	66
Houghton .....	402	424	461	8.6	11,126	11,889	13,021	66	Huron .....	541	615	623	1.3	15,445	17,585	17,805	12
Huron .....	541	615	623	1.3	15,445	17,585	17,805	12	Ingham .....	4,412	4,707	4,930	4.7	15,754	16,760	17,458	17
Ingham .....	4,412	4,707	4,930	4.7	15,754	16,760	17,458	17	Ionia .....	644	693	732	5.6	11,589	12,293	12,777	68
Ionia .....	644	693	732	5.6	11,589	12,293	12,777	68	Iosco .....	348	376	400	6.2	11,628	12,519	13,195	63
Iosco .....	348	376	400	6.2	11,628	12,519	13,195	63	Iron .....	162	177	192	8.8	12,098	13,346	14,615	40
Iron .....	162	177	192	8.8	12,098	13,346	14,615	40	Isabella .....	677	740	786	6.1	12,475	13,602	14,360	47
Isabella .....	677	740	786	6.1	12,475	13,602	14,360	47	Jackson .....	2,114	2,262	2,365	4.6	14,309	15,208	15,750	32
Jackson .....	2,114	2,262	2,365	4.6	14,309	15,208	15,750	32	Kalamazoo .....	3,602	3,917	4,096	4.6	16,313	17,637	18,288	11
Kalamazoo .....	3,602	3,917	4,096	4.6	16,313	17,637	18,288	11	Kalkaska .....	128	135	148	9.8	9,908	10,173	10,862	82
Kalkaska .....	128	135	148	9.8	9,908	10,173	10,862	82	Kent .....	8,117	8,817	9,386	6.5	16,578	17,799	18,674	6
Kent .....	8,117	8,817	9,386	6.5	16,578	17,799	18,674	6	Keweenaw .....	20	21	23	8.3	11,364	12,469	13,686	54
Keweenaw .....	20	21	23	8.3	11,364	12,469	13,686	54	Lake .....	82	88	94	6.0	9,723	10,403	10,971	80
Lake .....	82	88	94	6.0	9,723	10,403	10,971	80	Lapeer .....	1,109	1,237	1,292	4.5	15,292	16,780	17,194	19
Lapeer .....	1,109	1,237	1,292	4.5	15,292	16,780	17,194	19	Leelanau .....	246	273	294	7.4	15,421	16,822	17,655	14
Leelanau .....	246	273	294	7.4	15,421	16,822	17,655	14	Lenawee .....	1,357	1,455	1,502	3.2	15,060	16,024	16,373	25
Lenawee .....	1,357	1,455	1,502	3.2	15,060	16,024	16,373	25	Livingston .....	2,112	2,325	2,464	6.0	19,107	20,513	21,153	3
Livingston .....	2,112	2,325	2,464	6.0	19,107	20,513	21,153	3	Luce .....	93	98	106	7.9	15,939	17,007	18,394	9
Luce .....	93	98	106	7.9	15,939	17,007	18,394	9	Mackinac .....	125	135	147	8.7	11,886	12,757	13,740	52
Mackinac .....	125	135	147	8.7	11,886	12,757	13,740	52	Macomb .....	13,324	14,339	15,051	5.0	18,820	20,122	20,924	4
Macomb .....	13,324	14,339	15,051	5.0	18,820	20,122	20,924	4	Manistee .....	266	284	302	6.4	12,442	13,342	14,208	49
Manistee .....	266	284	302	6.4	12,442	13,342	14,208	49	Marquette .....	881	925	967	4.6	12,357	13,030	13,644	56
Marquette .....	881	925	967	4.6	12,357	13,030	13,644	56	Mason .....	317	346	369	6.8	12,395	13,545	14,448	45
Mason .....	317	346	369	6.8	12,395	13,545	14,448	45	Mecosta .....	395	431	453	5.1	10,669	11,611	12,123	73
Mecosta .....	395	431	453	5.1	10,669	11,611	12,123	73	Menominee .....	302	329	351	6.5	12,065	13,213	14,066	50
Menominee .....	302	329	351	6.5	12,065	13,213	14,066	50	Midland .....	1,302	1,419	1,498	5.6	15,750	16,938	19,732	5
Midland .....	1,302	1,419	1,498	5.6	15,750	16,938	19,732	5	Missaukee .....	122	135	141	5.0	10,450	11,303	11,558	76
Missaukee .....	122	135	141	5.0	10,450	11,303	11,558	76	Monroe .....	2,073	2,213	2,315	4.6	15,729	16,678	17,278	18
Monroe .....	2,073	2,213	2,315	4.6	15,729	16,678	17,278	18	Montcalm .....	637	700	727	4.0	12,373	13,369	13,636	57
Montcalm .....	637	700	727	4.0	12,373	13,369	13,636	57	Montmorency .....	91	97	106	9.4	10,626	11,082	11,810	75
Montmorency .....	91	97	106	9.4	10,626	11,082	11,810	75	Muskegon .....	2,091	2,235	2,353	5.3	13,283	14,130	14,767	38
Muskegon .....	2,091	2,235	2,353	5.3	13,283	14,130	14,767	38	Newaygo .....	460	494	529	7.1	12,335	13,074	13,775	51
Newaygo .....	460	494	529	7.1	12,335	13,074	13,775	51	Oakland .....	25,778	27,949	29,246	4.6	24,314	26,061	26,884	1
Oakland .....	25,778	27,949	29,246	4.6	24,314	26,061	26,884	1	Oceanoma .....	287	312	328	4.9	12,969	14,005	14,556	43
Oceanoma .....	287	312	328	4.9	12,969	14,005	14,556	43	Ogemaw .....	185	199	206	3.8	10,316	10,814	10,954	79
Ogemaw .....	185	199	206	3.8	10,316	10,814	10,954	79	Ontonagon .....	109	120	126	5.3	12,335	13,539	14,250	48
Ontonagon .....	109	120	126	5.3	12,335	13,539	14,250	48	Oscoda .....	208	229	240	5.2	10,512	11,433	11,892	74
Oscoda .....																	

Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Area name	Total personal income				Per capita personal income <sup>3</sup>				Area name	Total personal income				Per capita personal income <sup>3</sup>			
	Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State		Millions of dollars			Percent change <sup>2</sup>	Dollars			Rank in State
	1988	1989	1990		1988	1989	1990			1988	1989	1990		1988	1989	1990	
Beltrami	376	405	440	8.6	11,162	11,905	12,751	81	Mississippi	29,215	31,091	33,027	6.2	11,321	12,077	12,830	.....
Benton	372	412	428	3.8	12,797	13,891	14,094	71	Metropolitan portion	10,066	10,821	11,516	6.4	13,057	13,998	14,821	.....
Big Stone	79	91	92	8	11,905	14,270	14,685	64	Nonmetropolitan portion	19,149	20,270	21,512	6.1	10,581	11,253	11,970	.....
Blue Earth	701	771	808	4.8	12,891	14,236	14,957	60	Adams	416	443	478	7.8	11,423	12,383	13,563	11
Brown	378	432	446	3.2	13,909	15,990	16,543	26	Alcorn	364	382	402	5.3	11,379	12,007	12,691	18
Carlton	361	391	415	6.2	12,323	13,357	14,168	68	Amite	113	116	126	8.2	8,432	8,715	9,432	76
Carver	794	911	991	8.7	17,572	19,503	20,487	5	Attala	173	184	196	6.5	9,201	9,884	10,600	58
Cass	228	247	263	6.5	10,623	11,394	12,027	85	Benton	76	80	82	2.8	9,408	9,884	10,183	69
Chippewa	174	199	213	6.9	12,813	14,892	16,123	34	Bolivar	428	445	470	5.7	9,957	10,513	11,265	48
Chisago	425	467	492	5.4	14,454	15,558	16,041	36	Calhoun	154	159	164	3.2	10,190	10,589	10,991	53
Clay	641	697	753	8.1	12,880	13,906	14,905	61	Carroll	86	90	94	5.4	9,245	9,673	10,235	68
Clearwater	84	91	96	5.4	10,080	10,958	11,560	87	Chickasaw	194	202	211	4.5	10,784	11,222	11,672	34
Cook	85	91	96	7.3	13,905	15,564	16,804	20	Choctaw	80	85	88	3.9	8,877	9,396	9,735	73
Cottonwood	180	202	205	1.4	13,790	15,729	16,164	32	Claiborne	99	104	112	8.1	8,560	9,096	9,903	72
Crow Wing	569	622	664	6.7	12,938	14,146	14,972	59	Clarke	163	174	184	5.6	9,357	10,043	10,611	57
Dakota	4,924	5,463	5,879	7.6	19,222	20,472	21,123	2	Clay	228	246	259	7.7	10,736	11,599	12,291	27
Dodge	213	240	249	3.8	13,785	15,370	15,780	42	Coahoma	356	373	398	6.8	10,819	11,596	12,644	19
Douglas	354	387	409	5.5	12,431	13,557	14,226	67	Copiah	256	274	288	5.1	9,376	9,991	10,428	64
Fairbault	237	273	272	-3	13,599	15,953	16,141	33	Covington	153	161	165	3.0	9,304	9,753	9,999	71
Fillmore	272	304	316	3.8	12,987	14,611	15,209	54	De Soto	919	1,013	1,106	9.2	14,146	15,209	16,170	2
Freeborn	467	507	507	-1	13,971	15,281	15,352	52	Forrest	800	858	904	5.3	11,696	12,571	13,227	15
Goodhue	589	651	684	5.1	14,686	16,113	16,759	21	Franklin	86	89	95	6.0	10,167	10,618	11,322	45
Grant	87	101	104	2.1	13,600	16,056	16,624	23	George	149	160	175	9.3	9,013	9,641	10,486	63
Hennepin	21,482	22,920	24,561	7.2	21,234	22,410	23,705	1	Greene	75	77	81	5.7	7,393	7,523	7,933	82
Houston	239	266	280	5.5	12,946	14,390	15,144	55	Grenada	249	271	271	-1	11,679	12,638	12,569	21
Hubbard	161	175	186	6.6	10,860	11,763	12,445	83	Hancock	347	371	397	7.0	11,275	11,840	12,423	22
Isanti	341	368	390	5.9	13,442	14,338	14,975	58	Harrison	2,020	2,140	2,265	5.8	12,180	12,935	13,691	10
Itasca	476	514	547	6.4	11,539	12,547	13,399	74	Hinds	3,619	3,916	4,123	5.3	14,079	15,337	16,215	1
Jackson	163	192	195	1.4	13,499	16,214	16,747	22	Holmes	181	188	204	8.3	8,226	8,648	9,442	75
Kanabec	148	159	166	4.7	11,772	12,498	12,951	77	Humphreys	158	155	172	11.2	12,562	12,585	14,244	8
Kandiyohi	525	591	638	7.9	13,743	15,361	16,404	28	Issaquena	23	21	21	8	11,584	10,931	11,325	44
Kittson	90	104	109	5.0	15,312	17,907	18,979	9	Itawamba	206	218	230	5.4	10,228	10,783	11,497	36
Koochiching	174	199	231	15.7	10,560	12,184	14,165	69	Jackson	1,404	1,452	1,551	6.8	12,004	12,531	13,475	13
Lac Qui Parle	117	136	139	2.1	12,620	15,047	15,672	48	Jasper	155	163	173	6.1	9,022	9,525	10,127	70
Lake	105	117	132	13.0	9,743	11,077	12,770	80	Jefferson	64	65	70	7.6	7,275	7,478	8,138	81
Lake of the Woods	48	51	55	7.6	11,981	12,577	13,330	75	Jefferson Davis	113	120	124	3.8	8,039	8,533	8,658	79
Le Sueur	329	364	378	3.8	14,190	15,679	16,238	31	Jones	689	732	769	4.9	11,039	11,784	12,392	23
Lincoln	91	105	110	4.7	12,692	15,030	16,042	35	Kemper	86	89	93	4.9	8,290	8,565	8,984	77
Lyon	346	390	411	5.4	13,948	15,749	16,572	25	Lafayette	321	347	371	6.8	10,171	10,955	11,620	35
McLeod	468	509	542	6.6	14,898	16,038	16,876	18	Lamar	272	292	316	8.0	9,213	9,748	10,326	65
Mahnomen	56	60	66	9.1	10,931	11,924	13,095	76	Lauderdale	1,032	1,090	1,150	5.5	13,536	14,387	15,228	3
Marshall	153	169	179	6.0	13,466	15,190	16,361	30	Lawrence	125	124	131	5.4	9,840	9,906	10,516	62
Martin	338	389	402	3.4	14,400	16,818	17,588	13	Leake	179	198	203	2.6	9,684	10,729	11,016	52
Meeke	276	310	332	7.2	13,348	14,904	15,888	39	Lee	837	896	963	7.4	13,051	13,809	14,627	6
Millie Lacs	245	266	282	6.0	13,211	14,282	15,067	56	Leflore	437	460	495	7.4	11,237	12,118	13,311	14
Morrison	326	362	381	5.5	11,080	12,261	12,866	78	Lincoln	309	332	356	7.1	10,129	10,942	11,756	33
Mower	536	591	631	6.7	14,179	15,735	16,882	17	Londes	706	776	830	7.0	11,837	13,070	14,000	9
Murray	135	152	152	-1	13,581	15,581	15,776	43	Madison	657	735	801	8.9	12,830	13,966	14,774	5
Nicollet	351	397	410	3.3	12,633	14,200	14,553	66	Marion	242	254	268	5.8	9,291	9,870	10,530	61
Nobles	292	330	343	4.2	14,347	16,331	17,104	15	Marshall	301	325	347	6.9	9,887	10,683	11,434	39
Norman	119	131	142	8.7	14,564	16,250	17,881	10	Monroe	407	431	451	4.6	11,112	11,776	12,312	26
Olmsted	1,827	2,030	2,195	8.1	17,674	19,317	20,515	4	Montgomery	120	126	134	6.1	9,573	10,129	10,814	55
Otter Tail	620	697	739	6.1	12,223	13,741	14,568	65	Neshoba	237	250	266	6.4	9,573	10,094	10,719	56
Pennington	179	194	209	7.8	13,159	14,463	15,753	45	Newton	224	244	255	4.7	11,005	12,006	12,572	20
Pine	219	236	247	4.6	10,494	11,199	11,572	86	Noxubee	106	105	112	6.8	8,265	8,295	8,942	78
Pipestone	142	159	166	4.6	13,395	15,053	15,822	40	Okibeha	373	408	432	5.8	9,779	10,664	11,234	50
Polk	456	504	532	5.7	13,892	15,451	16,390	29	Panola	294	311	339	8.9	9,938	10,439	11,265	48
Pope	125	143	148	3.9	11,456	13,204	13,803	72	Pearl River	381	406	437	7.8	9,950	10,542	11,274	47
Ramsay	8,691	9,390	9,887	5.3	18,121	19,451	20,303	7	Perry	99	103	112	8.5	9,148	9,529	10,281	67
Red Lake	58	66	68	2.2	12,356	14,494	15,041	57	Pike	374	394	420	6.5	10,044	10,648	11,388	42
Redwood	217	262	265	1.3	12,357	15,063	15,393	51	Pontotoc	253	267	284	6.5	11,465	12,066	12,763	17
Renville	251	300	305	1.7	13,792	16,764	17,307	14	Prenitt	232	247	267	7.9	9,931	10,597	11,449	38
Rice	669	731	778	6.4	13,844	14,983	15,767	44	Quitman	102	104	110	5.7	9,373	9,799	10,535	60
Rock	136	154	156	1.4	13,672	15,611	15,973	37	Rankin	1,100	1,193	1,274	6.7	13,079	13,911	14,525	7
Roseau	217	227	250	10.1	15,132	15,398	16,484	27	Scott	270	298	313	5.3	11,101	12,297	12,991	16
St. Louis	2,626	2,875	3,052	6.2	13,070	14,432	15,419	50	Sharkey	79	75	84	12.6	10,693	10,439	12,002	29
Scott	959	1,051	1,113	5.8	17,565	18,640	19,060	8	Simpson	232	251	262	4.3	9,635	10,482	10,936	54
Sherburne	493	540	576	6.7	12,526	13,233	13,596	73	Smith	149	162	167	2.6	9,930	10,904	11,281	46
Sibley	193	223	226	1.0	13,315	15,511	15,718	46	Stone	106	113	123	8.6	10,019	10,628	11,427	40
Stearns	1,513	1,678	1,760	4.9	13,016	14,266	14,757	63	Sunflower	358	372	404	8.7	10,598	11,180	12,334	25
Steele	457	510	542	6.3	15,005	16,659	17,592	12	Tallahatchie	148	151	161	6.8	9,639	9,876	10,591	59
Stevens	138	159	162	2.3	12,909												



Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Table with columns for Area name, Total personal income (Millions of dollars, Percent change, Dollars, Rank in State), and Per capita personal income (Dollars, Rank in State). It lists data for Missouri and Montana counties from 1988 to 1990.

See footnotes at end of table.













Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988-90—Continued

Table with 18 columns: Area name, Total personal income (Millions of dollars, Percent change, 1988-90), Per capita personal income (Dollars, Rank in State, 1988-90). Rows list counties from Arizon to San Patricio, including sub-sections for Utah, Metropolitan and Nonmetropolitan portions, and Vermont.

See footnotes at end of table.





Table 2.—Total Personal Income and Per Capita Personal Income by County, 1988–90—Continued

Table with columns for Area name, Total personal income (Millions of dollars, Percent change), Per capita personal income (Dollars, Rank in State), and corresponding data for 1988, 1989, 1990, and 1989-90 for various counties in West Virginia, Wyoming, and Wisconsin.

1. The personal income level shown for the United States is derived as the sum of the county estimates; it differs from the national income and product accounts (NIPA) estimate of personal income because, by definition, it omits the earnings of Federal civilian and military personnel stationed abroad and of U.S. residents employed abroad temporarily by private U.S. firms. It can also differ from the NIPA estimate because of different data sources and revision schedules.

2. Percent change was calculated from unrounded data.

3. Per capita personal income was computed using Bureau of the Census midyear estimates. The years 1988-

89 are revised as of January 1992 to reflect 1980 and 1990 Census population counts. Midyear 1990 population estimates were prepared by BEA by adjusting the April 1990 population counts based on the Census Bureau July 1990 State estimates and the 1988-89 trend in the revised Census Bureau county estimates.

4. Virginia combination areas consist of one or two independent cities with populations less than 100,000 combined with an adjacent county. The county name appears first, followed by the city name(s). Separate estimates for the jurisdictions making up the combined areas are not available.

BUSINESS CYCLE INDICATORS

Data tables . . . . . C-1 Business cycle expansions and contractions . . . . . C-25
Footnotes for pages C-1 through C-5 . . . . . C-6 Specific peak and trough dates for selected indicators . . . . . C-26
Charts . . . . . C-7 Titles and sources of series . . . . . C-27

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Current and historical data for the series shown in the C-pages are available on printouts, diskettes, and the Commerce Department's Economic Bulletin Board. For more information, write to Business Cycle Indicators Branch, Business Outlook Division (BE-52), Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230.

NOTE.—This section of the SURVEY is prepared by the Business Cycle Indicators Branch.

Table with columns for Series no., Series title and timing classification, and years from 1991 to 1992. Section 1. COMPOSITE INDEXES includes sub-sections for The Leading Index, The Coincident Index, and The Lagging Index, with various economic indicators and their values over time.

NOTE.—The following current high values were reached before February 1991: November 1989—BCI-32 (67.5) and BCI-99 smoothed (2.09); January 1984—BCI-940 (116.1); February 1984—BCI-29 (158.5); March 1984—BCI-83 (97.7) and BCI-92 smoothed (4.61); August 1984—BCI-109 (13.00); March 1986—BCI-77 (1.58); July 1987—BCI-5 (286); May 1988—BCI-106 (2,473.4); December 1988—BCI-8 (99.83); April 1989—BCI-1 (41.2); June 1989—BCI-91 (11.1); September 1989—BCI-95 (16.07); October 1989—BCI-930 (120.3); December 1989—BCI-20 (51.59); June 1990—BCI-41 (110.435) and BCI-920 (134.6); July 1990—BCI-51 (3,509.8) and BCI-101 (409,650); August 1990—BCI-57 (488,655); and September 1990—BCI-47 (110.6) and BCI-120 smoothed (6.6).

See page C-6 for other footnotes.









## FOOTNOTES FOR PAGES C-1 THROUGH C-5

a	Anticipated.	NSA	Not seasonally adjusted.
AR	Annual rate.	p	Preliminary.
c	Corrected.	r	Revised.
©	Copyrighted.	◆	Graph included for this series.
e	Estimated.	§	Major revision—see notes.
*	Available data for later period(s) listed in notes.	◇	End of period.

L,C,Lg,U Cyclical indicator series are classified as L (leading), C (coincident), Lg (lagging), or U (unclassified) at reference cycle peaks, troughs, and overall. Series classifications are shown in parentheses following the series titles.

‡ Cyclical indicator series denoted by ‡ are inverted (i.e., the sign is reversed) for cyclical analysis calculations, including classifications, contributions to composite indexes, and current high values.

† Cyclical indicator series denoted by † are smoothed by an autoregressive-moving-average filter developed by Statistics Canada.

For information on composite indexes and other concepts used in this section, see "Composite Indexes of Leading, Coincident, and Lagging Indicators" in the November 1987 SURVEY OF CURRENT BUSINESS and "Business Cycle Indicators: Revised Composite Indexes" in the January 1989 SURVEY.

References to series in this section use the prefix "BCI-" followed by the series number. Unless otherwise noted, series are seasonally adjusted.

Percent change data are centered within the spans: 1-month changes are placed in the ending month, 3-month changes are placed in the 3d month, 6-month changes are placed in the 4th month, 1-quarter changes are placed in the ending quarter, and 4-quarter changes are placed in the 3d quarter.

Diffusion indexes are defined as the percent of components rising plus one-half of the percent of components unchanged. Diffusion index data are centered within the spans: 1-month indexes are placed in the ending month and 6-month indexes are placed in the 4th month.

High values reached by cyclical indicators since the last reference cycle trough (November 1982) are shown in boldface type; high values reached prior to the period shown in the table are listed at the bottom of each page. For inverted series, low values are indicated as highs.

Sources for series in this section are shown on pages C-27 and C-28.

## Page C-1

\* Preliminary April 1992 values: BCI-19 = 406.64 and BCI-109 = 6.50.

1. Data exclude Puerto Rico, which is included in figures published by the source agency.
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3. Excludes BCI-57, for which data are not available.
4. Excludes BCI-77 and BCI-95, for which data are not available.

## Page C-2

\* Anticipated 2d quarter 1992 values: BCI-61 = 557.48 and BCI-100 = 525.17.

1. Data exclude Puerto Rico, which is included in figures published by the source agency.
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## Page C-3

NOTE.—Major data revision: The fixed-weighted price index for gross domestic business product (BCI-311) is now shown from 1982 forward, reflecting the recent revisions in the national income and product accounts. Data for the earlier period will be included when they become available. For further information, contact the U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Wealth Division, Washington, DC 20230.

\* Preliminary April 1992 value: BCI-23 = 277.6.

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## Page C-4

\* Preliminary April 1992 values: BCI-122 = 64.8, BCI-123 = 89.5, and BCI-85 = 0.32.

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## Page C-5

\* Preliminary April 1992 values: BCI-119 = 3.80, BCI-114 = 3.83, BCI-116 = 8.59, BCI-115 = 7.85, BCI-117 = 6.67, BCI-109 = 6.50, BCI-19 (1941-43=10) = 406.64, BCI-19 (1967=100) = 442.3, BCI-748 = 1,153.3, BCI-745 = 332.7, BCI-746 = 929.4, BCI-742 = 1,197.7, BCI-747 = 303.6, BCI-743 = 373.8, BCI-750 = 89.77, BCI-758 = 133.54, BCI-755 = 1.6468, BCI-756 = 5.5722, BCI-752 = 0.5704, BCI-757 = 1,240.10, and BCI-753 = 1.1861.

1. Balance of payments basis: Excludes transfers under military grants and Department of Defense sales contracts (exports) and Department of Defense purchases (imports).

2. Organisation for Economic Co-operation and Development.

3. This index is the weighted-average exchange value of the U.S. dollar against the currencies of the other G-10 countries plus Switzerland. Each country is weighted by its 1972-76 global trade. For a description of this index, see the August 1978 *Federal Reserve Bulletin* (p. 700).

4. This index is compiled by the Center for International Business Cycle Research (CIBCR), Graduate School of Business, Columbia University, New York, NY 10027.

## Notes for Pages C-7 Through C-24

The following notes explain general features of the charts that appear in this section:

- Business cycle peaks (P) and troughs (T), as designated by the National Bureau of Economic Research, Inc., are indicated at the top of each chart. The shaded areas represent recessions.
- For each series classified as a cyclical indicator, the timing classifications at peaks, at troughs, and overall are shown in a box adjacent to the title. (L = leading, C = coincident, Lg = lagging, U = unclassified.) A complete list of series titles and sources is shown in the April and October issues of the SURVEY.
- Arithmetic scales are designated "Scale A." On the same arithmetic scale, equal vertical distances represent equal differences in data. (For example, the vertical distance from 10 to 15 is the same as the distance from 100 to 105.)
- Logarithmic (log) scales are designated L-1, L-2, or L-3 to indicate their relative size. On log scales of the same size, equal vertical distances represent equal percentage changes. (For

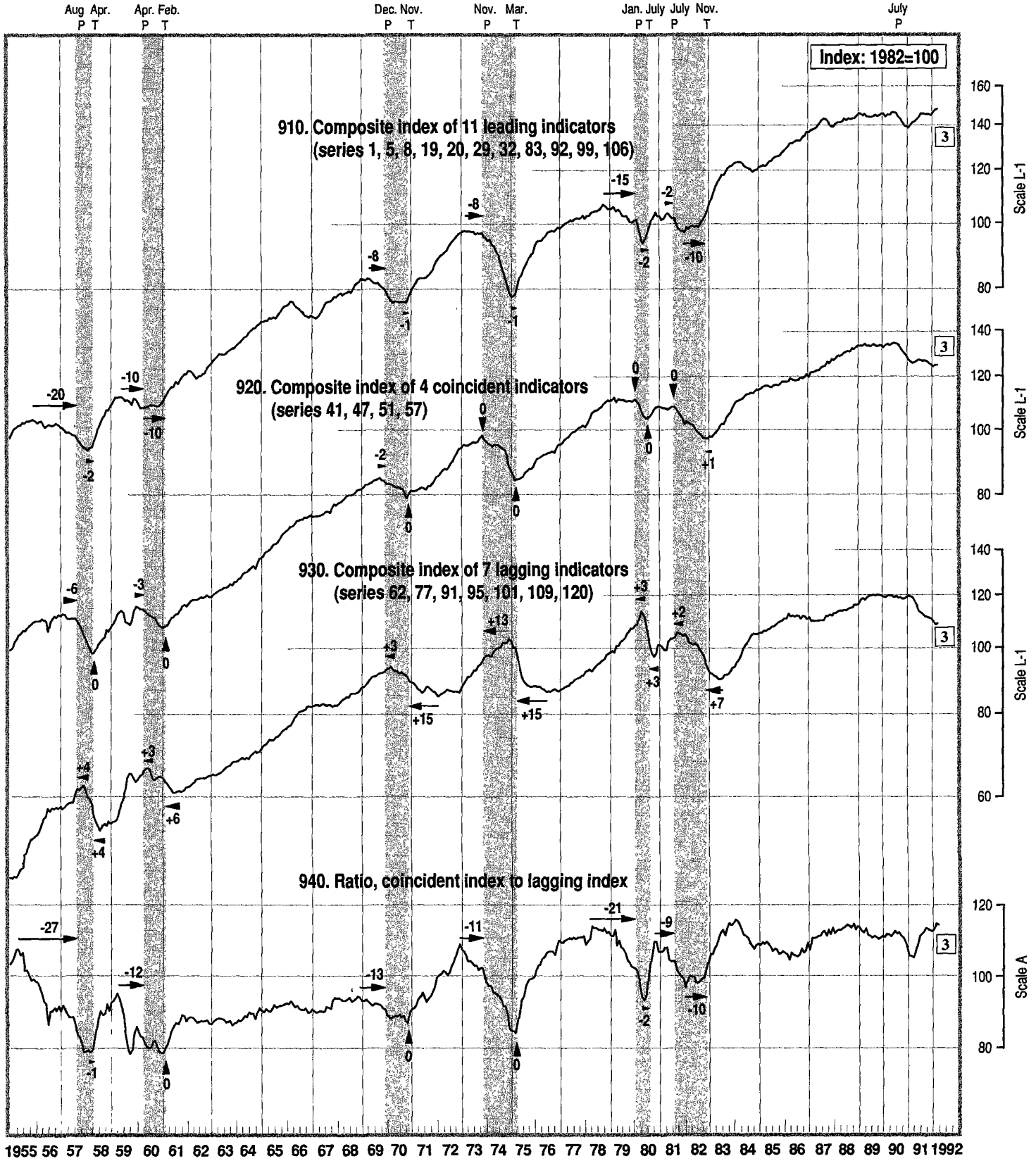
example, the vertical distance from 10 to 15 is the same as the distance from 100 to 150.) Compared with an L-1 scale, the same percentage change covers half the distance on an L-2 scale and one-third the distance on an L-3 scale.

- Data are monthly unless otherwise indicated. Quarterly data are indicated by a "Q" following the series title.
- Some series include a centered moving average, which is shown as a heavy line superimposed on the actual monthly data.
- Parallel lines across a plotted series indicate a missing data value, change in definition, or other significant break in continuity.
- The box near the end of each plotted series indicates the latest data month (Arabic numeral) or quarter (Roman numeral) shown or, for series computed over a span of time (diffusion indexes and rates of change), the latest data period used in computing the series.



**CYCLICAL INDICATORS**

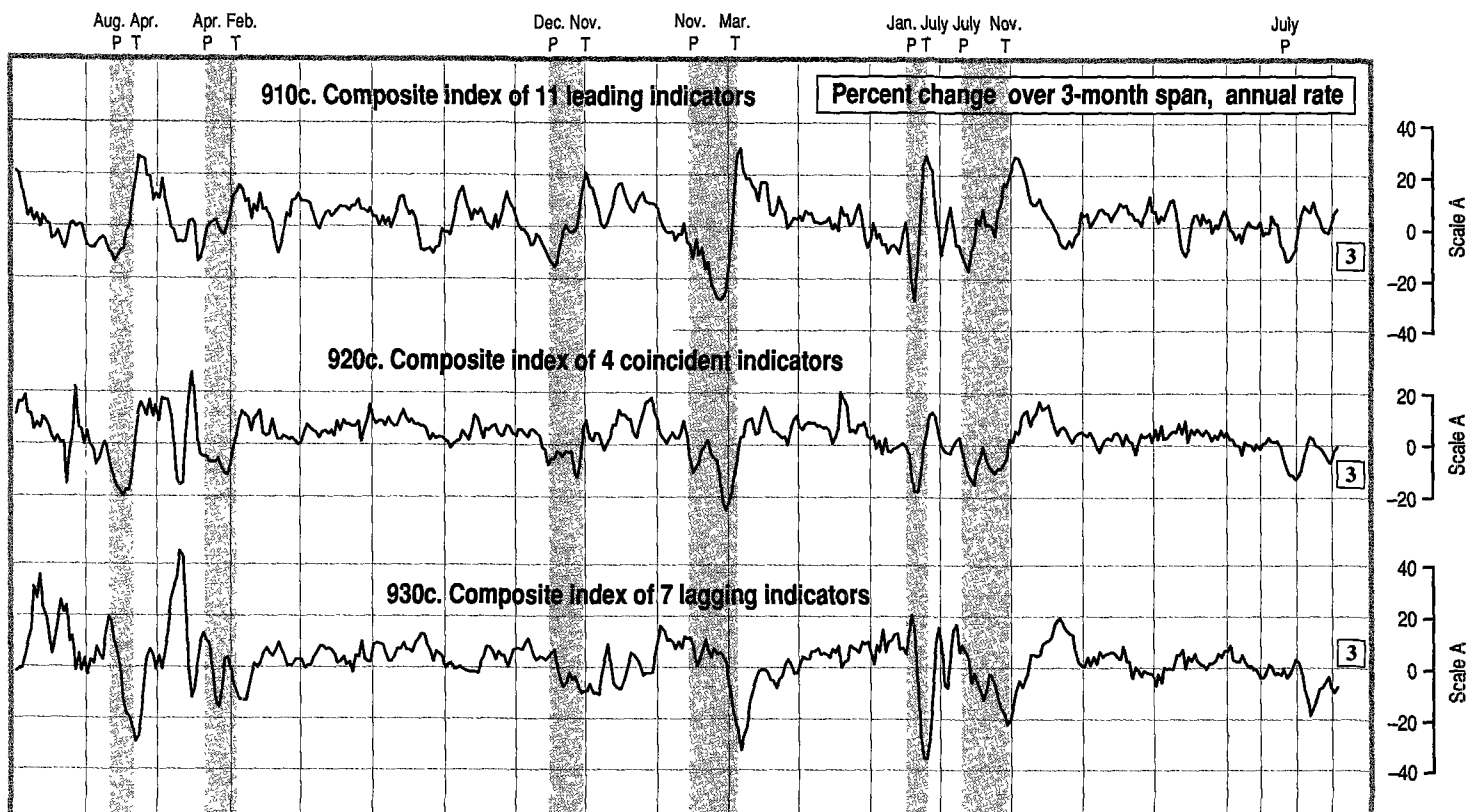
**Composite Indexes**



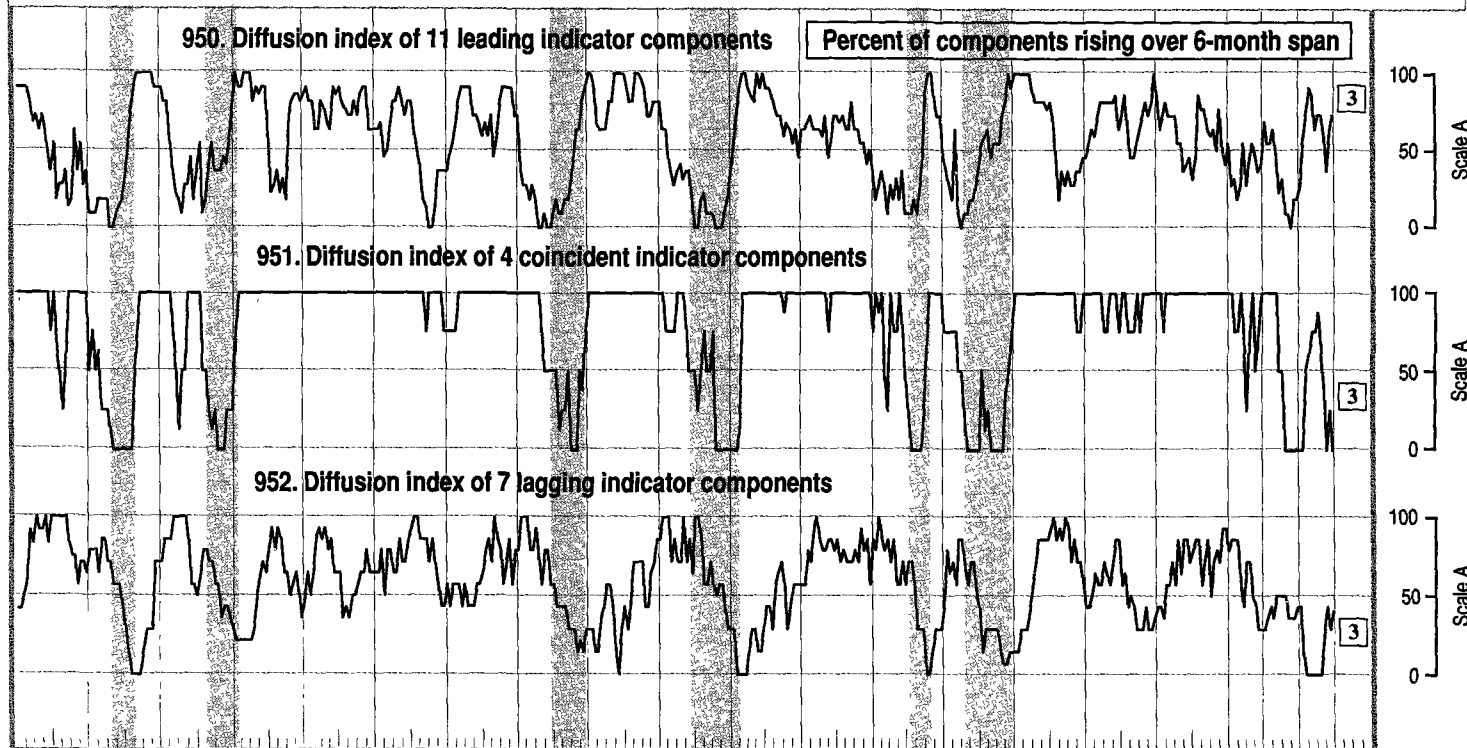
NOTE.—The numbers and arrows indicate length of leads (-) and lags (+) in months from business cycle turning dates. Current data for these series are shown on page C-1.

**CYCLICAL INDICATORS**

**Composite Indexes: Rates of Change**



**Composite Indexes: Diffusion**

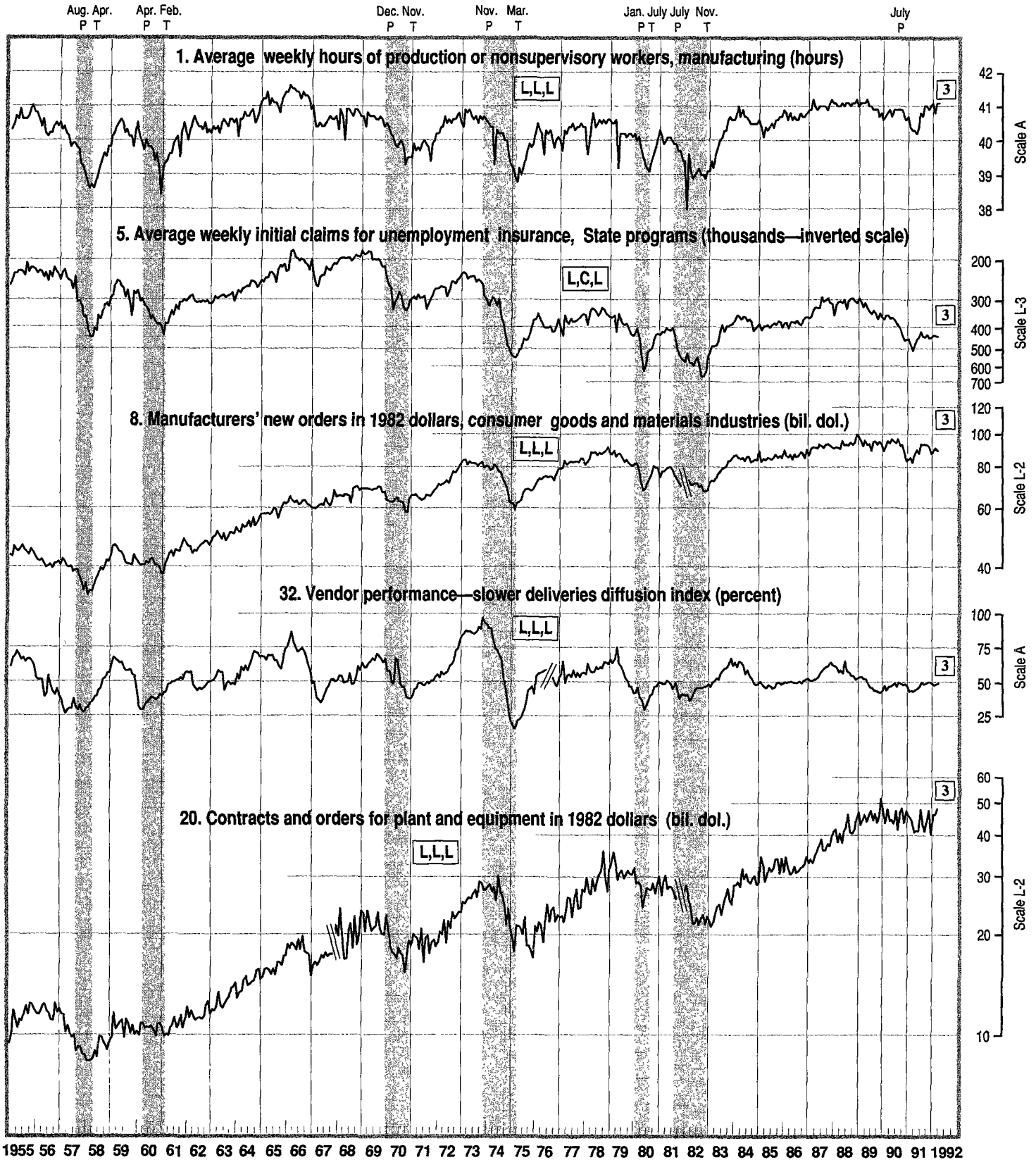


1955 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 1992

NOTE.—Current data for these series are shown on page C-1.

**CYCLICAL INDICATORS**

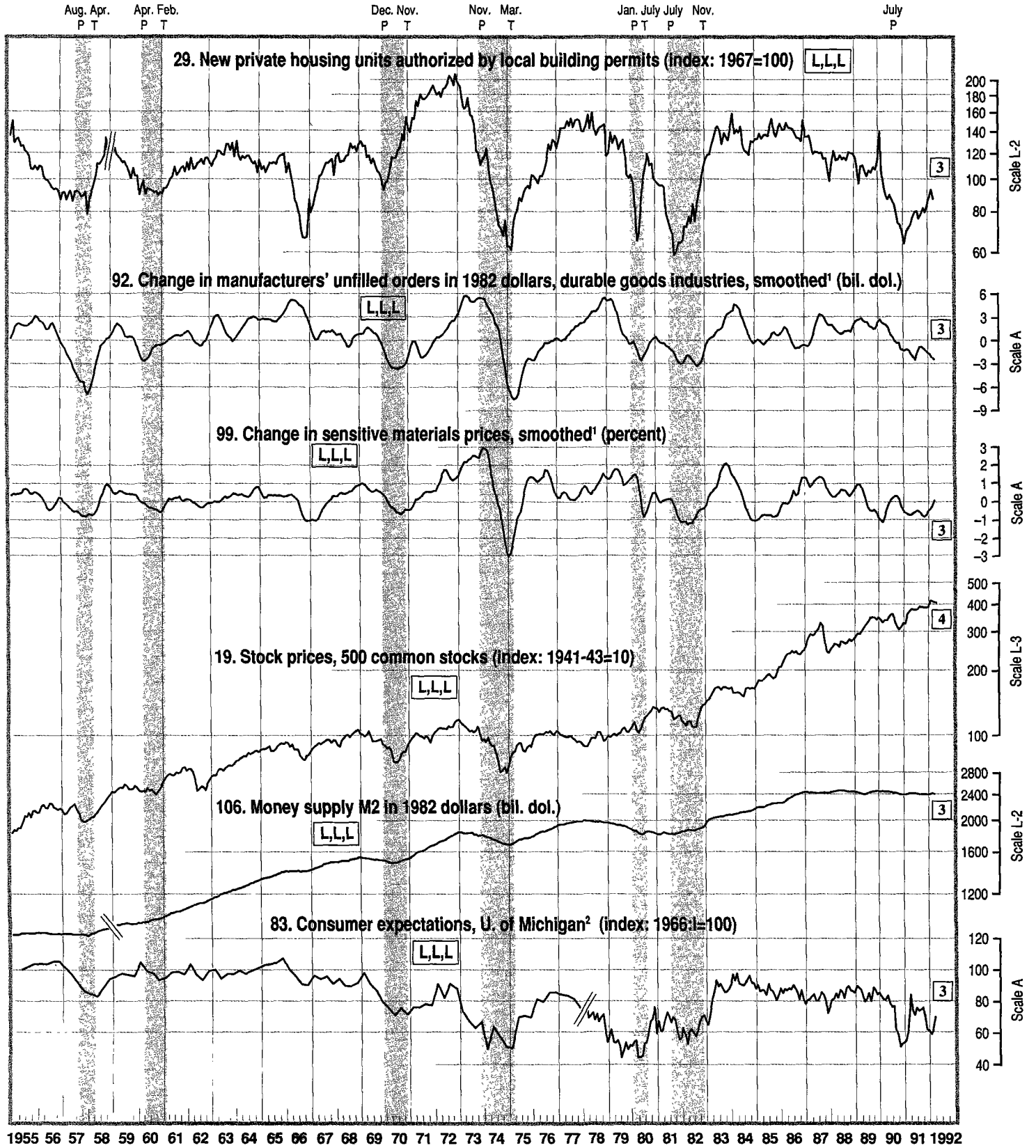
**Composite Indexes: Leading Index Components**



NOTE.—Current data for these series are shown on page C-1.

**CYCLICAL INDICATORS**

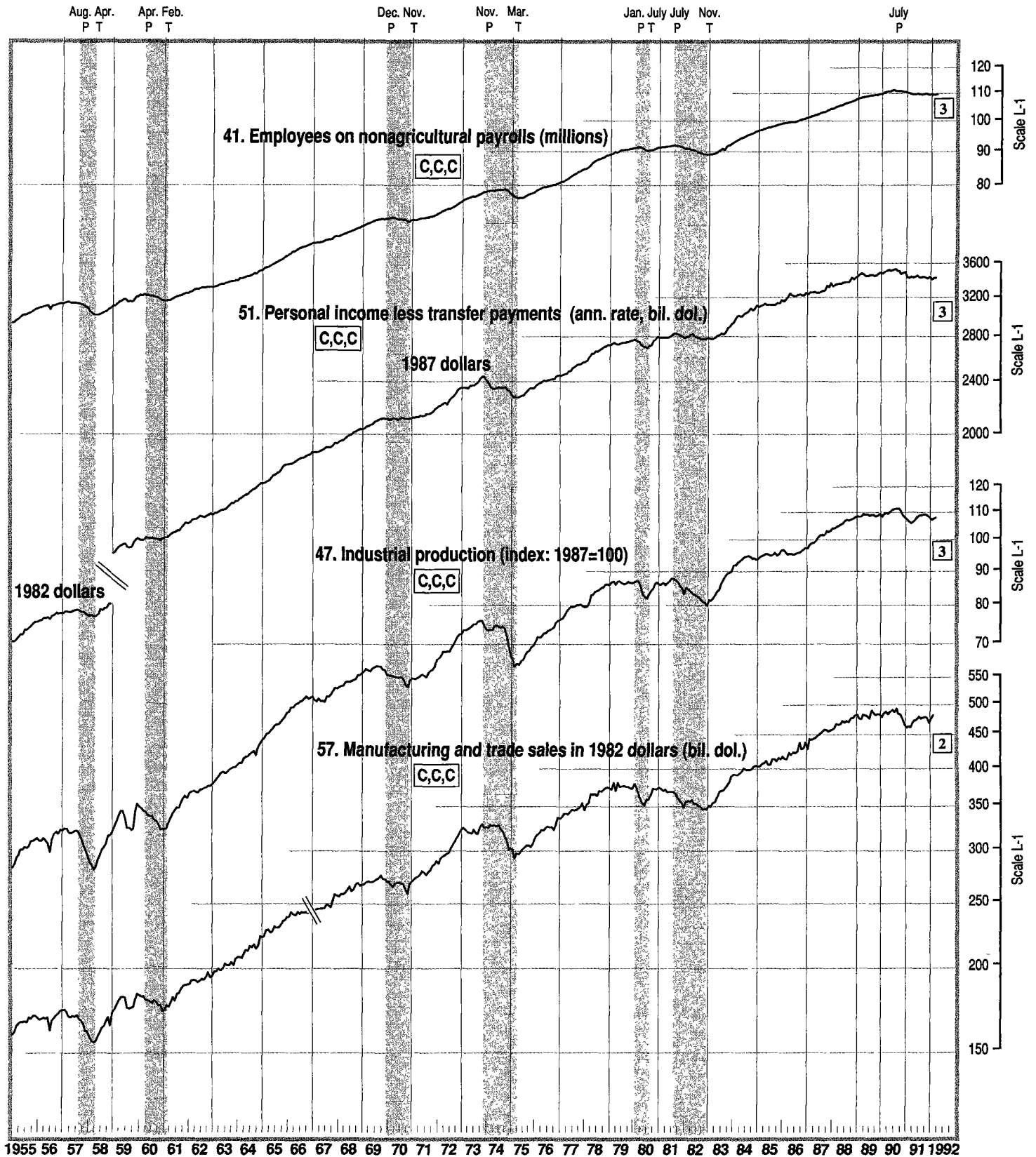
**Composite Indexes: Leading Index Components—Continued**



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 NOTE.—Current data for these series are shown on page C-1.

**CYCLICAL INDICATORS**

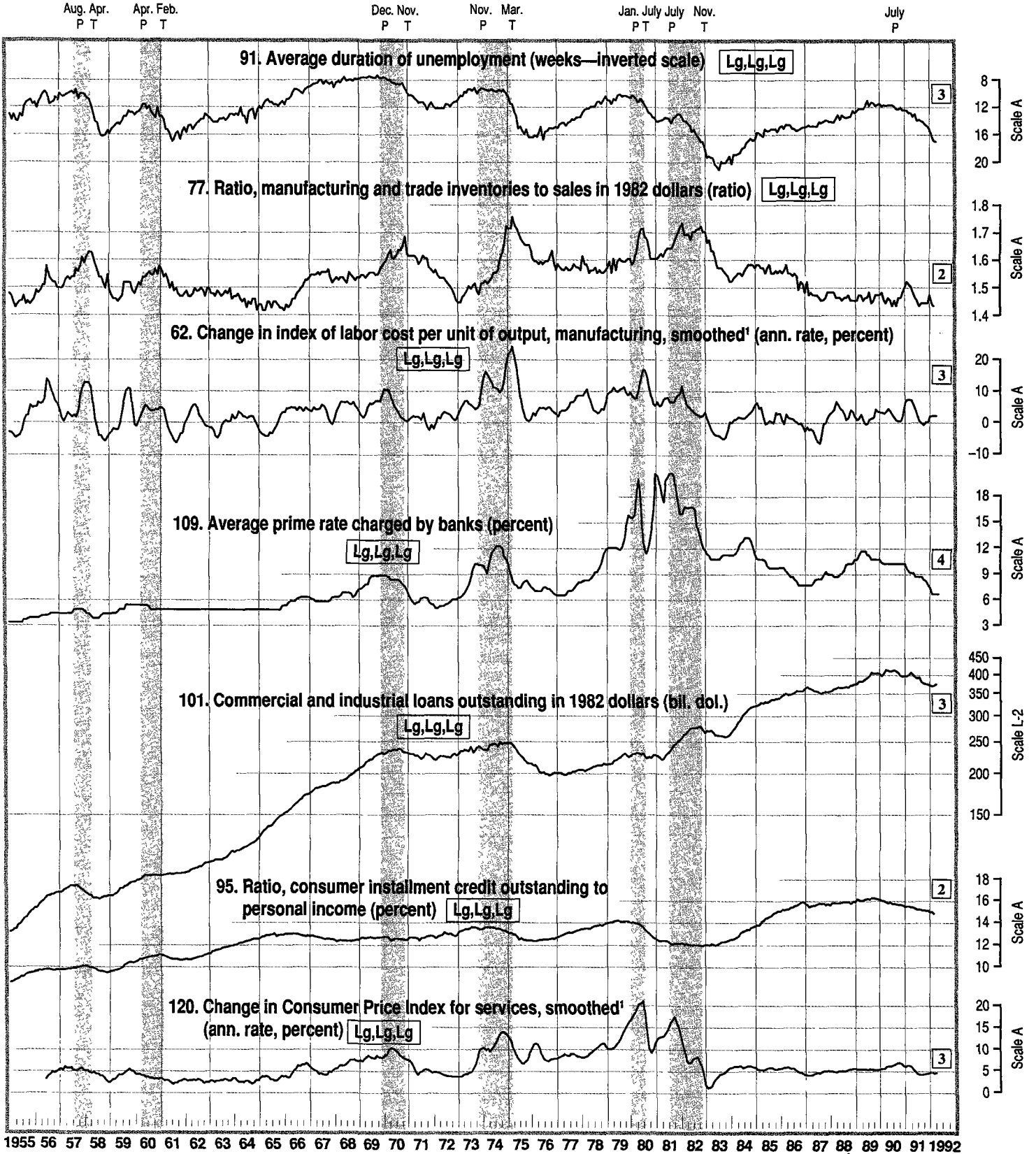
**Composite Indexes: Coincident Index Components**



NOTE.—Current data for these series are shown on page C-1.

**CYCLICAL INDICATORS**

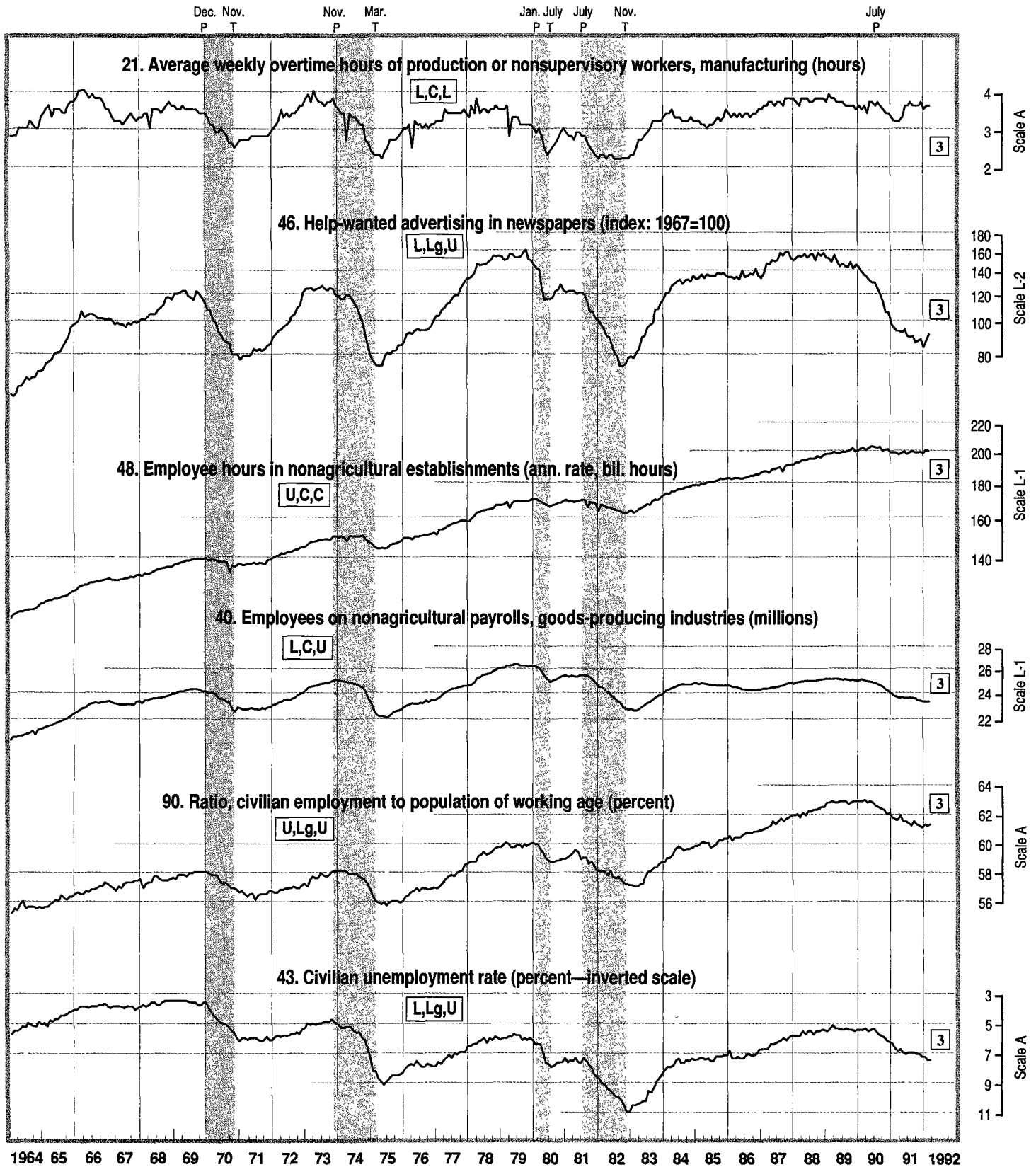
**Composite Indexes: Lagging Index Components**



1. This series is smoothed by an autoregressive-moving-average filter developed by Statistics Canada.  
 NOTE.—Current data for these series are shown on page C-1.

**CYCLICAL INDICATORS**

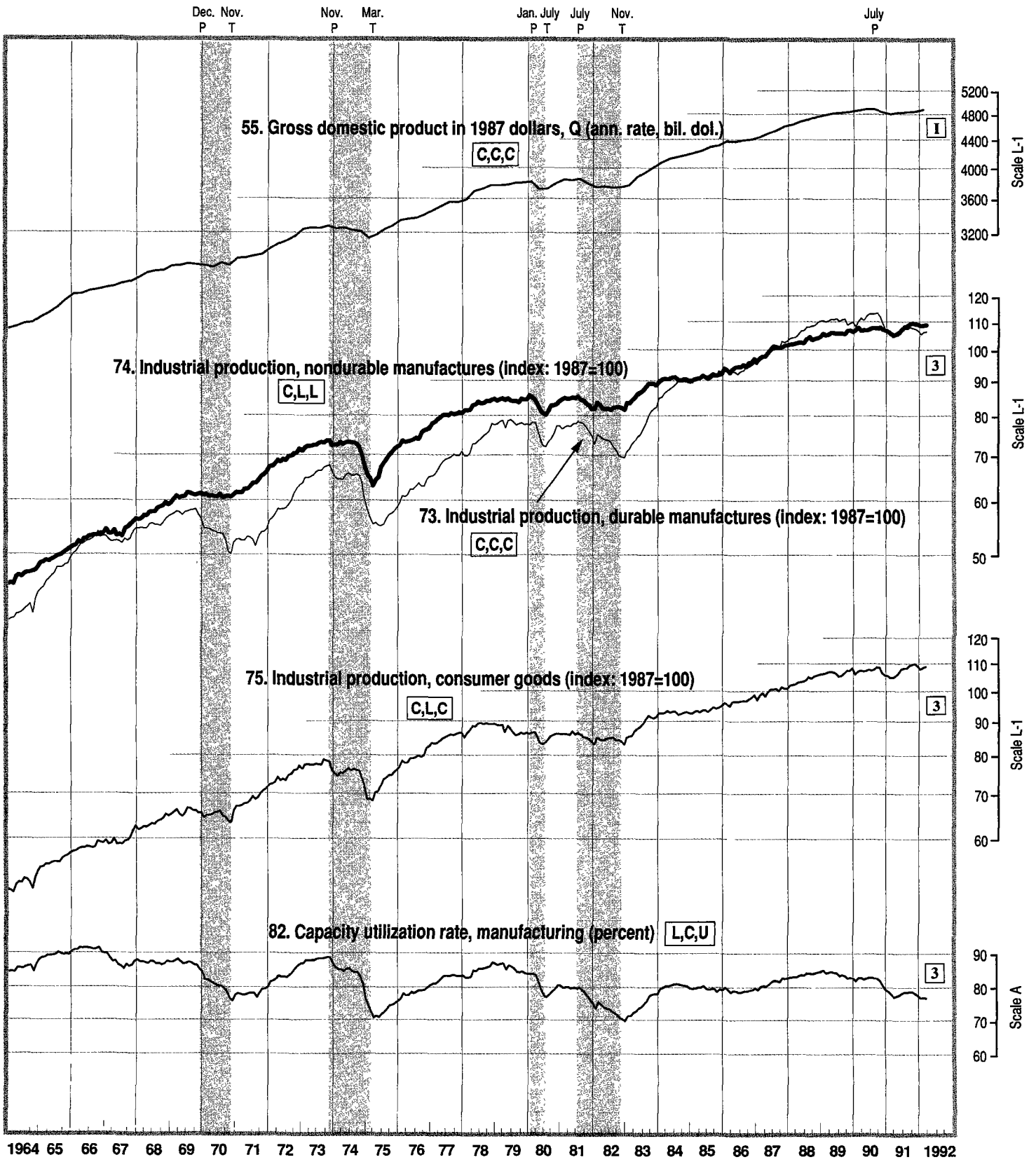
**Employment and Unemployment**



NOTE.—Current data for these series are shown on page C-2.

**CYCLICAL INDICATORS**

**Output, Production, and Capacity Utilization**

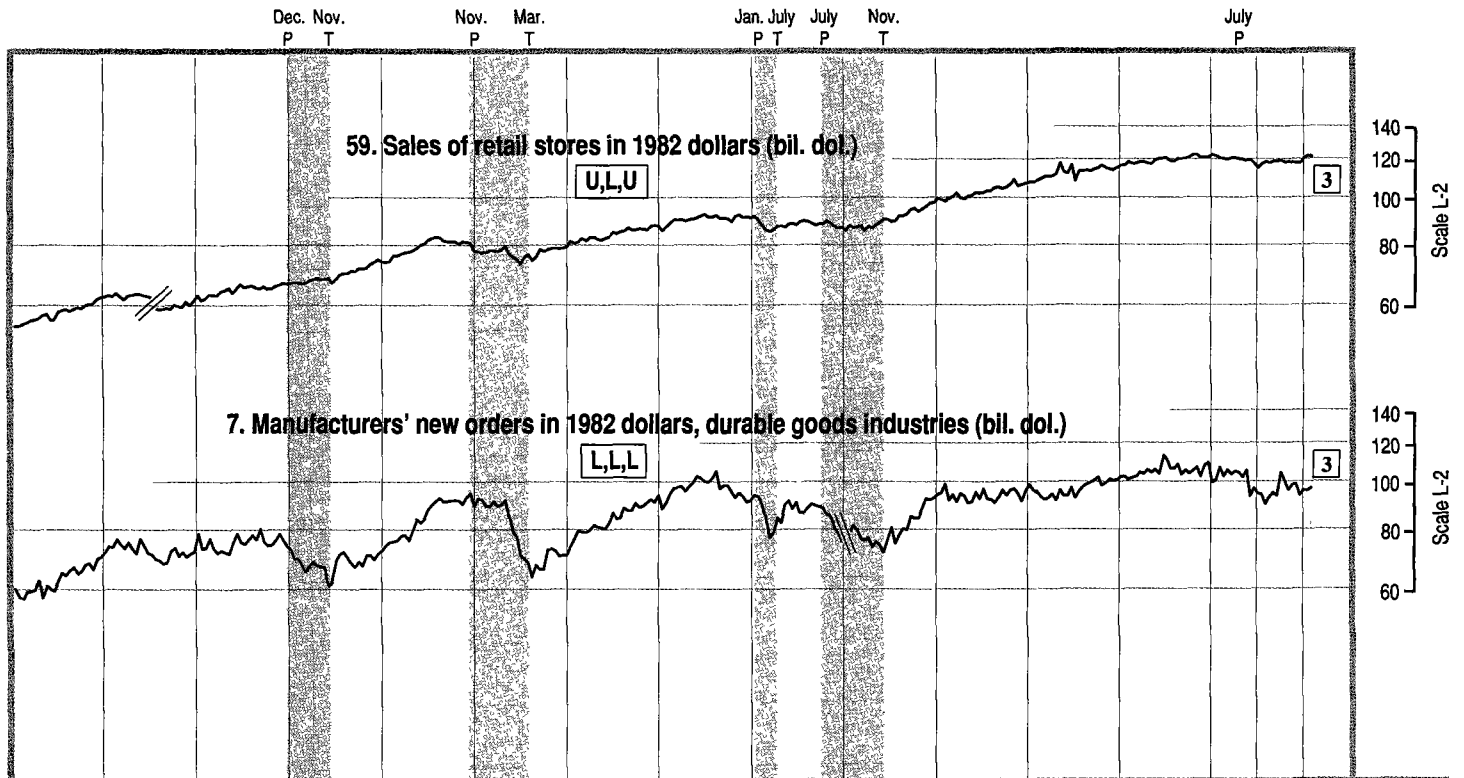


NOTE.—Current data for these series are shown on page C-2.

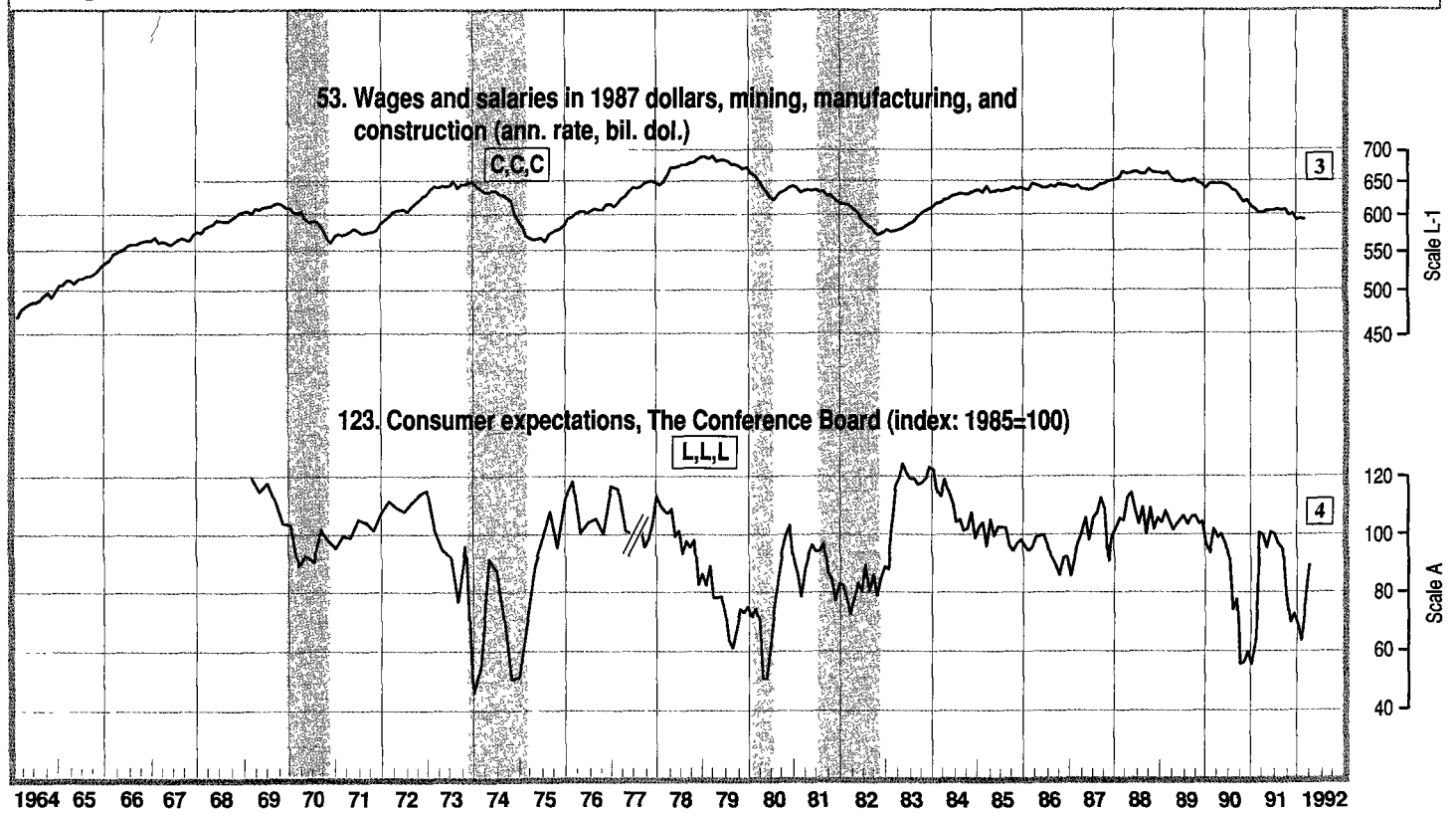


**CYCLICAL INDICATORS**

**Sales and Orders**



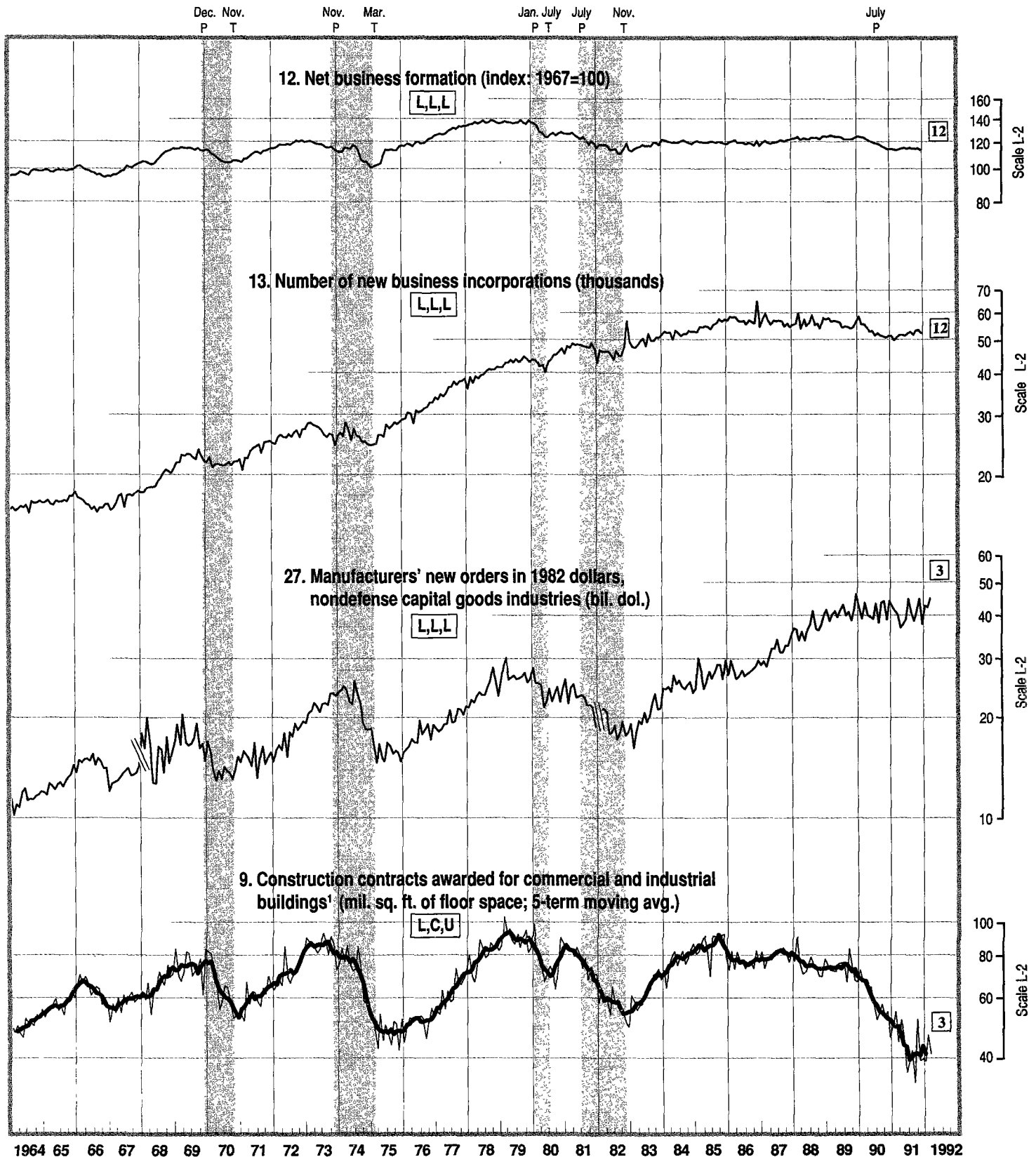
**Wages and Consumer Attitudes**



NOTE.—Current data for these series are shown on pages C-2 and C-4.

**CYCLICAL INDICATORS**

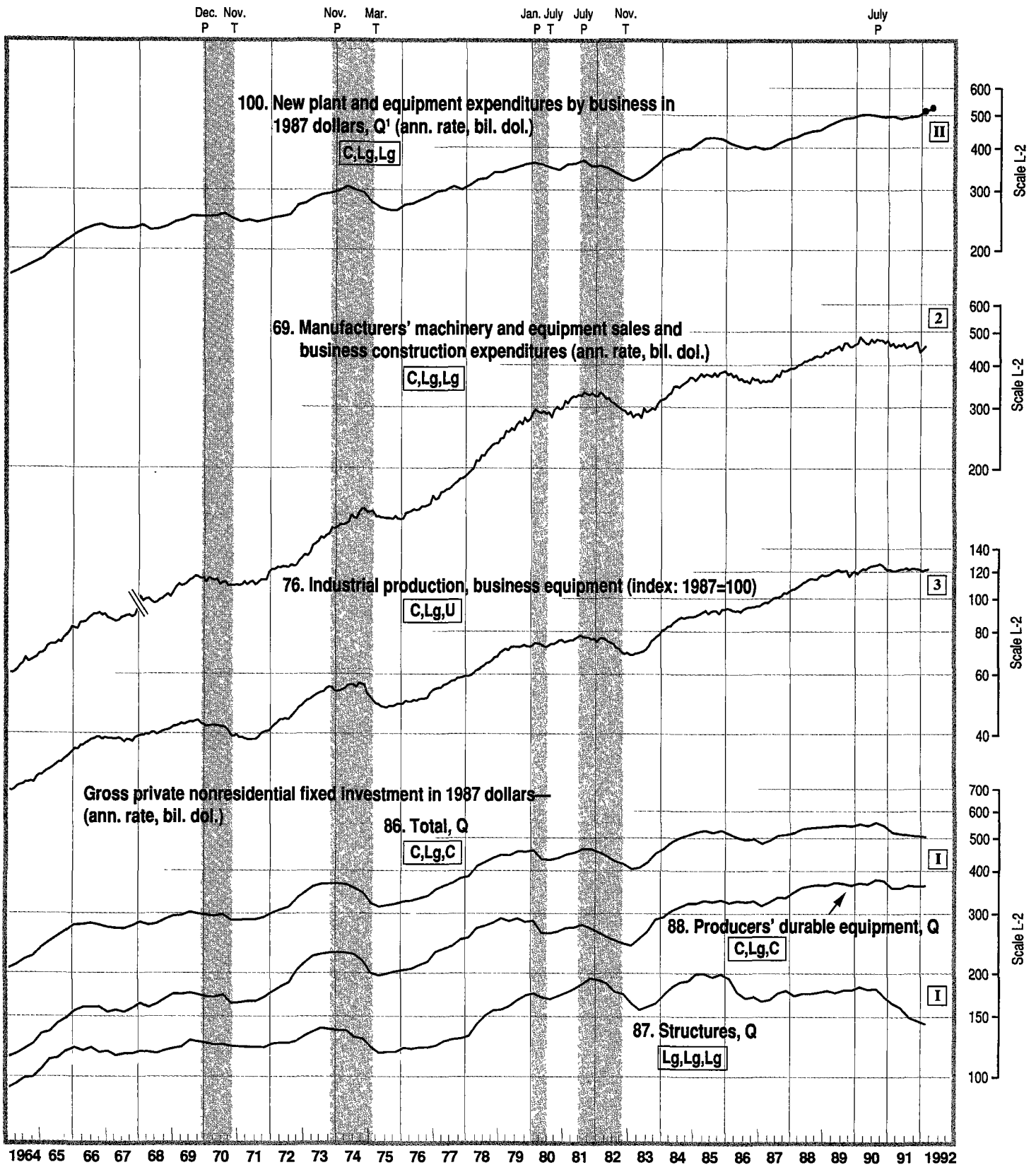
**Fixed Capital Investment**



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 NOTE.—Current data for these series are shown on page C-2.

**CYCLICAL INDICATORS**

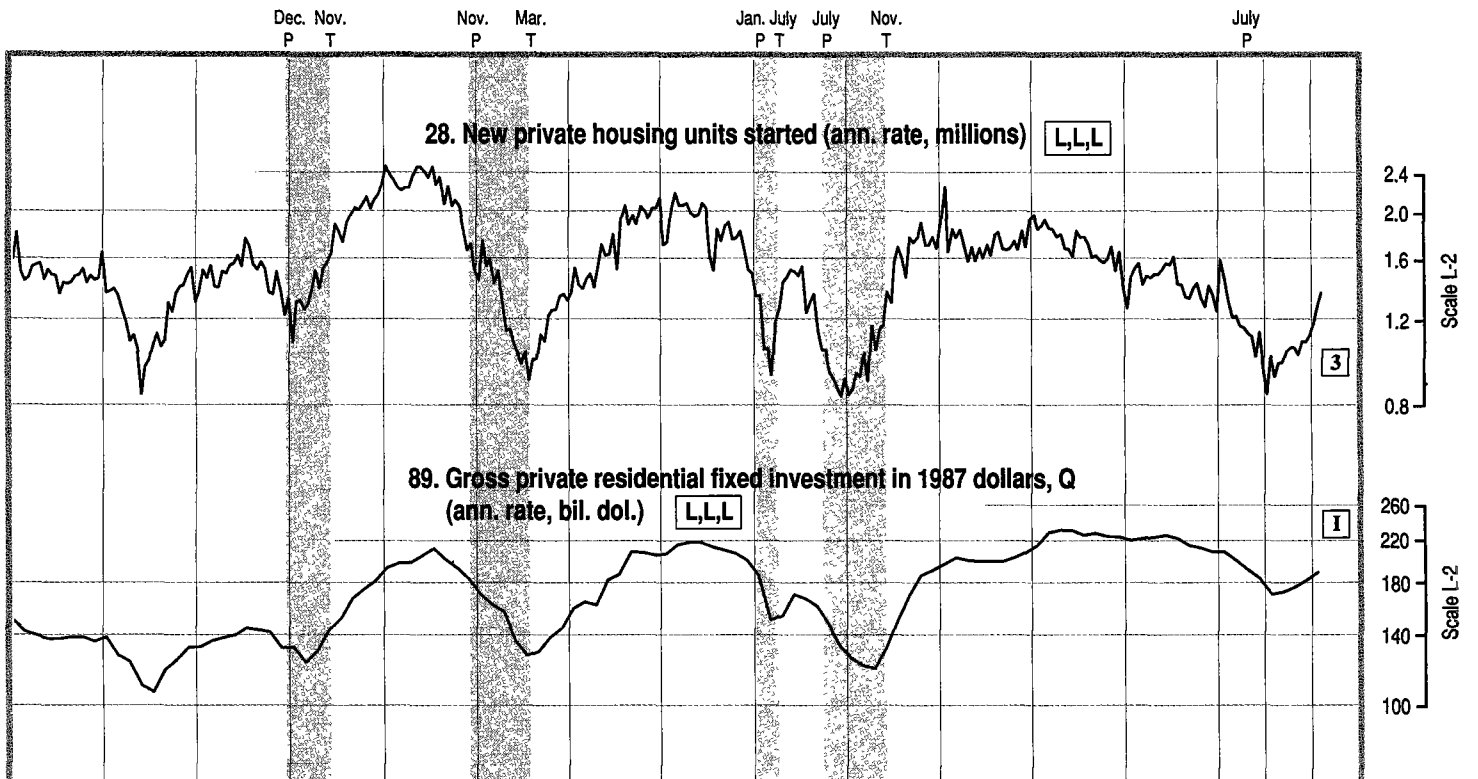
**Fixed Capital Investment—Continued**



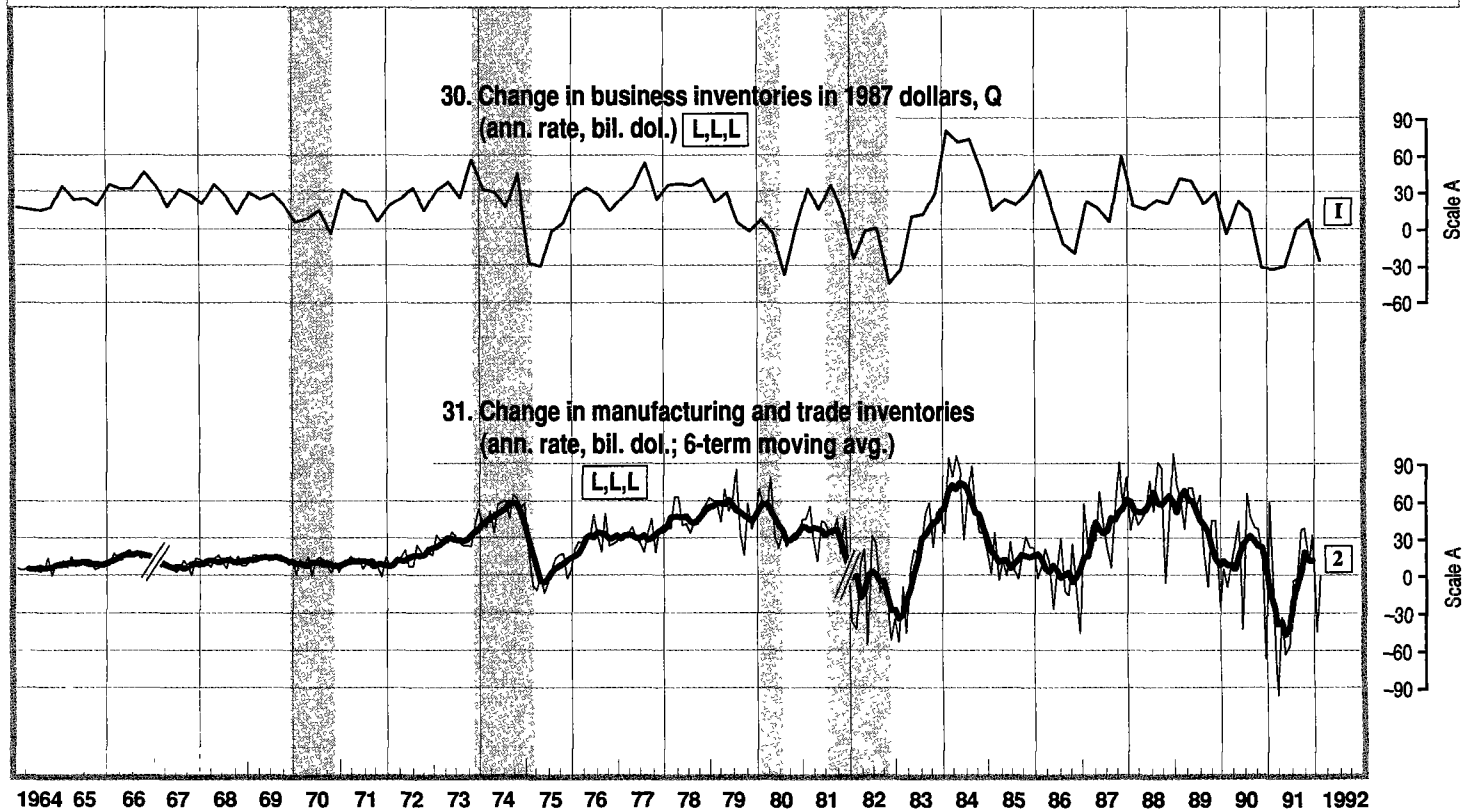
1. Dotted line represents anticipated expenditures.  
NOTE.—Current data for these series are shown on pages C-2 and C-3.

**CYCLICAL INDICATORS**

**Fixed Capital Investment—Continued**



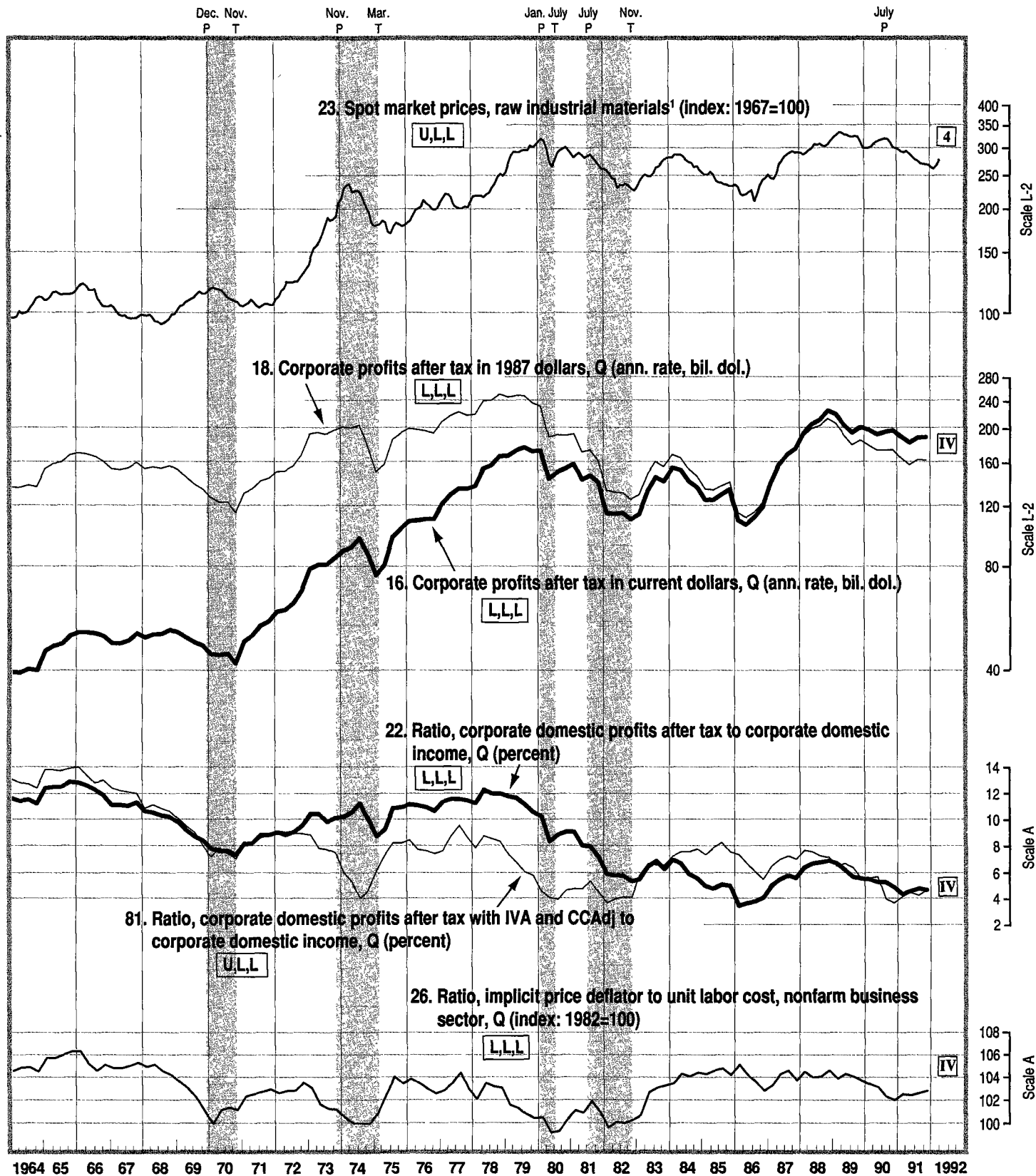
**Inventories and Inventory Investment**



NOTE.—Current data for these series are shown on page C-3.

**CYCLICAL INDICATORS**

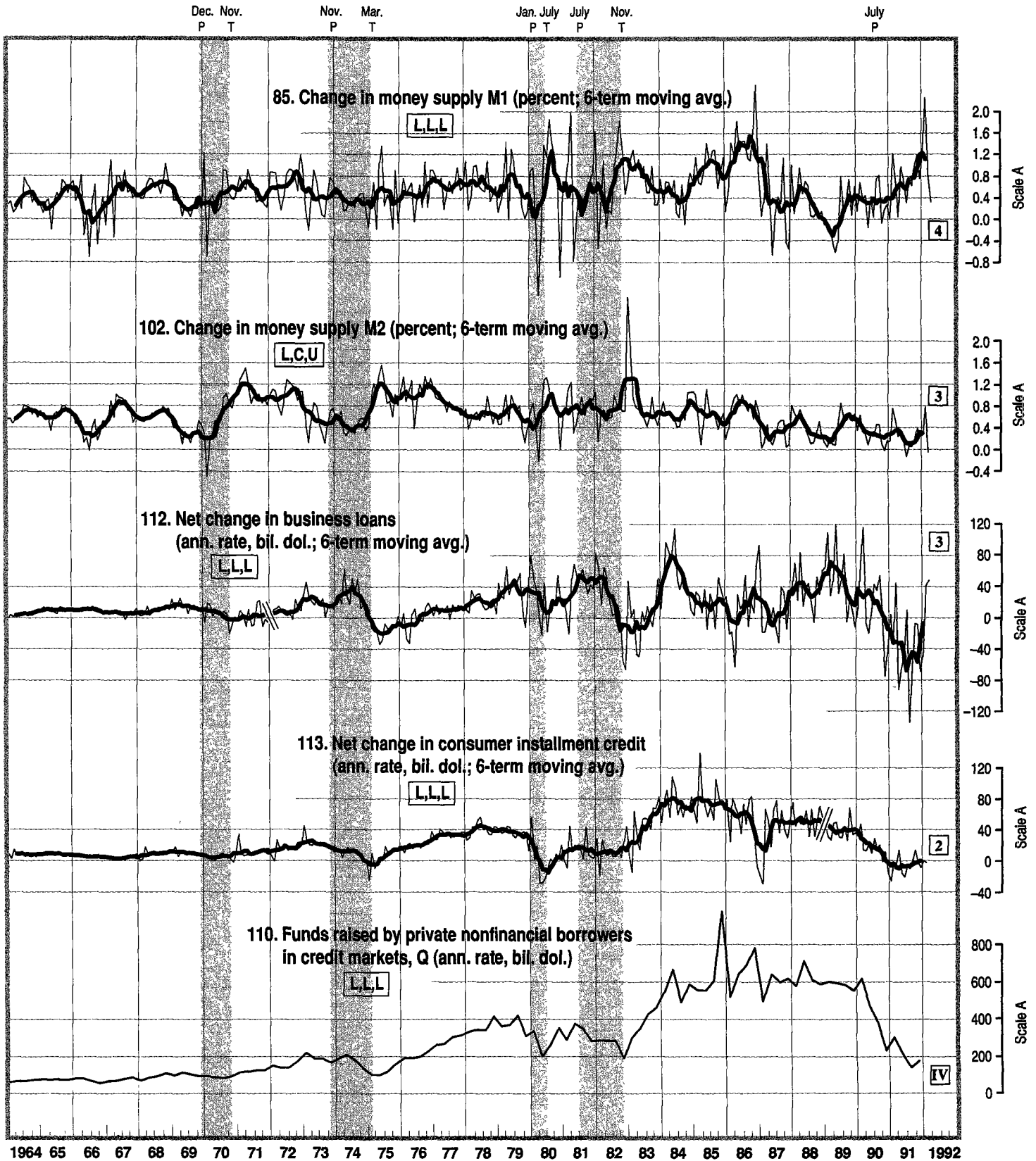
**Prices and Profits**



IVA Inventory valuation adjustment. CCAadj Capital consumption adjustment.  
 1. From June 1981 forward, this is a copyrighted series used by permission; it may not be reproduced without written permission from Commodity Research Bureau, Inc.  
 NOTE.—Current data for these series are shown on pages C-3 and C-4.

**CYCLICAL INDICATORS**

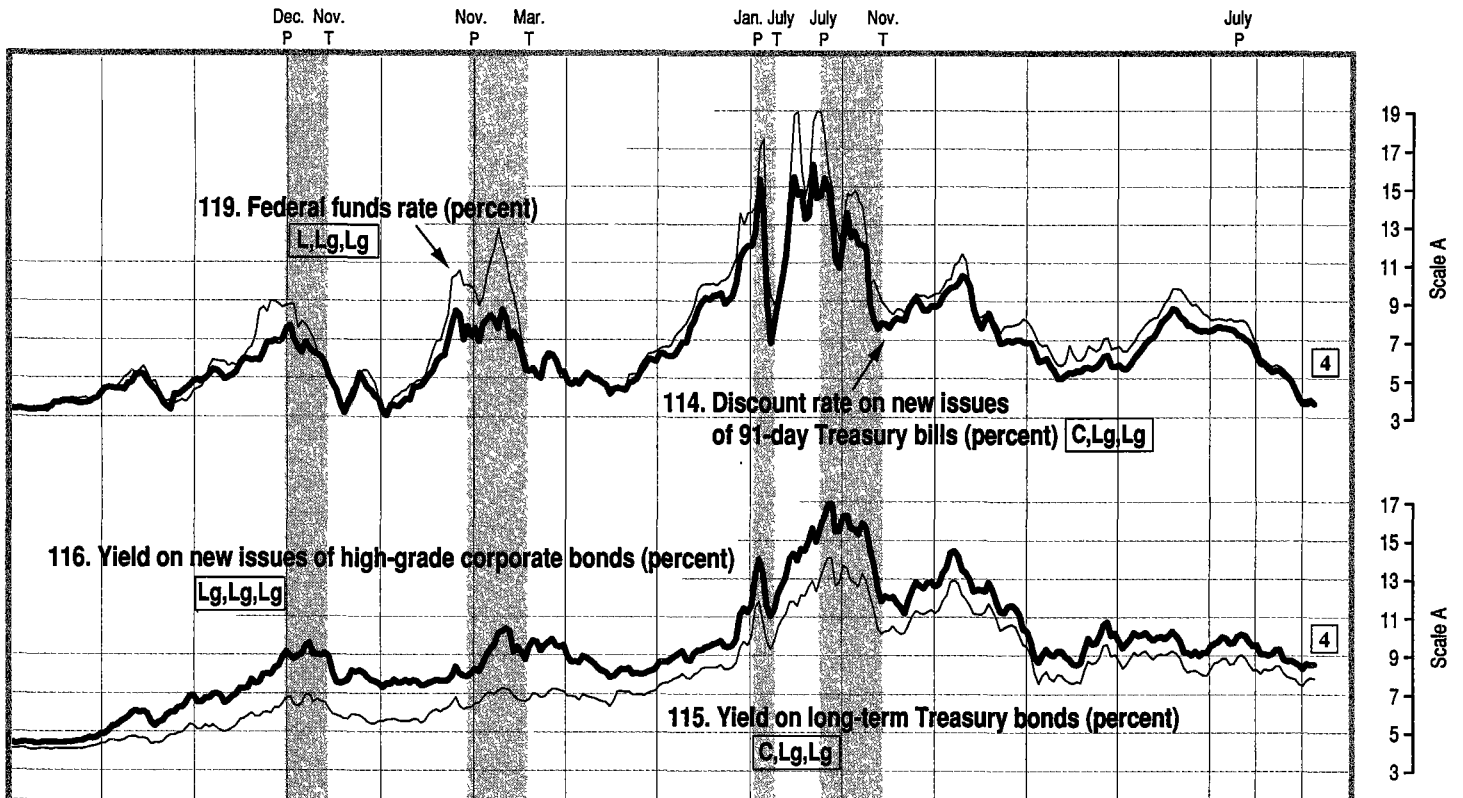
**Money, Credit, and Interest Rates**



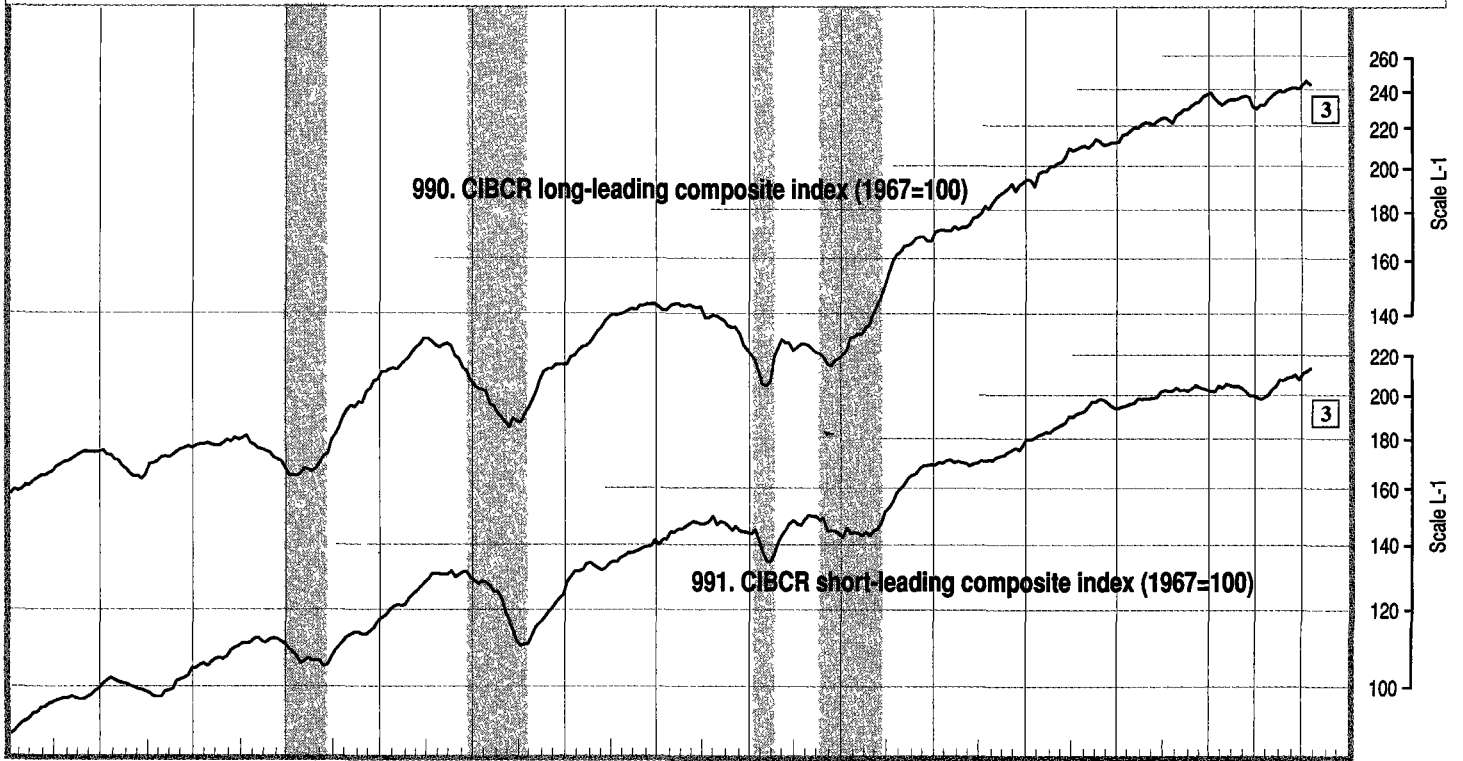
NOTE.—Current data for these series are shown on page C-4.

**CYCLICAL INDICATORS**

**Money, Credit, and Interest Rates—Continued**



**Alternative Composite Indexes**



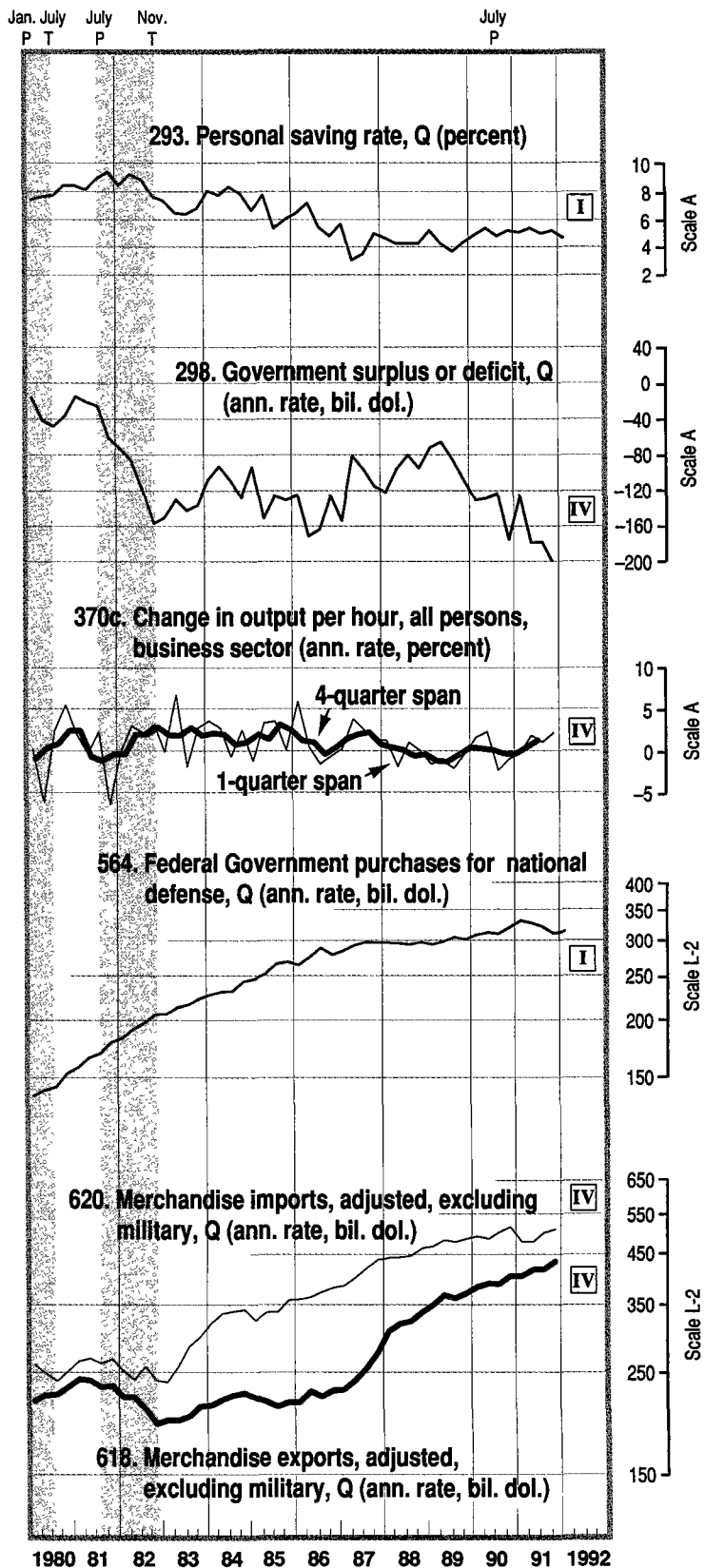
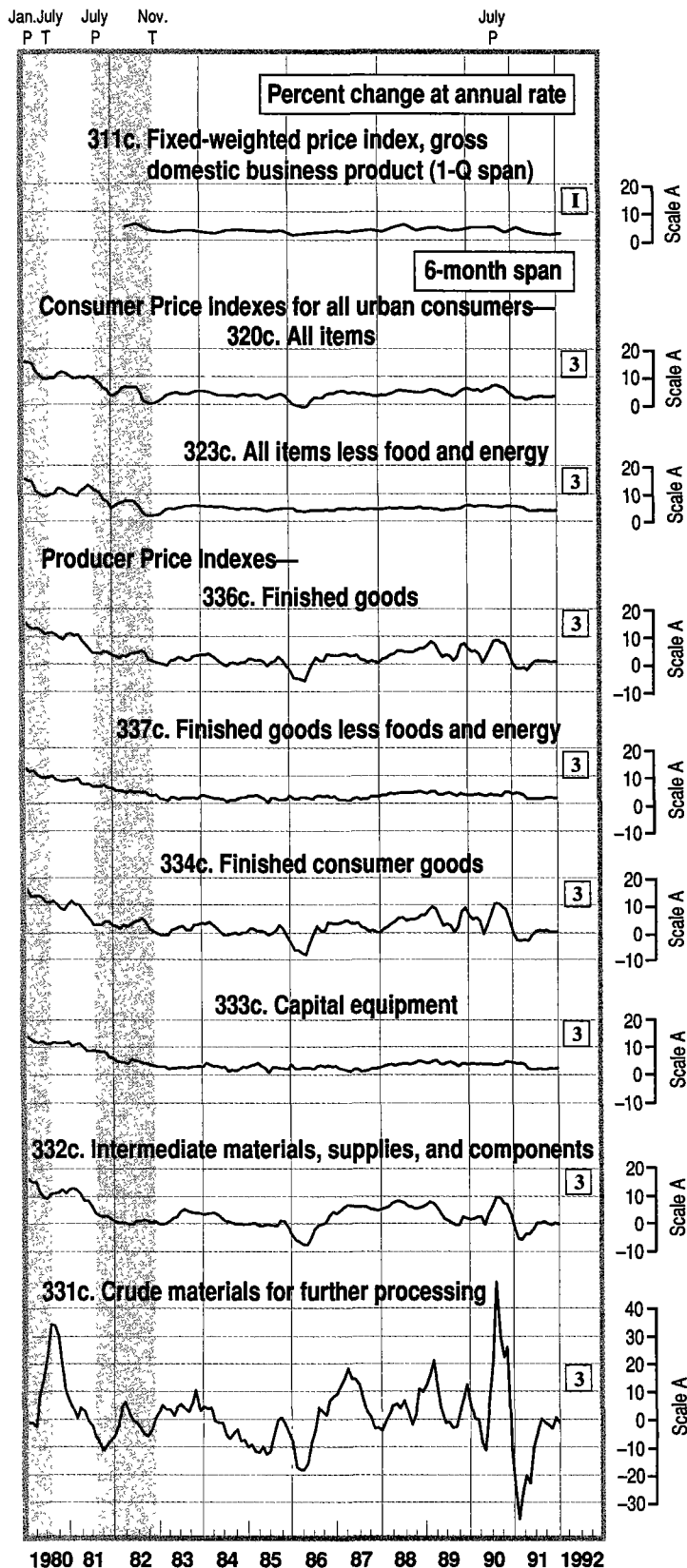
1964 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 1992

CIBCR Center for International Business Cycle Research (Columbia University).  
 NOTE.—Current data for these series are shown on page C-5.

**OTHER IMPORTANT ECONOMIC MEASURES**

**Prices**

**Other Measures**



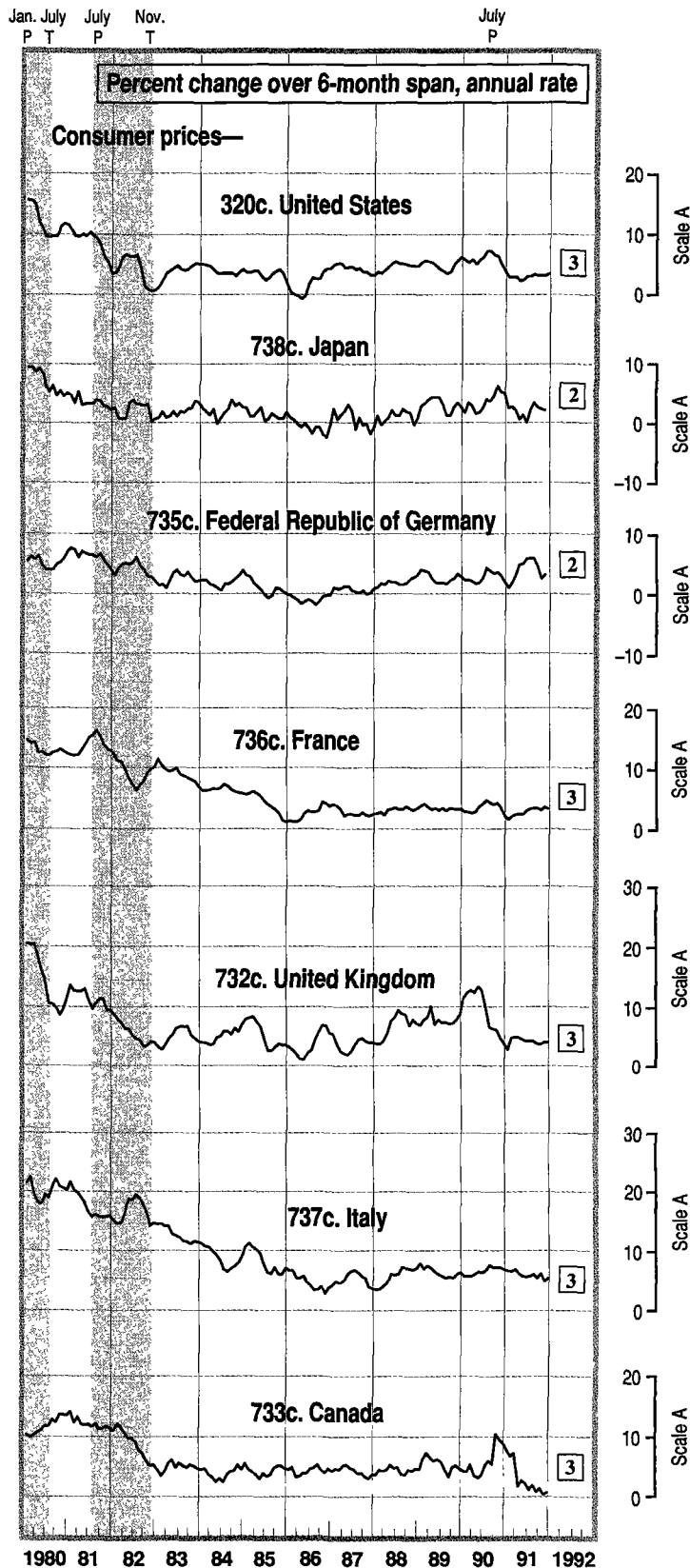
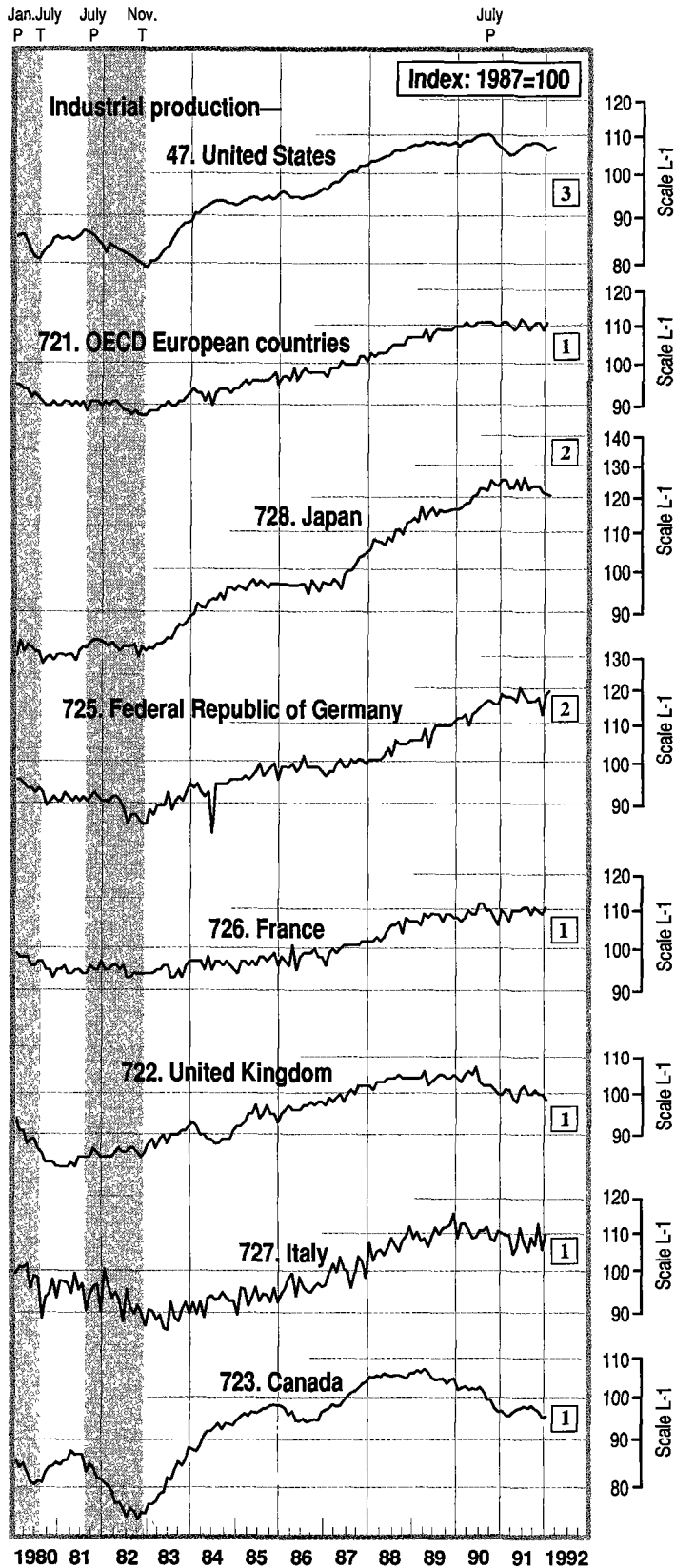
NOTE.—Current data for these series are shown on pages C-3, C-4, and C-5.



**OTHER IMPORTANT ECONOMIC MEASURES**

**International Industrial Production**

**International Consumer Prices**

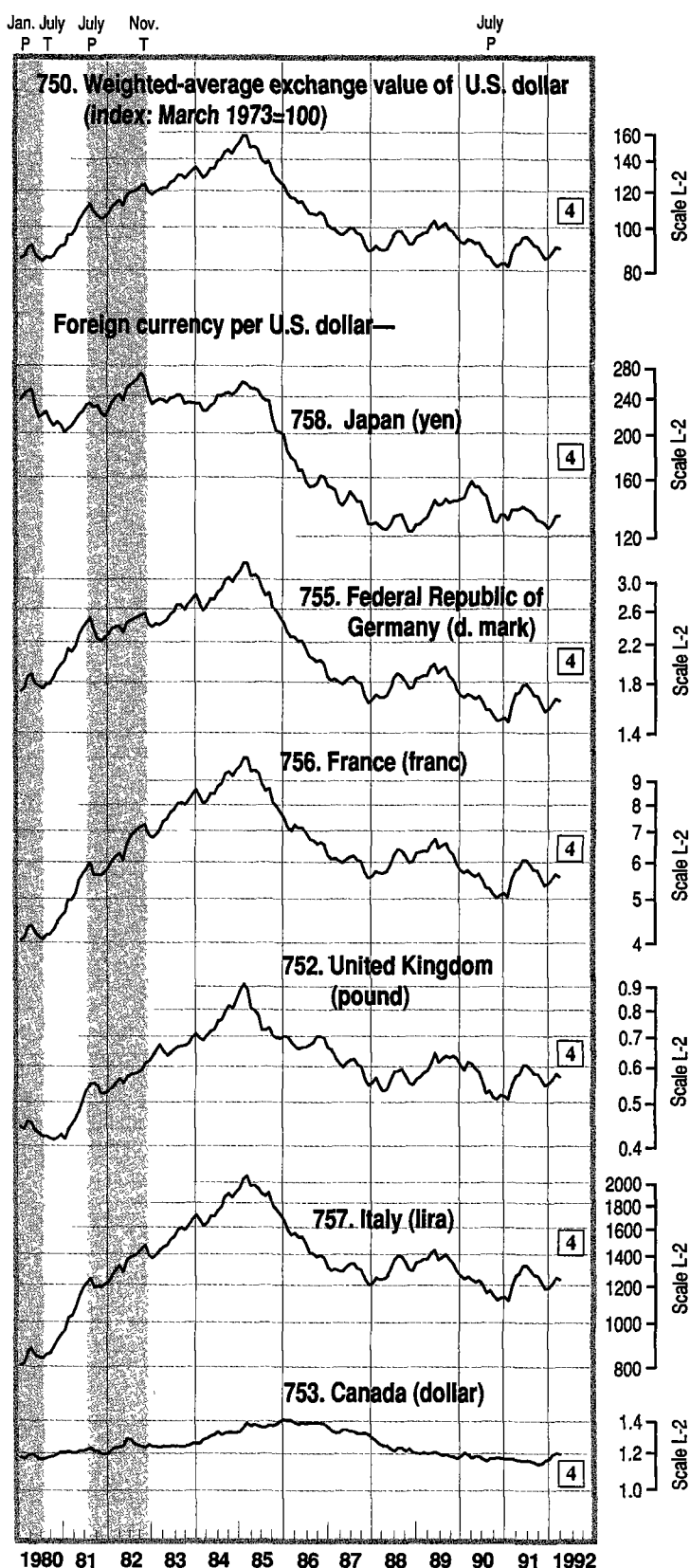
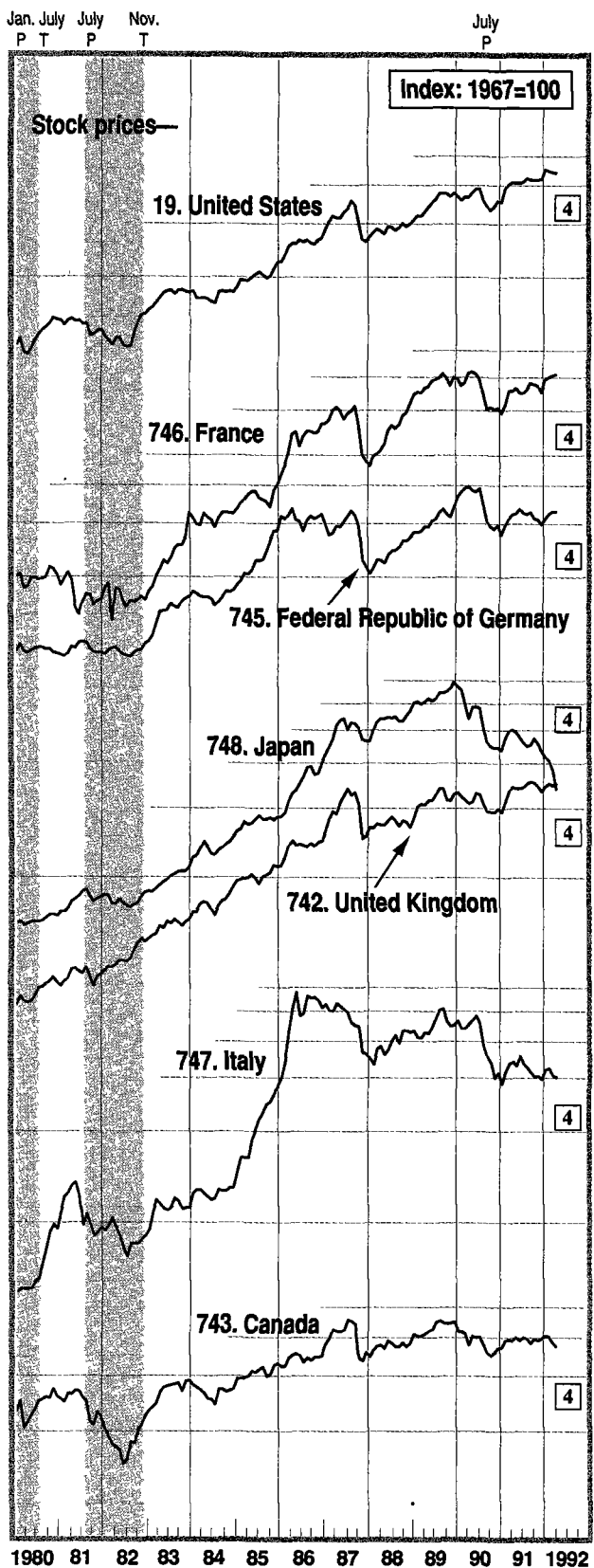


NOTE.—Current data for these series are shown on page C-5.

**OTHER IMPORTANT ECONOMIC MEASURES**

**International Stock Prices**

**International Exchange Rates**



NOTE.—Current data for these series are shown on page C-5.

Business Cycle Expansions and Contractions

Business cycle reference dates		Duration in months			
Trough	Peak	Contraction (trough from previous peak)	Expansion (trough to peak)	Cycle	
				Trough from previous trough	Peak from previous peak
December 1854	June 1857		30		
December 1858	October 1860	18	22	48	40
June 1861	April 1865	8	<b>46</b>	30	<b>54</b>
December 1867	June 1869	<b>32</b>	18	<b>78</b>	50
December 1870	October 1873	18	34	36	52
March 1879	March 1882	65	36	99	101
May 1885	March 1887	38	22	74	60
April 1888	July 1890	13	27	35	40
May 1891	January 1893	10	20	37	30
June 1894	December 1895	17	18	37	35
June 1897	June 1899	18	24	36	42
December 1900	September 1902	18	21	42	39
August 1904	May 1907	23	33	44	56
June 1908	January 1910	13	19	46	32
January 1912	January 1913	24	12	43	36
December 1914	August 1918	23	<b>44</b>	35	<b>67</b>
March 1919	January 1920	7	10	<b>51</b>	17
July 1921	May 1923	18	22	28	40
July 1924	October 1926	14	27	36	41
November 1927	August 1929	13	21	40	34
March 1933	May 1937	43	50	64	93
June 1938	February 1945	13	<b>80</b>	63	<b>93</b>
October 1945	November 1948	<b>8</b>	37	<b>88</b>	45
October 1949	July 1953	11	<b>45</b>	48	<b>56</b>
May 1954	August 1957	<b>10</b>	39	<b>55</b>	49
April 1958	April 1960	8	24	47	32
February 1961	December 1969	10	<b>106</b>	34	<b>116</b>
November 1970	November 1973	<b>11</b>	36	<b>117</b>	47
March 1975	January 1980	16	58	52	74
July 1980	July 1981	6	12	64	18
November 1982	July 1990	16	92	28	108
<b>Average, all cycles:</b>					
1854-1990 (30 cycles)		18	<sup>1</sup> 35	51	53
1854-1919 (16 cycles)		22	27	48	<sup>2</sup> 49
1919-1945 (6 cycles)		18	35	53	53
1945-1990 (8 cycles)		11	<sup>3</sup> 50	56	<sup>3</sup> 61
<b>Average, peacetime cycles:</b>					
1854-1990 (25 cycles)		19	<sup>4</sup> 29	46	48
1854-1919 (14 cycles)		22	24	46	<sup>5</sup> 47
1919-1945 (5 cycles)		20	26	46	45
1945-1990 (6 cycles)		11	<sup>6</sup> 43	46	<sup>6</sup> 53

1 31 cycles.  
2 15 cycles  
3 9 cycles  
4 26 cycles  
5 13 cycles

6 7 cycles  
NOTE—Figures printed in bold italic are the wartime expansions (Civil War, World Wars I and II, Korean war, and Vietnam war), the postwar contractions, and the full cycles that include the wartime expansions  
Source: National Bureau of Economic Research, Inc., 1050 Massachusetts Avenue, Cambridge, MA 02138

Specific Peak and Trough Dates for Selected Indicators

Series no	Series title	Specific peak dates corresponding to reference peaks in—						
		July 1981	Jan 1980	Nov 1973	Dec 1969	Apr 1960	Aug 1957	July 1953
<b>LEADING INDICATORS</b>								
1	Average weekly hours, mfg	12/80 (-7)	3/79 (-10)	4/73 (-7)	10/68 (-14)	5/59 (-11)	11/55 (-21)	4/53 (-3)
5	Average weekly initial claims (inverted)	7/81 (0)	9/78 (-16)	2/73 (-9)	1/69 (-11)	4/59 (-12)	9/55 (-23)	9/52 (-10)
8	Mfrs' new orders in 1982 dollars, consumer goods and materials	10/80 (-9)	12/78 (-13)	3/73 (-8)	11/68 (-13)	3/59 (-13)	7/55 (-25)	4/53 (-3)
32	Vendor performance, slower deliveries diffusion index	4/81 (-3)	4/79 (-9)	11/73 (0)	8/69 (-4)	2/59 (-14)	4/55 (-28)	7/52 (-12)
20	Contracts and orders for plant and equipment in 1982 dollars	4/81 (-3)	3/79 (-10)	10/73 (-1)	4/69 (-8)	3/59 (-13)	11/56 (-9)	2/53 (-5)
29	Building permits, new private housing units	9/80 (-10)	6/78 (-19)	12/72 (-11)	2/69 (-10)	11/58 (-17)	2/55 (-30)	11/52 (-8)
92	Change in mfrs' unfilled orders in 1982 dollars, durable goods (smoothed <sup>1</sup> )	1/81 (-6)	12/78 (-13)	5/73 (-6)	5/69 (-7)	4/59 (-12)	1/56 (-19)	5/51 (-26)
99	Change in sensitive materials prices (smoothed <sup>1</sup> )	12/80 (-7)	5/79 (-8)	1/74 (+2)	2/69 (-10)	11/58 (-17)	8/55 (-24)	6/53 (-1)
19	Index of stock prices, 500 common stocks	11/80 (-8)	NST	1/73 (-10)	12/68 (-12)	7/59 (-9)	7/56 (-13)	1/53 (-6)
106	Money supply M2 in 1982 dollars	NST	1/78 (-24)	1/73 (-10)	1/69 (-11)	NST	1/56 (-19)	NST
83	Index of consumer expectations	5/81 (-2)	11/76 (-38)	8/72 (-15)	2/69 (-10)	2/60 (-2)	11/56 (-9)	2/53 (-5)
910	Composite index of 11 leading indicators	5/81 (-2)	10/78 (-15)	3/73 (-8)	4/69 (-8)	6/59 (-10)	12/55 (-20)	2/53 (-5)
940	Ratio, coincident index to lagging index	10/80 (-9)	4/78 (-21)	12/72 (-11)	11/68 (-13)	4/59 (-12)	5/55 (-27)	10/52 (-9)
<b>COINCIDENT INDICATORS</b>								
41	Employees on nonagricultural payrolls	7/81 (0)	3/80 (+2)	10/74 (+11)	3/70 (+3)	4/60 (0)	3/57 (-5)	6/53 (-1)
51	Personal income less transfer payments in 1987 dollars	8/81 (+1)	1/80 (0)	11/73 (0)	NST	5/60 (+1)	8/57 (0)	10/53 (+3)
47	Index of industrial production	7/81 (0)	3/80 (+2)	11/73 (0)	10/69 (-2)	1/60 (-3)	3/57 (-5)	7/53 (0)
57	Mfg and trade sales in 1982 dollars	1/81 (-6)	3/79 (-10)	11/73 (0)	10/69 (-2)	1/60 (-3)	2/57 (-6)	4/53 (-3)
920	Composite index of 4 coincident indicators	7/81 (0)	1/80 (0)	11/73 (0)	10/69 (-2)	1/60 (-3)	2/57 (-6)	7/53 (0)
<b>LAGGING INDICATORS</b>								
91	Average duration of unemployment (inverted)	12/81 (+5)	7/79 (-6)	9/73 (-2)	10/69 (-2)	6/60 (+2)	9/57 (+1)	9/53 (+2)
77	Ratio, mfg and trade inventories to sales in 1982 dollars	10/82 (+15)	6/80 (+5)	3/75 (+16)	11/70 (+11)	1/61 (+9)	4/58 (+8)	12/53 (+5)
62	Change in index of labor cost per unit of output, mfg (smoothed <sup>1</sup> )	1/82 (+6)	6/80 (+5)	3/75 (+16)	1/70 (+1)	2/61 (+10)	3/58 (+7)	1/54 (+6)
109	Average prime rate charged by banks	8/81 (+1)	4/80 (+3)	9/74 (+10)	2/70 (+2)	7/60 (+3)	12/57 (+4)	2/54 (+7)
101	Commercial and industrial loans outstanding in 1982 dollars	9/82 (+14)	3/80 (+2)	9/74 (+10)	8/70 (+8)	NST	9/57 (+1)	6/53 (-1)
95	Ratio, consumer installment credit to personal income	NST	6/79 (-7)	4/74 (+5)	NST	12/60 (+8)	1/58 (+5)	4/54 (+9)
120	Change in Consumer Price Index for services (smoothed <sup>1</sup> )	9/81 (+2)	6/80 (+5)	10/74 (+11)	4/70 (+4)	10/59 (-6)	3/57 (-5)	n a
930	Composite index of 7 lagging indicators	9/81 (+2)	4/80 (+3)	12/74 (+13)	3/70 (+3)	7/60 (+3)	12/57 (+4)	12/53 (+5)
<b>Specific trough dates corresponding to reference troughs in—</b>								
		Nov 1982	July 1980	Mar. 1975	Nov 1970	Feb 1961	Apr 1958	May 1954
<b>LEADING INDICATORS</b>								
1	Average weekly hours, mfg	10/82 (-1)	7/80 (0)	3/75 (0)	9/70 (-2)	12/60 (-2)	4/58 (0)	4/54 (-1)
5	Average weekly initial claims (inverted)	9/82 (-2)	5/80 (-2)	3/75 (0)	10/70 (-1)	2/61 (0)	4/58 (0)	9/54 (-4)
8	Mfrs' new orders in 1982 dollars, consumer goods and materials	11/82 (0)	5/80 (-2)	3/75 (0)	11/70 (0)	2/61 (0)	2/58 (-2)	10/53 (-7)
32	Vendor performance, slower deliveries diffusion index	3/82 (-8)	5/80 (-2)	2/75 (-1)	12/70 (+1)	3/60 (-11)	12/57 (-4)	11/53 (-6)
20	Contracts and orders for plant and equipment in 1982 dollars	2/83 (+3)	5/80 (-2)	12/75 (+9)	10/70 (-1)	3/61 (+1)	3/58 (-1)	3/54 (-2)
29	Building permits, new private housing units	10/81 (-13)	4/80 (-3)	3/75 (0)	1/70 (-10)	12/60 (-2)	2/58 (-2)	9/53 (-8)
92	Change in mfrs' unfilled orders in 1982 dollars, durable goods (smoothed <sup>1</sup> )	9/82 (-2)	6/80 (-1)	4/75 (+1)	8/70 (-3)	5/60 (-9)	2/58 (-2)	12/53 (-5)
99	Change in sensitive materials prices (smoothed <sup>1</sup> )	4/82 (-7)	7/80 (0)	1/75 (-2)	9/70 (-2)	1/61 (-1)	1/58 (-3)	1/54 (-4)
19	Index of stock prices, 500 common stocks	7/82 (-4)	NST	12/74 (-3)	6/70 (-5)	10/60 (-4)	12/57 (-4)	9/53 (-8)
106	Money supply M2 in 1982 dollars	NST	5/80 (-2)	1/75 (-2)	4/70 (-7)	NST	1/58 (-3)	NST
83	Index of consumer expectations	3/82 (-8)	3/80 (-4)	2/75 (-1)	5/70 (-6)	11/60 (-3)	5/58 (+1)	11/53 (-6)
910	Composite index of 11 leading indicators	1/82 (-10)	5/80 (-2)	2/75 (-1)	10/70 (-1)	4/60 (-10)	2/58 (-2)	11/53 (-6)
940	Ratio, coincident index to lagging index	1/82 (-10)	5/80 (-2)	3/75 (0)	11/70 (0)	2/61 (0)	3/58 (-1)	12/53 (-5)
<b>COINCIDENT INDICATORS</b>								
41	Employees on nonagricultural payrolls	12/82 (+1)	7/80 (0)	4/75 (+1)	11/70 (0)	2/61 (0)	5/58 (+1)	8/54 (+3)
51	Personal income less transfer payments in 1987 dollars	11/82 (0)	7/80 (0)	2/75 (-1)	NST	12/60 (-2)	4/58 (0)	4/54 (-1)
47	Index of industrial production	12/82 (+1)	7/80 (0)	3/75 (0)	11/70 (0)	2/61 (0)	4/58 (0)	4/54 (-1)
57	Mfg and trade sales in 1982 dollars	10/82 (-1)	6/80 (-1)	3/75 (0)	11/70 (0)	1/61 (-1)	4/58 (0)	12/53 (-5)
920	Composite index of 4 coincident indicators	12/82 (+1)	7/80 (0)	3/75 (0)	11/70 (0)	2/61 (0)	4/58 (0)	8/54 (+3)
<b>LAGGING INDICATORS</b>								
91	Average duration of unemployment (inverted)	7/83 (+8)	1/81 (+6)	1/76 (+10)	6/72 (+19)	7/61 (+5)	10/58 (+6)	5/55 (+12)
77	Ratio, mfg and trade inventories to sales in 1982 dollars	1/84 (+14)	1/81 (+6)	11/78 (+44)	2/73 (+27)	4/62 (+14)	5/59 (+13)	4/55 (+11)
62	Change in index of labor cost per unit of output, mfg (smoothed <sup>1</sup> )	9/83 (+10)	2/81 (+7)	11/75 (+8)	11/71 (+12)	9/61 (+7)	11/58 (+7)	4/55 (+11)
109	Average prime rate charged by banks	7/83 (+8)	8/80 (+1)	4/77 (+25)	3/72 (+16)	11/65 (+57)	8/58 (+4)	7/55 (+14)
101	Commercial and industrial loans outstanding in 1982 dollars	10/83 (+11)	3/81 (+8)	9/76 (+18)	2/72 (+15)	NST	8/58 (+4)	8/54 (+3)
95	Ratio, consumer installment credit to personal income	11/82 (0)	NST	2/76 (+1)	NST	11/61 (+9)	11/58 (+7)	11/54 (+6)
120	Change in Consumer Price Index for services (smoothed <sup>1</sup> )	1/83 (+2)	10/80 (+3)	8/75 (+5)	2/73 (+27)	7/61 (+5)	12/58 (+8)	n a
930	Composite index of 7 lagging indicators	6/83 (+7)	10/80 (+3)	6/76 (+15)	2/72 (+15)	8/61 (+6)	8/58 (+4)	2/55 (+9)

NOTE.—Specific peak and trough dates mark the cyclical turning points in individual series; reference peak and trough dates mark the cyclical turning points in overall business activity. For the composite indexes and their components, this table lists the specific peaks and troughs corresponding to the last seven business cycles. The leads (-) or lags (+) of the specific dates in relation to the reference dates are shown in parentheses (in months). These specific dates should not be considered absolute; individual analysts may prefer alternative turning points for some series. See *Measuring Business Cycles* by Arthur F. Burns and Wesley C. Mitchell (National Bureau of Economic

Research, 1946) for detailed information on the selection of specific peaks and troughs.  
 n.a. Not available. This indicates that data necessary to determine a turning point are not available.  
 NST No specific turn. This indicates that no specific turning point corresponding to the indicated reference date is discernible.  
 1. This series is smoothed by an autoregressive-moving-average filter developed by Statistics Canada.

## TITLES AND SOURCES OF SERIES

Series are listed below in numerical order within each of the two major groups. Series numbers are for identification only and do not reflect relationships or order among the series. "M" following a series title indicates monthly data; "Q" indicates quarterly data. Data apply to the whole period except when indicated by "EOM" (end of month) or "EOQ" (end of quarter).

To save space, the commonly used sources listed below are referred to by number:

Source 1—U.S. Department of Commerce, Bureau of Economic Analysis; Source 2—U.S. Department of Commerce, Bureau of the Census; Source 3—U.S. Department of Labor, Bureau of Labor Statistics; Source 4—Board of Governors of the Federal Reserve System.

In parentheses following the source for each series is a reference to the C-page(s) on which that series appears. References to data tables are in roman type, references to charts are in bold-italic type.

## 1. Cyclical Indicators

1. **Average weekly hours of production or nonsupervisory workers, manufacturing** (M).—Source 3 (1, 2, 9)
5. **Average weekly initial claims for unemployment insurance, State programs** (M).—U.S. Department of Labor, Employment and Training Administration; seasonal adjustment by Bureau of Economic Analysis (1, 2, 9)
7. **Manufacturers' new orders in 1982 dollars, durable goods industries** (M).—Sources 1, 2, and 3 (2, 15)
8. **Manufacturers' new orders in 1982 dollars, consumer goods and materials industries** (M).—Sources 1, 2, and 3 (1, 2, 9)
9. **Construction contracts awarded for commercial and industrial buildings, floor space** (M).—McGraw-Hill Information Systems Company, seasonal adjustment by Bureau of Economic Analysis (Used by permission. This series may not be reproduced without written permission from the source.) (2, 16)
10. **Contracts and orders for plant and equipment in current dollars** (M).—Sources 1, 2, and McGraw-Hill Information Systems Company (2)
11. **Newly approved capital appropriations, 1,000 manufacturing corporations** (Q).—The Conference Board (2)
12. **Index of net business formation** (M).—Source 1 and Dun & Bradstreet, Inc. (2, 16)
13. **Number of new business incorporations** (M).—Dun & Bradstreet, Inc.; seasonal adjustment by Bureau of Economic Analysis (2, 16)
14. **Current liabilities of business failures** (M).—Dun & Bradstreet, Inc. (4)
16. **Corporate profits after tax in current dollars** (Q).—Source 1 (4, 19)
18. **Corporate profits after tax in 1987 dollars** (Q).—Source 1 (4, 19)
19. **Index of stock prices, 500 common stocks** (M).—Standard & Poor's Corporation (1, 5, 10, 24)
20. **Contracts and orders for plant and equipment in 1982 dollars** (M).—Sources 1, 2, and McGraw-Hill Information Systems Company (1, 2, 9)
21. **Average weekly overtime hours of production or nonsupervisory workers, manufacturing** (M).—Source 3 (2, 13)
22. **Ratio, corporate domestic profits after tax to total corporate domestic income** (Q).—Source 1 (4, 19)
23. **Index of spot market prices, raw industrial materials** (M).—Sources 1, 3, and Commodity Research Bureau, Inc. (Used by permission. From June 1981 forward, this series may not be reproduced without written permission from Commodity Research Bureau, Inc.) (3, 19)
26. **Ratio, implicit price deflator to unit labor cost, all persons, nonfarm business sector** (Q).—Sources 1 and 3 (4, 19)
27. **Manufacturers' new orders in 1982 dollars, nondurable goods industries** (M).—Sources 1, 2, and 3 (2, 16)
28. **New private housing units started** (M).—Source 2 (3, 18)
29. **Index of new private housing units authorized by local building permits** (M).—Sources 1 and 2 (1, 3, 10)
30. **Change in business inventories in 1987 dollars** (Q).—Source 1 (3, 18)
31. **Change in manufacturing and trade inventories** (M).—Sources 1 and 2 (3, 18)
32. **Vendor performance, slower deliveries diffusion index** (M).—National Association of Purchasing Management and Purchasing Management Association of Chicago, seasonal adjustment by U.S. Department of Commerce, Office of the Chief Economist (1, 2, 9)
35. **Corporate net cash flow in 1987 dollars** (Q).—Source 1 (4)
37. **Number of persons unemployed** (M).—Source 3 (2)
39. **Percent of consumer installment loans delinquent 30 days and over** (EOM).—American Bankers Association (4)
40. **Employees on nonagricultural payrolls, goods-producing industries** (M).—Source 3 (2, 13)
41. **Employees on nonagricultural payrolls** (M).—Source 3 (1, 2, 11)
42. **Number of persons engaged in nonagricultural activities** (M).—Source 3 (2)
43. **Civilian unemployment rate** (M).—Source 3 (2, 13)
44. **Unemployment rate, persons unemployed 15 weeks and over** (M).—Source 3 (2)
45. **Average weekly insured unemployment rate, State programs** (M).—Source 1 and U.S. Department of Labor, Employment and Training Administration (2)
46. **Index of help-wanted advertising in newspapers** (M).—The Conference Board (2, 13)
47. **Index of industrial production** (M).—Source 4 (1, 2, 5, 11, 23)
48. **Employee hours in nonagricultural establishments** (M).—Source 3 (2, 13)
49. **Value of domestic goods output in 1987 dollars** (Q).—Source 1 (2)
50. **Gross national product in 1987 dollars** (Q).—Source 1 (2)
51. **Personal income less transfer payments in 1987 dollars** (M).—Source 1 (1, 4, 11)
52. **Personal income in 1987 dollars** (M).—Source 1 (4)
53. **Wages and salaries in 1987 dollars, mining, manufacturing, and construction** (M).—Sources 1 and 3 (4, 15)
55. **Gross domestic product in 1987 dollars** (Q).—Source 1 (2, 14)
57. **Manufacturing and trade sales in 1982 dollars** (M).—Sources 1 and 2 (1, 2, 11)
58. **Index of consumer sentiment** (Q,M).—University of Michigan, Survey Research Center (Used by permission. This series may not be reproduced without written permission from the source.) (4)
59. **Sales of retail stores in 1982 dollars** (M).—Sources 1 and 2 (2, 15)
60. **Ratio, help-wanted advertising in newspapers to number of persons unemployed** (M).—Sources 1, 3, and The Conference Board (2)
61. **New plant and equipment expenditures by business in current dollars** (Q).—Source 2 (2)
62. **Change in index of labor cost per unit of output, manufacturing, smoothed** (M).—Sources 1 and 4 (1, 4, 12)
63. **Index of unit labor cost, all persons, business sector** (Q).—Source 3 (4)
66. **Consumer installment credit outstanding** (EOM).—Source 4 (5)
69. **Manufacturers' machinery and equipment sales and business construction expenditures** (M).—Sources 1 and 2 (3, 17)
70. **Manufacturing and trade inventories in 1982 dollars** (EOM).—Sources 1 and 2 (3)
72. **Commercial and industrial loans outstanding in current dollars** (M).—Sources 1, 4, and The Federal Reserve Bank of New York (5)
73. **Index of industrial production, durable manufactures** (M).—Source 4 (2, 14)
74. **Index of industrial production, nondurable manufactures** (M).—Source 4 (2, 14)
75. **Index of industrial production, consumer goods** (M).—Source 4 (2, 14)
76. **Index of industrial production, business equipment** (M).—Source 4 (3, 17)
77. **Ratio, manufacturing and trade inventories to sales in 1982 dollars** (M).—Sources 1 and 2 (1, 3, 12)
81. **Ratio, corporate domestic profits after tax with inventory valuation and capital consumption adjustments to total corporate domestic income** (Q).—Source 1 (4, 19)
82. **Capacity utilization rate, manufacturing** (M).—Source 4 (2, 14)
83. **Index of consumer expectations** (Q,M).—University of Michigan, Survey Research Center (Used by permission. This series may not be reproduced without written permission from the source.) (1, 4, 10)
85. **Change in money supply M1** (M).—Sources 1 and 4 (4, 20)
86. **Gross private nonresidential fixed investment in 1987 dollars** (Q).—Source 1 (3, 17)
87. **Gross private nonresidential fixed investment in 1987 dollars, structures** (Q).—Source 1 (3, 17)
88. **Gross private nonresidential fixed investment in 1987 dollars, producers' durable equipment** (Q).—Source 1 (3, 17)
89. **Gross private residential fixed investment in 1987 dollars** (Q).—Source 1 (3, 18)
90. **Ratio, civilian employment to population of working age** (M).—Source 3 (2, 13)
91. **Average duration of unemployment in weeks** (M).—Source 3 (1, 2, 12)
92. **Change in manufacturers' unfilled orders in 1982 dollars, durable goods industries, smoothed** (M).—Sources 1, 2, and 3 (1, 2, 10)
93. **Free reserves** (M).—Sources 1 and 4 (4)
94. **Member bank borrowings from the Federal Reserve** (M).—Source 4 (4)
95. **Ratio, consumer installment credit outstanding to personal income** (M).—Sources 1 and 4 (1, 5, 12)
97. **Backlog of capital appropriations, 1,000 manufacturing corporations** (EOQ).—The Conference Board (2)
98. **Index of producer prices for sensitive crude and intermediate materials** (M).—Sources 1 and 3 (3)
99. **Change in sensitive materials prices, smoothed** (M).—Sources 1, 3, and Commodity Research Bureau, Inc. (1, 3, 10)

100. **New plant and equipment expenditures by business in 1987 dollars** (Q).—Source 2 (2, 17)
101. **Commercial and industrial loans outstanding in 1982 dollars** (M).—Sources 1, 3, 4, and The Federal Reserve Bank of New York (1, 5, 12)
102. **Change in money supply M2** (M).—Sources 1 and 4 (4, 20)
105. **Money supply M1 in 1982 dollars** (M).—Sources 1, 3, and 4 (4)
106. **Money supply M2 in 1982 dollars** (M).—Sources 1, 3, and 4 (1, 4, 10)
107. **Ratio, gross domestic product to money supply M1** (Q).—Sources 1 and 4 (4)
108. **Ratio, personal income to money supply M2** (M).—Sources 1 and 4 (4)
109. **Average prime rate charged by banks** (M).—Source 4 (1, 5, 12)
110. **Funds raised by private nonfinancial borrowers in credit markets** (Q).—Source 4 (4, 20)
111. **Change in business and consumer credit outstanding** (M).—Sources 1, 4, Federal Home Loan Bank Board, and The Federal Reserve Bank of New York (4)
112. **Net change in business loans** (M).—Sources 1, 4, and The Federal Reserve Bank of New York (4, 20)
113. **Net change in consumer installment credit** (M).—Sources 1 and 4 (4, 20)
114. **Discount rate on new issues of 91-day Treasury bills** (M).—Source 4 (5, 21)
115. **Yield on long-term Treasury bonds** (M).—U.S. Department of the Treasury (5, 21)
116. **Yield on new issues of high-grade corporate bonds** (M).—Citibank and U.S. Department of the Treasury (5, 21)
117. **Yield on municipal bonds, 20-bond average** (M).—The Bond Buyer (5)
118. **Secondary market yields on FHA mortgages** (M).—U.S. Department of Housing and Urban Development, Federal Housing Administration (5)
119. **Federal funds rate** (M).—Source 4 (5, 21)
120. **Change in Consumer Price Index for services, smoothed** (M).—Sources 1 and 2 (1, 3, 12)
122. **Index of consumer confidence** (M).—The Conference Board (4)
123. **Index of consumer expectations** (M).—The Conference Board (4, 15)
124. **Capacity utilization rate, total industry** (M).—Source 4 (2)
910. **Composite index of 11 leading indicators** (includes series 1, 5, 8, 19, 20, 29, 32, 83, 92, 99, 106) (M).—Source 1 (1, 7, 8)
920. **Composite index of 4 coincident indicators** (includes series 41, 47, 51, 57) (M).—Source 1 (1, 7, 8)
930. **Composite index of 7 lagging indicators** (includes series 62, 77, 91, 95, 101, 109, 120) (M).—Source 1 (1, 7, 8)
940. **Ratio, coincident composite index (series 920) to lagging composite index (series 930)** (M).—Source 1 (1, 7)
950. **Diffusion index of 11 leading indicator components** (M).—Source 1 (1, 8)
951. **Diffusion index of 4 coincident indicator components** (M).—Source 1 (1, 8)
952. **Diffusion index of 7 lagging indicator components** (M).—Source 1 (1, 8)
963. **Diffusion index of employees on private nonagricultural payrolls, 356 industries** (M).—Source 3 (2)
990. **CIBCR long-leading composite index** (M).—Columbia University, Center for International Business Cycle Research (5, 21)
991. **CIBCR short-leading composite index** (M).—Columbia University, Center for International Business Cycle Research (5, 21)
441. **Civilian labor force** (M).—Source 3 (2)
442. **Civilian employment** (M).—Source 3 (2)
451. **Civilian labor force participation rate, males 20 years and over** (M).—Source 3 (2)
452. **Civilian labor force participation rate, females 20 years and over** (M).—Source 3 (2)
453. **Civilian labor force participation rate, both sexes 16–19 years of age** (M).—Source 3 (2)
525. **Defense Department prime contract awards for work performed in the United States** (M).—U.S. Department of Defense, Office of the Assistant Secretary of Defense (Comptroller), Washington Headquarters Services, Directorate for Information Operations and Reports, seasonal adjustment by Bureau of Economic Analysis (5)
548. **Manufacturers' new orders, defense products** (M).—Source 2 (5)
557. **Index of industrial production, defense and space equipment** (M).—Source 4 (5)
564. **Federal Government purchases, national defense** (Q).—Source 1 (5, 22)
570. **Employment, defense products industries** (M).—Source 3; seasonal adjustment by Bureau of Economic Analysis (5)
602. **Exports, excluding military aid shipments** (M).—Source 2 (5)
604. **Exports of domestic agricultural products** (M).—Source 2, seasonal adjustment by Bureau of Economic Analysis (5)
606. **Exports of nonelectrical machinery** (M).—Source 2; seasonal adjustment by Bureau of Economic Analysis (5)
612. **General imports** (M).—Source 2 (5)
614. **Imports of petroleum and petroleum products** (M).—Source 2; seasonal adjustment by Bureau of Economic Analysis (5)
616. **Imports of automobiles and parts** (M).—Source 2, seasonal adjustment by Bureau of Economic Analysis (5)
618. **Merchandise exports, adjusted, excluding military** (Q).—Source 1 (5, 22)
620. **Merchandise imports, adjusted, excluding military** (Q).—Source 1 (5, 22)
622. **Balance on merchandise trade** (Q).—Source 1 (5)
721. **Organisation for Economic Co-operation and Development, European countries, index of industrial production** (M).—Organisation for Economic Co-operation and Development (Paris) (5, 23)
722. **United Kingdom, index of industrial production** (M).—Central Statistical Office (London) (5, 23)
723. **Canada, index of industrial production** (M).—Statistics Canada (Ottawa) (5, 23)
725. **Federal Republic of Germany, index of industrial production** (M).—Statistisches Bundesamt (Wiesbaden) (5, 23)
726. **France, index of industrial production** (M).—Institut National de la Statistique et des Etudes Economiques (Paris) (5, 23)
727. **Italy, index of industrial production** (M).—Istituto Centrale di Statistica (Rome) (5, 23)
728. **Japan, index of industrial production** (M).—Ministry of International Trade and Industry (Tokyo) (5, 23)
732. **United Kingdom, consumer price index** (M).—Department of Employment (London); percent changes seasonally adjusted by Bureau of Economic Analysis (5, 23)
733. **Canada, consumer price index** (M).—Statistics Canada (Ottawa); percent changes seasonally adjusted by Bureau of Economic Analysis (5, 23)
735. **Federal Republic of Germany, consumer price index** (M).—Statistisches Bundesamt (Wiesbaden); percent changes seasonally adjusted by Bureau of Economic Analysis (5, 23)
736. **France, consumer price index** (M).—Institut National de la Statistique et des Etudes Economiques (Paris); percent changes seasonally adjusted by Bureau of Economic Analysis (5, 23)
737. **Italy, consumer price index** (M).—Istituto Centrale di Statistica (Rome); percent changes seasonally adjusted by Bureau of Economic Analysis (5, 23)
738. **Japan, consumer price index** (M).—Bureau of Statistics, Office of the Prime Minister (Tokyo); percent changes seasonally adjusted by Bureau of Economic Analysis (5, 23)
742. **United Kingdom, index of stock prices** (M).—Central Statistical Office (London) (5, 24)
743. **Canada, index of stock prices** (M).—Toronto Stock Exchange (Toronto) (5, 24)
745. **Federal Republic of Germany, index of stock prices** (M).—Statistisches Bundesamt (Wiesbaden) (5, 24)
746. **France, index of stock prices** (M).—Institut National de la Statistique et des Etudes Economiques (Paris) (5, 24)
747. **Italy, index of stock prices** (M).—Banca d'Italia (Rome) (5, 24)
748. **Japan, index of stock prices** (M).—Bank of Japan (Tokyo) (5, 24)
750. **Index of weighted-average exchange value of U.S. dollar against currencies of 10 industrial countries** (M).—Source 4 (5, 24)
752. **United Kingdom, exchange rate per U.S. dollar** (M).—Sources 1 and 4 (5, 24)
753. **Canada, exchange rate per U.S. dollar** (M).—Source 4 (5, 24)
755. **Federal Republic of Germany, exchange rate per U.S. dollar** (M).—Source 4 (5, 24)
756. **France, exchange rate per U.S. dollar** (M).—Source 4 (5, 24)
757. **Italy, exchange rate per U.S. dollar** (M).—Source 4 (5, 24)
758. **Japan, exchange rate per U.S. dollar** (M).—Source 4 (5, 24)

## 2. Other Important Economic Measures

290. **Gross saving** (Q).—Source 1 (4)
292. **Personal saving** (Q).—Source 1 (4)
293. **Personal saving rate** (Q).—Source 1 (4, 22)
295. **Business saving** (Q).—Source 1 (4)
298. **Government surplus or deficit** (Q).—Source 1 (4, 22)
311. **Fixed-weighted price index, gross domestic business product** (Q).—Source 1 (3, 22)
320. **Consumer Price Index for all urban consumers, all items** (M).—Source 3 (3, 5, 22, 23)
323. **Consumer Price Index for all urban consumers, all items less food and energy** (M).—Source 3 (3, 22)
331. **Producer Price Index, crude materials for further processing** (M).—Source 3 (3, 22)
332. **Producer Price Index, intermediate materials, supplies, and components** (M).—Source 3 (3, 22)
333. **Producer Price Index, capital equipment** (M).—Source 3 (3, 22)
334. **Producer Price Index, finished consumer goods** (M).—Source 3 (3, 22)
336. **Producer Price Index, finished goods** (M).—Source 3 (3, 22)
337. **Producer Price Index, finished goods less foods and energy** (M).—Source 3 (3, 22)
345. **Index of average hourly compensation, all employees, nonfarm business sector** (Q).—Source 3 (4)
346. **Index of real average hourly compensation, all employees, nonfarm business sector** (Q).—Source 3 (4)
358. **Index of output per hour, all persons, nonfarm business sector** (Q).—Source 3 (4)
370. **Index of output per hour, all persons, business sector** (Q).—Source 3 (4, 22)





















SURVEY OF CURRENT BUSINESS

Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88

	Annual		1991												1992		
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
<b>5. LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued</b>																	
<b>LABOR FORCE—Continued</b>																	
Seasonally adjusted ○—Continued																	
Civilian labor force—Continued																	
Unemployed—Continued																	
Rates %:																	
All civilian workers .....																	
Men, 20 years and over .....																	
Women, 20 years and over .....																	
Both sexes, 16-19 years .....																	
White .....																	
Black .....																	
Hispanic origin .....																	
Married men, spouse present .....																	
Married women, spouse present .....																	
Women who maintain families .....																	
Industry of last job:																	
Private nonagricultural wage and salary workers .....																	
Construction .....																	
Manufacturing .....																	
Durable goods .....																	
Agricultural wage and salary workers .....																	
Not seasonally adjusted:																	
Occupation:																	
Managerial and professional specialty .....																	
Technical, sales, and administrative support .....																	
Service occupations .....																	
Precision production, craft, and repair .....																	
Operators, fabricators, and laborers .....																	
Farming, forestry, and fishing .....																	
<b>EMPLOYMENT §</b>																	
[Thousands]																	
Employees on nonfarm payrolls by industry:																	
Total, not adjusted for seas. variation .....																	
Private sector (excl. government) .....																	
Seasonally adjusted:																	
Total employees, nonfarm payrolls .....																	
Private sector (excl. government) .....																	
Nonmanufacturing industries .....																	
Goods-producing .....																	
Mining .....																	
Construction .....																	
Manufacturing .....																	
Durable goods .....																	
Lumber and wood products .....																	
Furniture and fixtures .....																	
Stone, clay and glass products .....																	
Primary metal industries .....																	
Fabricated metal products .....																	
Industrial machinery and equipment .....																	
Electronic and other electrical equipment .....																	
Transportation equipment .....																	
Instruments and related products .....																	
Miscellaneous manufacturing .....																	
Nondurable goods .....																	
Food and kindred products .....																	
Tobacco manufactures .....																	
Textile mill products .....																	
Apparel and other textile products .....																	
Paper and allied products .....																	
Printing and publishing .....																	
Chemicals and allied products .....																	
Petroleum and coal products .....																	
Rubber and misc. plastics products .....																	
Leather and leather products .....																	
Service-producing .....																	
Transportation and public utilities .....																	
Wholesale trade .....																	
Retail trade .....																	
Finance, insurance, and real estate .....																	
Services .....																	
Government .....																	
Federal .....																	
State .....																	
Local .....																	
Production or nonsupervisory workers on private nonfarm payrolls, not seas. adjusted .....																	
Manufacturing, not seas. adjusted .....																	
Production or nonsupervisory workers on private nonfarm payrolls .....																	
Goods-producing .....																	
Mining .....																	
Construction .....																	
Manufacturing .....																	
Durable goods .....																	
Lumber and wood products .....																	
Furniture and fixtures .....																	
Stone, clay, and glass products .....																	
Primary metal industries .....																	
Fabricated metal products .....																	
Industrial machinery and equipment .....																	
Electronic and other electrical equipment .....																	
Transportation equipment .....																	
Instruments and related products .....																	
Miscellaneous manufacturing .....																	

See footnotes at end of tables.







Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1991-88

Table header with columns for Annual (1990, 1991) and 1991 (Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec) and 1992 (Jan, Feb, Mar)

5. LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

Main table for Section 5 containing rows for WORK STOPPAGES, UNEMPLOYMENT INSURANCE, and various unemployment programs.

6. FINANCE

Main table for Section 6 containing rows for BANKING, Deposits, Loans, and Investments, with sub-sections like Federal Reserve banks and large commercial banks.

See footnotes at end of tables.













Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88	Annual		1991										1992			
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>8. TRANSPORTATION AND COMMUNICATION—Continued</b>																
<b>COMMUNICATION</b>																
Telephone carriers:																
Operating revenues, mil. \$ #																
Station revenues, mil. \$																
Tolls, message, mil. \$																
Operating expenses (excluding taxes), mil. \$																
Net operating income (after taxes), mil. \$																
Access lines, millions																
<b>9. CHEMICALS AND ALLIED PRODUCTS</b>																
<b>CHEMICALS</b>																
<b>Inorganic Chemicals</b>																
<i>[Thousands of short tons, unless otherwise indicated]</i>																
<b>Production:</b>																
Aluminum sulfate, commercial (17% Al <sub>2</sub> O <sub>3</sub> )	1,227	1,180		6278				299							283	
Chlorine gas (100% Cl <sub>2</sub> )	11,810	11,324		62,795				2,715							2,247	
Hydrochloric acid (100% HCl)	3,013	2,799		668				638							728	
Phosphorus, elemental	346	312		90				80							70	
Sodium hydroxide (100% NaOH)	12,030	12,197		63,013				2,946							3,089	
Sodium silicate, anhydrous	879	993		6216				211							223	
Sodium sulfate (100% Na <sub>2</sub> SO <sub>4</sub> )	786	768		6236				171							173	
Sodium tripolyphosphate (100% Na <sub>3</sub> P <sub>3</sub> O <sub>10</sub> )	532			6132				118		(?)			(?)		279	
Titanium dioxide (composite and pure)	1,077	1,093		6272				269								
<b>Sulfur, native (Frasch) and recovered:</b>																
Production, thous. metric tons	10,262	9,494	769	806	776	813	800	837	*778	771	760	754	*791	818	749	
Stocks (producers') end of period, thous. metric tons	1,422	1,237	1,521	1,581	1,474	1,425	1,481	1,460	*1,257	1,470	1,415	1,302	*1,499	1,186	1,208	
<b>Inorganic Fertilizer Materials</b>																
<i>[Thousands of short tons, unless otherwise indicated]</i>																
<b>Production:</b>																
Ammonia, synthetic anhydrous ‡	16,958	17,020		64,245				4,419							4,144	
Ammonium nitrate, original solution ‡	7,107	7,310		61,902				1,903							1,770	
Ammonium sulfate ‡	2,495	2,230		6558				592							543	
Nitric acid (100% HNO <sub>3</sub> ) ‡	7,749	7,524		61,977				1,936							1,804	
Nitrogen solutions (100% N) ‡	2,853	3,137		6807				829							758	
Phosphoric acid (100% P <sub>2</sub> O <sub>5</sub> ) ‡	12,175	12,342		63,036				3,048							3,139	
Sulfuric acid (100% H <sub>2</sub> SO <sub>4</sub> ) ‡	44,281	43,308		610,778				10,610							10,895	
<b>Superphosphate and other phosphatic fertilizers (gross weight):</b>																
Production	18,887	19,418		64,813				4,813							4,903	
Stocks, end of period	738	689		6692				620							689	
Potash, sales (K <sub>2</sub> O)	5,700	5,460	327	414	740	735		227	236	687			346	368	304	454
<b>Imports:</b>																
Ammonium nitrate, thous. metric tons																
Ammonium sulfate, thous. metric tons																
Potassium chloride, thous. metric tons																
Sodium nitrate, thous. metric tons																
<b>Industrial Gases</b>																
<i>(Millions of cubic feet)</i>																
<b>Production:</b>																
Acetylene	5,207	4,567		61,139				1,132							1,187	
Hydrogen (high and low purity)	147,840	141,844		634,826				36,261							35,776	
Nitrogen (high and low purity)	749,525	786,727		6197,977				196,735							196,110	
Oxygen (high and low purity)	462,293	471,216		6119,221				118,588							117,003	
<b>Organic Chemicals §</b>																
<i>[Thousands of metric tons, unless otherwise indicated]</i>																
<b>Production:</b>																
Acetylsalicylic acid (aspirin)	12.8	19.4		( <sup>2</sup> )				( <sup>2</sup> )							5.7	
Ethyl acetate	124.3	126.1		31.8				21.0							29.9	
Formaldehyde (37% HCHO)	2,908.5	2,913.7		644.2				704.8							779.5	
Glycerin, refined, all grades, mil. lb.	286.5	298.1		79.7				71.6							69.2	
Methanol, synthetic	3,622.2	3,925.3		839.8				1,107.3							995.6	
Phthalic anhydride	426.7	396.3		96.7				96.5							103.3	
<b>ALCOHOL</b>																
<b>Ethyl alcohol and spirits:</b>																
Production, mil. tax gal.	1,107.3	1,198.8	92.6	101.1	100.3	101.2	90.2	91.8	99.6	100.0	106.9	101.9	111.4			
Stocks, end of period, mil. tax gal.	36.8	37.4	49.9	54.5	53.4	57.0	53.2	58.7	49.6	36.3	32.6	36.2	37.4			
<b>Denatured alcohol:</b>																
Production, mil. wine gal.	594.9	664.9	50.3	51.2	54.8	52.9	56.9	51.9	56.2	58.3	59.6	55.6	62.3			
Consumption (withdrawals), mil. wine gal.	645.7	702.7	65.4	49.3	58.7	58.1	60.7	53.0	77.0	60.1	48.1	56.9	61.2			
For fuel use, mil. wine gal.	297.9	354.6	37.5	22.6	32.0	26.8	32.7	30.7	31.2	32.8	20.3	31.5	33.0			
Stocks, end of period, mil. wine gal.	17.2	8.8	22.2	25.5	25.4	23.8	19.8	11.2	12.1	9.6	10.3	9.1	8.8			

See footnotes at end of tables.

	Annual		1991										1992			
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
	Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88															

## 9. CHEMICALS AND ALLIED PRODUCTS—Continued

PLASTICS AND RESIN MATERIALS																				
[Thousands of metric tons]																				
Production:																				
Phenolic resins	2,943.8																			
Polyethylene and copolymers	8,550.5	7,514.0		2,028.7				1,908.6						1,825.3				1,918.0		
Polypropylene	3,524.7	3,397.2		822.0				830.7						885.1				859.2		
Polystyrene and copolymers	4,624.1																			
Polyvinyl chloride and copolymers	4,112.9	3,977.4		941.7				1,079.8						1,039.2				1,027.6		
PAINTS, VARNISH, AND LACQUER †																				
[Millions of dollars]																				
Total shipments	11,761.6	11,391.3		2,498.4				3,158.7						3,123.0				2,611.2		
Architectural coatings	4,862.1	4,653.3		992.3				1,389.2						1,336.4				935.5		
Product coatings (OEM)	4,110.5	4,242.5		960.0				1,063.4						1,093.5				1,095.6		
Special purpose coatings	2,789.1	2,495.4		546.2				676.1						693.1				560.1		

## 10. ELECTRIC POWER AND GAS

ELECTRIC POWER																					
[Millions of kilowatt-hours, unless otherwise indicated]																					
Production:																					
Electric utilities, total	2,808,151	2,821,569	210,496	221,117	208,936	233,991	248,165	271,492	267,698	233,897	223,180	221,029	233,583				233,583				
By fuels	2,528,225	2,546,095	188,579	195,297	183,249	205,535	222,332	247,242	245,954	215,511	205,643	202,730	211,709				211,709				
By waterpower	279,926	275,475	21,918	25,820	25,687	28,457	25,832	24,250	21,744	18,387	17,537	18,299	21,873				21,873				
Sales to ultimate customers, total (Edison Electric Institute)		2,667,321	2,710,674		663,388			649,177				745,612					652,498				
Commercial \$	734,584	749,686		177,096			182,985				209,303					180,292					
Industrial \$	926,161	921,552		219,440			230,832				241,455					229,825					
Railways and railroads	5,297	5,420		1,438			1,324				1,312					1,348					
Residential or domestic	910,296	938,517		242,236			210,302				268,941					217,039					
Street and highway lighting	14,895	15,204		4,147			3,543				3,465					4,049					
Other public authorities	72,399	76,713		18,224			19,338				20,185					18,966					
Interdepartmental	3,689	3,582		809			843				950					980					
Revenue from sales to ultimate customers (Edison Electric Institute), mil. \$		175,503	183,361		43,315			43,874				53,094					43,078				
GAS †																					
Total utility gas, quarterly (American Gas Association):																					
Customers, end of period, total, thousands @	54,388																				
Residential	49,912																				
Commercial	4,281																				
Industrial @	167																				
Other	48																				
Sales to customers, total, tril. Btu		9,846																			
Residential	4,394																				
Commercial	2,192																				
Industrial	1,997																				
Electric generation	1,075																				
Other	188																				
Revenue from sales to customers, total, mil. \$		44,672																			
Residential	24,658																				
Commercial	10,462																				
Industrial	6,064																				
Electric generation	2,889																				
Other	598																				

## 11. FOOD AND KINDRED PRODUCTS; TOBACCO

ALCOHOLIC BEVERAGES																					
Beer:																					
Production, mil. bbl.	203.65	202.19	15.17	16.08	17.23	18.90	19.16	19.88	18.63	16.11	16.65	14.47	13.64	15.65				13.64			
Taxable withdrawals, mil. bbl.	184.51	180.99	13.11	14.40	14.82	16.77	16.93	17.88	17.39	14.51	15.13	13.42	12.84	13.78				12.84			
Stocks, end of period, mil. bbl.	12.68	12.64	14.11	14.15	15.01	14.91	14.99	14.96	14.27	14.03	13.75	13.23	12.64	13.29				12.64			
Distilled spirits (total):																					
Production, mil. tax gal.	118.34		10.89	10.27	10.47	8.76	7.62	6.40	3.59	7.93	14.43	8.52	9.09								
Consumption, apparent, for beverage purposes, mil. wine gal.	374.41		21.96	26.06	28.36	28.79	28.77	29.10	28.25	26.80	30.70										
Stocks, end of period, mil. tax gal.	422.49		437.61	431.71	444.06	435.77	440.08	441.96	438.74	422.30	437.39	437.52	402.10								
Imports, mil. proof liters																					
Whisky:																					
Production, mil. tax gal.	79.91		7.82	6.85	7.30	5.47	4.69	4.60	2.38	4.95	6.66	5.06	7.31								
Stocks, end of period, mil. tax gal.	371.60		377.19	370.40	382.42	373.35	382.75	382.76	379.44	367.58	375.75	375.33	341.87								
Imports, mil. proof liters																					
Wines and distilling materials:																					
Effervescent wines:																					
Production, mil. wine gal.	26.35		1.21	1.12	1.10	.13	.74	2.59	2.87	2.59											
Taxable withdrawals, mil. wine gal.	25.50		.92	1.08	1.43	1.91	1.69	1.10	1.63	2.88											
Stocks, end of period, mil. wine gal.	231.72		17.60	20.48	18.56	19.64	17.48	18.81	20.24	20.46											
Imports, mil. liters																					
Still wines:																					
Production, mil. wine gal.	427.15		3.36	4.54	4.18	3.23	1.68	1.41	9.34	128.30											
Taxable withdrawals, mil. wine gal.	417.25		26.98	31.93	34.01	33.23	32.98	30.16	31.29	30.22											
Stocks, end of period, mil. wine gal.	576.36		530.26	515.16	522.56	518.21	524.02	394.36	415.34	518.66											
Imports, mil. liters																					
Distilling materials produced at wineries, mil. wine gal.		108.07		7.30	4.52	2.75	3.36	1.15	3.39	4.23	32.35										

See footnotes at end of tables.

	Annual		1991												1992		
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
<p>Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88</p>																	
<p><b>11. FOOD AND KINDRED PRODUCTS; TOBACCO—Continued</b></p>																	
<p><b>DAIRY PRODUCTS</b></p>																	
Butter:																	
Production (factory), mil. lb.	1,302.2	1,360.4	126.3	131.6	133.7	126.0	98.3	88.9	85.0	84.7	105.2	108.5	130.1	156.0	132.0	.....	
Stocks, cold storage, end of period, mil. lb.	416.1	539.4	522.1	555.5	620.5	646.7	662.7	659.8	629.4	597.2	567.1	543.0	539.4	568.6	*630.3	656.3	
Producer Price Index, 1982=100	71.3	69.3	67.0	67.1	67.3	67.3	68.1	70.4	70.4	70.4	74.0	*74.4	69.5	68.2	60.9	61.0	
Cheese:																	
Production (factory), total, mil. lb.	6,061.2	6,006.3	458.0	521.4	500.7	516.0	505.4	489.9	493.7	476.5	507.9	497.0	538.1	514.1	495.9	.....	
American, whole milk, mil. lb.	2,890.8	2,777.0	222.4	250.0	236.9	247.5	235.2	225.0	224.5	205.8	221.6	214.9	246.1	245.5	230.0	.....	
Stocks, cold storage, end of period, mil. lb.	457.8	415.3	475.1	492.4	510.3	512.1	521.5	511.5	494.1	477.9	429.3	409.0	415.3	438.8	*445.9	415.1	
American, whole milk, mil. lb.	347.2	317.8	367.6	386.2	403.9	408.5	413.8	402.9	392.2	374.0	337.8	319.1	317.8	338.7	*348.0	320.2	
Imports, thous. metric tons																	
Price, wholesale, cheddar, single daisies (Chicago), \$ per lb.																	
Condensed and evaporated milk:																	
Production, case goods, mil. lb.	602.6	579.0	46.9	47.2	50.6	46.5	49.1	45.1	48.3	44.0	46.0	41.0	46.2	46.3	45.5	.....	
Stocks, manufacturers', case goods, end of period, mil. lb.	58.1	34.7	84.5	86.0	90.6	107.1	109.1	110.2	111.1	95.9	66.3	44.2	34.7	50.6	58.7	.....	
Exports, thous. metric tons																	
Fluid milk:																	
Production on farms, mil. lb. †	125,772	125,683	9,922	11,084	10,918	11,240	10,570	10,472	10,349	9,927	10,212	9,926	10,418	10,684	*10,230	11,097	
Utilization in manufactured dairy products, mil. lb.	89,998	90,489	7,190	8,069	8,107	8,236	7,804	7,493	7,328	6,803	7,185	6,866	7,653	8,161	*12.90	*12.60	
Price, wholesale, U.S. average, \$ per 100 lb.	13.73	*12.38	11.70	11.40	13.00	11.40	11.40	11.80	12.30	12.80	13.40	13.80	13.80	13.50			
Dry milk:																	
Production:																	
Dry whole milk, mil. lb.	175.1	114.9	8.3	8.3	9.3	7.1	8.8	9.9	11.6	11.0	12.5	10.1	9.4	10.3	9.2	.....	
Nonfat dry milk (human food), mil. lb.	876.6	879.0	77.9	87.6	95.1	101.4	78.6	69.8	56.8	44.5	48.9	54.1	81.7	80.2	78.1	.....	
Stocks, manufacturers', end of period:																	
Dry whole milk, mil. lb.	11.2	8.5	9.5	9.8	10.4	10.8	7.0	6.3	6.1	5.6	6.0	6.4	8.5	7.0	6.8	.....	
Nonfat dry milk (human food), mil. lb.	114.6	61.0	95.5	88.9	84.4	74.4	67.5	69.8	68.7	48.7	39.6	36.9	61.0	60.8	64.5	.....	
Exports, whole and nonfat (human food), thous. metric tons																	
Price, manufacturers' average selling, nonfat dry milk (human food), \$ per lb.	.948	.893	.849	.846	.850	.854	.844	.884	.895	.893	.966	.991	.993	.921	.932	.....	
<p><b>GRAIN AND GRAIN PRODUCTS</b></p>																	
Exports (barley, corn, oats, rye, wheat), mil. bu.																	
Barley:																	
Production (crop estimate), mil. metric tons	*29.192	*210.113															
Stocks (domestic), end of period, total, mil. metric tons	*6.656	*7.150	4.592				*2.948		9.579			*7.150			4.760	.....	
On farms, mil. metric tons	*3.841	*4.274	2.065				*1.067		5.900			*4.274			2.221	.....	
Off farms, mil. metric tons	*2.816	*2.876	2.527				*1.881		3.678			*2.876			2.539	.....	
Exports, including malt, thous. metric tons																	
Producer Price Index, No. 2 feed, Minneapolis, 1982=100	117.0	106.3	112.8	112.8	110.7	112.3	107.1	94.0	96.6	101.9	113.4	117.0	112.3	113.9	115.2	115.1	
Corn:																	
Production (crop estimate, grain only), mil. metric tons	*201.53	*2189.86															
Stocks (domestic), end of period, total, mil. metric tons	*176.29	*166.15	121.65				*76.00		38.64			*166.15			115.80	.....	
On farms, mil. metric tons	*123.80	*109.09	77.84				*44.58		17.56			109.09			66.30	.....	
Off farms, mil. metric tons	*52.49	*57.07	43.80				*31.42		21.08			*57.07			49.50	.....	
Exports, including meal and flour, mil. metric tons																	
Producer Price Index, No. 2, Chicago, 1982=100	100.9	97.0	95.3	101.9	102.0	98.4	95.3	90.2	100.4	97.4	97.1	97.5	95.5	100.8	102.2	108.9	
Oats:																	
Production (crop estimate), mil. metric tons	*2.5189	*2.3520															
Stocks (domestic), end of period, total, mil. metric tons	*2.278	*2.485					*2.485										
On farms, mil. metric tons	*1.203	*1.341					*1.341										
Off farms, mil. metric tons	*1.075	*1.144					*1.144										
Exports, including oatmeal, metric tons																	
Producer Price Index, No. 2, Minneapolis, 1982=100	76.1	70.4	63.4	68.7	69.7	71.6	68.2	65.5	74.0	71.1	74.5	76.3	78.5	79.2	93.6	91.1	
Rice:																	
Production (crop estimate), mil. metric tons	*2.7080	*2.7006															
Southern States mills:																	
Receipts, rough, from producers, mil. lb.	10,351	10,150	935	574	629	340	373	289	712	2,871	1,457	779	550	500	672	.....	
Shipments from mills, milled rice, mil. lb.	6,942	6,614	595	554	512	519	525	451	514	518	605	554	542	464	471	.....	
Stocks, domestic, rough and cleaned (cleaned basis), end of period, mil. lb.	2,106	1,904	1,870	1,660	1,618	1,334	1,041	729	719	2,027	2,277	2,089	1,904	1,788	1,177	.....	
Exports, thous. metric tons																	
Producer Price Index, medium grain, milled, 1982=100	102.4	110.2	105.8	110.3	113.4	116.2	117.1	114.5	108.9	109.5	109.6	*111.3	109.4	112.5	112.1	112.4	
Rye:																	
Production (crop estimate), mil. metric tons	*2.258	*2.248															
Producer Price Index, No. 2, Minneapolis, 1982=100	66.5		71.8		71.8	68.9			61.5	70.3	73.3	83.5		87.9		85.0	
Wheat:																	
Production (crop estimate), total, mil. metric tons	*274.47	*253.91															
Spring wheat, mil. metric tons	*19.20	*16.56															
Winter wheat, mil. metric tons	*255.27	*237.34															
Distribution, quarterly, mil. metric tons @	62.14	67.43	14.15				14.63		22.15			16.49				.....	
Stocks (domestic), end of period, total, mil. metric tons	*751.93	*739.29	38.00				*23.57		55.54			*39.29			24.10	.....	
On farms, mil. metric tons	*20.77	*15.37	14.50				*9.29		22.53			*15.37			7.50	.....	
Off farms, mil. metric tons	*731.16	*723.91	23.50				*14.28		33.00			*23.91			16.61	.....	
Exports, total, including flour, mil. metric tons																	
Wheat only, mil. bu.																	

See footnotes at end of tables.

	Annual		1991										1992			
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>11. FOOD AND KINDRED PRODUCTS; TOBACCO—Continued</b>																
<b>GRAIN AND GRAIN PRODUCTS—Continued</b>																
Wheat—Continued																
Producer Price Indexes:																
Hard red winter, No. 1, ord. protein (K.C.), 1982=100 .....	86.3	78.1	68.2	74.3	73.2	76.4	75.2	69.1	77.5	80.5	89.0	90.5	98.2	105.5	113.4	106.6
Hard red spring, No. 1, ord. protein (Minn.), 1982=100 .....	91.1	82.1	73.7	77.7	79.1	80.5	79.0	73.0	79.5	84.1	92.7	93.2	101.8	107.4	117.5	112.3
Wheat flour:																
Production:																
Flour, thous. sacks (100 lb.) .....	359,639	346,431	29,085	27,362	29,956	30,625	25,849	27,673	30,036	29,179	30,666	30,320	*27,285	27,468	.....	.....
Millfeed, thous. sh. tons .....	6,255	6,240	490	486	535	561	469	498	543	526	557	556	*502	507	.....	.....
Grindings of wheat, thous. bu. ....	797,589	780,458	64,502	60,428	66,522	68,686	58,336	62,378	67,737	66,389	69,259	68,553	*61,780	62,273	.....	.....
Stocks held by mills, end of period, thous. sacks (100 lb.) .....	8,051	*5,294	.....	8,264	.....	.....	8,429	.....	.....	6,234	.....	.....	*5,294	.....	.....	.....
Exports, thous. metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Producer Price Index, 6/83=100 .....	100.2	95.2	90.2	92.0	93.0	94.0	93.7	91.3	94.1	96.3	100.1	*97.5	107.4	114.4	120.6	111.3
<b>POULTRY AND EGGS</b>																
Poultry:																
Slaughter, mil. lb. ....	23,740	24,966	*1,859	1,895	2,120	2,191	2,006	2,210	2,233	2,040	2,363	1,958	1,982	*2,225	1,950	.....
Stocks, cold storage (frozen), end of period, total, mil. lb. ....	562	579	630	663	708	745	814	892	949	1,003	990	644	579	650	*681	697
Turkeys, mil. lb. ....	306	264	342	370	408	453	503	571	626	667	653	305	264	325	354	391
Price, in Georgia producing area, live broilers, \$ per lb. ....	.310	.295	.280	.295	.280	.300	.305	.315	.310	.310	.305	.280	.275	.280	.280	.285
Eggs:																
Production on farms, mil. cases \$ .....	188.6	191.6	14.7	16.4	15.7	16.0	15.6	16.1	16.2	15.7	16.4	16.1	16.7	16.4	15.4	16.8
Stocks, cold storage, end of period:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shell, thous. cases \$ .....	15	21	9	14	12	15	13	13	10	13	16	12	21	20	25	28
Frozen, mil. lb. ....	15	16	14	14	13	14	14	18	16	16	17	15	16	20	19	20
Price, wholesale, large (delivered; Chicago), \$ per doz .....	.760	.714	.720	.858	.676	.609	.634	.731	.713	.688	.679	.687	.739	.591	.....	.....
<b>LIVESTOCK</b>																
Cattle and calves:																
Slaughter (federally inspected):	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calves, thous. animals .....	1,742	1,398	120	119	105	102	90	108	115	127	125	131	128	*111	120	
Cattle, thous. animals .....	32,391	31,887	2,408	2,444	2,674	2,786	2,650	2,784	2,843	2,635	2,855	2,508	2,491	2,856	2,377	2,599
Prices, wholesale:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beef steers, \$ per 100 lb. ....	78.89	.....	79.86	81.41	81.24	78.67	74.53	72.25	67.34	69.18	70.93	.....	.....	.....	.....	.....
Steers, stocker and feeder, \$ per 100 lb. ....	92.15	.....	95.53	95.38	98.52	97.06	97.30	95.81	90.06	89.74	88.60	.....	.....	.....	.....	.....
Calves, vealers (So. St. Paul), dollars .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hogs:																
Slaughter (federally inspected), thous. animals .....	82,901	85,952	6,469	7,044	7,320	6,948	6,133	6,557	7,098	7,177	8,292	7,744	7,708	8,144	7,153	7,934
Prices:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wholesale, average, all weights (Sioux City), \$ per 100 lb. ....	54.72	.....	52.31	51.92	51.42	54.83	54.79	55.74	51.11	46.76	43.51	38.29	.....	.....	.....	.....
Hog-corn price ratio (bu. of corn equal in value to 100 lb. live hog) .....	22.5	20.9	22.5	21.5	21.0	22.7	23.7	23.8	22.0	19.8	19.0	16.5	16.6	15.2	*16.1	15.3
Sheep and lambs:																
Slaughter (federally inspected), thous. animals .....	5,469	5,504	449	546	436	443	388	431	438	456	501	449	471	469	422	481
Price, wholesale, lambs, avg. (San Angelo, TX), \$ per 100 lb. * .....	54.04	.....	45.81	49.67	54.00	54.45	52.88	55.42	54.31	53.25	51.20	.....	.....	.....	.....	.....
<b>MEATS</b>																
Total meats (excluding lard):																
Production, mil. lb. ....	38,606	39,584	2,954	3,081	3,285	3,291	3,060	3,253	3,425	3,308	3,708	3,324	3,284	3,622	3,088	3,376
Stocks, cold storage, end of period, mil. lb. ....	566	662	591	602	644	611	599	590	578	593	633	650	662	708	*691	724
Exports (meats and meat preparations), thous. metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Imports (meats and meat preparations), thous. metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beef and veal:																
Production, total, mil. lb. ....	22,950	23,223	1,720	1,745	1,895	1,970	1,894	2,018	2,099	1,964	2,142	1,839	1,809	2,067	1,732	1,876
Stocks, cold storage, end of period, mil. lb. ....	306	292	277	283	272	241	254	279	265	282	303	313	292	336	*306	321
Exports, thous. metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Imports, thous. metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Price, wholesale, beef, fresh steer carcasses, choice (600-700 lbs.)(Central U.S.), \$ per lb. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lamb and mutton:																
Production, total, mil. lb. ....	357	362	30	36	29	30	25	28	27	29	32	29	31	31	28	32
Stocks, cold storage, end of period, mil. lb. ....	8	6	10	8	7	8	8	7	6	5	6	7	6	7	7	8
Pork (excluding lard):																
Production, total, mil. lb. ....	15,299	16,000	1,204	1,300	1,361	1,291	1,140	1,207	1,299	1,316	1,534	1,456	1,444	1,524	1,329	1,467
Stocks, cold storage, end of period, mil. lb. ....	234	311	281	289	341	333	312	276	282	281	300	308	311	341	*353	373
Exports, thous. metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Imports, thous. metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Prices:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Producer Price Index, hams and picnics, except canned, 12/88=100 * .....	118.6	114.5	117.7	116.7	111.8	110.7	113.2	114.1	115.8	113.8	117.1	*115.8	114.1	104.6	104.7	105.6
Fresh loins, 8-14 lb. average, wholesale (Omaha), \$ per lb. * .....	1.1752	.....	1.0913	1.1033	1.0481	1.2048	1.2349	1.2173	1.1754	1.0585	1.0087	.....	.....	.....	.....	.....
<b>MISCELLANEOUS FOOD PRODUCTS</b>																
Cocoa (cacao) beans, imports (including shells), thous. metric tons .....																
Coffee:																
Imports, total, metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
From Brazil, metric tons .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
U.S. Import Price Index, 1985=100 .....	59.3	54.6	.....	57.7	.....	.....	54.9	.....	.....	53.2	.....	.....	52.4	.....	.....	.....
Fish:																
Stocks, cold storage, end of period, mil. lb. ....	343	384	290	267	275	308	312	343	349	378	383	394	384	372	344	.....

See footnotes at end of tables.

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	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	

11. FOOD AND KINDRED PRODUCTS; TOBACCO—Continued

MISCELLANEOUS FOOD PRODUCTS—Continued																
Sugar:																
Exports, raw and refined, metric tons																
Imports, raw and refined, thous. metric tons																
Producer Price Indexes:																
Raw (cane), 1982=100	119.2	113.7	113.1	113.3	113.1	112.8	113.5	112.9	114.1	114.1	114.2	*114.4	113.5	112.5	112.4	112.6
Refined, 1982=100	122.7	121.8	123.2	122.9	122.0	121.3	121.3	121.4	121.4	121.2	120.8	*120.6	120.8	120.8	121.5	121.2
Tea, imports, metric tons																
TOBACCO																
Leaf:																
Production (crop estimate), mil. lb.	1,626	1,660														
Stocks, dealers' and manufacturers', end of period, mil. lb.	3,674	3,744		3,458			3,075				3,428			3,744		
Exports, incl. scrap and stems, metric tons																
Imports, incl. scrap and stems, metric tons																
Manufactured products:																
Consumption (withdrawals):																
Cigarettes (small):																
Tax-exempt, millions	178,742	193,778	16,652	14,689	12,793	14,242	13,328	13,686	16,549	20,974	18,535	15,542	15,781			
Taxable, millions	523,094	516,338	39,407	47,061	40,106	49,266	45,849	44,037	42,337	43,430	40,464	57,123	32,744			
Cigars (large), taxable, millions	2,233	2,133	145	163	175	169	219	170	206	193	193	191	157			
Exports, cigarettes, millions																

12. LEATHER AND PRODUCTS

LEATHER																
Exports:																
Upper and lining leather, thous. sq. ft.																
Producer Price Index, leather, 1982=100	177.6	168.4	173.7	172.6	172.1	172.7	171.7	167.7	165.6	163.4	161.5	*162.4	162.8	161.6	162.1	163.6
LEATHER MANUFACTURES																
Footwear:																
Production, total, thous. pairs	201,648	168,633		647,602			38,399			*41,859			40,773			
Shoes, sandals, and play shoes, except athletic, thous. pairs				628,436			28,146			*29,126			28,537			
Slippers, thous. pairs	41,184	33,436		69,473			6,177			*9,113			8,673			
Athletic, thous. pairs				64,047			4,076			*3,620			3,563			
Other footwear, thous. pairs	3,405	2,482		6895			543			*525			519			
Exports, thous. pairs																
Producer Price Indexes:																
Men's leather upper, dress and casual, 1982=100	135.8	141.0	140.3	140.3	141.0	141.4	141.4	141.4	141.7	141.7	140.8	*141.4	142.6	142.3	142.3	145.5
Women's leather upper, 1982=100	120.9	124.0	122.3	123.8	124.0	124.1	124.2	124.6	124.7	124.7	124.7	124.5	124.5	125.0	124.5	126.2
Women's plastic upper, 1982=100	113.4	115.2	110.7	113.4	113.6	115.6	116.9	116.8	116.8	116.8	116.9	116.9	116.9	116.9	117.2	119.9

13. LUMBER AND PRODUCTS

LUMBER—ALL TYPES #																
<i>[Millions of board feet, unless otherwise indicated]</i>																
National Forest Products Association:																
Production, total	254,638	*43,976	3,410	3,661	3,958	3,837	3,762	3,664	3,808	3,682	3,933	3,473	*3,254	3,801		
Hardwoods	29,480	10,213	810	838	880	916	803	846	863	825	937	828	816	862		
Softwoods	245,159	*33,763	2,600	2,823	3,078	2,921	2,959	2,818	2,945	2,857	2,996	2,645	*2,438	2,939		
Shipments, total	246,083	*43,860	3,301	3,617	4,037	4,028	3,764	3,412	3,926	3,676	4,012	3,477	*3,370	3,875		
Hardwoods	210,102	9,844	711	791	855	876	761	775	890	813	866	808	843	894		
Softwoods	235,981	*34,016	2,590	2,826	3,182	3,152	3,003	2,637	3,036	2,863	3,046	2,669	*2,527	2,981		
Stocks (gross), mill, end of period, total																
Hardwoods																
Softwoods	4,734	4,616	4,949	4,946	4,849	4,600	4,699	4,684	4,793	4,786	4,741	4,710	4,616	4,603		
Exports, total sawmill products																
Imports, total sawmill products, thous. cubic meters																
SOFTWOODS																
<i>[Millions of board feet, unless otherwise indicated]</i>																
Douglas fir:																
Orders, new	8,749	8,489	643	829	865	797	680	579	709	695	705	649	725	778	564	
Orders, unfilled, end of period	452	504	434	556	607	586	532	475	443	445	465	447	504	590	479	
Production	8,751	8,320	656	722	803	737	700	673	707	678	710	653	610	688	675	
Shipments	8,798	8,437	646	707	814	818	734	636	741	693	685	667	668	692	675	
Stocks (gross), mill, end of period	772	655	825	840	829	748	714	751	717	702	727	713	655	651	651	
Exports, total sawmill products, thous. cubic meters																
Sawed timber, thous. cubic meters																
Boards, planks, scantlings, etc., thous. cubic meters																
Producer Price Index, Douglas fir, dressed, 1982=100	138.0	139.4	128.0	125.7	129.9	144.4	167.0	161.6	131.7	139.2	137.3	*138.0	143.0	146.3	161.8	166.1

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88	Annual		1991										1992			
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>13. LUMBER AND PRODUCTS—Continued</b>																
<b>SOFTWOODS—Continued</b>																
<i>(Millions of board feet, unless otherwise indicated)</i>																
<b>Southern pine:</b>																
Orders, new	12,827	12,287	979	1,147	1,059	1,275	968	909	1,113	1,070	1,169	1,003	740	1,387		
Orders, unfilled, end of period	697	571	677	756	696	821	690	641	666	678	648	671	571	758		
Production	12,911	12,367	924	1,024	1,102	1,071	1,123	1,021	1,049	1,039	1,169	992	903	1,217		
Shipments	12,763	12,415	961	1,065	1,124	1,146	1,101	950	1,091	1,060	1,204	972	849	1,253		
Stocks (gross), mill and concentration yards, end of period	2,197	2,134	2,219	2,177	2,164	2,080	2,090	1,973	2,122	2,102	2,071	2,084	2,134	2,125		
Exports, total sawmill products, cubic meters																
Producer Price Index, southern pine, dressed, 1982=100	111.0	111.0	100.3	103.6	110.0	110.8	122.5	124.5	112.6	110.1	109.3	111.0	114.0	117.3	127.7	133.7
<b>Western pine:</b>																
Orders, new	10,582	9,751	711	835	916	933	760	772	899	873	888	748	715	859	712	
Orders, unfilled, end of period	483	493	470	548	562	649	550	545	529	544	554	537	493	578	523	
Production	10,452	9,750	742	788	849	826	835	848	914	876	840	762	706	755	775	
Shipments	10,605	9,741	713	757	882	866	859	777	915	859	878	765	759	774	767	
Stocks (gross), mill, end of period	1,211	1,227	1,292	1,323	1,290	1,250	1,226	1,304	1,303	1,321	1,263	1,280	1,227	1,208	1,216	
Producer Price Index, other softwood, dressed, 1982=100	126.3	130.3	119.5	122.3	125.6	131.5	142.6	144.0	132.2	129.4	128.4	130.1	136.1	141.9	156.0	165.0
<b>HARDWOOD FLOORING</b>																
<i>(Millions of board feet)</i>																
<b>Oak:</b>																
Orders, unfilled, end of period	8.3	15.8	8.1	9.5	9.7	10.7	9.8	11.0	11.5	13.1	13.1	15.0	15.8	16.3	18.2	18.2
Shipments	205.3	199.9	15.1	18.7	17.1	16.4	17.9	13.8	17.3	18.0	18.6	16.6	16.1	19.1	16.3	19.4
Stocks (gross), mill, end of period	10.0	7.7	11.4	10.0	9.8	11.1	10.9	10.1	9.9	8.9	8.4	8.0	7.7	7.6	7.7	7.8

**14. METALS AND MANUFACTURES**

<b>IRON AND STEEL</b>																
<i>(Thousands of short tons)</i>																
<b>Exports:</b>																
Steel mill products	4,303	6,346	486	368	595	598	772	627	495	606	486	427	447	427	362	
Scrap	12,765	10,301	851	863	862	1,252	1,260	857	723	585	668	973	676	779	917	
Pig iron	16	17	1	1	1	(3)	2	2	1	2	1	4	3	3	4	
<b>Imports:</b>																
Steel mill products	17,162	15,741	1,291	1,231	1,571	1,367	1,080	1,395	1,032	1,152	1,230	1,312	1,325	1,576	1,132	
Scrap	1,424	1,183	92	87	83	102	89	114	101	105	123	98	108	83	84	
Pig iron	383	479	70	48	56	11	15	30	39	25	52	43	33	4	69	
<b>Iron and Steel Scrap</b>																
<i>(Thousands of metric tons, unless otherwise indicated)</i>																
Production	23,083		1,599	1,689	1,701	1,672	1,754	1,713	1,697	1,724	1,776					
Receipts, net	39,624		2,804	2,991	3,037	2,999	2,972	2,957	3,143	3,170	3,333					
Consumption	63,705		4,458	4,679	4,795	4,718	4,836	4,763	4,924	4,996	5,108					
Stocks, end of period	3,989		3,978	4,102	4,036	4,035	3,970	3,907	3,862	3,831	3,872					
Composite price, No. 1 heavy melting scrap: American Metal Market, \$ per metric ton	105.46	91.79	100.74	97.23	96.24	93.28	87.56	85.81	88.79	90.22	89.12	84.80	84.32	84.32	85.14	
<b>Ore</b>																
<i>(Thousands of metric tons)</i>																
<b>Iron ore (operations in all U.S. districts):</b>																
Mine production	56,408		4,274	4,135	4,754	4,846	5,070	4,218	5,210	4,844	4,582					
Shipments from mines	57,010		1,585	1,897	5,264	5,678	5,548	5,328	5,506	5,963	5,421					
Imports	18,054		397	503	834	1,485	1,369	1,395	1,180	1,367						
<b>U.S. and foreign ores and ore agglomerates:</b>																
Receipts at iron and steel plants	73,797	65,133	1,831	2,615	5,096	6,380	6,624	6,765	6,617	7,075	6,612	6,065	6,232	2,897		
Consumption at iron and steel plants	73,881	63,658	4,475	5,296	4,830	5,083	4,971	5,514	5,564	5,579	5,669	5,739	5,641	5,776		
Exports (domestic)	3,199		2	1	401	541	445	356	109	723						
Stocks, total, end of period	22,978		22,218	21,316	20,757	21,756	23,174	23,319	24,329	25,148	25,117					
At mines	3,366		9,182	11,421	10,910	10,078	9,604	8,510	8,305	7,096	6,256					
At furnace yards	15,910	17,611	11,174	8,493	8,749	10,067	11,732	13,044	14,098	15,768	16,711	17,030	17,611	14,843		
At U.S. docks	2,273	2,981	1,862	1,402	1,098	1,611	1,838	1,765	1,926	2,284	2,150	2,455	2,981	2,553		
<b>Manganese (manganese content), general imports</b>																
<b>Pig Iron and Iron Products</b>																
<i>(Thousands of short tons, unless otherwise indicated)</i>																
<b>Pig iron:</b>																
Production (including production of ferroalloys)	54,925	48,503	3,470	4,047	3,830	3,885	3,830	4,179	4,121	4,175	4,251	4,300	4,338	4,390	4,175	4,524
Consumption, thous. metric tons	50,019		3,354	3,867	3,573	3,615	3,609	3,954	3,961	3,960	3,989					
Stocks, end of period, thous. metric tons	130		125	129	134	153	158	151	159	157	166					
<b>Castings, gray and ductile iron:</b>																
Shipments, total	8,310															
For sale	6,257															
<b>Castings, malleable iron:</b>																
Shipments, total	276															
For sale	154															

See footnotes at end of tables.

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Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88

	Annual		1991												1992		
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
<b>14. METALS AND MANUFACTURES—Continued</b>																	
<b>Steel, Raw and Semifinished</b>																	
<i>[Thousands of short tons, unless otherwise specified]</i>																	
Steel (raw):																	
Production	98,015	87,310	6,705	7,283	7,089	7,076	7,017	7,338	7,386	7,457	7,711	7,461	7,347	7,754	7,432	8,043	
Rate of capability utilization, percent	84.0	74.2	73.1	71.7	72.5	70.0	71.7	74.8	75.2	78.5	78.0	78.0	74.4	80.5	82.4	83.5	
Steel castings:																	
Shipments, total	*1,136																
For sale, total	*1,034																
<b>Steel Mill Products</b>																	
<i>[Thousands of short tons]</i>																	
Steel products, net shipments:																	
Total (all grades)	84,981	78,868	6,039	5,966	6,450	6,762	6,623	6,420	6,954	6,746	7,499	6,427	6,118	6,867	6,471		
By product:																	
Semifinished products	6,313	6,872	550	527	550	595	647	584	642	550	642	522	498	511	543		
Structural shapes (heavy), steel piling	6,093	5,722	470	452	465	469	421	479	520	486	548	498	400	481	479		
Plates	7,945	6,938	551	548	590	618	583	565	568	543	599	539	538	622	548		
Rails and accessories	519	486	52	58	52	41	32	21	21	17	37	27	59	58	56		
Bars and tool steel, total	14,727	13,214	1,051	979	1,111	1,110	1,077	1,097	1,154	1,162	1,215	1,063	1,030	1,099	1,027		
Bars: Hot rolled (including light shapes)	7,878	6,902	586	540	603	572	549	560	593	594	626	551	534	600	543		
Bars: Reinforcing	5,305	4,934	349	329	392	425	420	434	444	450	457	400	395	361	356		
Bars: Cold finished	1,486	1,326	112	107	111	110	104	99	112	115	128	108	97	132	123		
Pipe and tubing	4,652	4,488	398	424	411	428	383	332	402	360	337	302	300	347	298		
Wire-drawn and/or rolled	918	864	67	75	82	77	73	75	79	69	80	64	52	75	77		
Tin mill products	4,032	4,040	292	298	342	365	336	350	359	336	345	310	371	277	267		
Sheets and strip (including electrical), total	39,784	36,244	2,608	2,605	2,846	3,059	3,071	2,918	3,208	3,222	3,696	3,102	2,870	3,398	3,177		
Sheets: Hot rolled	13,388	12,987	917	986	974	1,113	1,145	1,074	1,162	1,141	1,253	1,090	1,008	1,154	1,096		
Sheets: Cold rolled	13,199	11,356	839	791	922	936	924	906	982	1,003	1,175	970	959	1,111	1,033		
By market (quarterly):																	
Service centers and distributors	18,250	17,485		4,091			4,218			4,484			4,685	<sup>2</sup> 1,730	<sup>2</sup> 1,606		
Construction, incl. maintenance	7,391	6,814		1,629			1,711			1,790			1,684	<sup>2</sup> 541	<sup>2</sup> 514		
Contractors' products	2,793	2,261		539			547			605			570	<sup>2</sup> 217	<sup>2</sup> 186		
Automotive	10,444	9,445		2,047			2,379			2,416			2,604	<sup>2</sup> 877	<sup>2</sup> 841		
Rail transportation	901	837		261			214			155			207	<sup>2</sup> 85	<sup>2</sup> 80		
Machinery, industrial equipment, tools	2,104	1,648		481			425			379			355	<sup>2</sup> 150	<sup>2</sup> 122		
Containers, packaging, ship. materials	4,474	4,278		1,009			1,130			1,087			1,051	<sup>2</sup> 294	<sup>2</sup> 293		
Other	38,378	36,100		8,701			9,235			9,280			8,888	<sup>2</sup> 2,973	<sup>2</sup> 2,830		
<i>[Millions of short tons]</i>																	
Producing steel mills, inventory, end of period:																	
Total	14.0	13.1	13.7	13.8	13.8	13.5	13.4	13.6	13.1	13.1	12.4	12.7	13.1	13.1			
Steel in process	8.1	7.6	7.9	8.2	8.4	8.2	8.2	8.4	7.8	7.8	7.3	7.3	7.6	7.7			
Finished steel	5.9	5.5	5.8	5.6	5.4	5.3	5.2	5.2	5.3	5.3	5.1	5.4	5.5	5.4			
Steel service centers (warehouses), inventory, end of period	6.7	5.9	6.9	6.6	6.4	6.2	6.1	5.9	5.7	5.3	5.6	5.6	5.9	5.9			
<b>NONFERROUS METALS AND PRODUCTS</b>																	
<i>[Thousands of metric tons, unless otherwise specified]</i>																	
Aluminum:																	
Production, primary (dom. and foreign ores)	4,048	4,121	317	352	340	353	343	354	350	336	347	337	343	344	320		
Recovery from scrap	2,393	*2,210	155	180	196	186	191	199	203	190	195	174	167	204	199		
Imports:																	
Metal and alloys, crude	959.6	1,024.7	79.4	84.3	88.2	85.1	75.9	97.3	89.0	86.6	90.4	81.0	88.0	100.7			
Plates, sheets, bars, etc.	340.3	256.5	23.3	23.2	20.2	20.7	20.9	20.8	18.8	21.8	21.9	22.4	18.5	20.9			
Exports:																	
Metal and alloys, crude	679.8	792.8	54.8	46.7	82.8	56.4	71.3	69.0	80.1	54.6	68.0	80.7	67.3	50.8			
Plates, sheets, bars, etc.	437.7	508.7	35.5	38.1	44.8	48.4	48.1	44.9	55.4	42.9	50.0	34.5	31.0	48.5			
Price, U.S. market, 99.7% purity, monthly average, \$ per lb.	7404	5946	.6613	.6831	.6388	.5932	.5775	.5896	.5766	.5575	.5246	.5241	.5034	.5367	.5820	.5928	
Aluminum products:																	
Shipments:																	
Ingot and mill prod. (net ship.), mil. lb.	14,757	*15,079	1,086	1,221	1,211	1,295	1,271	1,376	1,357	1,263	*1,332	1,246	*1,241	1,171			
Mill products, total, mil. lb.	11,960	*11,660	877	940	996	1,030	995	1,029	1,028	970	*1,031	945	*879	910			
Sheet and plate, mil. lb.	7,514	*7,518	561	618	635	669	639	673	661	619	668	620	*569	552			
Castings, mil. lb.	2,134																
Inventories, total (ingot, mill products, and scrap), end of period, mil. lb.	4,013	*4,467	4,169	4,256	4,212	4,135	4,044	3,990	3,935	3,919	3,899	3,847	*4,467	3,901			
Copper:																	
Production:																	
Mine, recoverable copper	1,587.2	1,635.4	126.7	138.5	129.5	147.7	136.9	*139.2	141.3	131.5	*141.3	131.7	134.2	133.2			
Refined from primary materials	1,576.6	1,582.9	120.4	128.1	127.0	139.6	120.7	130.8	*134.5	134.9	*141.9	138.6	135.8	140.6			
Electrolytically refined @	1,183.2	1,143.8	90.7	94.0	92.5	99.8	84.4	91.9	*95.6	96.5	100.4	100.4	96.2	102.9			
Electrowon	393.5	439.0	29.7	34.1	34.5	39.8	36.4	38.8	38.9	*38.5	*41.5	38.1	39.6	37.7			
Refined from scrap	440.8	417.7	32.2	40.5	39.6	38.2	35.7	32.6	*33.0	28.5	*37.3	32.1	32.6	34.1			
Imports, unmanufactured:																	
Refined, unrefined, scrap (copper cont.)	441.3	442.0	39.5	28.0	44.8	30.4	31.6	35.5	31.3	32.6	59.2	38.7	32.0				
Refined	261.7	288.6	27.1	21.7	30.9	17.5	23.6	23.7	17.4	22.9	36.3	26.8	18.0				
Exports:																	
Refined and scrap	647.2	687.2	54.9	77.5	43.4	76.3	52.1	60.7	49.3	56.2	41.3	42.9	52.1				
Refined	211.2	270.7	21.4	37.4	16.8	31.5	23.9	20.6	20.9	17.9	13.4	15.4	17.9				
Consumption, refined (reported by mills, etc.)	2,150	2,058	146	179	172	171	171	144	191	184	202	168	155	184			
Stocks, refined, end of period	101	131	109	107	102	107	110	131	111	100	109	119	131	126			
Price, avg. U.S. producer cathode, delivered, \$ per lb. \$	1,2316	1,0933	1,1501	1,1395	1,1313	1,0557	1,0388	1,0434	1,0597	1,1111	1,1134	1,1003	1,0297	1,0072			

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	Annual		1991												1992		
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
14. METALS AND MANUFACTURES—Continued																	
<b>NONFERROUS METALS AND PRODUCTS—Continued</b>																	
<i>(Thousands of metric tons, unless otherwise specified)</i>																	
Copper-base mill and foundry products, shipments (quarterly total):																	
Brass mill products, mil. lb.																	
Copper wire mill products (copper content), mil. lb.																	
Brass and bronze foundry products, mil. lb.																	
Lead:																	
Production:																	
Mine, recoverable lead	1474.0	1462.5	41.1	41.6	37.8	43.5	36.4	47.5	41.1	36.1	38.9	28.0	26.1	36.0			
Recovered from scrap (lead content)	1922.9	1855.4	74.4	71.0	72.0	72.0	70.7	69.8	70.0	72.3	74.6	70.7	71.4	71.6			
Imports, ore (lead content)	98.4																
Consumption, total	1275.2	1200.3	105.3	101.2	101.3	98.4	92.4	90.8	101.9	102.7	106.9	102.4	92.7	102.7			
Stocks, end of period:																	
Producers', ore, base bullion, and in process (lead content), ABMS	53.9	68.8	63.7	61.0	59.4	65.9	73.6	74.3	75.7	73.1	74.5	70.9	68.8	71.5	71.4	67.1	
Refiners' (primary), refined and antimonial (lead content)	25.5	9.1	24.3	27.0	21.3	17.5	16.2	15.4	9.1	6.6	4.1	4.5	9.1	9.8			
Consumers' (lead content) ⌄	86.5	45.8	53.5	52.9	49.4	48.9	43.1	38.0	35.4	33.3	30.2	32.0	45.8	50.7			
Scrap (lead-base, purchased), all smelters (gross weight)	20.1	12.2	13.5	11.3	12.2	12.8	11.2	12.7	12.9	13.9	14.9	13.5	12.2	12.2			
Price, common grade, delivered, \$ per lb. @ @	.4602	.3348	.3323	.3334	.3330	.3260	.3203	.3279	.3286	.3339	.3462	.3448	.3465	.3449	.3429	.3430	
Tin:																	
Imports (for consumption):																	
Ore (tin content), metric tons	33810	29102	2934	1601	1946	2554	2006	2830	3173	1960	3052	2151	2493				
Metal unwrought, unalloyed, metric tons	17275	5947	489	585	554	478	558	373	522	530	531	472	356	513			
Recovery from scrap, total (tin content), metric tons	186								15	15	15	16	0				
As metal, metric tons	44363	49000	3900	4100	4300	4100	4200	3900	4100	4000	4300	4100	4000	3900			
Consumption, total, metric tons	36900	36900	2900	3100	3200	3100	3200	3000	3100	3000	3300	3100	2900	2900			
Primary, metric tons	658	970	60	11	111	129	145	129	71	61	105	63	59				
Exports (metal), metric tons	4829	3024	6677	6688	6177	5993	5991	6348	6739	6544	6616	6347	3024	3019			
Stocks, pig (industrial), end of period, metric tons	38629	36285	36488	36075	36204	36834	36895	36707	36506	36076	35862	35519	35427	36786	37574		
Price, Straits quality (delivered), \$ per lb.																	
Zinc:																	
Mine prod., recoverable zinc	515.4	518.6	41.9	43.8	45.5	49.4	36.9	43.0	47.4	49.5	39.0	33.4	38.0	41.5			
Imports:																	
Ores (zinc content)	46.7	45.4	1.0	1.1	1.4	8.1	10.4	4.5	2.1	1.5	1.0	1.0	5.3				
Metal (slab, blocks)	631.7	549.1	41.9	37.0	39.8	35.7	36.0	39.9	46.6	51.4	55.3	61.6	53.9				
Consumption (recoverable zinc content):																	
Ores	2.4	2.4	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2			
Scrap, all types	254.9	252.8	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1			
Slab zinc:																	
Production, total ±	207.8	194.4	15.0	16.9	15.8	17.7	15.6	16.4	13.6	15.8	17.5	16.2	16.6	17.6	16.8	17.8	
Consumption, fabricators	991.0	902.0	69.0	65.9	67.8	68.3	68.8	73.6	78.0	79.3	85.9	84.2	82.0	83.0			
Exports	5.8	5.5	.4	.4	.4	.7	.8	.3	.4	.3	.6	.4	.4				
Stocks, end of period:																	
Producers', at smelter (ABMS)	4.6	4.6	5.3	8.5	3.9	4.7	4.2	3.6	2.9	3.7	3.7	4.5	4.6	5.8	5.8	6.2	
Consumers'	61.0	38.9	41.2	40.6	43.7	43.0	39.3	38.1	35.4	35.6	34.5	35.8	38.9	38.1			
Price, high grade, \$ per lb.	.7459	.5277	.5593	.5611	.5763	.4984	.4840	.4867	.4836	.4978	.4856	.5464	.5729	.5450	.5289		
<b>MACHINERY AND EQUIPMENT</b>																	
<i>(Millions of dollars, unless otherwise specified)</i>																	
Industrial heating equipment, new orders (domestic), qtrly #	433.0	404.0		129.6			82.4			83.7			108.4				
Electric processing heating equipment	89.6	87.9		30.2			14.7			21.3			21.7				
Fuel-fired processing heating equipment	140.3	133.3		47.1			28.4			13.8			44.0				
Materials handling equipment, dollar value bookings index, 1982=100 †	131.9	135.1	121.3	135.7	122.5	140.2	114.8	132.7	141.5	162.2	158.9	132.8	132.9				
Industrial supplies, machinery, and equipment: New orders index, seas. adj., 1987=100 @	121.1	107.5	107.0	107.4	107.0	104.1	108.3	109.8	107.6	109.7	107.6	110.0	106.3	102.3	110.8		
Industrial suppliers distribution: Sales index, not seas. adj., 1990=1.00	1.0000	.9552	.9114	.9611	.9753	.9976	.9676	.9548	.9670	.9369	1.0616	.8974	.8617	.9854	.9298	1.0210	
Inflation index, not seas. adj. (tools, material handling equipment, valves, fittings, abrasives, fasteners, metal products, etc.), 1977=100	189.4	195.9	193.3	194.4	195.2	195.6	195.7	196.0	196.5	196.3	196.3	196.8	195.9	197.6	198.1	198.5	
Fluid power products shipments indexes: \$																	
Hydraulic products, 1990=100	100.0	87.9	89.9	94.8	95.6	89.0	87.1	81.0	84.1	87.7	90.3	81.8	78.3	87.7	86.9	97.1	
Pneumatic products, 1990=100	100.0	99.3	98.1	106.7	104.9	104.6	97.1	91.5	97.9	97.1	108.3	95.7	92.5	97.8	96.9	107.3	
Machine tools:																	
Metal cutting type tools:																	
Orders, new (net), total	2070.30	1893.95	186.25	153.55	136.45	109.60	130.95	145.60	126.40	174.05	155.85	161.55	283.65	158.55	159.60	176.95	
Domestic	1771.95	1549.20	113.80	127.20	109.95	96.45	87.70	123.25	117.30	150.25	133.90	140.85	241.35	153.40	140.65	157.85	
Shipments, total	2329.60	1871.80	133.15	173.85	145.35	173.85	142.60	149.40	137.35	166.80	177.30	144.35	217.00	106.25	140.25	209.70	
Domestic	2004.45	1595.35	109.45	148.75	126.55	157.25	104.30	137.35	121.85	140.90	155.35	118.70	181.65	97.50	121.80	180.30	
Order backlog, end of period	1,164.0	1,186.2	1,236.4	1,216.0	1,207.2	1,142.9	1,131.2	1,127.4	1,116.5	1,123.8	1,102.3	1,119.5	1,186.2	1,238.4	1,257.8	1,225.0	
Metal forming type tools:																	
Orders, new (net), total	894.40	748.15	58.90	51.90	57.25	43.40	41.95	47.65	109.35	70.75	68.80	69.15	59.25	58.85	56.65	59.40	
Domestic	760.55	546.35	51.30	31.45	37.30	35.05	25.05	26.90	87.05	56.30	51.35	41.35	43.45	50.85	43.35	47.65	
Shipments, total	970.30	801.65	69.00	103.00	61.70	58.00	69.55	63.40	46.00	49.90	58.45	65.90	65.00	63.55	60.75	71.05	
Domestic	851.10	624.60	58.80	86.05	47.05	44.60	47.15	35.00	30.75	36.05	48.35	76.90	52.90	38.05	46.60	52.30	
Order backlog, end of period	304.4	250.9	292.4	241.2	236.8	222.2	194.6	178.8	242.2	263.0	273.4	256.6	250.9	256.2	252.1	240.4	

See footnotes at end of tables.







SURVEY OF CURRENT BUSINESS

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Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88	Annual		1991												1992		
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	

**16. PULP, PAPER, AND PAPER PRODUCTS—Continued**

<b>PAPER AND PAPER PRODUCTS</b>																
<i>[Thousands of short tons, unless otherwise specified]</i>																
<b>Paper and board:</b>																
Production (API):																
Total	78,782	79,438	6,135	6,569	6,338	6,486	6,462	6,752	6,973	6,628	7,049	6,530	6,619	6,816	6,536	
Paper	39,359	39,115	3,009	3,243	3,172	3,206	3,176	3,337	3,443	3,267	3,528	3,173	3,145	3,306	3,183	
Paperboard	39,423	40,323	3,126	3,326	3,167	3,280	3,285	3,415	3,531	3,361	3,522	3,357	3,474	3,510	3,353	
Producer Price Indexes:																
Paperboard, 1982=100	135.9	130.2	132.0	129.6	128.4	127.0	127.2	127.1	127.8	131.8	132.7	132.8	132.9	133.3	133.7	134.4
Building paper and board, 1982=100	112.2	111.8	109.8	111.3	112.7	113.5	113.4	114.6	112.8	112.2	110.9	110.6	110.9	112.2	116.7	119.0
<b>Selected types of paper (API):</b>																
<b>Groundwood paper:</b>																
Orders, new	1,868	1,778	126	154	130	146	178	148	184	156	138	105	129	151	94	
Orders, unfilled, end of period	221	225	229	239	238	249	274	280	308	295	283	245	225	255	238	
Shipments	1,806	1,775	133	148	138	140	145	159	152	155	163	143	140	128	116	
<b>Coated papers:</b>																
Orders, new	7,430	7,294	517	600	582	601	623	646	685	669	660	527	550	665	621	
Orders, unfilled, end of period	589	576	522	528	565	604	598	638	647	667	666	600	576	641	678	
Shipments	7,536	7,310	564	588	558	572	596	640	660	644	685	588	566	597	597	
<b>Uncoated free sheet:</b>																
Orders, new	11,479	11,544	784	856	924	1,002	1,013	1,131	1,079	982	1,098	946	813	999	1,085	
Shipments	11,503	11,552	852	901	915	957	922	1,044	1,057	974	1,088	923	929	969	954	
<b>Unbleached kraft papers:</b>																
Shipments	2,377	2,276	186	203	207	185	195	186	188	176	190	176	182	210	193	
<b>Tissue paper, production</b>																
	5,802	5,669	459	505	477	472	474	440	484	465	486	458	464	480	466	
<i>[Thousands of metric tons, unless otherwise specified]</i>																
<b>Newsprint:</b>																
<b>Canada: †</b>																
Production	9,068	8,977	763	790	743	733	739	761	731	719	706	699	615	716	707	
Shipments from mills	9,074	8,756	686	755	736	710	719	697	731	698	735	686	714	662	680	
Inventory, end of period	315	536	462	498	506	529	550	614	614	635	606	619	536	589	636	
<b>United States:</b>																
Production	5,997	6,206	473	523	519	521	508	532	526	496	530	527	528	551	509	
Shipments from mills	6,007	6,154	465	511	502	520	497	515	512	495	513	545	552	546	517	
Inventory, end of period	46	98	50	61	79	80	91	107	121	122	139	122	98	103	95	
Estimated consumption, all users †	12,127	11,381	855	956	932	958	923	886	952	981	1,051	1,012	952	894	878	
Publishers' stocks, end of period #	802	816	919	923	907	905	890	914	904	864	804	764	816	902	819	
<b>Imports</b>																
Producer Price Index, standard newsprint, 1982=100	119.5	120.8	127.2	127.1	121.7	121.4	120.1	119.5	118.8	118.1	117.3	116.4	115.8	115.2	114.7	112.5
<b>Paper products:</b>																
Shipping containers, corrugated and solid fiber shipments, mil. sq. ft. surf. area	318,102	320,180	24,122	24,495	28,033	26,967	25,739	27,968	28,297	27,169	31,334	25,150	23,453	26,934	25,532	27,730

**17. RUBBER AND RUBBER PRODUCTS**

<b>RUBBER</b>																
<i>[Thousands of metric tons, unless otherwise specified]</i>																
<b>Natural rubber: §</b>																
Consumption	839.03															
Stocks, end of period	94.34															
Imports, incl. latex and guayule	2860.34															
U.S. Import Price Index, 1985=100	104.1	101.2		103.5				102.1			99.8			99.5		
<b>Synthetic rubber: ‡</b>																
Production	2,114.53															
Consumption	1,820.78															
Stocks, end of period	403.66															
Exports (Bureau of Census)																
<b>TIRES AND TUBES</b>																
<i>[Thousands]</i>																
<b>Pneumatic casings:</b>																
Production	210,662	202,390	17,375	16,208	17,017	17,360	16,419	14,354	17,784	17,045	19,588	16,354	15,173	18,772		
Shipments, total	260,424	257,606	17,632	19,798	21,237	22,215	23,884	21,628	24,036	25,930	25,719	19,446	17,724	19,590		
Original equipment	54,191	48,582	3,393	3,713	4,351	4,691	4,279	3,178	4,254	4,519	5,296	4,106	3,064	3,868		
Replacement equipment	188,838	190,029	12,689	14,595	15,377	15,959	18,008	16,826	18,041	19,607	18,598	13,982	13,208	13,925		
Exports	17,393	18,998	1,550	1,491	1,511	1,566	1,596	1,523	1,743	1,803	1,826	1,359	1,452	1,777		
Stocks, end of period	42,649	35,533	50,051	51,096	51,151	50,725	47,204	44,069	41,610	36,773	34,567	34,772	35,533	38,400		
Exports (Bureau of Census)																
<b>Inner tubes:</b>																
Exports (Bureau of Census)																

See footnotes at end of tables.

	Annual		1991												1992		
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
18. STONE, CLAY, AND GLASS PRODUCTS																	
<b>PORTLAND CEMENT</b>																	
Shipments, finished cement, thous. bbl. ....	467,211	415,203	23,949	27,239	35,379	39,876	40,037	42,577	43,363	40,294	44,163	31,667	26,041	24,482			
<b>CLAY CONSTRUCTION PRODUCTS</b>																	
Shipments:																	
Brick, unglazed (common and face), mil. standard brick	6,872.7	5,405.2		1,118.7			1,450.5			1,506.9			1,329.1				
Structural tile, except facing, thous. sh. tons	(2)	(2)		42.8			49.5			50.5			41.7				
Sewer pipe and fittings, vitrified, thous. sh. tons	242.0	184.5											109.8				
Floor and wall tile and accessories, glazed and unglazed, mil. sq. ft.	509.2	427.9		105.6			108.7			130.8							
Producer Price Index, brick and structural clay tile, 12/84=100	115.1	116.2	115.5	115.7	116.2	116.3	116.3	116.3	116.4	116.4	116.4	116.5	116.5	116.6	116.6	117.0	
<b>GLASS AND GLASS PRODUCTS</b>																	
<i>[Thousand gross, unless otherwise specified]</i>																	
Flat glass, mfrs.' shipments, thous. \$	1,471,447	1,372,196		306,391			338,261			382,405			345,139				
Glass containers:																	
Production	289,704	284,286	22,420	24,351	24,586	25,569	24,724	25,486	25,888	22,540	25,698	22,885	17,674	22,526			
Shipments, total	284,986	280,476	19,828	22,611	24,736	26,436	25,701	25,820	26,614	23,465	24,830	21,053	18,408	21,075			
Narrow-neck containers:																	
Food	23,008	23,404	1,707	2,082	2,082	2,379	2,268	2,297	2,497	2,199	1,885	1,371	1,208	1,692			
Beverage	61,999	59,591	3,933	4,802	5,527	6,073	5,876	5,849	5,661	4,913	4,913	3,971	3,854	4,020			
Beer	88,551	84,137	6,218	6,930	6,950	7,633	7,697	8,133	7,731	6,811	7,128	6,400	5,657	6,402			
Liquor and wine	26,297	24,246	1,670	2,078	2,373	2,393	2,241	2,130	2,143	1,908	2,061	1,828	1,686	1,962			
Wide-mouth containers:																	
Food and dairy products	70,767	74,129	5,532	5,833	6,671	6,616	6,005	6,182	6,934	6,192	7,252	6,051	4,878	5,703			
Narrow-neck and wide-mouth containers:																	
Medicinal and toilet	13,190	13,302	698	782	1,013	1,217	1,458	1,038	1,422	1,262	1,409	1,302	1,025	1,147			
Chemical, household, and industrial	1,174	1,667	70	104	120	125	156	191	226	180	182	130	100	149			
Stocks, end of period	40,449	41,416	44,646	46,088	45,733	44,233	43,293	42,745	41,755	41,028	41,703	43,019	41,416	43,384			
<b>GYPSUM AND PRODUCTS</b>																	
<i>[Thousands of short tons]</i>																	
Production:																	
Crude gypsum (exc. byproduct)	15,658	14,760	1,170	1,170	1,185	1,237	1,192	1,250	1,308	1,233	1,373	1,199	1,204	1,312			
Calcined	16,272	14,688	1,137	1,184	1,324	1,168	1,202	1,339	1,176	1,250	1,401	1,168	1,073	1,294			
Imports, crude gypsum	8,726	7,634	581	345	540	626	706	614	732	762	764	588	717				
Sales of gypsum products:																	
Uncalcined	5,310	5,272	377	296	383	478	509	480	513	427	467	482	496	425			
Calcined:																	
Industrial plasters	(4)	(4)															
Building plasters, total (incl. Keene's cement)	(2)	(2)															
<i>[Millions of square feet]</i>																	
Board products, total	20,445	18,317	1,366	1,463	1,521	1,508	1,487	1,725	1,665	1,588	1,748	1,435	1,363	1,625			
Lath	15	12	1	1	1	1	1	1	1	1	1	1	1	1			
Veneer base	442	396	28	30	33	32	33	41	35	35	39	31	31	38			
Gypsum sheathing	268	227	17	20	19	18	19	20	19	20	23	18	16	36			
Regular gypsum board	12,268	11,286	827	896	910	907	903	1,070	1,092	997	1,097	916	865	1,034			
Type X gypsum board	5,978	5,033	395	405	434	426	418	468	446	416	460	368	361	403			
Prefabricated wallboard	98	85	6	6	7	6	7	8	8	8	9	7	6	7			
1/8 mobile home board	713	670	46	55	64	66	57	61	65	60	62	48	40	54			
Water/moisture resistant board	662	608	47	49	53	51	49	56	55	51	58	46	43	53			
<b>19. TEXTILE PRODUCTS</b>																	
<b>FABRIC</b>																	
<i>[Millions of linear yards]</i>																	
Woven fabric, finishing plants:																	
Production (finished fabric)																	
Cotton																	
Manmade fiber and silk fabrics																	
Inventories held at end of period																	
Cotton																	
Manmade fiber and silk fabrics																	
Backlog of finishing orders																	
Cotton																	
Manmade fiber and silk fabrics																	
<b>COTTON AND MANUFACTURES</b>																	
<i>[Thousands of running bales, unless otherwise specified]</i>																	
Cotton (excluding linters):																	
Production:																	
Ginnings	15,064	17,089						137	699	2,478	8,474	13,275	15,891	16,766			
Crop estimate, thous. net weight bales \$	15,505	17,542											17,542				
Consumption	8,383	8,367		2,068			2,212			2,215			2,199	2,870	729		
Stocks in the United States, total, end of period #	11,978	13,579		6,929			3,174			16,591			13,579	11,748	10,058		
Domestic cotton, total	11,978	13,579		6,929			3,174			16,591			13,579	11,748	10,058		
On farms and in transit	1,522	1,924		585			70			13,798			1,924	864	275		
Public storage and compresses	9,875	11,075		5,681			2,452			2,223			11,075	10,290	9,201		
Consuming establishments	581	580		663			722			570			580	594	582		

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88	Annual		1991										1992			
	1990	1991	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
	<b>19. TEXTILE PRODUCTS—Continued</b>															
<b>COTTON AND MANUFACTURES—Continued</b>																
Cotton (excluding linters)—Continued																
Exports, <i>thous. running bales</i> .....																
Imports, <i>thous. net weight bales</i> .....																
Price(farm), American upland, <i>cents per lb. 0</i> .....	<sup>2</sup> 67.1	<sup>2</sup> 62.9	67.9	68.9	69.5	70.1	67.5	66.3	66.9	64.8	62.7	60.9	55.6	51.6	<sup>1</sup> 49.6	49.0
Price, Strict Low Middling, Grade 41, staple 34 (1½"), average 10 markets, <i>cents per lb.</i> .....	<sup>2</sup> 74.8	<sup>2</sup> 56.9	77.7	77.9	79.9	83.9	79.0	71.3	66.4	62.4	58.3	54.7	53.9	51.5	50.8	52.0
Spindle activity (cotton system spindles):																
Active spindles, last working day, total, <i>millions</i> .....	9.7	9.2		<sup>7</sup> 9.8			<sup>7</sup> 9.6			<sup>7</sup> 9.4			<sup>7</sup> 9.2	8.8	8.8	
Consuming 100 percent cotton, <i>millions</i> .....	3.8	3.7		<sup>7</sup> 3.8			<sup>7</sup> 3.9			<sup>7</sup> 4.0			<sup>7</sup> 3.7	3.8	3.8	
Spindle hours operated, all fibers, total, <i>billions</i> .....	65.8	60.4		<sup>7</sup> 14.9			<sup>7</sup> 15.7			<sup>7</sup> 15.0			<sup>7</sup> 14.8	<sup>4</sup> 5.8	4.8	
Average per working day, <i>billions</i> .....	.254	.231		<sup>7</sup> 2.33			<sup>7</sup> 2.41			<sup>7</sup> 2.27			<sup>7</sup> 2.24	<sup>4</sup> 2.33	2.41	
Consuming 100 percent cotton, <i>billions</i> .....	25.8	24.3		<sup>7</sup> 5.9			<sup>7</sup> 6.3			<sup>7</sup> 6.2			<sup>7</sup> 5.9	<sup>4</sup> 2.3	2.0	
Cotton cloth:																
Cotton broadwoven goods over 12" in width:																
Production (qtrly.), <i>mil. sq. yd.</i> .....	4,464	4,389		1,073			1,140			<sup>1</sup> 1,082			1,094			
Orders, unfilled, end of period, compared with average weekly production, <i>no. weeks' prod.</i> .....																
Inventories, end of period, compared with avg. weekly production, <i>no. weeks' prod.</i> .....																
Ratio of stocks to unfilled orders (at cotton mills), end of period .....																
Exports, raw cotton equivalent, <i>thous. net weight bales \$</i> .....																
Imports, raw cotton equivalent, <i>thous. net weight bales \$</i> .....																
Producer Price Index, gray cotton broadwovens, 1982=100 .....	113.8	114.8	113.6	114.1	114.5	114.9	115.2	115.3	115.3	115.3	115.4	<sup>1</sup> 115.8	115.6	116.5	116.8	116.8
<b>MANMADE FIBERS AND MANUFACTURES</b>																
<i>[Millions of pounds]</i>																
Fiber production, qtrly:																
Cellulosic filament yarn .....	206.2	213.2		48.0			55.4			54.5			55.3			
Rayon staple, including tow .....	299.1	273.3		67.4			68.7			69.7			67.5			
Noncellulosic, except textile glass:																
Yarn and monofilaments .....	4,193.7	4,282.2		994.0			1,066.3			1,100.2			1,121.8			
Staple, incl. tow .....	3,990.8	3,984.1		911.0			962.7			1,042.7			1,067.7			
Textile glass fiber .....																
Fiber stocks, producers', end of period:																
Cellulosic filament yarn .....	9.4	10.4		10.0			9.4			9.8			10.4			
Rayon staple, including tow .....	17.3	27.0		26.0			24.9			23.7			27.0			
Noncellulosic fiber, except textile glass:																
Yarn and monofilaments .....	304.2	351.0		344.2			321.1			309.8			351.0			
Staple, incl. tow .....	347.0	333.7		371.1			322.2			321.2			333.7			
Manmade fiber and silk broadwoven fabrics:																
Producer Price Index, gray synthetic broadwovens, 1982=100 .....	115.7	115.6	114.7	114.4	114.1	114.3	113.9	114.8	116.4	116.5	116.5	<sup>1</sup> 116.8	118.9	117.2	120.3	120.9
<b>WOOL AND MANUFACTURES</b>																
<i>[Millions of pounds, unless otherwise specified]</i>																
Wool consumption, mill (clean basis):																
Apparel class .....	120.6	143.5		33.3			38.7			35.9			35.6			
Carpet class .....	12.1	14.4		3.1			3.1			4.6			3.6			
Wool imports, clean yield † .....	71.7	86.5	6.9	5.4	5.5	7.3	8.1	9.2	7.0	4.4	7.8	5.1	9.0	10.2	8.1	
Unimproved and other grades not finer than 46's ...	21.4	18.2	1.2	1.5	1.3	1.7	1.5	1.5	1.3	1.4	2.5	1.2	1.2	2.4	1.7	
48's and finer * .....	50.3	68.2	5.7	3.9	4.3	5.5	6.6	7.7	5.7	3.0	5.4	3.9	7.8	7.8	6.4	
Wool prices, raw, shorn, clean basis:																
Domestic—Graded territory, 64's, staple 2¾" and up, delivered to U.S. mills, \$ per lb. ....	2.56	1.58	2.10	1.63	1.67	2.03	2.30	2.30	1.67	1.56	1.48	1.48	1.55	1.63	1.77	1.95
Australian, 64's, Type 63, duty-paid, price at Australian Wool Corp., Charleston, SC, \$ per lb. ....	3.70	2.42	3.35	2.09	2.21	2.71	2.86		2.48	2.29	2.15	2.74	2.70	2.59	2.80	2.77
Wool broadwoven goods, exc. felts:																
Production (qtrly.), <i>mil. sq. yd.</i> .....	140.7	169.6		38.1			48.3			<sup>1</sup> 41.7			41.5			
<b>FLOOR COVERINGS</b>																
Carpet, rugs, carpeting (woven, tufted, other), shipments, quarterly, <i>mil. sq. yd.</i> .....	1,348.5	1,277.8		294.2			326.5			347.2			309.9			
<b>APPAREL</b>																
<i>[Thousands, unless otherwise indicated]</i>																
Women's, misses', juniors' apparel cuttings, qtrly:																
Coats .....	18,120	18,618		4,236			4,108			5,228			5,046			
Dresses .....	172,317	170,844		49,360			44,693			40,338			36,453			
Suits (incl. pant suits, jumpsuits) .....	7,728	12,132		3,132			2,736			3,120			3,144			
Skirts .....	92,778	93,067		22,348			23,639			25,883			21,197			
Slacks, jeans, dungarees, and jean-cut casual slacks .....	298,988	309,155		68,397			83,461			83,636			73,661			
Blouses, <i>thou. doz.</i> .....	38,761	38,620		9,861			9,945			9,548			9,266			

See footnotes at end of tables.



## FOOTNOTES FOR PAGES S-1 THROUGH S-32

## General notes for all pages:

r Revised.  
p Preliminary.  
e Estimated.  
c Corrected.

## Address requests for data to:

Business Statistics Branch  
Business Outlook Division (BE-52)  
Bureau of Economic Analysis  
U.S. Department of Commerce  
Washington, D.C. 20230

## Page S-1

- † Revised series. See the article on the comprehensive revision of the national income and product accounts that appears in the December 1991 issue of the Survey.
- ‡ Includes inventory valuation and capital consumption adjustments.
- § Monthly estimates equal the centered three-month average of personal saving as a percentage of the centered three-month moving average of disposable personal income.
- ◇ See note "◇" for p. S-2.

## Page S-2

- 1. Based on data not seasonally adjusted.
- ◇ Effective April 1990 Survey, the industrial production index has been revised back to 1977 and has a new base year of 1987. A more detailed explanation of this revision is in the April 1990 *Federal Reserve Bulletin*. Historical data are available from the Industrial Output Section, Mail Stop 82, Division of Research and Statistics, Federal Reserve Board, Washington, DC 20551.
- # Includes data not shown separately.

## Page S-3

- # Includes data for items not shown separately.
- † Effective with the April 1991 Survey, M3 data have been revised to benchmark the data to the 1987 Census of Manufactures and 1988 Annual Survey of Manufactures, and to convert the series to the 1987 SIC codes. Revisions related to benchmarking affect all categories back to 1982. Revisions resulting from the SIC conversion affect about half the categories back to 1958. The coverage for some of the series in the market category has been changed.

## Page S-4

- 1. Based on data not seasonally adjusted.
- # Includes data for items not shown separately.
- ‡ Includes textile mill products, leather and products, paper and allied products, and printing and publishing industries; unfilled orders for other nondurable goods industries are zero.
- ◇ For these industries (food and kindred products, tobacco, apparel and other textile products, petroleum and coal, chemicals and allied products, and rubber and plastics products) sales are considered equal to new orders.
- † See note "†" for p. S-3.

## Page S-5

- 1. Based on data not seasonally adjusted.
- @ Compiled by Dun & Bradstreet, Inc.
- # Includes data for items not shown separately.
- § Ratio of prices received to prices paid (parity index).
- ‡ See note "‡" for p. S-4.
- † In the Feb. and July issues of the Survey each year, data for the most recent six to eight years are subject to revise and are available upon request.
- †† See note "†" for p. S-3.

## Page S-6

- § For producer price indexes of individual commodities, see respective commodities in the Industry section beginning p. S-19. All indexes subject to revision four months after original publication.
- # Includes data for items not shown separately.
- ‡ Effective with the Feb. 1992 Survey, data have been revised back to 1987 and are available upon request.

## Page S-7

- 1. Computed from cumulative valuation total.
- 2. Index as of Apr. 1, 1992: building, 415.9; construction, 460.5
- 3. Beginning Dec. 1988, series has been discontinued by the Bureau of the Census.
- ‡ Effective July 1991 Survey, data have been revised back to 1986. Effective July 1990 Survey, data were revised back to 1985. Revised data are available from the Construction Statistics Division at the Bureau of the Census, Washington, DC 20233.
- # Includes data for items not shown separately.
- § Data for Mar., May, Aug., and Nov. 1990, and Jan., May, Aug., and Oct. 1991 are for five weeks; other months four weeks.
- ◇ Effective Feb. 1990 Survey, data for seasonally adjusted housing starts have been revised back to 1987. These revisions are available upon request.
- @ Effective Feb. 1990 Survey, data for seasonally adjusted manufacturers' shipments of mobile homes have been revised back to 1987.
- † Effective May 1990 Survey, data for seasonally adjusted building permits have been revised back to 1988 and are available upon request.
- \* Series first shown in the July 1990 Survey. The fixed-weighted price index is a weighted average of the individual price index series used to deflate the Value of New Construction Put in Place (VIP) series. In calculating the index, the weights (the composition of current dollar VIP in 1987 by category of construction) are held constant. Consequently, the index reflects only changes in prices. The implicit price deflator is a derived ratio of total current to constant dollar VIP (multiplied by 100). It is the average

of the individual price indexes used in the deflation of VIP, but the prices are weighted by the composition of VIP each period. As a result, the implicit price deflator reflects not only changes in prices, but also changes in the composition of VIP, and its use as a measure of price change is discouraged. Effective July 1991 Survey, data have been revised back to 1986.

§§ Effective March 1992 Survey, the Construction Contracts Valuation Index has a new base year of 1987. Data have been revised back to 1983 and are available upon request.

†† Effective May 1991 Survey, the Boeckh indexes have a new base year of 1987.

†† Effective Sept. 1990 Survey, the construction cost index for the Federal Highway Administration has been revised back to 1986 and has a new base year of 1987=100.

## Page S-8

- 1. Advance estimate.
- 2. Beginning with Feb. 1989 data, associations in conservatorship are excluded.
- ◇ Home mortgage rates are under money and interest rates on p. S-14.
- § Data include guaranteed direct loans sold.
- # Includes data for items not shown separately.

@ Data are for closed mortgage loans of thrift institutions insured by the Savings Association Insurance Fund (SAIF)—FSLIC-insured institutions prior to Sept. 1989.

† Effective April 1991 Survey, estimates of wholesale sales have been revised back to January 1988 and wholesale inventories have been revised back to January 1989. Revised data and a summary of changes appear in the report *Revised Monthly Wholesale Trade, Sales and Inventories January 1984–December 1990, BW90–R*, available from the Bureau of the Census, Washington, DC 20233.

‡ Effective March 1991 Survey, retail trade data have been revised. Estimates of retail sales have been revised back to January 1988 and inventories have been revised back to January 1989. (In 1990 data were revised back to 1982.) Revised data and a summary of changes will appear in the report *Revised Monthly Retail Sales and Inventories, January 1981–December 1990, BR90–R*, available from the Bureau of the Census, Washington, DC 20233.

## Page S-9

- 1. Advance estimate.
- # Includes data for items not shown separately.

◇ Effective with the January 1992 Survey, the seasonally adjusted labor force series have been revised back to January 1987. The January 1992 issue of *Employment and Earnings* contains the new seasonal adjustment factors, a description of the current methodology, and revised data for the most recent 13 months or calendar quarters. Revised monthly data for the entire 1987–91 revision period will appear in the February 1992 issue of *Employment and Earnings*. Effective with the January 1991 Survey, the seasonally adjusted labor force series were revised back to January 1986.

† The participation rate is the percent of the civilian noninstitutional population in the civilian labor force. The employment-population ratio is civilian employment as a percent of the civilian noninstitutional population, 16 years and over.

@ Data include resident armed forces.

‡ See note "‡" for p. S-8.

## Page S-10

◇ See note "◇" for p. S-9.

‡ The unemployment rates are the number of unemployed in each group as a percent of the civilian labor force in that group.

§ Effective with the Sept. 1990 and June 1991 issues of the Survey, data have been revised, respectively back to April 1988 and April 1989, unadjusted, and back to Jan. 1985 and Jan. 1986, seasonally adjusted, to reflect new benchmarks and seasonal adjustment factors. The Sept. 1990 and June 1991 issues of *Employment and Earnings* contain detailed descriptions of the effects of these revisions. All of the revised historical series will be published in a special supplement to *Employment and Earnings*. This supplement, when combined with the historical bulletin, *Employment, Hours, and Earnings, United States, 1909–90* will comprise the full historical series on national data obtained from the establishment survey.

## Page S-11

§ See note "§" for p. S-10.

‡ This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

◇ Production and nonsupervisory workers.

## Page S-12

- § See note "§" for p. S-10.
- ◇ Production and nonsupervisory workers.
- ‡ Earnings in 1982 dollars reflect changes in purchasing power since 1982 by dividing by Consumer Price Index. Effective Feb. 1990 and 1991 issues of the Survey, this series has been revised, respectively, back to 1985 and 1986 to reflect new seasonal factors for the CPI-W. Revised data are available upon request.
- §§ Effective with the June 1991 Survey, data have been revised back to 1989 and are available upon request. Wages as of Apr. 1, 1992: Common, \$19.30; Skilled, \$25.21.
- † Excludes farm, household, and Federal workers.
- ⊙ Effective with the April 1990 Survey, the employment cost index is based on June 1989=100, rather than June 1981=100. Historical data for both June 1989 and June 1981 bases are available from the Bureau of Labor Statistics, Division of Employment Cost Trends, 441 G Street, N.W., Washington, DC 20212.
- \* Series first shown in the July 1991 Survey. Wages and salaries are defined as the hourly straight-time wage rate or, for workers not paid on an hourly basis, straight-time earnings divided by the corresponding hours. Straight-time wage and salary rates are total earnings before payroll deductions, excluding premium or supplemental pay for overtime and for work on weekends and holidays, shift differentials, and nonproduction bonuses such as lump-sum payments provided in lieu of wage increases. Production bonuses, incentive earnings, commission payments, and cost-of-living adjustments are included in straight-time wage and salary rates.

## Page S-13

1. Effective Feb. 28, 1989, there was a break in the series due to the enlargement of the panel of reporting dealers to 17 and of reporting direct issuers to 36. End of month figures on the old basis are as follows: All issuers, 481,734; financial companies, 373,717; dealer placed, 172,330; directly placed, 201,387; and nonfinancial companies, 108,017.
2. Average for Dec.
  - # Includes data for items not shown separately.
  - § Excludes loans and federal funds transactions with domestic commercial banks and includes valuation reserves (individual loan items are shown gross; i.e., before deduction of valuation reserves).
  - ‡ Covers 50 States and the District of Columbia. Only regular benefits are included.
  - ⊙ Average weekly insured unemployment for 12-month period divided by average monthly covered employment (lagging 4 full quarters for annual figure and 2 full quarters for monthly figure).
  - † Effective Oct. 1989 Survey, loans by loan type are provided by the Federal Farm Credit Banks Funding Corporation.
  - ◇ Effective with the April 1990 Survey, the reserves of depository institutions have been revised back to 1984 and are available upon request.

## Page S-14

1. Data are for fiscal years ending Sept. 30 and may include revisions not distributed to the months.
2. Weighted by number of loans.
3. Beginning Feb. 1988, data suspended by the Farm Credit Administration, which is revising the information it collects and amending the reports it distributes.
4. Beginning Sept. 1991, the Federal debt series are net of premium and discount.
  - § Effective Mar. 1990 Survey, data have been revised to reflect new benchmark and seasonal adjustments and are available from the Banking and Money Market Statistics Section of the Division of Monetary Affairs at the Federal Reserve Board, Washington, DC 20551.
  - # Includes data for items not shown separately.
  - ◇ Excludes loans to commercial banks in the U.S.
  - ‡ Rates on the commercial paper placed for firms whose bond rating is Aa or the equivalent.
  - ‡‡ Courtesy of *Metals Week*.
  - ⊙ Average effective rate
  - † Effective May 1990 Survey, the consumer installment credit series have been revised back to 1980 to incorporate new information and updated seasonal adjustment factors. These revisions are available upon request.
  - \* Series first shown in the June 1990 Survey.
  - †† This series, first shown in the June 1990 Survey, represents the outstanding balances of loans that the loan originator has sold and are no longer carried on the loan originator's books. The loans are pooled and securities are issued on the pools.

## Page S-15

1. Beginning Jan. 1989, the primary public offering statistics have been discontinued by the Securities and Exchange Commission.
2. Effective April 1991 Survey, the Security Markets series have been discontinued.
3. Money market deposit accounts are included with savings deposits.
  - † Effective Feb. 1992 Survey, the money stock measures and components have been revised and are available from the Banking Section of the Division of Research and Statistics at the Federal Reserve Board, Washington, D.C. 20551.
  - ‡‡ Includes ATS and NOW balances at all depository institutions, credit union share draft balances, and demand deposits at thrift institutions.
  - ◇ Overnight (and continuing contract) RP's are those issued by commercial banks to the nonbank public, and overnight Eurodollars are those issued by Caribbean branches of member banks to U.S. nonbank customers.
  - ⊙ Small time deposits are those issued in amounts of less than \$100,000. Large time deposits are those issued in amounts of \$100,000 or more and are net of the holdings of domestic banks, thrift institutions, the U.S. Government, money market mutual funds, and foreign banks and official institutions.
  - # Includes data for items not shown separately.

## Page S-16

1. The railroad average was discontinued by Moody's on July 13, 1989. Therefore, the July average reflects only eight working days.
2. Effective Oct. 3, 1990, the German Democratic Republic (GDR; East Germany) ceased to exist as a sovereign state and became a part of the Federal Republic of Germany. Accordingly, effective with the statistics for Oct. 1990, all merchandise imported from or exported to the former GDR will be included as trade with the Federal Republic of Germany.
3. Beginning Jan. 1991 data, Roadway Services, Inc. will be included in the Dow Jones Transportation Average replacing Pan Am Corp. Roadway Services is listed on the NASDAQ National Market System. Comparability with earlier averages is not affected by this change.
4. Beginning with Jan. 1992 data, the data include the republics of the former USSR, excluding Estonia, Latvia, and Lithuania.
  - ⊙ See note "4" for p. S-19 regarding the new commodity classification systems introduced Jan. 1989. Data may not equal the sum of the geographic regions, or commodity groups and principal commodities, because the revisions to the totals are not reflected in the component items.
  - # Number of issues represents number currently used; the change in number does not affect the continuity of the series.
  - ‡ For bonds due or callable in 10 years or more.
  - # Includes data for items not shown separately.
  - ◇ The March through August 1991 issues of the Survey showed month-end yields for 1991 rather than monthly averages.
  - † Effective with the Mar. 1990 Survey, seas. adj. exports and imports have been revised back to Jan. 1988, and are available upon request.

## Page S-17

1. Beginning with Jan. 1989 data, undocumented exports to Canada are now included, resulting in a break with Dec. 1988 data.
2. Beginning Jan. 1989, buses are excluded from "Motor vehicles and parts" and included in "Other manufactured goods," resulting in a break with Dec. 1988 data.
3. See note "2" for p. S-16.
4. See note "4" for p. S-16.
- ⊙ See note "⊙" for p. S-16.
- † See note "†" for p. S-16.
- # Includes data not shown separately.
- ◇ Data include undocumented exports to Canada, which are based on official Canadian import totals.
  - \* Series first shown in the October 1991 Survey. The deflators for the constant dollar series are primarily based upon the monthly price indexes published by the Bureau of Labor Statistics using techniques developed for the National Income and Product Accounts by the Bureau of Economic Analysis.

## Page S-18

1. Reported annual total; quarterly or monthly revisions are not available.
2. For month shown.
  - \* Series first shown in the October 1991 Survey. Source: Bureau of Labor Statistics.
  - # Includes data for items not shown separately.
  - § Total revenues, expenses, and income for all groups of carriers also reflect nonscheduled service.
  - ‡ The threshold for Class I railroad status is adjusted annually by the Interstate Commerce Commission to compensate for inflation.
  - ◇ Average daily rent per room occupied, not scheduled rates.
  - ## Data represent entries to a national park for recreational use of the park, its services, conveniences, and/or facilities.
  - † Before extraordinary and prior period items.
  - †† Effective with the Dec. 1989 Survey, data for 1981-88 have been revised and are available upon request.
  - †† Effective with the Mar. 1990 Survey, data for 1985-89 have been revised and are available upon request.

## Page S-19

1. Reported annual total; monthly or quarterly revisions are not available.
2. Less than 500 metric tons.
3. Figure suppressed because it did not meet Census publication standards.
4. Beginning with 1989 data, merchandise trade data are based upon two new commodity classification systems; the International Harmonized System and, Revision 3 of the Standard International Trade Classification and, as a result, data may not be directly comparable to 1988 and earlier years.
5. Data are partially estimated for first three quarters of 1991 and are not available. Value for 4th quarter 1991 is based on partially estimated production data.
6. Beginning in 1991, data are available only on a quarterly basis.
7. Data withheld to avoid disclosing figures for individual companies.
  - # Includes data for items not shown separately.
  - § Data are reported on the basis of 100 percent content of the specified material unless otherwise indicated.
  - ‡ Effective with the Jan. 1990 Survey, revisions for 1987-88 are available upon request.

## Page S-20

1. Reported annual total; monthly or quarterly revisions are not available.
2. Quarterly data are no longer available.
3. See note 4 for p. S-19.
4. Beginning in 1991, data are available only on a quarterly basis.
  - § Data are not wholly comparable from year to year because of changes in classification.
  - ⊙ Includes less than 500 electric generation customers not shown separately.
  - ‡ Effective with the Jan. 1990 Survey, revisions for 1987-88 are available upon request.
  - ◇ Effective with the Dec. 1989 Survey, revisions for 1987-88 are available upon request.



**Page S-21**

1. Previous year's crop. New crop is not reported until Sept. (crop year: Sept. 1–Aug. 31).
  2. Crop estimate for the year.
  3. Stocks as of June 1.
  4. Stocks as of June 1 and represents previous year's crop; new crop not reported until June (beginning of new crop year).
  5. Series has been discontinued.
  6. Stock estimates are available once a year as June 1 stocks and shown here in the May column and (as previous year's crop) in the annual column.
  7. Stocks as of Dec. 1.
  8. See note 4 for p. S-19.
- § Excludes pearl barley.  
 @ Quarterly data represent the 3-month periods Dec.–Feb., Mar.–May, June–Aug., and Sept.–Nov.  
 Annual data represent Dec.–Nov.  
 † Coverage for 21 selected States, representing approximately 85 percent of U.S. production.

**Page S-22**

1. See note 4 for p. S-19.
- § Cases of 30 dozen.  
 \* Series first shown in the Jan. 1991 SURVEY.

**Page S-23**

1. Crop estimate for the year.
  2. Reported annual total; revisions not distributed to the months.
  3. Data suppressed because they did not meet Census publication standards.
  4. See note 4 for p. S-19.
  5. Data withheld to avoid disclosing figures for individual companies.
  6. Beginning in 1991, data are available only on a quarterly basis.
- # Totals include data for items not shown separately.

**Page S-24**

1. Reported annual total; monthly revisions are not available.
2. See note 4 for p. S-19.
3. Less than 500 tons.
4. Beginning in 1990, monthly data have been discontinued.

**Page S-25**

1. Reported annual total; monthly revisions are not available.
  2. For month shown.
  3. Effective with Jan. 1989, import data are for consumption; earlier periods of data are general imports. See also note 4 for p. S-19 regarding the introduction of new classification systems.
  4. Beginning in 1990, monthly data have been discontinued.
- @ Includes domestic and foreign ores.  
 § Source: *Metals Week*.

**Page S-26**

1. Reported annual total; monthly revisions are not available.
  2. Less than 50 tons.
  3. See note 3 for p. S-25.
  4. Break in comparability beginning Jan. 1, 1991, because of a change in the *Metals Week* pricing series for zinc.
- ◇ Includes secondary smelters' lead stocks in refinery shapes and in copper-base scrap.  
 † Source for monthly data: American Bureau of Metal Statistics. Source for annual data: Bureau of Mines.  
 # Includes data not shown separately.  
 † Effective April 1991 SURVEY, the materials handling index has been revised back to 1982 and now includes lift trucks. Revised data are available upon request.  
 @@ Price represents North American Mean.  
 @ Effective with the Sept. 1990 SURVEY, the new orders index numbers have been converted to a new base year of 1987=100. Data back to 1988 are available upon request.  
 § Effective Mar. 1992 SURVEY, the fluid power indexes have a new base year of 1990. Historical data are available back to 1960.

**Page S-27**

1. Annual total includes revisions not distributed to the months or quarters.
  2. See note 4 for p. S-19.
  3. Beginning in 1990, quarterly data have been discontinued. Annual data will continue to be available.
  4. Beginning with May 1991 data, monochrome production numbers are no longer included.
- # Includes data for items not shown separately.  
 § Includes nonmarketable catalyst coke.  
 ◇ Includes small amounts of "other hydrocarbons and alcohol new supply (field production)," not shown separately.  
 †† March, June, September and December are five-week months. All others consist of four weeks.

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1. Reported annual total; revisions not allocated to the months.
  2. See note 4 for p. S-19.
  3. Beginning May 1991, the leaded gasoline price is not statistically valid for publication.
- # Includes data for items not shown separately.

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1. Reported annual total; revisions not allocated to the months.
- ◇ Source: American Paper Institute. Total U.S. estimated consumption by all newspaper users. See also note "†" for this page.  
 § Effective with the October 1990 SURVEY, data have been revised back to 1989 to reflect adjustments made by the Rubber Manufacturers Association's Rubber Statistical Committee.  
 † Effective with the October 1990 SURVEY, synthetic data consisting of Butyl, polyisoprene, polychloroprene, silicone, and other elastomers have been revised in keeping with data provided by the Census Bureau's MA30A report beginning in 1990. Also see note "§" on this page.  
 # Compiled by the American Newspaper Publishers Association.  
 † Effective with the March 1990 SURVEY, Canadian newsprint statistics have been revised back to Jan. 1982 to exclude supercalendered and some soft-nip calendered paper that was originally classified as newsprint and is now classified as uncoated groundwood papers. This revision also affects estimated consumption. Revised data are available upon request.

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1. Reported annual total; revisions not allocated to the months.
  2. Figure suppressed because it did not meet Census publication standards.
  3. Data cover five weeks; other months, four weeks.
  4. Beginning Jan. 1989, sales of industrial plasters are included with building plasters.
  5. Jan. 1, 1992 estimate of the 1991 crop.
  6. Total for crop years, 1989/1990 and 1990/1991 respectively.
  7. Data are available only on a quarterly basis.
- # Includes data for items not shown separately.  
 ◇ Cumulative ginnings to the end of month indicated.  
 § Bales of 480 lbs.

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1. Less than 500 bales.
  2. Annual total includes revisions not distributed to the months.
  3. Average for crop year; Aug. 1–Jul. 31.
  4. For five weeks; other months four weeks.
  5. See note 4 for p. S-19.
  6. Beginning in 1990, data are available only on a quarterly basis.
  7. Beginning in 1991, data are available only on a quarterly basis.
  8. Based on weighted marketing price for Aug.–Nov. 1991.
  9. Based on the average of Aug. 1991–Feb. 1992.
- ◇ Based on 480-lb. bales, preliminary price reflects sales as of the 15th; revised price reflects total quantity purchased and dollars paid for the entire month (revised price includes discounts and premiums).  
 § Bales of 480 lbs.  
 † The total may include some miscellaneous wool imports.  
 \* Series first shown in the July 1990 SURVEY.

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1. Annual total includes revisions not distributed to the months.
  2. Production of new vehicles (thous. of units) for Mar. 1992: *passenger cars*, 497; *trucks and buses*, 374.
  3. Data are reported on an annual basis only.
  4. See note 4 for p. S-19.
  5. Beginning Jan. 1989, shipments of trailer bodies are included with trailer chassis to avoid disclosure of data from individual firms.
  6. Effective with the Dec. 1991 SURVEY, data have been revised back to 1988 and are available upon request.
  7. Data withheld to avoid disclosing figures for individual companies.
- # Total includes backlog for nonrelated products and services and basic research.  
 § Domestic cars comprise all cars assembled in the U.S. and cars assembled in Canada and imported to the U.S. under the provisions of the Automotive Products Trade Act of 1965. Imports comprise all other cars.  
 ◇ Courtesy of R.L. Polk & Co.; republication prohibited. Because data for some States are not available, month-to-month comparisons are not strictly valid.  
 \* Series first shown in the August 1990 SURVEY. Effective with the Dec. 1991 SURVEY, seasonally adjusted retail sales for trucks and buses have been revised back to 1989, and are available upon request.  
 † Includes some imported trucks over 10,000 lbs. GVW.  
 ‡ Excludes railroad-owned private refrigerator cars and private line cars.  
 @ Effective with the Mar. 1992 SURVEY, seasonally adjusted retail inventories for trucks and buses have been revised back to 1977, and are available upon request.  
 †† BEA has temporarily suspended publishing domestic auto inventories and inventory/sales ratios because of inconsistencies in the source data used to derive these estimates. BEA is reviewing the source data and methodology, and will issue improved estimates in July.

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