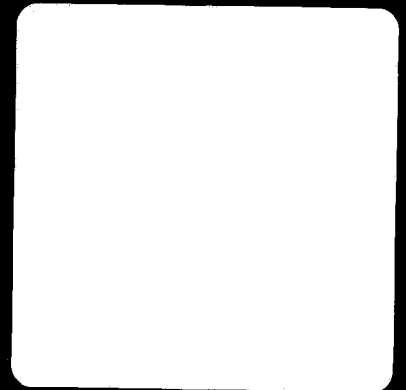
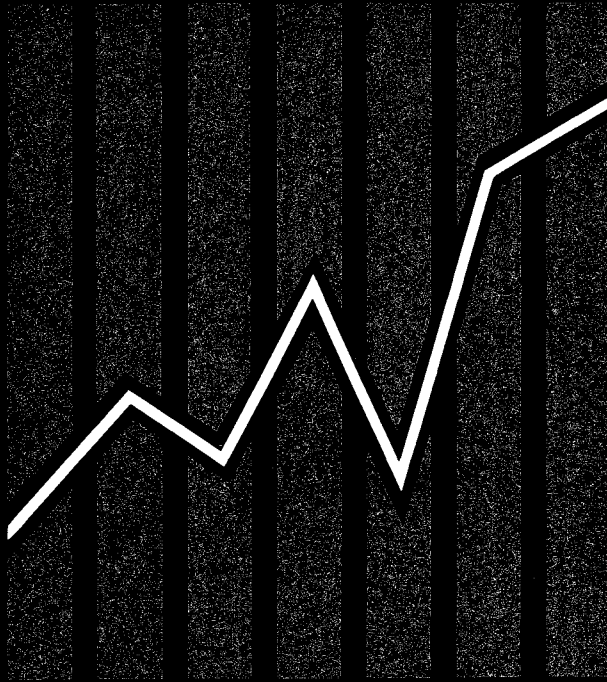


JANUARY 1991 / VOLUME 71 NUMBER

1



SURVEY OF CURRENT BUSINESS



UNITED STATES DEPARTMENT OF COMMERCE / BUREAU OF ECONOMIC ANALYSIS



SURVEY OF CURRENT BUSINESS



U.S. Department of Commerce
 Robert A. Mosbacher / *Secretary*
 Michael R. Darby / *Under Secretary*
 for Economic Affairs

Bureau of Economic Analysis
 Allan H. Young / *Director*
 Carol S. Carson / *Deputy Director*

Editor-in-Chief: Douglas R. Fox
Managing Editor: Leland L. Scott

Publication Staff: W. Ronnie Foster,
 M. Gretchen Gibson, Eric B. Manning,
 Donald J. Parschalk

SURVEY OF CURRENT BUSINESS. Published monthly by the Bureau of Economic Analysis of the U.S. Department of Commerce. Editorial correspondence should be addressed to the Editor-in-Chief, SURVEY OF CURRENT BUSINESS, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230.

Annual subscription: *Second-class mail*—\$23.00 domestic, \$28.75 foreign; *first-class mail*—\$52.00. Single copy—\$6.50 domestic, \$8.13 foreign.

Mail subscription orders and address changes to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Make checks payable to the Superintendent of Documents.

Second-class postage paid at Washington, DC and at additional mailing offices. (USPS 337-790).

The Secretary of Commerce has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department.

- 1 Business Situation**
- 6 National Income and Product Accounts**
 - 6 Selected NIPA Tables
 - 20 NIPA Charts
- 23 Gross Product by Industry, 1977-88:
A Progress Report on Improving the Estimates**
- 39 Regional Perspectives**
 - 39 Personal Income Continued To Grow Slowly in Third Quarter 1990
- 41 State Personal Income, Summary Estimates
for Third Quarter 1990**
- 43 Errata: "Evaluation of the State Personal Income Estimates"**
- 44 A User's Guide to BEA Information**

NORWICH LIBRARY
 DEPOSITORY ITEM 0228
 DATE RECEIVED MAR 04 1991
 SUPT. DOC. NO. C 59.11:71/1

C-pages: Business Cycle Indicators
(See page C-1 for contents)

S-pages: Current Business Statistics
(See page S-36 for contents and subject index)

Inside back cover: BEA Information

NOTE.—This issue of the SURVEY went to the printer on February 4, 1991. It incorporates data from the following monthly BEA news releases:
 Gross National Product (Jan. 25),
 Personal Income and Outlays (Jan. 28), and
 Composite Indexes of Leading, Coincident, and Lagging Indicators (Jan. 30).

the BUSINESS SITUATION

REAL GNP, a comprehensive measure of U.S. production, declined 2.1 percent in the fourth quarter of 1990—its first decline since a 1.8-percent drop in the second quarter of 1986. Real gross domestic purchases declined 4.2 percent. Inflation as measured by the (fixed-weight) price index for gross domestic purchases stepped up to 6.3 percent, reflecting higher energy prices (chart 1).¹

The motor vehicle and construction industries more than accounted for the fourth-quarter drop in GNP; output in the rest of the economy—that is, GNP excluding the output of these industries—continued to record weak growth, 1.1 percent (table 1).² The mo-

NOTE.—Daniel Larkins of the Current Business Analysis Division was primarily responsible for preparing this article, with contributions from Larry R. Moran, Ralph W. Morris, and Mira A. Piplani.

1. The regularly featured estimate of real GNP is based on 1982 weights. An alternative estimate of real GNP growth based on more current weights can be calculated using the change in the chain price index, which is published in table 3.1 of the "Selected NIPA Tables." This alternative measure declined 2.6 percent in the fourth quarter after increasing 1.5 percent in the third. Growth of real GNP in 1987 dollars, another measure based on more current weights, will be published in the "Reconciliation and Other Special Tables" in the February SURVEY OF CURRENT BUSINESS.

2. The output of the motor vehicle industry is derived by summing auto output (table 1.18) and truck output (table 1.20). The output of the construction industry may be roughly approximated by "structures," shown in table 1.4 of the "Selected NIPA Tables." This approximation excludes maintenance and repair construction and includes brokers' commissions as well as mining exploration, shafts, and wells; nevertheless, it probably tracks movements in construction output in 1990 quite closely. The value of the output of these industries includes the value of inputs, such as steel, provided by other sectors of the economy.

tor vehicle and construction industries had both showed substantial volatility earlier in 1990:

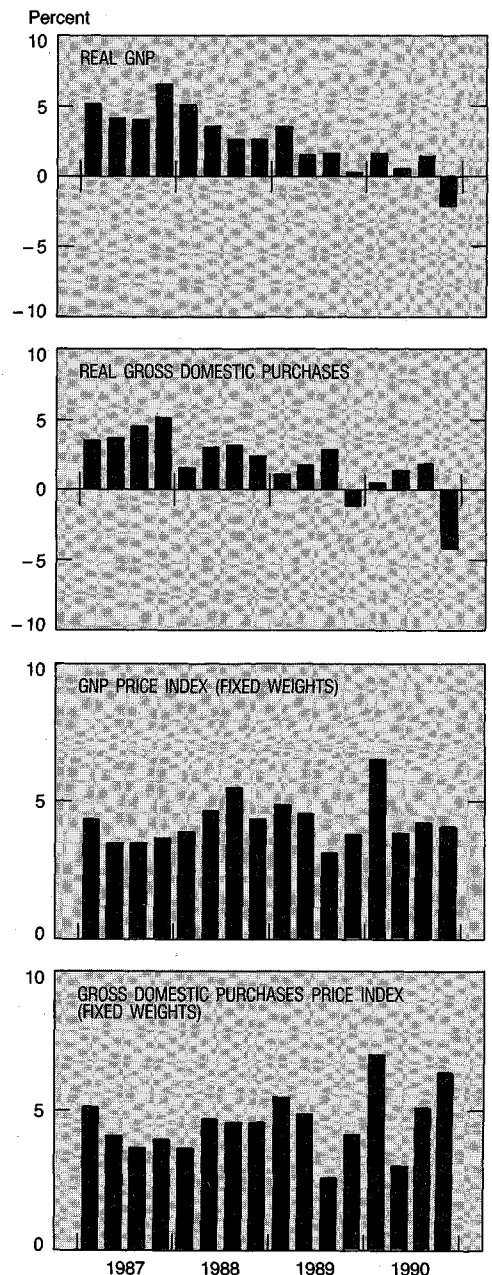
- Motor vehicle output had dropped in the first quarter—its fifth consecutive quarterly decline—before increasing in the second and third quarters, and
- Construction output had jumped in the first quarter—interrupting a 4-year downtrend—before declining in the second and third quarters.

Among the major components of GNP, personal consumption expenditures and fixed investment declined in the fourth quarter after increasing in the third; inventory investment (that is, change in business inventories) declined substantially more than in the third quarter. These fourth-quarter declines were partly offset by increases in net exports (after a small decline in the third quarter) and in government purchases (after a smaller increase in the third quarter).

In personal consumption expenditures, motor vehicles accounted for more than two-fifths of the drop. In fixed investment, motor vehicles and construction more than accounted for the drop.

Inventory investment swung from an accumulation of \$4.7 billion in the third quarter to a liquidation of \$16.3 billion in the fourth. In the last four business cycles (as identified by the National Bureau of Economic Research), inventory accumulation, not

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

91-1-1

Looking Ahead...

• **National Income and Product Accounts Revisions.** The next comprehensive revision—that is, benchmark revision—of the national income and product accounts is now scheduled for release in November 1991 instead of in July. The annual revision of the estimates for 1987–89 that would usually be released this July will be combined with the benchmark revision. (Selected tables that show detailed annual estimates for 1990 on an unrevised basis will appear in the July SURVEY.)

Table 1.—Gross National Product, Motor Vehicle Output, and Construction Output

[Seasonally adjusted at annual rates]

	Billions of dollars					Percent change from the preceding quarter			
	Level	Change from the preceding quarter				1990			
	1990: IV	I	II	III	IV	I	II	III	IV
Gross national product.....	4,147.6	17.4	4.5	14.9	-22.4	1.7	0.4	1.4	-2.1
Motor vehicle output.....	145.5	-9.1	15.3	5.5	-23.1	-21.3	48.3	14.2	-44.5
Construction output.....	354.1	11.1	-10.3	-8.1	-9.0	12.5	-10.4	-8.4	-9.6
Gross national product less:									
Motor vehicle output.....	4,002.1	26.5	-10.8	9.4	.7	2.7	-1.1	.9	.1
Construction output.....	3,793.5	6.3	14.8	23.0	-13.4	.7	1.6	2.5	-1.4
Motor vehicle and construction output.....	3,648.0	15.4	-5	17.5	9.7	1.7	-1	1.9	1.1

NOTE.—Motor vehicle output is shown in tables 1.18 (autos) and 1.20 (trucks) of the "Selected NIPA Tables." Structures from table 1.4 of the "Selected NIPA Tables" are used here to approximate construction output. See footnote 2 of the text.

Table 2.—Change From Preceding Year in Real Gross National Product and Prices

[Dollars are in billions of 1982 dollars]

	Real GNP						GNP prices ¹		
	Dollars			Percent			Percent		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Gross national product.....	171.6	100.8	38.1	4.5	2.5	0.9	4.2	4.5	4.5
Personal consumption expenditures.....	90.7	50.3	25.4	3.6	1.9	1.0	4.1	4.8	5.2
Fixed investment.....	35.9	11.0	-1.7	5.6	1.6	-2	3.6	3.4	2.7
Nonresidential.....	37.4	18.9	7.8	8.3	3.9	1.5	3.6	3.4	3.0
Residential.....	-1.5	-7.9	-9.5	-8	-4.1	-5.1	3.5	3.6	1.8
Change in business inventories.....	.8	.2	-24.9						
Net exports of goods and services.....	42.6	21.8	16.6						
Exports.....	82.9	58.6	37.0	18.3	11.0	6.2	5.3	2.7	2.4
Imports.....	40.3	36.8	20.4	7.1	6.0	3.2	5.2	3.6	4.2
Government purchases.....	1.4	17.6	22.7	.2	2.3	2.8	4.6	4.7	4.5
Addenda:									
Gross domestic purchases.....	129.0	85.3	21.5	3.3	1.9	.5	4.1	4.6	4.7
Final sales to domestic purchasers.....	128.1	79.0	46.3	3.3	1.9	1.1	4.1	4.6	4.7
Disposable personal income.....	129.8	68.5	24.3	4.9	2.4	.8			

1. Based on seasonally adjusted fixed-weighted index numbers (1982=100).

liquidation, was typical in the quarter after a peak in GNP. The aggregate inventory-sales ratios published in table 5.11 of the "Selected NIPA Tables" have typically increased at, and immediately after, peaks in GNP; however, the ratios declined in the fourth quarter of 1990 after changing little in the third.

Net exports increased \$22.9 billion in the fourth quarter. Exports increased \$11.9 billion, and imports declined \$11.0 billion. The decline in imports was more than accounted for by lower purchases of petroleum and petroleum products; presumably, the drop in petroleum imports was both a response to large price increases in the third and fourth quarters and a consequence of the drop in GNP.

Federal defense purchases accounted for most of the fourth-quarter increase in government purchases. No doubt a large (although not precisely quantifiable) part of this increase reflected Operation Desert Shield; it is not clear how much of the increase came from higher imports of defense goods and services or from a running-down of

business inventories of defense goods, both of which would offset in GNP the increased purchases.

The year 1990.—In 1990, real GNP increased 0.9 percent—its smallest annual increase since the recession of 1981–82. Except for government pur-

chases, all of the major components of GNP were weaker in 1990 than in 1989, just as they had been weaker in 1989 than in 1988 (table 2). Gross domestic purchases also stepped down in 1989 and 1990. The price indexes for gross domestic purchases and for GNP increased at about the same rate as in 1989; an acceleration in prices of personal consumption expenditures was offset by decelerations in prices of the other major components.

Motor vehicles

Real motor vehicle output dropped 44.5 percent in the fourth quarter after increasing 14.2 percent in the third. Sales fell sharply after changing little, and inventories edged down after increasing slightly. (Auto and truck output, sales, and inventory investment are shown in tables 1.17–1.20 of the "Selected NIPA Tables.")

In terms of units, domestic car production dropped to 5.6 million (seasonally adjusted annual rate) in the fourth quarter from 6.9 million in the third; fourth-quarter production was the same as first-quarter production, which was the lowest level since the fourth quarter of 1982. Domestic car sales fell to 6.6 million; the only strength in sales was in luxury cars, as consumers stepped up purchases before a Federal tax on luxury goods became effective on January 1, 1991. Domestic car inventories declined to 1.3 million; because of the drop in sales, the inventory-sales ratio edged up to 2.4. Sales of imported cars declined to 2.4 million in the fourth

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 1982 dollars. The advance GNP estimate for the fourth 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 of goods and services: Federal outlays (2), and State and local construction put in place (2);

GNP 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).

quarter, the lowest level since the third quarter of 1984.

Sales of new trucks dropped sharply to 4.2 million in the fourth quarter; light domestic trucks accounted for most of the drop. Truck inventories declined for the second consecutive quarter.

The fourth-quarter fall in motor vehicle production reflected manufacturers' anticipation of weak fourth-quarter sales; it also reflected a third-quarter production level that may have been inflated by shorter-than-normal downtime at plants for model changeovers. (Downtime was shorter than normal because manufacturers introduced a number of 1991 models earlier in the year.) Current plans for the first quarter of 1991 call for a small cut in production.

The fourth-quarter drop in sales reflected factors specific to the motor vehicle industry, as well as general factors underlying the weakness in total consumer spending. Aggressive fleet marketing programs offered by manufacturers, which began in the third quarter, added less to sales in the fourth quarter than in the third. Sales-incentives programs offered to consumers by manufacturers in the fourth quarter were modest compared with the third-quarter programs. New-car prices increased sharply in the fourth quarter after declining in the second and third quarters. Sharp jumps in gasoline prices in the third and fourth quarters and uncertainty about future prices due to the situation in the Middle East also may have contributed to lower vehicle sales.

Among the general factors behind the drop in sales, real disposable personal income declined 3.6 percent in the fourth quarter after declining 0.7 percent in the third. The unemployment rate rose for the second consecutive quarter, to 5.9 percent, and the Index of Consumer Sentiment (prepared by the University of Michigan's Survey Research Center) dropped sharply for the second consecutive quarter—to its lowest level since the second quarter of 1980—after three small declines.

Prices

The price index (fixed weights) for gross domestic purchases increased 6.3 percent in the fourth quarter, 1.2 percentage points more than in the third. For many applications, this index is preferable to the GNP price index as

a measure of U.S. inflation because it measures prices of goods and services *purchased*; the price index for GNP measures prices of goods and services *produced*. The GNP price index increased 4.1 percent in the fourth quarter, about the same rate as in the third (table 3).

Differences in the movements of the two price measures arise from differences in the movements of export and import prices. (Export prices are included in GNP prices but not in gross domestic purchases prices; import prices are subtracted out in deriving GNP prices but not in deriving gross domestic purchases prices.) Export prices increased modestly in both the third and fourth quarters; import prices surged in both quarters, largely reflecting runups in petroleum prices following the Iraqi invasion of Kuwait in early August.³

The fourth-quarter acceleration in gross domestic purchases prices was largely attributable to the huge jump in energy prices (chart 2). Food prices

3. In the fourth quarter, the difference between the increases in the price index for gross domestic purchases and in the price index for GNP was 2.2 percentage points. This difference has exceeded 2 percentage points only twice before—in the second quarter of 1974 and in the first quarter of 1980. In all three cases, the difference was accounted for by soaring prices of petroleum imports.

Table 3.—Price Indexes (Fixed Weights): Change From Preceding Quarter

[Percent change at annual rates; based on seasonally adjusted index numbers (1982=100)]

	1990			
	I	II	III	IV
GNP.....	6.6	3.9	4.2	4.1
Less: Exports.....	5.0	3.4	2.6	2.0
Plus: Imports.....	9.2	-7.0	12.6	28.1
Equals: Gross domestic purchases.....	7.0	2.9	5.1	6.3
Less: Change in business inventories.....				
Equals: Final sales to domestic purchasers.....	6.9	2.9	5.1	6.3
Personal consumption expenditures.....	7.4	3.1	5.7	7.1
Nonresidential structures.....	2.8	1.9	2.9	2.3
Producers' durable equipment.....	5.4	1.4	2.2	4.8
Residential investment.....	3.5	.3	2.4	-4
Government purchases.....	7.2	3.0	4.6	6.3
Addenda: Categories of gross domestic purchases:				
Food ¹	13.4	1.1	4.0	4.2
Energy ²	17.3	-7.8	24.1	59.6
Other.....	5.4	3.9	4.2	3.9

1. Consists of all components of gross domestic purchases for which separate estimates are prepared. The major component that is not included is purchases of food by the Federal Government other than transactions by the Commodity Credit Corporation.

2. Consists of all components of gross domestic purchases for which separate estimates are prepared. The major components that are not included are the gasoline and motor oil portions of inventories held by gasoline service stations and the energy portions of inventories held by businesses that do not produce energy for sale.

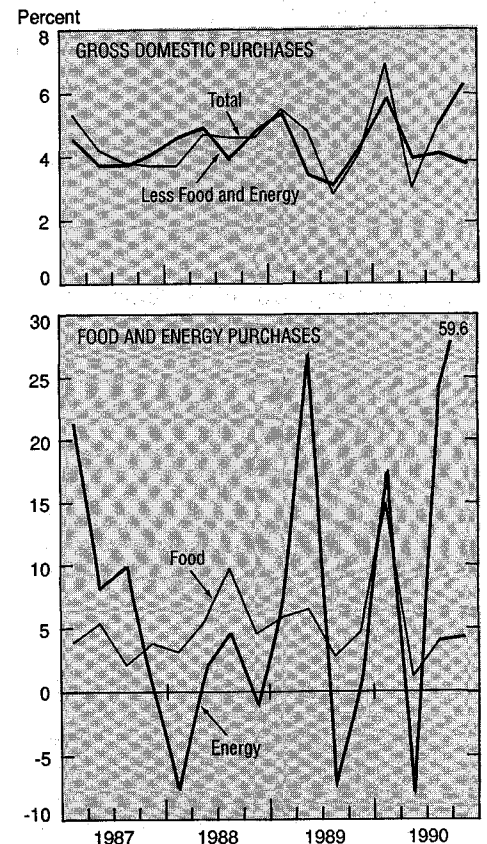
NOTE.—Percent changes in major aggregates are found in table 8.1 of the "Selected NIPA Tables." Most index number levels are found in tables 7.1 and 7.3.

increased at the same rate as in the third quarter. Prices of gross domestic purchases less food and energy—which may be viewed as a measure of underlying inflation in the U.S. economy—increased 3.9 percent, about the same rate as in the second and third quarters.

Among major components, prices of personal consumption expenditures (PCE) increased 7.1 percent after a 5.7-percent increase. The acceleration in PCE prices was largely accounted for by energy prices: Prices of gasoline and oil and of fuel oil and coal were up even more than in the third quarter, and prices of natural gas and electricity increased after a decline. Prices of motor vehicles and parts accelerated; a pickup in new-car prices largely reflected higher prices on new models and the discontinuation of some sales-incentive programs. PCE food prices increased 4.9

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 (1982 = 100).

percent after a 4.2-percent increase; the step-up partly reflected the impact of below-freezing temperatures in California on the prices of fruits and vegetables. Prices of clothing and shoes and of transportation also contributed to the acceleration in PCE prices. Within transportation, higher air fares reflected sharply higher jet fuel prices.

Prices of fixed investment increased slightly more than in the third quarter, and prices of government purchases increased considerably more than in the third quarter. Among the investment components, a step-up in prices of producers' durable equipment was largely accounted for by transportation

equipment; computer prices dropped sharply. Prices of nonresidential structures decelerated, and prices of residential structures registered a downswing. The step-up in prices of government purchases was mainly accounted for by increases in petroleum prices.

Personal income

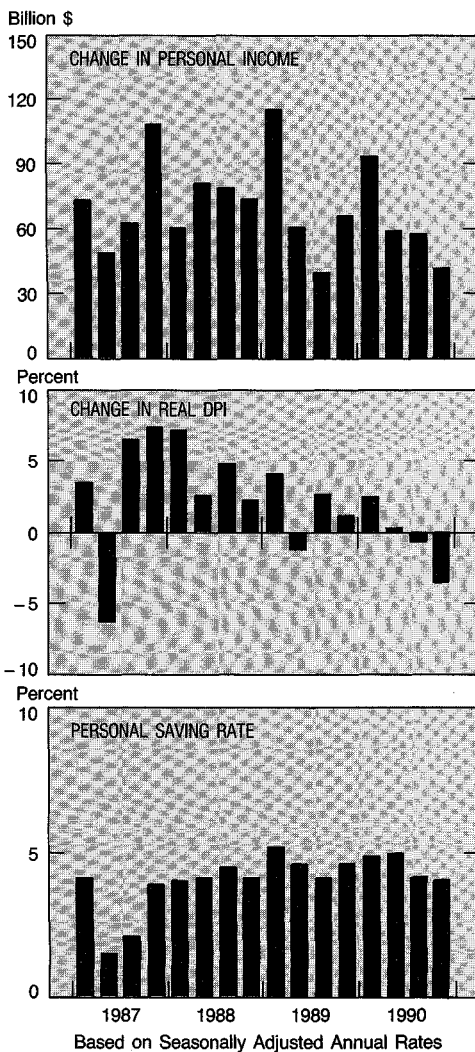
Real disposable personal income (DPI) declined 3.6 percent in the fourth quarter after declining 0.7 percent in the third (chart 3). Back-to-back declines in real DPI last occurred during the 1981-82 recession. The fourth-quarter drop in real DPI reflected a slowdown in current-dollar DPI, as well as the pickup in PCE prices.

Personal income, which is only available in current dollars, increased \$40.5 billion in the fourth quarter after increasing \$56.3 billion in the third. A sharp slowdown in wages and salaries was partly offset by an upswing in farm proprietors' income and a pickup in transfer payments (table 4).

Wage and salary disbursements increased \$4.9 billion in the fourth quarter, \$33.0 billion less than in the third. Private-sector wages and salaries declined \$1.9 billion in the fourth quarter, the first decline since the end of the 1973-75 recession. The decline was traceable to sharp downswings in employment and average weekly hours. All the major private industry components except services declined in the fourth quarter; construction and motor vehicles were especially weak—declining \$4.0 billion and \$2.6 billion, respectively. Services increased, but considerably less than in the third quarter. Government wages and salaries increased somewhat more than in the third quarter; military compensation, reflecting Operation Desert Shield, accounted for about one-half of the acceleration.

Farm proprietors' income increased \$6.5 billion in the fourth quarter after declining \$8.6 billion in the third. The upswing was entirely due to Fed-

CHART 3
Selected Personal Income and Saving Measures



Note.—Changes are from preceding quarter.

U.S. Department of Commerce, Bureau of Economic Analysis 91-1-3

Table 4.—Personal Income and Its Disposition

[Billions of dollars; seasonally adjusted at annual rates]

	Level 1990:IV	Change from preceding quarter			
		1990			
		I	II	III	IV
Wage and salary disbursements.....	2,739.1	38.9	44.7	37.9	4.9
Commodity-producing industries.....	725.6	3.2	6.5	4.2	-9.7
Manufacturing.....	545.6	3	6.9	3.7	-6.2
Other.....	180.0	2.9	-4	.5	-3.5
Distributive industries.....	641.5	12.4	10.3	5.4	-1.2
Service industries.....	853.9	12.9	19.3	22.7	9.0
Government and government enterprises.....	518.1	10.4	8.6	5.6	6.8
Other labor income.....	263.2	5.3	3.6	3.6	3.2
Proprietors' income.....	406.1	22.3	-2.3	-3.8	8.2
Farm.....	48.9	11.7	-6.4	-8.6	6.5
Nonfarm.....	357.2	10.6	4.2	4.8	1.6
Rental income of persons.....	8.5	1.4	-1.2	4.1	.1
Personal dividend income.....	126.7	2.3	2.4	2.0	1.8
Personal interest income.....	690.1	5.6	7.5	7.3	4.8
Transfer payments.....	714.3	25.0	5.8	9.7	17.9
Less: Personal contributions for social insurance.....	229.0	7.1	1.2	4.5	.4
Personal income.....	4,719.0	93.6	59.4	56.3	40.5
Less: Personal tax and nontax payments.....	718.1	5.5	21.4	13.0	8.6
Equals: Disposable personal income.....	4,000.9	88.1	38.0	43.4	31.8
Less: Personal outlays.....	3,837.4	70.9	34.2	72.0	34.8
Equals: Personal saving.....	163.5	17.2	3.8	-28.6	-3.0
Addenda: Special factors in personal income:					
In wages and salaries:					
Federal Government and Postal Service pay adjustments.....		4.2	.5	.3	.3
In farm proprietors' income:					
Agricultural subsidy payments.....		2.9	-5.1	-6.3	10.7
In transfer payments:					
Social security retroactive payments.....		-9	.4	-4	1.2
Cost-of-living increases in Federal transfer payments.....		14.7			1.1
Japanese-American World War II internec payments.....					1.8
In personal contributions for social insurance:					
Social security rate and base changes and increase in premium for supplementary medical insurance.....		5.8			
Medicare insurance premiums.....		-2.1	-1.6	3.7	0

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

eral farm subsidy payments: Subsidies increased \$10.7 billion in the fourth quarter after declining \$6.3 billion in the third. The fourth-quarter increase reflected increases in Conservation Reserve Program payments and in deficiency payments (that is, payments made because the market price of a crop is, or is projected to be, below the Federal target price). Farm income excluding subsidies declined in the third and fourth quarters—\$2.3 billion and \$4.2 billion, respectively. In both quarters, declines largely reflected lower prices for farm output. Nonfarm proprietors' income was up less than in the third quarter.

Transfer payments increased \$17.9 billion in the fourth quarter after increasing \$9.7 billion in the third. Fourth-quarter payments were boosted by several special factors: Reparation

payments to Japanese-Americans interned during World War II, cost-of-living adjustments to benefits under the Federal Food Stamps program, and retroactive social security payments to recent retirees, which resulted mainly from the recalculation of the earnings base underlying social security benefits.

Among the remaining components of personal income, personal interest income increased somewhat less than in the third quarter; the slowdown largely reflected recent declines in interest rates. Increases in other labor income and personal dividend income were similar to those in the third quarter; rental income changed little after an increase. Personal contributions for social insurance, which are subtracted in deriving personal income, increased \$0.4 billion in the fourth quarter af-

ter increasing \$4.5 billion in the third. (The repeal of the major provisions of the Medicare Catastrophic Act of 1988 had added \$3.7 billion to the third-quarter increase.)

Personal tax and nontax payments increased \$8.6 billion in the fourth quarter after increasing \$13.0 billion in the third. The slowdown reflected slower growth in the taxable earnings base.

In the fourth quarter, personal outlays—mainly PCE—increased more than DPI; thus, personal saving declined. In the third quarter, personal saving had dropped much more sharply. The personal saving rate declined 0.1 percentage point, to 4.1 percent, in the fourth quarter after declining 0.8 percentage point in the third.

BEA Vacancies

BEA is hiring additional staff—primarily economists and accountants. The positions are in national economic accounting, balance of payments accounting, and international investment surveys. Requests for information, including how to apply for these positions, may be addressed to James J. Hartman, Administrative Officer, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230; phone (202) 523-0508.

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

[Billions of dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Gross national product	5,200.8	5,463.0	5,238.6	5,289.3	5,375.4	5,443.3	5,514.6	5,518.9
Less: Exports of goods and services	626.2	670.4	623.7	642.8	661.3	659.7	672.7	687.7
Plus: Imports of goods and services	672.3	708.4	673.0	678.1	691.3	684.6	714.1	743.7
Equals: Gross domestic purchases ²	5,246.9	5,501.1	5,287.9	5,324.6	5,405.3	5,468.2	5,555.9	5,574.8
Less: Change in business inventories.....	28.3	-2.2	28.9	25.0	-11.8	13.4	9.0	-19.5
Equals: Final sales to domestic purchasers ³	5,218.6	5,503.3	5,259.0	5,299.6	5,417.1	5,454.7	5,546.9	5,594.4

1. See the box on page 21 of the July 89 SURVEY OF CURRENT BUSINESS.
 2. Purchases in the United States of goods and services wherever produced.
 3. Final sales in the United States 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 National Product by Sector

[Billions of dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Gross national product	5,200.8	5,463.0	5,238.6	5,289.3	5,375.4	5,443.3	5,514.6	5,518.9
Gross domestic product.....	5,163.2	5,424.4	5,201.4	5,246.5	5,333.8	5,411.7	5,471.7	5,480.6
Business.....	4,418.1	4,620.3	4,449.8	4,483.1	4,551.8	4,613.5	4,659.6	4,656.2
Nonfarm	4,346.6	4,530.2	4,379.4	4,399.5	4,455.8	4,522.1	4,571.4	4,571.4
Nonfarm less housing.....	3,915.3	4,071.1	3,939.4	3,955.8	4,007.6	4,067.5	4,106.9	4,102.4
Housing	431.2	459.1	440.1	443.7	448.1	454.7	464.4	469.0
Farm	88.6	93.2	86.7	86.7	95.3	94.6	93.1	89.7
Statistical discrepancy	-17.0	-3.1	-16.2	-3.0	.7	-3.2	-4.9	-4.9
Households and institutions.....	203.6	224.8	206.5	210.3	215.0	221.4	229.3	233.5
Private households.....	10.3	10.8	10.3	10.4	10.5	10.8	10.9	11.0
Nonprofit institutions.....	193.3	214.0	196.2	199.9	204.5	210.6	218.4	222.5
Government.....	541.6	579.4	545.1	553.0	567.0	576.7	582.8	590.9
Federal.....	168.6	178.5	168.7	169.7	176.6	179.2	178.3	179.7
State and local.....	373.0	400.9	376.4	383.3	390.4	397.5	404.5	411.2
Rest of the world.....	37.6	38.6	37.2	42.8	41.6	31.6	42.9	38.3
Addendum:								
Gross domestic business product less housing.....	3,978.4							

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

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

[Billions of 1982 dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Gross national product	4,117.7	4,155.8	4,129.7	4,133.2	4,150.6	4,155.1	4,170.0	4,147.6
Less: Exports of goods and services	593.3	630.3	592.5	611.6	628.1	620.1	630.5	642.4
Plus: Imports of goods and services	647.4	667.8	656.6	659.4	663.5	664.7	677.0	666.0
Equals: Gross domestic purchases ²	4,171.8	4,193.3	4,193.9	4,181.1	4,185.9	4,199.7	4,216.5	4,171.1
Less: Change in business inventories.....	23.8	-1.1	24.6	18.9	-2.2	9.5	4.7	-16.3
Equals: Final sales to domestic purchasers ³	4,148.1	4,194.4	4,169.3	4,162.2	4,188.1	4,190.1	4,211.8	4,187.4

1. See the box on page 21 of the July 89 SURVEY OF CURRENT BUSINESS.
 2. Purchases in the United States of goods and services wherever produced.
 3. Final sales in the United States 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 National Product by Sector in Constant Dollars

[Billions of 1982 dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Gross national product	4,117.7	4,155.8	4,129.7	4,133.2	4,150.6	4,155.1	4,170.0	4,147.6
Gross domestic product.....	4,087.6	4,126.2	4,100.1	4,099.5	4,118.2	4,130.6	4,137.5	4,118.6
Business.....	3,557.9	3,581.9	3,567.9	3,564.4	3,580.0	3,587.2	3,590.8	3,569.9
Nonfarm	3,492.9	3,504.4	3,503.5	3,487.5	3,500.3	3,510.3	3,514.3	3,492.7
Nonfarm less housing.....	3,196.0	3,202.3	3,205.3	3,187.8	3,199.1	3,208.4	3,211.9	3,189.6
Housing	296.9	302.1	298.2	299.7	301.2	301.8	302.4	303.1
Farm	78.8	79.9	77.4	79.3	79.1	79.4	80.2	80.9
Statistical discrepancy	-13.8	-2.4	-13.0	-2.4	.6	-2.5	-3.7	-3.7
Households and institutions.....	146.2	154.6	148.0	149.2	150.8	153.6	156.7	157.2
Private households.....	9.5	9.7	9.6	9.7	9.7	9.8	9.8	9.7
Nonprofit institutions.....	136.6	144.8	138.4	139.6	141.2	143.7	146.9	147.5
Government.....	383.5	389.7	384.2	385.9	387.4	389.9	390.0	391.5
Federal.....	126.5	127.6	126.5	126.8	127.0	128.2	127.4	127.8
State and local.....	257.0	262.1	257.7	259.2	260.4	261.7	262.7	263.6
Rest of the world.....	30.2	29.6	29.6	33.7	32.4	24.5	32.6	29.0
Addendum:								
Gross domestic business product less housing.....	3,252.6							

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

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

[Billions of dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Gross national product	5,200.8	5,463.0	5,238.6	5,289.3	5,375.4	5,443.3	5,514.6	5,518.9
Less: Capital consumption allowances with capital consumption adjustment	554.4	575.7	567.5	572.5	567.0	571.1	579.3	585.2
Capital consumption allowances without capital consumption adjustment	541.9	540.5	544.6	544.3	538.6	539.3	540.7	543.3
Less: Capital consumption adjustment	-12.6	-35.2	-22.9	-28.2	-28.4	-31.8	-38.6	-41.9
Equals: Net national product	4,646.4	4,887.4	4,671.1	4,716.8	4,808.4	4,872.2	4,935.3	4,933.7
Less: Indirect business tax and nontax liability	414.0	440.4	419.9	421.5	431.7	433.0	444.9	451.9
Business transfer payments	32.4	35.0	32.7	33.4	34.1	34.7	35.4	36.0
Statistical discrepancy	-17.0	-3.1	-16.2	-3.0	.7	-3.2	-4.9	
Plus: Subsidies less current surplus of government enterprises	6.3	2.5	-2.6	2.2	8.4	3.6	-7.5	5.3
Equals: National income	4,223.3	4,417.5	4,232.1	4,267.1	4,350.3	4,411.3	4,452.4	
Less: Corporate profits with inventory valuation and capital consumption adjustments	311.6	297.1	306.7	290.9	296.8	306.6	300.7	
Net interest	445.1	467.1	456.2	461.7	463.6	466.2	468.3	470.2
Contributions for social insurance	476.8	506.9	479.1	484.2	498.9	503.9	511.3	513.6
Wage accruals less disbursements	0	0	0	0	0	0	0	0
Plus: Government transfer payments to persons	604.5	659.5	609.1	622.5	646.8	652.0	661.0	678.3
Personal interest income	643.2	680.9	655.2	664.9	670.5	678.0	685.3	690.1
Personal dividend income	114.4	123.8	115.7	118.2	120.5	122.9	124.9	126.7
Business transfer payments	32.4	35.0	32.7	33.4	34.1	34.7	35.4	36.0
Equals: Personal income	4,384.3	4,645.6	4,402.8	4,469.2	4,562.8	4,622.2	4,678.5	4,719.0

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

[Billions of 1982 dollars]

Gross national product	4,117.7	4,155.8	4,129.7	4,133.2	4,150.6	4,155.1	4,170.0	4,147.6
Less: Capital consumption allowances with capital consumption adjustment	506.0	519.7	515.6	519.8	512.5	516.5	522.5	527.2
Equals: Net national product	3,611.7	3,636.1	3,614.2	3,613.4	3,638.0	3,638.6	3,647.5	3,620.4
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises	333.4	333.3	334.8	335.9	334.3	332.5	335.5	330.9
Statistical discrepancy	-13.8	-2.4	-13.0	-2.4	.6	-2.5	-3.7	
Equals: National income	3,292.1	3,305.2	3,292.4	3,280.0	3,303.2	3,308.6	3,315.7	

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

[Billions of 1982 dollars]

Gross national product	4,117.7	4,155.8	4,129.7	4,133.2	4,150.6	4,155.1	4,170.0	4,147.6
Less: Net exports of goods and services	-54.1	-37.5	-64.1	-47.9	-35.4	-44.6	-46.5	-23.6
Exports	593.3	630.3	592.5	611.6	628.1	620.1	630.5	642.4
Imports	647.4	667.8	656.6	659.4	663.5	664.7	677.0	666.0
Equals: Gross domestic purchases	4,171.8	4,193.3	4,193.9	4,181.1	4,185.9	4,199.7	4,216.5	4,171.1
Plus: Command-basis net exports of goods and services	-44.4	-35.8	-48.1	-34.3	-28.8	-24.2	-39.2	-50.1
Command-basis exports ¹	603.1	631.9	608.5	625.1	634.7	640.5	637.8	615.9
Imports	647.4	667.8	656.6	659.4	663.5	664.7	677.0	666.0
Equals: Command-basis gross national product	4,127.4	4,157.5	4,145.8	4,146.8	4,157.2	4,175.5	4,177.3	4,121.0
Addendum:								
Terms of trade ²	101.6	100.3	102.7	102.2	101.1	103.3	101.1	95.9

1. Exports of goods and services deflated by the implicit price deflator for imports of goods and services.
2. Ratio of the implicit price deflator for exports of goods and services to the implicit price deflator for imports of goods and services 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]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
National income	4,223.3	4,417.5	4,232.1	4,267.1	4,350.3	4,411.3	4,452.4	
Compensation of employees	3,079.0	3,244.2	3,095.2	3,128.6	3,180.4	3,232.5	3,276.9	3,286.9
Wages and salaries	2,573.2	2,705.3	2,586.6	2,612.7	2,651.6	2,696.3	2,734.2	2,739.1
Government and government enterprises	476.6	508.0	479.9	486.7	497.1	505.7	511.3	518.1
Other	2,096.6	2,197.3	2,106.7	2,126.0	2,154.5	2,190.6	2,222.9	2,221.0
Supplements to wages and salaries	505.8	538.9	508.6	515.9	528.8	536.1	542.7	547.8
Employer contributions for social insurance	263.9	280.8	265.1	268.4	276.0	279.7	282.7	284.6
Other labor income	241.9	258.1	243.5	247.5	252.8	256.4	260.0	263.2
Proprietors' income with inventory valuation and capital consumption adjustments	379.3	402.4	368.1	381.7	404.0	401.7	397.9	406.1
Farm	48.6	49.9	38.7	45.7	57.4	51.0	42.4	48.9
Proprietors' income with inventory valuation adjustment	56.3	57.5	46.7	53.4	65.1	58.5	49.9	56.4
Capital consumption adjustment	-7.7	-7.6	-8.0	-7.7	-7.7	-7.6	-7.6	-7.5
Nonfarm	330.7	352.5	329.5	336.0	346.6	350.8	355.6	357.2
Proprietors' income	298.9	323.9	298.9	306.7	317.1	320.7	329.3	328.4
Inventory valuation adjustment	-1.0	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1
Capital consumption adjustment	32.8	30.0	31.9	30.4	30.3	30.2	29.8	29.5
Rental income of persons with capital consumption adjustment	8.2	6.7	5.8	4.1	5.5	4.3	8.4	8.5
Rental income of persons	64.1	61.4	66.6	63.0	60.2	58.8	63.5	63.2
Capital consumption adjustment	-55.8	-54.8	-60.8	-58.9	-54.6	-54.5	-55.1	-54.7
Corporate profits with inventory valuation and capital consumption adjustments	311.6	297.1	306.7	290.9	296.8	306.6	300.7	
Corporate profits with inventory valuation adjustment	286.1	292.1	285.3	275.3	285.5	298.8	298.7	
Profits before tax	307.7	305.4	291.4	289.8	296.9	299.3	318.5	
Profits tax liability	135.1	134.1	127.8	123.5	129.9	133.1	139.1	
Profits after tax	172.6	171.3	163.6	166.3	167.1	166.1	179.4	
Dividends	123.5	133.9	125.0	127.7	130.3	133.0	135.1	137.2
Undistributed profits	49.1	37.4	38.6	38.6	36.8	33.2	44.3	
Inventory valuation adjustment	-21.7	-13.2	-6.1	-14.5	-11.4	-5.1	-19.8	-21.2
Capital consumption adjustment	25.5	4.9	21.4	15.6	11.3	7.7	2.0	-1.4
Net interest	445.1	467.1	456.2	461.7	463.6	468.3	470.2	
Addenda:								
Corporate profits after tax with inventory valuation and capital consumption adjustments	176.5	163.0	178.9	167.5	167.0	173.4	161.6	
Net cash flow with inventory valuation and capital consumption adjustments	399.4	392.2	405.5	396.3	393.4	400.2	392.0	
Undistributed profits with inventory valuation and capital consumption adjustments	53.0	29.1	53.9	39.8	36.7	40.5	26.5	
Capital consumption allowances with capital consumption adjustment	346.4	363.0	351.6	356.5	356.7	359.7	365.5	370.3
Less: Inventory valuation adjustment	-21.7	-13.2	-6.1	-14.5	-11.4	-5.1	-19.8	-21.2
Equals: Net cash flow	421.1	405.4	411.6	410.8	404.9	400.6	411.8	

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

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Billions of dollars								
Gross domestic product of corporate business	3,086.4	3,200.4	3,110.0	3,109.5	3,136.3	3,206.0	3,234.4	
Capital consumption allowances with capital consumption adjustment.....	346.4	363.0	351.6	356.5	356.7	359.7	365.5	370.3
Net domestic product	2,739.9	2,837.4	2,758.4	2,753.0	2,779.5	2,846.3	2,869.0	
Indirect business tax and nontax liability plus business transfer payments less subsidies.....	295.1	313.6	299.9	299.9	307.3	307.6	317.7	321.8
Domestic income	2,444.9	2,523.8	2,458.5	2,453.1	2,472.3	2,538.7	2,551.3	
Compensation of employees.....	2,058.1	2,140.4	2,066.0	2,080.6	2,090.1	2,140.3	2,167.7	2,163.5
Wages and salaries.....	1,731.5	1,800.3	1,738.0	1,750.3	1,758.1	1,800.4	1,823.9	1,818.6
Supplements to wages and salaries.....	326.7	340.1	328.0	330.3	332.0	339.8	343.8	344.9
Corporate profits with inventory valuation and capital consumption adjustments.....	260.7	243.0	257.5	234.0	243.9	257.6	243.1	
Profits before tax.....	256.9	251.4	242.1	232.9	244.0	250.3	260.9	
Profits tax liability.....	135.1	134.1	127.8	123.5	129.9	133.1	139.1	
Profits after tax.....	121.8	117.3	114.3	109.4	114.1	117.2	121.8	
Dividends.....	104.3	112.5	104.9	100.4	115.6	109.4	112.7	112.3
Undistributed profits.....	17.5	4.8	9.4	9.0	-1.4	7.8	9.1	
Inventory valuation adjustment.....	-21.7	-13.2	-6.1	-14.5	-11.4	-5	-19.8	-21.2
Capital consumption adjustment.....	23.5	4.9	21.4	15.6	11.3	7.7	2.0	-1.4
Net interest	126.0	140.3	135.0	138.5	138.3	140.8	140.5	141.7
Billions of 1982 dollars								
Gross domestic product of nonfinancial corporate business	2,431.2	2,429.5	2,443.9	2,421.8	2,423.1	2,440.1	2,435.1	
Capital consumption allowances with capital consumption adjustment.....	290.7	298.0	294.0	296.9	294.6	296.9	299.1	301.4
Net domestic product	2,140.5	2,131.5	2,149.9	2,125.0	2,128.5	2,143.1	2,135.9	
Indirect business tax and nontax liability plus business transfer payments less subsidies.....	213.3	212.7	214.5	214.7	213.5	212.4	214.4	210.6
Domestic income	1,927.3	1,918.8	1,935.4	1,910.3	1,915.0	1,930.7	1,921.5	

Table 1.17.—Auto Output

[Billions of dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Auto output	131.3	127.8	132.5	128.2	120.3	128.9	141.3	120.8
Final sales	128.9	131.0	137.8	123.0	135.0	133.8	133.3	122.1
Personal consumption expenditures.....	141.4	139.8	149.5	133.9	145.3	140.2	139.8	133.9
New autos.....	99.7	96.6	109.1	90.1	102.6	97.6	95.2	91.1
Net purchases of used autos.....	41.6	43.2	40.5	43.8	42.7	42.6	44.6	42.7
Producers' durable equipment.....	20.3	25.1	21.1	18.6	22.3	24.2	28.9	25.1
New autos.....	50.1	53.8	52.3	46.7	50.0	52.2	59.6	53.2
Net purchases of used autos.....	-29.8	-28.6	-31.2	-28.1	-27.8	-28.0	-30.7	-28.1
Net exports of goods and services.....	-34.4	-35.7	-34.4	-30.9	-34.6	-32.4	-37.0	-38.8
Exports.....	10.0	10.6	9.4	11.2	10.9	11.4	10.2	9.8
Imports.....	44.5	46.3	43.8	42.1	45.5	43.8	47.2	48.6
Government purchases of goods and services.....	1.6	1.8	1.5	1.4	1.9	1.7	1.6	1.9
Change in business inventories of new and used autos	2.4	-3.2	-5.3	5.1	-14.6	-4.9	8.0	-1.3
New.....	1.6	-3.0	-3.3	6.6	-14.6	-3.8	7.6	-1.3
Used.....	.8	-1	3.1	-1.4	0	-1.1	5	.1
Addenda:								
Domestic output of new autos ¹	105.2	100.4	103.4	100.2	92.5	103.4	113.4	92.2
Sales of imported new autos ²	57.6	58.4	60.7	54.8	58.1	59.1	58.8	57.7

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 1.18.—Auto Output in Constant Dollars

[Billions of 1982 dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Auto output	110.4	105.6	111.4	106.3	99.0	107.3	117.2	99.1
Final sales	109.0	108.8	116.6	103.4	111.7	110.8	111.2	101.3
Personal consumption expenditures.....	115.1	113.0	122.2	108.6	117.0	113.8	113.3	107.8
New autos.....	81.5	77.9	89.7	73.3	82.3	78.8	77.2	73.1
Net purchases of used autos.....	33.6	35.1	32.5	35.2	34.7	35.0	36.1	34.7
Producers' durable equipment.....	17.2	19.9	18.0	15.3	17.6	19.1	23.3	19.6
New autos.....	41.0	43.3	43.0	38.0	40.1	42.2	48.3	42.7
Net purchases of used autos.....	-23.8	-23.4	-25.0	-22.6	-22.6	-23.1	-25.0	-23.0
Net exports of goods and services.....	-24.7	-25.6	-24.9	-21.8	-24.5	-23.5	-26.8	-27.7
Exports.....	7.9	8.1	7.3	8.8	8.4	8.8	7.8	7.4
Imports.....	32.6	33.7	32.2	30.6	32.9	32.3	34.6	35.2
Government purchases of goods and services.....	1.4	1.5	1.4	1.2	1.6	1.5	1.4	1.6
Change in business inventories of new and used autos	1.4	-3.1	-5.2	2.9	-12.7	-3.5	6.0	-2.3
New.....	.7	-3.0	-7.7	4.1	-12.7	-2.5	5.6	-2.3
Used.....	.6	-1	2.5	-1.2	0	-9	.4	0
Addenda:								
Domestic output of new autos ¹	85.1	80.0	83.9	80.3	72.9	82.7	91.2	73.0
Sales of imported new autos ²	47.1	47.1	49.9	44.6	46.6	47.7	47.7	46.3

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 5.12.—Fixed Investment by Type

[Billions of dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Fixed investment	742.9	747.2	746.9	737.7	758.9	745.6	750.7	733.6
Nonresidential	511.9	524.3	518.1	511.8	523.1	516.5	532.8	525.0
Structures.....	146.2	147.2	147.0	147.1	148.8	147.2	149.8	142.8
Nonresidential buildings, excluding farm.....	104.3	103.5	106.0	104.5	104.9	104.6	106.1	98.4
Public utilities.....	25.7	25.9	24.8	24.9	25.4	25.8	25.9	26.2
Mining exploration, shafts, and wells.....	11.1	11.7	11.1	12.0	12.4	10.9	11.5	12.1
Other.....	5.1	6.1	5.1	5.7	6.1	5.9	6.2	6.0
Producers' durable equipment.....	365.7	377.2	371.0	364.7	374.3	369.3	383.0	382.2
Information processing and related equipment.....	116.0	119.7	116.4	118.2	120.4	118.6	119.1	120.8
Industrial equipment.....	93.1	92.4	93.3	93.8	95.1	90.6	91.3	92.5
Transportation and related equipment.....	76.2	83.5	80.4	70.7	77.9	79.4	91.7	84.9
Other.....	80.4	81.6	80.8	82.0	80.9	80.7	80.8	84.0
Residential	231.0	222.9	228.9	225.9	235.9	229.1	217.9	208.6
Single-family structures.....	116.7	111.1	114.4	113.8	122.6	115.1	107.4	99.5
Multifamily structures.....	23.3	20.1	23.9	21.6	20.8	20.9	19.6	19.1
Other.....	90.9	91.6	90.6	90.5	92.4	93.1	90.9	90.0

Table 5.13.—Fixed Investment by Type in Constant Dollars

[Billions of 1982 dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Fixed investment	693.1	691.4	697.7	690.2	702.9	691.2	692.3	679.1
Nonresidential	506.1	513.9	513.3	508.4	514.6	508.4	519.3	513.2
Structures.....	122.4	121.0	122.7	123.1	123.8	120.9	122.4	117.0
Nonresidential buildings, excluding farm.....	81.2	78.6	82.3	80.6	80.2	79.7	80.2	74.2
Public utilities.....	21.3	20.7	20.4	20.2	20.5	20.7	20.7	20.8
Mining exploration, shafts, and wells.....	15.7	16.9	15.9	17.7	18.2	15.8	16.5	17.3
Other.....	4.1	4.8	4.2	4.6	4.9	4.7	5.0	4.8
Producers' durable equipment.....	383.7	392.9	390.6	385.4	390.8	387.5	397.0	396.3
Information processing and related equipment.....	179.0	189.1	181.9	186.0	188.4	188.1	187.9	192.2
Industrial equipment.....	74.9	71.4	74.8	74.6	74.4	70.6	70.3	70.3
Transportation and related equipment.....	63.8	67.5	67.8	58.2	63.3	64.4	74.5	67.7
Other.....	66.1	64.9	66.1	66.5	64.7	64.5	64.2	66.0
Residential	187.0	177.5	184.4	181.8	188.3	182.8	173.0	165.9
Single-family structures.....	93.5	87.7	91.2	90.6	96.9	91.1	84.2	78.5
Multifamily structures.....	18.7	15.9	19.0	17.2	16.4	16.6	15.4	15.1
Other.....	74.8	74.0	74.1	74.0	75.0	75.2	73.4	72.4

Table 6.3B.—National Income Without Capital Consumption Adjustment by Industry

[Billions of dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
National income without capital consumption adjustment	4,228.5	4,444.9	4,247.6	4,287.6	4,371.0	4,435.4	4,483.2	
Domestic industries	4,190.9	4,406.3	4,210.4	4,244.8	4,329.3	4,403.8	4,440.4	
Private industries	3,584.9	3,758.0	3,600.6	3,625.9	3,694.9	3,758.8	3,788.3	
Agriculture, forestry, and fisheries.....	101.0	103.4	91.7	98.7	111.0	104.5	96.0	
Mining.....	36.4	41.6	36.5	37.4	39.3	40.4	41.2	
Construction.....	225.1	225.4	224.7	227.8	232.1	227.7	225.0	
Manufacturing.....	803.8	809.5	811.0	793.8	800.6	819.8	814.7	
Durable goods.....	465.6	463.8	467.9	458.3	464.8	471.5	464.5	
Nondurable goods.....	338.2	345.7	343.1	335.6	335.8	348.4	350.1	
Transportation and public utilities.....	314.2	329.3	313.9	314.6	322.8	328.3	332.7	
Transportation.....	136.6	144.3	137.0	136.4	140.8	144.8	145.8	
Communication.....	87.4	92.5	85.4	89.8	91.1	91.9	93.5	
Electric, gas, and sanitary services.....	90.2	92.4	91.5	88.4	90.9	91.7	93.3	
Wholesale trade.....	247.4	261.2	249.2	255.8	256.5	260.4	263.7	
Retail trade.....	360.1	376.4	365.2	366.3	372.4	381.5	377.2	
Finance, insurance, and real estate.....	613.8	647.6	615.5	621.6	630.6	643.6	658.5	
Services.....	883.0	963.7	892.9	910.0	929.6	952.5	979.4	
Government and government enterprises	606.0	648.3	609.8	618.9	634.4	645.0	652.0	
Rest of the world	37.6	38.6	37.2	42.8	41.6	31.6	42.9	

Table 6.18B.—Corporate Profits by Industry

[Billions of dollars]

	1989	1990	Seasonally adjusted at annual rates					
			1989		1990			
			III	IV	I	II	III	IV
Corporate profits with inventory valuation and capital consumption adjustments	311.6	297.1	306.7	290.9	296.8	306.6	300.7	
Domestic industries	260.7	243.0	257.5	234.0	243.9	257.6	243.1	
Financial.....	19.7	21.7	13.1	10.3	19.3	21.8	24.3	
Nonfinancial.....	241.0	221.4	244.4	223.8	224.5	235.8	218.8	
Rest of the world	50.9	54.0	49.3	56.9	52.9	48.9	57.6	
Corporate profits with inventory valuation adjustment	286.1	292.1	285.3	275.3	285.5	298.8	298.7	
Domestic industries	235.2	238.1	236.0	218.4	232.6	249.9	241.1	
Financial.....	15.4	18.6	9.2	6.9	16.1	18.2	21.7	
Federal Reserve banks.....	20.7	21.9	20.5	20.8	20.8	21.1	22.6	
Other.....	-5.2	-3.3	-11.3	-13.9	-4.7	-2.9	-8	
Nonfinancial	219.8	219.6	226.9	211.5	216.5	231.7	219.3	
Manufacturing.....	96.1	91.8	99.9	83.7	90.1	100.8	91.2	
Durable goods.....	37.1	33.5	37.4	30.2	37.4	39.5	30.2	
Primary metal industries.....	6.2	4.3	7.0	4.3	4.9	5.4	3.6	
Fabricated metal products.....	6.7	5.5	7.2	4.6	6.4	6.0	4.8	
Machinery, except electrical.....	4.7	6.9	5.0	5.7	7.3	7.9	6.3	
Electric and electronic equipment.....	7.4	7.3	6.0	8.9	8.6	7.8	6.6	
Motor vehicles and equipment.....	-1.9	-6.0	-2.7	-5.8	-7.2	-4.3	-5.4	
Other.....	13.9	15.6	15.1	12.6	17.4	16.7	14.3	
Nondurable goods.....	59.0	58.3	62.4	53.5	52.7	61.3	60.9	
Food and kindred products.....	14.0	14.3	13.3	12.4	10.9	15.3	15.7	
Chemicals and allied products.....	21.7	21.9	21.6	20.1	21.9	22.7	22.1	
Petroleum and coal products.....	3	2.9	3.9	-1	1.0	3.7	3.7	
Other.....	23.1	19.2	23.6	21.1	18.9	19.6	19.4	
Transportation and public utilities.....	43.6	42.0	42.9	40.2	41.5	41.9	42.8	
Wholesale and retail trade.....	38.7	40.3	41.4	41.9	39.2	44.4	39.5	
Other.....	41.4	45.5	42.7	45.7	45.7	44.6	45.9	
Rest of the world	50.9	54.0	49.3	56.9	52.9	48.9	57.6	

Table 7.1.—Fixed-Weighted Price Indexes for Gross National Product, 1982 Weights

[Index numbers, 1982=100]

	1989	1990	Seasonally adjusted					
			1989		1990			
			III	IV	I	II	III	IV
Gross national product	129.5	135.3	130.0	131.2	133.3	134.6	136.0	137.4
Personal consumption expenditures	131.6	138.4	132.1	133.7	136.1	137.1	139.1	141.4
Durable goods.....	114.3	116.8	114.4	115.2	116.4	116.5	116.7	117.4
Nondurable goods.....	123.9	132.3	124.4	125.7	129.7	130.3	132.8	136.4
Services.....	141.7	148.4	142.3	144.2	145.7	147.3	149.3	151.1
Gross private domestic investment								
Fixed investment.....	115.0	118.1	115.3	116.1	117.3	117.6	118.4	119.2
Nonresidential.....	112.6	116.0	112.9	113.8	115.0	115.5	116.2	117.3
Structures.....	110.3	112.6	110.5	110.9	111.6	112.2	113.0	113.6
Producers' durable equipment.....	114.1	118.2	114.4	115.7	117.2	117.6	118.2	119.6
Residential.....	123.3	125.5	123.9	124.1	125.1	125.2	126.0	125.8
Change in business inventories.....								
Net exports of goods and services								
Exports.....	114.4	117.2	114.5	114.4	115.9	116.7	117.6	118.2
Imports.....	109.5	114.1	108.8	109.9	112.3	110.0	113.6	120.9
Government purchases of goods and services	130.6	136.5	131.0	132.1	134.4	135.5	137.0	139.1
Federal.....	122.4	127.3	122.5	123.0	125.8	126.5	127.5	129.3
National defense.....	121.8	127.1	121.8	122.3	125.6	126.0	127.2	129.6
Nondefense.....	123.9	127.6	124.1	124.9	126.6	127.6	128.0	128.5
State and local.....	136.7	143.3	137.3	138.9	140.8	142.1	144.0	146.3
Addenda:								
Final sales.....	129.3	135.2	129.9	131.1	133.2	134.4	135.8	137.2
Personal consumption expenditures, food.....	129.2	137.1	129.8	131.4	135.8	136.1	137.5	139.2
Personal consumption expenditures, energy.....	97.8	106.4	98.3	98.3	102.3	100.6	105.5	117.0
Other personal consumption expenditures.....	136.4	142.7	136.9	138.7	140.3	141.9	143.6	145.1

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

Table 7.2.—Fixed-Weighted Price Indexes for Gross National Product by Major Type of Product, 1982 Weights

[Index numbers, 1982=100]

	1989	1990	Seasonally adjusted					
			1989		1990			
			III	IV	I	II	III	IV
Gross national product	129.5	135.3	130.0	131.2	133.3	134.6	136.0	137.4
Final sales.....	129.3	135.2	129.9	131.1	133.2	134.4	135.8	137.2
Change in business inventories.....								
Goods	119.9	125.4	120.4	121.3	123.9	125.1	126.1	127.4
Final sales.....	119.7	125.2	120.2	121.1	123.7	124.8	125.9	127.2
Change in business inventories.....								
Durable goods.....	110.8	113.5	111.2	112.0	113.4	113.9	114.2	114.8
Final sales.....	110.9	113.5	111.4	112.1	113.5	113.9	114.3	114.8
Change in business inventories.....								
Nondurable goods.....	126.0	133.5	126.5	127.6	130.9	132.5	134.1	135.9
Final sales.....	125.8	133.2	126.3	127.3	130.7	132.2	133.8	135.6
Change in business inventories.....								
Services	143.0	149.9	143.7	145.3	144.1	145.7	147.4	149.1
Structures	117.3	119.5	117.6	118.0	118.9	119.2	119.9	120.2

Table 7.3.—Fixed-Weighted Price Indexes for Relation of Gross National Product, Gross Domestic Purchases, and Final Sales to Domestic Purchasers, 1982 Weights

[Index numbers, 1982=100]

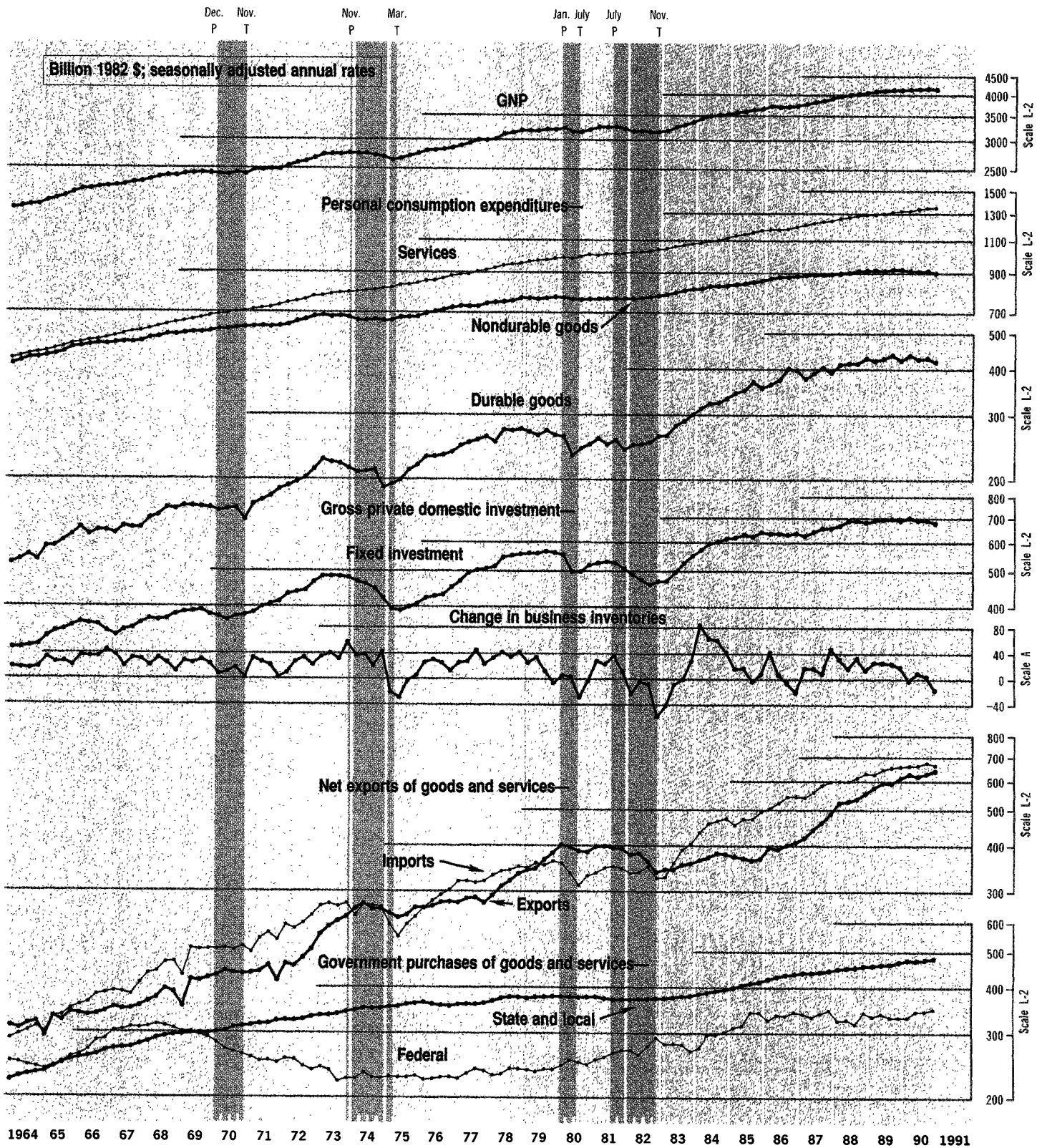
	1989	1990	Seasonally adjusted					
			1989		1990			
			III	IV	I	II	III	IV
Gross national product	129.5	135.3	130.0	131.2	133.3	134.6	136.0	137.4
Less: Exports of goods and services.....	114.4	117.2	114.5	114.4	115.9	116.7	117.6	118.2
Plus: Imports of goods and services.....	109.5	114.1	108.8	109.9	112.3	110.0	113.6	120.9
Equals: Gross domestic purchases ¹	129.1	135.2	129.6	130.9	133.1	134.1	135.7	137.8
Less: Change in business inventories.....								
Equals: Final sales to domestic purchasers ²	129.0	135.0	129.4	130.7	132.9	133.9	135.5	137.7

1. Purchases in the United States of goods and services wherever produced.
2. Final sales in the United States of goods and services wherever produced.

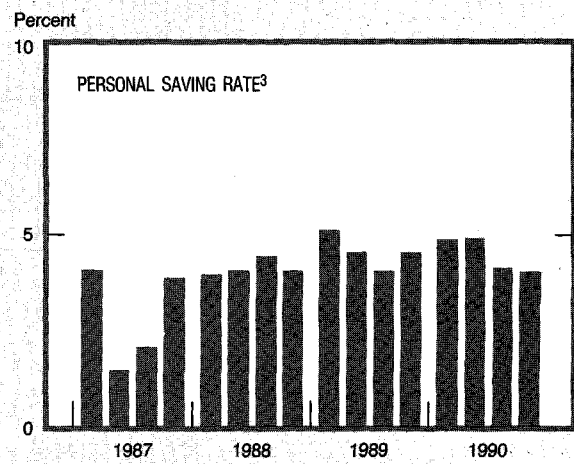
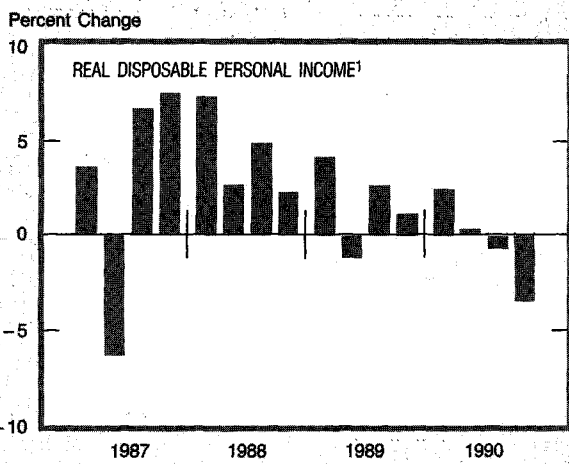
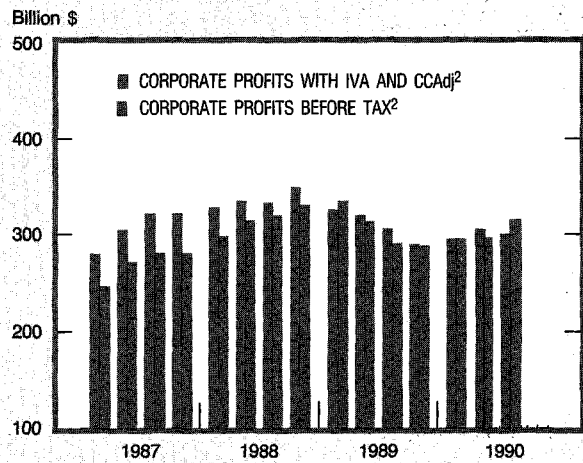
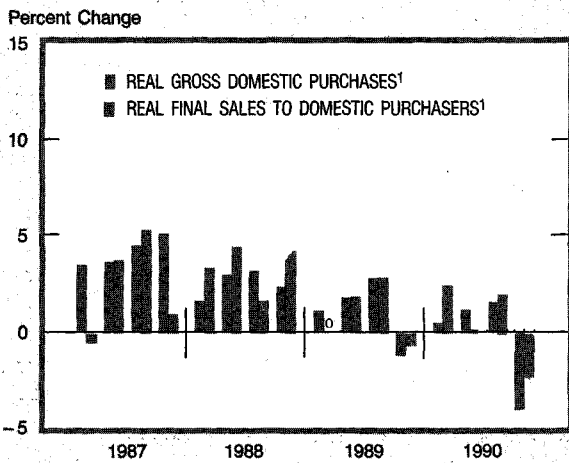
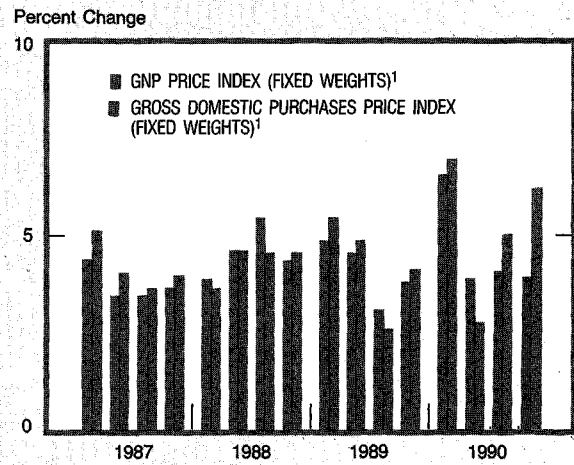
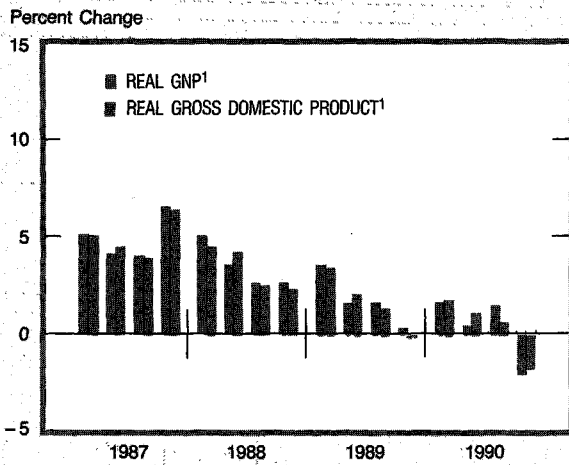
NOTE.—Percent changes from preceding period for selected items in this table are shown in table 8.1.

NIPA Charts

REAL GNP AND ITS COMPONENTS: TRENDS AND CYCLES



SELECTED SERIES: RECENT QUARTERS

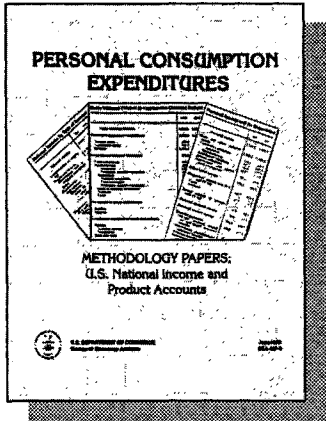


¹Percent change at annual rate from preceding quarter; based on seasonally adjusted estimates.
²Seasonally adjusted annual rate; IVA is inventory valuation adjustment, and CCAdj is capital consumption adjustment.
³Personal saving as percentage of disposable personal income; based on seasonally adjusted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

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

PERSONAL CONSUMPTION EXPENDITURES

NIPA Methodology Paper No. 6



Personal Consumption Expenditures is the latest in BEA’s series of methodology papers on the national income and product accounts (NIPA’s). These methodology papers describe both the conceptual framework for and the practical aspects of producing the NIPA’s, an essential tool for analyzing the U.S. economy.

Personal Consumption Expenditures

- Presents the conceptual basis and framework for personal consumption expenditures (PCE) in the NIPA’s
- Describes the presentation of the estimates
- Details the sources and methods used to prepare annual, quarterly, and monthly estimates of PCE
- Includes a bibliography, definitions, and convenient tabular summaries of estimating procedures

Personal Consumption Expenditures will be of interest and use to economists, researchers, scholars, economic forecasters, public officials, students--to everyone interested in the conceptual and practical aspects of national economic accounting.

Still Available from GPO: Government Transactions, NIPA Methodology Paper No. 5

Superintendent of Documents **Publications Order Form**

Order Processing Code:
* **6910**

**Charge your order.
It's easy!**



To fax your orders and inquiries—(202) 275-0019

YES, please send me the following indicated publications:

_____ copies of **PERSONAL CONSUMPTION EXPENDITURES**, S/N 003-010-00200-0 at \$4.50 each.

_____ copies of **GOVERNMENT TRANSACTIONS**, S/N 003-010-00187-9 at \$5.50 each.

Please send me your **Free Catalog** of hundreds of bestselling Government books.

The total cost of my order is \$_____. (International customers please add 25%.) Prices include regular domestic postage and handling and are good through 3/91. After this date, please call Order and Information Desk at 202-783-3238 to verify prices.

Please Choose Method of Payment:

- Check payable to the Superintendent of Documents
- GPO Deposit Account -
- VISA or MasterCard Account

(Company or personal name) (Please type or print)

(Additional address/attention line)

(Street address)

(City, State, ZIP Code)

(_____) _____
(Daytime phone including area code)

(Credit card expiration date)

(Signature) 9/90

Thank you for your order!

Mail To: Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325 USA

Gross Product by Industry, 1977-88: A Progress Report on Improving the Estimates

THIS article reports on the first phase of BEA's work to improve the estimates of constant-dollar gross product by industry. In 1989, BEA suspended publication of these estimates in response to criticism of their accuracy and outlined its plans to improve them.¹ Revised constant-dollar estimates for 1977-87 and new estimates for 1988, the results of the first phase of this work, are presented in this article.

The picture of U.S. industries shown by the gross product estimates is not altered much by the revision. In terms of growth rates for broad industry groups, the general pattern is the same both before and after the revision: Wholesale and retail trade and services show the highest constant-dollar growth rates, and government enterprises and the agriculture, mining, and construction group show the lowest (chart 4). The average annual rate of growth of manufacturing industries—of special interest to many users—was estimated at 2.7 percent for 1977-87 before the revision, and it is now estimated at 2.5 percent. Several of the

improvements in methodology that are incorporated into the revised estimates had surprisingly little impact on most industries.

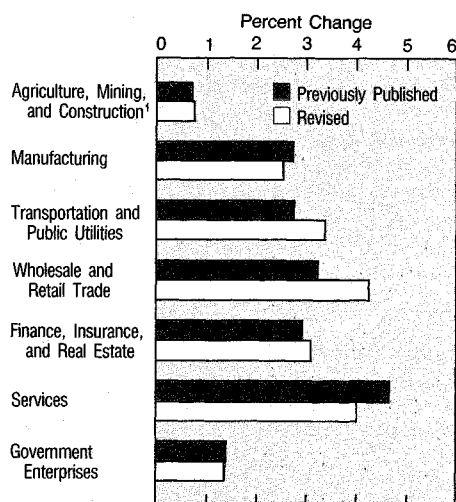
The first part of the article provides an overview of the gross product by industry series; it describes the estimating methods used by BEA, the improvements incorporated into the revised estimates, how these improvements address the earlier criticisms, and the further work to be done to improve the estimates. The second part discusses the impact of the revisions on industry growth rates. A "Technical Note" describes the methodologies used for the previously published estimates and the revised estimates. The estimates are presented in a set of tables at the end of the article.

Gross Product by Industry—An Overview

Gross product, or gross product originating (GPO), by industry is the contribution of each industry—including government and the rest of the world—to GNP.² An industry's GPO, often referred to as its "value added," is equal to its gross output (sales or receipts and other operating income, plus inventory change) minus its intermediate inputs (consumption of goods and services purchased from other industries or imported).

In concept, GNP measured as the sum of GPO in all industries is the same as GNP measured in two other ways: (1) As the sum of expenditures (consumer spending, investment, net exports, and government purchases) and (2) as the sum of costs incurred (compensation of employees, net interest, indirect business taxes, etc.) and profits earned in production. In practice, BEA implements these three ways using less than perfectly consistent source data, and the resulting totals are not the same. For current-dollar estimates, BEA measures what it refers to as "GNP" as the sum of the expenditure components, and it uses "charges against GNP" to refer to the sum of costs incurred and profits earned. The difference between GNP and charges against GNP is the statistical discrepancy. In constant dollars also, GNP is measured as the sum of the expenditure components. Constant-dollar charges against GNP

CHART 4
GNP by Industry in 1982 Dollars:
Annual Average Percent Change,
1977-87, Previously Published
and Revised



NOTE.—BEA's gross product by industry program is under the guidance of Robert P. Parker, Associate Director for National Economic Accounts. The industry estimates were prepared under the supervision of Michael F. Mohr, Chief of the GNP by Industry Branch of the National Income and Wealth Division. The preparation of the estimates involved the following staff: Norman Bakka, Mary Carol Barron, Felicia Candela, Vesta Jones, Sherlene Lum, Robert Sylvester, and Gregory Won. Marilyn Baker, Getty Mumford, and Angela Williams provided statistical and secretarial services. Mark Planting and Paula Young, of the Interindustry Economics Division, provided special tabulations from BEA's input-output tables.

1. See "Gross Product by Industry: Comments on Recent Criticisms," *SURVEY OF CURRENT BUSINESS* 68 (July 1988): 132-133. Before their publication was suspended in 1989, annual estimates of gross product by industry in current dollars and in constant dollars appeared in tables 6.1 and 6.2, respectively, in "National Income and Product Accounts Tables," which usually is published in the July *SURVEY*.

Note—1987 is the terminal year because it was the last year for which the previously published estimates were available.

1. Includes forestry and fisheries.

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

91-1-4

2. The industrial distribution of the GPO of private activities is based on the 1972 Standard Industrial Classification (SIC), a system that provides a classification for establishments (that is, economic units, generally at a single physical location, where business is conducted or where services or industrial operations are performed). Establishments are classified into an SIC industry on the basis of their principal product. Thus, establishment data cover both the principal products included in the SIC and the products of these establishments that are primary to other SIC industries.

is not estimated, however, because price indexes for deflation cannot be associated with income measures as they can be with the goods and services that make up the expenditure measures.³

GPO estimates in current dollars are prepared as distributions by industry of the components of charges against GNP. Thus, the sum of the current-dollar GPO estimates also differs from current-dollar GNP by the statistical discrepancy. To prepare constant-dollar GPO estimates, a different strategy—described in the next section—is used. The sum of the constant-dollar GPO estimates differs from constant-dollar GNP by the constant-dollar statistical discrepancy plus an additional discrepancy, titled the “residual.”

Estimating methods for constant-dollar GPO

The strategy for estimating constant-dollar GPO by industry is to work with the measures of goods and services—gross output and intermediate inputs—that are used to define GPO. The industry estimates can then be derived using one of three methods: Double deflation, extrapolation, or direct deflation. The method chosen usually depends on the availability of source data.

In the double-deflation method, constant-dollar GPO is derived as the difference between constant-dollar gross output and constant-dollar intermediate inputs. In practice, there are at least three variants of this method, and the variant chosen depends on the availability of source data.

- (1) When complete and consistent gross output and inputs series are available, these series can be deflated, and constant-dollar GPO can be measured as the difference between them.
- (2) When only complete and consistent gross output and GPO series are available, a current-dollar input series can be derived and then deflated for use in the output-minus-input calculation.

3. Constant-dollar estimates of two other aggregates measured in current dollars as sums of cost and profit components are derived from constant-dollar GNP. These aggregates—net national product and national income—are derived by preparing constant-dollar estimates of capital consumption allowances with capital consumption adjustment and of nonfactor charges (business transfer payments, indirect business taxes, and the current surplus of government enterprises) and subtracting these estimates from constant-dollar GNP.

- (3) When only consistent but incomplete gross output and inputs series are available, the available series can be used to derive a GPO deflator to apply to the appropriate current-dollar GPO estimate.

(See the “Technical Note” for more information.)

In the extrapolation method, constant-dollar GPO is derived by extrapolating the base-year value of GPO (for which the current-dollar value equals the constant-dollar value) by an indicator series. The indicator series usually is constant-dollar gross output, the number of employees, or the number of hours worked.

In the direct-deflation method, constant-dollar GPO is derived by deflating current-dollar GPO. The index used for deflation usually is gross output prices or earnings.

Generally, double deflation is the conceptually preferred method because it measures GPO in the same way that GPO is defined. Moreover, assuming the availability of appropriate source data, double deflation is preferred because it allows for changes over time in the relationships between gross output and inputs. The extrapolation method will yield the correct results only if the rates of change in constant-dollar gross output and inputs are the same. The direct-deflation method will yield the correct results if the deflators for both constant-dollar gross output and inputs are the same.

Double deflation is not the preferred method for the two industries—private households and general government—for which gross output and GPO are defined as employee compensation and for the industry—the rest of the world—for which GPO is defined as net flows of factor incomes. For private households and general government, the most appropriate method is extrapolation by an indicator of labor input that reflects changes in productivity. For the rest of the world, the most appropriate method is direct deflation using a composite deflator calculated from the GPO of the industry and country in which the income was earned.

Improvements in the revised estimates

The revised constant-dollar GPO series reflect both the wider use of double deflation and improvements in the source data underlying the industry es-

timates derived using double deflation. In the revised estimates, double deflation was used in 51 industries, which accounted for 87 percent (in 1987) of the total GPO for industries for which it is the preferred method, compared with 25 industries, which accounted for 43 percent, in the previously published estimates (table 1).⁴ Further, the double-deflation method was applied more consistently in the revised estimates; the same variant of double deflation was used for 49 of the 51 industries.

For most of the 25 industries for which GPO had previously been estimated using the double-deflation method, the source data were improved in three major ways.⁵ The estimates of gross output were improved by benchmarking them to information from BEA’s 1977 and 1982 input-output (I-O) tables to provide a more complete and consistent framework for estimating gross output and input and by preparing the constant-dollar estimates in greater detail. The estimates of inputs were improved by using information on their composition from the I-O tables for 1977 and 1981–85 to replace the estimates for 1982, which had been used for all years. Finally, the prices of inputs were improved by introducing prices of imported goods and services and by introducing more appropriate prices for service inputs.

For 26 of the 36 industries for which GPO had previously been estimated using either extrapolation or direct deflation but for which double deflation is the preferred method, the double-deflation method was introduced. The introduction of double deflation was made possible by the development of new estimates of gross output, input composition, and input prices incorporating the source-data improvements referred to in the preceding paragraph.

Addressing the earlier criticisms

The criticisms of the accuracy of BEA’s previously published constant-dollar GPO estimates focused on four major areas: The adjustments BEA made so that the GPO estimates would be more consistent with the constant-

4. In this count, two parts of the real estate industry—nonfarm housing services and other real estate—are counted as separate industries.

5. For a summary of the sources and methods used for the previously published GPO estimates, see “Gross Product by Industry, 1986,” SURVEY 67 (April 1987): 25–28.

dollar GNP estimates, the use of BEA's price index for computers, the use of indexes that covered only domestic prices and that only roughly approximated service prices to estimate constant-dollar inputs, and the use of out-of-date information on the composition of inputs.⁶ The last two areas are addressed by the improvements incorporated into the revised estimates; the first two are discussed briefly in the following paragraphs.

When BEA published revised 1947-84 estimates in 1985, it adjusted the constant-dollar GPO of manufacturing and nonmanufacturing industries for 1947-81. The adjustments were criticized as being too subjective.⁷ BEA made the adjustments to reduce the residual, which it views as a measure of the error in the constant-dollar GPO estimates. This view is supported by the fact that the source data available to prepare these estimates are less accurate and comprehensive than the source data available to prepare constant-dollar GNP (from expenditure estimates). Most of the adjustments were applied to manufacturing. They lowered the 1947-72 estimates of manufacturing by about the same percentage each year and lowered the estimates for 1973-82 by successively smaller percentages. The effect of the adjustments was to lower the initial constant-dollar 1972 estimate by \$60 billion and the 1977 estimate by \$25 billion, thus raising the growth rate of GPO in manufacturing from 1972 to 1982. In the revised estimates, the residuals are relatively small, and adjustments were not deemed necessary. (See line 82 of table 2.) Nevertheless, BEA still views the residual as a measure of error in the constant-dollar GPO estimates and the adjustment of GPO estimates to reduce the residual, when necessary, as an appropriate procedure.

In 1985, BEA introduced a new price index for computers. The index declined at an average annual rate of 15 percent from 1977 to 1987, and its steep decline contributed to the growth of both constant-dollar GNP and manufacturing GPO. The criticism was that the index, which is used to

Table 1.—Previously Published and Revised Methods for Estimating Constant-Dollar Gross Product Originating

Industry	Method ¹	
	Previously published	Revised
Agriculture, forestry, and fisheries:		
Farms	Double deflation.....	(*)
Agricultural services, forestry, and fisheries.....	Extrapolation	Double deflation.
Mining:		
Metal mining	Extrapolation	Double deflation.
Coal mining	Extrapolation	Double deflation.
Oil and gas extraction	Extrapolation	Double deflation.
Nonmetallic minerals, except fuels	Extrapolation	Double deflation.
Construction	Double deflation.....	(*)
Manufacturing:		
Petroleum and coal products.....	Extrapolation	Double deflation.
Other manufacturing industries ²	Double deflation.....	(*)
Transportation:		
Railroad transportation	Double deflation.....	(*)
Local and interurban passenger transit.....	Extrapolation	Double deflation.
Trucking and warehousing.....	Direct deflation.....	Double deflation.
Water transportation.....	Extrapolation	Double deflation.
Transportation by air.....	Extrapolation	Double deflation.
Pipelines, except natural gas.....	Extrapolation	Double deflation.
Transportation services	Extrapolation	(*)
Communication:		
Telephone and telegraph.....	Direct deflation.....	Double deflation.
Radio and television broadcasting.....	Direct deflation.....	Double deflation.
Electric, gas, and sanitary services	Double deflation.....	(*)
Wholesale trade	Direct deflation.....	Double deflation.
Retail trade	Extrapolation	Double deflation.
Finance, insurance, and real estate:		
Banking.....	Extrapolation	(*)
Credit agencies other than banks.....	Extrapolation	(*)
Security and commodity brokers, and services.....	Extrapolation	Double deflation.
Insurance carriers	Extrapolation	Double deflation.
Insurance agents and brokers, and services	Extrapolation	Double deflation.
Real estate: ³		
Nonfarm housing services.....	Double deflation.....	(*)
Other real estate	Direct deflation.....	(*)
Holding and other investment companies	Extrapolation	(*)
Services:		
Hotels and other lodging places	Extrapolation	Double deflation.
Personal services	Direct deflation.....	Double deflation.
Business services.....	Extrapolation	(*)
Auto repair, services, and garages.....	Direct deflation.....	Double deflation.
Miscellaneous repair services	Extrapolation	Double deflation.
Motion pictures	Direct deflation.....	(*)
Amusement and recreation services	Direct deflation.....	Double deflation.
Health services	Extrapolation	Double deflation.
Legal services	Extrapolation	Double deflation.
Educational services.....	Extrapolation	Double deflation.
Social services and membership organizations.....	Direct deflation.....	(*)
Miscellaneous professional services	Direct deflation.....	(*)
Private households.....	Direct deflation.....	(*)
Government and government enterprises:		
General government	Extrapolation	(*)
Government enterprises.....	Extrapolation	(*)
Rest of the world	Direct deflation.....	(*)

* Same method as used for previously published estimates.

1. In both the previously published and revised estimates, several variants are used in implementing the double-deflation method. For a description of the variants and the identification of the industries using them, see the text, p. 30.

2. The other 20 manufacturing industries, as shown in tables 5 and 6, are not listed separately because estimates for them are all prepared using the same method.

3. The real estate industry is listed in two parts because the estimates for the two parts are prepared using different methods.

6. See, for example, Lawrence Mishel, *Manufacturing Numbers: How Inaccurate Statistics Conceal U.S. Industrial Decline* (Washington, DC: Economic Policy Institute, 1988) and Edward F. Denison, *Estimates of Productivity Change by Industry* (Washington, DC: The Brookings Institution, 1989).

7. Mishel, *Manufacturing Numbers*, 18-23.

prepare the constant-dollar estimates, is not consistent with the resource-cost concept of capital that BEA uses in measuring other types of capital goods.⁸ As explained in an article in the SURVEY OF CURRENT BUSINESS, BEA does not agree with this criticism and will continue to use the index for measuring constant-dollar GNP and GPO.⁹ In the criticism, it was noted that the use of the index made the estimates much more sensitive to the choice of the base year in calculating constant-dollar measures. BEA plans to introduce estimates with alternative base years in the next comprehensive revision of the national income and product accounts (NIPA's) to help deal with this problem.¹⁰

8. Denison, *Estimates*, 8-10.

9. See Allan H. Young, "BEA's Measurement of Computer Output," SURVEY 69 (July 1989): 108-115.

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

Further work to improve the estimates

The 1987 and 1988 current- and constant-dollar estimates presented in this article are not fully consistent with the presently published GNP estimates; they do not yet incorporate source data used in the July 1990 revisions of the NIPA's. Revised estimates for 1987 and 1988 and estimates for 1989 consistent with the published estimates will be published in the April 1991 SURVEY.

BEA will continue to address the shortcomings of the revised GPO estimates, and it plans to incorporate additional improvements into the estimates to be released following the next comprehensive NIPA revision. The further work will focus on improving procedures for deriving the composition of inputs for years not covered by I-O tables, on developing and incorporating improved service prices, and on extending the use of double defla-

tion. Improved estimates will also be prepared for years before 1977.

Long-term improvement in the estimates of both GPO and GNP will require additional research apart from the GPO improvement work. Research on the prices of services is one area. The service prices incorporated into the revised GPO estimates improve on the previous ones because they cover a far wider range of services and because they represent prices of inputs rather than implicit deflators of GPO. However, the formidable statistical problems of measuring prices of many services are still present in the new estimates; only a substantial research effort over many years holds any promise of overcoming these statistical problems. Research on the definition of output of several industries—most notably, financial services—is another area in which some research is under way.

The Impact of the Revisions on Industry Growth Rates

Chart 4 summarizes the impact of the revisions by showing, for seven broad groups of industries, the average annual rate of growth of constant-dollar GPO from 1977 to 1987 before and after revision. The chart shows that the general pattern of high- and low-growth industries is the same both before and after the revision. Wholesale and retail trade and services show the highest constant-dollar growth rates, and government enterprises and the agriculture, mining, and construction group show the lowest. The average annual rate of growth of manufacturing industries, previously estimated at 2.7 percent, is now estimated at 2.5 percent.

Impact of changes in methodology.—One reason for the similarity of growth rates before and after the revision is that several of the changes in methodology had surprisingly little impact on most industries. For example, introducing import prices in the deflation of intermediate inputs raised manufacturing growth from 1977 to 1987 by an annual average rate of less than 0.1 percent. From 1979 to 1985, when the exchange value of the U.S. dollar rose, the effect of introducing import prices was to lower manufacturing growth by 0.2 percent per year; from 1977 to 1979, the effect was strongly in the opposite direction. Outside of manufacturing, the effects of import prices were small in all years.

Table 2.—Method and Source Data for Estimating Constant-Dollar Gross Product Originating for Industries for Which Double Deflation Is Not Used

Industry	Method	Major source data ¹
Transportation services.....	Extrapolation.....	BEA persons engaged in production.
Banking.....	Extrapolation.....	BEA persons engaged in production.
Credit agencies other than banks.....	Extrapolation.....	BEA persons engaged in production.
Real estate, except nonfarm housing services.....	Direct deflation.....	Index of rent for office buildings from trade source and BEA estimates.
Holding and other investment companies.....	Extrapolation.....	BEA persons engaged in production.
Business services.....	Extrapolation.....	BLS employment weighted by Census Bureau receipts.
Motion pictures.....	Direct deflation.....	BLS prices and earnings.
Social services and membership organizations.....	Direct deflation.....	BEA average wages and salaries per full-time equivalent employee.
Miscellaneous professional services.....	Direct deflation.....	BEA average wages and salaries per full-time equivalent employee.
Private households.....	Direct deflation.....	BLS prices.
Government:		
General government.....	Extrapolation.....	BEA hours worked weighted by BEA measures of experience and education.
Government enterprises.....	Extrapolation.....	BEA and Census Bureau employment and BLS output indexes.
Rest of the world.....	Direct deflation.....	BEA implicit price deflator for net domestic product.

1. Source data provide either a price index for deflation of gross product originating or a quantity extrapolator of base-year value of gross product originating.

BEA Bureau of Economic Analysis
BLS Bureau of Labor Statistics

The methodological change that provided for changes in the composition of intermediate inputs rather than for use of estimated 1982 composition for all years also had a minor impact on most industries. From 1977 to 1985 (the latest year in which the composition changes in the revised estimates), the impact on total manufacturing was to raise manufacturing growth by an average of 0.2 percent per year: Growth was raised before 1982 and lowered thereafter. The revision largely reflected the use of variable input composition and its impact on the inputs of the nonelectrical machinery industry; the computer portion of this industry has used increasing quantities of inputs accompanied by falling prices of inputs. The use of variable composition reduced the importance of falling input prices in the years before 1982 and therefore lowered the growth of inputs and raised the estimated growth of GPO. After 1982, these effects were in the opposite direction.

The methodological change that introduced improved prices for services also had a minor overall impact. The impact was minor because the new service prices, as did the previous ones, rise much more rapidly, than do the prices of goods. A comparison of two deflators illustrates the difference: The implicit deflator of gross output in the service industries that are double deflated rose at an average annual rate of 7.6 percent from 1977 to 1987, while the implicit deflator of gross output in the manufacturing industries rose at a rate of only 4.3 percent. Omitting the petroleum refining and nonelectrical machinery industries because prices in them are heavily influenced by special factors raises the manufacturing increase to 4.7 percent, still well below the increase in services.

The largest industry revisions.—The largest revisions in the broad industry groups shown in the chart are mainly due to the combined impact of two factors: The extension of double deflation to many additional industries and the rapid rise of service prices relative to goods prices. Other changes—including revisions in gross output, new price series, and revisions in current-dollar gross product—have sizable impacts on a few individual industries but not on the broad groups.

For wholesale and retail trade, which displays the largest upward revision in the chart, the replacement of

extrapolation by double deflation introduces into the calculations input prices that, on average, increase rapidly because of the importance of intermediate services in these industries (inputs purchased by trade industries do not include the goods to be resold, because gross output is defined as the margin between sales and purchases of goods). The rapid increase in prices of inputs depresses the growth of constant-dollar inputs, which, in turn, increases the growth of constant-dollar GPO. To a considerable extent, the upward revision in the growth of transportation, communication, and public utilities reflects the same forces.

The downward revision in the services industries also reflects the increased use of double deflation and the behavior of service prices relative to goods prices, but these factors interact in a different way in the services industries. Here, the increased use of double deflation introduces intermediate input prices that tend to rise less than the price of gross output, because in the services industries—in contrast to the trade industries—gross output reflects services and inputs reflect both goods and services. Estimated constant-dollar inputs therefore tend to rise relatively rapidly, which, in turn, lowers the growth of GPO.

Revisions in manufacturing.—The small downward revision in the growth of manufacturing industries is entirely due to nonelectrical machinery. In part, it is the result of dropping an adjustment that had been made in 1977 to reduce the residual; as the previous section notes, the revised estimates have not been adjusted to reduce the residual. In addition, the revision in nonelectrical machinery is primarily the result of departing from the assumption of fixed input composition. This departure had the effect of increasing the estimated growth of constant-dollar inputs, which, in turn, lowered the growth of constant-dollar GPO.

Technical Note

BEA has incorporated major improvements in methodology—i.e., in estimating methods and source data—into the revised estimates of constant-dollar GPO. No changes in methodology have been made to the previously published current-dollar GPO estimates; the 1986 and 1987 estimates were revised only to reflect changes

introduced in the July 1989 annual NIPA revision, and several estimates for earlier years were revised to eliminate industry-allocation errors uncovered during the review of the revised estimates.

The first section of this note reviews the methodology for the previously published estimates of constant-dollar GPO by industry. The second section presents the methodology for the revised estimates.

Methodology for the previously published estimates

In the previously published constant-dollar estimates of GPO by industry, double deflation was used for farms; construction; manufacturing industries except petroleum and coal products; railroad transportation; electric, gas, and sanitary services; and the nonfarm housing services part of the real estate industry. The estimates were prepared using one of three variants—the choice depending on the availability of source data.

(1) For farms and nonfarm housing services, where complete and consistent gross output and intermediate inputs series are available, constant-dollar GPO was measured as the difference between constant-dollar gross output and constant-dollar inputs.¹¹

(2) For manufacturing industries except petroleum and coal products, where only a gross output series consistent with the current-dollar GPO series is available, the derived input variant was used. Current-dollar inputs were derived as the difference between current-dollar gross output and current-dollar GPO, and constant-dollar inputs were calculated by deflating the derived current-dollar series using a composite input deflator that reflected the estimated composition of inputs in 1982 (based on information from the 1977 input-output (I-O) table) and the price indexes for domestic inputs.¹² For goods inputs, either producer price indexes or other appropriate price indexes were used. For service inputs, GPO deflators for the

11. In international literature, it is this variant that is usually referred to as "double deflation." That literature is often couched in terms of input-output tables or production accounts by industry, where gross output and intermediate inputs are displayed. See, for example, United Nations, *Manual on National Accounts at Constant Prices*, Statistical Papers, Series M, No. 64 (New York: United Nations, 1979): 8-11.

12. For years prior to 1972, the composition of inputs was estimated using information from earlier I-O tables.

Table 3.—Principal Source Data and Estimating Methods Used in Preparing Estimates of Gross Output for Use in Double Deflation

Industry ¹	Current dollars	Constant dollars
	Extrapolator or interpolator of benchmark values ²	Price index for deflation or quantity extrapolator of base-year value
Agriculture, forestry, and fisheries:		
Farms.....	Cash receipts from marketings, inventory change, and other receipts from USDA (1977, 1982).	Prices received by farmers from USDA.
Agricultural services, forestry, and fisheries:		
Agricultural services.....	Receipts for agricultural services, forestry, and fisheries from IRS tabulations of business tax returns less gross output of forestry and fisheries (1977).	Index of selected prices paid by farmers from USDA.
Forestry.....	Shipments of logging camps and contractors from Census Bureau quinquennial census and annual survey (1977).	PPI's.
Fisheries.....	Value of fish landed from NOAA (1977).....	Fish landed from NOAA.
Mining:		
Metal mining.....	Physical quantity produced times average price: For uranium, physical quantity from BOM and average price from DOE; for all others, quantities and prices from BOM (1977, 1982).	Quantity produced from BOM.
Coal mining.....	Physical quantity produced times average price, both from DOE (1977, 1982).	Quantity produced from DOE.
Oil and gas extraction.....	Physical quantity produced times average price, both from NEA's through 1985 and from DOE for 1986-88 (1977, 1982).	Quantity produced from NEA's and DOE.
Nonmetallic minerals, except fuels.....	Physical quantity produced times average price, both from BOM (1977, 1982).	Quantity produced from BOM.
Construction:		
For the Department of Defense.....	Expenditures from DOD (1982).....	For most military construction, BEA indexes based on DOD prices; for other construction, cost indexes from trade sources and government agencies.
For State and local highways.....	Expenditures from DOT (1982).....	For new construction, cost indexes from government agencies; for maintenance and repair, CPI for home maintenance and repair services.
For private electric and gas utilities.....	Expenditures from Federal regulatory agencies and trade source (1982).	Cost indexes from trade sources and government agencies.
For farms, excluding residential.....	Expenditures from USDA (1982).....	Cost index from trade source and price deflator for single-family houses from Census Bureau.
For other nonresidential:		
New construction.....	Value put in place from Census Bureau construction survey (1982).	Cost indexes from trade sources and government agencies and price deflator for single-family houses from Census Bureau.
Maintenance and repair.....	Value put in place from Census Bureau construction survey (1982).	CPI for home maintenance and repair services.
For other residential:		
New construction.....	Value put in place from Census Bureau construction survey (1982).	Price deflator of single-family houses from Census Bureau.
Maintenance and repair.....	Expenditures by owner-occupants from BLS survey and by landlords from Census Bureau survey (1982).	CPI for home maintenance and repair services.
Manufacturing.....	Shipments and inventory change from Census Bureau quinquennial census and annual survey ³ .	PPI's and BEA computer price index.
Transportation:		
Railroad transportation.....	Total operating revenue for Class I railroads and AMTRAK (1977, 1982).	Composite index of IPD for Class I freight, from revenue ton-miles from trade source, and of IPD for AMTRAK passenger, from passenger miles from NRPC.
Local and interurban passenger transit:		
Taxicabs.....	PCE (1977).....	CPI for taxi fares.
Intercity buses.....	Operating revenues from trade source (1977, 1982).....	Passenger miles from trade source.
School buses.....	Wages and salaries from BLS (1977, 1982).....	Employment from BLS.
Other local transit.....	Operating revenues of private local transit systems from trade source (1977).	Passenger trips from trade source.
Trucking and warehousing.....	For 1977-83, operating revenues for Class I motor carriers of property from ICC; for 1984-88, Census Bureau annual survey (1977, 1982).	Ton-miles from DOT.
Water transportation.....	Receipts from IRS tabulations of corporate tax returns (1982).	Ton-miles for deep sea foreign transportation from BEA, and tons for marine cargo and ton-miles for other water transportation from DOD.
Transportation by air.....	Operating revenues of air carriers and of Federal Express from DOT and public sources (1977, 1982).	For passenger, revenue passenger miles for domestic and for international travel from DOT. For freight and mail, ton-miles for domestic and international freight and for domestic and international mail from DOT. For all other, composite index of IPD for passenger, freight, and mail.
Pipelines, except natural gas.....	Operating revenues from trade source (1977, 1982).....	Ton-miles from trade source.
Communications:		
Radio and television broadcasting.....	Advertising expenditures from trade source (1977, 1982).....	Cost indexes from trade source.
Telephone and telegraph.....	Revenues from FCC (1977, 1982).....	PPI's.

Table 3.—Principal Source Data and Estimating Methods Used in Preparing Estimates of Gross Output for Use in Double Deflation—Continued

Industry ¹	Current dollars	Constant dollars
	Extrapolator or interpolator of benchmark values ²	Price index for deflation or quantity extrapolator of base-year value
Electric, gas, and sanitary services:		
Electric utilities	For private utilities, revenues from DOE. For rural cooperatives, revenues from USDA (1977, 1982).	Kilowatthours from trade source.
Gas utilities	Revenues of gas pipeline and utilities from trade source (1977, 1982).	BTU's from trade source.
Sanitary services	Receipts from IRS tabulations of business tax returns (1977, 1982).	CPI for water and sewerage maintenance.
Wholesale trade:		
Merchant wholesalers	Ratio of gross margin to sales (margin rate) times sales: For 1977-82, margin rate from quinquennial census and sales from Census Bureau annual survey; for 1983-88, both from annual survey (1977, 1982) ⁴ .	Sales deflated by PPI's.
Manufacturers' sales branches and sales offices.	For equipment rental, interpolation of quinquennial census receipts; for 1988, judgmental trend. For other receipts, manufacturing shipments from Census Bureau annual survey (1977, 1982).	For equipment rental, IPD from BEA capital stock statistics. For other receipts, shipments deflated by PPI's.
Agents and brokers	Merchant wholesalers margin rate times sales: For 1977-82, margin rate from quinquennial census and sales from Census Bureau annual survey; for 1983-88, both from annual survey (1977, 1982).	Merchant wholesalers sales deflated by PPI's.
Retail trade:		
Eating and drinking places	Sales from quinquennial census and from Census Bureau annual survey (1977, 1982).	CPI's.
Other	Ratio of gross margin to sales from Census Bureau quinquennial census times sales from Census Bureau annual survey (1977, 1982).	Base-year margin rate times sales deflated by CPI's.
Finance, insurance, and real estate:		
Security and commodity brokers, and services.	Securities commissions, revenue from sale of investment company securities, profits on underwriting/selling, gains on trading and investment accounts and other revenues excluding interest, and revenues earned by exchanges; receipt items from SEC and interest from SEC and BEA (1977, 1982).	For securities commissions, number of public securities orders from SEC and trade sources; for mutual funds, IPD for securities commissions; for underwriting, new securities registrations from SEC; for all others, IPD for GNP.
Insurance carriers	Net premiums for health, auto, accident, property, and workers' compensation insurance from trade sources; PCE for expense of handling life insurance (1977, 1982).	For health and life insurance, IPD's for PCE. For all others, composite index of BEA IPD for workers' compensation and CPI for auto and property insurance.
Insurance agents and brokers, and services ..	Receipts from IRS tabulations of business tax returns (1977, 1982).	Insurance carrier deflators weighted by commissions from trade source.
Real estate:		
Nonfarm housing services	PCE for owner- and tenant-occupied nonfarm dwellings (1977, 1982).	IPD for PCE.
Services:		
Hotels and other lodging places	Receipts from Census Bureau quinquennial census and annual survey (1977, 1982).	Room-rate index from trade source.
Personal services	Receipts from Census Bureau quinquennial census and annual survey (1977, 1982).	CPI's.
Automotive repair, services, and garages	Receipts from Census Bureau quinquennial census and annual survey (1977, 1982).	CPI's.
Miscellaneous repair services	Receipts from Census Bureau quinquennial census and annual survey (1977, 1982).	CPI's and average annual earnings from BLS.
Amusement and recreation services	Receipts from Census Bureau quinquennial census and annual survey (1977, 1982).	CPI's.
Health services:		
Hospitals	Receipts from trade sources (1977, 1982)	HCFA index of input prices and CPI for hospital room.
Other health services	Receipts from Census Bureau quinquennial census and annual survey (1977, 1982).	CPI's and HCFA index of input prices.
Legal services	Receipts from Census Bureau quinquennial census and annual survey (1977, 1982).	CPI for legal services.
Educational services	PCE for private education (1977, 1982)	IPD for PCE.

1. For many industries, gross output is estimated at more detailed industry levels than shown in this table. For mining, for example, gross output is estimated for 44 industries. This table combines the listing when the methodology is the same within the listing and separates the listing when it differs.

2. The year(s) in parentheses represents the benchmark input-output table to which gross output is directly benchmarked.

3. The manufacturing gross output estimates were benchmarked to gross output from the 1977, 1982, and 1987 Censuses of Manufacturing. For 1977 and 1982, these census data differ very slightly from the corresponding input-output measures because the I-O measures have been adjusted for misreporting and include the margin on resales; the census measures include the total value of resales.

4. Gross margin, which is used to measure the gross output of most of the wholesale and retail trade industry, equals sales minus cost of goods sold.

BEA	Bureau of Economic Analysis (DOC)	EIA	Energy Information Administration (DOE)	NOAA	National Oceanic and Atmospheric Administration (DOC)
BLS	Bureau of Labor Statistics	FCC	Federal Communications Commission		
BOM	Bureau of Mines	HFCA	Health Care Financing Administration	NRPC	National Railroad Passenger Corporation
CPI	Consumer Price Index (BLS)	ICC	Interstate Commerce Commission	PCE	Personal consumption expenditures
DOC	U.S. Department of Commerce	IPD	Implicit price deflator	PPI	Producer Price Index (BLS)
DOE	U.S. Department of Energy	IRS	Internal Revenue Service	SEC	Securities and Exchange Commission
DOT	U.S. Department of Transportation	NEA	National Energy Accounts (DOC, Office of Business Analysis)	USDA	U.S. Department of Agriculture

corresponding industries were used. Constant-dollar GPO was then derived as the difference between the constant-dollar gross output and the derived constant-dollar inputs.

(3) For construction, railroad transportation, and electric, gas, and sanitary services, where the available series of gross output and inputs were not consistent with the current-dollar GPO estimates because they covered only part of the industry, the derived GPO deflator variant was used. The available gross output and inputs series were deflated and used to calculate a GPO deflator, and that derived GPO deflator was used to deflate the current-dollar GPO estimate.

For the non-double-deflated industries, the extrapolation method and the direct deflation method were used in about equal numbers of industries.

Methodology for the revised estimates

This section describes the extension of the double-deflation method to additional industries and the new and improved estimates of gross output, input composition, and input prices that were prepared for the double-deflated industries. More detailed information will be available in April; its availability will be announced in the SURVEY.

Estimating methods.—The use of double deflation was extended to an additional 26 industries. As a result, the share of 1987 GPO for which double deflation is the preferred method and was used increased from 43 percent to 87 percent. Further, for all double-deflated industries except farms and nonfarm housing services, double deflation was implemented using the same variant—the one used for manufacturing industries except petroleum and coal products in the previously published estimates: Directly measured constant-dollar gross output less derived constant-dollar inputs.

Double deflation was not used for 10 industries for which it is the preferred method, because adequate source data were not available to prepare estimates of current-dollar gross output or of constant-dollar gross output or of both. The largest of these industries are business services, banking, and real estate except nonfarm housing services. The key source data used in the preparation of GPO for these and for other industries for which double deflation is not used are shown in table 2.

Table 4.—Principal Sources of Service Input Prices

Service input ¹	Source ²
Agricultural services	IPD for agricultural services gross output.
Railroad transportation:	
Dining car receipts, business travel	CPI for food away from home.
Other passenger train services	CPI for intercity train fares.
Rail freight transportation	IPD for freight gross output.
Other railroad services	IPD for freight gross output.
Local and interurban passenger transit:	
Services from local private transit systems	IPD for local transit system gross output.
Taxicabs	CPI for taxi fares.
Other	IPD for intercity bus gross output.
Trucking and warehousing	IPD for trucking and warehousing gross output.
Water transportation	IPD for water transportation gross output.
Transportation by air:	
Domestic passenger	IPD for domestic passenger gross output.
International passenger	IPD for international passenger gross output.
Freight and express	IPD for freight and express gross output.
Other air services	IPD for transportation by air.
Pipelines, except natural gas	IPD for pipelines, except natural gas gross output.
Transportation services:	
Private carline services	IPD for boxcar rental.
Other	IPD for transportation services GPO.
Telephone and telegraph:	
Telephone	IPD for telephone gross output.
Telegraph services	PPI for telephone services.
Radio and television broadcasting	IPD for radio and television broadcasting gross output.
Electric, gas, and sanitary services:	
Electric utilities	PPI for electric power.
Gas pipeline	IPD for gas pipeline gross output.
Gas utilities	IPD for gas utility gross output.
Sanitary services	CPI for water and sewerage maintenance.
Wholesale trade:	
Merchant wholesalers and agents and brokers	IPD for merchant wholesalers and agents and brokers gross output.
Manufacturers' sales offices and sales branches	IPD for manufacturers' sales offices and sales branches gross output.
Retail trade:	
Eating and drinking	IPD for eating and drinking gross output.
Other	IPD for other retail trade gross output.
Banking:	
Imputed service charges	IPD for financial services furnished without payment by commercial banks.
Other	CPI for personal financial services.
Credit agencies other than banks:	
Imputed service charges	IPD for financial services furnished without payment by savings and loan associations.
Other	CPI for personal financial services.
Security and commodity brokers, and services:	
Securities underwriting	IPD for underwriting gross output.
Securities and commodity trading	IPD for securities commissions gross output.
Services allied with exchange of securities	IPD for security and commodity brokers, and services gross output.
Other services	IPD for GNP.
Insurance carriers:	
Automobile insurance	CPI for automobile insurance.
Nonlife insurance services, except automobile	CPI for property and household insurance.
Other	IPD for insurance carrier gross output.
Insurance agents and brokers, and services	IPD for insurance agents and brokers, and services gross output.
Real estate services:	
Nonfarm business rental and property management	Rental rate per square foot from trade source.
Farm rental	IPD for rental value of farm housing PCE.
Rent paid by nonprofits	IPD for capital consumption allowance of nonprofit organizations.
Royalties for oil and gas mining	IPD for oil and gas extraction gross output.
Royalties, except oil and gas mining	IPD for PCE.
Commissions paid to real estate dealers	IPD for new nonresidential building construction.
Condominium association fees and assessments by cooperatives	CPI for home maintenance and repair services.
Other	IPD for real estate GPO.

Table 4.—Principal Sources of Service Input Prices—Continued

Service input ¹	Source ²
Personal services:	
Funeral and burial expenses.....	CPI for funeral expenses.
Other.....	CPI for laundry and dry cleaning.
Business services:	
Advertising.....	Cost indexes by type of media from trade sources.
Maintenance, cleaning, disinfecting, and exterminating.....	CPI for home maintenance and repair services.
Photofinishing.....	IPD for film development PCE.
Other business services.....	IPD for business services gross output.
Auto repair, services, and garages:	
Repairs, tire retreading, parking, and washing.....	CPI for automobile maintenance and repair.
Other.....	CPI for other auto-related fees.
Miscellaneous repair services:	
Radio, TV, refrigeration and air conditioning, and electrical and electronic repairs.....	CPI for appliance and furniture repairs.
Other.....	Average annual earnings from BLS.
Motion pictures services:	
Production and allied services.....	Average annual earnings from BLS.
Distribution and allied services.....	Average annual earnings from BLS.
Amusement and recreation services:	
Sports, recreation, and amusements.....	IPD for commercial participant amusement and commercial amusement n.e.c. PCE.
Theatrical, dance, symphony, and spectator sports productions.....	CPI for admissions.
Health services:	
Physicians services.....	CPI for physicians.
Other.....	CPI for other medical professionals.
Legal services.....	CPI for legal services.
Education services:	
Vocational schools, except high schools.....	IPD for commercial and vocational schools PCE.
Higher education and related services.....	IPD for private higher education PCE.
Social services.....	Average annual earnings from BLS.
Membership organizations:	
Membership organization expenses.....	BEA earnings and expense index.
Business associations.....	Average annual earnings from BLS.
Professional organizations.....	Average annual earnings from BLS.
Miscellaneous professional services:	
Noncommercial museums and art galleries.....	IPD for miscellaneous professional services GPO.
Accounting, auditing, and bookkeeping services.....	CPI for personal financial and legal services fees.
Other.....	IPD for miscellaneous professional services gross output.
Government enterprises:	
Postal services.....	PPI's for eight types of services.
Pension insurance.....	BEA earnings and expense index for life insurance.
Deposit insurance for credit unions.....	No price change assumed.
Deposit insurance for commercial banks.....	IPD for deposit insurance.
Imported services:	
Rail freight transportation.....	PPI for railroad freight.
Water transportation n.e.c.....	IPD for imports of passenger water transportation services.
Gas utilities.....	Prices of imported natural gas from DOE.
Miscellaneous repair.....	Average annual earnings from BLS.
Tire retreading.....	PPI for tires and innertubes.

1. For this table, services consist of the primary outputs of (1) private businesses in the agricultural services, transportation and public utilities, trade, finance, insurance, and real estate, and services industries as defined by the 1972 Standard Industrial Classification, and (2) similar services provided by government enterprises. Prices for imported services are shown separately at the end of the table if they differ from prices used for corresponding domestic services.

2. Sources of price indexes for gross output IPD's, except for business services and for miscellaneous professional services, are shown in table 3. The IPD's for the gross output for these two industries were estimated from the IPD's for GPO for these industries and from information on inputs from the input-output tables.

BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
CPI	Consumer Price Index
GPO	Gross product originating
IPD	Implicit price deflator
PCE	Personal consumption expenditures
PPI	Producer Price Index

Gross output.—New and improved estimates of gross output were developed for the 51 industries (except farms and nonfarm housing services) for which the revised constant-dollar GPO estimates are prepared using the double-deflation method. These estimates primarily reflect the use of information based on BEA's 1977 and forthcoming 1982 benchmark I-O tables, the preparation of estimates at greater levels of detail, and the use of improved extrapolator series.

Table 3 provides a summary description of the principal source data used to prepare the estimates. The table shows, for current-dollar gross output, the series used to extrapolate or interpolate the benchmark values. For constant-dollar gross output, it shows the price index used to deflate current-dollar gross output or the quantity indicator used to extrapolate the base-year value.

Among the previously double-deflated industries, the revised estimates for the construction, railroad transportation, and electric, gas, and sanitary industries were improved by preparing the estimates at more detailed levels and by benchmarking the level of the series to estimates of gross output on an SIC industry basis from benchmark I-O tables. For construction, the estimates were benchmarked to the 1982 benchmark I-O table; for the other industries, the estimates also were benchmarked to comparable gross output from the 1977 benchmark I-O table. Previously, the estimates for these industries had not been benchmarked. For the manufacturing industries except petroleum and coal products, the revised estimates were benchmarked to data from the 1987 Census of Manufactures. Previously, the estimates had been benchmarked to data from the 1977 and 1982 censuses. (The gross output for the two other previously double-deflated industries—farms and nonfarm housing services—was not revised as part of the GPO improvement effort; the estimates for these industries are estimated as an integral part of the preparation of the GNP estimates, and revisions to them were not needed.)

For the newly double-deflated industries, new gross output estimates were prepared for nine industries, and improved gross output estimates were prepared for the others (the ones for which the gross output estimates had previously been used in extrapolation). The revised estimates of gross output

for all these industries were benchmarked to the preliminary estimates of gross output on an SIC industry basis from the 1982 benchmark I-O table or to comparable gross output from the 1977 benchmark I-O table or to both. For the gross output estimates that were improved, extrapolator series that provided more complete and consistent coverage were developed.

Input composition.—New and improved estimates of the composition of inputs were prepared for all the double-deflated industries except farms and nonfarm housing services. In the revised estimates, the composition of inputs is more up to date; inputs for 1977–85 largely reflect the composition of purchases in each of those years, and inputs for 1986–88 for most industries reflect the composition in 1985. In addition, the level of detail for service inputs to all industries was greatly expanded for all years. In the previously published estimates, the composition of inputs in 1982 estimated from the 1977 benchmark I-O table was used for all these years, and the services input detail was generally limited to the GPO industry level of detail.

The revised composition for 1977–35 was estimated from I-O tables converted to an SIC industry basis. For 1977, the composition is from the 1977 benchmark table, which is estimated largely from economic census reports on purchased goods and selected services. For 1981–85, the composition is from BEA's annual update tables, in which the composition is estimated using an indirect method. Initial estimates, prepared assuming that both

constant-dollar gross output and inputs have had the same rates of change since the 1977 benchmark, are modified so that the sum of the initial estimates of industry inputs equals the directly measured output of these industries. For 1978–80, the composition is derived by interpolating between the 1977 and 1981 estimates.

As noted, the 1985 composition is used for 1986–88 for most industries. The exceptions are the oil and gas extraction, construction, primary metals, machinery except electrical, food and kindred products, petroleum and coal products, and water transportation industries. For these industries, the composition of inputs changed after 1985 to the extent that the use of the 1985 composition resulted in significant errors in the estimates of constant-dollar inputs. Instead, their total constant-dollar inputs for 1986–88 were estimated by assuming no change in the constant-dollar relationship in 1985 between inputs and gross output. In future years, estimates of the composition of inputs for these industries will be incorporated and these assumptions revised.

Input prices.—Improved deflators for intermediate inputs were developed for all the double-deflated industries except farms and nonfarm housing services to incorporate more appropriate prices in greater detail, especially for services inputs, and to incorporate import prices. In the previously published estimates, only about 30 input prices for services were used; these prices were the implicit deflators for GPO, and they reflected only prices of domestic products.

The revised estimates reflect the use of prices for about 100 services inputs. Most of the new prices were prepared in conjunction with the development of the new estimates of gross output. The sources of the new prices of services inputs are shown in table 4.

The import prices were developed from a variety of sources. Import prices for energy commodities are based on estimates prepared by the Commerce Department's Office of Business Analysis for the National Energy Accounts and on Department of Energy prices. Import prices for nonenergy mineral industry commodities are based on price data from the Bureau of Mines. Import prices for most other goods are from the Bureau of Labor Statistics (BLS) import price series. For years before 1981, however, many of the detailed BLS import prices are not available. Estimates for those years primarily reflect rates of change of more aggregate BLS import prices and, where aggregate indexes were not available, the rates of change in corresponding domestic prices based on the producer price indexes were used.

The import share of intermediate goods and services for 1977 was estimated using the 1977 I-O table and assuming that the proportion of imports to total inputs was the same for all industries purchasing that input. For 1981–85, the import shares were estimated by using Census Bureau imports of each type of commodity identified in 1977 and the estimated 1977 distribution of these imports among all industries. For 1978–80, the import share is interpolated; for 1986–88, the 1985 share is used.

Tables

Tables 5 and 6 show current- and constant-dollar estimates of gross national product by industry—gross product originating—for 1977–88. Comparable estimates for earlier years are not available. Thus, the revised estimates are not consistent with estimates for these years that were published in *National Income and Product Accounts of the United States, 1929–82: Statistical Tables*. These revised estimates are subject to further revision; the 1987 and 1988 estimates will be revised in the spring of 1991, and the estimates for all years will be revised following the forthcoming comprehensive GNP revision.

Average annual rates of change in constant-dollar gross product originating and industry shares in current and constant dollars are shown in table 7. Revisions from the previously published estimates are shown for the rates of change in table 8, for the industry shares in table 9, and for constant-dollar gross product originating in table 10.

Table 7.—Gross National Product by Industry: Average Annual Rates of Change and Percentages of Total Gross National Product for Selected Years

[Percent]

	Line	Average annual rates of change, 1982 dollars			Percentage of gross national product				
		1977-88	1977-82	1982-88	Current dollars			1982 dollars ¹	
					1977	1982	1988	1977	1988
Gross national product	1	2.8	1.4	4.1	100.0	100.0	100.0	100.0	100.0
Domestic industries (gross domestic product)	2	2.9	1.3	4.2	98.7	98.4	99.3	98.7	99.3
Private industries	3	3.2	1.3	4.8	86.3	86.3	87.8	86.6	89.7
Agriculture, forestry, and fisheries	4	2.3	4.1	.9	3.0	2.8	2.0	2.5	2.3
Farms	5	1.4	4.4	-1.0	2.5	2.4	1.6	2.1	1.8
Agricultural services, forestry, and fisheries	6	6.3	2.6	9.5	.4	.4	.5	.4	.5
Mining	7	-1.2	-1.9	-6	2.5	4.2	1.6	4.9	3.2
Metal mining	8	1.1	0	2.1	.1	.1	.1	.1	.1
Coal mining	9	4.2	4.4	4.0	.5	.5	.3	.4	.5
Oil and gas extraction	10	-2.0	-2.4	-1.7	1.8	3.5	1.2	4.2	2.5
Nonmetallic minerals, except fuels	11	-1	-6.5	5.5	.2	.1	.1	.2	.2
Construction	12	1.1	-2.2	3.9	4.9	4.5	4.8	5.3	4.4
Manufacturing	13	3.1	-9	6.5	23.4	20.0	19.4	22.5	23.0
Durable goods	14	3.4	-2.1	8.2	14.0	11.4	10.9	13.6	14.5
Lumber and wood products	15	2.5	-3.9	8.2	.8	.5	.6	.7	.6
Furniture and fixtures	16	2.0	-.8	4.4	.3	.3	.3	.3	.3
Stone, clay, and glass products	17	1.0	-4.3	5.6	.8	.6	.8	.8	.6
Primary metal industries	18	-2.1	-5.9	1.2	1.7	1.1	1.0	1.6	.9
Fabricated metal products	19	1.9	-2.1	5.3	1.8	1.5	1.3	1.7	1.6
Machinery, except electrical	20	7.3	.4	13.4	2.8	2.5	1.9	2.6	4.2
Electric and electronic equipment	21	5.3	4.3	6.1	2.0	2.0	1.9	1.7	2.2
Motor vehicles and equipment	22	-9	-12.3	9.8	1.8	.9	1.1	1.9	1.3
Other transportation equipment	23	5.9	-1	11.2	1.0	1.0	1.2	1.1	1.5
Instruments and related products	24	4.4	2.8	5.7	.7	.7	.6	.7	.8
Miscellaneous manufacturing industries	25	1.0	-5.1	6.4	.4	.4	.3	.5	.4
Nondurable goods	26	2.5	.8	4.0	9.4	8.6	8.6	8.8	8.6
Food and kindred products	27	2.5	3.5	1.7	2.1	1.9	1.7	1.7	1.7
Tobacco manufactures	28	-6.2	-1.3	-10.1	.3	.3	.3	.3	.1
Textile mill products	29	-4	-3.4	2.1	.7	.5	.4	.6	.4
Apparel and other textile products	30	1.0	-1.9	3.5	.7	.6	.5	.7	.6
Paper and allied products	31	2.2	-.6	4.6	.9	.8	.9	.9	.9
Printing and publishing	32	2.4	1.8	2.9	1.2	1.2	1.3	1.2	1.1
Chemicals and allied products	33	3.1	.9	5.0	1.9	1.7	1.9	1.8	1.8
Petroleum and coal products	34	6.0	.8	10.6	.7	.8	.8	.8	1.1
Rubber and miscellaneous plastic products	35	4.7	1.5	7.5	.7	.6	.6	.6	.7
Leather and leather products	36	-4.5	-3.1	-5.6	.2	.1	.1	.2	.1
Transportation and public utilities	37	3.4	1.2	5.2	9.0	9.1	9.0	9.2	9.7
Transportation	38	2.7	-2	5.2	3.9	3.5	3.3	3.8	3.7
Railroad transportation	39	3.0	-2	5.7	.8	.6	.4	.6	.7
Local and interurban passenger transit	40	0	-3	.3	.2	.2	.2	.2	.2
Trucking and warehousing	41	2.1	-2.2	5.8	1.6	1.5	1.4	1.8	1.6
Water transportation	42	-7.0	-2.0	-10.9	.2	.2	.2	.3	.1
Transportation by air	43	6.9	4.8	8.6	.7	.6	.8	.5	.8
Pipelines, except natural gas	44	0	-1.9	1.6	.1	.2	.1	.2	.1
Transportation services	45	6.7	6.5	6.8	.2	.2	.3	.2	.3
Communication	46	5.4	7.3	3.9	2.5	2.7	2.6	2.0	2.7
Telephone and telegraph	47	5.9	8.1	4.0	2.2	2.4	2.3	1.8	2.4
Radio and television broadcasting	48	2.0	1.3	2.6	.2	.3	.3	.3	.2
Electric, gas, and sanitary services	49	2.8	-1.5	6.5	2.7	2.9	3.0	3.4	3.3
Wholesale trade	50	5.6	6.1	5.2	7.0	6.9	6.7	5.5	7.4
Retail trade	51	3.6	1.2	5.5	9.7	9.1	9.3	9.1	9.9
Finance, insurance, and real estate	52	3.1	2.6	3.5	14.1	15.0	17.0	14.1	14.5
Banking	53	2.2	4.1	.7	1.6	1.9	2.0	1.7	1.6
Credit agencies other than banks	54	6.1	4.2	7.6	.2	.2	.4	.1	.2
Security and commodity brokers, and services	55	12.7	7.8	17.0	.3	.4	.8	.3	.8
Insurance carriers	56	1.8	-2.5	5.5	1.4	.9	1.4	1.1	1.0
Insurance agents and brokers, and services	57	1.9	2.1	1.7	.6	.5	.7	.5	.5
Real estate	58	2.8	2.6	2.9	10.0	10.8	11.4	10.2	10.1
Holding and other investment companies	59	6.8	5.2	8.1	0	.2	.3	.2	.3
Services	60	4.0	3.0	4.8	12.7	14.6	17.9	13.5	15.3
Hotels and other lodging places	61	1.7	-2.8	5.6	.6	.7	.8	.8	.7
Personal services	62	1.8	-1.0	4.2	.7	.7	.8	.8	.7
Business services	63	7.7	6.9	8.4	2.1	2.9	4.1	2.2	3.7
Auto repair, services, and garages	64	2.6	1.1	3.9	.7	.7	.9	.8	.7
Miscellaneous repair services	65	3.5	3.2	3.8	.3	.3	.3	.3	.3
Motion pictures	66	3.0	.6	4.9	.2	.2	.2	.2	.2
Amusement and recreation services	67	5.6	5.4	5.7	.5	.5	.5	.4	.5
Health services	68	2.6	3.3	2.0	3.7	4.5	5.1	4.1	4.0
Legal services	69	3.6	2.6	4.4	.8	1.0	1.4	.9	1.0
Educational services	70	2.1	.1	3.7	.6	.6	.7	.6	.6
Social services and membership organizations	71	3.2	2.5	3.7	.9	1.0	1.0	.9	.9
Miscellaneous professional services	72	5.7	4.3	6.9	1.2	1.4	1.8	1.3	1.7
Private households	73	.1	-2.7	2.5	.3	.2	.2	.3	.2
Government and government enterprises	74	1.4	1.1	1.6	12.4	12.1	11.7	12.3	10.5
Federal	75	1.1	.7	1.3	4.5	4.4	3.8	4.5	3.7
Government	76	1.0	.8	1.1	3.8	3.7	3.3	3.8	3.1
Government enterprises	77	1.6	.6	2.3	.7	.7	.6	.7	.6
State and local	78	1.6	1.4	1.7	7.9	7.7	7.8	7.7	6.7
Government	79	1.5	1.2	1.7	7.3	7.2	7.1	7.2	6.2
Government enterprises	80	2.6	2.9	2.3	.6	.6	.7	.5	.5
Statistical discrepancy ²	81				0	0	-2	0	-2
Residual ²	82							-2	-7
Rest of the world	83	-2.6	6.5	-9.5	1.3	1.6	.7	1.3	.7

1. Current and constant-dollar estimates are the same in 1982, the base period.
 2. See footnotes 1 and 2 of table 6.

Table 8.—Revisions in Average Annual Rates of Change of Gross National Product by Industry in Constant Dollars for Selected Years

[Percent]

	Line	1977-87			1977-82			1982-87			1979-85		
		Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision
Gross national product	1	2.7	2.7	0	1.4	1.4	0	4.0	4.0	0	2.1	2.1	0
Domestic industries (gross domestic product).....	2	2.7	2.7	0	1.3	1.3	0	4.2	4.2	0	2.2	2.2	0
Private industries.....	3	2.9	3.0	.1	1.3	1.3	0	4.5	4.7	.2	2.3	2.4	.1
Agriculture, forestry, and fisheries.....	4	3.0	3.6	.6	4.6	4.1	-.5	1.4	3.1	1.7	3.5	3.7	.2
Mining.....	5	-.7	-1.5	-.8	.9	-1.9	-2.8	-2.3	-1.0	1.3	0	-.4	-.4
Construction.....	6	.6	1.1	.5	-3.1	-2.2	.9	4.5	4.5	0	-.8	-.1	.7
Manufacturing.....	7	2.7	2.5	-.2	-.3	-.9	-.6	5.8	6.0	-.2	2.0	1.5	-.5
Durable goods.....	8	3.1	2.5	-.6	-1.3	-2.1	-.9	7.7	7.4	-.3	2.6	1.4	-1.2
Nondurable goods.....	9	2.0	2.4	.4	1.0	.8	-.2	2.9	4.1	1.2	1.2	1.6	.4
Transportation and public utilities.....	10	2.7	3.3	.6	1.4	1.2	-.2	3.9	5.3	1.4	1.8	2.2	.4
Transportation.....	11	.8	2.8	2.1	-2.6	-.2	2.4	4.2	5.9	1.7	-1.5	1.0	2.5
Communication.....	12	5.7	5.7	0	6.7	7.3	.6	4.7	4.1	-.6	4.6	3.8	-.8
Electric, gas, and sanitary services.....	13	2.8	2.0	-.8	2.7	-1.5	-4.2	2.9	5.8	2.9	4.0	2.3	-1.7
Wholesale trade.....	14	3.6	5.9	2.3	1.4	6.1	4.5	5.9	5.7	-.2	3.6	5.2	1.6
Retail trade.....	15	3.0	3.2	.2	.9	1.2	.3	5.1	5.2	.1	2.5	3.3	.8
Finance, insurance, and real estate.....	16	3.0	3.1	.1	2.6	2.6	0	3.3	3.5	.2	2.2	2.3	.1
Services.....	17	4.6	4.0	-.6	3.6	3.0	-.6	5.7	5.0	-.7	4.1	3.5	-.6
Government and government enterprises.....	18	1.4	1.3	-.1	1.1	1.1	0	1.6	1.6	0	1.1	1.0	-.1
Statistical discrepancy ¹	19												
Residual ¹	20												
Rest of the world.....	21	-3.7	-3.4	.3	6.5	6.5	0	-12.9	-12.3	.8	-6.6	-6.6	0

1. See footnotes 1 and 2 of table 6.

Table 9.—Revisions in Gross National Product by Industry as Percentage of Total Gross National Product in Constant Dollars for Selected Years

[Percent]

	Line	1977			1979			1985			1987		
		Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision
Gross national product	1	100.0	100.0	0	100.0	100.0	0	100.0	100.0	0	100.0	100.0	0
Domestic industries (gross domestic product).....	2	98.7	98.7	0	98.3	98.3	0	99.0	99.0	0	99.3	99.3	0
Private industries.....	3	86.6	86.6	0	86.8	87.0	.2	88.0	88.4	.4	88.6	89.4	.8
Agriculture, forestry, and fisheries.....	4	2.4	2.5	.1	2.4	2.4	0	2.6	2.6	0	2.5	2.7	.2
Mining.....	5	4.3	4.9	.6	4.1	4.5	.4	3.6	3.8	.2	3.1	3.3	.2
Construction.....	6	5.6	5.3	-.3	5.4	5.2	-.2	4.6	4.6	0	4.6	4.6	0
Manufacturing.....	7	21.8	22.5	.7	21.8	22.3	.5	21.7	21.5	-.2	21.8	22.0	.2
Durable goods.....	8	13.1	13.6	.5	13.3	13.6	.3	13.6	13.0	-.6	13.7	13.4	-.3
Nondurable goods.....	9	8.8	8.8	0	8.6	8.7	.1	8.1	8.5	.4	8.2	8.6	.4
Transportation and public utilities.....	10	9.1	9.2	.1	9.2	9.1	-.1	9.0	9.2	.2	9.1	9.7	.6
Transportation.....	11	4.3	3.8	-.5	4.3	3.9	-.4	3.5	3.7	.2	3.5	3.8	.3
Communication.....	12	2.1	2.0	-.1	2.3	2.3	0	2.6	2.5	-.1	2.8	2.7	-.1
Electric, gas, and sanitary services.....	13	2.7	3.4	.7	2.6	3.0	.4	2.9	3.0	.1	2.8	3.2	.4
Wholesale trade.....	14	6.9	5.5	-1.4	6.8	6.2	-.6	7.4	7.4	0	7.6	7.5	-.1
Retail trade.....	15	9.3	9.1	-.2	9.2	9.1	-.1	9.4	9.8	.4	9.6	9.6	0
Finance, insurance, and real estate.....	16	14.1	14.1	0	14.4	14.4	0	14.5	14.6	.1	14.5	14.7	.2
Services.....	17	13.1	13.5	.4	13.5	13.7	.2	15.1	14.9	-.2	15.9	15.3	-.6
Government and government enterprises.....	18	12.3	12.3	0	11.8	11.8	0	11.1	11.1	0	10.8	10.8	0
Statistical discrepancy ¹	19	0	0	0	0	0	0	-.1	-.1	0	-.2	-.1	-.1
Residual ¹	20	-.1	-.2	-.1	-.3	-.5	-.2	.1	-.4	-.5	.1	-.7	-.8
Rest of the world.....	21	1.3	1.3	0	1.7	1.7	0	1.0	1.0	0	.7	.7	0

1. See footnotes 1 and 2 of table 6.

BEA REGIONAL PROJECTIONS TO 2040

Every 5 years, the Bureau of Economic Analysis (BEA) updates its regional projections for selected economic variables and population. The projections, which extend 50 years into the future, cover the Nation, the States, metropolitan statistical areas (MSA's), and BEA economic areas. Volume 1 of this 3-volume work presents BEA's projections for the States; volumes 2 and 3 present projections for MSA's and BEA economic areas, respectively.

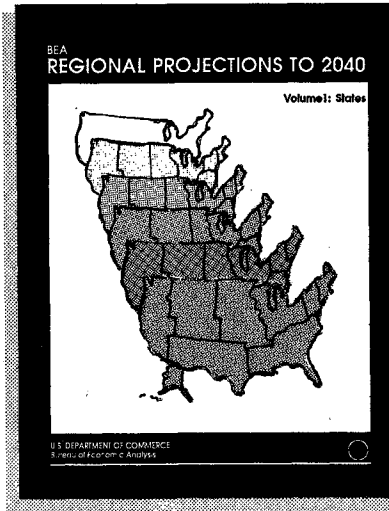
The three volumes contain historical data for 1973, 1979, 1983, and 1988 and projections for 1995, 2000, 2005, 2010, 2020, and 2040 for the following:

• **Variables:**

- Total personal income
- Earnings by industry
- Total population
- Per capita personal income
- Employment by industry

• **Industrial detail:**

- Vol. 1: States*—industries at roughly the ten-digit Standard Industrial Classification (SIC) level
- Vol. 2: MSA's, and Vol. 3: BEA Economic Areas*—14 industries at the one-digit SIC level



• **Geographic detail:**

- Vol. 1: States*—
 - United States
 - 50 States
 - District of Columbia
- Vol. 2: MSA's*—
 - United States
 - 17 Consolidated Metropolitan Statistical Areas
 - 319 Metropolitan Statistical Areas
- Vol. 3: BEA Economic Areas*—
 - United States
 - 183 BEA Economic Areas

All projections are available on diskettes; for more information call BEA at (202) 523-0971.

Superintendent of Documents Publications Order Form

Order Processing Code:
***6967**

YES, please send me the following indicated publications:

Charge your order. It's easy!



To fax your orders and inquiries—(202) 275-0019

- _____ copies of **BEA REGIONAL PROJECTIONS TO 2040, Vol. 1: States**, S/N 003-010-00199-2 at \$7.50 each.
- _____ copies of **BEA REGIONAL PROJECTIONS TO 2040, Vol. 2: Metropolitan Statistical Areas**, S/N 003-010-00211-5 at \$17.00 each.
- _____ copies of **BEA REGIONAL PROJECTIONS TO 2040, Vol. 3: BEA Economic Areas**, S/N 003-010-00212-3 at \$10.00 each.

Please send me your **Free Catalog** of hundreds of bestselling Government books.

The total cost of my order is \$_____. (International customers please add 25%.) Prices include regular domestic postage and handling and are good through 6/91. After this date, please call Order and Information Desk at 202-783-3238 to verify prices.

(Company or personal name) (Please type or print)

(Additional address/attention line)

(Street address)

(City, State, ZIP Code)

(Daytime phone including area code)

Please Choose Method of Payment:

- Check payable to the Superintendent of Documents
- GPO Deposit Account [] [] [] [] [] - []
- VISA or MasterCard Account [] [] [] [] [] [] [] [] [] [] [] [] [] []

(Credit card expiration date) **Thank you for your order!**

(Signature) 12/90

Mail To: Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325

REGIONAL PERSPECTIVES

Personal Income Continued To Grow Slowly in Third Quarter 1990

PERSONAL income in the Nation grew 1.2 percent in the third quarter of 1990, about as much as in the second quarter (1.3 percent) but substantially less than in the first quarter (2.1 percent).¹ The slow third-quarter growth in personal income was most noticeable in the Plains region, where farm income declined, and in New England, where nonfarm income was weak. Growth was slightly below the U.S. average in the Rocky Mountain region, equal to the average in the Midwest and Great Lakes regions, and above the average in the Southeast, Southwest, and Far West regions. (For estimates by State, see "State Personal Income, Summary Estimates for Third Quarter 1990" on pages 41 and 42.)

In New England and the Southwest, the pattern of income growth in recent quarters differs from that in most of the 1980's. In New England, income has grown slower than the U.S. average for the past seven quarters after having grown faster than average in most of the 1980's. In the Southwest, income has grown faster than the U.S. average for the past two quarters after having grown slower than average in most of the 1980's. Prior to 1990, the Southwest had not had two consecutive quarters of above-average growth since 1982.

Income growth by region

In the Plains region, personal income grew 0.3 percent in the third quarter after increasing 0.9 percent in the second quarter and 2.0 percent in the first. In all three quarters, income

NOTE.—This article was written by Rudolph E. DePass and Howard L. Friedenberg.

1. Percent changes shown in this article are not at annual rates.

growth was below the U.S. average. The slow third-quarter growth mainly reflected a decline in farm income, as Federal farm subsidy payments fell for the second consecutive quarter. In addition, payroll gains were below the U.S. average in durables manufacturing, in the transportation-public utilities group, and in services (table 1). Three Plains States—North Dakota, South Dakota, and Nebraska—were the only States in the Nation that had substantial declines in personal income; income growth was less than or equal to the U.S. average in the other Plains States.

In New England, personal income grew 0.6 percent in the third quarter after increasing 1.1 percent in the second quarter and 0.8 percent in the first. The slow third-quarter growth reflected payroll declines in durables manufacturing, in construction, and in wholesale and retail trade. Moreover, payrolls in nondurables manufacturing, in the transportation-public utilities group, in the finance-insurance-real estate group, and in services grew slower than in any other region. Connecticut was the only State in New England with above-average growth in personal income.

Table 1.—Percent Change in Personal Income for the United States and BEA Regions, 1990:I, 1990:II, and 1990:III

(Change from preceding quarter, not at annual rates; based on seasonally adjusted data)

	United States	Plains	New England	Rocky Mountain	Midwest	Great Lakes	Southeast	Southwest	Far West
Personal income:									
Total:									
1990:I	2.1	2.0	0.8	1.4	1.6	1.6	2.7	1.7	3.3
1990:II	1.3	.9	1.1	1.6	1.4	1.5	1.1	1.8	1.1
1990:III	1.2	.3	.6	1.1	1.2	1.2	1.3	1.5	1.7
Farm:									
1990:I	24.6	28.9	21.3	-13.4	27.5	65.1	35.4	3.0	7.7
1990:II	-10.6	-18.2	-7.4	1.8	-9.3	-16.2	-12.4	-3.5	-1.7
1990:III	-16.0	-27.7	-3.2	-26.6	-5.6	-23.3	-12.2	-20.8	-2.9
Wages and salaries (payrolls):									
Durables manufacturing:									
1990:I	-2	-3.0	.5	1.6	-7	-2.7	3.0	2.4	.9
1990:II	1.2	4.6	0	1.3	-9	3.6	.4	.8	-6
1990:III	.6	.2	-9	3.0	-6	1.9	.6	.9	-1
Nondurables manufacturing:									
1990:I	.4	-7	.8	-1.0	.4	.4	1.2	.4	-6
1990:II	1.5	3.4	.5	6.6	.3	1.4	1.2	1.3	2.9
1990:III	.9	1.0	.3	3.3	.4	.8	.7	1.3	1.8
Construction:									
1990:I	1.5	4.1	-6.3	3.4	-4	1.8	4.5	1.8	1.4
1990:II	-8	-2.9	-4.3	2.8	-8	-7	-1.6	2.6	-7
1990:III	-4	1.0	-3.3	.7	-1.5	.7	-6	1.3	-1
Mining:									
1990:I	2.2	4.8	-6.9	-2	8.2	3.5	4.9	.9	-1.2
1990:II	2.5	-1.5	-6.9	1.8	-6.6	-1.1	1.0	5.0	6.2
1990:III	3.5	3.9	7.0	3.8	1.6	1.1	2.9	4.1	3.7
Transportation and public utilities:									
1990:I	3.1	-2	4.3	2.2	5.2	2.3	3.1	2.8	3.6
1990:II	1.9	2.1	-6	2.9	1.7	2.3	2.5	2.9	.5
1990:III	1.4	.8	.2	1.1	1.5	1.6	1.3	2.0	1.7
Wholesale trade:									
1990:I	1.2	1.5	-1.7	5.6	-1.5	.5	1.4	2.5	4.5
1990:II	1.6	.6	1.4	-1.1	3.4	1.2	1.4	.6	1.2
1990:III	1.0	1.3	-1	1.5	.4	1.1	.9	1.6	1.7
Retail trade:									
1990:I	1.9	1.9	.3	1.8	1.0	1.3	2.7	2.7	2.5
1990:II	1.5	.9	-4	1.7	1.2	1.9	1.8	2.1	1.9
1990:III	.4	.4	-1.5	.9	-1	.6	.8	.6	.6
Finance, insurance, and real estate:									
1990:I	.7	1.4	.4	.5	.6	1.0	.6	.5	.9
1990:II	2.3	2.4	2.3	2.8	2.2	3.0	2.1	1.9	2.2
1990:III	2.6	2.6	1.8	2.8	2.1	2.9	2.8	2.5	3.5
Services:									
1990:I	1.9	1.3	.3	1.2	2.1	1.4	2.4	1.5	2.9
1990:II	2.4	2.6	2.3	3.2	2.5	2.5	1.8	3.4	2.4
1990:III	2.8	2.7	2.0	3.3	2.5	2.7	3.0	2.7	3.3

In the Rocky Mountain region, personal income grew 1.1 percent in the third quarter after increasing 1.6 percent in the second quarter and 1.4 percent in the first. The slow third-quarter growth reflected a decline in farm income; both Federal farm subsidy payments and farm income excluding subsidies fell. In contrast, the region's nonfarm economy showed strength; payrolls grew faster than the U.S. average in manufacturing, in construction, in mining, and in nearly all private service-type industries.² By State, personal income changed little in Montana and Idaho, largely reflecting sharp declines in farm income; income growth was above average in the other Rocky Mountain States.

In the Mideast, personal income grew 1.2 percent in the third quarter after increasing 1.4 percent in the second quarter and 1.6 percent in the first. In the third quarter, strength in nonfarm proprietors' income offset weakness in payrolls. Payrolls declined in retail trade and, for the sixth consecutive quarter, in durables manufacturing and in construction. In nondurables manufacturing, in wholesale trade, in the finance-insurance-real es-

tate group, and in services, payroll gains were below the U.S. average. By State, personal income growth was below the U.S. average in Delaware and New Jersey, equal to the average in Pennsylvania and New York, and above the average in Maryland.

In the Great Lakes region, personal income grew 1.2 percent in the third quarter after increasing 1.5 percent in the second quarter and 1.6 percent in the first. In the third quarter, weakness in payrolls in nondurables manufacturing, in government, and in services offset strength in payrolls in the other private service-type industries, in construction, and in durables manufacturing. Within durables manufacturing, strength in motor vehicles was partly due to less downtime to retool for model changeovers than is usual for a third quarter; less downtime was needed because manufacturers had retooled for a number of 1991 models earlier in 1990. By State, personal income growth was above the U.S. average in Michigan and Ohio, partly reflecting the strength in motor vehicles; income growth was less than or equal to the average in the other Great Lakes States.

In the Southeast, personal income grew 1.3 percent in the third quarter after increasing 1.1 percent in the second quarter and 2.7 percent in the first. The third-quarter growth re-

flected payroll gains in retail trade, in the finance-insurance-real estate group, and in services. In contrast, payrolls in construction declined for the second consecutive quarter. By State, personal income growth was above the U.S. average in Florida, South Carolina, Tennessee, Louisiana, and Virginia and below the average in Arkansas, West Virginia, Kentucky, Mississippi, Georgia, Alabama, and North Carolina.

In the Southwest, personal income grew 1.5 percent in the third quarter after increasing 1.8 percent in the second quarter and 1.7 percent in the first. The above-average third-quarter growth reflected strong payroll gains in all industry groups except for services and the finance-insurance-real estate group. Personal income growth was above the U.S. average in all Southwest States except Oklahoma.

In the Far West, personal income grew 1.7 percent in the third quarter after increasing 1.1 percent in the second quarter and 3.3 percent in the first. The above-average third-quarter growth reflected payroll gains in nondurables manufacturing and in all private service-type industries. In contrast, payrolls in durables manufacturing and in construction declined for the second consecutive quarter. Personal income growth was above or equal to the U.S. average in all Far West States.

2. The term "private service-type industries" refers to transportation and public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services.

State Personal Income, Summary Estimates for Third Quarter 1990

Table 1.—Total Personal Income, States and Regions

[Millions of dollars, seasonally adjusted at annual rates]

Table with columns for State and region, years 1987-1990, and percent change. Rows include United States, New England, Midwest, Great Lakes, Plains, Southeast, Southwest, Rocky Mountain, Far West, Alaska, Hawaii, and Census Divisions.

* Revised.

† Preliminary.

1. The personal income level shown for the United States is derived as the sum of the State 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 em-

ployed abroad temporarily by private U.S. firms. It can also differ from the NIPA estimate because of different data sources and revision schedules.

NOTE.—The quarterly estimates of State personal income were prepared by Francis G. McPaul, James P. Stehle, Isabelle B. Whiston, and James M. Zavrel, under the supervision of Robert L. Brown.

ERRATA:

"Evaluation of the State Personal Income Estimates"

The article "Evaluation of the State Personal Income Estimates," which appeared in the December 1990 SURVEY OF CURRENT BUSINESS, contained errors in table 2 and the accompanying analysis on pages 25-26. The table below shows the effected section of table 2 with the corrected values in italics. The corrections raise the upper limits of the ranges of nine-tenths of the revisions for total personal income and for wages and salaries.

As a result of these corrections, the analysis in the text based on the data in table 2 has been revised; the analysis now focuses on ranges that exceed 5.5 percentage points instead of 3.5 percentage points. The revised text, which replaces the first four paragraphs of the section "Preliminary quarterly estimates," follows:

[Revisions are from preliminary to final]

	Percentage points					
	Ranges					
	Total personal income		Nonfarm personal income		Wages and salaries	
	Two-thirds of revisions	Nine-tenths of revisions	Two-thirds of revisions	Nine-tenths of revisions	Two-thirds of revisions	Nine-tenths of revisions
United States.....	-0.1 to 0.5	-0.7 to 0.8	-0.2 to 0.4	-0.5 to 0.6	-0.1 to 0.5	-0.3 to 0.8
New England.....	-3 to 1.1	-5 to 1.1	-3 to 1.0	-4 to 1.2	-1 to 1.5	-1.0 to 1.8
Connecticut.....	-2 to 1.1	-8 to 2.1	-3 to 1.0	-8 to 2.1	-2 to 1.6	-1.1 to 2.6
Maine.....	-5 to 1.2	-1.0 to 1.4	-6 to .9	-1.3 to 1.5	-1.0 to 1.7	-1.7 to 2.2
Massachusetts.....	-2 to 1.0	-8 to 1.4	-2 to 1.0	-8 to 1.4	-3 to 1.6	-1.6 to 2.0
New Hampshire.....	-4 to 1.5	-1.3 to 1.9	-4 to 1.5	-1.2 to 1.9	-7 to 1.9	-1.9 to 3.2
Rhode Island.....	-7 to .9	-1.0 to 1.4	-7 to .9	-1.0 to 1.3	-6 to 1.4	-1.3 to 2.3
Vermont.....	-8 to 1.4	-1.0 to 1.9	-5 to 1.4	-1.2 to 1.7	-7 to 1.9	-2.1 to 2.7
Mideast.....	-1 to .6	-3 to .7	-1 to .6	-3 to .7	.1 to .7	-2 to .8
Delaware.....	-1.1 to 1.7	-1.8 to 2.9	-1.0 to 1.6	-1.5 to 2.2	-1.3 to 2.8	-3.1 to 3.4
District of Columbia.....	-2 to .9	-1.0 to 1.1	-2 to .9	-1.0 to 1.1	-6 to 1.3	-1.3 to 1.8
Maryland.....	-2 to 1.0	-6 to 1.2	-2 to 1.1	-5 to 1.2	-2 to 1.4	-8 to 1.6
New Jersey.....	0 to .8	-4 to 1.3	0 to .8	-3 to 1.2	-2 to 1.3	-1.0 to 1.7
New York.....	-3 to .6	-4 to .8	-3 to .6	-5 to .9	0 to .8	-6 to 1.2
Pennsylvania.....	-4 to .6	-1.0 to .9	-4 to .6	-8 to .9	-5 to .8	-9 to 1.5
Great Lakes.....	-6 to .5	-1.0 to .6	-6 to .3	-9 to .6	-6 to .5	-8 to .7
Illinois.....	-1.0 to .5	-1.9 to 1.5	-5 to .5	-1.2 to .9	-9 to .8	-1.4 to 1.4
Indiana.....	-8 to .5	-1.3 to 1.7	-8 to .5	-9 to 1.1	-6 to .7	-1.7 to 1.7
Michigan.....	-9 to 1.0	-1.7 to 1.4	-9 to 1.0	-1.8 to 1.3	-1.6 to 1.5	-2.4 to 1.9
Ohio.....	-7 to 4	-1.0 to .6	-5 to 4	-1.2 to .6	-8 to .6	-1.7 to .9
Wisconsin.....	-8 to .6	-1.3 to 1.2	-5 to .5	-9 to .7	-7 to .6	-9 to .9
Plains.....	-1.6 to 1.2	-2.1 to 2.0	-5 to .4	-8 to 1.0	-4 to .6	-7 to .8
Iowa.....	-3.4 to 2.3	-4.2 to 3.2	-9 to .8	-1.3 to 1.3	-1.0 to .8	-1.3 to 1.2
Kansas.....	-1.2 to 1.5	-2.7 to 3.6	-6 to .5	-9 to 1.1	-7 to 1.1	-1.6 to 1.6
Minnesota.....	-1.3 to .8	-1.6 to 1.7	-5 to .5	-6 to .8	-6 to 1.0	-1.1 to 1.1
Missouri.....	-7 to 1.0	-1.3 to 1.3	-4 to 7	-7 to 1.1	-5 to .8	-1.2 to 1.2
Nebraska.....	-2.4 to 2.2	-4.8 to 4.1	-9 to 4	-1.0 to .9	-7 to .5	-1.0 to 1.0
North Dakota.....	-3.2 to 3.7	-15.8 to 8.1	-1.1 to .8	-1.4 to 1.1	-1.3 to .8	-1.7 to 1.4
South Dakota.....	-2.6 to 2.8	-4.4 to 3.4	-1.1 to .6	-1.2 to .9	-9 to .9	-1.9 to 1.7
Southeast.....	-2 to .7	-6 to 1.1	-2 to .5	-6 to .6	-2 to .6	-4 to .9
Alabama.....	-8 to 1.0	-1.3 to 1.6	-3 to .6	-9 to 1.0	-6 to 1.1	-1.0 to 1.5
Arkansas.....	-1.4 to 1.0	-2.2 to 2.2	-6 to 4	-1.1 to .6	-7 to .4	-1.7 to 1.2
Florida.....	-6 to 1.0	-1.0 to 1.2	-6 to .8	-9 to 1.2	-2 to .6	-5 to .9
Georgia.....	-1 to 1.1	-7 to 1.6	-1 to .9	-6 to 1.2	-2 to 1.2	-1.0 to 1.9
Kentucky.....	-8 to 1.0	-1.3 to 1.8	-8 to .9	-1.1 to 1.6	-8 to .8	-2.7 to 2.3
Louisiana.....	-6 to .5	-1.2 to 1.2	-7 to .4	-1.2 to 1.0	-1.0 to .7	-2.1 to 1.5
Mississippi.....	-1.0 to 1.2	-2.0 to 2.0	-6 to .6	-8 to .8	-6 to 1.1	-1.5 to 1.3
North Carolina.....	-6 to 1.1	-1.1 to 1.7	-2 to .8	-7 to 1.3	-5 to 1.0	-9 to 1.8
South Carolina.....	-6 to .8	-1.2 to 1.6	-6 to .6	-1.0 to 1.1	-7 to 1.0	-1.2 to 1.7
Tennessee.....	-5 to .8	-1.1 to 1.4	-4 to .8	-8 to .8	-4 to .9	-9 to 1.2
Virginia.....	-1 to .8	-5 to 1.0	-1 to .8	-5 to 1.0	-2 to 1.0	-8 to 1.2
West Virginia.....	-6 to .8	-1.4 to 1.2	-7 to .8	-1.4 to 1.1	-1.1 to 1.3	-2.1 to 2.5
Southwest.....	-5 to .6	-7 to 1.4	-4 to .5	-1.0 to .8	-5 to .6	-1.0 to 1.0
Arizona.....	-5 to 1.4	-1.8 to 1.8	-7 to 1.2	-1.4 to 1.5	-9 to 1.2	-1.2 to 2.4
New Mexico.....	-4 to .6	-9 to 1.6	-4 to .5	-6 to .9	-5 to .7	-9 to 1.0
Oklahoma.....	-1.1 to .8	-2.2 to 2.2	-9 to .5	-2.0 to 1.4	-1.0 to .8	-1.6 to 2.3
Texas.....	-6 to .6	-1.0 to 1.5	-3 to .5	-9 to .9	-6 to .8	-1.0 to 1.2
Rocky Mountain.....	-5 to .5	-1.1 to .9	-5 to .4	-7 to .5	-6 to .7	-1.1 to 1.2
Colorado.....	-6 to .6	-9 to 1.1	-3 to .7	-7 to 1.1	-7 to .7	-1.3 to 1.6
Idaho.....	-1.0 to 1.2	-3.5 to 2.1	-1.1 to .3	-1.5 to .8	-1.3 to .8	-1.8 to 2.0
Montana.....	-2.9 to 2.1	-4.9 to 4.2	-1.3 to 1.1	-2.2 to 1.6	-2.1 to 1.6	-3.0 to 3.0
Utah.....	-6 to .7	-1.0 to .9	-7 to .6	-1.1 to 1.0	-8 to .9	-1.3 to 1.5
Wyoming.....	-2.3 to 1.0	-3.6 to 2.5	-2.1 to 1.0	-3.9 to 1.5	-2.6 to 1.2	-5.4 to 3.1
Far West.....	-6 to 1.0	-1.2 to 1.5	-5 to .8	-1.1 to 1.0	-4 to .9	-7 to 1.5
California.....	-6 to 1.1	-1.4 to 1.6	-4 to .9	-1.0 to 1.1	-5 to 1.1	-6 to 1.5
Nevada.....	-6 to .6	-1.1 to .7	-6 to .6	-1.0 to .7	-8 to .8	-1.3 to 1.1
Oregon.....	-8 to .5	-1.8 to 1.2	-7 to .3	-1.2 to .8	-9 to 1.0	-1.4 to 1.4
Washington.....	-8 to .8	-2.0 to 1.9	-8 to .9	-1.2 to 1.1	-1.0 to .9	-1.9 to 2.2
Alaska.....	-2.7 to 2.5	-8.4 to 7.1	-2.7 to 2.5	-8.4 to 7.1	-2.1 to 1.1	-2.7 to 3.0
Hawaii.....	-7 to 1.0	-1.8 to 2.2	-6 to .9	-1.0 to 1.4	-8 to .9	-1.2 to 1.7

Range.—The range of the revisions between the preliminary and final estimates of total personal income is largest for the States of the Plains region. Of the nine States in which the differences between the lower and upper limits for nine-tenths of the revisions exceed 5.5 percentage points, five are in the Plains region (chart 1).⁴ A comparison of chart 1 with chart 2, which shows the range of revisions for nonfarm personal income, reveals that farm income is the source of much of the variation in the range of revisions among States. After removing farm income, the range of revision for all of the Plains States is below 5.5 percentage points.

For nonfarm personal income, the range of revisions exceeds 5.5 percentage points for only Alaska. Alaska has a large special transfer payment, the Alaska Permanent Fund dividend payment, that began in 1982 after the discovery and development of oil on the North Slope. The introduction in 1985 of seasonal adjustment for this payment, which amounts to 4 percent of total personal income in Alaska, led to large revisions to the estimates of total personal income and nonfarm personal income for 1982-84. The revisions to the estimates of total personal income and nonfarm personal income in Alaska for 1985-87 are significantly smaller; however, they are still large relative to other States.

For wages and salaries, Delaware, Montana, Wyoming, and Alaska are the only States for which the range of revisions exceeds 5.5 percentage points (chart 3). The economies of these four "small" States are strongly influenced either by a few large companies or by volatile industries, such as mining. In addition, the income estimates for Alaska, Montana, and Wyoming have strong seasonal patterns, the adjustments for which were revised substantially during the period covered by this study.

4. For the purposes of this study, the District of Columbia is counted as a State.

A User's Guide to BEA Information

Publications, Computer Tapes, Diskettes, and Other Information Services

BEA provides basic information on such key issues as economic growth, inflation, regional development, and the Nation's role in the world economy. This guide, which lists the most recent and most frequently requested BEA products and services, helps users locate that information.

The guide contains program descriptions and entries for specific products and services. The first section, entitled "General," describes the products and services that cut across the range of BEA's work. The following sections describe the products and services related to BEA's four program areas: National economics, regional economics, international economics, and other tools for measuring, analyzing, and forecasting.

General

BEA's current national, regional, and international estimates usually appear first in news releases. (For upcoming release dates, see the outside back cover of this issue.) The information in news releases is available to the general public in three forms: On recorded telephone messages, online through the Economic Bulletin Board, and in *BEA Reports*. This section describes these services, as well as the SURVEY OF CURRENT BUSINESS—BEA's monthly publication of record—and products related to it. Most of BEA's work is presented in the SURVEY OF CURRENT BUSINESS, either in full or summary form. The presentations of current estimates and analyses are usually on a regular schedule; this schedule is noted in each of the program-description sections that follow. For more information on BEA's programs, products, and services, write to the Public Information Office, BE-53, Bureau

of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0777.

1.1 Recorded Telephone Messages. Brief (3–5 minutes) recorded telephone messages summarizing key estimates immediately after their release. The messages are available 24 hours a day for several days following release. The usual time of release (eastern standard or eastern daylight time) and the telephone numbers to call are:

Leading Indicators (8:30 a.m.)	(202) 898-2450
The message is updated weekly, usually on Monday, to include recently available component data that will be incorporated into the next release.	
Gross National Product (8:30 a.m.)	-2451
Personal Income and Outlays (10:00 a.m.)	-2452
Merchandise Trade, Balance of Payments Basis or U.S. International Transactions (10:00 a.m.)	-2453
The message summarizes the most recently released of these two series.	

1.2 Economic Bulletin Board. Online computer access to news releases and other information. BEA places an increasing range of its information on the Economic Bulletin Board (EBB) maintained by the Office of Business Analysis of the Department of Commerce. News releases are available on the Bulletin Board shortly after their release. Selected estimates and articles such as the "Business Situation" and other SURVEY OF CURRENT BUSINESS articles are also available. (Other items in this guide that are available through the EBB are marked "EBB" after the title.) The Bulletin Board may be accessed by personal computer, computer terminal, or word processor equipped with a modem; the information available on it—which includes information from several Federal agencies—may be either viewed on the user's screen or downloaded. The Bulletin Board is available by subscription from NTIS. A \$35.00 registration fee covers 2 hours of connect time on the system; additional time is charged by the minute. Instant hook-up is available. High-speed service is available at additional cost. For more information, call the Commerce Department's Office of Business Analysis at (202) 377-1986.

1.3 BEA Reports (EBB, news release). Five sets of reports that present the information contained in the BEA news releases for the following areas: Gross national product; personal income and outlays; regional reports; international reports; and composite indexes of

What's New?

- *Personal Consumption Expenditures (NIPA Methodology Paper No. 6)* (see reference no. 2.15);
- *BEA Regional Projections to 2040* (see reference no. 7.4);
- *The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures* (see reference no. 9.6);
- *Foreign Direct Investment in the United States, 1987 Benchmark Survey, Final Results* (see reference no. 10.3).

***How To Use This Guide and
How To Order BEA Products and Services***

Entries in this guide are arranged by program area. A sample entry follows:

2.7 The National Income and Product Accounts of the United States, 1929-82: Statistical Tables (publication). The full set of NIPA tables. Also includes a selected bibliography and the definitions and classifications underlying the NIPA's. (1986) Available from GPO: Stock No. 003-010-00174-7, price \$23.00.

The sample entry begins with a reference number, which consists of a number, a period, and a second number; the first number refers to the subject area, and the second number refers to the specific product.

Products and services are available from three sales agents. Abbreviations used for the sales agents follow:

BEA—Bureau of Economic Analysis

GPO—U.S. Government Printing Office, Superintendent of Documents

NTIS—National Technical Information Service

Order forms are provided at the end of this guide. They give the agents' complete mailing addresses and, for GPO and NTIS, telephone and fax numbers for placing charge orders. Orders placed by mail must include title and stock or accession numbers (see sample entry) and must be accompanied by payment.

leading, coincident, and lagging indicators. The reports contain summary estimates. All reports are available online through the EBB (see reference no. 1.2). The printed reports are mailed the day after estimates are released. Annual subscriptions to the printed reports may be ordered for individual sets or for all five sets. Order information for the five sets is given below. For information on individual sets: Gross national product, see reference no. 2.1; personal income and outlays, see reference no. 2.2; regional reports, see reference no. 5.1; international reports, see reference no. 8.1; and composite indexes, see reference no. 11.1.

All Five Sets. Usually a total of 55 printed reports. Available from BEA: Accession No. BEA-19-S, price \$110.00 per year.

1.4 Survey of Current Business (publication). A monthly journal containing estimates and analyses of U.S. economic activity. Includes the "Business Situation"—a review of current economic developments—and regular and special articles pertaining to the national, regional, and international economic accounts and related topics. Among the special articles that appeared in 1990 were "The United Nations System of National Accounts: An Introduction," "Evaluation of the State Personal Income Estimates," "Regional and State Projections of Income, Employment, and Population to the Year 2000," and "U.S. International Sales and Purchases of Services." Current quarterly estimates of the national income and product accounts (see reference no. 2.0) appear every month. The SURVEY also contains two statistical sections that present an array of economic data from public and private sources. The Business Cycle Indicators section consists of tables for over 250 series and charts for about 130 series that are widely used in analyzing current cyclical developments. The Current Business Statistics section consists of tables for over 1,900 series covering general business activities and specific industries. Available from GPO: List ID SCUB, price \$23.00 per year (domestic second-class mail), \$28.75 (foreign second-class

mail), or \$52.00 (domestic first-class mail); single copy price, \$6.50 (domestic) and \$8.13 (foreign).

1.5 Current Business Statistics (EBB, diskette). Series shown in the Current Business Statistics section (or S-pages) of the current issue of the SURVEY OF CURRENT BUSINESS. Updated monthly. Available online through the EBB (see reference no. 1.2). The diskettes are available from BEA on a subscription basis: Accession No. BEA CBA 87-401, price \$200.00 per year.

1.6 Business Statistics, 1961-88 (publication). Monthly or quarterly data for 1985-88 and annual data for 1961-88 for series that appear in the Current Business Statistics section (or S-pages) of the SURVEY OF CURRENT BUSINESS. These series include business sales, inventories, and orders; prices; employment and unemployment; construction; banking and finance; transportation; and many other industries and commodities. An appendix provides data for principal BEA series of the national income and product accounts and of U.S. international transactions. Also contains definitions of terms, sources of data, and methods of compilation. (1990) Available from GPO: Stock No. 003-010-00198-4, price \$16.00.

National Economics

BEA's national economics program encompasses the national income and product accounts, government transactions on a national income and product accounting basis, and the input-output accounts.

National income and product accounts

2.0 The national income and product accounts (NIPA's)—the most widely used branch of the national economic accounts—show the value and composition of

the Nation's output and the distribution of incomes generated in its production. The accounts include estimates of gross national product (GNP)—the market value of the Nation's output of goods and services—in current and constant dollars, GNP price measures, the goods and services that make up GNP in current and constant dollars, national income, personal income, and corporate profits. In addition, BEA produces specialized measures such as estimates of auto and truck output, gross domestic product of corporate business, housing output, and business inventories and sales. Measures of the inventory and fixed capital stocks consistent with the NIPA output measures are also provided. Further, the accounts provide a consistent framework within which estimates of special interest—such as expenditures to protect the environment—are prepared. (Information about the environmental estimates is provided in program description 12.0.)

The estimates of GNP are prepared each quarter in the following sequence: *Advance* estimates are released in the first month after the end of the quarter, and, as more detailed and comprehensive data become available, *preliminary* and *final* estimates are released in the second and third months, respectively. Estimates of personal income and outlays are prepared each month. The NIPA's are also revised in each of the following 3 years, usually in July, and in comprehensive (benchmark) revisions, usually every 5 years (most recently in 1985). Current quarterly and monthly estimates are reported in the SURVEY OF CURRENT BUSINESS; quarterly NIPA estimates appear in a set of 54 "selected" tables, and monthly personal income and outlays estimates are reported in the Current Business Statistics (or S-pages). The full set of annual revisions (132 tables) usually is reported in the July issue. Annual estimates of the fixed capital stock are reported in the August issue.

In addition to the current and historical estimates described in the entries that follow, a considerable amount of component detail (for example, purchases of private structures by type) and industry detail (for example, change in business inventories by industry) is available. For further information about this detail or about the listed computer tapes, printouts, and diskettes, write to the National Income and Wealth Division, BE-54, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0669. For specific questions, the following telephone numbers may be used:

GNP	(202) 523-0824
Personal income and outlays	-0832
Corporate profits	-0888
Personal consumption expenditures	-0819
Gross private domestic investment	-0791
GNP by industry	-0795

A recorded telephone message summarizing the latest GNP estimates is available by calling (202) 898-2451 (see reference no. 1.1). A recorded message summarizing the latest personal income and outlays estimates is available at (202) 898-2452.

Current estimates:

2.1 BEA Reports: Gross National Product (EBB, news release). Monthly reports with summary NIPA estimates that feature GNP and corporate profits. Reports

are available online through the EBB (see reference no. 1.2). Printed reports are mailed the day after estimates are released. (This set of reports is included in the five sets of *BEA Reports*; see reference no. 1.3.) The gross national product printed reports are available from BEA on a subscription basis: Accession No. BEA-15-S, price \$24.00 per year.

2.2 BEA Reports: Personal Income and Outlays (EBB, news release). Monthly reports with summary NIPA estimates that feature personal income and outlays. Reports are available online through the EBB (see reference no. 1.2). Printed reports are mailed the day after estimates are released. (This set of reports is included in the five sets of *BEA Reports*; see reference no. 1.3.) The personal income and outlays printed reports are available from BEA on a subscription basis: Accession No. BEA-14-S, price \$24.00 per year.

2.3 Monthly Advance National Income and Product Accounts Tables (EBB, diskette, or printout). NIPA estimates as they appear in the current issue of the SURVEY OF CURRENT BUSINESS. Updated monthly. Available online through the EBB (see reference no. 1.2). Diskettes and printouts are available 1 day after the release of GNP and are available from BEA on a subscription basis:

Diskette—Accession No. BEA NIW 85-401, price \$200.00 per year.

Printout—Accession No. BEA NIW 83-201, price \$100.00 per year.

2.4 Key Source Data and Assumptions (EBB, printed table). Available source data and assumptions for missing source data that are used to prepare the advance estimates of GNP. Available in January, April, July, and October. Available online through the EBB (see reference no. 1.2). Annual subscriptions for the printed table begin in January and are available from BEA: Accession No. BEA NIW 84-209, price \$25.00 per year.

Historical estimates:

2.5 National Income and Product Accounts (diskette). Most NIPA tables with estimates from 1929 to the present. Available from BEA: Accession No. BEA NIW 89-401, price \$100.00 (5 diskettes). (Diskettes can be ordered individually; for information, write or call the National Income and Wealth Division.)

2.6 National Income and Product Accounts (computer tape). The full set of NIPA tables with estimates from 1929 to the present. Available from BEA: Accession No. BEA NIW 83-001, price \$100.00.

2.7 The National Income and Product Accounts of the United States, 1929-82: Statistical Tables (publication). The full set of NIPA tables. Also includes a selected bibliography and the definitions and classifications underlying the NIPA's. (1986) Available from GPO: Stock No. 003-010-00174-7, price \$23.00.

Recent information related to the NIPA's:

2.8 Index of Items Appearing in the National Income and Product Accounts Tables (publication). An index to the NIPA tables with listings by general subject

area as well as by detailed series. (1987) Available from GPO: Stock No. 003-010-00180-1, price \$1.25.

2.9 National Income and Product Accounts Estimates: When They Are Released, Where They Are Available, How They Are Presented (reprint). A guide to assist users in locating NIPA estimates and to explain some of the conventions used in their presentation. Appeared in January 1988 SURVEY OF CURRENT BUSINESS. (1988) Available upon request from the National Income and Wealth Division.

Methodology Papers (publications). A series of papers that documents the conceptual framework of the NIPA's and the methodology used to prepare the estimates. To date, six papers are available.

2.10 An Introduction to National Economic Accounting (NIPA Methodology Paper No. 1). An introduction to the concepts of the U.S. NIPA's that places these accounts within the larger framework of national economic accounting. Shows the step-by-step derivation of a general national economic accounting system from the conventional accounting statements used by business and government and inferred for other transactors. Also shows how the income and product accounts, the capital finance accounts, and the input-output accounts—the major branches of national economic accounting in the United States today—are derived from this general system. Also appeared in March 1985 SURVEY OF CURRENT BUSINESS. (1985) Available from NTIS: Accession No. PB 85-247567, price \$11.00 (paper copy), \$8.00 (microfiche).

2.11 Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends (NIPA Methodology Paper No. 2). A description of the concepts, sources, and methods of the corporate profits components of the NIPA's. (1985) Available from NTIS: Accession No. PB 85-245397, price \$17.00 (paper copy), \$8.00 (microfiche).

2.12 Foreign Transactions (NIPA Methodology Paper No. 3). A description of the preparation of estimates in the NIPA's of net exports (both current- and constant-dollar), transfer payments to foreigners, capital grants received by the United States, interest paid by Government to foreigners, and net foreign investment. Also describes the relationship between foreign transactions estimates in the NIPA's and those in the balance of payments accounts. (1987) Available from NTIS: Accession No. PB 88-100649, price \$17.00 (paper copy), \$8.00 (microfiche).

2.13 GNP: An Overview of Source Data and Estimating Methods (NIPA Methodology Paper No. 4). Basic information about GNP, including the conceptual basis for the account that presents GNP, definitions of each of the components on the income and product sides of that account, and a summary, presented in tabular form, of the source data and methods used in preparing estimates of current- and constant-dollar GNP. Also provides an annotated bibliography, with a directory, of the more than 50 items over the last decade that provided methodolog-

ical information about GNP. Appeared in July 1987 SURVEY OF CURRENT BUSINESS. (1987) Available from NTIS: Accession No. PB 88-134838, price \$15.00 (paper copy), \$8.00 (microfiche).

2.14 Government Transactions (NIPA Methodology Paper No. 5). Presents the conceptual basis and framework of government transactions in the national income and product accounts, describes the presentation of the estimates, and details the sources and methods used to prepare estimates of Federal transactions and of State and local transactions. (1988) Available from GPO: Stock No. 003-010-00187-9, price \$5.50.

2.15 Personal Consumption Expenditures (NIPA Methodology Paper No. 6). Presents the conceptual basis and framework for personal consumption expenditures (PCE) in the NIPA's, describes the presentation of the estimates, and details the sources and methods used to prepare annual, quarterly, and monthly estimates of PCE. Includes a bibliography, definitions, and convenient tabular summaries of estimating procedures. (1990) Available from GPO: Stock No. 003-010-00200-0, price \$4.50.

2.16 Evaluation of the GNP Estimates (reprint). An evaluation of the GNP estimates, covering the reliability of estimates, sources of error and types of statistical improvement, status of source data, documentation of methodology, release schedules, and security before release. This article appeared in the August 1987 SURVEY OF CURRENT BUSINESS. (1987) Available from BEA: Accession No. BEA CBA 88-101, price \$5.00.

2.17 The Use of National Income and Product Accounts for Public Policy: Our Successes and Failures (BEA Staff Paper No. 43). An evaluation using two indirect approaches. The first reviews the "accuracy" of the estimates, using the size of revisions to GNP estimates as an indicator. The second reviews users' recommendations drawn from publications issued over the last 30 years. (1985) Available from BEA: Accession No. BEA CBA 86-101, price \$5.00.

2.18 The Underground Economy: An Introduction (reprint). A discussion of the coverage, measurement methods, and implications of the underground economy. Part of the discussion features the relation between the NIPA's and the underground economy—illegal activities in the context of the NIPA's, three sets of NIPA estimates sometimes misunderstood as being measures of the underground economy, and the effect on NIPA estimates of possible misreporting in source data due to the underground economy. Article appeared in the May 1984 and July 1984 issues of the SURVEY OF CURRENT BUSINESS. (1984) Available from BEA: Accession No. BEA CBA 84-101, price \$5.00.

2.19 Wealth (computer tape). Annual estimates through 1990 of gross and net stocks, depreciation, and discards for fixed nonresidential private and residential capital, durable goods owned by consumers, and fixed capital owned by governments. For fixed private capital, contains estimates by each NIPA type of equipment and structures starting in 1925. For fixed private capital, also contains estimates of total equip-

ment, total structures, and the total of equipment and structures owned by each two-digit SIC establishment-based industry starting in 1947. For durable goods owned by consumers, contains estimates by each NIPA type of goods starting in 1925. For fixed capital owned by governments, contains estimates by each NIPA type of equipment and structures, separately for the Federal Government and for State and local governments, starting in 1925. The estimates are in historical-cost, constant-cost, and current-cost valuations. Also includes stock series similar to those used by the Bureau of Labor Statistics to derive measures of capital input for multifactor productivity studies. The investment series through 1990 used to derive all of these estimates are also included, in the same detail as the stock estimates, in historical-cost and constant-cost valuations. Updated annually. Available from BEA: Accession No. BEA NIW 89-001, price \$100.00.

2.20 Detailed Investment by Industry (computer tape). Annual estimates through 1990 of investment owned by each two-digit SIC establishment-based industry, separately for each detailed NIPA type of equipment and structures. (The Wealth tape in item 2.19 also includes investment series for each industry, but only for total equipment, total structures, and the total of equipment and structures.) The estimates are in historical-cost and constant-cost valuations. Updated annually. Available from BEA: Accession No. BEA NIW 89-002, price \$100.00.

2.21 Detailed Wealth by Industry (computer tape). Annual estimates through 1990 of gross and net stocks, depreciation, and discards for fixed nonresidential private capital owned by each two-digit establishment-based SIC industry, separately for each detailed NIPA type of equipment and structures. (The Wealth tape in item 2.19 also includes estimates of gross and net stocks, depreciation, and discards for each industry, but only for total equipment, total structures, and the total of equipment and structures.) Also includes stock series similar to those used by the Bureau of Labor Statistics to derive measures of capital input for multifactor productivity studies. The estimates are in constant-cost and current-cost valuations. Updated annually. Available from BEA: Accession No. BEA NIW 89-003, price \$100.00.

2.22 Fixed Reproducible Tangible Wealth in the United States, 1925-85 (publication). Annual estimates of the stock of privately owned and government-owned durable equipment and structures and of durable goods owned by consumers for 1925-85. Estimates are for fixed nonresidential private capital by major industry group (farm, manufacturing, and nonfarm nonmanufacturing), for residential capital by tenure group (owner-occupied and tenant-occupied), for government-owned fixed capital by type of government (Federal, and State and local), and for 11 types of durable goods owned by consumers. (1987) Available from GPO: Stock No. 003-010-00177-1, price \$18.00.

2.23 The United Nations System of National Accounts: An Introduction (reprint). Describes the United Nations System of National Accounts (SNA), which is followed by most other countries, and contrasts it with the U.S. economic accounts. The article

also presents estimates prepared by BEA to approximate some of the major SNA aggregates and describes the revision of the SNA that is underway. This article appeared in the June 1990 SURVEY OF CURRENT BUSINESS. (1990) Available upon request from the BEA Public Information Office.

Government transactions

3.0 BEA's estimates of government receipts, expenditures, and surplus or deficit are on a national income and product accounting basis. The estimates are prepared separately for Federal and for State and local governments on the same schedule as described for the NIPA's. Reconciliations of the Federal sector on a NIPA basis and the unified budget prepared by the Office of Management and Budget are the basis for an article in the SURVEY OF CURRENT BUSINESS, usually in February, about Federal fiscal programs for the next fiscal year and for detailed tables in the July issue. These reconciliations, and more specialized work such as described in the papers that follow, facilitate analysis of the effects of government fiscal policies on the economy. An article on the fiscal position of State and local governments is usually published in February. For further information, write to the Government Division, BE-57, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0715. For specific questions, the following telephone numbers may be used:

Federal	(202) 523-0744
State and local	-0726
National defense	-3472

3.1 Government Transactions (NIPA Methodology Paper No. 5). Presents the conceptual basis and framework of government transactions in the national income and product accounts, describes the presentation of the estimates, and details the sources and methods used to prepare estimates of Federal transactions and of State and local transactions. (1988) Available from GPO: Stock No. 003-010-00187-9, price \$5.50.

3.2 Cyclical Adjustment of the Federal Budget and Federal Debt: Updated Detailed Methodology and Estimates (BEA Staff Paper No. 45). Description of the models that BEA uses to estimate the cyclically adjusted Federal budget and inflation-induced changes in the cyclically adjusted budget. The quarterly data for the variables in the models and the regression equations underlying the coefficients are presented. The paper also discusses the cyclical adjustment of Federal debt and shows some results. (1986) Available from NTIS: Accession No. PB87-157376, price \$23.00 (paper copy), \$8.00 (microfiche).

Input-output accounts

4.0 Input-output accounts for the United States show how industries interact—providing input to, and taking output from, each other—to produce the GNP. Benchmark tables, based largely on the economic censuses, are prepared every 5 years; the latest benchmark table is for 1977, and the next (which will be available in 1991) will be for 1982. Annual tables are prepared using basically the same procedures as used for the benchmark

tables, but with less comprehensive and less reliable source data. Associated tables showing capital flows from producing to using industries and employment and employee compensation by industry are also prepared. The computer tapes, diskettes, and printouts listed below are for the tables at the 85-industry level; more detailed tables are also available. For further information about this detail or about the listed computer tapes, diskettes, and printouts, write to the Interindustry Economics Division, BE-51, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0792. For specific questions, the following telephone numbers may be used:

Benchmark tables	(202) 523-0683
Annual tables	-0867
Methodology	-0683
Computer tapes, diskettes, and printouts .	-0792

4.1 Annual 85-Industry Input-Output Tables Based on the 1977 Benchmark Input-Output Study: 1985 Summary Input-Output Tables (computer tape, diskette, and printout). Five tables: (1) Use table, (2) make table, (3) commodity-by-commodity direct requirements table, (4) commodity-by-commodity total requirements table, and (5) industry-by-commodity total requirements table. Available from BEA:

Computer tape—Accession No. BEA IED 90-001, price \$100.00.

Diskette—Accession No. BEA IED 90-401, price \$40.00 (two diskettes). (Diskettes can be ordered separately for \$20.00: please specify diskette A for tables 1, 2, and 3 or diskette B for tables 4 and 5.)

Printout—Accession No. BEA IED 90-201, price \$55.00.

4.2 Annual 85-Industry Input-Output Tables Based on the 1977 Benchmark Input-Output Study: 1984 Summary Input-Output Tables (computer tape, diskette, and printout). Five tables: (1) Use table, (2) make table, (3) commodity-by-commodity direct requirements table, (4) commodity-by-commodity total requirements table, and (5) industry-by-commodity total requirements table. Available from BEA:

Computer tape—Accession No. BEA IED 89-002, price \$100.00.

Diskette—Accession No. BEA IED 89-402, price \$40.00 (two diskettes). (Diskettes can be ordered separately for \$20.00: please specify diskette A for tables 1, 2, and 3 or diskette B for tables 4 and 5.)

Printout—Accession No. BEA IED 89-202, price \$55.00.

4.3 Annual 85-Industry Input-Output Tables Based on the 1977 Benchmark Input-Output Study: 1983 Summary Input-Output Tables (computer tape, diskette, and printout). Five tables: (1) Use table, (2) make table, (3) commodity-by-industry direct requirements table, (4) commodity-by-commodity total requirements table, and (5) industry-by-commodity total requirements table. Available from BEA:

Computer tape—Accession No. BEA IED 89-001, price \$100.00.

Diskette—Accession No. BEA IED 89-401, price \$40.00 (two diskettes). (Diskettes can be ordered separately

for \$20.00: please specify diskette A for tables 1, 2, and 3, or diskette B for tables 4 and 5.)

Printout—Accession No. BEA IED 89-201, price \$55.00.

4.4 Annual 85-Industry Input-Output Tables Based on the 1977 Benchmark Input-Output Study: 1982 Summary Input-Output Tables (computer tape, diskette, and printout). Five tables: (1) Use table, (2) make table, (3) commodity-by-industry direct requirements table, (4) commodity-by-commodity total requirements table, and (5) industry-by-commodity total requirements table. Available from BEA:

Computer tape—Accession No. BEA IED 88-001, price \$100.00.

Diskette—Accession No. BEA IED 88-401, price \$40.00 (two diskettes). (Diskettes can be ordered separately for \$20.00: please specify diskette A for tables 1, 2, and 3 or diskette B for tables 4 and 5.)

Printout—Accession No. BEA IED 88-201, price \$55.00.

4.5 Annual 85-Industry Input-Output Tables Based on the 1977 Benchmark Input-Output Study: 1981 Summary Input-Output Tables (computer tape, diskette, and printout). Five tables: (1) Use table, (2) make table, (3) commodity-by-industry direct requirements table, (4) commodity-by-commodity total requirements table, and (5) industry-by-commodity total requirements table. Available from BEA:

Computer tape—Accession No. BEA IED 87-003, price \$100.00.

Diskette—Accession No. BEA IED 87-409, price \$40.00 (two diskettes). (Diskettes can be ordered separately for \$20.00: please specify diskette A for tables 1, 2, and 3 or diskette B for tables 4 and 5.)

Printout—Accession No. BEA IED 87-218, price \$55.00.

4.6 Annual 85-Industry Input-Output Tables Based on the 1977 Benchmark Input-Output Study: 1980 (Revised) Summary Input-Output Tables (computer tape, diskette, and printout). Five tables: (1) Use table, (2) make table, (3) commodity-by-industry direct requirements table, (4) commodity-by-commodity total requirements table, and (5) industry-by-commodity total requirements table. Available from BEA:

Computer tape—Accession No. BEA IED 87-002, price \$100.00.

Diskette—Accession No. BEA IED 87-406, price \$40.00 (two diskettes). (Diskettes can be ordered separately for \$20.00: please specify diskette A for tables 1, 2, and 3 or diskette B for tables 4 and 5.)

Printout—Accession No. BEA IED 87-212, price \$55.00.

4.7 The Input-Output Structure of the U.S. Economy, 1977 (reprint). An explanation of the concepts, conventions, definitions, and uses of the 1977 input-output tables. Includes the input-output tables at the 85-industry level as published in the May 1984 SURVEY OF CURRENT BUSINESS; the tables have since been revised (see the next item). Also includes an extensive bibliography of BEA publications relating to input-output. (1984)

Available from BEA: Accession No. BEA IED 84-101, price \$5.00.

4.8 1977 (Revised) 85-Industry Input-Output Tables (computer tape, diskette, and printout). Five tables: (1) Use table, (2) make table, (3) commodity-by-industry direct requirements table, (4) commodity-by-commodity total requirements table, and (5) industry-by-commodity total requirements table. The revised input-output tables reflect the statistical changes and the changes in definition and classification incorporated in the 1985 comprehensive revision of the national income and product accounts. Available from BEA:

Computer tape—Accession No. BEA IED 87-001, price \$100.00.

Diskette—Accession No. BEA IED 87-403, price \$40.00 (two diskettes). (Diskettes can be ordered separately for \$20.00: please specify diskette A for tables 1, 2, and 3 or diskette B for tables 4 and 5.)

Printout—Accession No. BEA IED 87-206, price \$55.00.

Regional Economics

BEA's regional economics program provides estimates, analyses, and projections by region, State, metropolitan area, and county.

5.1 BEA Reports: Regional Reports (EBB, news release). Reports (usually six a year) with summary estimates of State personal income (quarterly and annual) and of county and metropolitan area personal income (annual). Reports are available online through the EBB (see reference no. 1.2). (The EBB carries, in addition to the news release, estimates of personal income by State and by county and earnings and wages by industry and by State.) Printed reports are mailed the day after estimates are released. (This set of reports is included in the five sets of *BEA Reports*; see reference no. 1.3.) These printed reports are available from BEA on a subscription basis: Accession No. BEA-17-S, price \$12.00 per year.

Regional estimates

6.0 Current quarterly State personal income estimates are reported in the January, April, July, and October issues of the SURVEY OF CURRENT BUSINESS. The annual estimates of State and local area personal income for a given year are subject to successive refinement. Preliminary annual 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. Revised annual estimates based on more reliable source data are published in the August SURVEY. These estimates are subsequently revised to incorporate newly available information used to prepare the current local area estimates. The revised State estimates, together with the current local area estimates, are published in the following April SURVEY. The annual estimates emerging from this process are subject to further revision 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 State estimates for a given year are normally completed with the fourth April release. After that, the estimates will be changed only to incorporate a comprehensive revision in the national income and product accounts—which takes place approximately every 5 years—or to make important improvements to the estimates through the use of additional or more current State and local area data.

Through the Regional Economic Information System, the following data sets are available: Quarterly and annual State personal income and wage and salary disbursements; annual State disposable personal income and personal tax and nontax payments; annual State full- and part-time wage and salary employment; annual State and county personal income, transfer payments, and farm income and expenses; and annual State and county full- and part-time total employment. The system includes an information retrieval service that provides a variety of analytical tabulations for counties and specified combinations of counties. All of the tabulations are available in several media.

BEA also makes its regional estimates available through the BEA User Group, members of which include State agencies, universities, and Census Bureau Primary State Data Centers. BEA provides its estimates of income and employment for all States and counties to these organizations with the understanding that they will make the estimates readily available.

For further information, write to the Regional Economic Measurement Division, BE-55, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0966. For specific questions, the following telephone numbers may be used:

Quarterly State personal income	(202) 523-0911
Wage and salary income and employment	-0945
Proprietors' income and employment	-0937

6.1 Local Area Personal Income, 1983-88 (publication). An annual publication that presents personal income by major type of payment and earnings by major industry, population, and total and per capita personal income for States, counties, and metropolitan areas. (Estimates are available from BEA on computer tape, diskette, and printout.) (1990) Publication available from GPO.

Volume 1. Summary: Regions, States, and Metropolitan Areas. Estimates for the United States, regions, States, and metropolitan areas. Also contains county definitions of metropolitan areas, a detailed description of sources and methods, and samples of tables available. GPO Stock No. 003-010-00205-1, price \$15.00.

Each of the following volumes provides a methodology and estimates for the listed States and their counties and metropolitan areas.

Volume 2. New England, Mideast, and Great Lakes Regions. (Connecticut, Delaware, District of Columbia, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin) GPO Stock No. 003-010-00206-9, price \$16.00.

Volume 3. Plains Region. (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota) GPO Stock No. 003-010-00207-7, price \$12.00.

Volume 4. Southeast Region. (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia) GPO Stock No. 003-010-00208-5, price \$18.00.

Volume 5. Southwest, Rocky Mountain, and Far West Regions and Alaska and Hawaii. (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, and Wyoming) GPO Stock No. 003-010-00209-3, price \$16.00.

6.2 State Personal Income: 1929-87 (publication). Estimates of annual personal income and disposable personal income, total and per capita, for 1929-87 and 1948-87, respectively; annual personal income by major type of payment and earnings by industry for 1929-87; and quarterly total personal income for 1969-88. The estimates are for each State, eight BEA regions, and the United States. A comprehensive statement of sources and methods used for estimating State personal income is provided. (1989) Available from GPO: Stock No. 003-010-00197-6, price \$16.00.

Regional analyses and projections

7.0 BEA prepares analyses to identify and measure factors that determine area differences in total and per capita income and in industry employment and output. Long-term projections of personal income, employment, and earnings by industry are prepared every 5 years for all States and metropolitan areas and for selected States and areas in other years. BEA maintains mid-term regional econometric models to forecast annual changes in economic activity and to analyze the impacts of projects and programs. In conjunction with the projections work, BEA has developed estimates of gross state product. These estimates, prepared by industry, supplement the estimates of personal income described in program description 6.0. For further information, write to the Regional Economic Analysis Division, BE-61, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0946. For specific questions, the following telephone numbers may be used:

Long-term regional projections	(202) 523-0971
Mid-term regional projections	-9212
Regional input-output multipliers	-9213
Gross state product by industry	-9180

7.1 Gross State Product, Annual Estimates, 1963-86¹ (computer tape, diskette). These estimates are the counterpart of gross domestic product and provide the most comprehensive measure of State production now available. Gross state product is measured in current dollars as the sum of four components for each industry: Compensation of employees; proprietors' income with inventory valuation adjustment and capital consumption allowances; indirect business tax and nontax liability;

¹ Gross state product estimates through 1988 with revisions back to 1977 will be published in the fall of 1991.

and other, mainly capital-related, charges. The estimates are for the 50 States, nine BEA regions, and the United States and for 61 industries. Estimates are in current and constant dollars. These estimates were originally published in the May 1988 SURVEY OF CURRENT BUSINESS, with errata on page 37 of the October 1988 SURVEY. (1988) Available from BEA:

Computer tape—Accession No. BEA REA 88-401, price \$100.00.

Diskette—A diskette for a region contains estimates for the United States, the BEA region, and each State of the region. (The Southeast region, on two diskettes, costs \$40.00.)

Area	Accession No.	Price
New England	BEA REA 88-402	\$20.00
Mideast	BEA REA 88-403	\$20.00
Great Lakes	BEA REA 88-404	\$20.00
Plains	BEA REA 88-405	\$20.00
Southeast (AL-LA)	BEA REA 88-406	\$20.00
Southeast (MS-WV)	BEA REA 88-407	\$20.00
Southwest	BEA REA 88-408	\$20.00
Rocky Mountain	BEA REA 88-409	\$20.00
Far West (plus AK and HI)	BEA REA 88-410	\$20.00

7.2 Experimental Estimates of Gross State Product by Industry (BEA Staff Paper No. 42). A description of the issues and methodology for preparing estimates of gross state product—the State equivalent of GDP. The estimates are consistent with BEA's State personal income and with GNP by industry. Estimates for 1963, 1967, 1972, and 1977 are presented. (These estimates were superseded; see item description 7.1.) (1985) Available from NTIS: Accession No. PB85-240885, price \$23.00 (paper copy), \$8.00 (microfiche).

7.3 Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II) (publication). An explanation of how to use regional input-output multipliers, by industry, for output, earnings, and employment. Includes information on how to perform systematic analyses of the regional economic impacts of projects and programs. Also contains multipliers for all States from RIMS II, sample tables of input-output multipliers, and hypothetical case studies. (1986) Available from NTIS: Accession No. PB86-230216, price \$23.00 (paper copy), \$8.00 (microfiche).

7.4 BEA Regional Projections to 2040 (publication, diskette). Estimates for 1973, 1979, 1983, and 1988, and projections for 1995, 2000, 2005, 2010, 2020 and 2040 for total personal income, population, per capita personal income, and employment and earnings by industry for the United States, BEA regions, States, metropolitan statistical areas, and BEA economic areas. (1990)

Volume 1: States.

Publication—Available from GPO: Stock No. 003-010-00199-2, price \$7.50.

Diskette—Available from BEA: Accession No. BEA REA 90-420, price \$40.00 (two diskettes).

Volume 2: Metropolitan Statistical Areas.

Publication—Available from GPO: Stock No. 003-010-00211-5, price \$17.00.

Diskette—Available from BEA: Accession No. BEA REA 90-430, price \$40.00 (two diskettes).

Volume 3: BEA Economic Areas.

Publication—Available from GPO: Stock No. 003-010-00212-3, price \$10.00.

Diskette—Available from BEA: Accession No. BEA REA 90-440, price \$40.00 (two diskettes).

International Economics

BEA's international economics program encompasses the international transactions accounts (balance of payments) and the direct investment estimates. The international transactions accounts, which measure U.S. transactions with foreign countries, include merchandise trade, trade in services, the current-account balance, and capital transactions. The direct investment estimates cover estimates of U.S. direct investment abroad and foreign direct investment in the United States, income and other flows associated with these investments, and other aspects of the operations of multinational enterprises.

8.1 BEA Reports: International Reports (EBB, news release). Reports (usually 13 a year) with summary estimates of merchandise trade, balance of payments basis (quarterly); summary of international transactions (quarterly); international investment position (annual); capital spending by majority-owned foreign affiliates (semiannual); direct investment (annual); and related topics. Reports are available online through the EBB (see reference no. 1.2). Printed reports are mailed the day after estimates are released. (This set of reports is included in the five sets of *BEA Reports*; see reference no. 1.3.) These printed reports are available from BEA on a subscription basis: Accession No. BEA-18-S, price \$26.00 per year.

U.S. international transactions

9.0 The international transactions accounts provide a detailed and comprehensive view of economic transactions between the United States and foreign countries. The accounts include estimates of merchandise exports and imports; travel, transportation, and other services; foreign aid; and private and official capital flows, including direct investment. (Information about direct investment and international services is provided in program description 10.0.) Current estimates, including estimates of merchandise trade on a balance of payments basis, are reported in the March, June, September, and December issues of the SURVEY OF CURRENT BUSINESS. Estimates include detail for the current and capital accounts, classified by type of transaction and by area. Each June, these estimates are revised back 4 years.

Estimates of the international investment position of the United States appear in June. For further information, write to the Balance of Payments Division, BE-58, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0620. For

specific questions, the following telephone numbers may be used:

Current-account analysis	(202) 523-0621
Current-account estimates	-0625
Merchandise trade	-0668
Capital-account transactions	-0603
Government transactions	-0615

A recorded telephone message summarizing key estimates of merchandise trade or U.S. international transactions, whichever is the most recent release, is available at (202) 898-2453 (see reference no. 1.1).

9.1 U.S. Merchandise Trade Data (printout, diskette). Seasonally adjusted and unadjusted exports and imports for the end-use categories used by BEA to derive trade totals on a Census basis. Series begin in 1979. Updated monthly or quarterly. Available from BEA on a subscription basis:

U.S. Merchandise Trade Data, Monthly.

Printout—Accession No. BEA BPD 86-201, price \$100.00 per year.

Diskette—Accession No. BEA BPD 86-401, price \$200.00 per year.

U.S. Merchandise Trade Data, Quarterly. Also includes, on a balance of payments basis, exports of agricultural products, nonagricultural products, and nonmonetary gold, and imports of petroleum and products, nonpetroleum products, and nonmonetary gold.

Printout—Accession No. BEA BPD 86-202, price \$40.00 per year.

Diskette—Accession No. BEA BPD 86-402, price \$80.00 per year.

9.2 U.S. Merchandise Trade: Exports and Imports by End-Use Category, Monthly (computer tape). Monthly end-use detail (not seasonally adjusted) on a Census basis for exports and imports for 70 countries and areas. Series begin in 1978. Updated monthly. Available from BEA:

U.S. Merchandise Exports, Monthly. Accession No. BEA BPD 86-001, price \$100.00.

U.S. Merchandise Imports, Monthly. Accession No. BEA BPD 86-002, price \$100.00.

9.3 U.S. Merchandise Trade: Exports and Imports by End-Use Category, Quarterly (computer tape). Quarterly end-use detail (not seasonally adjusted) on a Census basis for exports and imports for 70 countries and areas. Series begin in 1978. Updated quarterly. Available from BEA:

U.S. Merchandise Exports, Quarterly. Accession No. BEA BPD 86-003, price \$100.00.

U.S. Merchandise Imports, Quarterly. Accession No. BEA BPD 86-004, price \$100.00.

9.4 U.S. Merchandise Trade: Exports and Imports by End-Use Category, Annually (computer tape, printout). Annual end-use detail on a Census basis for exports and imports for 70 countries and areas. Series begin in 1978. Updated annually. Available from BEA:

U.S. Merchandise Exports, Annually.

Computer tape—Accession No. BEA BPD 86-005, price \$100.00

Printout—Accession No. BEA BPD 86-103, price \$55.00

U.S. Merchandise Imports, Annually.

Computer tape—Accession No. BEA BPD 86-006, price \$100.00

Printout—Accession No. BEA BPD 86-104, price \$55.00

9.5 Status Report on Statistical and Methodological Improvements in the U.S. Balance of Payments Statistics (BEA Working Paper No. 6). Reviews major problems, such as timing and coverage, in the balance of payments accounts; describes statistical and methodological improvements BEA has undertaken to resolve some of the problems; and discusses projects for future improvements. (1988) Available from BEA: Accession No. BEA OD 88-001, price \$5.00.

9.6 The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures (publication). Describes in detail the methodology used in constructing the balance of payments estimates for the United States. Explains underlying principles and describes the presentation of the estimates. Includes a comprehensive list of data sources. (1990) Available from GPO: Stock No. 003-010-00204-2, price \$8.50.

NOTE.—For a discussion of the relationship between foreign transactions estimates in the balance of payments accounts and those in the national income and product accounts, see reference no. 2.12.

Direct investment and international services

10.0 BEA conducts quarterly, annual, and benchmark surveys of U.S. direct investment abroad and of foreign direct investment in the United States. The information collected relates to the direct investment position and flows of capital, income, royalties and license fees, and other service charges between parent companies and affiliates; capital expenditures by majority-owned foreign affiliates of U.S. companies; the financial structure and operations of U.S. parent companies and their foreign affiliates; the financial structure and operations of U.S. affiliates of foreign companies; and U.S. business enterprises acquired or established by foreign direct investors. Summary information on the annual and quarterly surveys usually appears in the SURVEY OF CURRENT BUSINESS on the following schedule:

Foreign direct investment in the United States:

- The position and balance of payments flows, in June, with additional detail in August.
- Operations of U.S. affiliates of foreign companies, in May (July for 1989–91 issues).
- U.S. business enterprises acquired or established by foreign direct investors, in May.

U.S. direct investment abroad:

- The position and balance of payments flows, in June, with additional detail in August.
- Operations of U.S. parent companies and their foreign affiliates, in June (September for 1991 issue).
- Capital expenditures by majority-owned foreign affiliates of U.S. companies, in March and September.

BEA is expanding and improving the information it provides on U.S. international trade and investment in services. (For a description of the major elements of this program, see part I of "U.S. Sales of Services to Foreigners" in the January 1987 SURVEY OF CURRENT BUSINESS. The most recent improvements are outlined in the Technical Notes section of "U.S. International Transactions, First Quarter, 1989" in the June 1989 SURVEY.) Information on sales of services by U.S. parents, their foreign affiliates, and the U.S. affiliates of foreign companies is collected as part of the benchmark and annual surveys on their financial structure and operations. BEA has also completed a benchmark survey and conducts an annual follow-on survey on selected U.S. services transactions with unaffiliated foreign persons.

For further information on direct investment and international services, write to the International Investment Division, BE-50, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0659. For specific questions, the following telephone numbers may be used:

Foreign direct investment in the United States	(202) 523-0641
International services	-0646
Operations of U.S. parent companies and their foreign affiliates	-3451
Operations of U.S. affiliates of foreign companies	-0650
U.S. direct investment abroad	-0649

10.1 Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies (publication, diskette). The most detailed results of BEA's annual survey of foreign direct investment in the United States (only summary information appears in articles in the SURVEY OF CURRENT BUSINESS). Contains information on the financial structure and operations of nonbank U.S. affiliates of foreign direct investors. Data are classified by industry of U.S. affiliate, by country and industry of ultimate beneficial owner, and, for selected data, by industry of sales and by State. Updated annually. (Note: Annual survey data for 1977–85 are available from the International Investment Division.)

Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies, Preliminary 1988 Estimates. (1990)

Publication—Available from GPO: Stock No. 003-010-00203-4, price \$4.75.

Diskette—Available from BEA: Accession No. BEA IID 90-402, price \$20.00.

NOTE: The annual survey publication for 1987 has been replaced by the publication for the 1987 benchmark survey of foreign direct investment in the United States. (See reference no. 10.3.)

Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies, Revised 1986 Estimates. (1989)

Publication—Available from GPO: Stock No. 003-010-00190-9, price \$3.25.

Diskette—Available from BEA: Accession No. BEA IID 89-401, price \$20.00.

10.2 Foreign Direct Investment in the United States: Direct Investment Position and Related Capital and Income Flows, 1980–89 (computer tape). Annual estimates of the foreign direct investment position in the

United States and selected capital and income flows between U.S. affiliates and their foreign parent companies. Estimates are for 32 countries by 16 industries. Available from BEA: Accession No. BEA IID 80-002, price \$100.00.

10.3 Foreign Direct Investment in the United States, 1987 Benchmark Survey, Final Results (publication, diskette). The final results of BEA's 1987 benchmark survey of foreign direct investment in the United States. Benchmark surveys are BEA's most comprehensive surveys, both in terms of companies covered and information gathered. Contains information on the financial structure and operations of the U.S. affiliates of foreign direct investors in 1987. Data are classified by industry of U.S. affiliate, by country and industry of foreign parent or ultimate beneficial owner, and, for selected data, by industry of sales and by State. (1990)

Publication—Available from GPO: Stock No. 003-010-00210-7, price \$14.00.

Diskette—Available from BEA: Accession No. BEA IID 90-401, price \$60.00 (three diskettes).

10.4 U.S. Business Enterprises Acquired or Established by Foreign Direct Investors, Supplementary Tables (tables, diskette). The results of BEA's survey of new foreign direct investments in the United States. Summary tables appeared in the May 1990 SURVEY OF CURRENT BUSINESS article. This set of 34 supplementary tables contains additional detail for 1987-89 on the number of investments and investors, investment outlays, and selected operating data of the U.S. business enterprises acquired or established. Comparable tables for 1980-86 are also available. (1990) Available from BEA:

1987-89:

Tables—Accession No. BEA IID 90-105, price \$10.00.

Diskette—Accession No. BEA IID 90-405, price \$20.00.

1980-86:

Tables—Accession No. BEA IID 89-106, price \$18.00.

Diskette—Accession No. BEA IID 89-406, price \$20.00.

10.5 Foreign Direct Investment in the United States: Gross Product of Nonbank U.S. Affiliates, 1977-87 (tables) Presents, by industry of U.S. affiliate and by country of ultimate beneficial owner, estimates of U.S. affiliates' gross product. (1989) Available from BEA: Accession No. BEA IID 89-107, price \$10.00.

10.6 U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and Their Foreign Affiliates (publication, diskette). The most detailed results of BEA's annual survey of the worldwide operations of U.S. multinational companies (only summary information appears in articles in the SURVEY OF CURRENT BUSINESS). Contains information on the financial structure and operations of both U.S. parent companies and their foreign affiliates. Data are classified by country and industry of foreign affiliate and by industry of U.S. parent. Updated annually. (Note: Annual survey data for 1982-85 are available from the International Investment Division.)

U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and Their Foreign Affiliates, Preliminary 1988 Estimates. (1990)

Publication—Available from GPO: Stock No. 003-010-00202-6, price \$4.25.

Diskette—Available from BEA: Accession No. BEA IID 90-404, price \$20.00.

U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and Their Foreign Affiliates, Revised 1987 Estimates. (1990)

Publication—Available from GPO: Stock No. 003-010-00201-8, price \$4.25.

Diskette—Available from BEA: Accession No. BEA IID 90-403, price \$20.00.

U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and Their Foreign Affiliates, Revised 1986 Estimates. (1989)

Publication—Available from GPO: Stock No. 003-010-00189-5, price \$4.25.

Diskette—Available from BEA: Accession No. BEA IID 89-403, price \$20.00.

10.7 U.S. Direct Investment Abroad: Balance of Payments and Direct Investment Position Estimates, 1977-81 (publication). Contains final estimates of the U.S. direct investment position abroad and balance of payments transactions between U.S. parent companies and their foreign affiliates for 1977-81. Includes estimates by country and industry of foreign affiliate. (1987) Available from BEA: Accession No. BEA IID 86-150, price \$5.00

10.8 U.S. Direct Investment Abroad, Country by Industry Estimates, 1950-89 (computer tape). Annual estimates of the U.S. direct investment position abroad and of selected capital and income flows between U.S. parent companies and their foreign affiliates. Estimates are for 56 countries by 7 industries for 1950-65, 56 countries by 14 industries for 1966-76, 76 countries by 15 industries for 1977-81, and 80 countries by 15 industries for 1982-89. Available from BEA: Accession No. BEA IID 50-002, price \$100.00.

10.9 U.S. Direct Investment Abroad: 1982 Benchmark Survey Data (publication, computer tape). Results of a BEA benchmark survey of over 2,000 U.S. multinational companies and their 18,000 foreign affiliates. Presents a detailed account of U.S. direct investment abroad in 1982, including data on balance sheets; income statements; employment; employee compensation; U.S. merchandise trade; sales of goods and services; research and development expenditures; property, plant, and equipment; and taxes. Data are classified by country and industry of affiliate and industry of U.S. parent. (1985)

Publication—Available from NTIS: Accession No. PB 86-169117, price \$45.00 (paper copy), \$8.00 (microfiche).

Computer tape—Available from BEA: Accession No. BEA IID 86-001, price \$100.00.

10.10 U.S. International Sales and Purchases of Services (reprint). Presents information on services in a more detailed and unified format than has been available previously. Includes data on cross-border transactions

Need Help? Try An Index!

Survey of Current Business:

- Subject Index—in every June and December issue.
- NIPA Index—just after the NIPA tables in the July 1990 issue.
- S-Pages Index—at the back of the S-pages in every issue.
- C-Pages Index—page C-47 of the October 1990 issue.

in services (for 1986–89) and on sales of services by foreign affiliates of U.S. companies (for 1986–88) and by U.S. affiliates of foreign companies (for 1987–88). This article appeared in the September 1990 SURVEY OF CURRENT BUSINESS; the data will be updated annually. (1990) Available upon request from the International Investment Division.

10.11 A Guide to BEA Statistics on Foreign Direct Investment in the United States (reprint). Explains the types of data on foreign direct investment in the United States that are collected and published by BEA and clarifies the differences between those data sets. This article appeared in the February 1990 SURVEY OF CURRENT BUSINESS. (1990) Available upon request from the International Investment Division.

10.12 Foreign Direct Investment in the United States: Balance of Payments and Direct Investment Position Estimates, 1980–86 (publication). Contains final estimates of the foreign direct investment position in the United States and balance of payments transactions between foreign parent groups and their U.S. affiliates for 1980–86. Includes estimates by country of foreign parent and industry of U.S. affiliate. (1990) Available from GPO: Stock No. 003-010-00213-1, price \$3.00.

Other Tools for Measuring, Analyzing, and Forecasting

BEA's work on economic accounts is supplemented by various other tools for measuring, analyzing, and forecasting economic developments. These include a system of business cycle indicators and a set of estimates relating to the environment.

Business cycle indicators

11.0 BEA maintains a system of indicators to track business cycles. The system features the composite indexes of leading, coincident, and lagging indicators. The data base includes series classified as cyclical indicators (because they conform well to broad fluctuations in economic activity), as well as other series useful in interpreting the economic situation and outlook. Each month preliminary values of the three composite indexes for the latest month and revised values for the 5 preceding months are released. Once a year, in the fall, the composite indexes are recalculated to incorporate historical revisions in component data. Information on composite indexes appears each month in the C-pages

of the SURVEY OF CURRENT BUSINESS. For further information, write to the Business Outlook Division, BE-52, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0800. A recorded telephone message at (202) 898-2450 provides current data for the composite indexes (and the leading index components) immediately upon their release. The message is updated weekly, usually on Monday, to include recently available component data that will be incorporated into the next release (see reference no. 1.1).

11.1 BEA Reports: Composite Indexes of Leading, Coincident, and Lagging Indicators (EBB, news release). Monthly reports with summary estimates of the composite indexes. Reports are available online through the EBB (see reference no. 1.2). Printed reports are mailed the day after estimates are released. (This set of reports is included in the five sets of *BEA Reports*; see reference no. 1.3.) The printed composite index reports are available from BEA on a subscription basis: Accession No. BEA-16-S, price \$24.00 per year.

11.2 Cyclical Indicators Methodology (reprint). Reprints of two articles that appeared in the SURVEY OF CURRENT BUSINESS. "Composite Indexes of Leading, Coincident, and Lagging Indicators" from the November 1987 issue summarizes the selection and classification of the composite index components and the method of construction of the indexes. "Business Cycle Indicators: Revised Composite Indexes" from the January 1989 issue describes the changes in components, the changes in methodology for computing the indexes, the updating of seasonal factors, and the historical revisions in component data that were incorporated in the March 1989 revision in the composite indexes. Also includes selected other information. (1989) Available from BEA: Accession No. BEA BOD 90-301, price \$10.00.

11.3 Business Cycle Indicators Current Data (EBB, diskette, printout). Data for the last 4 calendar years (plus data for earlier years if revised) for all series in the Business Cycle Indicators section of the SURVEY OF CURRENT BUSINESS. Includes data for about 250 series; most are monthly series. Updated monthly. Available online through the EBB (see reference no. 1.2). Diskettes and printouts are available from BEA on a subscription basis:

Diskette—Accession No. BEA BOD 90-401, price \$200.00 per year.

Printout—Accession No. BEA BOD 90-201, price \$100.00 per year.

11.4 Business Cycle Indicators Historical Data (diskette, printout; occasionally on EBB). Historical data (from 1945, when available, to the present) for all series in the Business Cycle Indicators section of the SURVEY OF CURRENT BUSINESS (about 250 series). Updated monthly. Diskettes and printouts are available from BEA:

Diskette—Accession No. BEA BOD 90-402, price \$40.00 (two diskettes).

Printout—Accession No. BEA BOD 90-202, price \$55.00.

Environmental estimates

12.0 BEA maintains a set of annual current- and constant-dollar estimates of capital expenditures and operating costs for pollution abatement and control. These estimates, which are prepared within the framework of the national income and product accounts, are classified by sector (consumers, business, and government) and by element of the environment affected (air, land, and water). The most recent SURVEY OF CURRENT BUSINESS article reporting the capital expenditures appeared in November 1988, and the most recent article reporting the total expenditures (including operating costs) appeared in November 1990. For further information, write to the Environmental Economics Division, BE-62, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0687. For specific questions, the following telephone numbers may be used:

Total expenditures	(202) 523-4821
Capital expenditures	-0882

12.1 **BEA Reports: Pollution Abatement and Control Expenditures** (EBB, news release). News release on annual pollution abatement and control expenditures. Available online through the EBB (see reference no. 1.2). Printed release available by calling or writing the Environmental Economics Division.

12.2 **Stocks and Underlying Data for Air and Water Pollution Abatement Plant and Equipment** (print-out). Estimates of the gross and net capital stocks at historical, constant, and current cost; estimates of capital expenditures in constant and current dollars; price indexes by media (air and water) and for selected industry groups (manufacturing, electric utilities, and other nonmanufacturing); and estimates of lifetimes by media for pollution abatement plant and equipment. Available from BEA: Accession No. BEA EED 86-201, price \$35.00.

BEA Publications, Printouts, and Diskettes

How To Order

Orders should specify the item's accession number, title, number of copies, and price. An order form is provided below; payment by check or money order payable to Bureau of Economic Analysis must accompany all orders. The average processing time for new orders is 2 to 4 weeks. Correspondence about late delivery or nondelivery should be sent to Bureau of Economic Analysis, Public Information Office, BE-53, Washington, DC 20230.

Foreign orders—For foreign orders, 25 percent should be added to the listed domestic price to cover additional mailing costs.

Express delivery—Express delivery is available at an extra charge; for more information, call (202) 523-0777.

Note to diskette users—All files are copied, using DOS, onto 5 1/4 inch diameter diskettes (9 sector, double-sided, double density). Documentation is included. Contact the BEA division mentioned in the relevant program description about the possibility of obtaining other microcomputer media.

ORDER FORM for BEA Publications, Printouts, and Diskettes

Mail to:

Public Information Office
Order Desk, BE-53
Bureau of Economic Analysis
U.S. Department of Commerce
Washington, DC 20230

Name _____

Organization _____

Address _____

City _____ State _____ Zip _____

Country _____ Phone () _____

Enclosed is my check or money order for the items listed:

Accession Number	Title of publication or year of diskette	No. of copies	Price
			\$
Subtotal			\$
Foreign orders, add 25% of subtotal			
Express charge (write or call BEA)			
Total enclosed			\$

BEA Computer Tapes

How To Order

Orders should specify the computer tape's accession number, title, desired density, and price (and for EBCDIC tapes, whether internal labels should be included). An order form is provided below; payment by check or money order payable to Bureau of Economic Analysis must accompany all orders. The average processing time for new orders is 1 to 3 weeks. Correspondence about late delivery or nondelivery should be sent to Bureau of Economic Analysis, Public Information Office, BE-53, Washington, DC 20230.

Foreign orders—For foreign orders, 25 percent should be added to the listed domestic price to cover additional mailing costs.

Express delivery—Express delivery is available at an extra charge; for more information, write or call BEA (see appropriate program description for address or telephone number).

Note—The recording mode is odd parity, 9 track, and density of either 1600 or 6250 BPI. BEA's standard output tape is the ASCII character set with ANSI standard labels; however, an alternate EBCDIC character set, with or without internal labels, may be requested.

ORDER FORM for BEA Computer Tapes

Mail to:

Public Information Office
Order Desk, BE-53
Bureau of Economic Analysis
U.S. Department of Commerce
Washington, DC 20230

Name _____
Organization _____
Address _____
City _____ State _____ Zip _____
Country _____ Phone () _____

Enclosed is my check or money order for the items listed:

Accession Number	Tape Title	ASCII		EBCDIC		Price	
		Density		Labels			
		1600	6250	1600	6250		Yes
							\$
Subtotal							\$
Foreign orders, add 25% of subtotal							
Express charge (write or call BEA)							
Total enclosed							\$

GPO Publications and Subscriptions

How To Order

Orders should specify the publication's stock number or the subscription's List ID symbol, title, number of copies, and price. Payment must accompany all orders unless charged to a GPO Deposit Account or charged to VISA or MasterCard.

Charge orders using a GPO Deposit Account number, VISA, or MasterCard may be placed by either of two methods:

- o *By telephone*—Call GPO at (202) 783-3238.
- o *By fax machine*—Fill out the order form below and send to GPO. GPO can receive charge orders by fax machine 24 hours a day, 7 days a week, from U.S. and international customers. The fax service reduces order processing time. Customers should use (202) 275-0019 or FTS 8-275-0019 for fax service.

Foreign orders—International customers, please add an additional 25 percent. For information on foreign airmail delivery, write to GPO at the address below, call (202) 275-3097, or fax (202) 275-0019.

The average processing time for new orders is 2 to 6 weeks. Correspondence about late delivery or nondelivery should be sent directly to GPO.

Superintendent of Documents Publications and Subscriptions Order Form

Order Processing Code:
***6987**

**Charge your order.
It's easy!**



To fax your orders and inquiries—(202) 275-0019

PUBLICATIONS

Please Type or Print (Form is aligned for typewriter use.)

Qty.	Stock Number	Title	Price Each	Total Price
1	021-602-00001-9	Catalog—Bestselling Government Books	FREE	FREE
Total for Publications				

SUBSCRIPTIONS

Qty.	List ID	Title	Price Each	Total Price
Total for Subscriptions				
Total Cost of Order				

NOTE: Prices include regular domestic postage and handling. Publication prices are good through 12/91. After that date, please call Order and Information Desk at 202-783-3238 to verify prices. Subscription prices are subject to change at any time. International customers please add 25%.

(Company or personal name) (Please type or print)

(Additional address/attention line)

(Street address)

(City, State, ZIP Code)

()
(Daytime phone including area code)

Please Choose Method of Payment:

- Check payable to the Superintendent of Documents
 - GPO Deposit Account -
 - VISA or MasterCard Account
- _____

(Credit card expiration date)

(Signature)

Thank you for your order!

Mail To: Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325

NTIS Service and Publications

How To Order

Orders for publications should specify the accession number, title, number of copies, and price. An order form is provided below. To order the Economic Bulletin Board, check box below. Payment (by check or money order) must accompany all orders unless charged to an NTIS Deposit Account, or to VISA, Master Card, or American Express.

Charge orders using an NTIS Deposit Account number, VISA, MasterCard, or American Express may be placed by either of two methods:

- o *By telephone*—To order publications, call (703) 487-4650; for the Economic Bulletin Board, call (703) 487-4630.
- o *By fax machine*—Fill out the order form below and send to NTIS. Use fax number (703) 321-8547.

Foreign orders—For foreign orders, the price is double the listed domestic price; there is an additional \$3.00 charge for airmail delivery.

The average processing time for new publication orders is 2 to 6 weeks. Correspondence about late delivery or nondelivery should be sent directly to NTIS.

ORDER FORM for NTIS Service and Publications

Mail to:

U.S. Department of Commerce
National Technical Information
Service
5285 Port Royal Road
Springfield, VA 22161

Name _____

Organization _____

Address _____

City _____ State _____ Zip _____

Country _____ Phone () _____

- Service:* Please start my one year subscription to the Economic Bulletin Board, registration fee \$35.00. I understand this entitles me to 2 hours of connect time on the system, after which I will be billed for each minute of connect time.

- Publications:* Please send the publications listed below.

Accession Number	Title	No. of copies	Price
			\$
Shipping and handling charge: Domestic \$3.00, foreign \$4.00			\$
Total			\$

Enclosed is my check to NTIS for \$ _____
 Enclosed is Purchase Order No. _____
 Charge my NTIS Deposit Account No. _____
 Charge to: American Express VISA MasterCard
 Card No. _____
 Expiration Date _____
 Signature _____

(Required to validate order)

BUSINESS CYCLE INDICATORS

Data tables.....	C-1
Footnotes for pages C-1 through C-5	C-6
Charts	C-7

Series originating in Government agencies are not copyrighted and may be reprinted freely. Series from private sources are provided through the courtesy of the compilers and are subject to their copyrights.

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 Statistical 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 Statistical Indicators Branch.

Series no.	Series title and timing classification	Year		1990													
		1989	1990	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
I. CYCLICAL INDICATORS																	
1.1 Composite Indexes																	
The Leading Index																	
910 ♦	Composite index of leading indicators, 1982=100 (L,L,L).....	144.0	144.6	145.3	145.4	144.1	145.4	145.2	146.0	146.2	146.2	144.5	143.3	141.6	140.0	140.1	
♦	Percent change from previous month.....	-3	.1	.5	.1	-9	-1	.6	.1	-1	-12	-8	-12	-11	-1		
♦	Percent change over 1-month span, AR.....	-3.2	1.7	6.0	.8	-10.2	11.4	-1.6	6.8	1.7	.0	-13.1	-9.5	-13.3	-12.7	.9	
♦	Percent change over 3-month span, AR.....		1.1	2.8	-1.4	.3	-5	5.4	2.2	2.8	-4.0	-7.7	-12.0	-11.9	-8.6		
Contributions of leading index components: 1																	
(1)	Average weekly hours, mfg. (L,L,L).....	.01	-07	-08	-08	.07	0	-07	.15	.07	-07	.07	0	-22	-15	.23	
(5)	Average weekly initial claims for unemployment insurance (inverted) (L,C,L) ‡.....	-06	.11	-09	-07	.08	.06	-08	.08	-04	-01	-12	-12	-23	-21	.02	
(8)	New orders in 1982\$, consumer goods and materials (L,L,L).....	-37	.07	-16	-22	.26	.16	-06	.17	-14	-03	.13	-21	.07	-27	-23	
(32)	Vendor performance, slower deliveries diffusion index (L,L,L).....	.02	0	-02	.20	-17	.11	.08	.04	.11	-12	.15	-05	-04	.05	-13	
(20)	Contracts and orders for plant and equipment in 1982\$ (L,L,L).....	-17	.11	.23	-24	-13	.25	-20	-01	-04	.21	-28	.29	.03	-20	.15	
(29)	Building permits, new private housing units (L,L,L).....	-12	.01	.11	.59	-83	-15	-30	-12	.12	-07	-09	-16	-21	-05	-20	
(92)	Change in unfilled orders in 1982\$, durable goods, smoothed (L,L,L) ‡.....	-08	.07	.32	.14	-10	-03	-07	-10	-25	-10	-17	-11	.02	-22	.02	
(99)	Change in sensitive materials prices, smoothed (L,L,L) †.....	.04	-15	-25	-09	-08	.23	.37	.25	.16	.12	.07	-04	-15	-29	-13	
(19)	Stock prices, 500 common stocks, NSA (L,L,L).....	-03	-12	.13	-14	-16	.13	0	.19	.16	-01	-47	-26	-15	.14	.23	
(106)	Money supply M2 in 1982\$ (L,L,L).....	-08	.07	.08	-25	.08	.01	.01	-10	-09	-08	-09	-10	-18	-11	.06	
(83)	Index of consumer expectations, NSA (L,L,L).....	-10	-11	.04	-08	-08	0	.10	-17	-10	.03	-53	-15	-29	.07	.03	
950	Diffusion index of 11 leading indicator components:																
♦	Percent rising over 1-month span.....	39.0	63.6	54.5	36.4	36.4	72.7	36.4	54.5	45.5	27.3	36.4	13.6	27.3	27.3	54.5	
♦	Percent rising over 6-month span.....		27.3	45.5	54.5	54.5	54.5	63.6	45.5	27.3	40.9	18.2	9.1				
The Coincident Index																	
920 ♦	Composite index of coincident indicators, 1982=100 (C,C,C).....	133.2	133.4	133.8	132.7	133.8	134.2	133.7	134.4	134.9	134.6	134.4	133.3	131.9	130.3	130.2	
♦	Percent change from previous month.....	-2	.2	.3	-.8	.8	.3	-.4	.5	.4	-.2	-.1	-.8	-.1	-.12	-.1	
♦	Percent change over 1-month span, AR.....	-2.4	2.7	3.7	-9.4	10.4	3.6	-4.4	6.5	4.6	-2.6	-1.8	-9.4	-11.9	-13.6	-2.9	
♦	Percent change over 3-month span, AR.....		.3	-1.2	1.2	1.2	3.0	1.8	2.1	2.7	0	-4.7	-7.8	-11.7	-9.0		
Contributions of coincident index components: 1																	
(41)	Employees on nonagricultural payrolls (C,C,C).....	.04	.19	.10	.19	.22	.12	.04	.31	.15	-.06	-.09	0	-.13	-.18	-.07	
(51)	Personal income less transfer payments in 1982\$ (C,C,C).....	-02	.06	.28	-.36	.20	.16	.05	.01	.06	.13	-.23	-.19	-.51	-.03	.38	
(47)	Industrial production (C,C,C).....	-04	.10	.13	-.28	.26	.10	-.03	.15	.18	.08	.03	.03	-.20	-.51	-.24	
(57)	Manufacturing and trade sales in 1982\$ (C,C,C).....	.09	-.05	-.22	.33	.15	-.24	.23	.15	-.16	.29	-.46	-.05	-.34	-.07		
951	Diffusion index of 4 coincident indicator components:																
♦	Percent rising over 1-month span.....	54.9	100.0	75.0	25.0	100.0	100.0	50.0	100.0	100.0	50.0	50.0	25.0	0	25.0	33.3	
♦	Percent rising over 6-month span.....		75.0	100.0	100.0	100.0	100.0	100.0	100.0	50.0	75.0	0	0				
The Lagging Index																	
930 ♦	Composite index of lagging indicators, 1982=100 (L,L,L).....	119.0	119.7	119.7	119.0	118.6	119.0	119.4	119.1	118.7	119.2	118.8	119.0	118.7	118.4	120.1	
♦	Percent change from previous month.....	0	-2	0	-.6	-.3	.3	.3	-.3	-.3	.4	-.3	.2	-.3	-.3	1.4	
♦	Percent change over 1-month span, AR.....	.5	-3.0	0	-6.8	-4.0	4.1	4.1	-3.0	-4.0	5.2	-4.0	2.0	-3.0	-3.0	18.7	
♦	Percent change over 3-month span, AR.....		.3	-3.3	-3.6	-2.3	1.4	1.7	-1.0	-7	-1.0	1.0	-1.7	-1.3	3.7		
Contributions of lagging index components: 1																	
(91)	Average duration of unemployment (inverted) (L,L,L) ‡.....	-04	.05	.05	-.31	.20	-.15	-.05	.25	-.20	-.05	-.10	-.05	.20	-.20	0	
(77)	Ratio, mfg. and trade inventories to sales in 1982\$ (L,L,L).....	0	0	.13	-.39	-.13	.26	-.13	-.13	.13	-.26	.39	0	.26			
(62)	Change in labor cost per unit of output, mfg., smoothed (L,L,L) †.....	.08	-.28	-.07	-.02	-.17	.05	.05	.07	.03	-.03	-.05	-.03	.08	.20	.82	
(109)	Average prime rate, NSA (L,L,L).....	-02	0	0	-.23	-.06	0	0	0	0	0	0	0	0	0	0	
(101)	Commercial and industrial loans in 1982\$ (L,L,L).....	.02	.02	-.06	-.17	.33	.53	.04	-.27	.08	.05	-.25	-.12	-.56	-.21	.77	
(95)	Ratio, consumer installment credit to personal income (L,L,L).....	-.06	-.09	-.31	-.31	-.19	-.06	.06	-.22	.09	.09	-.06	.12	-.09			
(120)	Change in CPI for services, smoothed (L,L,L) †.....	.02	.05	.14	.24	.10	.19	0	-.19	.05	.14	.24	.05	-.19	-.19	-.20	
952	Diffusion index of 7 lagging indicator components:																
♦	Percent rising over 1-month span.....	47.3	57.1	42.9	28.6	42.9	50.0	57.1	50.0	50.0	64.3	35.7	35.7	57.1	35.7	60.0	
♦	Percent rising over 6-month span.....		28.6	28.6	28.6	35.7	42.9	35.7	50.0	50.0	71.4	50.0	30.0				
940 ♦	Ratio, coincident index to lagging index, 1982=100 (L,L,L).....	111.9	111.4	111.8	111.5	112.8	112.8	112.0	112.8	113.6	112.9	113.1	112.0	111.1	110.1	108.4	

See footnotes on page C-6.

Series no.	Series title and timing classification	1989												1990				
		1990	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. *		
1. CYCLICAL INDICATORS — Continued																		
1.5 Fixed Capital Investment — Continued																		
61	Business investment expenditures: New plant and equipment expenditures by business, bil.\$, AR (C.Lg.Lg.)	533.91	519.58			532.45				535.49			534.86			* 532.84		
100 ♦	New plant and equipment expenditures by business, bil. 1982\$, AR (C.Lg.Lg.)	522.12	515.96			524.07				527.06			520.80			* 516.54		
69 ♦	Mfrs.' machinery and equipment sales and business construction expenditures, bil.\$, AR (C.Lg.Lg.)		488.22	495.48	499.30	521.73	512.14	500.36	499.11	516.46	* 501.70	* 516.21	* 512.65	* 510.17	* 501.32			
76 ♦	Index of industrial production, business equipment, 1987=100 (C.Lg.U.)	123.0	118.7	119.9	118.0	120.1	122.2	121.6	123.5	124.4	125.0	125.4	* 126.4	* 125.3	* 122.5	* 121.4		
86 ♦	Gross private nonres. fixed investment, bil. 1982\$, AR: Total (C.Lg.C.)	513.9	508.4			514.6				508.4			519.3			* 513.2		
87 ♦	Structures (Lg.Lg.Lg.)	121.0	123.1			123.8				120.9			122.4			* 117.0		
88 ♦	Producers' durable equipment (C.Lg.C.)	392.9	385.4			390.8				387.5			397.0			* 396.3		
28 ♦	Residential construction and investment: New private housing units started, thous., AR (L.L.L.)	1.193	1.347	1.273	1.568	1.488	1.307	1.216	1.206	1.189	1.153	1.131	1.106	* 1.026	* 1.127	* 987		
29 ♦	Index of new private housing units authorized by local building permits, 1967=100 (L.L.L.)	88.7	108.8	112.9	138.7	103.4	98.2	88.4	84.9	88.4	86.3	83.7	79.1	73.4	72.2	67.3		
89 ♦	Gross private residential fixed investment, bil. 1982\$, AR (L.L.L.)	177.5	181.8			188.3				182.8			173.0			* 165.9		
1.6 Inventories and Inventory Investment																		
30 ♦	Inventory investment: Change in business inventories, bil. 1982\$, AR (L.L.L.)	-1.1	18.9			-2.2			9.5			4.7			* -16.3			
31 ♦	Change in mfg. and trade inventories, bil.\$, AR (L.L.L.)		* 43.1	* -26.4	21.4	-38.2	-4.2	28.6	52.2	-47.2	68.2	64.1	40.3	* 41.7	* 24.4			
70	Inventories on hand: Mfg. and trade inventories, bil. 1982\$ (Lg.Lg.Lg.)	705.14	701.56	699.50	695.19	695.32	697.26	700.03	696.87	700.40	699.18	698.15	* 697.99	* 699.37				
77 ♦	Ratio, mfg. and trade inventories to sales in 1982\$ (Lg.Lg.Lg.)	1.47	1.47	1.48	1.45	1.44	1.46	1.45	1.44	1.45	1.43	1.46	1.46	1.48				
1.7 Prices, Costs, and Profits																		
99 ♦	Sensitive commodity prices: Index of sensitive materials prices, 1982=100	125.73	128.54	125.87	125.32	123.70	125.36	126.91	126.73	126.73	127.13	* 127.27	126.84	125.70	123.41	123.62		
	Percent change from previous month	-1.5	-1.89	-2.08	-1.44	-1.29	1.34	1.24	-1.4	0	32	* 11	* -34	-9.0	-1.82	1.17		
	Percent change from previous month, smoothed (L.L.L.) †	-2.9	-6.3	-9.3	-1.04	-1.14	-8.6	-4.2	-12	0.7	21	* 29	* 24	* 0.6	-2.9	-4.4		
98	Index of producer prices for sensitive crude and intermediate materials, 1982=100 (L.L.L.)	140.35	140.07	138.31	137.43	136.79	138.05	141.61	143.16	141.77	142.24	* 143.15	142.66	140.68	138.54	138.18		
	Cattle hides	217.9	225.6	229.6	206.2	233.0	217.2	220.7	224.8	223.1	224.0	* 221.2	215.3	210.6	212.1	206.0		
	Lumber and wood products	129.7	130.3	129.7	129.8	129.7	130.0	131.6	131.5	130.4	130.8	* 130.2	129.6	128.1	127.0	127.9		
	Wastepaper, news	103.2	110.6	108.5	109.4	105.7	105.0	106.4	109.1	107.4	107.8	* 103.8	99.6	92.7	92.7	99.3		
	Wastepaper, mixed, NSA	86.5	100.4	101.5	100.8	81.0	80.6	91.9	92.0	90.6	90.6	* 89.0	78.4	80.5	81.4	81.5		
	Wastepaper, corrugated	163.0	171.6	177.8	173.2	176.1	170.0	167.3	167.6	162.4	155.2	* 148.6	145.3	150.7	159.1	180.0		
	Iron and steel scrap	165.9	153.9	152.6	154.0	150.9	156.1	166.2	177.0	173.3	170.6	* 176.3	174.6	167.3	163.9	160.1		
	Copper base scrap	181.4	175.9	157.2	160.3	157.6	169.8	184.5	188.7	184.2	189.4	* 201.7	200.5	191.7	176.8	171.1		
	Aluminum base scrap	172.4	188.2	183.3	177.5	159.1	157.8	168.2	166.4	166.5	169.1	* 176.5	184.3	191.2	180.5	171.7		
	Other nonferrous scrap, n.e.c., NSA	158.2	155.3	146.5	146.0	138.8	156.0	164.2	163.7	160.3	161.0	* 168.4	172.6	165.2	155.5	147.0		
	Sand, gravel, and crushed stone	125.5	123.9	124.0	123.9	124.7	125.0	124.9	125.5	125.6	125.3	* 125.7	125.9	126.0	126.4	126.9		
	Raw cotton	118.2	120.4	111.2	105.9	111.0	115.0	115.5	114.9	117.0	125.1	* 121.4	121.2	123.6	126.4	125.0		
	Domestic apparel wool	89.7	134.0	124.5	121.2	105.3	105.8	96.6	86.2	84.3	82.5	* 80.7	79.6	79.3	77.6	77.6		
23 ♦	Index of spot market prices, raw industrial materials, 1967=100, NSA (U.L.L.) © 1	310.7	314.2	301.7	300.9	301.1	304.5	310.9	317.2	317.2	319.7	* 321.1	320.0	313.9	303.2	301.2		
	Copper scrap, \$ per lb. ©	904	894	768	777	841	846	951	938	883	979	1,084	990	890	851	823		
	Lead scrap, \$ per lb. ©	234	239	228	236	258	228	234	227	226	235	263	236	236	193	184		
	Steel scrap, \$ per ton ©	107,646	96,000	94,094	97,143	96,836	98,000	109,566	116,303	117,647	114,787	111,765	111,881	106,198	103,316	106,339		
	Tin, \$ per lb. ©	3,464	3,665	3,531	3,543	3,378	3,424	3,483	3,459	3,372	3,318	3,588	3,449	3,652	3,534	3,362		
	Zinc, \$ per lb. NSA ©	777	761	734	688	669	762	830	870	874	866	831	810	782	700	700		
	Burlap, \$ per yd. ©	287	284	279	276	279	286	284	285	287	291	292	294	294	287	286		
	Cotton, \$ per lb. ©	712	719	647	643	669	689	701	697	707	763	756	735	739	727	723		
	Print cloth, \$ per yd. ©	743	719	699	727	713	722	711	692	731	729	713	748	778	792	857		
	Wool tops, \$ per lb., NSA ©	4,893	5,000	4,800	4,680	4,500	4,738	5,000	5,000	5,000	5,000	5,000	5,250	5,240	4,712	4,600		
	Hides, \$ per lb. ©	1,022	1,040	1,052	1,085	1,109	1,056	1,032	1,022	1,068	1,039	978	948	945	970	1,010		
	Rosin, \$ per 100 lb. ©	63,121	62,500	62,438	63,690	65,217	65,347	63,370	62,874	63,317	64,090	64,483	64,090	61,934	59,901	59,140		
	Rubber, \$ per lb., NSA ©	463	457	449	448	458	460	457	458	460	458	474	488	464	462	471		
	Tallow, \$ per lb., NSA ©	133	144	136	136	142	134	128	133	139	129	121	125	134	135	138		
120 ♦	Consumer Price Index for services, 1982=100	139.2	134.2	134.9	135.7	136.2	137.1	137.5	137.9	138.8	139.6	140.6	141.1	141.5	142.1	142.7		
	Percent change from previous month, AR	5.8	5.5	6.4	7.4	4.5	8.2	3.6	3.5	8.1	7.1	8.9	4.4	3.5	5.2	5.2		
	Percent change from previous month, AR, smoothed (Lg.Lg.Lg.) †	5.9	4.6	4.9	5.4	5.6	6.0	6.0	5.6	5.7	6.0	6.5	6.6	6.2	5.8	5.5		
19 ♦	Index of stock prices, 500 common stocks, 1941-43=10, NSA (L.L.L.)	334.59	340.22	348.57	339.97	330.45	338.47	338.18	350.25	360.39	360.03	330.75	315.41	307.12	315.29	328.75		
16 ♦	Profits and profit margins: Corporate profits after tax, bil.\$, AR (L.L.L.)	166.3				167.1			166.1			179.4						
18 ♦	Corporate profits after tax, bil. 1982\$, AR (L.L.L.)	135.2				133.4			131.1			141.8						
22 ♦	Ratio, corporate domestic profits after tax to corporate domestic income, percent (L.L.L.)	4.5				4.6			4.6			4.8						
81 ♦	Ratio, corporate domestic profits after tax with IVA and CCA(d) to corporate domestic income, percent (U.L.L.)	4.5				4.6			4.9			4.1						
26 ♦	Ratio, implicit price deflator to unit labor cost, all persons, nonfarm business sector, 1982=100 (L.L.L.)	104.2				103.7			103.7			103.6						
35	Corporate net cash flow, bil. 1982\$, AR (L.L.L.)	396.5				389.1			385.7			395.9						
63	Unit labor costs: Index of unit labor cost, all persons, business sector, 1982=100 (Lg.Lg.Lg.)	119.5				121.1			122.5			123.7						
62 ♦	Index of labor cost per unit of output, mfg., 1987=100	101.8	101.2	101.6	101.7	101.1	101.6	101.6	101.7	101.7	101.5	101.4	* 101.4	* 101.7	* 102.3	* 104.0		
	Percent change from previous month, AR	2.6	-16.2	4.8	1.2	-6.9	6.1	0	1.2	0	-2.3	-1.2	* 0	* 3.6	* 7.3	* 21.9		
	Percent change from previous month, AR, smoothed (Lg.Lg.Lg.) †	4	.6	.2	.1	-9	-6	-3	.1	.3	.1	-2	* -4	* 1.1	* 1.3	* 4.8		
1.8 Money and Credit																		
85 ♦	Money: Percent change in money supply M1 (L.L.L.)	.32	.16	.68	0	.83	.42	.31	-.24	.50	-.05	.85	* .77	-.26	* .30	* .35		
102 ♦	Percent change in money supply M2 (L.C.U.)	.26	.61	.64	.29	.76	.47	.22	* -17	.25	* .14	.53	* .43	* .05	* -.04	* .17		
105	Money supply M1, bil. 1982\$ (L.L.L.)	599.0	603.4	607.2	600.8	602.6	602.4	603.4	601.0	600.9	598.4	598.6	598.8	593.8	593.9	* 593.9		
106 ♦	Money supply M2, bil. 1982\$ (L.L.L.)	2,427.1	2,454.9	2,461.1	2,442.2	2,447.9	2,448.4	2,450.0	2,442.2	2,435.6	2,430.0	2,423.3	2,416.0	2,403.2	2,395.4	* 2,390.7		

See footnotes on page C-6.

Series no.	Series title and timing classification	Year		1990												
		1990	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. *
1. CYCLICAL INDICATORS — Continued																
1.8 Money and Credit — Continued																
107	Velocity of money: Ratio, GNP to money supply M1 (C,C,C)	6.732	6.689				6.717				6.742			6.761		6.708
108	Ratio, personal income to money supply M2 (C,Lg,C)	1.413	1.396	1.396	1.403	1.401	1.405	1.405	1.412	1.415	1.419	1.415	1.416	1.415	1.421	1.429
Credit flows:																
112	Net change in business loans, bil.\$, AR (L,L,L)	22.24	-28	-98	48.34	56.26	121.45	5.50	-41.65	4.61	22.00	35.41	56.65	-23.16	-85.04	66.54
113	Net change in consumer installment credit, bil.\$, AR (L,L,L)		45.23	32.66	14.46	.48	30.91	4.68	43.80	1.39	56.74	36.67	34.04	16.46	20.65	
111	Percent change in business and consumer credit outstanding, AR (L,L,L)		3.1	-2.8	1.7	4.8	6.5	-2	-1.6	-6.7	3.5					
110	Funds raised by private nonfinancial borrowers in credit markets, mil.\$, AR (L,L,L)		452,096			510,956			436,916			448,248				
Credit difficulties:																
14	Current liabilities of business failures, mil.\$, NSA (L,L,L) †		2,000.8	5,085.4	6,220.0	7,229.9	4,375.9	6,362.6	4,928.7	10,269.6	3,093.4	5,972.7	4,049.2			
39	Percent of consumer installment loans delinquent 30 days and over (L,L,L) † ‡		2.63	2.64	2.45	2.41	2.46	2.60	2.55	2.55	2.53	2.43	2.56			
Bank reserves:																
93	Free reserves, mil.\$, NSA (L,U,U) ‡	508	617	677	602	76	687	672	502	239	385	67	290	455	740	1,378
94	Member bank borrowings from the Federal Reserve, mil.\$, NSA (L,L,U)	928	349	265	440	1,448	2,124	1,628	1,335	881	757	927	624	410	230	326
Interest rates (percent, NSA):																
119	Federal funds rate (L,L,L)	8.10	8.55	8.45	8.23	8.24	8.28	8.26	8.18	8.29	8.15	8.13	8.20	8.11	7.81	7.31
114	Discount rate on new issues of 91-day Treasury bills (C,L,L)	7.51	7.65	7.64	7.64	7.76	7.87	7.78	7.78	7.74	7.66	7.44	7.38	7.19	7.07	6.81
116	Yield on new issues of high-grade corporate bonds (L,L,L)	9.84	9.20	9.23	9.56	9.68	9.79	10.02	9.97	9.69	9.72	10.01	10.17	10.09	9.83	9.55
115	Yield on long-term Treasury bonds (C,L,L)	8.73	8.03	8.02	8.39	8.66	8.74	8.92	8.90	8.62	8.64	8.97	9.11	8.93	8.60	8.31
117	Yield on municipal bonds, 20-bond average (U,L,L)	7.27	7.14	6.98	7.10	7.22	7.29	7.39	7.35	7.24	7.19	7.32	7.43	7.49	7.18	7.09
118	Secondary market yields on FHA mortgages (L,L,L)	10.17	9.69	9.72	10.01	10.22	10.30	10.75	10.23	10.18	10.11	10.28	10.24	10.23	9.81	9.66
109	Average prime rate charged by banks (L,L,L)	10.01	10.50	10.50	10.11	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Outstanding debt:																
66	Consumer installment credit outstanding, mil.\$ (L,L,L) †	713,903	716,624	717,829	717,869	720,445	720,835	724,485	724,601	729,329	732,385	735,222	736,595	738,316		
72	Commercial and industrial loans outstanding, mil.\$ (L,L,L)	465,685	448,236	448,154	452,182	456,870	466,991	467,449	463,978	464,362	466,195	469,146	473,867	471,937	464,850	470,395
101	Commercial and industrial loans outstanding, mil. 1982\$ (L,L,L)	400,618	397,725	396,596	393,544	399,362	408,924	409,684	404,867	406,266	407,157	402,700	400,564	390,676	387,052	396,623
95	Ratio, consumer installment credit outstanding to personal income, percent (L,L,L)	15.97	15.94	15.84	15.74	15.68	15.66	15.68	15.61	15.64	15.67	15.65	15.69	15.66		

1.9 Alternative Composite Indexes

990	CIBCR long-leading composite index, 1967=100 ¹	234.1	234.0	235.4	238.9	234.8	233.7	231.8	231.3	232.9	233.0	234.6	236.3	236.2	235.1	230.8
991	CIBCR short-leading composite index, 1967=100 ¹	201.8	202.4	201.6	200.1	200.0	202.4	201.9	203.6	204.0	203.2	204.0	203.0	202.0	198.8	198.8

2. OTHER IMPORTANT ECONOMIC MEASURES

2.1 Savings

290	Gross saving, bil.\$, AR		674.8			664.8			679.3			665.9				
295	Business saving, bil.\$, AR		612.3			603.7			611.6			605.8				
292	Personal saving, bil.\$, AR	179.1	174.1			191.3			195.1			166.5			163.5	
298	Government surplus or deficit, bil.\$, AR		-111.6			-130.2			-127.3			-106.4				
293	Personal saving rate, percent	4.5	4.6			4.9			5.0			4.2			4.1	

2.2 Prices, Wages, and Productivity

Price Movements																
310	Implicit price deflator for gross national product, 1982=100	131.5	128.0			129.5			131.0			132.2			133.1	
	Percent change from previous quarter, AR	4.1	3.8			4.8			4.7			3.7			2.8	
311	Fixed-weighted price index, gross domestic business product, 1982=100	133.2	129.2			131.3			132.5			133.9			135.2	
	Percent change from previous quarter, AR	4.4	3.7			6.3			3.7			4.1			4.1	
Consumer Price Indexes for all urban consumers:																
320	All items, 1982-84=100, NSA	130.7	125.9	126.1	127.4	128.0	128.7	128.9	129.2	130.4	131.6	132.7	133.5	133.8	133.8	133.8
	Percent change over 1-month span	.5	.3	.4	1.1	.5	.5	.2	.5	.4	.8	.8	.6	.3	.3	.3
	Percent change over 6-month span, AR	6.2	6.7	6.0	5.6	5.9	4.4	5.1	5.7	6.6	6.9	6.4	5.7	5.7	5.7	5.7
323	All items less food and energy, 1982-84=100	135.5	131.2	131.6	132.4	133.1	134.0	134.3	134.7	135.3	136.1	136.8	137.2	137.6	138.0	138.5
	Percent change over 1-month span	.4	.3	.6	.5	.7	.2	.3	.4	.6	.5	.3	.3	.3	.4	.4
	Percent change over 6-month span, AR	5.3	6.1	5.6	5.4	5.7	5.7	5.6	4.8	5.0	5.0	4.8	4.8	4.8	4.8	4.8
Producer Price Indexes:																
336	Finished goods, 1982=100	119.2	114.8	115.5	117.7	117.7	117.5	117.3	117.4	117.6	117.7	119.0	120.9	122.2	122.8	122.1
	Percent change over 1-month span	.5	.1	.6	1.9	0	-2	-2	.1	.2	.1	1.1	1.6	1.1	.5	-6
	Percent change over 6-month span, AR	7.9	6.0	4.6	4.6	3.7	0	2.2	5.9	8.5	9.4	7.8	7.8	7.8	7.8	7.8
337	Finished goods less foods and energy, 1982=100	126.6	123.8	124.3	124.5	124.9	125.4	125.5	125.9	126.7	126.7	127.0	127.7	127.7	128.3	128.7
	Percent change over 1-month span	.3	.2	.4	.2	.3	.4	.1	.3	.6	.2	.2	.6	.0	.5	.3
	Percent change over 6-month span, AR	3.6	3.6	3.3	3.4	3.9	3.6	3.4	3.7	3.5	3.8	3.2	3.2	3.2	3.2	3.2
334	Finished consumer goods, 1982=100	118.2	113.3	114.1	117.0	116.8	116.4	116.1	116.2	116.3	116.3	117.9	120.1	121.9	122.6	121.5
	Percent change over 1-month span	.5	0	.7	2.5	-2	-3	-3	.1	.1	0	1.4	1.9	1.5	.6	-9
	Percent change over 6-month span, AR	9.5	7.1	5.0	5.2	3.9	-1.2	-1.9	6.5	10.2	11.3	9.1	9.1	9.1	9.1	9.1
333	Capital equipment, 1982=100	122.9	120.4	120.7	120.9	121.4	121.9	122.0	122.1	122.6	123.0	123.4	124.2	124.0	124.3	124.8
	Percent change over 1-month span	.3	.3	.2	.2	.4	.4	.1	.1	.4	.3	.3	.6	.6	.2	.4
	Percent change over 6-month span, AR	3.6	3.0	3.4	2.8	3.2	3.5	3.3	3.8	3.3	3.6	3.6	3.6	3.6	3.6	3.6
332	Intermediate materials, supplies, and components, 1982=100	114.5	112.2	112.2	113.6	112.7	112.8	112.9	113.0	112.7	112.7	114.2	116.2	117.9	118.0	116.9
	Percent change over 1-month span	.4	-2	0	1.2	-8	.1	.1	.1	.1	.1	1.3	1.8	1.5	.1	-9
	Percent change over 6-month span, AR	1.6	1.1	.9	1.4	.9	-1.6	2.7	6.1	9.1	9.0	7.6	7.6	7.6	7.6	7.6
331	Crude materials for further processing, 1982=100	108.9	103.2	104.7	107.0	107.3	105.9	103.1	103.0	100.3	100.9	110.2	115.2	125.2	117.5	111.2
	Percent change over 1-month span	.6	.6	1.5	2.2	.3	-1.3	-2.6	-1	-2.6	.6	9.2	4.5	8.7	-6.2	-5.4
	Percent change over 6-month span, AR	12.6	7.2	1.0	-4	-8.2	-11.1	5.5	18.3	47.5	30.1	22.9	22.9	22.9	22.9	22.9

See footnotes on page C-6.

Series no.	Series title and timing classification	Year		1990											
		1989	1990	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.

2. OTHER IMPORTANT ECONOMIC MEASURES - Continued

2.2 Prices, Wages, and Productivity - Continued

Wages and Productivity																	
345	Index of average hourly compensation, all employees, nonfarm business sector, 1982=100.		132.5				133.8				135.4				136.9		
346	Percent change from previous quarter, AR		2.3				4.0				4.8				4.5		
370	Index of real average hourly compensation, all employees, nonfarm business sector, 1982=100.		101.6				100.7				100.9				100.5		
370	Percent change from previous quarter, AR		-1.6				-3.8				1.1				-1.8		
370	Index of output per hour, all persons, business sector, 1982=100.		111.9				111.7				111.9				112.0		
370	Percent change over 1-quarter span, AR		-2.3				-9				.6				.4		
370	Percent change over 4-quarter span, AR		-1.0				-5										
358	Index of output per hour, all persons, nonfarm business sector, 1982=100.		111.0				110.7				110.7				110.8		

2.3 Labor Force and Employment

441	Civilian labor force, thous. \$	124,787	124,548	124,542	124,489	124,653	124,798	124,781	124,939	124,797	124,709	124,705	124,970	124,875	124,723	125,174
442	Civilian employment, thous. \$	117,914	117,920	117,957	117,945	118,074	118,235	118,090	118,277	118,237	117,882	117,690	117,883	117,733	117,386	117,574
441	Civilian labor force participation rates (percent):															
451	Males 20 years and over \$	77.8	78.0	77.9	77.9	77.9	77.9	77.9	77.9	77.7	77.7	77.7	77.9	77.8	77.8	77.9
452	Females 20 years and over \$	57.9	57.8	57.8	57.9	57.9	57.9	58.0	58.1	58.0	58.1	58.1	57.9	57.7	57.5	57.8
453	Both sexes 16-19 years of age \$	53.7	56.6	55.9	55.3	55.1	56.1	55.2	54.6	53.2	52.5	51.3	53.1	53.0	52.4	52.8

2.4 Government Activities

Defense indicators:																	
517	Defense Department gross obligations incurred, mil. \$		26,377	29,228	35,483	32,418											
525	Defense Department prime contract awards, mil. \$				12,887	11,056	13,392	15,840	13,865	9,142	9,765	13,882	13,517	3,706	7,088		
543	Defense Department gross unpaid obligations outstanding, mil. \$		211,677	209,027	214,526	213,703											
548	Manufacturers' new orders, defense products, mil. \$	92,991	11,267	9,770	6,488	7,676	8,023	8,406	10,081	7,879	7,475	8,372	7,858	7,204	5,264	8,265	
557	Index of industrial production, defense and space equipment, 1987=100.	97.4	96.7	96.6	97.5	97.6	97.5	97.3	97.6	97.6	97.8	97.7	97.3	97.3	96.4	96.9	
570	Employment, defense products industries, thous.		1,250	1,251	1,251	1,251	1,247	1,245	1,241	1,236	1,228	1,218	1,210	1,201	1,191		
564	Federal Government purchases of goods and services, national defense, bil. \$, AR.	314.0	299.2			307.2			309.6			312.6			326.5		

2.5 U.S. International Transactions

602	Exports, excluding military aid shipments, mil. \$		30,618	31,261	31,372	31,575	33,264	32,058	32,773	34,218	32,120	32,548	32,008	35,006	33,616	
604	Exports of domestic agricultural products, mil. \$		3,388	3,173	3,543	3,270	3,500	3,282	3,354	3,709	3,182	3,322	2,861	2,901	3,145	
606	Exports of nonelectrical machinery, mil. \$		6,230	6,443	7,001	6,779	6,883	6,661	6,964	7,072	7,104	6,767	6,912	7,254	6,774	
612	General imports, mil. \$		40,530	38,058	41,570	38,672	41,636	39,364	40,543	39,560	41,244	42,283	41,336	45,994	43,319	
614	Imports of petroleum and petroleum products, mil. \$		4,154	4,270	5,881	5,126	5,158	3,988	4,095	3,563	3,594	4,365	6,502	6,927	6,332	
616	Imports of automobiles and parts, mil. \$		5,705	5,655	5,203	5,432	6,489	5,433	5,804	6,098	5,855	6,179	5,999	6,567	5,993	
618	Merchandise exports, adjusted, excluding military, mil. \$ ¹		91,738			96,262			96,758			96,159				
620	Merchandise imports, adjusted, excluding military, mil. \$ ¹		120,484			122,545			119,860			125,911				
622	Balance on merchandise trade, mil. \$ ¹		-28,746			-26,283			-23,102			-29,752				

2.6 International Comparisons

Industrial Production Indexes (1987=100)																	
47	United States	109.1	108.1	108.6	107.5	108.5	108.9	108.8	109.4	110.1	110.4	110.5	110.6	109.8	107.8	107.1	
721	OECD, European countries ²		109	110	110	109	111	109	110	111	111	111	112	111			
728	Japan		116.7	116.9	117.0	117.0	118.8	117.9	121.0	121.1	123.2	123.7	122.4	125.8	124.3		
725	Federal Republic of Germany		110	111	112	111	113	110	113	113	115	116	117	117	116		
726	France		109	108	109	107	108	110	109	109	112	112	110	110	110		
722	United Kingdom		104	104	104	103	105	106	105	107	104	103	103	103	103		
727	Italy		112.4	115.5	108.2	112.4	111.3	110.4	108.1	109.3	110.6	110.6	111.6	108.3	108.3		
723	Canada		104.5	104.8	102.4	102.5	102.7	102.3	102.8	102.9	103.3	102.4	100.9	101.1			
Consumer Price Indexes (1982-84=100)																	
320	United States, NSA	130.7	125.9	126.1	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8	
738	Japan, NSA		6.2	6.7	6.0	5.6	5.9	4.4	5.1	5.7	6.6	6.9	6.4	113.9	113.5		
735	Federal Republic of Germany, NSA		109.9	110.2	110.9	111.3	111.4	111.6	111.8	111.9	111.9	112.2	112.6	113.4	113.2		
736	France, NSA		130.3	130.5	130.8	131.1	131.6	132.1	132.3	132.6	132.9	133.7	134.4	135.2	135.0		
732	United Kingdom, NSA	148.2	139.2	139.6	140.4	141.2	142.6	147.0	148.3	148.9	149.0	150.5	151.9	153.1	152.7	152.6	
737	Italy, NSA	159.5	153.7	154.4	155.3	156.5	157.1	157.7	158.0	158.7	159.3	160.3	161.2	162.6	163.6	164.2	
733	Canada, NSA	135.4	131.6	131.5	132.7	133.4	133.9	133.9	134.6	135.1	135.8	135.8	136.3	137.4	138.2	138.1	
Stock Price Indexes (1967=100, NSA)																	
19	United States	364.0	370.1	379.2	369.8	359.5	368.2	367.9	381.0	392.0	391.6	359.8	343.1	334.1	343.0	357.6	
748	Japan	1,974.9	2,468.4	2,589.4	2,498.2	2,427.8	2,175.1	1,959.4	2,142.6	2,155.2	2,119.1	1,833.0	1,644.4	1,592.1	1,572.2	1,579.4	
745	Federal Republic of Germany	356.2	318.1	343.1	370.8	384.6	384.6	389.5	389.5	385.3	393.7	348.9	308.8	297.8	295.7	303.9	
746	France	835.0	855.5	909.7	900.4	856.2	872.4	938.4	949.5	932.2	899.7	796.5	714.6	726.8	713.9	719.4	
742	United Kingdom		1,055.4	1,114.4	1,123.4	1,086.7	1,060.8	1,031.9	1,048.2	1,118.0	1,109.6	1,030.1	971.1	974.1			
747	Italy	408.5	450.2	453.8	466.0	440.1	439.9	455.3	468.9	485.6	457.4	387.9	354.4	338.4	302.2	305.4	
743	Canada	386.6	445.5	448.6	418.6	416.6	411.2	377.5	404.7	400.4	402.4	378.1	357.0	348.2	356.0	368.0	
Exchange Rates																	
750	Exchange value of U.S. dollar, index: March 1973=100, NSA ³	89.05	97.99	94.88	93.00	92.25	94.11	93.51	92.04	92.43	89.68	86.55	86.10	83.43	82.12	83.35	
Foreign currency per U.S. dollar (NSA):																	
758	Japan (yen)	144.82	143.53	143.69	144.98	145.69	153.31	158.46	154.04	153.70	149.04	147.46	138.44	129.59	129.22	133.89	
755	Federal Republic of Germany (d. mark)	1.6159	1.8300	1.7378	1.6914	1.6758	1.7053	1.6863	1.6630	1.6832	1.6375	1.5702	1.5701	1.5238	1.4857	1.4982	
756	France (franc)	5.4449	6.2225	5.9391	5.7568	5.6897	5.7555	5.6638	5.5989	5.6613	5.4924	5.2680	5.2575	5.1032	5.0020	5.0895	
752	United Kingdom (pound)	.5630	.6359	.6264	.6056	.5896	.6156	.6108	.5962	.5847	.5525	.5260	.5321	.5140	.5091	.5203	
757	Italy (lira)	1,198.05	1,343.83	1,291.93	1,261.87	1,243.68	1,257.67	1,238.38	1,221.93	1,235.60	1,199.65	1,157.07	1,172.87	1,141.62	1,117.04	1,129.26	
753	Canada (dollar)	1.1670	1.1697	1.1613	1.1720	1.1965	1.1800	1.1641	1.1747	1.1730	1.1570	1.1448	1.1583	1.1600	1.1635	1.1603	

See footnotes on page C-6.

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 issue of the SURVEY OF CURRENT BUSINESS (pages 24–27) and "Business Cycle Indicators: Revised Composite Indexes" in the January 1989 issue of the SURVEY (pages 23–28).

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 in the notes. For inverted series, low values are indicated as highs.

Sources for series in this section are shown on pages C-47 and C-48 in the October 1990 SURVEY.

Page C-1

NOTE.—The following series reached its current high value before November 1989: BCI-940 (116.1) in January 1984.

1. A component's contribution measures its impact, in percentage points, on the percent change in the index. Each month, the sum of the contributions plus the trend adjustment factor equals (except for rounding differences) the index's percent change from the previous month. The trend adjustment factors are 0.142 for the leading index, -0.186 for the coincident index, and 0.030 for the lagging index.

2. Excludes BCI-57, for which data are not available.

3. Excludes BCI-77 and BCI-95, for which data are not available.

Page C-2

NOTE 1.—The following series reached current high values before November 1989: BCI-1 (41.2) in November 1988; BCI-21 (4.0) and BCI-122 (120.7) in February 1989; BCI-5 (290) and BCI-53 (568.0) in October 1988; BCI-46 (162) in November 1987; BCI-60 (0.741), BCI-7 (113.53), and BCI-8 (92.64) in December 1988; BCI-40 (25,399) and BCI-82 (85.1) in January 1989; BCI-37 (6,252), BCI-43 (5.1), and BCI-12 (126.5) in March 1989; BCI-45 (2.0) in May 1989; BCI-91 (11.2) in June 1989; BCI-124 (85.0) in April 1989; BCI-92 change (8.31), BCI-92 smoothed (4.40), BCI-58 (101.0), and BCI-83 (97.7) in March 1984; BCI-32 (67.5) in November 1983; BCI-59 (124,183) in September 1989; BCI-123 (124.3) in May 1983; BCI-13 (65,318) in December 1986; BCI-9 (93.19) in September 1985; BCI-11 (50.01) in 1st Q 1989; and BCI-97 (117.90) in 2d Q 1989.

NOTE 2.—Major data revisions:

Series on employment and unemployment in the civilian labor force (BCI-37, -42, -43, -44, -90, -91, -441, -442, -451, -452, and -453) have been revised by the source agency from 1986 forward to incorporate updated seasonal adjustment factors. Further information concerning these revisions may be obtained from the U.S. Department of Labor, Bureau of Labor Statistics, Office of Employment and Unemployment Statistics, Division of Employment and Unemployment Analysis, Washington, DC 20210.

The ratio of help-wanted advertising in newspapers to number of persons unemployed (BCI-60) has been revised from 1986 forward to incorporate revised data for the unemployment component. Further information concerning this revision may be obtained from the U.S. Department of Commerce, Bureau of Economic Analysis, Business Outlook Division, Washington, DC 20230.

The series on vendor performance (BCI-32) has been revised by the source agency from 1989 forward to reflect a new seasonal adjustment. Further information concerning this revision may be obtained from the National Association of Purchasing Management, 2055 East Centennial Circle, Tempe, AZ 85285-2160.

1. Data exclude Puerto Rico, which is included in figures published by the source agency.

2. Copyrighted. This series may not be reproduced without written permission from the University of Michigan, Survey Research Center, P.O. Box 1248, Ann Arbor, MI 48106-1248.

3. Copyrighted. This series may not be reproduced without written permission from McGraw-Hill Information Systems Company, F.W. Dodge Division, 1221 Avenue of the Americas, New York, NY 10020.

Page C-3

NOTE.—The following series reached current high values before November 1989: BCI-87 (151.4) in 2d Q 1985; BCI-28 (2,260) and BCI-29 (158.5) in February 1984; BCI-89 (200.3) in 4th Q 1986; BCI-30 (83.4) and BCI-22 (6.9) in 1st Q 1984; BCI-31 (93.7) in October 1987; BCI-77 (1.58), BCI-62 index (104.4), and BCI-62 change (29.1) in March 1986; BCI-99 index (135.64) in March 1989; BCI-99 change (3.21) in August 1983; BCI-99 smoothed (2.09) in November 1983; BCI-23 (335.0) in April 1989; BCI-16 (189.1), BCI-18 (163.8), and BCI-26 (104.6) in 4th Q 1988; BCI-81 (8.6) in 3d Q 1985; BCI-35 (433.1) in 3d Q 1988; BCI-62 smoothed (6.3) in January 1985; BCI-85 (2.66) in December 1986; BCI-102 (2.67) in January 1983; BCI-105 (637.4) in July 1988; and BCI-106 (2,472.5) in June 1988.

* Preliminary January values: BCI-23 = 299.6, BCI-19 = 321.08, BCI-85 = 0.34; anticipated 1st quarter values: BCI-61 = 557.92, BCI-100 = 538.47; anticipated 2d quarter values: BCI-61 = 561.85, BCI-100 = 539.87.

1. Copyrighted. This series may not be reproduced without written permission from Commodity Research Bureau, Inc., 75 Wall Street, 22d Floor, New York, NY 10005.

Page C-4

NOTE.—The following series reached current high values before November 1989: BCI-107 (7.034) in 4th Q 1984; BCI-113 (132.08) in September 1985; BCI-111 (23.2), BCI-116 (14.49), BCI-115 (13.00), and BCI-117 (10.67) in June 1984; BCI-110 (869,764) in 4th Q 1985; BCI-14 (829.2) in July 1983; BCI-39 (1.78) in February 1984; BCI-93 (-2,380), BCI-94 (8,017), BCI-119 (11.64), BCI-114 (10.49), and BCI-109 (13.00) in August 1984; BCI-118 (15.01) in May 1984; and BCI-95 (16.02) in January 1989.

* Preliminary January values: BCI-119 = 6.80, BCI-114 = 6.32, BCI-116 = 9.60, BCI-115 = 8.34, BCI-117 = 7.10, and BCI-109 = 9.52.

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

Page C-5

NOTE.—Major data revisions: Series on labor force and employment (BCI-441, -442, -451, -452, and -453)—see note 2 for page C-2.

* Preliminary January values: BCI-19 = 349.3, BCI-748 = 1,551.9, BCI-747 = 384.2, BCI-743 = 363.5, BCI-750 = 83.76, BCI-758 = 134.17, BCI-755 = 1.5143, BCI-756 = 5.1431, BCI-752 = 0.5188, BCI-757 = 1,138.69, and BCI-753 = 1.1548.

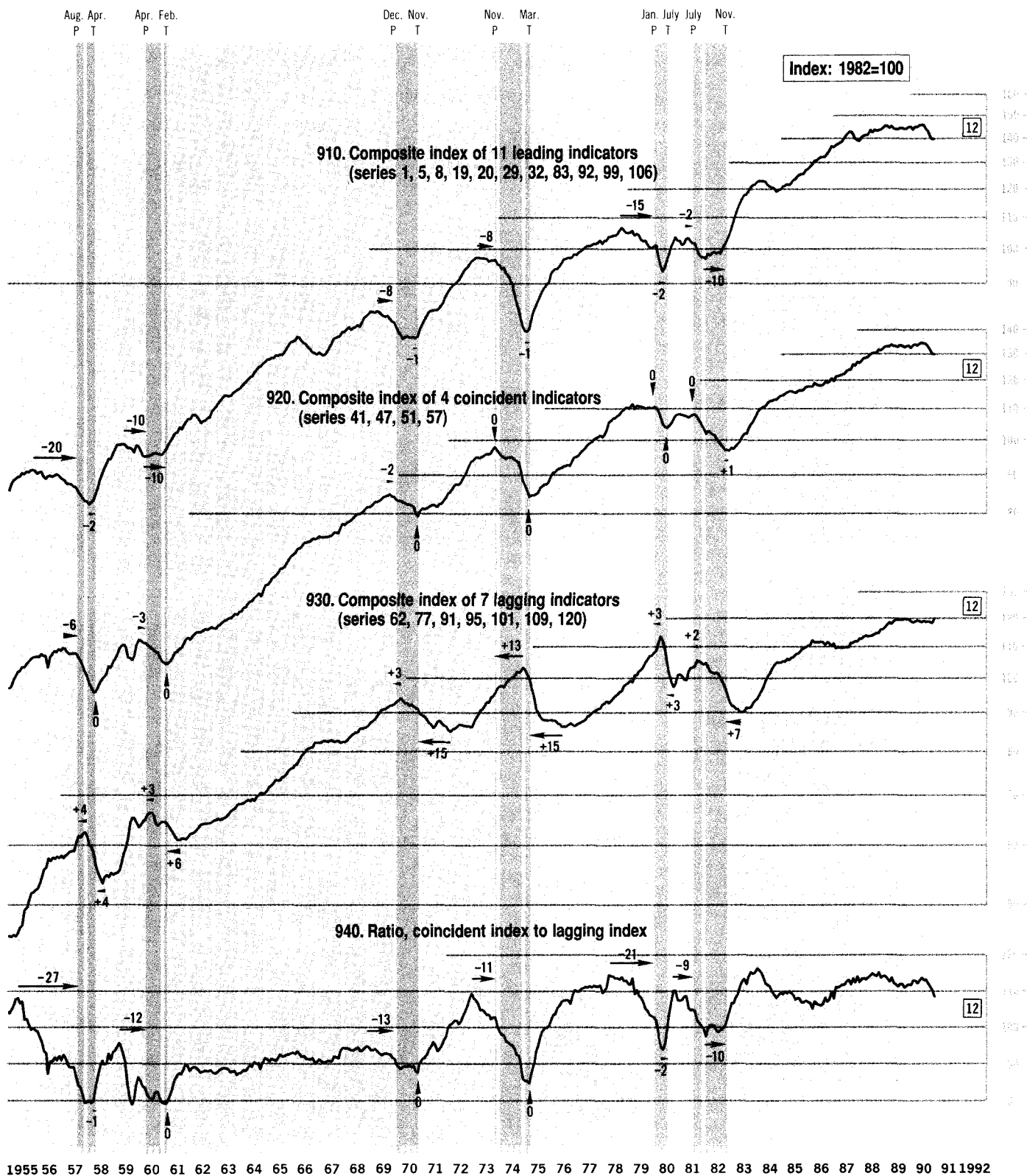
1. Balance of payments basis: Excludes transfers under military grants and Department of Defense sales contracts (exports) and Department of Defense purchases (imports).

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. Weights are the 1972–76 global trade of each of the 10 countries. For a description of this index, see the August 1978 *Federal Reserve Bulletin* (p. 700).

CYCLICAL INDICATORS

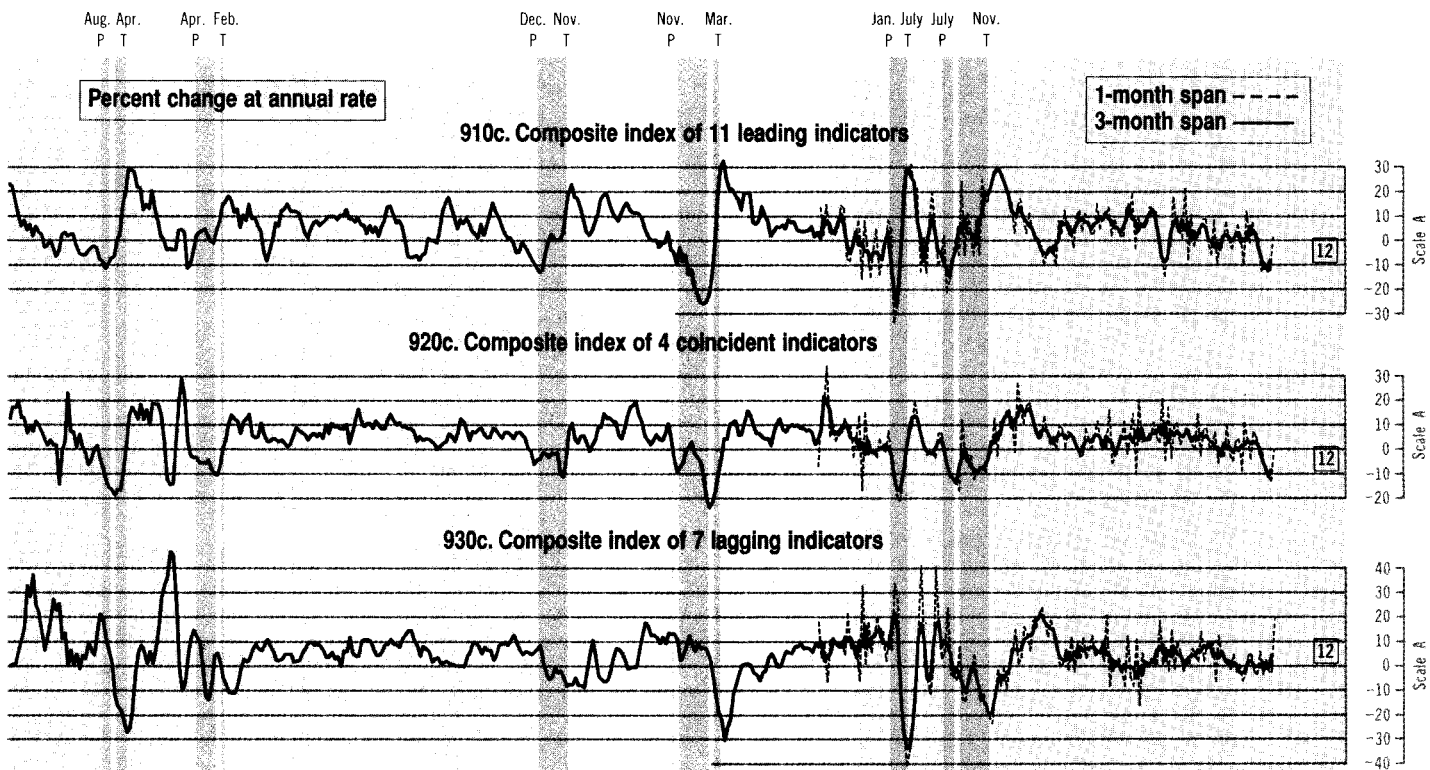
Composite Indexes



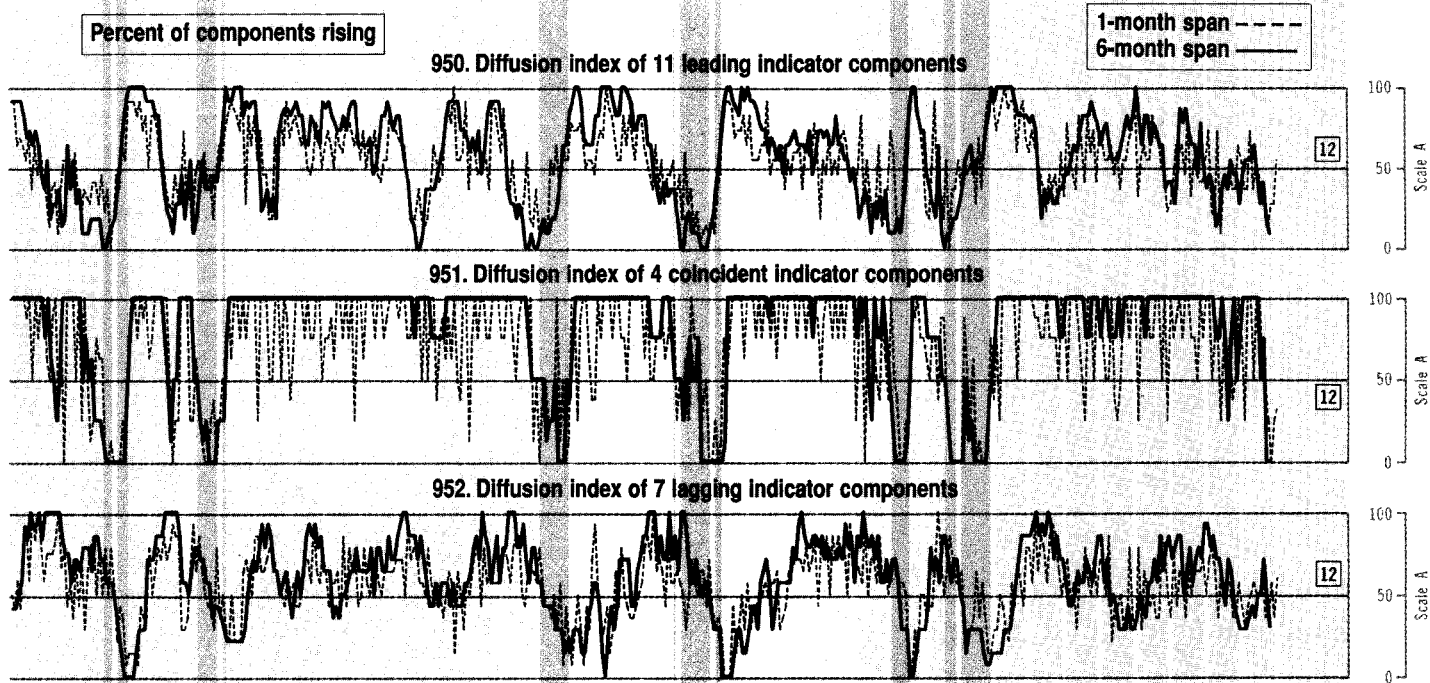
Note.—The numbers and arrows indicate length of leads (-) and lags (+) in months from business cycle turning dates. Current data for these series are shown on page C-1.

CYCLICAL INDICATORS

Composite Indexes: Rates of Change



Composite Indexes: Diffusion

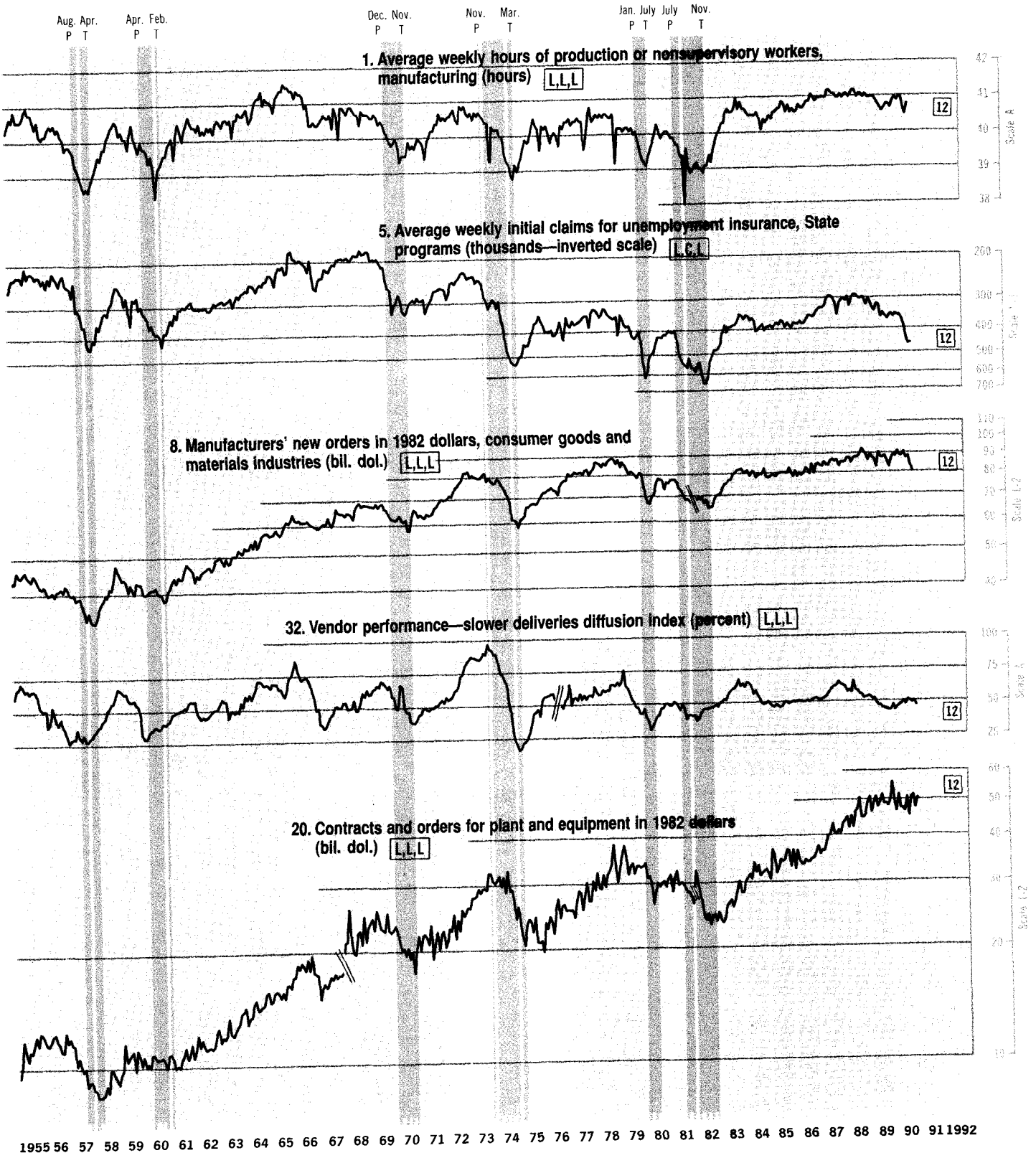


1955 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 1992

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

CYCLICAL INDICATORS

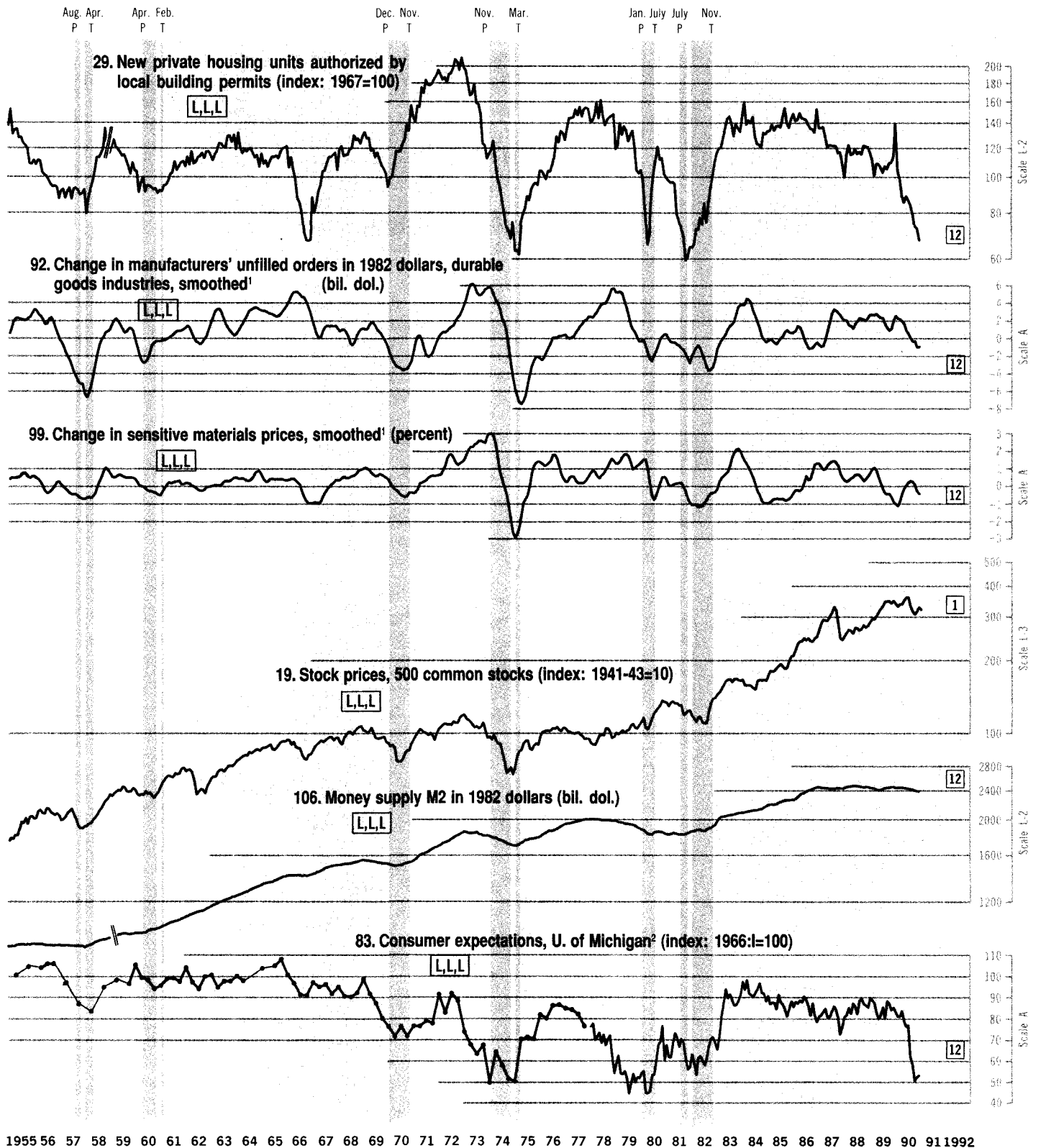
Composite Indexes: Leading Index Components



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

CYCLICAL INDICATORS

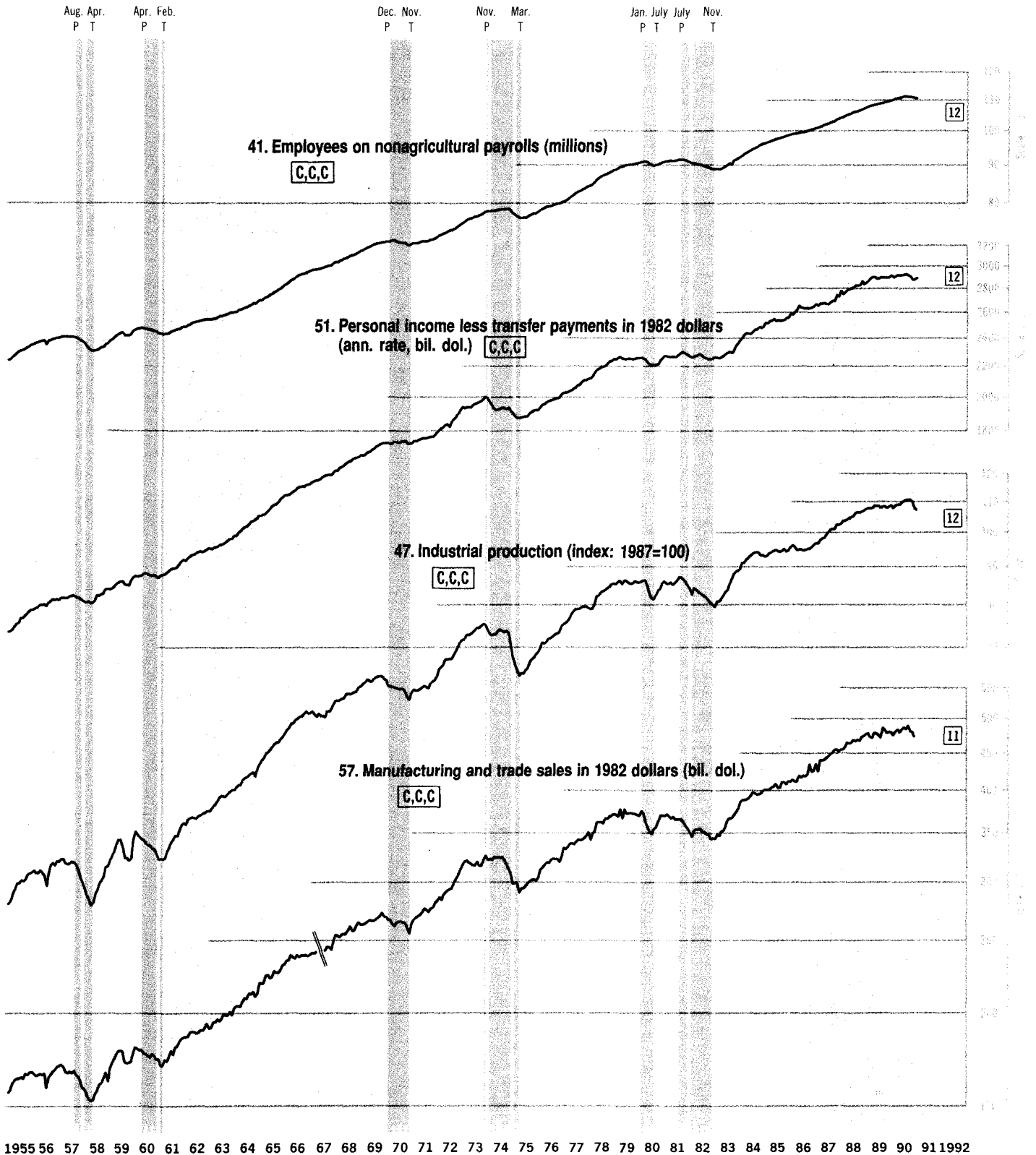
Composite Indexes: Leading Index Components—Continued



1. This series is smoothed by an autoregressive-moving-average filter developed by Statistics Canada.
 2. This is a copyrighted series used by permission; it may not be reproduced without written permission from the University of Michigan, Survey Research Center.
 NOTE.—Current data for these series are shown on pages C-2 and C-3.

CYCLICAL INDICATORS

Composite Indexes: Coincident Index Components

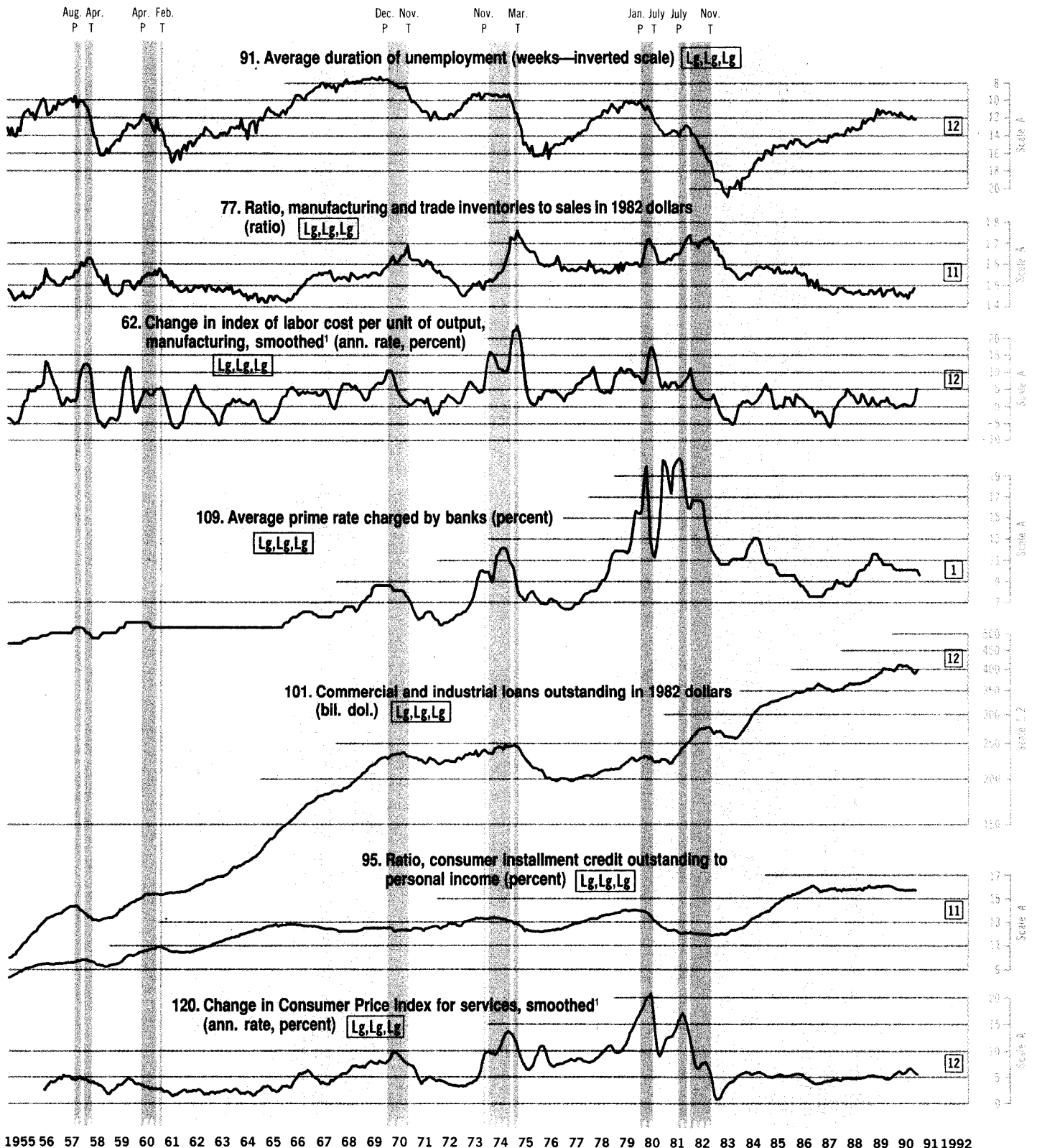


1955 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 1992

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

CYCLICAL INDICATORS

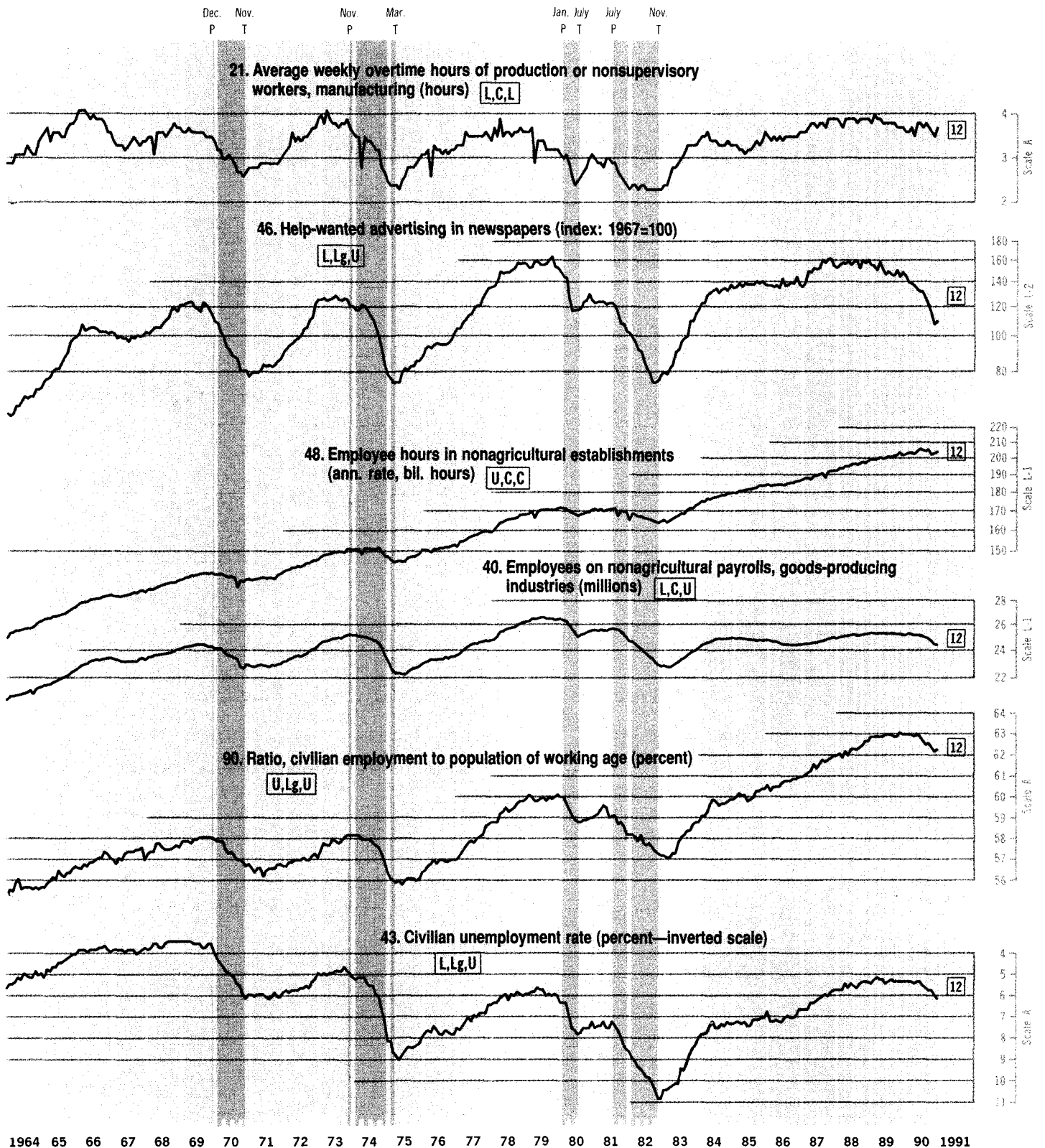
Composite Indexes: Lagging Index Components



1. This series is smoothed by an autoregressive-moving-average filter developed by Statistics Canada.
 Note.—Current data for these series are shown on pages C-2, C-3, and C-4.

CYCLICAL INDICATORS

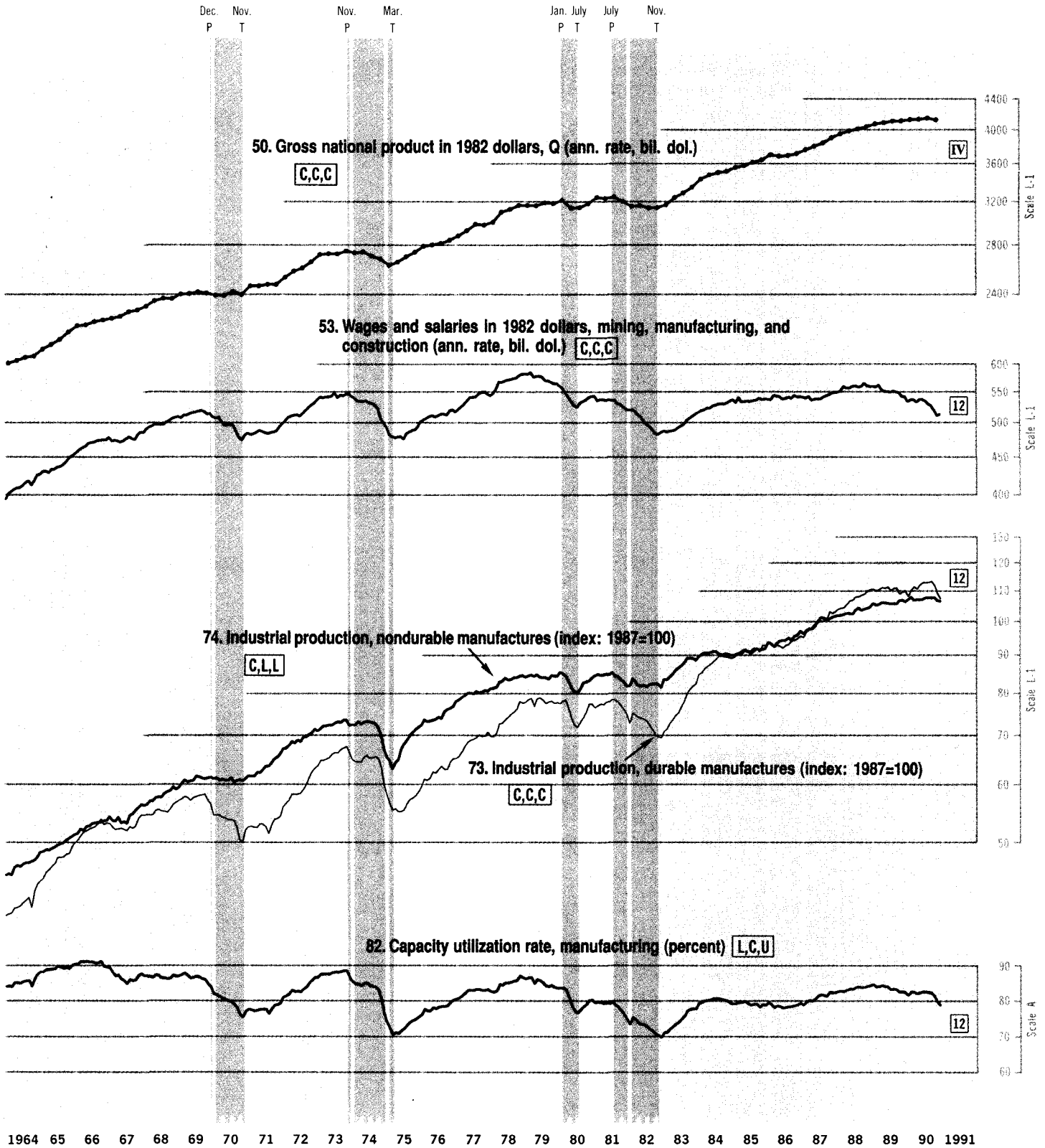
Employment and Unemployment



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

CYCLICAL INDICATORS

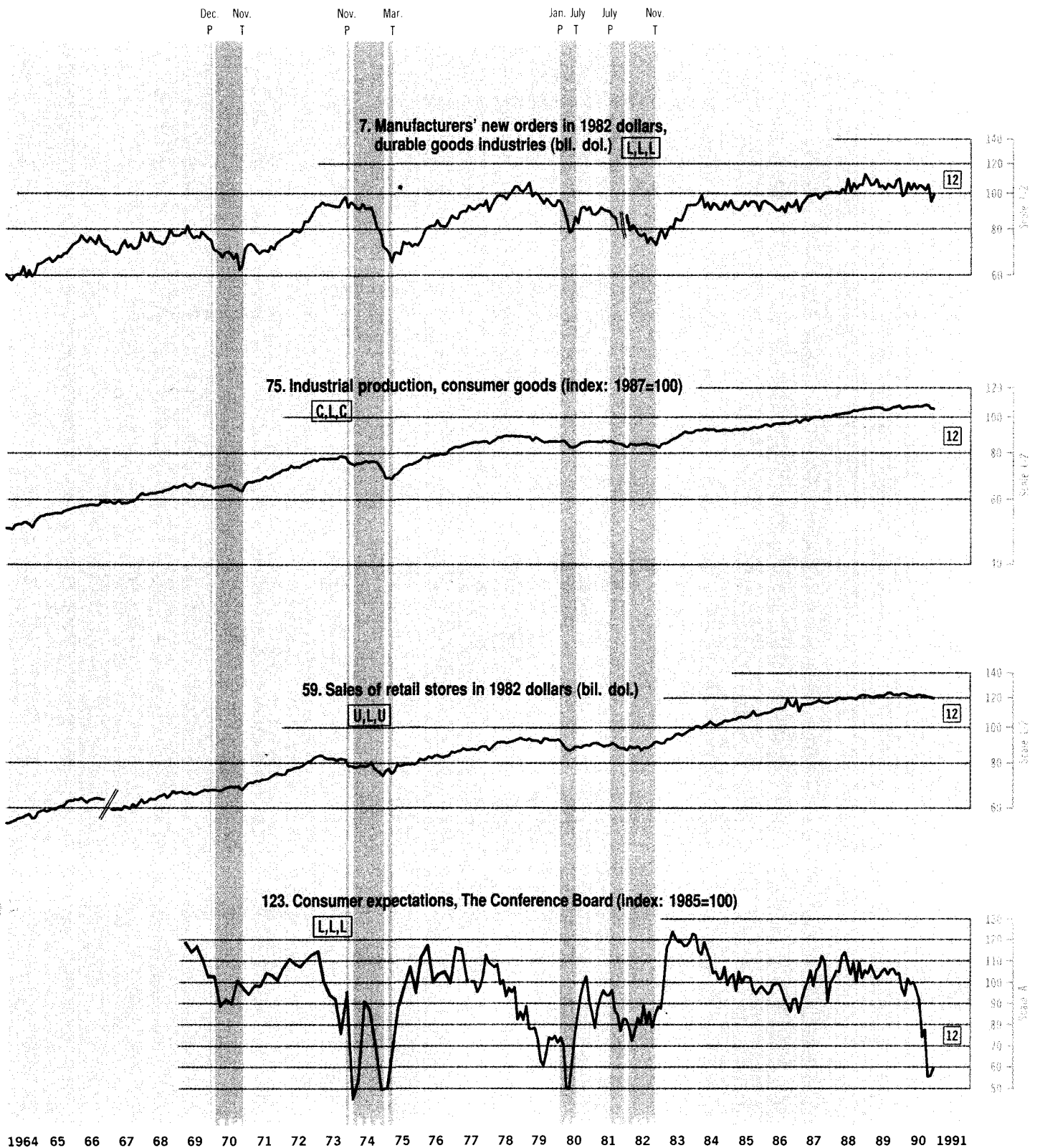
Production and Income



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

CYCLICAL INDICATORS

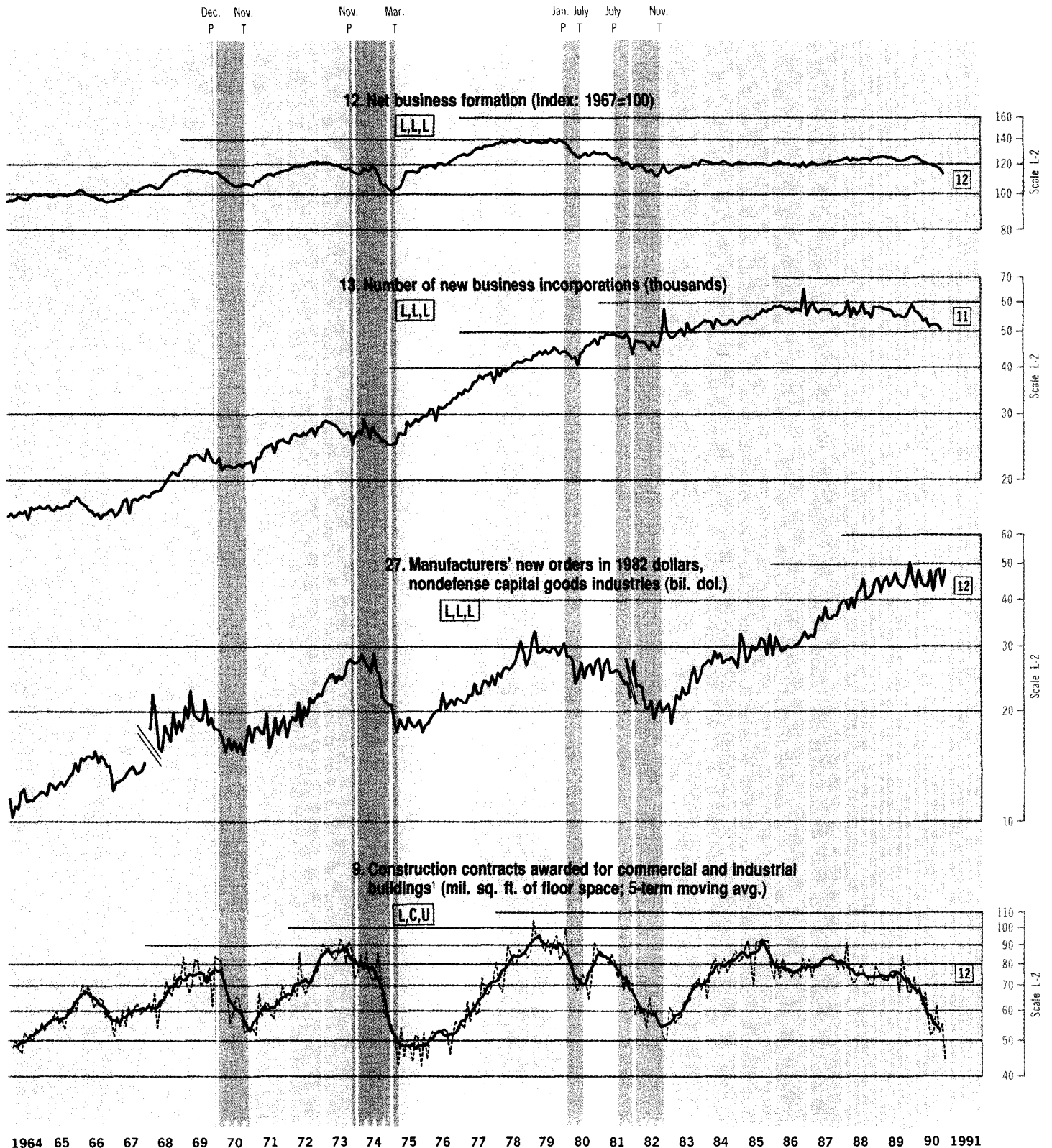
Consumption, Trade, Orders, and Deliveries



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

CYCLICAL INDICATORS

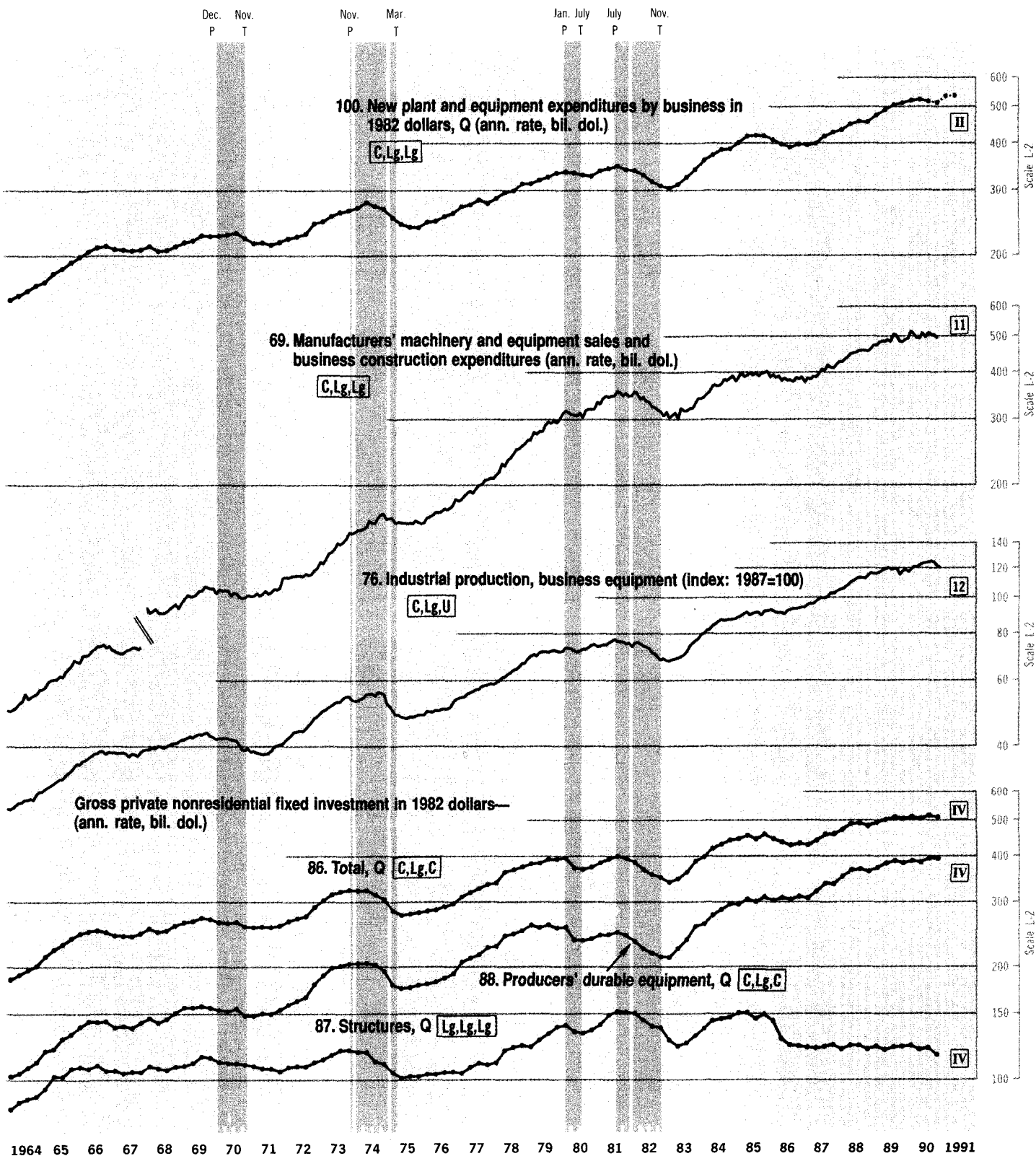
Fixed Capital Investment



1. This is a copyrighted series used by permission; it may not be reproduced without written permission from McGraw-Hill Information Systems Company, F.W. Dodge Division.
 Note.—Current data for these series are shown on page C-2.

CYCLICAL INDICATORS

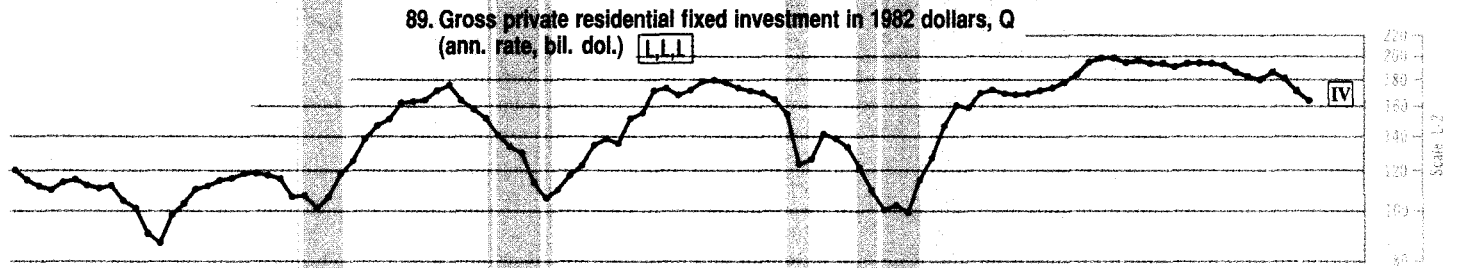
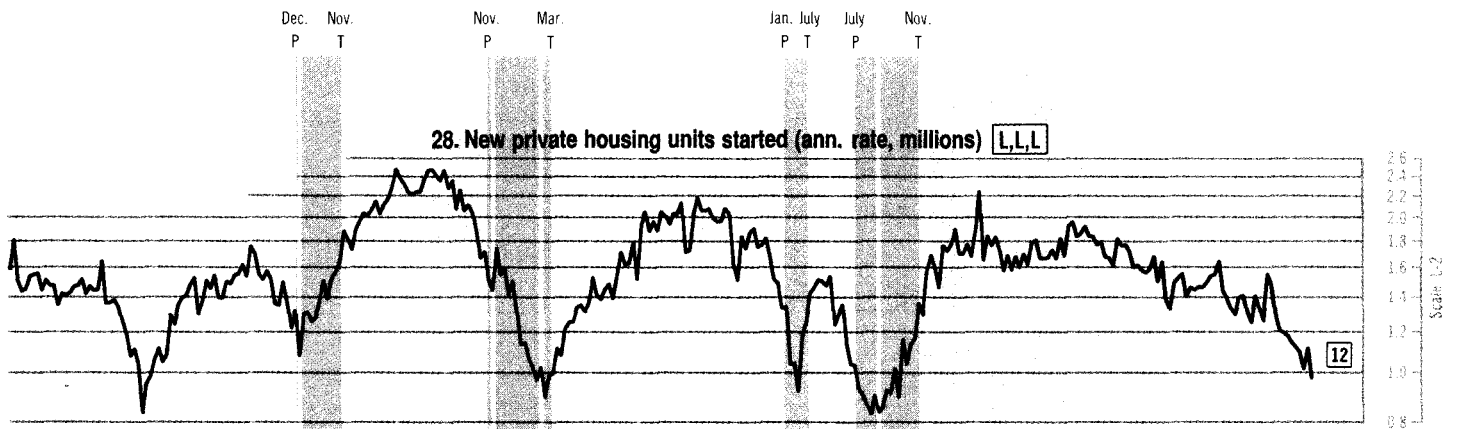
Fixed Capital Investment—Continued



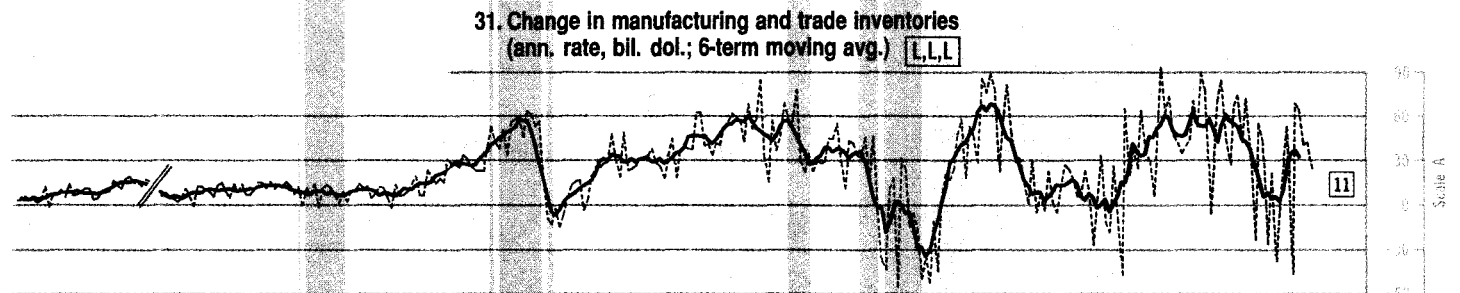
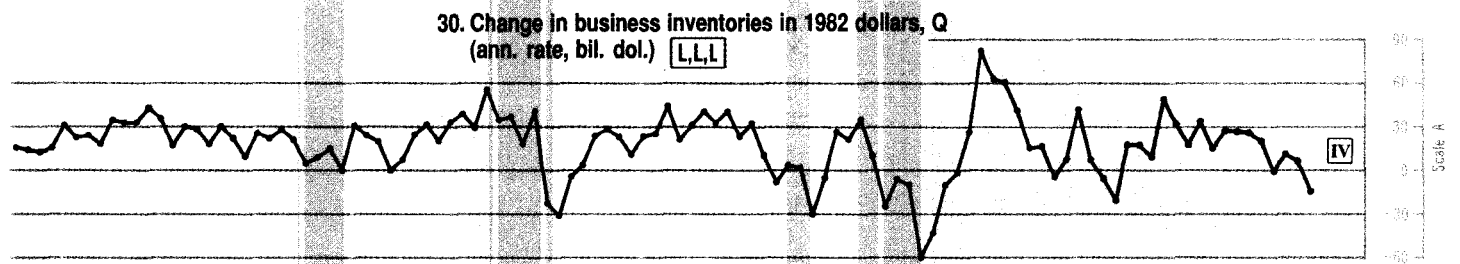
NOTE.—Current data for these series are shown on page C-3.

CYCLICAL INDICATORS

Fixed Capital Investment—Continued



Inventories and Inventory Investment

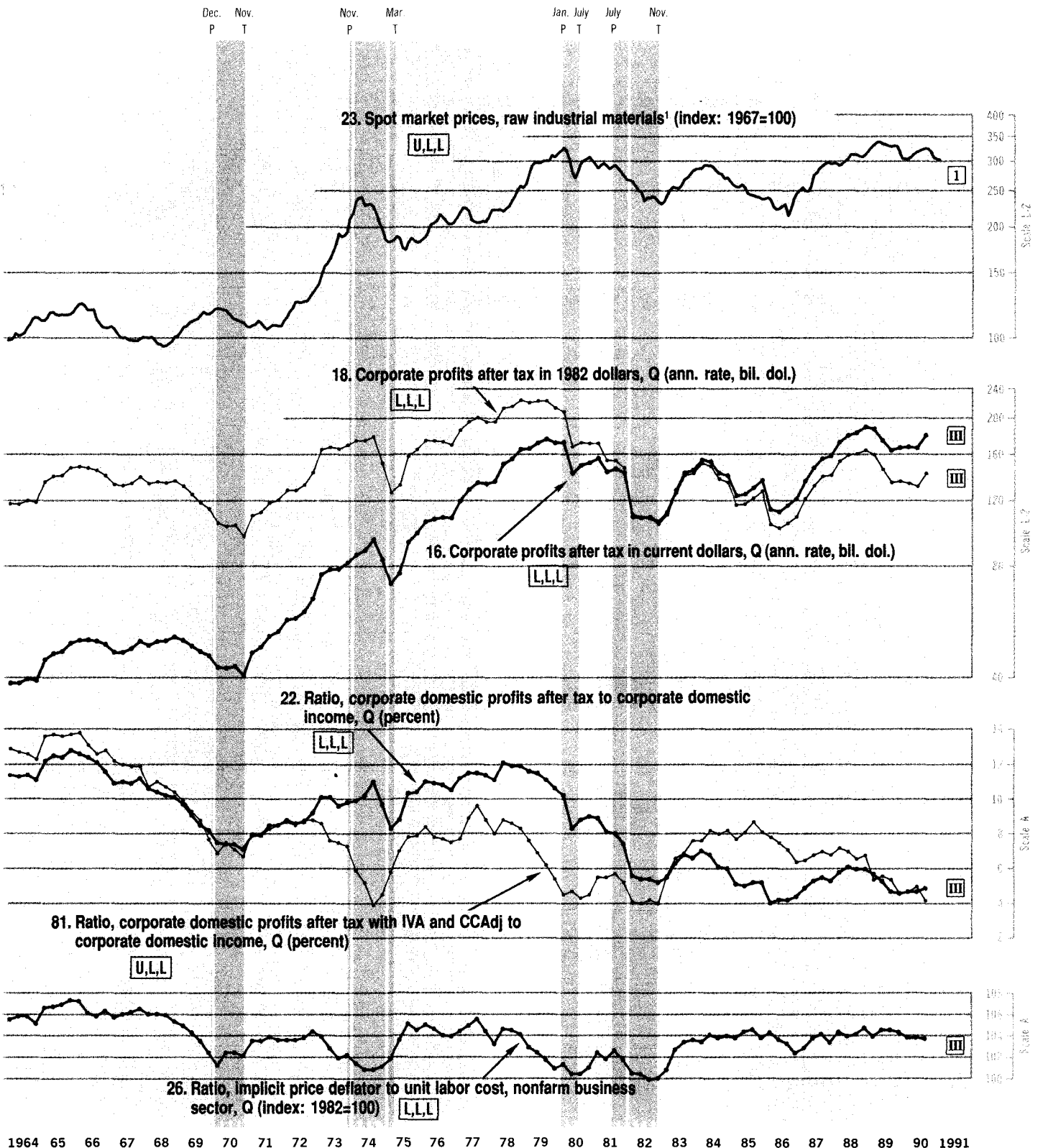


1964 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 1991

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

CYCLICAL INDICATORS

Prices, Costs, and Profits



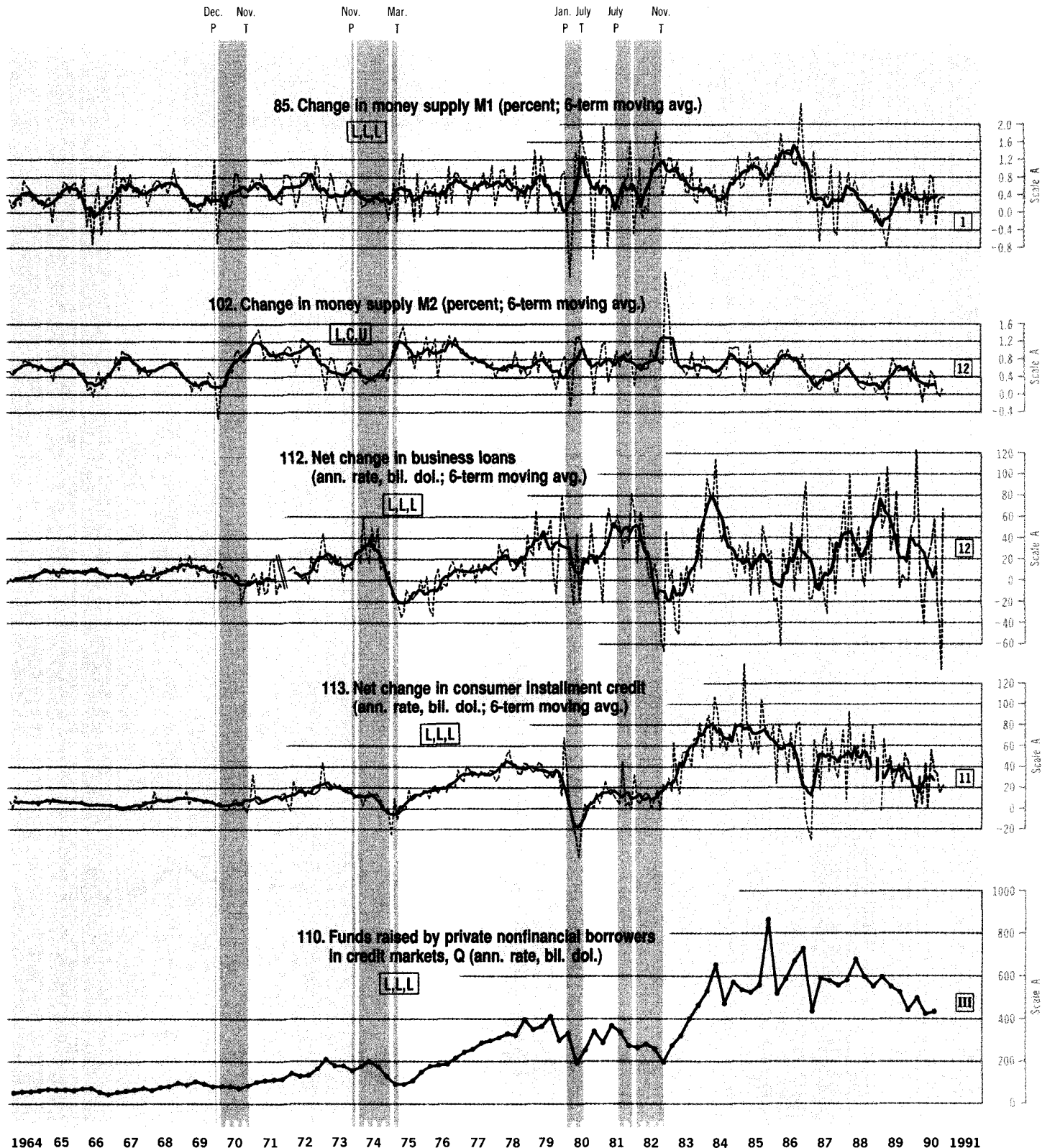
IVA Inventory valuation adjustment. CCAadj Capital consumption adjustment.

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 page C-3.

CYCLICAL INDICATORS

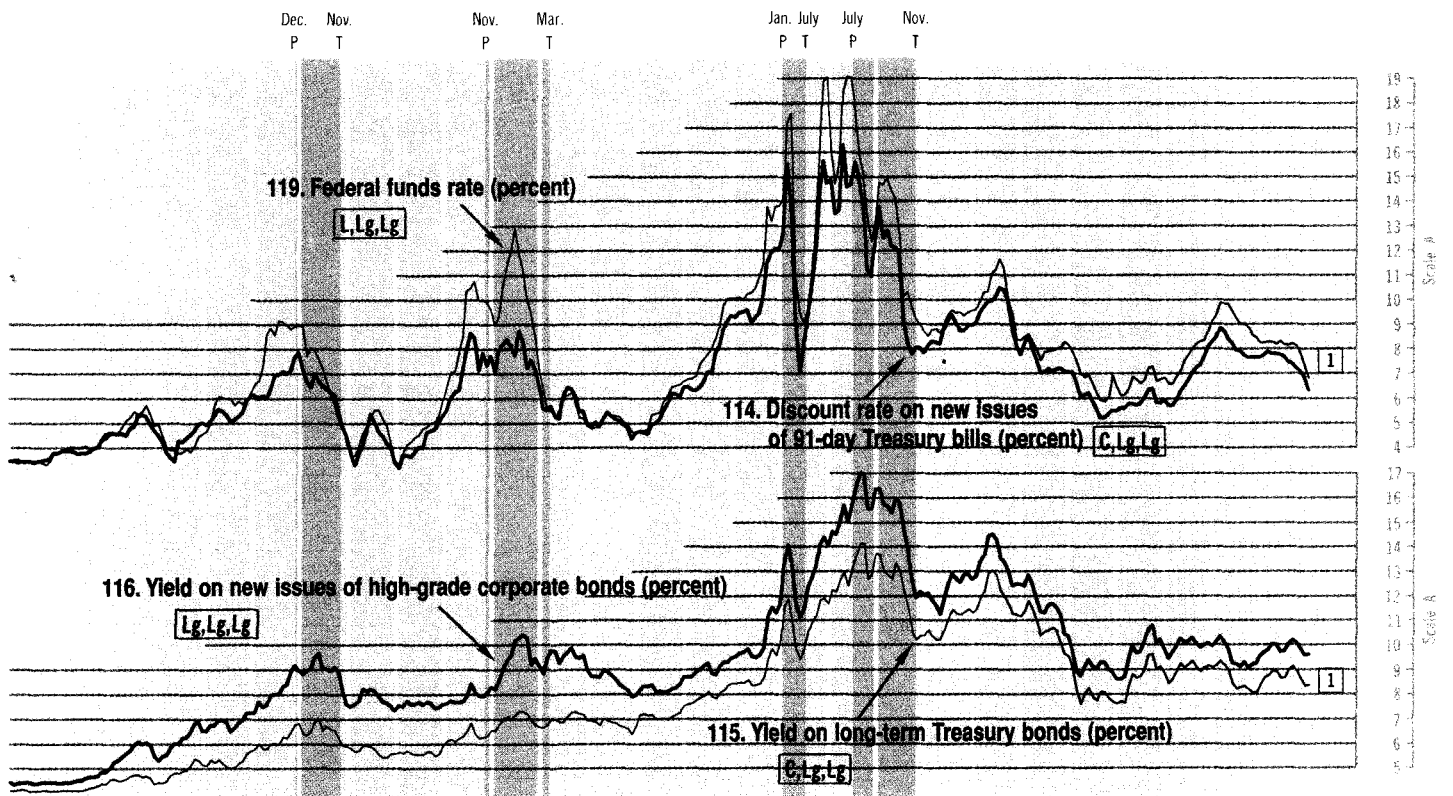
Money and Credit



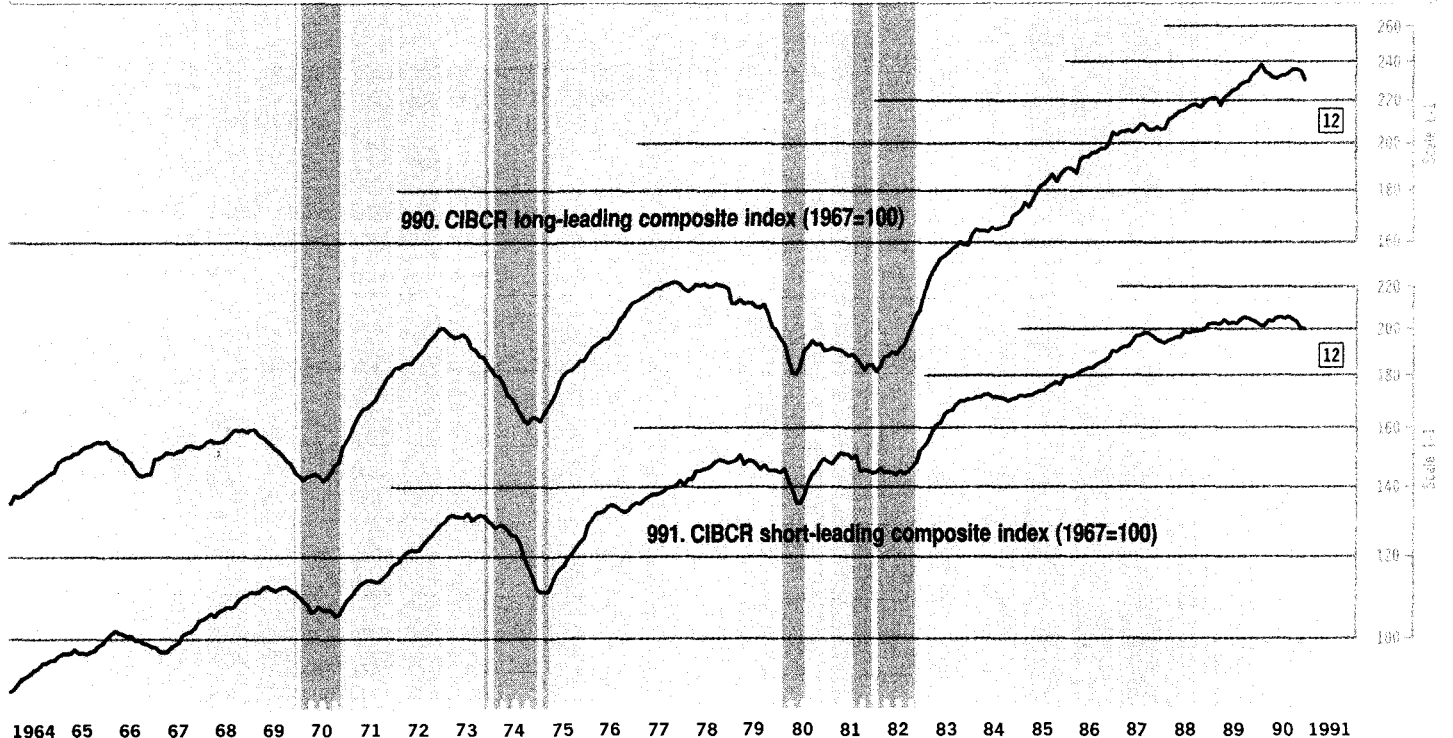
NOTE.—Current data for these series are shown on pages C-3 and C-4.

CYCLICAL INDICATORS

Money and Credit—Continued



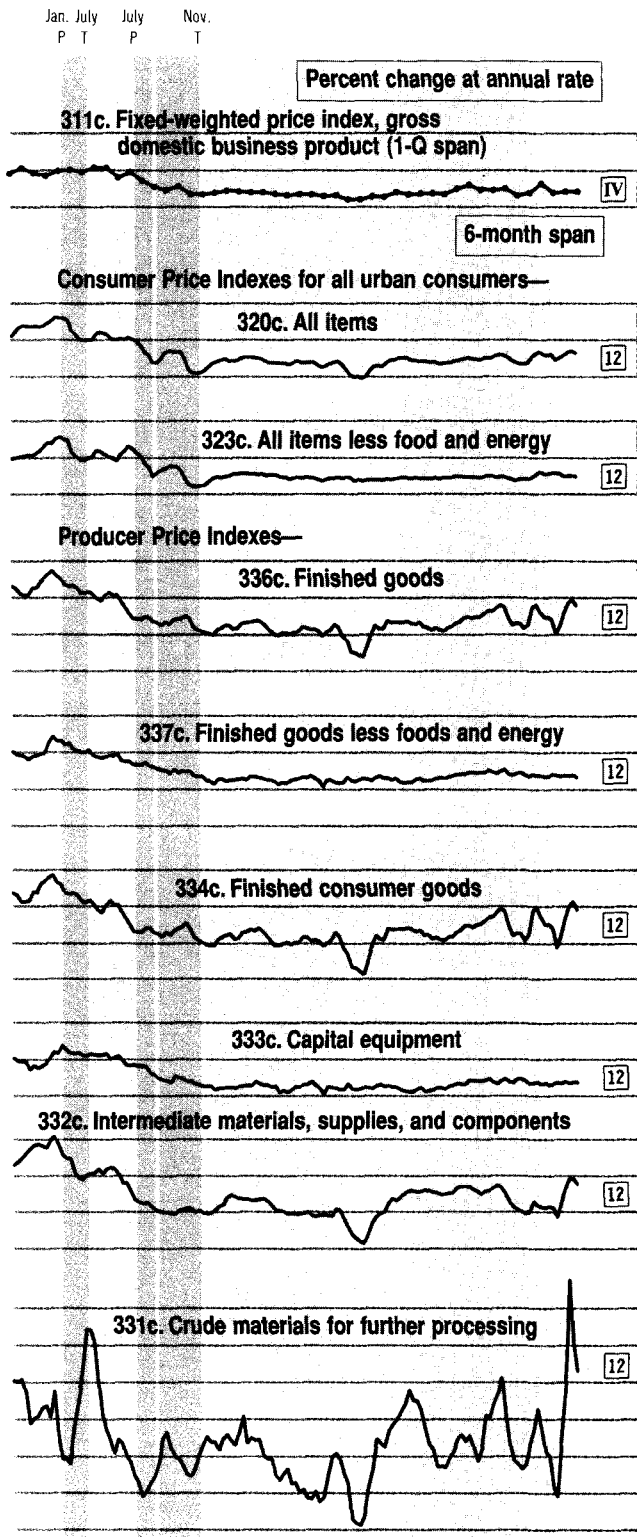
Alternative Composite Indexes



CIBCR Center for International Business Cycle Research (Columbia University).
 NOTE.—Current data for these series are shown on page C-4.

OTHER IMPORTANT ECONOMIC MEASURES

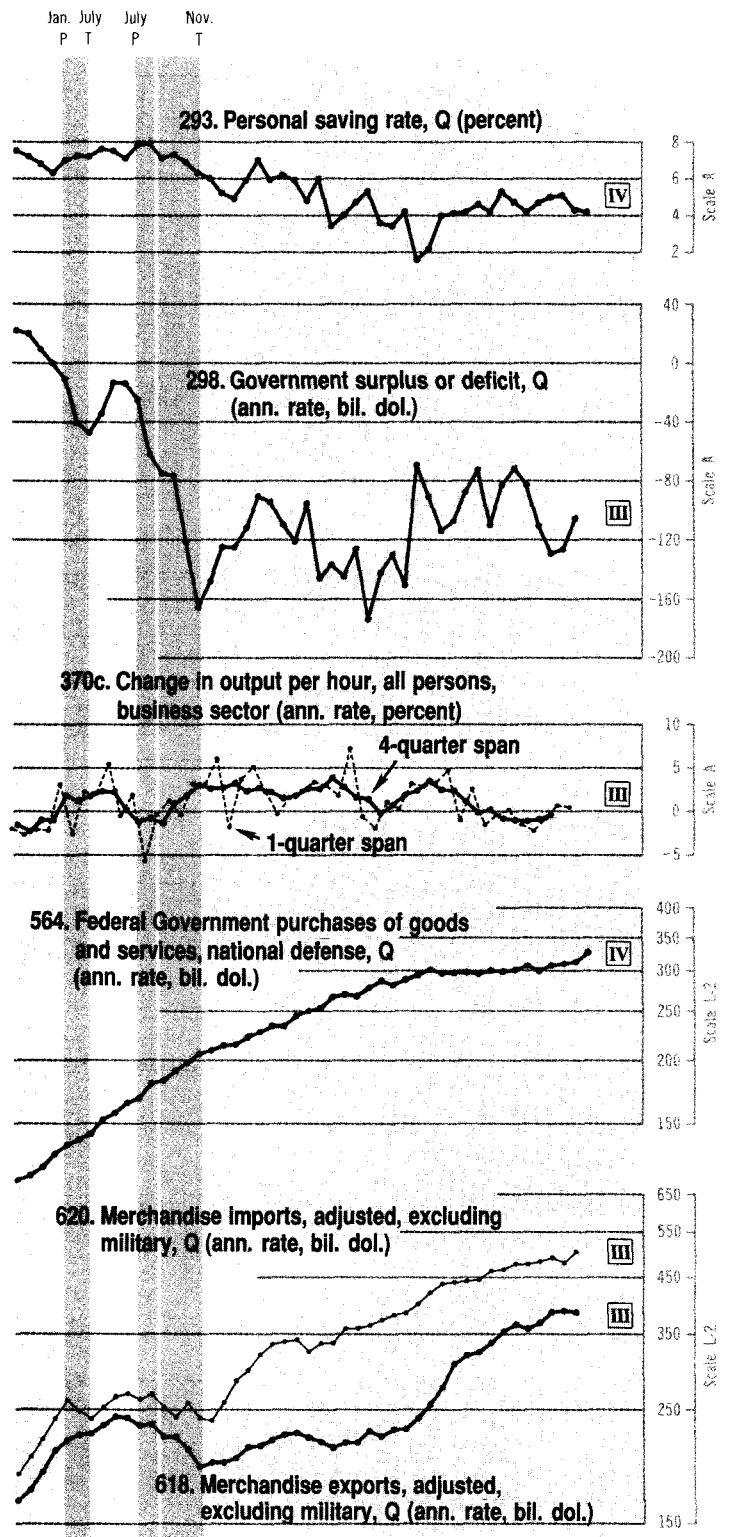
Price Movements



1979 80 81 82 83 84 85 86 87 88 89 90 1991

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

Other Measures

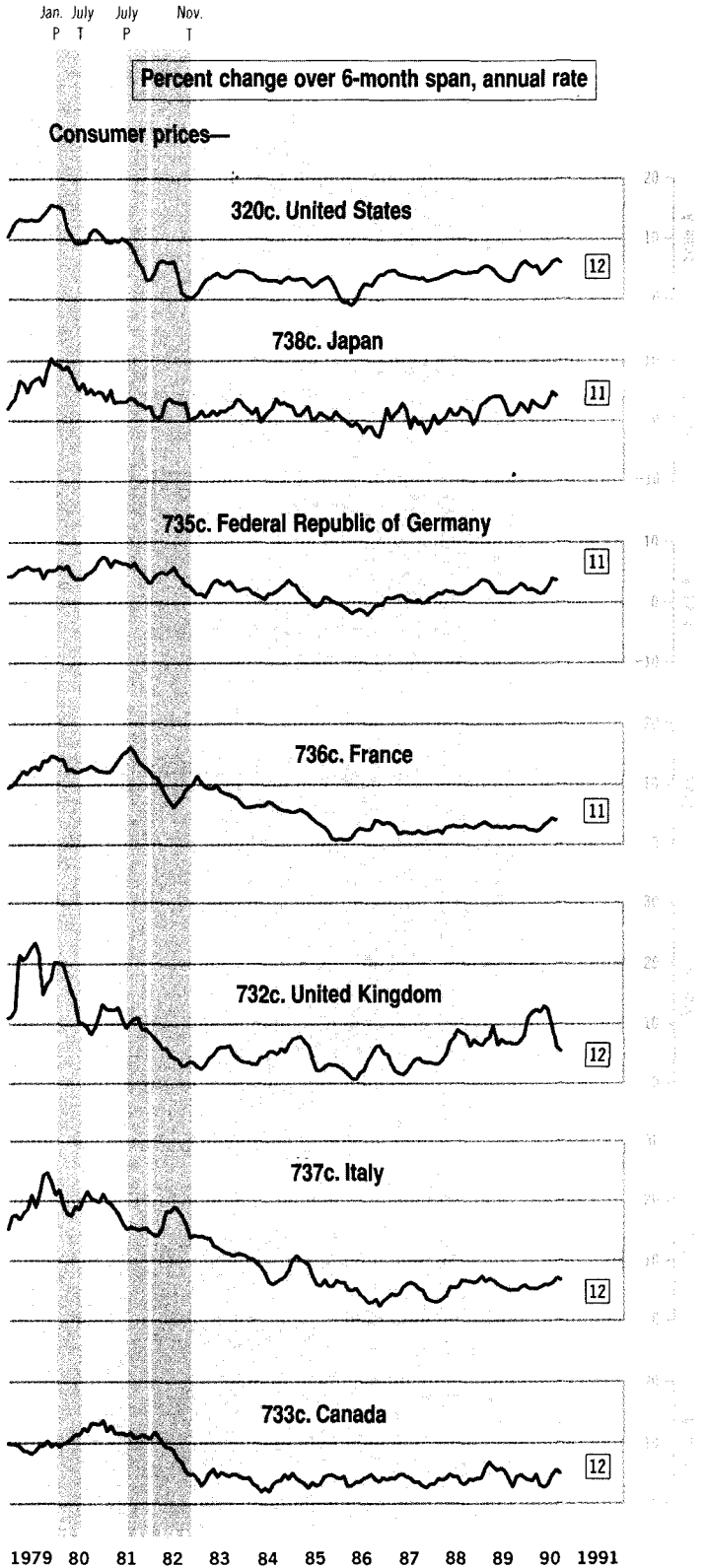
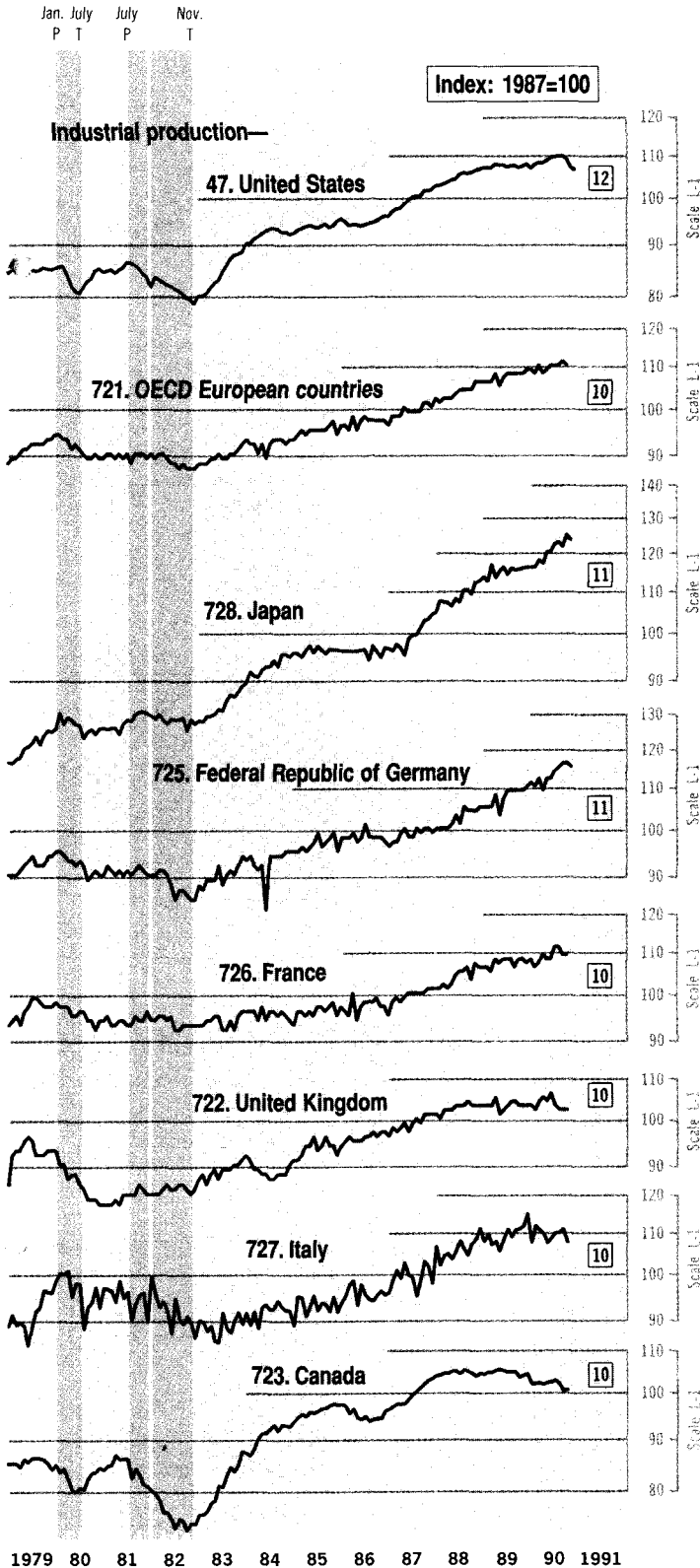


1979 80 81 82 83 84 85 86 87 88 89 90 1991

OTHER IMPORTANT ECONOMIC MEASURES

International Comparisons: Industrial Production

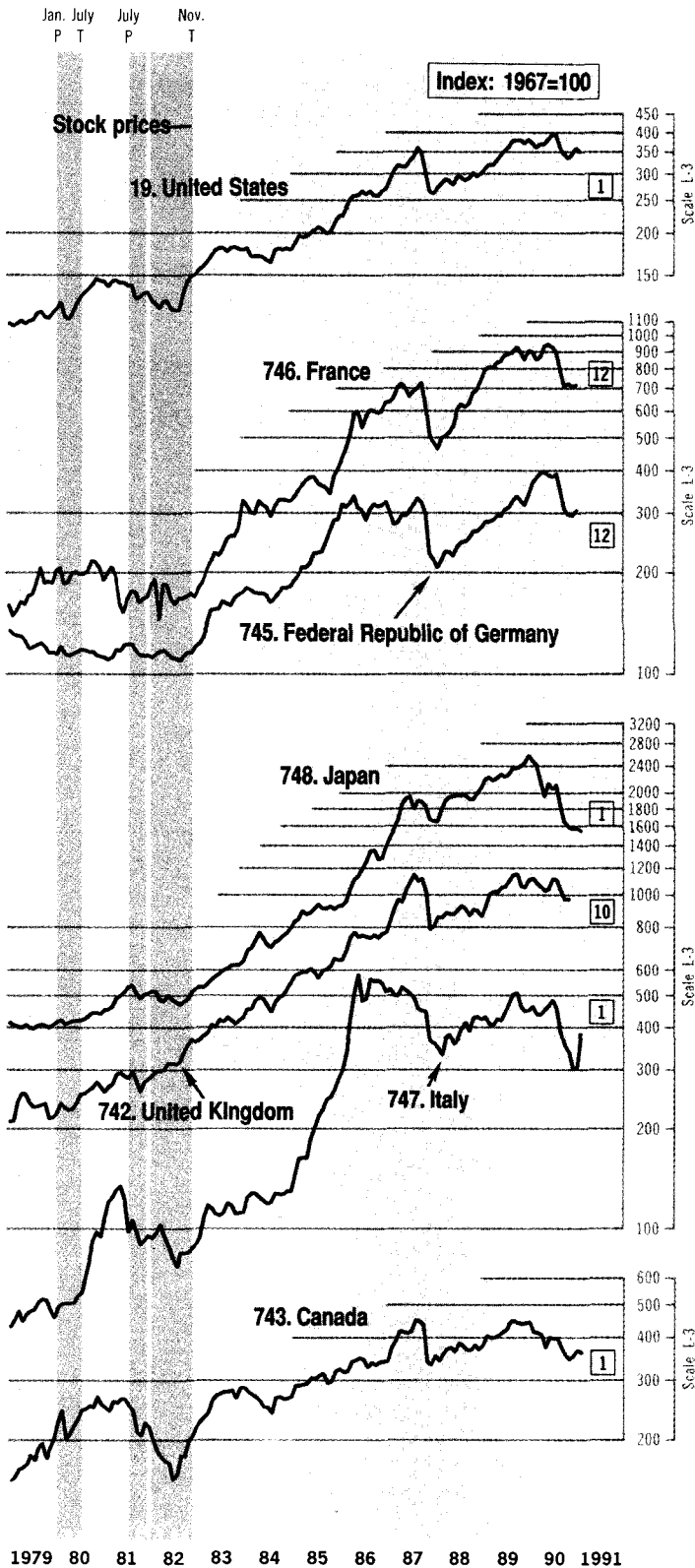
International Comparisons: Consumer Prices



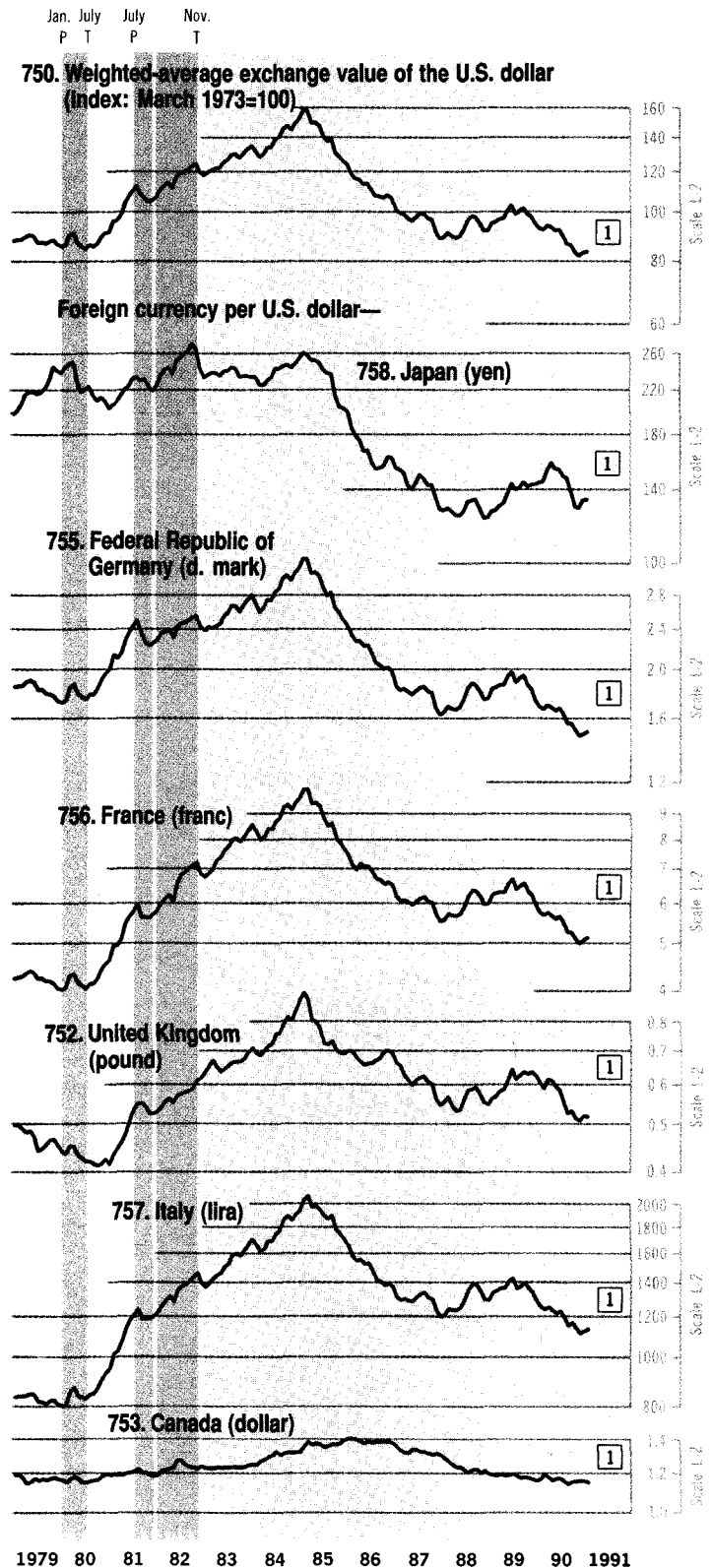
NOTE.—Current data for these series are shown on page C-5.

OTHER IMPORTANT ECONOMIC MEASURES

International Comparisons: Stock Prices



International Comparisons: Exchange Rates



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

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

Table with columns for years: 1988, 1989, 1989 (Nov, Dec), 1990 (Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec)

GENERAL BUSINESS INDICATORS—Continued

Main data table containing Industrial Production (Seasonally Adjusted), Business Sales, and various sub-categories with corresponding index values.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS, 1981-88

Table with columns for Units, Annual (1988, 1989), 1989 (Nov, Dec), and 1990 (Jan-Dec). Rows include GENERAL BUSINESS INDICATORS—Continued, MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS—Continued, Shipments (seas. adj.)—Continued, Inventories, end of year or month: Book value (non-LIFO basis), Nondurable goods industries, etc.

See footnotes at end of tables.

Table header for DOMESTIC TRADE with columns for Units, Annual (1988, 1989), 1989 (Nov, Dec), 1990 (Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec).

DOMESTIC TRADE—Continued

Main body of the DOMESTIC TRADE table containing various retail trade categories like Nondurable goods stores, Estimated inventories, and Firms with 11 or more stores.

LABOR FORCE, EMPLOYMENT, AND EARNINGS

Table for LABOR FORCE, EMPLOYMENT, AND EARNINGS with columns for various labor force metrics and years from 1988 to 1990.

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

Table with columns for Units, Annual (1988, 1989), 1989 (Nov, Dec), and 1990 (Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec).

LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

Main data table containing categories like LABOR FORCE, Unemployed, EMPLOYMENT, and various industry and occupational sub-categories with numerical data.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1989 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88

Table header with columns for Units, Annual (1988, 1989), 1989 (Nov., Dec.), and 1990 (Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec.)

LABOR FORCE, EMPLOYMENT, AND EARNINGS-Continued

Main table for Labor Force, Employment, and Earnings. Includes sub-sections for Work Stoppages, Unemployment Insurance (State programs, Federal civilian employees, Veterans), and various metrics like initial claims, benefits paid, and weekly benefits.

FINANCE

Main table for Finance. Includes sub-sections for Banking (Open market paper, Federal Reserve banks, All member banks) and Large commercial banks reporting to Federal Reserve System, with numerous rows detailing assets, liabilities, deposits, and loans.

See footnotes at end of tables.

Units	Annual		1989		1990											
	1988	1989	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<p style="text-align: center;">TRANSPORTATION AND COMMUNICATION—Continued</p> <p>COMMUNICATION</p> <p>Telephone carriers:</p> <p>Operating revenues #mil. \$</p> <p>Station revenuesdo</p> <p>Tolls, messagedo</p> <p>Operating expenses (excluding taxes)do</p> <p>Net operating income (after taxes)do</p> <p>Access linesmil</p>															

Units	Annual		1989		1990											
	1988	1989	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<p style="text-align: center;">CHEMICALS AND ALLIED PRODUCTS</p> <p>CHEMICALS</p> <p>Inorganic Chemicals</p> <p>Production:</p> <p>Aluminum sulfate, commercial (17% Al₂O₃).....thous. sh. tons ..</p> <p>Chlorine gas (100% Cl₂).....do ..</p> <p>Hydrochloric acid (100% HCl).....do ..</p> <p>Phosphorus, elemental.....do ..</p> <p>Sodium hydroxide (100% NaOH).....do ..</p> <p>Sodium silicate, anhydrous.....do ..</p> <p>Sodium sulfate (100% Na₂SO₄).....do ..</p> <p>Sodium tripolyphosphate (100% Na₅P₃O₁₀).....do ..</p> <p>Titanium dioxide (composite and pure).....do ..</p> <p>Sulfur, native (Frasch) and recovered:</p> <p>Production.....thous. met. tons ..</p> <p>Stocks (producers') end of period.....do ..</p> <p>Inorganic Fertilizer Materials</p> <p>Production:</p> <p>Ammonia, synthetic anhydrous ‡.....thous. sh. tons ..</p> <p>Ammonium nitrate, original solution †.....do ..</p> <p>Ammonium sulfate †.....do ..</p> <p>Nitric acid (100% HNO₃) †.....do ..</p> <p>Nitrogen solutions (100% N) †.....do ..</p> <p>Phosphoric acid (100% P₂O₅) †.....do ..</p> <p>Sulfuric acid (100% H₂SO₄) †.....do ..</p> <p>Superphosphate and other phosphatic fertilizers (gross weight):</p> <p>Production.....thous. sh. tons ..</p> <p>Stocks, end of period.....do ..</p> <p>Potash, sales (K₂O).....do ..</p> <p>Imports:</p> <p>Ammonium nitrate.....thous. met. tons ..</p> <p>Ammonium sulfate.....do ..</p> <p>Potassium chloride.....do ..</p> <p>Sodium nitrate.....do ..</p> <p>Industrial Gases</p> <p>Production:</p> <p>Acetylene.....mil. cu. ft. ..</p> <p>Hydrogen (high and low purity).....do ..</p> <p>Nitrogen (high and low purity).....do ..</p> <p>Oxygen (high and low purity).....do ..</p> <p>Organic Chemicals ‡</p> <p>Production:</p> <p>Acetylsalicylic acid (aspirin).....thous. met. tons ..</p> <p>Ethyl acetate.....do ..</p> <p>Formaldehyde (37% HCHO).....do ..</p> <p>Glycerin, refined, all grades.....mil. lb. ..</p> <p>Methanol, synthetic.....thous. met. tons ..</p> <p>Phthalic anhydride.....do ..</p> <p>ALCOHOL</p> <p>Ethyl alcohol and spirits:</p> <p>Production.....mil. tax gal. ..</p> <p>Stocks, end of period.....do ..</p> <p>Denatured alcohol:</p> <p>Production.....mil. wine gal. ..</p> <p>Consumption (withdrawals).....do ..</p> <p>For fuel use.....do ..</p> <p>Stocks, end of period.....do ..</p>															

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

Table with columns for Units, Annual (1988, 1989), 1989 (Nov, Dec), and 1990 (Jan, Feb, Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec).

CHEMICALS AND ALLIED PRODUCTS—Continued

Table for CHEMICALS AND ALLIED PRODUCTS including sub-sections PLASTICS AND RESIN MATERIALS and PAINTS, VARNISH, AND LACQUER.

ELECTRIC POWER AND GAS

Table for ELECTRIC POWER AND GAS including sub-sections ELECTRIC POWER and GAS.

FOOD AND KINDRED PRODUCTS; TOBACCO

Table for FOOD AND KINDRED PRODUCTS; TOBACCO including sub-sections ALCOHOLIC BEVERAGES and Wines and distilling materials.

See footnotes at end of tables.

Table with columns for Annual (1988, 1989), 1989 (Nov, Dec), and 1990 (Jan-Dec). Rows include sections for DAIRY PRODUCTS, GRAIN AND GRAIN PRODUCTS, and various sub-items like Butter, Cheese, Fluid milk, etc.

See footnotes at end of tables.

Units	Annual		1989		1990											
	1988	1989	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
FOOD AND KINDRED PRODUCTS; TOBACCO—Continued																
GRAIN AND GRAIN PRODUCTS—Continued																
Wheat—Continued																
Producer Price Indexes:																
Hard red winter, No. 1, ord. protein (K.C.) 1982=100..	90.8	109.1	107.7	109.2	108.6	102.7	98.6	101.9	94.3	95.4	78.1	71.8	71.8	71.9	70.4	70.1
Hard red spring, No. 1, ord. protein (Minn.) 1982=100..	93.1	108.7	105.0	108.6	110.1	104.7	99.7	103.4	103.7	102.2	98.7	77.6	75.7	75.3	73.8	73.8
Wheat flour:																
Production:																
Flour.....thous. sacks (100 lb.)..	344,154	328,500	29,287	26,360	27,906	27,963	29,213	26,958	27,634	26,719	27,711	33,381	29,833	33,122		
Millfeed.....thous. sh. tons..	6,163	5,828	514	455	497	493	512	478	492	468	485	565	512	571		
Grindings of wheat.....thous. bu.	769,699	781,338	65,096	58,665	63,393	64,038	66,725	61,567	63,566	60,572	62,258	74,373	67,093	74,662		
Stocks held by mills, end of period																
Exports.....thous. sacks (100 lb.)..	4,800	5,207		5,207			5,072			5,818			6,205			
Exports.....thous. met. tons..	960.80	1,195.53	134.94	71.42												
Producer Price Index.....6/83=100..	102.0	110.5	108.7	109.6	109.4	109.0	106.9	108.8	107.9	106.0	99.7	93.4	91.8	90.8	89.3	89.9
POULTRY AND EGGS																
Poultry:																
Slaughter.....mil. lb.																
Stocks, cold storage (frozen), end of period, total	451	469	479	469	504	513	575	623	666	760	810	846	852	860	584	
Turkeys.....do.....	250	236	259	236	267	272	319	354	406	489	541	593	620	623	334	
Price, in Georgia producing area, live broilers.....\$ per lb.	.315	.352	.290	.270	.280	.305	.350	.315	.335	.330	.370	.310	.335	.270	.265	.270
Eggs:																
Production on farms.....mil. cases \$.																
Stocks, cold storage, end of period:																
Shell.....thous. cases \$.	9	12	11	12	22	16	23	20	21	22	29	19	18	11	16	
Frozen.....mil. lb.	20	14	13	14	14	15	17	17	17	18	17	17	16	17	17	
Price, wholesale, large (delivered; Chicago) \$ per doz..	.588	.777	.891	.943	.886	.751	.861	.786	.603	.669	.642	.739	.754	.800		
LIVESTOCK																
Cattle and calves:																
Slaughter (federally inspected):																
Calves.....thous. animals..	2,411	2,100	175	167	175	145	165	128	137	132	139	147	132	158	149	
Cattle.....do.....	34,048	33,010	2,694	2,600	2,775	2,437	2,696	2,552	2,920	2,873	2,789	2,918	2,553	2,877	2,622	
Prices, wholesale:																
Beef steers (Omaha).....\$ per 100 lb.	69.58	72.52	72.48	75.21	76.73	76.61	78.15	79.36	77.57	75.63	74.46	76.22	75.75			
Steers, stocker and feeder (Kansas City).....do.....	80.50	81.45	82.65	82.30	82.47	82.86	87.50	90.81	91.90	94.74	93.50	92.30	91.50			
Calves, weaners (So. St. Paul).....dollars	227.67	248.62	242.90	230.00	248.50	255.00										
Hogs:																
Slaughter (federally inspected).....thous. animals..																
Prices:																
Wholesale, average, all weights (Sioux City) \$ per 100 lb.	43.25	43.91	47.21	49.65	48.41	49.48	52.56	54.63	62.80	61.34	62.54	56.37	55.64			
Hog-corn price ratio (bu. of corn equal in value to 100 lb. live hog).....	19.3	17.3	20.1	21.2	20.5	20.8	21.6	21.4	23.4	22.9	23.2	22.3	23.4	25.9	23.1	21.8
Sheep and lambs:																
Slaughter (federally inspected).....thous. animals..																
Price, wholesale, lambs, avg. (San Angelo, TX) \$ per 100 lb.	68.84	66.06	55.60	60.83	54.80	60.38	63.69	54.75	53.70	48.00			52.00			
MEATS																
Total meats (excluding lard):																
Production.....mil. lb.																
Stocks, cold storage, end of period.....do.....	716	535	554	535	565	610	637	651	633	592	566	507	507	537	536	
Exports (meats and meat preparations).....thous. met. tons..	1,081	1,301	122	109												
Imports (meats and meat preparations).....do.....	1,263	1,110	89	93												
Beef and veal:																
Production, total.....mil. lb.																
Stocks, cold storage, end of period.....do.....	323	256	242	256	265	274	312	300	277	263	272	247	249	273	284	
Exports.....thous. met. tons..	443	568	48	43												
Imports.....do.....	753	682	56	61												
Price, wholesale, beef, fresh steer carcasses, choice (600-700 lbs.) (Central U.S.).....\$ per lb.	1.031	1.078	1.070	1.114	1.133	1.128	1.136	1.147	1.143	1.122						
Lamb and mutton:																
Production, total.....mil. lb.																
Stocks, cold storage, end of period.....do.....	6	8	8	8	8	9	8	8	8	8	10	10	9	9	8	8
Pork (excluding lard):																
Production, total.....do.....																
Stocks, cold storage, end of period.....do.....	358	256	279	256	272	307	297	319	323	293	256	225	226	232	222	
Exports.....thous. met. tons..	147	152	15	14												
Imports.....do.....	439	358	27	26												
Prices:																
Producer Price Index, hams and picnics, except canned *.....12/88=100..		99.7	112.2	116.9	109.3	107.0	111.0	108.9	112.8	116.4	119.9	123.5	122.2	129.6	133.3	130.7
Fresh loins, 8-14 lb. average, wholesale (Omaha) *.....\$ per lb.	.9748	1.0111	.9175	1.0728	1.0136	1.0775	1.1726	1.2668	1.3606	1.2562	1.4414	1.2494	1.2163			
MISCELLANEOUS FOOD PRODUCTS																
Cocoa (cacao) beans, imports (including shells).....thous. met. tons..																
236.7	266.1	9.5	10.4													
Coffee:																
Imports, total.....metric tons..																
From Brazil.....do.....	920,040	1,162,920	105,479	100,872												
U.S. Import Price Index.....1985=100..	252,780	249,295	17,140	13,213				59.2		57.3			63.1			
91.0	69.2		47.6													
Fish:																
Stocks, cold storage, end of period.....mil. lb.																
394	430	419	430	401	354	322	320	327	337	334	347	369	356			

See footnotes at end of tables.

Units	Annual		1989		1990											
	1988	1989	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
FOOD AND KINDRED PRODUCTS; TOBACCO—Cont.																
MISCELLANEOUS FOOD PRODUCTS—Cont.																
Sugar:																
Exports, raw and refined.....metric tons..	877,365	*412,044	45,619	28,927												
Imports, raw and refined.....thous. met. tons..	1,213	*1,542	119	85												
Producer Price Indexes:																
Raw (cane).....1982=100..	111.9	115.5	117.9	117.5	118.9	117.9	118.8	120.3	119.7	119.3	119.6	119.6	119.7	119.8	119.4	117.2
Refined.....do....	108.9	118.2	120.1	122.0	122.4	123.2	121.7	122.4	122.5	122.8	123.2	*122.6	122.7	123.1	123.0	122.9
Tea, imports.....metric tons..	90,143	*85,257	6,964	7,053												
TOBACCO																
Leaf:																
Production (crop estimate).....mil. lb..	*1,370	*1,367														
Stocks, dealers' and manufacturers', end of period.....do....	4,020	3,803		3,803			3,624			3,247				3,463		
Exports, incl. scrap and stems.....metric tons..	216,481	*224,382	32,072	19,644												
Imports, incl. scrap and stems.....do....	196,429	*180,286	13,351	16,164												
Manufactured products:																
Consumption (withdrawals):																
Cigarettes (small):																
Tax-exempt.....millions..	132,953		12,966	14,030	12,517	12,234	15,815	13,726	14,229	14,366						
Taxable.....do....	543,378		49,863	43,848	38,369	41,157	48,496	45,315	47,205	45,897						
Cigars (large), taxable.....do....	2,430		201	178	159	157	189	172	205	222						
Exports, cigarettes.....do....	118,499	*41,755	2,760	5,629												
LEATHER AND PRODUCTS																
LEATHER																
Exports: Upper and lining leather.....thous. sq. ft..	215,358															
Producer Price Index, leather.....1982=100..	167.5	170.4	173.0	174.0	176.6	178.0	177.7	179.5	181.2	179.6	179.0	*177.3	177.3	175.1	174.9	174.7
LEATHER MANUFACTURES																
Footwear:																
Production, total.....thous. pairs..	235,141	210,490	17,488	14,322	17,824	17,186	18,492	16,669	18,913	16,734	14,274	*18,844	16,607			
Shoes, sandals, and play shoes, except athletic.....thous. pairs..	162,507		11,521	10,125	12,106	11,677	12,475	11,450	12,676	11,019	10,857	*13,177	11,319			
Slippers.....do....	55,181	57,594	4,562	2,575	3,813	3,812	4,329	3,579	4,050	3,440	2,183	*3,514	3,616			
Athletic.....do....	17,453		1,405	1,622	1,905	1,697	1,688	1,640	2,192	2,275	1,734	*2,153	1,672			
Other footwear.....do....	3,410	3,680	510	254	335	374	323	347	381	337	156	*291	312			
Exports.....do....	18,394															
Producer Price Indexes:																
Men's leather upper, dress and casual																
.....1982=100..	121.3	127.5	131.0	129.8	131.6	135.4	136.5	136.4	136.4	134.3	134.4	*135.7	135.7	137.3	137.3	138.0
Women's leather upper																
.....do....	112.5	116.2	117.8	118.7	118.9	120.0	120.0	119.9	121.3	121.3	121.3	*121.5	121.5	121.9	121.8	121.8
Women's plastic upper																
.....do....	107.5	110.0	110.9	112.5	114.3	114.3	114.3	114.2	114.3	114.3	113.4	*113.2	113.4	113.8	110.9	110.9
LUMBER AND PRODUCTS																
LUMBER—ALL TYPES #																
National Forest Products Association:																
Production, total.....mil. bd. ft..	*49,576	*48,533	3,811	3,615	4,160	3,862	4,300	4,121	4,084	3,944	3,976	4,060	*3,602	3,898		
Hardwoods.....do....	*11,446	*10,988	905	775	921	868	939	866	936	839	870	1,025	886	961		
Softwoods.....do....	*38,130	*37,545	2,906	2,840	3,239	2,994	3,361	3,255	3,148	3,105	3,106	3,035	*2,716	2,937		
Shipments, total.....do....	*49,134	*49,008	3,854	3,626	4,035	3,870	4,317	4,173	3,952	4,176	3,912	3,987	*3,453	3,762		
Hardwoods.....do....	*11,163	*11,347	971	750	922	874	954	858	887	871	754	928	794	846		
Softwoods.....do....	*37,971	*37,656	2,883	2,876	3,113	2,996	3,363	3,315	3,065	3,305	3,158	3,059	*2,659	2,916		
Stocks (gross), mill, end of period, total.....do....																
Hardwoods.....do....																
Softwoods.....do....	4,999	4,898	4,934	4,898	5,022	5,022	5,020	4,961	5,043	4,831	4,783	4,752	4,810	4,834		
Exports, total sawmill products.....do....																
Imports, total sawmill products.....thous. m ³ ..	33,547	*64,355	5,778	3,913												
SOFTWARES																
Douglas fir:																
Orders, new.....mil. bd. ft..	10,081	9,552	688	780	852	766	945	808	783	875	704	609	736	695	615	
Orders, unfilled, end of period.....do....	636	501	506	501	560	530	559	527	537	559	546	420	473	431	432	
Production.....do....	10,029	9,620	754	766	850	779	912	845	785	780	707	734	680	722	605	
Shipments.....do....	9,943	9,637	709	785	793	796	916	840	773	855	717	735	683	737	614	
Stocks (gross), mill, end of period.....do....	876	809	823	809	866	849	845	850	862	803	793	792	789	774	765	
Exports, total sawmill products.....thous. m ³ ..	2,202	*2,781	241	472												
Sawed timber.....do....	344	*335	22	36												
Boards, planks, scantlings, etc.....do....	1,859	*2,450	220	436												
Producer Price Index, Douglas fir, dressed																
.....1982=100..	135.7	151.6	137.5	138.4	141.2	144.8	146.7	149.5	141.8	137.4	143.2	*139.9	136.2	125.1	122.9	127.3

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

Table with columns for Units, Annual (1988, 1989), 1989 (Nov., Dec.), and 1990 (Jan. through Dec.). Rows are categorized into Steel, Raw and Semifinished; Steel Mill Products; NONFERROUS METALS AND PRODUCTS (Aluminum, Copper); and various sub-categories like Production, Shipments, Imports, Exports, and Consumption.

See footnotes at end of tables.

Units	Annual		1989		1990											
	1988	1989	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

METALS AND MANUFACTURES—Continued

NONFERROUS METALS AND PRODUCTS—Continued

Copper-base mill and foundry products, shipments (quarterly total):																
Brass mill products..... mil. lb.																
Copper wire mill products (copper content)..... do																
Brass and bronze foundry products..... do																
Lead:																
Production:																
Mine, recoverable lead.....thous. met. tons..... 385.0 '410.6 32.9 30.1 38.6 35.3 36.1 33.7 37.0 35.0 41.1 45.9 38.9																
Recovered from scrap (lead cont.).....do..... '737.0 '808.6 67.1 66.9 68.7 69.6 73.0 69.4 66.9 67.0 67.0 '71.8 71.0																
Imports, ore (lead content).....do..... 256.6 '120.8 9.4 8.5 7.9 7.6 12.6 5.5 9.8 9.2 7.9 6.3																
Consumption, total.....do..... 1,230.7 '1,283.2 106.2 97.3 104.1 106.7 111.9 101.1 106.2 103.2 97.7 '112.4 104.6																
Stocks, end of period:																
Producers', ore, base bullion, and in process (lead content), ABMS.....thous. met. tons..... 66.9 73.5 78.6 73.5 67.6 63.9 59.7 51.1 56.6 51.9 58.8 63.7 61.8 52.3 55.7																
Refiners' (primary), refined and antimonial (lead content).....thous. met. tons..... 15.4 15.6 14.6 15.6 14.7 18.3 16.5 21.1 19.3 19.6 20.8 19.9 20.6 63.9																
Consumers' (lead content).....do..... 89.8 82.7 58.6 82.7 59.1 58.2 58.2 61.8 59.9 63.2 66.6 '62.3 63.9																
Scrap (lead-base, purchased), all smelters (gross weight).....thous. met. tons..... 19.9 17.4 20.1 17.4 20.2 18.5 18.4 21.5 21.3 21.5 23.5 '26.6 24.2																
Price, common grade, delivered @ @.....\$ per lb. 371.4 '393.5 .4126 .3889 .3981 418.4 541.1 487.3 452.1 451.6 501.3 503.6 494.7 .4616 .4275 .3852																
Tin:																
Imports (for consumption):																
Ore (tin content).....metric tons..... 2,337 '216 37																
Metal, unwrought, unalloyed.....do..... 43,498 '52,639 3,862 3,281 2,746 2,538 1,805 2,500 2,601 3,178 4,193 2,606 2,491																
Recovery from scrap, total (tin cont.).....do..... '15,088 '15,213 659 490 589 577 628 585 572 578 487 544 '580 67																
As metal.....do..... '578 '569																
Consumption, total.....do..... '45,073 51,600 4,000 3,300 4,000 4,000 4,200 4,100 4,200 4,100 4,100 4,300 '4,100 4,100																
Primary.....do..... '37,008 39,000 3,000 2,300 3,000 2,900 3,200 3,100 3,200 3,100 3,100 3,200 3,000 3,100																
Exports (metal).....do..... 1,573 '904 25 38 95 31 95 11 126 73 50 57 36																
Stocks, pig (industrial), end of period.....do..... 4,943 6,072 5,530 6,072 5,975 5,824 6,401 4,959 3,298 3,792 3,592 3,886 3,449 4,772																
Price, Straits quality (delivered).....do..... \$ per lb. 4.4142 5.2018 4.1880 4.1334 4.0287 3.8040 3.8771 3.9417 3.8937 3.7634 3.6730 3.9026 3.8019 3.9932 3.9440																
Zinc:																
Mine prod., recoverable zinc.....thous. met. tons..... '244.3 '275.9 22.8 20.9 26.9 24.8 26.4 26.2 27.9 45.6 50.7 57.1 '44.7 41.9																
Imports:																
Ores (zinc content).....do..... 405.7 '41.0 2.7 7.1 3.3 3.7 2.8 1.8 3.0 2.1 2.0																
Metal (slab, blocks).....do..... 740.8 '711.6 62.6 56.7 57.4 42.7 55.7 41.1 45.4 66.3 68.3 70.9 49.4																
Consumption (recoverable zinc content):																
Ores.....do..... 2.4 2.1 2 2 2 2 2 2 2 2 2 2 2																
Scrap, all types.....do..... '253.9 '251.7 20.6 20.6 20.6 20.6 20.6 20.6 21.1 21.1 21.1 21.1 21.1 21.1																
Slab zinc:																
Production, total.....thous. met. tons..... 194.4 205.3 16.2 17.4 18.1 16.1 18.5 17.8 18.7 16.2 17.6 17.6 16.0 17.9 16.0 17.2																
Consumption, fabricators.....do..... '1,089.0 '1,060.0 92.7 78.0 82.4 79.2 88.0 74.0 79.4 91.0 102.8 100.0 '73.0 85.0																
Exports.....do..... .5 '8.0 2.0 2 1.0 2 .5 7 4 .5 5																
Stocks, end of period:																
Producers', at smelter (ABMS).....do..... 5.6 4.7 3.3 4.7 4.1 4.0 4.0 3.6 2.9 2.9 3.6 4.0 5.3 4.5 4.7 4.6																
Consumers'.....do..... 64.3 42.7 42.6 60.3 46.9 45.0 44.3 43.5 41.4 41.9 44.0 47.1 '46.1 41.7																
Price, high grade.....do..... \$ per lb. 6020 8206 7592 7233 6763 6475 7378 8074 8560 8719 8610 7898 7777 6754 6294 6209																

MACHINERY AND EQUIPMENT

Heating, combustion, atmosphere equipment, new orders (domestic), net, qtrly #.....mil. \$...																
Electric processing heating equipment.....do.....																
Fuel-fired processing heating equip.....do.....																
Materials handling equipment, dollar value bookings index.....1982=100																
Industrial supplies, machinery, and equipment: New orders index, seas. adj. @.....1987=100																
Industrial suppliers distribution: Sales index, seas. adjusted.....1977=100																
Inflation index, not seas. adj. (tools, material handling equip., valves, fittings, abrasives, fasteners, metal products, etc.)....1977=100																
Fluid power products shipments indexes: Hydraulic products.....1985=100																
Pneumatic products.....do.....																
Machine tools:																
Metal cutting type tools: Orders, new (net), total.....mil. \$....																
Domestic.....do.....																
Shipments, total.....do.....																
Domestic.....do.....																
Order backlog, end of period.....do.....																
Metal forming type tools: Orders, new (net), total.....do.....																
Domestic.....do.....																
Shipments, total.....do.....																
Domestic.....do.....																
Order backlog, end of period.....do.....																

See footnotes at end of tables.

Units	Annual		1989		1990											
	1988	1989	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in Business Statistics, 1961-88															

PULP, PAPER, AND PAPER PRODUCTS—Continued

PAPER AND PAPER PRODUCTS																
PAPER AND BOARD:																
Production (API):																
Total.....thous. sh. tons..	76,455	76,704	6,382	6,153	6,686	6,117	6,692	6,371	6,576	6,452	6,556	6,744	6,504	*6,830	6,489	
Paper.....do.....	38,352	38,248	3,241	3,090	3,373	3,119	3,340	3,168	3,284	3,190	3,279	3,439	3,246	*3,486	3,237	
Paperboard.....do.....	38,103	38,456	3,141	3,073	3,313	2,998	3,352	3,202	3,292	3,262	3,277	3,305	3,258	*3,344	3,253	
Producer Price Indexes:																
Paperboard.....1982=100..	133.2	140.1	139.7	140.0	139.2	138.9	138.9	137.6	136.0	135.5	135.0	*133.4	133.1	133.9	135.0	133.9
Building paper and board.....do...	113.3	115.6	117.0	116.9	116.6	116.0	115.5	113.7	113.4	111.9	111.2	*110.3	110.0	109.4	109.2	108.8
Selected types of paper (API):																
Groundwood paper:																
Orders, new.....thous. sh. tons..	*1,654	1,741	128	149	160	149	125	115	158	173	156	164	*173	163	138	
Orders, unfilled, end of period.....do...	296	193	195	210	189	197	185	140	170	172	175	197	*226	*222	210	
Shipments.....do.....	*1,624	1,743	152	122	156	141	149	140	183	142	152	147	137	168	153	
Coated papers:																
Orders, new.....do.....	*7,412	7,171	554	586	616	537	647	648	614	647	639	680	603	671	554	
Orders, unfilled, end of period.....do...	751	706	834	824	672	622	658	728	761	717	*733	*688	*692	634		
Shipments.....do.....	7,359	7,215	617	587	649	584	618	562	620	611	634	678	681	689	606	
Uncoated free sheet:																
Orders, new.....do.....	*11,298	11,097	971	915	944	971	1,042	977	1,007	986	899	1,019	*937	996	889	
Shipments.....do.....	*11,277	11,081	984	865	1,000	935	990	958	957	904	947	1,011	928	1,010	943	
Unbleached kraft papers:																
Shipments.....thous. sh. tons..	*2,800	*2,681	241	216	215	185	196	187	206	208	208	198	198	208	196	
Tissue paper, production.....do.....																
	5,476	*5,636	474	460	474	452	500	467	494	479	482	501	487	*507	465	
Newsprint:																
Canada: †																
Production.....thous. metric tons..	9,840	9,640	788	767	797	747	794	786	847	762	826	758	661	711	664	
Shipments from mills.....do.....	9,740	9,607	816	817	716	718	825	815	861	804	752	750	698	710	638	
Inventory, end of period.....do.....	288	321	371	321	403	432	401	372	358	316	391	399	362	363	340	
United States:																
Production.....do.....	5,427	5,523	468	483	502	462	492	491	495	489	508	519	498	511	512	
Shipments from mills.....do.....	5,415	5,515	481	490	497	467	493	493	502	486	508	518	509	506	511	
Inventory, end of period.....do.....	48	56	53	56	61	56	56	53	46	49	49	50	39	44	45	
Estimated consumption, all users (.....do.....)																
	12,244	12,241	1,115	1,029	966	930	1,059	1,038	1,070	1,005	960	996	*1,018	*1,047	1,031	
Publishers' stocks, end of period #																
	933	749	758	749	803	836	821	805	802	825	859	912	850	*810	783	
Imports.....do.....																
	7,794	*7,678	628	605												
Producer Price Index, standard newsprint.....1982=100..																
	127.6	122.5	119.0	118.3	116.8	115.4	115.6	115.5	116.6	121.6	122.2	*122.2	121.8	122.0	121.9	122.2
Paper products:																
Shipping containers, corrugated and solid fiber shipments.....mil. sq. ft. surf. area..	308,509	313,398	25,349	23,202	27,605	24,182	26,698	26,679	27,398	26,330	26,494	28,115	25,410	30,526	24,955	21,412

RUBBER AND RUBBER PRODUCTS

RUBBER																
Natural rubber: §																
Consumption.....thous. metric tons..	858.28	866.87	*84.58	50.86	62.57	57.27	78.98	65.22	87.43	73.92	57.37	74.11	78.78			
Stocks, end of period.....do.....	61.74	91.98	83.88	91.98	100.20	100.15	101.63	97.15	97.30	99.80	101.56	87.18	90.35			
Imports, incl. latex and guayule.....do...	853.82	*887.62	78.92	60.09	72.31	58.57	81.87	63.08	89.49	77.66	60.38	60.96	82.97			
U.S. Import Price Index.....1985=100..	147.7	110.3			100.3		102.7			105.4			105.4			102.9
Synthetic rubber: ‡																
Production.....thous. metric tons..	2,334.72	*2,261.37	*189.87	*162.75	*173.46	*180.05	*182.51	*187.76	*174.62	*171.98	*171.93	*180.94	180.41			
Consumption.....do.....	2,016.85	*2,050.97	*182.23	*151.10	*159.62	*158.25	*159.96	*140.57	*160.87	*149.35	*136.69	*148.11	155.32			
Stocks, end of period.....do.....	279.28	*404.03	*414.77	*404.03	*393.50	*392.47	*385.81	*406.83	*397.49	*395.03	*414.85	*420.83	419.58			
Exports (Bu. of Census).....do.....	460.01	*579.08	48.59	44.39												
TIRES AND TUBES																
Pneumatic casings:																
Production.....thous.....	*211,351	*212,370	16,323	14,721	19,017	17,376	19,522	17,680	17,990	18,186	14,996	18,555	17,612	19,965		
Shipments, total.....do.....	264,811	264,049	21,924	18,545	19,848	18,955	22,756	21,375	23,646	24,042	22,436	24,391	22,667	24,488		
Original equipment.....do.....	62,932	59,347	4,706	3,832	3,489	4,554	5,382	4,780	5,589	5,311	3,572	4,696	4,687	5,433		
Replacement equipment.....do.....	189,212	188,717	16,011	13,950	14,984	13,090	15,872	15,142	16,605	17,381	17,586	17,992	16,515	17,327		
Exports.....do.....	12,666	15,985	1,206	1,065	1,374	1,372	1,504	1,458	1,452	1,351	1,277	1,704	1,465	1,727		
Stocks, end of period.....do.....	33,191	39,308	38,378	39,308	43,888	46,561	48,446	49,601	48,728	47,893	45,351	43,492	42,047	41,553		
Exports (Bu. of Census).....do.....	16,149	*19,118	1,412	1,396												
Inner tubes:																
Exports (Bu. of Census).....do.....	1,712	*1,813	96	174												

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1989 and methodological notes are as shown in BUSINESS STATISTICS, 1961-88

Units	Annual		1989		1990											
	1988	1989	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
STONE, CLAY, AND GLASS PRODUCTS																
PORTLAND CEMENT																
Shipments, finished cement.....thous. bbl.	477,958	474,346	40,234	26,303	29,615	27,030	35,205	38,744	44,828	46,513	44,687	48,159	42,567	46,272		
CLAY CONSTRUCTION PRODUCTS																
Shipments:																
Brick, unglazed (common and face)																
mil. standard brick ..	6,930.0	6,698.2	548.7	416.6	469.7	466.0	578.8	591.1	631.0	630.8	631.5	658.1	555.7			
Structural tile, except facing.....thous. sh. tons..	(²)	(²)	(²)	(²)	(²)	(²)	(²)	21.5	21.9	17.3	16.4	18.8	18.7	15.5		
Sewer pipe and fittings, vitrified.....do	300.9	255.7	21.0	17.7	16.4	16.3	21.5	21.9	17.3	16.4	18.8	18.7	15.5			
Floor and wall tile and accessories, glazed and unglazed.....mi. sq. ft.	470.7	545.3	44.6	41.7	39.7	38.1	44.0	40.3	43.2	40.4	38.3	41.4	35.6			
Producer Price Index, brick and structural clay tile.....12/84=100 ..	110.9	112.2	113.3	113.5	113.7	114.2	114.9	115.0	115.3	115.3	115.4	115.4	115.4	115.4	115.4	115.4
GLASS AND GLASS PRODUCTS																
Flat glass, mfrs.' shipments.....thous. \$.	1,479,446	1,543,242		370,059			357,010			375,869			372,826			
Glass containers:																
Production.....thous. gross..	284,473	287,511	20,963	17,513	21,859	21,997	25,228	24,099	25,790	24,882	25,185	25,843	25,288	25,866		
Shipments, total.....do	280,439	285,586	20,688	19,976	21,917	20,563	24,689	23,825	26,478	24,943	24,775	26,652	22,599	23,939		
Narrow-neck containers:																
Food.....do	22,100	22,010	1,337	1,411	1,596	1,707	2,160	1,840	2,529	2,033	2,089	2,436	1,778	1,835		
Beverage.....do	62,382	63,813	4,727	4,242	4,535	4,532	5,706	5,493	6,253	6,053	6,065	6,110	4,995	5,134		
Beer.....do	86,285	88,556	6,460	6,430	7,160	6,554	7,819	7,891	7,990	7,603	7,962	8,024	7,197	7,234		
Liquor and wine.....do	26,491	26,059	1,964	2,078	1,999	1,819	2,221	2,345	2,507	2,635	2,173	2,262	1,859	2,081		
Wide-mouth containers:																
Food and dairy products.....do	66,675	67,973	5,480	5,080	5,769	5,084	5,887	5,300	6,266	5,764	5,729	7,022	6,061	6,929		
Narrow-neck and wide-mouth containers:																
Medicinal and toilet.....do	13,980	13,826	655	647	751	804	818	881	873	795	700	745	661	662		
Chemical, household, and industrial.....do	1,357	1,318	65	88	107	63	77	75	60	55	57	53	48	64		
Stocks, end of period.....do	42,296	42,053	45,243	42,408	41,709	42,889	43,094	43,262	42,265	42,287	42,526	41,396	41,197	42,945		
GYPSUM AND PRODUCTS																
Production:																
Crude gypsum (exc. byproduct).....thous. sh. tons..	15,100	15,500	1,890	1,310	1,253	1,182	1,318	1,373	1,342							
Calcined.....do	16,900	17,500	1,900	1,200	1,411	1,363	1,530	1,402	1,372							
Imports, crude gypsum.....do	9,680		728	581	684	592	784	815								
Sales of gypsum products:																
Uncalcined.....do	5,310	5,170	430	619	355	379	428	496	495							
Calcined:																
Industrial plasters.....do	150	(⁴)														
Building plasters, total (incl. Keene's cement).....do	235		(²)													
Board products, total.....mil. sq. ft.	20,563	20,870	1,700	1,473	1,772	1,700	1,869	1,649	1,710							
Lath.....do	21	18	1	1	1	1	2	1	1							
Veneer base.....do	472	475	37	29	38	40	43	35	37							
Gypsum sheathing.....do	911	266	23	19	22	21	22	23	21							
Regular gypsum board.....do	13,888	12,523	1,036	890	1,071	1,033	1,131	975	1,014							
Type X gypsum board.....do	4,583	6,071	438	498	521	489	540	484	505							
Predecorated wallboard.....do	132	113	9	8	9	8	8	8	8							
1/8 mobile home board.....do	605	717	52	39	52	51	59	66	68							
Water/moisture resistant board.....do	550	687	55	48	58	57	63	57	55							

TEXTILE PRODUCTS

FABRIC																
Woven fabric, finishing plants:																
Production (finished fabric).....mil. linear yd.																
Cotton.....do																
Manmade fiber and silk fabrics.....do																
Inventories held at end of period.....do																
Cotton.....do																
Manmade fiber and silk fabrics.....do																
Backlog of finishing orders.....do																
Cotton.....do																
Manmade fiber and silk fabrics.....do																
COTTON AND MANUFACTURES																
Cotton (excluding linters):																
Production:																
Ginnings.....thous. running bales..	14,985	11,884	10,357	11,558						120	583	2,620	7,959	12,436	14,519	
Crop estimate.....thous. net weight bales \$.	15,412	12,196													15,617	
Consumption.....thous. running bales..	7,294	7,444	617	*653	605	633	*794	624	641	*826	559	680	*836			
Stocks in the United States, total, end of period #.....thous. running bales..	16,062	12,808	13,917	12,803	11,289	9,894	8,033	6,975	5,778	4,337	3,228	15,974	14,514	*13,855	13,173	11,978
Domestic cotton, total.....do	16,062	12,808	13,917	12,803	11,289	9,894	8,033	6,975	5,778	4,337	3,228	15,974	14,514	*13,855	13,173	11,978
On farms and in transit.....do	1,957	1,457	2,815	1,457	1,104	1,153	771	843	879	485	369	13,740	11,532	*7,210	3,729	1,522
Public storage and compresses.....do	13,524	10,762	10,558	10,762	9,524	8,052	6,566	5,447	4,224	3,185	2,187	1,615	2,451	*6,126	8,930	9,875
Consuming establishments.....do	581	584	544	584	661	689	696	685	675	667	672	619	531	*519	514	581

See footnotes at end of tables.

Units	Annual		1989		1990											
	1988	1989	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
TEXTILE PRODUCTS—Continued																
COTTON AND MANUFACTURES—Cont.																
Cotton (excluding linters)—Continued																
Exports.....thous. running bales..	5,649	*6,704	496	650												
Imports.....thous. net-weight bales \$.	1	*5	(1)	(1)												
Price(farm), American upland (1/8).....cents per lb.	*55.6	*63.6	65.4	61.4	59.8	60.6	64.1	65.0	65.4	62.3	63.7	64.6	65.0	67.5	*68.2	67.3
Price, Strict Low Middling, Grade 41, staple 34 (1 1/8"), average 10 markets.....cents per lb.	*57.7	*69.8	68.3	63.6	62.2	65.0	68.1	71.3	74.6	77.1	79.5	76.3	71.0	70.5	69.5	69.9
Spindle activity (cotton system spindles):																
Active spindles, last working day, total.....mil.	11.5	10.7	10.7	10.7	10.6	10.7	10.6	10.5	10.4	10.3	10.1	10.0				
Consuming 100 percent cotton.....do.	4.4	4.3	4.2	4.3	4.3	4.3	4.2	4.2	4.2	4.1	3.9	3.9	3.9			
Spindle hours operated, all fibers, total.....bil.	78.1	80.8	5.8	*6.4	5.4	5.6	*6.9	5.4	5.3	*6.4	4.4	5.3	*6.3			
Average per working day.....do.	.302	.294	.293	.254	.272	.278	.276	.271	.287	.255	.220	.264	.253			
Consuming 100 percent cotton.....do.	28.9	27.8	2.2	*2.4	2.1	2.2	*2.7	2.1	2.1	*2.6	1.7	2.0	*2.5			
Cotton cloth:																
Cotton broadwoven goods over 12" in width:																
Production (qtrly.).....mil. sq. yd.	4,632	4,589		1,106			1,194			*1,122			1,082			
Orders, unfilled, end of period, compared with average weekly production.....no. weeks' prod.																
Inventories, end of period, compared with avg. weekly production.....no. weeks' prod.																
Ratio of stocks to unfilled orders (at cotton mills), end of period.....																
Exports, raw cotton equivalent.....thous. net-weight bales \$.	250.4															
Imports, raw cotton equivalent.....do.	1,146.8															
Producer Price Index, gray cotton broadwovens.....1982=100	114.4	110.9	110.9	113.5	113.7	113.8	113.8	114.0	114.1	109.9	115.1	*115.1	112.4	111.8	115.8	116.2
MANMADE FIBERS AND MANUFACTURES																
Fiber production, qtrly:																
Acetate filament yarn.....mil. lb.	219.9	217.5		52.3			46.8			52.3			53.6			
Rayon staple, including tow.....do.	399.8	362.8		77.6			73.3			72.0			74.2			
Noncellulosic fiber, except textile glass: Yarn and monofilaments.....do.	4,180.3	4,225.4		1,011.3			1,030.1			1,084.8			1,085.4			
Staple, incl. tow.....do.	4,345.6	4,290.3		999.1			984.4			1,060.8			962.4			
Textile glass fiber.....do.																
Fiber stocks, producers', end of period:																
Acetate filament yarn.....mil. lb.	11.4	9.9		9.9			8.8			8.7			8.3			
Rayon staple, including tow.....do.	14.0	22.4		22.4			14.0			10.1			9.2			
Noncellulosic fiber, except textile glass: Yarn and monofilaments.....do.	288.6	364.2		364.2			375.1			374.6			348.0			
Staple, incl. tow.....do.	298.4	340.8		340.8			334.3			384.7			362.8			
Textile glass fiber.....do.																
Manmade fiber and silk broadwoven fabrics:																
Production (qtrly), total.....mil. sq. yd.																
Filament yarn (100%) fabrics.....do.																
Chiefly rayon and/or acetate fabrics.....do.																
Chiefly nylon fabrics.....do.																
Spun yarn (100%) fabrics.....do.																
Rayon and/or acetate fabrics, blends.....do.																
Polyester blends with cotton.....do.																
Acetate filament and spun yarn fabrics.....do.																
Producer Price Index, gray synthetic broadwovens.....1982=100	112.7	114.0	115.9	115.3	115.6	115.7	115.6	115.7	115.5	115.6	115.7	*115.2	116.2	115.6	115.4	116.1
Manmade fiber textile trade:																
Exports, manmade fiber equivalent.....mil. lbs.	684.75															
Yarn, tops, thread, cloth.....do.	282.19															
Cloth, woven.....do.	169.31															
Manufactured prods., apparel, furnishings.....do.	402.56															
Imports, manmade fiber equivalent.....do.	1,735.70															
Yarn, tops, thread, cloth.....do.	258.18															
Cloth, woven.....do.	179.23															
Manufactured products, apparel, furnishings.....do.	1,477.52															
Apparel, total.....do.	991.03															
Knit apparel.....do.	443.03															
WOOL AND MANUFACTURES																
Wool consumption, mill (clean basis):																
Apparel class.....mil. lb.	117.1	113.0	7.8	*9.1			*29.9			30.0			25.4			
Carpet class.....do.	15.6	14.1	.8	*1.0			*3.8			2.9			4.1			
Wool imports, clean yield ↑.....do.	96.7	106.9	5.1	9.8	7.5	9.2	4.7	8.2	5.0	4.8	3.4	5.5	5.0	6.9	7.5	
Unimproved and other grades not finer than 46's.....do.	24.4	29.9	1.3	1.8	2.8	1.5	2.4	2.6	2.4	2.1	1.5	1.3	1.5	1.4	1.3	
48's and finer ".....do.	72.3	77.0	3.7	8.0	4.4	7.7	2.3	5.6	2.6	2.7	1.9	4.2	3.5	5.5	6.2	
Wool prices, raw, shorn, clean basis, delivered to U.S. mills:																
Domestic—Graded territory, 64's, staple 2 3/4" and up.....dollars per lb.	4.38	3.70	3.33	3.00	2.94	2.87	2.87	2.54	2.75	2.57	2.42	2.35	2.35	2.35	2.25	2.20
Australian, 64's, Type 62, duty-paid.....do.	4.87	4.31	4.17	4.20	4.17	4.04	4.08	4.14	4.06	3.42	3.38	3.52	3.55	3.43	3.32	3.32
Wool broadwoven goods, exc. felts:																
Production (qtrly.).....mil. sq. yd.	190.5	176.3		37.0			38.8			*38.8			32.3			
FLOOR COVERINGS																
Carpet, rugs, carpeting (woven, tufted, other), shipments, quarterly.....mil. sq. yds.	1,328.0	1,357.2		324.3			334.7			356.7			350.4			
APPAREL																
Women's, misses', juniors' apparel cuttings, qtrly:																
Coats.....thous. units	18,416	16,895		4,055												
Dresses.....do.	160,488	181,967		40,178												
Suits (incl. pant suits, jumpsuits).....do.	8,972	8,372		1,910												
Skirts.....do.	96,417	97,639		20,331												
Slacks, jeans, dungarees, and jean-cut casual slacks.....do.	276,364	300,907		72,302												
Blouses.....thous. dozen	33,721	37,180		9,104												

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.

Page S-1

† Revised series. See Tables 2.6-2.9 in the July 1990 SURVEY for revised estimates for 1987-89.

‡ 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.

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.

Page S-5

@ 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.

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. 1990 SURVEY, data have been revised back to 1985 and are available upon request.

Page S-7

1. Computed from cumulative valuation total.

2. Index as of Jan. 1, 1991: building, 402.5; construction, 444.1.

3. Beginning Dec. 1988, series has been discontinued by the Bureau of the Census.

† Effective July 1990 SURVEY, data have been 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 June, Aug., and Nov. 1989, and Mar. 1990 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

Address requests for data to:

Business Statistics Branch
Current Business Analysis Division (BE-53)
Bureau of Economic Analysis
U.S. Department of Commerce
Washington, D.C. 20230

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 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 (conventional first mortgages) 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 1990 SURVEY, wholesale trade data have been revised back to Dec. 1980. Revised data and a summary of changes appear in the report *Revised Monthly Wholesale Trade Sales and Inventories BW89-R*, available from the Bureau of the Census, Washington, DC 20233.

‡ Effective April 1990 SURVEY, retail trade data have been revised. Estimates of retail sales and inventories have been revised back to January 1982. Revised data and a summary of changes appear in the report *Revised Monthly Retail Sales and Inventories BR89-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 1991 SURVEY, the seasonally adjusted labor force series have been revised back to January 1986. The January 1991 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 1986-90 revision period appear in the February 1991 issue of *Employment and Earnings*.

‡ 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.

§ Effective Sept. 1990 SURVEY, data have been revised to reflect annual benchmark revisions, the conversion of the industry series to 1987 SIC codes, and updated seasonal adjustment factors. All series have been revised back to April 1988, unadjusted, and Jan. 1985, seasonally adjusted. Industry series affected by revisions in the SIC have been revised back to the inception of the series, to the extent possible. In addition, all constant-dollar and indexed series have been recomputed on a 1982 base. The Sept. 1990 issue of *Employment and Earnings* contains a detailed description of the effects of these revisions and revised data for all regularly published tables. All historical data will be published in a historical bulletin, *Employment, Hours, and Earnings, United States, 1909-1990*.

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

1. 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. Use the corresponding unadjusted series.

2. The hourly earnings index has been discontinued.

§ 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 SURVEY, this series has been revised back to 1985 to reflect new seasonal factors for the CPI-W. Revised data are available upon request.

§§ Wages as of Jan. 1, 1991: Common, \$18.58; Skilled, \$24.35.

† 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.

†† These series were affected by an error in the Sept. 1990 SURVEY. The stub for "Transportation equipment" was omitted. Hourly earnings for "Transportation equipment" were shown following the stub for "Electronic and other electrical equipment". Hourly earnings for "Electronic and other electrical equipment" were shown following the stub for "Industrial machinery and equipment". Hourly earnings for "Industrial machinery and equipment" were shown following the stub for "Machinery, except electrical", which was the former name for that industry (SIC 35).

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 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.

§ 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.

† Effective Feb. 1990 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.

@ 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.

† 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.

@ 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.

Page S-18

1. Reported annual total; quarterly or monthly revisions are not available.

2. For month shown.

3. Beginning Aug. 1989, the export and import indexes have been discontinued by the Census Bureau.

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.

@ Changes in these unit value indexes may reflect changes in quality or product mix as well as price changes.

†† 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.

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.

§ Data are not wholly comparable from year to year because of changes from one classification to another.

@ 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.

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. Annual data will continue to be available.

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. Annual data will continue to be available.
- @ Includes 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.
- ◇ 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.
† Includes bookings (new orders) for automatic guided vehicles, automated storage and retrieval systems, below hook lifters, cranes, hoists, monorails, racks, shelving, casters and floor trucks, and conveyors.
@@ 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.

Page S-27

1. Annual total includes revisions not distributed to the months.
 2. See note 4 for p. S-19.
 3. Beginning in 1990, quarterly data have been discontinued. Annual data will continue to be available.
- # 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.

Page S-28

1. Reported annual total; revisions not allocated to the months.
 2. See note 4 for p. S-19.
- # Includes data for items not shown separately.

Page S-29

1. Reported annual total; revisions not allocated to the months.
 2. See note 4 for p. S-19.
- ◇ 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.

Page S-30

1. Reported annual total; revisions not allocated to the months.
 2. Data are being withheld to avoid disclosing data from individual firms.
 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, 1991 estimate of the 1990 crop.
- # Includes data for items not shown separately.
◇ Cumulative ginnings to the end of month indicated.
§ Bales of 480 lbs.

Page S-31

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.
- ◇ 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.

Page S-32

1. Annual total includes revisions not distributed to the months.
 2. Production of new vehicles (thous. of units) for Dec. 1990: *passenger cars*, 336; *trucks and buses*, 161.
 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 August 1990 SURVEY, data have been revised back to 1987 and are available upon request.
- # Total includes backlog for nonrelated products and services and basic research.
§ Domestic 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.
† Includes some imported trucks over 10,000 lbs. GVW.
‡ Excludes railroad-owned private refrigerator cars and private line cars.

Index to Current Business Statistics

Sections				
General:				
Business indicators	1-5	Disposition of personal income	1	National parks, visits
Commodity prices	5, 6	Distilled spirits	20	Newsprint
Construction and real estate	7, 8	Dividend payments	1, 15	New York Stock Exchange, selected data
Domestic trade	8, 9	Drugstores, sales	8, 9	Nonferrous metals
Labor force, employment, and earnings	9-13	Earnings, weekly and hourly	12	Oats
Finance	13-16	Eating and drinking places	8, 9	Oils and fats
Foreign trade of the United States	16-18	Eggs and poultry	5, 22	Orders, new and unfilled, manufacturers'
Transportation and communication	18, 19	Electric power	2, 20	Outlays, U.S. Government
Industry:		Electrical machinery and equipment	2-5, 10-12, 15, 27	Paint and paint materials
Chemicals and allied products	19, 20	Employee-hours, aggregate, and indexes	11	Paper and products and pulp
Electric power and gas	20	Employment and employment cost	10-12	Parity ratio
Food and kindred products; tobacco	20-23	Exports (see also individual commodities)	16-18	Passenger cars
Leather and products	23	Failures, industrial and commercial	5	Passports issued
Lumber and products	23, 24	Farm prices	5, 6	Personal consumption expenditures
Metals and manufactures	24-27	Fats and oils	17	Personal income
Petroleum, coal, and products	27, 28	Federal Government finance	14	Personal outlays
Pulp, paper, and paper products	28, 29	Federal Reserve System	13	Petroleum and products
Rubber and rubber products	29	Federal Reserve member banks	13	Pig iron
Stone, clay, and glass products	30	Fertilizers	19	Plastics and resin materials
Textile products	30-32	Fish	22	Population
Transportation equipment	32	Flooring, hardwood	24	Pork
Footnotes	32-35	Flour, wheat	22	Poultry and eggs
		Fluid power products	26	Price deflator, implicit (PCE)
Individual Series		Food products	2-6, 8, 10-12, 15, 17, 20-23	Prices (see also individual commodities)
Advertising	8, 12	Foreign trade (see also individual commod.)	16-18	Printing and publishing
Aerospace vehicles	32	Freight cars (equipment)	32	Private sector employment, hours, earnings
Agricultural loans	13	Fruits and vegetables	5	Producer Price Indexes (see also individual commodities)
Air carrier operations	18	Fuel oil	6, 28	Profits, corporate
Air conditioners (room)	27	Fuels	2, 6, 17, 27, 28	Public utilities
Aircraft and parts	4, 5, 32	Furnaces	27	Pulp and pulpwood
Alcohol, denatured and ethyl	19	Furniture	2, 6, 8-12	Purchasing power of the dollar
Alcoholic beverages	8, 20	Gas, output, prices, sales, revenues	2, 6, 20	Radio and television
Aluminum	25	Gasoline	28	Railroads
Apparel	2, 4-6, 8-12, 31, 32	Glass and products	30	Ranges and microwave ovens
Asphalt	28	Glycerin	19	Rayon and acetate
Automobiles, etc.	2-4, 6, 8, 9, 14, 15, 17, 32	Gold	14	Real estate
Banking	13, 14	Grains and products	5, 21, 22	Receipts, U.S. Government
Barley	21	Grocery stores	9	Refrigerators
Battery shipments	27	Gypsum and products	30	Registrations (new vehicles)
Beef and veal	22	Hardware stores	8	Rent (housing)
Beverages	8, 17, 20	Heating equipment	26	Retail trade
Blast furnaces, steel mills	3-5	Help-wanted advertising index	12	Rice
Bonds, issued, prices, sales yields	15, 16	Hides and skins	6	Rubber and products (incl. plastics)
Brass and bronze	26	Hogs	22	Saving, personal
Brick	30	Home loan banks, outstanding advances	8	Savings deposits
Building and construction materials	2, 4, 5	Home mortgages	8	Savings institutions
Building costs	7	Hotels, motor hotels, and economy hotels	18	Securities issued
Building permits	7	Hours, average weekly	11	Security markets
Business incorporation (new), failures	5	Housefurnishings	2, 4-6, 8, 9	Services
Business sales and inventories	2, 3	Household appliances, radios, and television sets	27	Sheep and lambs
Butter	21	Housing starts and permits	7	Shoes and other footwear
Carpets	31	Imports (see also individual commodities)	17, 18	Silver
Cattle and calves	22	Income, personal	1	Spindle activity, cotton
Cement	30	Income and employment tax receipts	14	Steel and steel manufactures
Chain-store sales, firms with 11 or more stores	9	Industrial production indexes:		Stock market customer financing
Cheese	21	By industry	1, 2	Stock prices, yields, sales, etc.
Chemicals	2-4, 10-12, 15, 17, 19, 20	By market grouping	1, 2	Stone, clay, glass products
Cigarettes and cigars	23	Installment credit	14	Sugar
Clay products	2-4, 30	Instruments and related products	2-4, 10-12	Sulfur
Clothing (see apparel)		Interest and money rates	14	Sulfuric acid
Coal	2, 27	Inventories, manufacturers' and trade	3, 4, 8, 9	Superphosphate
Cocoa	22	Inventory-sales ratios	3	Synthetic textile products
Coffee	22	Iron and steel	2, 15, 24, 25	Tea imports
Coke	27	Labor force	9, 10	Telephone carriers
Combustion, atmosphere, heating equipment	26	Lamb and mutton	22	Television and radio
Communication	15, 19	Lead	26	Textiles and products
Construction:		Leather and products	2, 6, 10-12, 23	Tin
Contracts	7	Livestock	5, 22	Tires and inner tubes
Costs	7	Loans, real estate, agricultural, bank (see also Consumer credit)	8, 13	Tobacco and manufactures
Employment, unemployment, hours, earnings	10-12	Lubricants	28	Tractors
Housing starts	7	Lumber and products	2, 6, 10-12, 23, 24	Trade (retail and wholesale)
New construction put in place	7	Machine tools	26	Transit lines, urban
Consumer credit	14	Machinery	2-6, 10-12, 15, 17, 26, 27	Transportation
Consumer goods output, index	1, 2	Manufacturers' sales (or shipments), inventories, orders	3-5	Transportation equipment
Consumer Price Index	5, 6	Manufacturing employment, unemployment, production workers, hours, earnings	10-12	Travel
Copper and copper products	25, 26	Manufacturing production indexes	1, 2	Truck trailers
Corn	21	Meat animals and meats	5, 22	Trucks
Cost of living (see Consumer Price Index)	5, 6	Medical care	6	Unemployment and insurance
Cotton, raw and manufactures	5, 30, 31	Metals	2-6, 10-12, 15, 24-26	U.S. Government bonds
Credit, commercial bank, consumer	14	Milk	21	U.S. Government finance
Crops	5, 21-23, 30	Mining	2, 10-12	Utilities
Crude oil	3, 27	Mobile homes, shipments, installment credit	7, 14	Vacuum cleaners
Currency in circulation	15	Monetary statistics	15	Variety stores
Dairy products	5, 21	Money and interest rates	14	Vegetables and fruits
Debt, U.S. Government	14	Money supply	15	Wages and salaries
Deflator, PCE	1	Mortgage applications, loans, rates	8, 13, 14	Washers and dryers
Department stores, sales, inventories	9	Motor carriers	18	Water heaters
Deposits, bank	13, 15	Motor vehicles	2-4, 6, 8, 9, 15, 17, 32	Wheat and wheat flour
Dishwashers and disposers	27			Wholesale trade
				Wood pulp
				Wool and wool manufactures
				Zinc

BEA Information

BEA's economic information is available in publications, on computer tapes, on diskettes, and through a variety of other products and services. Most of these are described in *A User's Guide to BEA Information*. For a copy, send a self-addressed stamped envelope (8 1/2 by 11 inches, with 75 cents postage) to Public Information Office, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230.

Available From GPO

ORDER FROM: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Payment may be by check (made payable to Superintendent of Documents) or charged to a GPO deposit account number, VISA, or MasterCard. Phone (202) 783-3238 or fax (202) 275-0019.

SURVEY OF CURRENT BUSINESS. Contains estimates and analyses of U.S. economic activity. Features include a review of current economic developments; articles pertaining to BEA's work on the national, regional, and international economic accounts and related topics; quarterly national income and product accounts tables; a 28-page section of business cycle indicators containing tables for over 250 series and charts for about 130 series; and a 36-page section of current business statistics presenting over 1,900 major economic series obtained from public and private sources. Monthly. Annual subscription: \$23.00 second class mail, \$52.00 first class mail. Single copy: \$6.50.

Business Statistics, 1961-88. (1989) Provides monthly or quarterly data for 1985-88 and annual data for 1961-88 for series that appear in the SURVEY OF CURRENT BUSINESS. Also contains definitions of terms, sources of data, and methods of compilation. 328 pp. \$16.00 (GPO Stock No. 003-010-00198-4).

The National Income and Product Accounts of the United States, 1929-82: Statistical Tables. (1986) Contains detailed estimates of the national income and product accounts for 1929-82 from the comprehensive revision released in 1985. Also includes definitions of the major components of the accounts and of the major sectors of the economy. 442 pp. \$23.00 (GPO Stock No. 003-010-00174-7).

NIPA Methodology Papers:

No. 1 through No. 4: Available from NTIS (see box below).

No. 5: *Government Transactions.* (1988) Presents the conceptual basis and framework of government transactions in the national income and product accounts; describes the presentations of the estimates; and delineates the sources and methods used to prepare estimates of Federal transactions and of State and local transactions. 120 pp. \$5.50 (GPO Stock No. 003-010-00187-9).

No. 6: *Personal Consumption Expenditures.* (1990) Presents the conceptual basis and framework of personal consumption expenditures in the national income and product accounts. Describes the presentation of the estimates and the sources and methods used to prepare them. 92 pp. \$4.50 (GPO Stock No. 003-010-00200-0).

Fixed Reproducible Tangible Wealth in the United States, 1925-85. (1987) Contains annual estimates of the stock of privately owned and government-owned durable equipment and structures and of durable goods owned by consumers in the United States for 1925-85.

NIPA Methodology Papers 1 through 4 (photocopies) are available from the National Technical Information Service (NTIS).

No. 1: *Introduction to National Economic Accounting.* (1985) 19 pp. \$11.00 (NTIS Accession No. PB 85-247567).

No. 2: *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends.* (1985) 67 pp. \$17.00 (NTIS Accession No. PB 85-245397).

No. 3: *Foreign Transactions.* (1987) 52 pp. \$17.00 (NTIS Accession No. PB 88-100649).

No. 4: *GNP: An Overview of Source Data and Estimating Methods.* (1987) 36 pp. \$15.00 (NTIS Accession No. PB 88-134838).

ORDER FROM: U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Payment may be by check (made payable to NTIS) or charged to an NTIS deposit account number, American Express, VISA, or Mastercard. Phone (703) 487-4650 or fax (703) 321-8547.

Estimates are for fixed nonresidential private capital by major industry group, for residential capital by tenure group, for government-owned fixed capital by type of government, and for 11 types of durable goods owned by consumers. 400 pp. \$18.00 (GPO Stock No. 003-010-00177-1).

BEA Regional Projections to 2040. (1990) Three volumes. Presents regional projections for selected economic and population variables for 1995, 2000, 2005, 2010, 2020, and 2040. Includes projections for employment and earnings by industry and for personal income, as well as a statement of methodology.

Vol. 1: States. 144 pp. \$7.50 (GPO Stock No. 003-010-00199-2).

Vol. 2: Metropolitan Statistical Areas. 352 pp. \$17.00 (GPO Stock No. 003-010-00211-5).

Vol. 3: BEA Economic Areas. 200 pp. \$10.00 (GPO Stock No. 003-010-00212-3).

State Personal Income: 1929-87. (1989) Contains annual estimates for 1929-87 of total personal income, annual estimates for 1948-87 of disposable personal income, and quarterly estimates for 1969-88 of total personal income. Also contains a statement of methodology. 320 pp. \$16.00 (GPO Stock No. 003-010-00197-6).

Local Area Personal Income, 1983-88. (1990) Contains estimates of personal income by major type of payment and earnings by major industry, population, and total and per capita personal income for regions, States, counties, and metropolitan areas.

Vol. 1. Summary: Regions, States, and Metropolitan Areas. Estimates for the United States, regions, States, and metropolitan areas. Also contains county definitions of metropolitan areas, a detailed description of sources and methods, and samples of tables available. 300 pp. \$15.00 (GPO Stock No. 003-010-00205-1).

Vol. 2. New England, Mideast, and Great Lakes Regions. (CT, DE, DC, IL, IN, ME, MD, MA, MI, NH, NJ, NY, OH, PA, RI, VT, WI) 324 pp. \$16.00 (GPO Stock No. 003-010-00206-9).

Vol. 3. Plains Region. (IA, KS, MN, MO, NE, ND, SD) 236 pp. \$12.00 (GPO Stock No. 003-010-00207-7).

Vol. 4. Southeast Region. (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV) 372 pp. \$18.00 (GPO Stock No. 003-010-00208-5).

Vol. 5. Southwest, Rocky Mountain, and Far West Regions and Alaska and Hawaii. (AK, AZ, CA, CO, HI, ID, MT, NV, NM, OK, OR, TX, UT, WA, WY) 328 pp. \$16.00 (GPO Stock No. 003-010-00209-3).

The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures. (1990) Describes in detail the methodology used in constructing the balance of payments estimates for the United States. Explains underlying principles, and describes the presentation of the estimates. Includes a comprehensive list of data sources. 160 pp. \$8.50 (GPO Stock No. 003-010-00204-2).

Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies, Preliminary 1988 Estimates. (1990) Contains information on the financial structure and operations of nonbank U.S. affiliates of foreign direct investors. Data are classified by industry of U.S. affiliate, by country and industry of ultimate beneficial owner, and, for selected data, by State. 92 pp. \$4.75 (GPO Stock No. 003-010-00203-4).

Foreign Direct Investment in the United States: 1987 Benchmark Survey, Final Results. (1990) Contains information for 1987 on the financial structure and operations of U.S. affiliates of foreign direct investors, on the foreign direct investment position in the United States, and on balance of payments transactions between U.S. affiliates and their foreign parents. Data are classified by industry of affiliate, by country and industry of ultimate beneficial owner or foreign parent, and, for selected data, by State. Also contains a complete methodology and copies of survey forms and instructions. 284 pp. \$14.00 (GPO Stock No. 003-010-00210-7).

U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and Their Foreign Affiliates. (1990) Presents results of BEA's annual survey of the worldwide operations of U.S. multinational companies. Contains information on the financial structure and operations of both U.S. parent companies and their foreign affiliates. Data are classified by country and industry of foreign affiliate and by industry of U.S. parent. 80 pp. \$4.25 each. **Preliminary 1988 Estimates:** GPO Stock No. 003-010-00202-6; **Revised 1987 Estimates:** GPO Stock No. 003-010-00201-8.

UNITED STATES
GOVERNMENT PRINTING OFFICE
SUPERINTENDENT OF DOCUMENTS
WASHINGTON, DC 20402

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300

SECOND CLASS MAIL

POSTAGE AND FEES PAID
U.S. GOVERNMENT PRINTING OFFICE

USPS Pub. No. 337-790

Schedule of Upcoming BEA News Releases

<i>Subject</i>	<i>Release Date</i>
Merchandise Trade (balance of payments basis), 4th quarter 1990	Feb. 26
Gross National Product, 4th quarter 1990 (preliminary)	Feb. 27
Personal Income and Outlays, January 1991	Feb. 28
Composite Indexes of Leading, Coincident, and Lagging Indicators, January 1991	Mar. 1
Summary of International Transactions, 4th quarter 1990	Mar. 12
Gross National Product, 4th quarter 1990 (final)	Mar. 27
Corporate Profits, 4th quarter 1990 (preliminary)	Mar. 27
Personal Income and Outlays, February 1991	Mar. 28
Composite Indexes of Leading, Coincident, and Lagging Indicators, February 1991	Mar. 29
State Personal Income, 4th quarter 1990 and Per Capita Personal Income, 1990 (preliminary)	Apr. 17
Gross National Product, 1st quarter 1991 (advance)	Apr. 26
Corporate Profits, 4th quarter 1990 (revised)	Apr. 26
Personal Income and Outlays, March 1991	Apr. 29

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