

MAY 1989 / VOLUME 69 NUMBER

5



SURVEY OF CURRENT BUSINESS



UNITED STATES DEPARTMENT OF COMMERCE / BUREAU OF ECONOMIC ANALYSIS



SURVEY OF CURRENT BUSINESS



U.S. Department of Commerce

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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*—\$18.00 domestic, \$22.50 foreign; *first-class mail*—\$46.00. 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.

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NOTE.—This issue of the **SURVEY** went to the printer on June 5, 1989. It incorporates data from the following monthly **BEA** news releases:

- Gross National Product (May 25),
- Personal Income and Outlays (May 26), and
- Composite Indexes of Leading, Coincident, and Lagging Indicators (May 31).

the BUSINESS SITUATION

PRELIMINARY estimates show that real GNP—a measure of U.S. production—increased at an annual rate of 4½ percent in the first quarter of 1989; the advance estimates issued a month ago had shown an increase of 5½ percent (see table 1 on page 18). The fourth-quarter increase in real gross domestic purchases—a measure of U.S. demand—was revised down from 4½

percent to 2½ percent at an annual rate. Increases in both the GNP price index (fixed weights) and the gross domestic purchases price index (fixed weights) were unrevised at annual rates of 5 percent and 5½ percent, respectively (chart 1).¹

The unusually large downward revisions in real GNP, which amounted to \$11.7 billion, and in real gross domestic purchases, which amounted to \$19.7 billion, were mainly attributable to a substantial revision in inventory

NOTE.—Quarterly estimates in the national income and product accounts are expressed at seasonally adjusted annual rates, and quarterly changes in them are differences between these rates. Quarter-to-quarter percent changes are compounded to annual rates. Real, or constant-dollar, estimates are expressed in 1982 dollars.

1. The regularly featured estimates of real GNP and GNP prices are based on 1982 weights. Alternative measures based on more current weights are shown in tables 4 and 5 on page 20.

Looking Ahead...

- **Computers.** An article reviewing the concepts and statistical procedures used by BEA in measuring the output of computers will appear in an upcoming issue of the SURVEY.

- **U.S. International Transactions and Investment Position.** Revised estimates of U.S. international transactions will be presented in the June SURVEY, along with preliminary estimates for the first quarter of 1989. The revisions cover 1985–88. The same issue will present preliminary estimates for yearend 1988 of U.S. assets abroad and foreign assets in the United States and the sources of change in the investment position.

- **U.S. Multinational Companies.** Data and analysis of the operations in 1987 of U.S. parent companies and their foreign affiliates, by industry and country of foreign affiliate, will be presented in the June SURVEY. Selected data will be available as of June 28.

- **Pollution Abatement and Control Expenditures.** Estimates of U.S. expenditures for pollution abatement and control for 1985–87 will be presented in the June SURVEY.

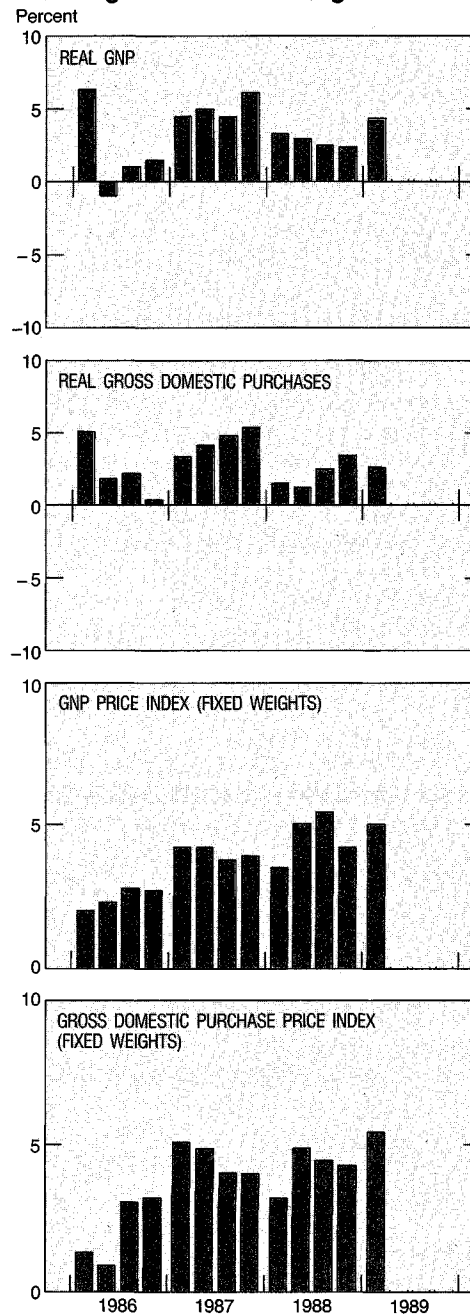
- **U.S. Affiliates of Foreign Companies: Benchmark Survey Results.** Data on the operations of foreign-owned U.S. companies in 1987, based on preliminary results of BEA's latest benchmark survey of foreign direct investment in the United States, will be presented in the July SURVEY. Comparable estimates of key items for 1986, analysis of changes in affiliate operations in 1987, and a discussion of the share of the U.S. economy accounted for by affiliates will also be presented. Selected data will be available as of June 27.

- **Annual Revisions of the National Income and Product Accounts.** Revised estimates will be presented in the July SURVEY. The revisions cover the 3-year period beginning with the first quarter of 1986.

- **Annual Revisions of State Personal Income.** State personal income for 1986–88 will be presented in the August SURVEY.

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 89-5-1

investment—that is, change in business inventories. In turn, about three-fourths of the \$15.8 billion revision in inventory investment was in nonfarm inventories, mostly in wholesale and retail trade (monthly Census Bureau data on trade inventories for March and revised data for February). A \$2.3 billion downward revision in nonresidential fixed investment was traceable to petroleum and natural gas drilling (monthly data from the Energy Information Administration for March and revised data for February) and to public utilities (quarterly information on anticipated expenditures from the Census Bureau plant and equipment survey). Within government purchases, Federal purchases were revised up \$2.6 billion; about one-half of the revision was accounted for by Commodity Credit Corporation inventory transactions (new and revised monthly data from the Department of Agriculture). A \$2.1 billion downward revision in State and local government purchases was accounted for by structures (monthly Census Bureau data on construction put in place for March and revised data for February).

The difference between the size of the downward revision in real GNP and that in real domestic purchases was accounted for by a \$7.8 billion upward revision in net exports. Within net exports, exports were revised up \$5.6 billion and imports were revised down \$2.2 billion (monthly Census Bureau merchandise trade data for March and revised data for February).

The preliminary GNP estimates show a somewhat different picture of the economy than sketched in the last month's "Business Situation." If the impact of the 1988 drought is excluded, the preliminary estimate for real GNP increased 2 percent in the first quarter of 1989, somewhat slower than the pace of 3 to 4 percent registered in the four preceding quarters; the comparable advance estimate increased 3 percent, which was in the range of the four preceding quarters. Among the components of real GNP, the preliminary estimates for nonfarm inventories show smaller accumulations in all categories—manufacturing, wholesale, retail, and "other"—in the first quarter than in the fourth; the advance estimates had shown larger accumula-

tions in both wholesale and retail trade inventories.

Corporate Profits

In the first quarter of 1989, profits from current production fell \$21½ billion—the largest decline in 7 years; declines were very widespread. Profits before tax (PBT), in contrast, declined only \$½ billion.

The current-production measure of profits includes two adjustments that are not included in PBT—namely, the inventory valuation adjustment (IVA), which declined \$14½ billion, and the capital consumption adjustment (CCAdj), which declined \$6½ billion.

The decline in the IVA mirrored an increase in inventory profits that resulted from a step-up in the rate of increase of inventory prices. For example, the Producer Price Index, a major source for estimating inventory prices, increased 9 percent (annual rate) in the first quarter, following a 2-percent increase in the fourth. Although the most dramatic step-up in prices was in crude materials (reflecting an almost 150-percent increase in crude petroleum prices), step-ups were significant in all major stages of processing and in many industrial commodities.

The CCAdj is the difference between depreciation based largely on tax accounting, on the one hand, and economic depreciation as estimated by BEA, on the other. The first-quarter decline in the CCAdj reflected the continuing impact of the Tax Reform Act of 1986, which lengthened the service lives that may be used in calculating most depreciation allowances for tax purposes. (The CCAdj, now \$33½ billion, is expected to turn negative in the early 1990's.)

Domestic nonfinancial corporations accounted for most of the first-quarter drop in profits from current production. (Profits of domestic financial corporations declined \$½ billion, and profits from the rest of the world declined \$1½ billion.) Real product of domestic nonfinancial corporations increased slightly, but profits per unit fell sharply. The decline in unit profits reflected a smaller increase in unit

prices than in unit costs; both labor and nonlabor unit costs increased.

Government Sector

The fiscal position of the government sector improved slightly in the first quarter of 1989, as the combined deficit of the Federal Government and of State and local governments declined \$1½ billion (table 1). The deficit of the Federal Government increased \$1 billion, and the surplus of State and local governments increased \$2½ billion.

The Federal sector.—The Federal Government deficit increased to \$158½ billion, as expenditures increased more than receipts.

Receipts increased \$32½ billion, compared with a \$16 billion increase in the fourth quarter of 1988. Personal tax and nontax receipts increased \$15½ billion, and contributions for social insurance increased \$14 billion. Contributions were boosted by the following special factors, all of which were effective January 1, 1989: (1) An increase in the social security tax base to \$48,000 from \$45,000 (\$3½ billion); (2) the initiation of premiums for catastrophic health insurance (\$2 billion); (3) an increase in the supplemental medical insurance premium to \$27.90 per month from \$24.80 (\$1½ billion); and (4) an increase in the contribution for military retirement (\$1 billion). Corporate profits tax accruals increased \$2 billion, and indirect business tax and nontax accruals increased \$½ billion.

Expenditures increased \$33½ billion, compared with a \$50 billion increase in the fourth quarter of 1988 that reflected increased spending for agricultural purchases and subsidies. Over one-half of the increase was in transfer payments to persons; an \$18 billion increase included \$12 billion for cost-of-living adjustments (COLA's). The largest COLA's were for social security (\$8½ billion), civilian and military retirement (\$1 billion each), and veterans pensions and disability payments (\$½ billion). Net interest paid increased \$10 billion, reflecting higher interest rates, and grants-in-aid to State and local governments increased

\$6 billion, including \$2½ billion for highways and \$1½ billion for public assistance. Nondefense purchases of goods and services and subsidies less the current surplus of government enterprises each increased by smaller amounts. The increases in expenditures were partly offset by declines in transfer payments to foreigners and in national defense purchases of goods and services.

Cyclically adjusted surplus or deficit.—When measured using simplified cyclical adjustments (see next paragraph) based on a 6-percent unemployment rate trend GNP, the Fed-

eral deficit on the national income and product accounts basis increased from \$177.3 billion in the fourth quarter of 1988 to \$187.5 billion in the first quarter of 1989 (see table 3 on page 19). The cyclically adjusted deficit as a percentage of the 6-percent unemployment rate trend GNP increased from 3.6 percent in the fourth quarter to 3.7 percent in the first.

Beginning with the estimate of the cyclically adjusted deficit for the first quarter of 1989, BEA will temporarily discontinue use of detailed models to derive the estimates. Instead, BEA will use a simplified procedure to derive cyclically adjusted receipts, expen-

ditures, and surplus or deficit based on a 6-percent unemployment rate trend GNP. This change is being made because the more detailed models need to be reviewed and updated to reflect, for example, new income tax elasticities that may have resulted from tax legislation. Until a review can be completed, BEA will use the simplified procedure, which yields results that are very similar to the detailed models. Using the simplified procedure allows BEA to continue to provide users with cyclically adjusted budget estimates while freeing the resources necessary for the review. A description of the simplified procedure and an historical series based on this procedure is available upon request.²

The State and local sector.—The State and local government surplus increased to \$55 billion, as receipts increased more than expenditures.

Receipts increased \$15 billion, compared with a \$12½ billion increase in the fourth quarter of 1988. A large increase in Federal grants-in-aid—\$6 billion—more than accounted for the acceleration. Indirect business taxes increased \$5 billion, of which \$2½ billion was in property taxes. Personal tax and nontax receipts increased \$4 billion, and contributions for social insurance increased \$½ billion.

Expenditures increased \$12½ billion, compared with a \$15½ billion increase in the fourth quarter of 1988. All of the first-quarter increase was in purchases of goods and services; on balance, all other types of expenditures were unchanged. Purchases of nondurable goods increased \$2½ billion, compared with a \$½ billion increase in the previous quarter; the first-quarter increase largely reflected higher prices for petroleum products. Purchases of services also accelerated, increasing \$3 billion, compared with a \$2 billion increase in the fourth quarter; the first-quarter increase largely reflected higher prices for air fares and lodging. Purchases of durable goods increased at the same pace as in the previous quarter, and purchases of structures was unchanged after a \$4 billion increase in the fourth quarter.

Table 1.—Government Sector Receipts and Expenditures

[Billions of dollars, seasonally adjusted at annual rates]

	Change from preceding quarter					Level 1989:1
	1988				1989	
	I	II	III	IV	I	
Government sector						
Receipts.....	15.5	45.6	1.0	26.5	41.8	1,640.7
Expenditures.....	4.0	23.3	-8.5	64.3	40.3	1,744.1
Surplus or deficit (-).....	11.5	22.3	9.6	-37.8	1.5	-103.4
Federal Government						
Receipts.....	6.6	31.9	-7.5	16.1	32.5	1,024.0
Personal tax and nontax receipts.....	-17.7	20.4	-16.7	7.5	15.7	431.6
Corporate profits tax accruals.....	-5	4.6	1.4	.7	2.2	116.0
Indirect business tax and nontax accruals.....	.9	.1	1.1	.8	.4	58.3
Contributions for social insurance.....	24.0	6.9	6.7	7.0	14.2	418.2
Expenditures.....	1.2	10.2	-17.3	50.0	33.5	1,182.5
Purchases of goods and services.....	-13.7	4.6	-14.5	28.6	1.6	397.8
National defense.....	-8	.5	-4.5	7.6	-2.2	299.8
Nondefense.....	-12.9	4.1	-10.0	21.0	3.7	98.1
Of which: Commodity Credit Corporation inventory change.....	-16.1	.7	-5.8	17.8	-3	-5.2
Transfer payments.....	11.9	3.1	3.2	6.8	13.0	460.5
To persons.....	16.8	3.6	1.7	2.7	17.8	448.8
To foreigners.....	-4.9	-5	1.4	4.1	-4.8	11.7
Grants-in-aid to State and local governments.....	9.7	-7	1.1	1.5	5.9	118.9
Net interest paid.....	.4	2.2	2.9	4.0	10.0	168.9
Subsidies less current surplus of government enterprises.....	-6.7	1.0	-9.9	9.2	3.0	36.3
Subsidies.....	-8.0	2.8	-15.7	18.6	-9	34.6
Of which: Agricultural subsidies.....	-8.0	2.8	-15.8	18.2	-1.4	18.6
Less: Current surplus of government enterprises.....	-1.2	1.8	-5.3	9.4	-3.9	-1.8
Less: Wage accruals less disbursements.....						
Surplus or deficit (-).....	5.3	21.8	9.8	-34.0	-1.0	-158.5
State and local governments						
Receipts.....	18.6	12.9	9.7	12.4	15.2	735.6
Personal tax and nontax receipts.....	2.7	4.7	2.2	4.0	3.8	186.0
Corporate profits tax accruals.....	1.2	1.8	.2	.5		32.2
Indirect business tax and nontax accruals.....	4.3	6.3	5.4	5.5	4.8	345.6
Contributions for social insurance.....	.7	.7	.7	.7	.7	52.8
Federal grants-in-aid.....	9.7	-7	1.1	1.5	5.9	118.9
Expenditures.....	12.5	12.5	9.9	15.7	12.7	680.5
Purchases of goods and services.....	11.6	11.8	8.2	13.6	12.7	613.9
Of which: Structures.....	2.1	1.3	-1.5	4.2	.1	69.3
Transfer payments to persons.....	2.1	2.1	3.3	4.3	2.0	135.6
Net interest paid.....	-7	-8	-9	-9	-1.0	-43.1
Less: Dividends received by government.....	.3	.3	.3	.3	.3	9.0
Subsidies less current surplus of government enterprises.....	-3	-3	-5	-1.0	-7	-17.0
Subsidies.....						1.0
Less: Current surplus of government enterprises.....	.4	.4	.5	1.0	.7	18.0
Less: Wage accruals less disbursements.....						
Surplus or deficit (-).....	6.1	.4	-2	-3.4	2.5	55.2
Social insurance funds.....	1.5	1.6	1.5	1.6	1.6	72.5
Other.....	4.5	-1.2	-1.9	5.0	.9	-17.3

NOTE.—Dollar levels are found in tables 3.2 and 3.3 of the "Selected NIPA Tables."

2. Thomas M. Holloway, "Measuring the Cyclical Sensitivity of Federal Receipts and Expenditures: Simplified Estimation Procedures," 1986.

National Income and Product Accounts Tables

Selected NIPA Tables

New estimates in this issue: First quarter 1989, revised.

The selected set of 54 national income and product accounts (NIPA) tables shown in this section presents quarterly estimates, which are updated monthly. (In most of these tables, annual estimates are also shown.) The full set of 132 tables usually shown in July presents annual NIPA revisions. For more information on the presentation of the estimates, see "National Income and Product Accounts Estimates: When They are Released, Where They Are Available, and How They Are Presented" in the July 1988 SURVEY.

The full set of estimates for 1985-87 is in the July 1988 issue of the SURVEY; estimates for 1984 are in the July 1987 issue; estimates for 1983 are in the July 1986 issue. Estimates for 1929-82 are in *National Income and Product Accounts, 1929-82: Statistical Tables* (GPO Stock No. 003-010-00174-7, price \$23.00). These publications are available from the Superintendent of Documents; see address on inside front cover.

The full set of NIPA tables is available on diskette for \$200 per year (12 updates, for the quarterly estimates prepared each month). For more information, write to the Bureau of Economic Analysis (BE-54), U.S. Department of Commerce, Washington, DC 20230.

Table 1.1.—Gross National Product

	[Billions of dollars]									
	1987	1988	Seasonally adjusted at annual rates							
			1987	1988				1989		
			IV	I	II	III	IV	I		
Gross national product	4,526.7	4,864.3	4,662.8	4,724.5	4,823.8	4,909.0	4,999.7	5,105.0		
Personal consumption expenditures.....	3,012.1	3,227.5	3,076.3	3,128.1	3,194.6	3,261.2	3,326.4	3,377.2		
Durable goods.....	421.9	451.1	422.0	437.8	449.8	452.9	464.0	459.4		
Nondurable goods.....	997.9	1,046.9	1,012.4	1,016.2	1,036.6	1,060.8	1,073.9	1,093.0		
Services.....	1,592.3	1,729.6	1,641.9	1,674.1	1,708.2	1,747.5	1,788.5	1,824.8		
Gross private domestic investment.....	712.9	766.5	764.9	763.4	758.1	772.5	772.0	793.6		
Fixed investment.....	673.7	718.1	692.9	698.1	714.4	722.8	737.2	750.0		
Nonresidential.....	446.8	488.4	464.1	471.5	487.8	493.7	500.6	512.9		
Structures.....	139.5	142.8	147.7	140.1	142.3	143.8	145.0	148.5		
Producers' durable equipment.....	307.3	345.6	316.3	331.3	345.5	349.9	355.6	364.4		
Residential.....	226.9	229.7	228.8	226.6	226.5	229.1	236.6	237.1		
Change in business inventories.....	39.2	48.4	72.0	65.3	43.7	49.7	34.7	43.5		
Nonfarm.....	40.7	42.2	72.8	49.4	33.1	41.9	44.6	29.3		
Farm.....	-1.5	6.1	-8	15.9	10.6	7.8	-9.8	14.3		
Net exports of goods and services.....	-123.0	-94.6	-125.7	-112.1	-90.4	-80.0	-96.1	-77.5		
Exports.....	428.0	519.7	459.7	487.8	507.1	536.1	548.0	577.8		
Imports.....	551.1	614.4	585.4	599.9	597.5	616.0	644.0	655.2		
Government purchases of goods and services.....	924.7	964.9	947.3	945.2	961.6	955.3	997.5	1,011.8		
Federal.....	382.0	381.0	391.4	377.7	382.2	367.7	396.3	397.8		
National defense.....	295.3	298.4	299.2	298.4	298.8	294.3	301.9	299.8		
Nondefense.....	86.7	82.6	92.2	79.3	83.4	73.4	94.3	98.1		
State and local.....	542.8	583.9	555.9	567.5	579.4	587.6	601.2	613.9		

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

Table 1.2.—Gross National Product in Constant Dollars

	[Billions of 1982 dollars]									
	1987	1988	Seasonally adjusted at annual rates							
			1987	1988				1989		
			IV	I	II	III	IV	I		
Gross national product	3,847.0	3,996.1	3,923.0	3,956.1	3,985.2	4,009.4	4,033.4	4,076.5		
Personal consumption expenditures.....	2,521.0	2,592.2	2,531.7	2,559.8	2,579.0	2,603.8	2,626.2	2,633.6		
Durable goods.....	390.9	409.7	387.6	401.1	410.6	416.5	411.9			
Nondurable goods.....	890.5	899.6	890.5	892.7	893.6	904.5	911.4			
Services.....	1,239.5	1,283.0	1,253.6	1,265.9	1,274.8	1,288.9	1,302.2	1,310.3		
Gross private domestic investment.....	674.8	721.8	724.7	728.9	715.1	726.1	717.1	732.4		
Fixed investment.....	640.4	679.3	657.6	662.9	679.7	686.6	688.0	694.4		
Nonresidential.....	445.1	487.5	464.8	473.4	490.2	495.0	491.4	500.5		
Structures.....	125.5	125.1	132.1	124.0	125.0	125.8	125.5	126.3		
Producers' durable equipment.....	319.6	362.4	332.7	349.4	365.1	369.2	365.9	374.2		
Residential.....	195.2	191.8	192.7	189.5	189.6	191.6	196.6	193.9		
Change in business inventories.....	34.4	42.5	67.1	66.0	35.3	39.5	29.1	38.0		
Nonfarm.....	36.9	40.0	68.2	51.9	30.1	40.4	37.6	29.1		
Farm.....	-2.5	2.5	-1.1	14.1	5.3	-8	-8.5	8.8		
Net exports of goods and services.....	-128.9	-100.2	-126.0	-109.0	-92.6	-93.9	-105.4	-87.8		
Exports.....	427.8	504.8	459.2	486.2	496.9	514.0	522.1	541.0		
Imports.....	556.7	605.0	585.2	595.1	589.5	607.9	627.4	628.8		
Government purchases of goods and services.....	780.2	782.3	792.6	776.4	783.8	773.5	795.5	798.3		
Federal.....	339.0	328.7	347.7	327.8	331.6	320.1	335.5	335.8		
National defense.....	264.9	261.8	268.2	264.6	263.6	256.4	262.5	256.7		
Nondefense.....	74.1	66.9	79.5	63.2	67.9	63.7	72.9	79.2		
State and local.....	441.2	453.6	444.9	448.7	452.2	453.4	460.0	462.4		

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

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

	[Billions of dollars]									
	1987	1988	Seasonally adjusted at annual rates							
			1987	1988				1989		
			IV	I	II	III	IV	I		
Gross national product	4,526.7	4,864.3	4,662.8	4,724.5	4,823.8	4,909.0	4,999.7	5,105.0		
Final sales.....	4,487.5	4,815.9	4,590.7	4,659.2	4,780.1	4,859.3	4,965.0	5,061.5		
Change in business inventories.....	39.2	48.4	72.0	65.3	43.7	49.7	34.7	43.5		
Goods.....	1,792.5	1,938.7	1,849.3	1,879.5	1,928.0	1,960.1	1,987.1	2,038.8		
Final sales.....	1,753.3	1,890.3	1,777.3	1,814.2	1,884.3	1,910.4	1,952.4	1,995.3		
Change in business inventories.....	39.2	48.4	72.0	65.3	43.7	49.7	34.7	43.5		
Durable goods.....	776.3	858.3	808.7	819.3	849.5	881.6	882.7	895.0		
Final sales.....	749.7	827.3	758.2	792.7	831.6	836.4	848.6	863.3		
Change in business inventories.....	26.6	30.9	50.5	26.6	17.8	45.1	34.1	31.7		
Nondurable goods.....	1,016.2	1,080.4	1,040.7	1,060.1	1,078.5	1,078.5	1,104.4	1,143.8		
Final sales.....	1,003.6	1,063.0	1,019.1	1,021.5	1,052.7	1,074.0	1,103.8	1,132.0		
Change in business inventories.....	12.6	17.4	21.6	38.6	25.9	4.6	.6	11.8		
Services.....	2,295.7	2,477.9	2,363.9	2,405.2	2,451.5	2,501.6	2,553.5	2,603.1		
Structures.....	438.4	447.6	449.5	439.9	444.3	447.3	459.1	463.1		

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

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

	[Billions of 1982 dollars]									
	1987	1988	Seasonally adjusted at annual rates							
			1987	1988				1989		
			IV	I	II	III	IV	I		
Gross national product	3,847.0	3,996.1	3,923.0	3,956.1	3,985.2	4,009.4	4,033.4	4,076.5		
Final sales.....	3,812.6	3,953.6	3,855.9	3,890.1	3,949.9	3,969.9	4,004.4	4,038.5		
Change in business inventories.....	34.4	42.5	67.1	66.0	35.3	39.5	29.1	38.0		
Goods.....	1,663.3	1,762.3	1,713.9	1,748.1	1,762.4	1,768.9	1,769.6	1,809.3		
Final sales.....	1,628.9	1,719.8	1,646.8	1,682.2	1,727.1	1,729.4	1,740.6	1,771.3		
Change in business inventories.....	34.4	42.5	67.1	66.0	35.3	39.5	29.1	38.0		
Durable goods.....	774.6	864.8	812.7	832.5	861.7	885.0	879.8	883.8		
Final sales.....	750.7	837.3	767.2	809.0	845.8	844.6	849.7	856.8		
Change in business inventories.....	23.9	27.5	45.5	23.5	15.9	40.4	30.1	27.0		
Nondurable goods.....	888.8	897.5	901.2	915.6	900.7	884.0	889.8	925.4		
Final sales.....	878.2	882.5	879.6	873.2	881.3	884.9	890.8	914.5		
Change in business inventories.....	10.5	15.0	21.6	42.4	19.4	-9	-1.0	10.9		
Services.....	1,801.1	1,855.4	1,822.3	1,833.4	1,846.1	1,862.8	1,879.2	1,885.5		
Structures.....	382.6	378.4	386.7	374.6	376.7	377.7	384.6	381.7		

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

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

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987	1988				1989
				IV	I	II	III		IV	P
Gross national product	4,526.7	4,864.3	4,662.8	4,724.5	4,823.8	4,909.0	4,999.7	5,105.0
Less: Exports of goods and services	428.0	519.7	459.7	487.8	507.1	536.1	548.0	577.8
Plus: Imports of goods and services	551.1	614.4	585.4	599.9	597.5	616.0	644.0	655.2
Equals: Gross domestic purchases ¹	4,649.7	4,958.9	4,788.4	4,836.6	4,914.2	4,989.0	5,095.8	5,182.5
Less: Change in business inventories	39.2	48.4	72.0	65.3	43.7	49.7	34.7	43.5
Equals: Final sales to domestic purchasers ²	4,610.5	4,910.6	4,716.4	4,771.3	4,870.5	4,939.3	5,061.1	5,139.0

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.

Table 1.7.—Gross National Product by Sector

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987	1988				1989
				IV	I	II	III		IV	P
Gross national product	4,526.7	4,864.3	4,662.8	4,724.5	4,823.8	4,909.0	4,999.7	5,105.0
Gross domestic product	4,497.2	4,839.4	4,631.8	4,702.1	4,802.5	4,882.2	4,970.7	5,077.8
Business	3,855.5	4,148.2	3,972.9	4,028.1	4,117.5	4,185.2	4,262.1	4,351.1
Nonfarm	3,787.8	4,091.9	3,905.8	3,965.4	4,048.0	4,123.7	4,230.6	4,287.8
Nonfarm less housing	3,416.5	3,693.8	3,522.7	3,576.0	3,654.0	3,722.5	3,822.6	3,873.9
Housing	371.3	398.1	383.1	389.4	394.0	401.2	408.0	413.9
Farm	75.9	70.7	73.4	77.7	74.6	75.6	54.8	87.2
Statistical discrepancy	-8.1	-14.3	-6.4	-15.0	-5.1	-14.0	-23.2	-23.9
Households and institutions	168.9	188.4	176.4	180.9	185.6	191.2	196.0	200.8
Private households	9.2	9.5	9.3	9.3	9.4	9.6	9.7	9.8
Nonprofit institutions	159.8	178.9	167.1	171.6	176.1	181.6	186.4	191.0
Government	472.7	502.8	482.5	493.1	499.4	505.8	512.6	525.9
Federal	151.0	157.8	152.7	156.7	157.4	158.1	159.0	166.2
State and local	321.7	345.0	329.9	336.4	342.1	347.8	353.6	359.7
Rest of the world	29.5	24.9	31.0	22.4	21.3	26.8	29.0	27.2
Addendum:								
Gross domestic business product less housing	3,476.7							

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]

	1987	1988	Seasonally adjusted at annual rates					
			1987	1988				1989
				IV	I	II	III		IV	P
Gross national product	3,847.0	3,996.1	3,923.0	3,956.1	3,985.2	4,009.4	4,033.4	4,076.5
Less: Exports of goods and services	427.8	504.8	459.2	486.2	496.9	514.0	522.1	541.0
Plus: Imports of goods and services	556.7	605.0	585.2	595.1	589.5	607.9	627.4	628.8
Equals: Gross domestic purchases ¹	3,975.9	4,096.3	4,049.0	4,065.1	4,077.9	4,103.4	4,138.8	4,164.2
Less: Change in business inventories	34.4	42.5	67.1	66.0	35.3	39.5	29.1	38.0
Equals: Final sales to domestic purchasers ²	3,941.5	4,053.8	3,981.9	3,999.1	4,042.6	4,063.8	4,109.7	4,126.3

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.

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

[Billions of 1982 dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987	1988				1989
				IV	I	II	III		IV	P
Gross national product	3,847.0	3,996.1	3,923.0	3,956.1	3,985.2	4,009.4	4,033.4	4,076.5
Gross domestic product	3,821.4	3,975.0	3,896.3	3,936.6	3,967.0	3,987.0	4,009.6	4,054.3
Business	3,322.5	3,464.8	3,393.6	3,430.5	3,458.9	3,475.1	3,494.7	3,537.0
Nonfarm	3,247.1	3,408.9	3,317.2	3,360.9	3,393.1	3,421.5	3,460.0	3,479.0
Nonfarm less housing	2,965.7	3,120.8	3,032.8	3,074.8	3,105.7	3,132.8	3,170.1	3,187.3
Housing	281.4	288.0	284.4	286.1	287.4	288.8	289.9	291.6
Farm	82.5	67.9	81.8	82.3	70.1	65.2	53.8	77.5
Statistical discrepancy	-7.0	-11.9	-5.4	-12.8	-4.3	-11.6	-19.1	-19.5
Households and institutions	129.0	135.6	130.7	133.3	134.4	136.8	138.0	139.5
Private households	8.8	9.0	8.8	8.9	8.9	9.0	9.1	9.2
Nonprofit institutions	120.2	126.6	121.9	124.4	125.5	127.8	128.9	130.3
Government	369.9	374.6	372.0	372.8	373.7	375.2	376.8	377.8
Federal	123.5	124.2	123.9	123.9	123.8	124.2	124.8	124.9
State and local	246.4	250.5	248.1	249.0	249.9	251.0	252.0	253.0
Rest of the world	25.6	21.0	26.7	19.5	18.3	22.4	23.9	22.2
Addendum:								
Gross domestic business product less housing	3,032.1							

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]								
	1987	1988	Seasonally adjusted at annual rates						1989
			1987		1988				
			IV	I	II	III	IV	I ^r	
Gross national product	4,526.7	4,864.3	4,662.8	4,724.5	4,823.8	4,909.0	4,999.7	5,105.0	
Less: Capital consumption allowances with capital consumption adjustment ..	480.0	506.3	489.5	498.3	503.2	507.7	516.2	524.7	
Capital consumption allowances without capital consumption adjustment	507.6	524.5	516.4	520.8	524.1	526.0	527.0	526.6	
Less: Capital consumption adjustment	27.6	18.1	26.9	22.5	20.9	18.2	10.9	1.9	
Equals: Net national product	4,046.7	4,357.9	4,173.3	4,226.2	4,320.5	4,401.3	4,483.6	4,580.3	
Less: Indirect business tax and nontax liability	366.3	389.0	374.2	379.4	385.8	392.3	398.7	403.9	
Business transfer payments	28.1	30.7	29.0	29.6	30.3	31.1	31.8	32.6	
Statistical discrepancy	-8.1	-14.3	-6.4	-15.0	-5.1	-14.0	-23.2	-23.9	
Plus: Subsidies less current surplus of government enterprises	18.3	15.9	25.6	18.6	19.2	8.8	17.1	19.4	
Equals: National income	3,678.7	3,968.4	3,802.0	3,850.8	3,928.8	4,000.7	4,093.4	4,187.1	
Less: Corporate profits with inventory valuation and capital consumption adjustments	310.4	328.4	316.1	316.2	326.5	330.0	340.9	319.3	
Net interest	353.6	391.5	369.5	373.9	380.6	396.2	415.4	435.3	
Contributions for social insurance	399.1	444.7	408.6	433.3	440.9	448.4	456.1	471.0	
Wage accruals less disbursements	0	0	-2	0	0	0	0	0	
Plus: Government transfer payments to persons	520.6	555.3	527.8	546.7	552.5	557.6	564.5	584.4	
Personal interest income	527.0	575.9	550.0	554.2	563.7	581.9	603.7	632.9	
Personal dividend income	88.6	96.3	91.9	93.5	95.0	97.3	99.4	102.1	
Business transfer payments	28.1	30.7	29.0	29.6	30.3	31.1	31.8	32.6	
Equals: Personal income	3,780.0	4,062.1	3,906.8	3,951.4	4,022.4	4,094.0	4,180.5	4,313.6	

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

	[Billions of 1982 dollars]							
	1987	1988	1989	1990	1991	1992	1993	1994
Gross national product	3,847.0	3,996.1	3,923.0	3,956.1	3,985.2	4,009.4	4,033.4	4,076.5
Less: Capital consumption allowances with capital consumption adjustment ..	460.8	479.7	468.2	472.9	477.3	481.9	486.5	491.2
Equals: Net national product	3,386.2	3,516.4	3,454.8	3,483.2	3,507.9	3,527.5	3,547.0	3,585.3
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises	319.2	327.5	321.0	324.4	326.2	328.1	331.1	330.8
Statistical discrepancy	-7.0	-11.9	-5.4	-12.8	-4.3	-11.6	-19.1	-19.5
Equals: National income	3,074.0	3,200.9	3,139.3	3,171.5	3,186.0	3,211.1	3,235.0	3,274.0

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

	[Billions of 1982 dollars]							
	1987	1988	1989	1990	1991	1992	1993	1994
Gross national product	3,847.0	3,996.1	3,923.0	3,956.1	3,985.2	4,009.4	4,033.4	4,076.5
Less: Net exports of goods and services	-128.9	-100.2	-126.0	-109.0	-92.6	-93.9	-105.4	-87.8
Exports	427.8	504.8	459.2	486.2	496.9	514.0	522.1	541.0
Imports	556.7	605.0	585.2	595.1	589.5	607.9	627.4	628.8
Equals: Gross domestic purchases	3,975.9	4,096.3	4,049.0	4,065.1	4,077.9	4,103.4	4,138.8	4,164.2
Plus: Command-basis net exports of goods and services	-124.3	-93.2	-125.6	-111.2	-89.2	-78.9	-93.6	-74.4
Command-basis exports ¹	432.4	511.8	459.6	483.9	500.3	529.0	533.9	554.4
Imports	556.7	605.0	585.2	595.1	589.5	607.9	627.4	628.8
Equals: Command-basis gross national product	3,851.6	4,003.1	3,923.4	3,953.9	3,988.7	4,024.5	4,045.2	4,089.9
Addendum:								
Terms of trade ²	101.0	101.4	100.1	99.5	100.7	103.0	102.3	102.5

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]									
	1987	1988	Seasonally adjusted at annual rates						1989	
			1987		1988					
			IV	I	II	III	IV	I ^r		
National income	3,678.7	3,968.4	3,802.0	3,850.8	3,928.8	4,000.7	4,093.4	4,187.1		
Compensation of employees	2,683.4	2,904.7	2,769.9	2,816.4	2,874.0	2,933.2	2,995.3	3,060.5		
Wages and salaries	2,248.4	2,436.9	2,324.8	2,358.7	2,410.0	2,462.0	2,516.8	2,574.3		
Government and government enterprises	420.1	446.1	429.2	437.1	442.9	449.1	455.4	465.9		
Other	1,828.3	1,990.7	1,895.6	1,921.6	1,967.1	2,012.9	2,061.4	2,108.4		
Supplements to wages and salaries	435.0	467.8	445.1	457.7	464.0	471.1	478.5	486.2		
Employer contributions for social insurance	227.1	249.6	232.7	243.1	247.5	251.7	256.0	260.8		
Other labor income	207.9	218.3	212.4	214.6	216.5	219.5	222.5	225.4		
Proprietors' income with inventory valuation and capital consumption adjustments	312.9	324.5	326.0	323.9	328.8	321.6	323.8	358.1		
Farm	43.0	36.3	47.0	44.7	43.4	30.9	26.0	57.2		
Proprietors' income with inventory valuation adjustment	50.6	43.4	54.5	52.2	50.8	37.9	32.9	64.0		
Capital consumption adjustment	-7.6	-7.2	-7.5	-5.5	-7.3	-7.0	-6.9	-6.8		
Nonfarm	270.0	288.2	279.0	279.2	285.3	290.7	297.7	300.9		
Proprietors' income	233.0	254.0	243.4	243.7	250.9	256.8	264.5	270.4		
Inventory valuation adjustment	-1.0	-1.3	-1.7	-1.2	-1.7	-1.5	-9	-2.3		
Capital consumption adjustment	38.0	35.6	37.4	36.6	36.1	35.4	34.2	32.8		
Rental income of persons with capital consumption adjustment	18.4	19.3	20.5	20.5	19.1	19.7	18.1	14.0		
Rental income of persons	66.2	68.3	69.1	69.6	68.0	68.5	67.2	64.4		
Capital consumption adjustment	-47.8	-49.0	-48.6	-49.1	-49.0	-48.8	-49.1	-50.4		
Corporate profits with inventory valuation and capital consumption adjustments	310.4	328.4	316.1	316.2	326.5	330.0	340.9	319.3		
Corporate profits with inventory valuation adjustment	258.7	282.8	263.7	266.8	278.5	284.6	301.3	286.0		
Profits before tax	276.7	306.6	281.9	286.2	305.9	313.9	320.6	319.9		
Profits tax liability	133.8	142.7	136.2	136.9	143.2	144.8	146.1	148.3		
Profits after tax	142.9	163.9	145.7	149.4	162.7	169.1	174.5	171.6		
Dividends	95.5	104.5	99.3	101.3	103.1	105.7	108.0	111.1		
Undistributed profits	47.4	59.4	46.4	48.1	59.6	63.4	66.4	60.5		
Inventory valuation adjustment	-18.0	-23.8	-18.2	-19.4	-27.4	-29.3	-19.2	-33.9		
Capital consumption adjustment	51.7	45.6	52.4	49.4	48.0	45.4	39.6	33.3		
Net interest	353.6	391.5	369.5	373.9	380.6	396.2	415.4	435.3		
Addenda:										
Corporate profits after tax with inventory valuation and capital consumption adjustments	176.6	185.7	179.9	179.3	183.2	185.2	194.8	171.0		
Net cash flow with inventory valuation and capital consumption adjustments	378.6	396.9	384.2	387.8	393.4	396.4	409.8	388.1		
Undistributed profits with inventory valuation and capital consumption adjustments	81.1	81.1	80.5	78.1	80.1	79.5	86.8	59.9		
Capital consumption allowances with capital consumption adjustment	297.5	315.7	303.7	309.8	313.3	316.8	323.0	328.2		
Less: Inventory valuation adjustment	-18.0	-23.8	-18.2	-19.4	-27.4	-29.3	-19.2	-33.9		
Equals: Net cash flow	396.6	420.7	402.4	407.3	420.8	425.7	429.0	422.0		

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

			Seasonally adjusted at annual rates					
	1987	1988	1988					1989
			IV	I	II	III	IV	
Billions of dollars								
Gross domestic product of corporate business	2,717.9	2,930.5	2,793.0	2,845.1	2,901.1	2,954.2	3,021.6	3,055.0
Capital consumption allowances with capital consumption adjustment.....	297.5	315.7	303.7	309.8	313.3	316.8	323.0	328.2
Net domestic product.....	2,420.4	2,614.8	2,489.3	2,535.4	2,587.8	2,637.4	2,698.5	2,726.8
Indirect business tax and nontax liability plus business transfer payments less subsidies.....	257.5	274.7	262.8	267.7	271.8	278.0	281.2	284.9
Domestic income.....	2,162.9	2,340.1	2,226.5	2,267.6	2,316.1	2,359.4	2,417.4	2,441.9
Compensation of employees.....	1,803.7	1,949.3	1,858.4	1,887.7	1,927.9	1,968.8	2,012.7	2,052.3
Wages and salaries.....	1,520.6	1,649.6	1,569.3	1,594.7	1,630.8	1,667.0	1,705.9	1,742.9
Supplements to wages and salaries.....	283.0	299.7	289.1	293.1	297.1	301.8	306.8	309.3
Corporate profits with inventory valuation and capital consumption adjustments.....	274.0	291.3	274.6	286.0	291.1	289.2	298.8	278.8
Profits before tax.....	240.3	269.5	240.4	256.0	270.5	273.1	278.4	279.5
Profits tax liability.....	133.8	142.7	136.2	136.9	143.2	144.8	146.1	148.3
Profits after tax.....	106.5	126.8	104.2	119.2	127.3	128.3	132.4	131.2
Dividends.....	83.4	89.1	91.3	75.3	87.1	99.6	94.6	97.2
Undistributed profits.....	23.1	37.7	12.9	43.9	40.2	28.7	37.8	34.0
Inventory valuation adjustment.....	-18.0	-23.8	-18.2	-19.4	-27.4	-29.3	-19.2	-33.9
Capital consumption adjustment.....	51.7	45.6	52.4	49.4	48.0	45.4	39.6	33.3
Net interest.....	85.2	99.6	93.5	93.9	97.1	101.4	105.9	110.9
Gross domestic product of financial corporate business	204.4	219.2	207.4	212.0	217.1	222.2	225.4	228.7
Gross domestic product of nonfinancial corporate business	2,513.5	2,711.3	2,585.6	2,633.2	2,684.0	2,732.1	2,796.1	2,826.3
Capital consumption allowances with capital consumption adjustment.....	276.2	292.1	281.3	286.8	290.0	293.0	298.5	303.1
Net domestic product.....	2,237.3	2,419.3	2,304.3	2,346.4	2,394.0	2,439.1	2,497.6	2,523.2
Indirect business tax and nontax liability plus business transfer payments less subsidies.....	239.8	255.6	244.5	249.2	253.0	258.8	261.7	265.1
Domestic income.....	1,997.5	2,163.6	2,059.7	2,097.2	2,141.1	2,180.3	2,235.9	2,258.1
Compensation of employees.....	1,661.4	1,797.4	1,714.7	1,739.6	1,777.8	1,816.4	1,855.8	1,891.8
Wages and salaries.....	1,399.7	1,520.0	1,447.0	1,468.4	1,502.8	1,536.9	1,571.9	1,605.5
Supplements to wages and salaries.....	261.8	277.4	267.8	271.2	275.0	279.5	283.9	286.2
Corporate profits with inventory valuation and capital consumption adjustments.....	237.5	252.7	238.4	250.6	252.6	248.2	259.4	239.9
Profits before tax.....	210.2	239.0	211.6	228.4	240.5	240.4	246.6	248.1
Profits tax liability.....	99.0	108.6	101.7	104.4	109.4	109.1	111.6	114.9
Profits after tax.....	111.2	130.4	109.9	124.1	131.1	131.3	135.0	133.2
Dividends.....	83.8	88.3	90.8	74.6	86.2	98.7	93.6	96.0
Undistributed profits.....	27.4	42.1	19.1	49.5	44.9	32.7	41.4	37.2
Inventory valuation adjustment.....	-18.0	-23.8	-18.2	-19.4	-27.4	-29.3	-19.2	-33.9
Capital consumption adjustment.....	45.3	37.5	45.0	41.5	39.5	37.1	32.0	25.7
Net interest.....	98.6	113.6	106.6	107.1	110.7	115.7	120.8	126.4
Billions of 1982 dollars								
Gross domestic product of nonfinancial corporate business	2,270.4	2,390.4	2,322.5	2,363.5	2,380.9	2,395.5	2,421.7	2,430.0
Capital consumption allowances with capital consumption adjustment.....	269.4	279.3	273.2	275.7	278.1	280.6	283.0	285.4
Net domestic product.....	2,001.0	2,111.1	2,049.3	2,087.8	2,102.9	2,114.9	2,138.7	2,144.6
Indirect business tax and nontax liability plus business transfer payments less subsidies.....	203.2	208.7	204.3	206.3	207.8	209.6	211.1	210.5
Domestic income.....	1,797.8	1,902.4	1,845.1	1,881.4	1,895.1	1,905.3	1,927.7	1,934.1

Table 1.17.—Auto Output

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987		1988			1989
			IV	I	II	III	IV	
Auto output	116.3	127.0	120.6	113.1	130.3	132.0	132.5	130.5
Final sales.....	109.4	125.3	106.6	117.8	129.3	128.0	126.1	119.6
Personal consumption expenditures.....	130.0	138.6	128.0	133.9	139.8	139.2	141.7	135.5
New autos.....	94.1	101.2	90.9	100.2	100.1	101.1	103.3	98.7
Net purchases of used autos.....	35.9	37.5	37.0	33.7	39.7	38.1	38.4	36.8
Producers' durable equipment.....	19.2	23.2	19.3	22.1	23.7	23.7	23.3	21.9
New autos.....	44.4	50.3	44.9	47.9	50.0	52.3	51.1	46.7
Net purchases of used autos.....	-25.2	-27.1	-25.6	-25.7	-26.4	-27.8	-27.8	-24.9
Net exports of goods and services.....	-41.3	-38.2	-42.3	-40.1	-35.8	-36.4	-40.5	-39.6
Exports.....	6.6	8.8	8.1	8.2	8.3	9.8	9.0	9.6
Imports.....	47.9	47.0	50.3	48.3	44.1	46.2	49.5	49.2
Government purchases of goods and services.....	1.5	1.7	1.6	1.9	1.6	1.5	1.6	1.8
Change in business inventories of new and used autos	6.9	1.7	14.0	-4.7	1.1	4.0	6.4	10.8
New.....	6.7	.6	14.0	-9.1	3.4	2.7	5.5	10.3
Used.....	.2	1.1	0	4.4	-2.3	1.3	.9	.5
Addenda:								
Domestic output of new autos ¹	94.8	101.6	98.7	88.7	104.2	103.0	110.7	106.3
Sales of imported new autos ²	55.0	59.7	57.2	60.2	60.6	60.2	57.9	56.0

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]

	1987	1988	Seasonally adjusted at annual rates					
			1987		1988			1989
			IV	I	II	III	IV	
Auto output	100.6	107.5	102.9	96.0	111.2	111.5	111.3	108.2
Final sales.....	95.1	106.7	91.4	101.0	110.4	108.5	106.9	100.1
Personal consumption expenditures.....	108.8	113.6	105.3	110.4	115.5	113.7	114.7	108.5
New autos.....	80.0	84.4	76.5	84.3	83.9	84.1	85.2	80.7
Net purchases of used autos.....	28.8	29.2	28.8	26.0	31.6	29.6	29.6	27.8
Producers' durable equipment.....	16.3	19.8	16.4	19.0	20.1	20.3	19.7	18.5
New autos.....	37.7	42.0	37.8	40.3	41.9	43.5	42.2	38.2
Net purchases of used autos.....	-21.5	-22.2	-21.4	-21.2	-21.8	-23.3	-22.5	-19.8
Net exports of goods and services.....	-31.4	-28.1	-31.8	-30.1	-26.5	-26.8	-28.9	-28.5
Exports.....	5.4	7.1	6.6	6.7	6.8	7.9	7.2	7.6
Imports.....	36.8	35.2	38.4	36.8	33.3	34.7	36.1	36.1
Government purchases of goods and services.....	1.4	1.5	1.4	1.7	1.4	1.3	1.4	1.6
Change in business inventories of new and used autos	5.5	.8	11.5	-4.9	.8	3.0	4.3	8.1
New.....	5.3	0	11.5	-8.5	2.8	2.0	3.6	7.7
Used.....	.2	.8	0	3.6	-2.0	1.1	.7	.4
Addenda:								
Domestic output of new autos ¹	80.5	84.5	83.1	74.2	87.3	85.4	91.1	86.3
Sales of imported new autos ²	46.8	49.8	48.1	50.7	50.8	50.1	47.8	45.8

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

Table 1.19.—Truck Output

	[Billions of dollars]		Seasonally adjusted at annual rates					
	1987	1988	1988					1989
			IV	I	II	III	IV	
Truck output ¹	59.6	67.0	64.6	65.8	65.3	64.3	72.5	70.4
Final sales.....	58.3	66.6	60.9	66.2	65.4	67.3	67.5	65.3
Personal consumption expenditures.....	27.7	29.2	27.3	28.7	28.8	29.8	29.4	29.3
Producers' durable equipment.....	33.0	37.3	34.2	36.4	36.1	37.4	39.2	36.7
Net exports of goods and services.....	-7.0	-5.6	-5.6	-4.9	-5.3	-5.6	-6.8	-6.6
Exports.....	3.3	3.8	4.2	4.1	3.7	3.8	3.8	3.9
Imports.....	10.3	9.5	9.8	9.0	9.0	9.4	10.6	10.5
Government purchases of goods and services.....	4.7	5.8	5.0	6.0	5.8	5.7	5.6	6.0
Change in business inventories.....	1.3	.4	3.7	-4	0	-3.0	5.1	5.1

1. Includes new trucks only.

Table 1.20.—Truck Output in Constant Dollars

	[Billions of 1982 dollars]		Seasonally adjusted at annual rates					
	1987	1988	1988					1989
			IV	I	II	III	IV	
Truck output ¹	50.8	56.2	54.9	55.8	55.5	54.1	59.2	57.1
Final sales.....	49.7	55.9	51.9	56.2	55.5	56.5	55.3	53.1
Personal consumption expenditures.....	23.5	24.5	23.0	24.2	24.3	25.1	24.4	24.0
Producers' durable equipment.....	28.2	31.2	29.3	31.0	30.8	31.3	31.8	29.7
Net exports of goods and services.....	-6.0	-4.7	-4.7	-4.1	-4.5	-4.7	-5.6	-5.4
Exports.....	2.8	3.2	3.6	3.5	3.1	3.2	3.1	3.1
Imports.....	8.8	7.9	8.3	7.6	7.6	7.8	8.7	8.5
Government purchases of goods and services.....	4.0	4.8	4.3	5.1	4.9	4.8	4.6	4.8
Change in business inventories.....	1.1	.3	3.0	-3	0	-2.3	4.0	4.0

1. Includes new trucks only.

Table 2.1.—Personal Income and Its Disposition

	[Billions of dollars]		Seasonally adjusted at annual rates					
	1987	1988	1988					1989
			IV	I	II	III	IV	
Personal income.....	3,780.0	4,062.1	3,906.8	3,951.4	4,022.4	4,094.0	4,180.5	4,313.6
Wage and salary disbursements.....	2,248.4	2,436.9	2,325.1	2,358.7	2,410.0	2,462.0	2,516.8	2,574.3
Commodity-producing industries.....	649.8	695.4	665.5	676.0	689.1	701.3	715.4	727.4
Manufacturing.....	490.3	522.5	501.3	509.6	517.4	525.9	537.1	545.2
Distributive industries.....	531.7	578.7	547.3	558.2	572.1	585.8	598.6	611.9
Service industries.....	646.8	716.6	682.8	687.4	705.9	725.8	747.4	769.1
Government and government enterprises.....	420.1	446.1	429.5	437.1	442.9	449.1	455.4	465.9
Other labor income.....	207.9	218.3	212.4	214.6	216.5	219.5	222.5	225.4
Proprietors' income with inventory valuation and capital consumption adjustments.....	312.9	324.5	326.0	323.9	328.8	321.6	323.8	358.1
Farm.....	43.0	36.3	47.0	44.7	43.4	30.9	26.0	57.2
Nonfarm.....	270.0	288.2	279.0	279.2	285.3	290.7	297.7	300.9
Rental income of persons with capital consumption adjustment.....	18.4	19.3	20.5	20.5	19.1	19.7	18.1	14.0
Personal dividend income.....	88.6	96.3	91.9	93.5	95.0	97.3	99.4	102.1
Personal interest income.....	527.0	575.9	550.0	554.2	563.7	581.9	603.7	632.9
Transfer payments.....	548.8	586.0	556.8	576.3	582.8	588.6	596.4	617.0
Old-age, survivors, disability, and health insurance benefits.....	282.9	301.8	286.5	298.1	300.4	303.1	305.7	317.8
Government unemployment insurance benefits.....	14.7	13.3	13.4	13.9	13.4	13.4	12.7	13.6
Veterans benefits.....	16.6	17.0	16.6	17.0	17.1	17.1	16.9	17.2
Government employees retirement benefits.....	75.7	81.7	77.1	80.4	82.3	81.6	82.4	85.8
Other transfer payments.....	158.9	172.1	163.3	166.9	169.6	173.4	178.6	182.4
Aid to families with dependent children.....	16.7	17.2	16.8	16.9	17.1	17.2	17.5	17.4
Other.....	142.1	155.0	146.5	150.0	152.5	156.2	161.1	165.1
Less: Personal contributions for social insurance.....	172.0	195.1	175.9	190.2	193.5	196.7	200.1	210.2
Less: Personal tax and nontax payments.....	570.3	590.3	591.0	575.8	601.0	586.5	598.0	617.5
Equals: Disposable personal income.....	3,209.7	3,471.8	3,315.8	3,375.6	3,421.5	3,507.5	3,582.5	3,696.0
Less: Personal outlays.....	3,105.5	3,327.5	3,171.8	3,225.7	3,293.6	3,361.8	3,428.7	3,481.5
Personal consumption expenditures.....	3,012.1	3,227.5	3,076.3	3,128.1	3,194.6	3,261.2	3,326.4	3,377.2
Interest paid by consumers to business.....	92.1	98.9	94.4	96.4	98.2	99.8	101.2	103.3
Personal transfer payments to foreigners (net).....	1.3	1.0	1.2	1.2	.8	.8	1.1	1.1
Equals: Personal saving.....	104.2	144.3	144.0	149.9	127.8	145.7	153.8	214.5
Addenda:								
Disposable personal income:								
Total, billions of 1982 dollars.....	2,686.3	2,788.3	2,728.9	2,762.3	2,762.2	2,800.4	2,828.4	2,882.2
Per capita:								
Current dollars.....	13,157	14,103	13,543	13,760	13,919	14,231	14,497	14,924
1982 dollars.....	11,012	11,326	11,145	11,260	11,237	11,362	11,445	11,638
Population (mid-period, millions).....	243.9	246.2	244.8	245.3	245.8	246.5	247.1	247.7
Personal saving as percentage of disposable personal income.....	3.2	4.2	4.3	4.4	3.7	4.2	4.3	5.8

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

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

	[Billions of dollars]		Seasonally adjusted at annual rates					
	1987	1988	1988					1989
			IV	I	II	III	IV	
Personal consumption expenditures.....	3,012.1	3,227.5	3,076.3	3,128.1	3,194.6	3,261.2	3,326.4	3,377.2
Durable goods.....	421.9	451.1	422.0	437.8	449.8	452.9	464.0	459.4
Motor vehicles and parts.....	195.8	208.6	194.0	202.2	208.7	210.2	213.2	206.5
Furniture and household equipment.....	148.3	159.0	149.4	154.7	159.5	159.5	162.3	167.8
Other.....	77.8	83.6	78.6	81.0	81.5	83.2	88.5	85.2
Nondurable goods.....	997.9	1,046.9	1,012.4	1,016.2	1,036.6	1,060.8	1,073.9	1,093.0
Food.....	526.4	551.5	530.9	535.9	546.3	558.9	564.9	578.7
Clothing and shoes.....	178.2	186.4	181.2	180.5	183.2	188.4	193.6	193.9
Gasoline and oil.....	77.0	78.8	79.3	76.3	78.8	80.5	79.5	78.6
Other nondurable goods.....	216.3	230.2	220.9	223.5	228.2	233.0	235.9	241.8
Fuel oil and coal.....	16.2	17.2	16.6	17.0	17.2	17.4	17.3	16.5
Other.....	200.1	212.9	204.2	206.6	211.0	215.6	218.6	225.3
Services.....	1,592.3	1,729.6	1,641.9	1,674.1	1,708.2	1,747.5	1,788.5	1,824.8
Housing.....	467.7	501.6	481.8	490.1	496.4	506.0	514.0	522.0
Household operation.....	186.3	196.7	188.2	190.9	193.5	199.7	202.7	200.1
Electricity and gas.....	88.8	93.1	88.8	90.2	90.9	94.6	96.7	92.5
Other.....	97.5	103.6	99.5	100.7	102.7	105.1	106.0	107.5
Transportation.....	106.2	117.2	112.0	111.3	116.4	118.5	122.5	125.1
Medical care.....	360.3	404.1	374.4	384.9	396.6	410.4	424.7	440.4
Other.....	471.8	510.0	485.4	497.0	505.2	512.9	524.8	537.3

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

	[Billions of 1982 dollars]		Seasonally adjusted at annual rates					
	1987	1988	1988					1989
			IV	I	II	III	IV	
Personal consumption expenditures.....	2,521.0	2,592.2	2,531.7	2,559.8	2,579.0	2,603.8	2,626.2	2,633.6
Durable goods.....	390.9	409.7	387.6	401.1	410.6	410.4	416.5	411.9
Motor vehicles and parts.....	170.4	177.7	166.7	173.5	179.0	178.7	179.6	172.3
Furniture and household equipment.....	151.0	160.8	151.9	157.3	161.8	161.0	163.0	169.1
Other.....	69.6	71.2	69.0	70.3	69.8	70.7	73.9	70.5
Nondurable goods.....	890.5	899.6	890.5	892.7	893.6	904.5	907.4	911.4
Food.....	450.4	453.3	449.2	451.4	453.2	453.8	454.8	459.9
Clothing and shoes.....	160.5	161.1	160.3	159.6	156.3	164.2	164.1	164.3
Gasoline and oil.....	98.3	99.6	98.4	98.8	99.8	99.5	100.3	99.2
Other nondurable goods.....	181.3	185.6	182.6	183.0	184.2	187.0	188.2	188.0
Fuel oil and coal.....	21.1	22.4	21.4	22.0	21.8	22.4	23.6	21.2
Other.....	160.2	163.2	161.2	161.0	162.4	164.6	164.6	166.7
Services.....	1,239.5	1,283.0	1,253.6	1,265.9	1,274.8	1,288.9	1,302.2	1,310.3
Housing.....	358.3	366.5	361.7	363.6	365.6	367.7	369.0	371.1
Household operation.....	157.0	163.5	158.1	160.4	161.1	165.9	166.4	163.0
Electricity and gas.....	79.0	82.3	79.2	80.5	80.6	83.8	84.2	80.2
Other.....	78.0	81.2	79.0	80.0	80.4	82.1	82.2	82.8
Transportation.....	89.3	93.7	90.8	91.7	92.9	94.2	96.0	95.7
Medical care.....	268.2	282.0	274.0	276.9	279.5	283.4	288.2	293.3
Other.....	366.6	377.3	369.0	373.2	375.8	377.7	382.6	387.1

Table 3.2.—Federal Government Receipts and Expenditures

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1988					1989
			IV	I	II	III	IV	
Receipts	916.5	975.2	944.4	951.0	983.0	975.5	991.5	1,024.0
Personal tax and nontax receipts.....	405.6	413.4	422.3	404.6	425.0	408.3	415.8	431.6
Income taxes.....	396.8	404.0	414.1	395.9	415.1	398.6	406.4	422.1
Estate and gift taxes.....	7.4	7.9	6.7	7.1	8.2	8.3	7.9	7.9
Nontaxes.....	1.4	1.6	1.6	1.5	1.7	1.4	1.5	1.5
Corporate profits tax accruals.....	105.8	111.4	107.7	107.2	111.7	113.1	113.8	116.0
Federal Reserve banks.....	17.7	18.6	17.9	18.4	18.3	19.1	18.5	19.7
Other.....	88.1	92.9	89.8	88.8	93.4	94.0	95.3	96.4
Indirect business tax and nontax accruals.....	54.0	56.7	55.0	55.9	55.9	57.1	57.9	58.3
Excise taxes.....	31.8	33.1	32.2	32.4	33.0	33.2	33.9	33.7
Customs duties.....	15.4	16.4	15.8	16.5	15.9	16.3	16.8	17.3
Nontaxes.....	6.8	7.2	7.0	7.0	7.0	7.5	7.2	7.2
Contributions for social insurance.....	351.0	393.7	359.4	383.4	390.3	397.0	404.0	418.2
Expenditures	1,074.2	1,117.6	1,104.9	1,106.1	1,116.3	1,099.0	1,149.0	1,182.5
Purchases of goods and services.....	382.0	381.0	391.4	377.7	382.2	367.7	396.3	397.8
National defense.....	295.3	298.4	299.2	298.4	298.8	294.3	301.9	299.8
Nondefense.....	86.7	82.6	92.2	79.3	83.4	73.4	94.3	98.1
Transfer payments.....	414.2	440.1	422.5	434.4	437.6	440.7	447.5	460.5
To persons.....	402.0	427.2	406.1	422.9	426.5	428.3	430.9	448.8
To foreigners.....	12.2	12.9	16.4	11.5	11.0	12.5	16.6	11.7
Grants-in-aid to State and local governments.....	102.7	111.5	101.4	111.1	110.4	111.5	113.0	118.9
Net interest paid.....	143.0	153.9	149.5	149.9	152.1	154.9	158.9	168.9
Interest paid.....	162.5	174.4	168.4	172.5	171.8	174.3	179.1	188.4
To persons and business.....	138.4	146.7	143.8	146.0	145.0	146.5	149.5	157.0
To foreigners.....	24.1	27.7	24.6	26.6	26.6	27.8	29.6	31.4
Less: Interest received by government.....	19.4	20.5	18.9	22.6	19.8	19.4	20.2	19.5
Subsidies less current surplus of government enterprises.....	32.4	31.1	39.7	33.0	34.0	24.1	33.3	36.3
Subsidies.....	30.8	28.6	37.6	29.6	32.5	16.8	35.4	34.6
Less: Current surplus of government enterprises.....	-1.6	-2.5	-2.1	-3.3	-1.5	-7.3	2.1	-1.8
Less: Wage accruals less disbursements.....	0	0	-2	0	0	0	0	0
Surplus or deficit (-), national income and product accounts	-157.8	-142.3	-160.4	-155.1	-133.3	-123.5	-157.5	-158.5
Social insurance funds.....	27.5	53.2	34.9	44.8	49.8	56.0	62.1	61.3
Other.....	-185.3	-195.5	-195.3	-199.8	-183.1	-179.5	-219.6	-219.7

Table 3.3.—State and Local Government Receipts and Expenditures

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1988					1989
			IV	I	II	III	IV	
Receipts	655.7	703.1	666.9	685.5	698.4	708.0	720.4	735.6
Personal tax and nontax receipts.....	164.7	176.9	168.6	171.3	176.0	178.2	182.2	186.0
Income taxes.....	86.1	92.7	88.1	89.3	92.6	93.3	95.7	97.8
Nontaxes.....	64.8	69.4	66.5	67.6	68.7	69.9	71.2	72.5
Other.....	13.8	14.8	14.1	14.3	14.7	15.0	15.3	15.7
Corporate profits tax accruals.....	27.9	31.3	28.5	29.7	31.5	31.7	32.3	32.2
Indirect business tax and nontax accruals.....	312.3	332.3	319.2	323.5	329.8	335.3	340.8	345.6
Sales taxes.....	148.7	158.9	152.5	154.3	157.9	160.2	163.2	164.8
Property taxes.....	121.9	129.6	124.7	126.6	128.5	130.6	132.9	135.1
Other.....	41.6	43.8	42.0	42.6	43.4	44.5	44.7	45.7
Contributions for social insurance.....	48.1	51.0	49.2	49.9	50.6	51.4	52.1	52.8
Federal grants-in-aid.....	102.7	111.5	101.4	111.1	110.4	111.5	112.0	118.9
Expenditures	602.8	647.9	617.2	629.7	642.1	652.0	667.8	680.5
Purchases of goods and services.....	542.8	583.9	555.9	567.5	579.4	587.6	601.2	613.9
Compensation of employees.....	321.7	345.0	329.9	336.4	342.1	347.8	353.6	359.7
Other.....	221.1	239.0	226.0	231.1	237.3	239.8	247.6	254.2
Transfer payments to persons.....	118.7	128.2	121.7	123.8	126.0	129.3	133.6	135.6
Net interest paid.....	-37.7	-40.8	-38.8	-39.5	-40.3	-41.2	-42.1	-43.1
Interest paid.....	53.3	59.0	55.4	56.8	58.3	59.7	61.2	62.7
Less: Interest received by government.....	91.0	99.8	94.2	96.3	98.6	101.0	103.3	105.8
Less: Dividends received by government.....	6.9	8.2	7.5	7.8	8.1	8.4	8.7	9.0
Subsidies less current surplus of government enterprises.....	-14.0	-15.2	-14.1	-14.4	-14.7	-15.3	-16.2	-17.0
Subsidies.....	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0
Less: Current surplus of government enterprises.....	15.0	16.2	15.1	15.5	15.8	16.3	17.3	18.0
Less: Wage accruals less disbursements.....	0	0	0	0	0	0	0	0
Surplus or deficit (-), national income and product accounts	52.9	55.2	49.7	55.8	56.2	56.0	52.6	55.2
Social insurance funds.....	62.1	68.5	64.6	66.1	67.7	69.3	70.9	72.5
Other.....	-9.2	-13.3	-14.8	-10.3	-11.5	-13.3	-18.2	-17.3

Table 3.7B.—Government Purchases of Goods and Services by Type

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1988					1989
			IV	I	II	III	IV	
Government purchases of goods and services	924.7	964.9	947.3	945.2	961.6	955.3	997.5	1,011.8
Federal	382.0	381.0	391.4	377.7	382.2	367.7	396.3	397.8
National defense.....	295.3	298.4	299.2	298.4	298.8	294.3	301.9	299.8
Durable goods.....	89.8	84.1	88.4	83.8	84.2	81.7	86.6	83.4
Nondurable goods.....	10.5	11.0	11.3	10.8	11.4	10.7	11.3	11.2
Services.....	187.8	196.2	191.9	197.3	195.8	194.8	197.0	198.4
Compensation of employees.....	108.9	112.9	110.0	112.7	112.6	112.9	113.5	118.4
Military.....	73.2	75.8	73.9	75.5	75.7	75.9	76.2	79.2
Civilian.....	35.7	37.1	36.2	37.2	37.0	37.0	37.3	39.2
Other services.....	78.9	83.3	81.9	84.6	83.1	81.8	83.5	80.0
Structures.....	7.2	7.1	7.6	6.6	7.5	7.2	7.1	6.7
Nondefense.....	86.7	82.6	92.2	79.3	83.4	73.4	94.3	98.1
Durable goods.....	4.1	4.6	4.5	4.6	4.8	4.2	4.6	4.7
Nondurable goods.....	3.2	-7.9	4.9	-9.1	-8.2	-16.4	2.0	2.5
Commodity Credit Corporation inventory change.....	-3.3	-15.4	-1.4	-17.5	-16.8	-22.6	-4.8	-5.2
Other nondurables.....	6.5	7.5	6.3	8.4	8.6	6.1	6.8	7.7
Services.....	70.9	78.1	74.5	76.4	78.8	77.0	80.1	82.9
Compensation of employees.....	42.1	44.8	42.7	44.0	44.7	45.1	45.5	47.8
Other services.....	28.8	33.2	31.8	32.3	34.1	31.9	34.7	35.1
Structures.....	8.5	7.9	8.3	7.5	7.9	8.6	7.6	8.0
State and local	542.8	583.9	555.9	567.5	579.4	587.6	601.2	613.9
Durable goods.....	26.9	29.6	27.8	28.4	29.2	30.0	30.7	31.5
Nondurable goods.....	44.1	47.3	45.0	45.3	47.0	48.1	48.8	51.3
Services.....	409.6	440.6	420.0	428.7	436.7	444.6	452.5	461.8
Compensation of employees.....	321.7	345.0	329.9	336.4	342.1	347.8	353.6	359.7
Other services.....	87.9	95.7	90.2	92.2	94.6	96.8	98.9	102.1
Structures.....	62.2	66.4	63.1	65.2	66.4	65.0	69.2	69.3

Table 3.8B.—Government Purchases of Goods and Services by Type in Constant Dollars

[Billions of 1982 dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1988					1989
			IV	I	II	III	IV	
Government purchases of goods and services	780.2	782.3	792.6	776.4	783.8	773.5	795.5	798.3
Federal	339.0	328.7	347.7	327.8	331.6	320.1	335.5	335.8
National defense.....	264.9	261.8	268.2	264.6	263.6	256.4	262.5	256.7
Durable goods.....	87.9	84.1	88.4	84.9	85.1	81.2	85.0	82.4
Nondurable goods.....	14.7	14.3	15.6	14.6	14.8	13.2	14.7	15.0
Services.....	156.4	157.8	158.0	159.9	157.8	156.4	157.4	154.1
Compensation of employees.....	89.3	89.1	89.5	89.3	88.8	89.0	89.3	89.3
Military.....	60.2	60.1	60.3	60.1	59.9	60.0	60.2	60.1
Civilian.....	29.0	29.0	29.2	29.2	28.9	28.9	29.1	29.2
Other services.....	67.2	68.7	68.6	70.5	69.0	67.4	68.0	64.8
Structures.....	5.9	5.6	6.1	5.2	5.9	5.6	5.5	5.1
Nondefense.....	74.1	66.9	79.5	63.2	67.9	63.7	72.9	79.2
Durable goods.....	4.8	5.5	5.4	5.6	5.8	5.2	5.4	5.5
Nondurable goods.....	2.5	-8.5	4.9	-11.1	-8.6	-11.0	-3.4	2.3
Commodity Credit Corporation inventory change.....	-3.9	-15.5	-1.1	-19.3	-16.8	-16.5	-9.4	-4.7
Other nondurables.....	6.4	7.0	6.1	8.2	8.3	5.5	6.0	7.0
Services.....	59.2	63.2	61.8	62.2	63.9	62.1	64.5	64.6
Compensation of employees.....	34.2	35.1	34.4	34.5	35.0	35.2	35.5	35.5
Other services.....	25.0	28.1	27.4	27.7	28.9	26.9	29.0	29.1
Structures.....	7.5	6.8	7.3	6.5	6.8	7.3	6.5	6.7
State and local	441.2	453.6	444.9	448.7	452.2	453.4	460.0	462.4
Durable goods.....	24.4	26.2	25.1					

Table 3.9.—National Defense Purchases of Goods and Services

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates						
			1987	1988					1989
				IV	I	II	III	IV		F
National defense purchases	295.3	298.4	299.2	298.4	298.8	294.3	301.9	299.8	
Durable goods	89.8	84.1	88.4	83.8	84.2	81.7	86.6	83.4	
Military equipment.....	77.3	73.0	75.9	72.3	73.3	70.9	75.4	73.2	
Aircraft.....	33.4	29.3	33.7	29.8	29.8	27.4	29.9	27.8	
Missiles.....	13.0	12.6	13.3	11.7	12.8	11.7	14.2	13.7	
Ships.....	8.5	8.5	8.2	8.4	7.9	8.0	9.4	10.4	
Vehicles.....	4.8	4.1	4.6	4.5	4.2	4.2	3.6	3.5	
Electronic equipment.....	5.8	6.2	5.6	5.9	6.0	5.7	7.0	5.5	
Other.....	11.8	12.4	10.5	12.0	12.6	13.8	11.1	12.2	
Other durable goods.....	12.5	11.1	12.4	11.5	11.0	10.8	11.2	10.3	
Nondurable goods	10.5	11.0	11.3	10.8	11.4	10.7	11.3	11.2	
Petroleum products.....	4.2	4.4	5.3	4.3	4.4	4.3	4.7	4.6	
Ammunition.....	3.8	4.0	3.6	3.8	4.5	3.7	4.0	3.9	
Other nondurable goods.....	2.5	2.6	2.4	2.6	2.4	2.7	2.5	2.7	
Services	187.8	196.2	191.9	197.3	195.8	194.8	197.0	198.4	
Compensation of employees.....	108.9	112.9	110.0	112.7	112.6	112.9	113.5	118.4	
Military.....	73.2	75.8	73.9	75.5	75.7	75.9	76.2	79.2	
Civilian.....	35.7	37.1	36.2	37.2	37.0	37.0	37.3	39.2	
Other services.....	78.9	83.3	81.9	84.6	83.1	81.8	83.5	80.0	
Contractual research and development.....	28.5	30.5	28.4	30.6	30.2	30.1	31.0	30.9	
Installation support ¹	22.3	24.0	23.4	24.7	23.9	23.6	23.6	22.8	
Weapons support ²	9.0	9.2	9.3	9.3	9.2	9.2	9.1	8.3	
Personnel support ³	11.3	11.6	11.9	11.7	11.6	11.7	11.5	10.9	
Transportation of materiel.....	4.0	4.1	4.5	4.3	4.2	3.9	4.0	3.3	
Travel of persons.....	3.8	3.9	3.9	3.7	3.9	3.9	3.9	3.8	
Other.....	0	.1	.7	.3	.1	-.5	.3	0	
Structures	7.2	7.1	7.6	6.6	7.5	7.2	7.1	6.7	
Military facilities.....	4.9	4.7	5.3	4.2	5.0	4.9	4.6	4.3	
Other.....	2.4	2.4	2.3	2.4	2.4	2.3	2.5	2.5	

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

Table 4.1.—Foreign Transactions in the National Income and Product Accounts

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates						
			1987	1988					1989
				IV	I	II	III	IV		F
Receipts from foreigners	428.0	519.7	459.7	487.8	507.1	536.1	548.0	577.8	
Exports of goods and services	428.0	519.7	459.7	487.8	507.1	536.1	548.0	577.8	
Merchandise.....	254.8	321.6	276.7	300.8	316.9	331.0	337.6	357.3	
Durable goods.....	158.3	201.3	175.0	188.2	198.4	204.8	213.8	224.6	
Nondurable goods.....	96.4	120.2	101.7	112.5	118.5	126.1	123.7	132.7	
Services.....	173.3	198.2	183.0	187.0	190.2	205.1	210.4	220.4	
Factor income ¹	96.1	111.9	105.1	104.7	104.2	116.1	122.5	129.4	
Other.....	77.2	86.3	77.9	82.3	86.1	89.0	87.9	91.0	
Capital grants received by the United States (net)	0	0	0	0	0	0	0	0	
Payments to foreigners	428.0	519.7	459.7	487.8	507.1	536.1	548.0	577.8	
Imports of goods and services	551.1	614.4	585.4	599.9	597.5	616.0	644.0	655.2	
Merchandise.....	413.0	449.7	438.0	441.7	439.4	448.6	469.0	470.1	
Durable goods.....	264.5	295.2	281.8	287.5	286.6	293.4	313.2	311.3	
Nondurable goods.....	148.5	154.5	156.2	154.2	152.7	155.2	155.8	158.7	
Services.....	138.1	164.7	147.4	158.2	158.2	167.5	175.0	185.1	
Factor income ¹	66.6	87.0	74.1	82.3	82.9	89.3	93.5	102.2	
Other.....	71.5	77.7	73.3	75.8	75.3	78.1	81.5	83.0	
Transfer payments (net)	13.5	13.9	17.6	12.7	11.8	13.3	17.6	12.8	
From persons (net).....	1.3	1.0	1.2	1.2	.8	.8	1.1	1.1	
From government (net).....	12.2	12.9	16.4	11.5	11.0	12.5	16.6	11.7	
Interest paid by government to foreigners	24.1	27.7	24.6	26.6	26.8	27.8	29.6	31.4	
Net foreign investment	-160.6	-136.2	-167.8	-151.3	-129.1	-121.1	-143.3	-121.7	

1. Line 7 less line 16 equals rest-of-the-world product as shown in table 1.7.

Table 3.10.—National Defense Purchases of Goods and Services in Constant Dollars

[Billions of 1982 dollars]

	1987	1988	Seasonally adjusted at annual rates						
			1987	1988					1989
				IV	I	II	III	IV		F
National defense purchases	264.9	261.8	268.2	264.6	263.6	256.4	262.5	256.7	
Durable goods	87.9	84.1	88.4	84.9	85.1	81.2	85.0	82.4	
Military equipment.....	72.5	69.4	72.6	69.5	70.3	67.2	70.6	68.8	
Aircraft.....	30.7	28.2	31.9	29.0	28.6	26.5	28.7	26.7	
Missiles.....	12.8	12.7	13.7	12.2	13.3	11.5	13.6	13.8	
Ships.....	7.3	7.1	7.1	7.2	6.8	6.7	7.8	8.4	
Vehicles.....	5.1	4.4	4.9	4.7	4.5	4.4	3.9	3.9	
Electronic equipment.....	5.5	5.8	5.3	5.5	5.7	5.5	6.6	5.2	
Other.....	11.0	11.2	9.7	10.9	11.4	12.5	9.9	10.8	
Other durable goods.....	15.4	14.7	15.9	15.4	14.9	14.0	14.4	13.6	
Nondurable goods	14.7	14.3	15.6	14.6	14.8	13.2	14.7	15.0	
Petroleum products.....	8.4	7.8	9.5	8.3	7.8	6.9	8.2	8.3	
Ammunition.....	4.0	4.3	3.9	4.1	4.9	4.0	4.3	4.4	
Other nondurable goods.....	2.3	2.2	2.2	2.3	2.2	2.3	2.2	2.3	
Services	156.4	157.8	158.0	159.9	157.8	156.4	157.4	154.1	
Compensation of employees.....	89.3	89.1	89.5	89.3	88.8	89.0	89.3	89.3	
Military.....	60.2	60.1	60.3	60.1	59.9	60.0	60.2	60.1	
Civilian.....	29.0	29.0	29.2	29.2	28.9	28.9	29.1	29.2	
Other services.....	67.2	68.7	68.6	70.5	69.0	67.4	68.0	64.8	
Contractual research and development.....	24.7	25.5	24.2	25.9	25.4	25.0	25.5	25.3	
Installation support ¹	17.9	18.8	18.4	19.5	18.8	18.4	18.4	17.7	
Weapons support ²	7.9	7.8	8.0	8.0	7.9	7.8	7.7	6.9	
Personnel support ³	8.8	8.7	9.0	8.9	8.7	8.7	8.5	7.9	
Transportation of materiel.....	4.2	4.2	4.6	4.4	4.3	4.0	4.0	3.3	
Travel of persons.....	3.7	3.8	3.8	3.6	3.8	3.8	3.8	3.7	
Other.....	0	.1	.5	.2	.1	-.4	.3	0	
Structures	5.9	5.6	6.1	5.2	5.9	5.6	5.5	5.1	
Military facilities.....	3.9	3.7	4.2	3.3	4.0	3.8	3.5	3.2	
Other.....	2.0	1.9	1.9	1.9	1.9	1.8	2.0	1.9	

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

Table 4.2.—Exports and Imports of Goods and Services in Constant Dollars

[Billions of 1982 dollars]

	1987	1988	Seasonally adjusted at annual rates						
			1987	1988					1989
				IV	I	II	III	IV		F
Exports of goods and services	427.8	504.8	459.2	486.2	496.9	514.0	522.1	541.0	
Merchandise.....	280.1	341.5	304.6	329.0	339.1	345.9	351.9	364.7	
Durable goods.....	177.3	226.4	198.8	215.4	223.1	229.4	237.8	243.6	
Nondurable goods.....	102.8	115.0	105.8	113.6	116.0	116.5	114.2	121.1	
Services.....	147.7	163.4	154.6	157.1	157.8	168.1	170.2	176.3	
Factor income ¹	80.3	90.2	87.0	86.3	84.5	93.0	96.9	101.3	
Other.....	67.4	73.1	67.6	70.9	73.3	75.1	73.3	75.0	
Imports of goods and services	556.7	605.0	585.2	595.1	589.5	607.9	627.4	628.8	
Merchandise.....	439.0	469.8	461.0	463.1	459.1	470.9	486.0	480.6	
Durable goods.....	260.2	283.2	276.9	279.1	276.3	283.5	294.1	294.6	
Nondurable goods.....	178.8	186.6	184.1	184.1	182.8	187.4	191.9	186.0	
Services.....	117.7	135.3	124.2	132.0	130.4	137.0	141.4	148.2	
Factor income ¹	54.7	69.2	60.3	66.8	66.3	70.6	73.0	79.1	
Other.....	63.0	66.0	63.9	65.2	64.2	66.4	68.4	69.1	

1. Line 6 less line 13 equals rest-of-the-world product as shown in table 1.8.

Table 4.3.—Merchandise Exports and Imports by Type of Product and by End-Use Category

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987	1988				1989
				IV	I	II	III		IV	F
Merchandise exports	254.8	321.6	276.7	300.8	316.9	331.0	337.6	357.3
Foods, feeds, and beverages	24.6	33.2	25.4	30.1	32.8	36.2	33.7	38.1
Industrial supplies and materials	66.5	83.0	71.0	77.8	82.1	86.0	86.2	92.7
Durable goods	20.9	27.8	22.8	24.6	28.0	28.4	30.3	32.7
Nondurable goods	45.6	55.2	48.1	53.3	54.1	57.6	55.9	60.0
Capital goods, except autos	88.1	111.6	96.5	105.4	109.2	114.1	117.8	121.5
Autos	26.3	32.6	30.5	31.7	32.2	32.2	34.4	35.4
Consumer goods	18.0	23.8	19.3	21.2	22.8	24.9	26.2	30.3
Durable goods	7.4	10.6	8.1	9.3	10.1	11.4	11.7	15.3
Nondurable goods	10.5	13.2	11.1	11.9	12.8	13.5	14.4	15.0
Other	31.3	37.3	34.1	34.6	37.8	37.5	39.3	39.3
Durable goods ¹	15.7	18.7	17.0	17.3	18.9	18.8	19.6	19.7
Nondurable goods ¹	15.7	18.6	17.0	17.3	18.9	18.8	19.6	19.7
Merchandise imports	413.0	449.7	438.0	441.7	439.4	448.6	469.0	470.1
Foods, feeds, and beverages	24.7	25.0	25.1	26.0	23.8	25.0	25.2	25.3
Industrial supplies and materials, excluding petroleum	66.6	77.6	72.3	76.7	75.3	77.4	80.8	81.7
Durable goods	35.6	42.0	38.6	41.8	40.1	41.2	44.9	45.5
Nondurable goods	31.0	35.6	33.7	35.0	35.2	36.2	36.0	36.2
Petroleum and products	42.9	39.4	45.2	39.8	41.1	39.4	37.2	43.6
Capital goods, except autos	84.8	101.4	93.2	96.4	100.7	101.9	106.5	107.1
Autos	85.2	88.1	88.7	87.4	84.5	86.4	93.8	91.9
Consumer goods	88.7	96.4	92.0	94.2	92.8	96.1	102.4	99.2
Durable goods	49.0	52.8	50.6	51.5	50.7	52.6	56.5	56.2
Nondurable goods	39.7	43.6	41.4	42.8	42.1	43.4	46.0	43.0
Other	20.2	21.9	21.4	21.1	21.1	22.4	23.0	21.2
Durable goods ¹	10.1	11.0	10.7	10.5	10.6	11.2	11.3	10.6
Nondurable goods ¹	10.1	11.0	10.7	10.5	10.6	11.2	11.5	10.6
Addenda:								
Exports of agricultural products ²	29.5	38.7	30.5	36.1	38.5	41.6	38.5	42.9
Exports of nonagricultural products	225.3	282.9	246.2	264.7	278.4	289.4	299.0	314.4
Imports of nonpetroleum products	370.1	410.3	392.8	401.9	398.3	409.2	431.8	426.5

1. Because no data are available to distribute exports and imports of "other" merchandise between durable and nondurable goods, they are distributed equally.
2. Includes parts of line 2 and line 5.

NOTE.—Beginning with 1985, the definitions of the end-use categories have been changed. For a description of the new definitions, see the technical notes in "U.S. International Transactions, First Quarter 1988," SURVEY OF CURRENT BUSINESS 68 (June 1988): 34-39 and 57.

Table 4.4.—Merchandise Exports and Imports by Type of Product and by End-Use Category in Constant Dollars

[Billions of 1982 dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987	1988				1989
				IV	I	II	III		IV	F
Merchandise exports	280.1	341.5	304.6	329.0	339.1	345.9	351.9	364.7
Foods, feeds, and beverages	29.9	33.3	30.5	34.1	34.9	33.2	31.2	35.0
Industrial supplies and materials	69.7	79.8	72.0	76.9	79.4	81.3	81.5	86.6
Durable goods	21.9	26.7	23.2	24.3	27.1	26.8	28.6	30.6
Nondurable goods	47.8	53.1	48.9	52.6	52.3	54.4	52.9	56.0
Capital goods, except autos	109.5	144.2	124.5	138.0	140.6	147.1	150.9	151.3
Autos	23.2	28.5	26.8	27.9	28.3	28.0	29.7	30.3
Consumer goods	16.7	21.2	17.6	19.1	20.5	22.2	23.1	26.3
Durable goods	7.3	9.8	7.8	8.8	9.4	10.4	10.7	13.8
Nondurable goods	9.5	11.4	9.8	10.3	11.1	11.8	12.4	12.5
Other	31.0	34.5	33.2	33.0	35.4	34.1	35.5	35.3
Durable goods ¹	15.5	17.3	16.6	16.5	17.7	17.0	17.8	17.6
Nondurable goods ¹	15.5	17.3	16.6	16.5	17.7	17.0	17.8	17.6
Merchandise imports	439.0	469.8	461.0	463.1	459.1	470.9	486.0	480.6
Foods, feeds, and beverages	23.9	22.8	23.7	23.8	21.7	22.7	22.8	23.0
Industrial supplies and materials, excluding petroleum	74.2	74.7	77.0	77.1	72.8	73.7	75.3	74.9
Durable goods	39.8	40.5	41.1	42.0	38.8	39.3	41.8	41.7
Nondurable goods	34.5	34.3	35.9	35.1	34.0	34.4	33.5	33.2
Petroleum and products	77.9	86.4	81.4	82.2	85.4	87.1	90.7	88.1
Capital goods, except autos	99.4	122.3	112.2	116.4	121.5	125.0	126.3	129.8
Autos	68.1	67.1	69.9	67.7	64.8	65.9	69.9	68.2
Consumer goods	77.1	78.1	77.8	77.6	75.0	77.7	82.1	79.2
Durable goods	43.8	44.1	44.1	43.8	42.2	44.0	46.6	46.2
Nondurable goods	33.4	34.0	33.7	33.8	32.8	33.8	35.6	33.0
Other	18.3	18.4	18.9	18.1	17.8	18.8	18.9	17.4
Durable goods ¹	9.2	9.2	9.5	9.1	8.9	9.4	9.4	8.7
Nondurable goods ¹	9.2	9.2	9.5	9.1	8.9	9.4	9.4	8.7
Addenda:								
Exports of agricultural products ²	34.9	38.2	35.2	39.3	39.8	37.9	35.6	39.4
Exports of nonagricultural products	245.2	303.3	269.4	289.7	299.3	308.0	316.3	325.3
Imports of nonpetroleum products	361.1	383.4	379.6	380.9	373.7	383.8	395.4	392.5

1. Because no data are available to distribute exports and imports of "other" merchandise between durable and nondurable goods, they are distributed equally.
2. Includes parts of line 2 and line 5.

NOTE.—Beginning with 1985, the definitions of the end-use categories have been changed. For a description of the new definitions, see the technical notes in "U.S. International Transactions, First Quarter 1988," SURVEY OF CURRENT BUSINESS 68 (June 1988): 34-39 and 57.

Table 5.1.—Gross Saving and Investment

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987	1988				1989
				IV	I	II	III		IV	F
Gross saving	560.4	644.6	603.4	627.0	634.1	665.4	651.9	695.8
Gross private saving	665.3	731.8	714.1	726.3	711.2	732.9	756.7	799.2
Personal saving	104.2	144.3	144.0	149.9	127.8	145.7	153.8	214.5
Undistributed corporate profits with inventory valuation and capital consumption adjustments	81.1	81.1	80.5	78.1	80.1	79.5	86.8	59.9
Undistributed profits	47.4	59.4	46.4	48.1	59.6	63.4	66.4	60.5
Inventory valuation adjustment	-18.0	-23.8	-18.2	-19.4	-27.4	-29.3	-19.2	-33.9
Capital consumption adjustment	51.7	45.6	52.4	49.4	48.0	45.4	39.6	33.3
Corporate capital consumption allowances with capital consumption adjustment	297.5	315.7	303.7	309.8	313.3	316.8	323.0	328.2
Noncorporate capital consumption allowances with capital consumption adjustment	182.5	190.6	185.8	188.5	189.9	190.9	193.1	196.6
Wage accruals less disbursements	0	0	0	0	0	0	0	0
Government surplus or deficit (-), national income and product accounts	-104.9	-87.2	-110.7	-99.2	-77.1	-67.5	-104.8	-103.3
Federal	-157.8	-142.3	-160.4	-155.1	-133.3	-123.5	-157.5	-158.5
State and local	52.9	55.2	49.7	55.8	56.2	56.0	52.6	55.2
Capital grants received by the United States (net)	0	0	0	0	0	0	0	0
Gross investment	552.3	630.3	597.0	612.0	629.0	651.4	628.7	671.9
Gross private domestic investment	712.9	766.5	764.9	763.4	758.1	772.5	772.0	793.6
Net foreign investment	-160.6	-136.2	-167.8	-151.3	-129.1	-121.1	-143.3	-121.7
Statistical discrepancy	-8.1	-14.3	-6.4	-15.0	-5.1	-14.0	-23.2	-23.9

Table 5.8.—Change in Business Inventories by Industry

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987		1988			
			IV	I	II	III	IV	r
Change in business inventories	39.2	48.4	72.0	65.3	43.7	49.7	34.7	43.5
Farm.....	-1.5	6.1	-8	15.9	10.6	7.8	-9.8	14.3
Nonfarm.....	40.7	42.2	72.8	49.4	33.1	41.9	44.6	29.3
Change in book value.....	64.5	77.6	96.9	78.1	74.7	83.8	73.8	82.0
Inventory valuation adjustment ¹	-23.8	-35.4	-24.1	-28.7	-41.6	-41.9	-29.2	-52.8
Manufacturing.....	6.1	10.6	14.8	15.4	6.3	6.9	13.8	6.7
Durable goods.....	4.6	9.7	11.7	9.6	6.7	8.5	13.8	12.3
Nondurable goods.....	1.5	1.0	3.2	5.8	-4	-1.6	0	-5.6
Wholesale trade.....	7.4	10.0	22.0	24.6	-4	11.1	4.9	-1.1
Durable goods.....	5.3	8.2	15.4	21.2	-7.9	16.8	2.9	3.2
Nondurable goods.....	2.1	1.8	6.6	3.4	7.5	-5.7	2.0	-4.2
Merchant wholesalers.....	7.2	8.6	20.1	22.6	.3	8.2	3.1	-2.3
Durable goods.....	4.8	6.7	13.6	19.3	-7.8	14.7	.6	2.6
Nondurable goods.....	2.3	1.9	6.5	3.3	8.1	-6.5	2.6	-5.0
Nonmerchant wholesalers.....	.2	1.5	1.8	2.0	-7	2.8	1.8	1.3
Durable goods.....	.5	1.5	1.8	1.9	-1	2.1	2.4	.6
Nondurable goods.....	-.3	-.1	.1	.2	-.6	.8	-.6	.7
Retail trade.....	21.3	11.3	28.2	1.2	15.6	13.3	15.0	14.0
Durable goods.....	14.6	8.5	21.9	-7.0	14.5	14.4	12.2	10.6
Automotive.....	10.6	4.9	15.1	-11.6	12.7	10.1	8.7	12.3
Other.....	4.0	3.6	6.8	4.6	1.8	4.4	3.5	-1.7
Nondurable goods.....	6.7	2.7	6.2	8.2	1.1	-1.1	2.8	3.4
Other.....	5.9	10.3	7.8	8.2	11.6	10.7	10.8	9.6
Durable goods.....	2.0	4.5	1.4	2.9	4.5	5.4	5.2	5.7
Nondurable goods.....	3.9	5.8	6.4	5.3	7.0	5.3	5.6	3.9

1. The inventory valuation adjustment (IVA) shown in this table differs from the IVA that adjusts business incomes. The IVA in this table reflects the mix of methods (first-in, first-out; last-in, first-out; etc.) underlying book value inventories derived primarily from Census Bureau statistics. This mix differs from that underlying business income derived primarily from Internal Revenue Service statistics.

Table 5.10.—Inventories and Final Sales of Business by Industry

[Billions of dollars]

	1987	1988	Seasonally adjusted quarterly totals					
			1987		1988			
			IV	I	II	III	IV	r
Inventories¹	941.5	965.2	992.3	1,015.8	1,035.6	1,061.5		
Farm.....	68.8	72.6	78.7	81.8	81.2	83.9		
Nonfarm.....	872.8	892.6	913.6	934.0	954.4	977.6		
Durable goods.....	513.3	523.5	533.3	549.0	563.6	578.0		
Nondurable goods.....	359.5	369.1	380.2	385.0	390.8	399.6		
Manufacturing.....	346.2	353.4	360.4	366.0	372.7	381.3		
Durable goods.....	231.9	236.1	240.6	244.8	250.9	257.6		
Nondurable goods.....	114.3	117.3	119.7	121.3	121.8	123.7		
Wholesale trade.....	201.0	209.3	213.6	219.5	222.5	226.4		
Durable goods.....	130.6	137.0	136.4	141.9	144.3	147.0		
Nondurable goods.....	70.5	72.3	77.2	77.6	78.2	79.3		
Merchant wholesalers.....	175.2	182.7	186.7	191.8	194.1	196.5		
Durable goods.....	115.0	120.8	120.1	124.8	126.4	128.7		
Nondurable goods.....	60.2	61.9	66.7	67.0	67.7	67.8		
Nonmerchant wholesalers.....	25.8	26.7	26.9	27.7	28.4	29.8		
Durable goods.....	15.6	16.2	16.4	17.0	17.8	18.3		
Nondurable goods.....	10.2	10.5	10.5	10.7	10.6	11.5		
Retail trade.....	213.7	215.2	221.5	226.7	232.5	238.5		
Durable goods.....	109.4	108.0	112.3	116.6	120.8	124.0		
Automotive.....	56.7	53.8	57.2	60.0	62.8	65.8		
Other.....	52.7	54.2	55.1	56.6	58.0	58.2		
Nondurable goods.....	104.3	107.2	109.1	110.1	111.7	114.5		
Other.....	111.7	114.7	118.1	121.8	126.6	131.4		
Final sales²	325.1	330.2	339.5	344.6	352.3	359.0		
Final sales of goods and structures ²	185.6	187.8	194.0	196.5	201.0	204.9		
Ratio of inventories to final sales								
Inventories to final sales.....	2.90	2.92	2.92	2.95	2.94	2.96		
Nonfarm inventories to final sales.....	2.68	2.70	2.69	2.71	2.71	2.72		
Nonfarm inventories to final sales of goods and structures.....	4.70	4.75	4.71	4.75	4.75	4.77		

1. Inventories are as of the end of the quarter. The quarter-to-quarter change in inventories calculated from current-dollar inventories in this table is not the current-dollar change in business inventories (CBI) component of GNP. The former is the difference between two inventory stocks, each valued at their respective end-of-quarter prices. The latter is the change in the physical volume of inventories valued at average prices of the quarter. In addition, changes calculated from this table are at quarterly rates, whereas CBI is stated at annual rates.

2. Quarterly totals at monthly rates. Business final sales equals final sales less gross product of households and institutions, government, and rest of the world, and includes a small amount of final sales by farms.

Table 5.9.—Change in Business Inventories by Industry in Constant Dollars

[Billions of 1982 dollars]

	1987	1988	Seasonally adjusted at annual rates					
			1987		1988			
			IV	I	II	III	IV	r
Change in business inventories	34.4	42.5	67.1	66.0	35.3	39.5	29.1	38.0
Farm.....	-2.5	2.5	-1.1	14.1	5.3	-8	-8.5	8.8
Nonfarm.....	36.9	40.0	68.2	51.9	30.1	40.4	37.6	29.1
Manufacturing.....	5.2	9.6	14.4	15.8	5.8	5.7	11.2	6.1
Durable goods.....	4.1	8.8	10.6	8.7	6.2	8.0	12.3	10.6
Nondurable goods.....	1.1	.8	3.8	7.1	-4	-2.3	-1.1	-4.4
Wholesale trade.....	5.8	9.5	19.4	24.9	-1.2	11.2	3.2	1.1
Durable goods.....	4.9	7.3	14.1	18.2	-6.8	15.1	2.9	2.8
Nondurable goods.....	.9	2.2	5.3	6.7	5.7	-3.9	.3	-1.7
Merchant wholesalers.....	5.8	8.2	18.1	22.7	0	8.1	2.2	-9
Durable goods.....	4.4	5.8	12.5	16.4	-6.8	13.1	.6	2.2
Nondurable goods.....	1.4	2.4	5.6	6.3	6.7	-5.1	1.6	-3.1
Nonmerchant wholesalers.....	0	1.3	1.3	2.2	-1.1	3.2	1.0	1.9
Durable goods.....	.5	1.5	1.7	1.8	-1	2.0	2.3	.5
Nondurable goods.....	-.5	-.2	-.4	.4	-1.1	1.2	-1.3	1.4
Retail trade.....	19.2	9.9	25.1	1.5	13.7	11.7	12.9	12.0
Durable goods.....	13.1	7.5	19.5	-5.9	12.7	12.7	10.5	8.9
Automotive.....	9.3	4.3	13.2	-10.1	11.0	8.7	7.5	10.5
Other.....	3.7	3.2	6.3	4.2	1.7	4.0	3.0	-1.5
Nondurable goods.....	6.1	2.4	5.6	7.4	1.0	-1.0	2.4	3.0
Other.....	6.7	10.9	9.3	9.7	11.8	11.8	10.3	10.0
Durable goods.....	1.9	3.9	1.3	2.5	3.9	4.7	4.4	4.8
Nondurable goods.....	4.9	7.0	8.0	7.2	7.9	7.1	5.9	5.2

Table 5.11.—Inventories and Final Sales of Business by Industry in Constant Dollars

[Billions of 1982 dollars]

	1987	1988	Seasonally adjusted quarterly totals					
			1987		1988			
			IV	I	II	III	IV	r
Inventories¹	883.2	899.7	908.5	918.4	925.7	935.2		
Farm.....	70.2	73.7	75.0	74.8	72.7	74.9		
Nonfarm.....	813.0	826.0	833.5	843.6	853.0	860.3		
Durable goods.....	461.3	467.1	471.1	481.2	488.8	495.5		
Nondurable goods.....	351.7	358.8	362.4	362.4	364.2	364.7		
Manufacturing.....	322.3	326.3	327.7	329.1	332.0	333.5		
Durable goods.....	210.2	212.4	213.9	215.9	219.0	221.6		
Nondurable goods.....	112.2	113.9	113.8	113.2	113.0	111.9		
Wholesale trade.....	187.2	193.4	193.1	195.9	196.7	197.0		
Durable goods.....	117.4	122.0	120.3	124.0	124.8	125.5		
Nondurable goods.....	69.8	71.4	72.9	71.9	72.0	71.5		
Merchant wholesalers.....	161.2	166.9	166.9	168.9	169.5	169.2		
Durable goods.....	103.5	107.6	105.9	109.2	109.3	109.9		
Nondurable goods.....	57.8	59.3	61.0	59.8	60.2	59.4		
Nonmerchant wholesalers.....	26.0	26.5	26.2	27.0	27.3	27.7		
Durable goods.....	14.0	14.4	14.4	14.9	15.5	15.6		
Nondurable goods.....	12.0	12.1	11.8	12.1	11.8	12.1		
Retail trade.....	191.3	191.7	195.1	198.1	201.3	204.3		
Durable goods.....	97.2	95.8	98.9	102.1	104.7	107.0		
Automotive.....	49.2	46.7	49.5	51.6	53.5	56.1		
Other.....	48.0	49.0	49.5	50.5	51.2	50.9		
Nondurable goods.....	94.1	95.9	96.2	95.9	96.5	97.3		
Other.....	112.1	114.6	117.5	120.5	123.0	125.5		
Final sales²	277.2	280.4	285.3	286.3	288.8	291.6		
Final sales of goods and structures ²	169.5	171.4	175.3	175.6	177.1	179.4		
Ratio of inventories to final sales								
Inventories to final sales.....	3.19	3.21	3.18	3.21	3.21	3.21		
Nonfarm inventories to final sales.....	2.93	2.95	2.92	2.95	2.95	2.95		
Nonfarm inventories to final sales of goods and structures.....	4.80	4.82	4.75	4.80	4.82	4.79		

1. Inventories are as of the end of the quarter. Quarter-to-quarter changes calculated from this table are at quarterly rates, whereas the constant-dollar change in business inventories component of GNP is stated at annual rates.

2. Quarterly totals at monthly rates. Business final sales equals final sales less gross product of households and institutions, government, and rest of the world, and includes a small amount of final sales by farms.

Table 5.12.—Fixed Investment by Type

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates						
			1987		1988				1989
			IV	I	II	III	IV	I ^r	
Fixed investment.....	673.7	718.1	692.9	698.1	714.4	722.8	737.2	750.0	
Nonresidential.....	446.8	488.4	464.1	471.5	487.8	493.7	500.6	512.9	
Structures.....	139.5	142.8	147.7	140.1	142.3	143.8	145.0	148.5	
Nonresidential buildings, excluding farm.....	92.6	94.2	96.6	93.3	95.7	93.5	94.4	100.1	
Public utilities.....	28.4	30.3	30.8	27.7	28.8	32.1	32.5	31.7	
Mining exploration, shafts, and wells.....	13.9	14.5	15.8	15.1	14.3	14.6	14.0	13.0	
Other.....	4.5	3.8	4.6	4.0	3.5	3.6	4.1	3.8	
Producers' durable equipment.....	307.3	345.6	316.3	331.3	345.5	349.9	355.6	364.4	
Information processing and related equipment.....	101.2	111.0	102.8	107.0	111.5	112.9	112.4	113.8	
Industrial equipment.....	70.6	82.9	74.2	77.2	81.3	83.8	89.3	95.2	
Transportation and related equipment.....	67.8	77.5	68.5	74.2	78.7	79.0	78.1	77.2	
Other.....	67.6	74.2	70.9	73.0	74.0	74.1	75.8	78.2	
Residential.....	226.9	229.7	228.8	226.6	226.5	229.1	236.6	237.1	
Single-family structures.....	114.5	117.1	117.3	116.5	116.2	115.4	120.4	121.4	
Multifamily structures.....	25.5	21.3	24.1	22.1	20.7	21.2	21.0	22.3	
Other.....	87.0	91.3	87.4	87.9	89.6	92.6	95.2	93.5	

Table 5.13.—Fixed Investment by Type in Constant Dollars

[Billions of 1982 dollars]

	1987	1988	Seasonally adjusted at annual rates						
			1987		1988				1989
			IV	I	II	III	IV	I ^r	
Fixed investment.....	640.4	679.3	657.6	662.9	679.7	686.6	688.0	694.4	
Nonresidential.....	445.1	487.5	464.8	473.4	490.2	495.0	491.4	500.5	
Structures.....	125.5	125.1	132.1	124.0	125.0	125.8	125.5	126.3	
Nonresidential buildings, excluding farm.....	77.1	76.4	79.4	76.1	78.0	75.7	75.8	79.5	
Public utilities.....	25.7	26.6	27.6	24.6	25.4	28.1	28.2	27.3	
Mining exploration, shafts, and wells.....	18.8	18.9	21.1	19.8	18.7	19.0	18.1	16.5	
Other.....	3.9	3.2	4.0	3.4	2.9	3.0	3.4	3.1	
Producers' durable equipment.....	319.6	362.4	332.7	349.4	365.1	369.2	365.9	374.2	
Information processing and related equipment.....	139.4	162.7	147.0	155.9	165.0	167.4	162.4	166.4	
Industrial equipment.....	61.4	69.0	63.4	65.2	68.0	69.9	73.0	76.9	
Transportation and related equipment.....	59.1	66.7	59.8	64.9	68.3	68.0	65.7	64.9	
Other.....	59.7	64.0	62.5	63.4	63.8	63.9	64.8	66.0	
Residential.....	195.2	191.8	192.7	189.5	189.6	191.6	196.6	193.9	
Single-family structures.....	97.5	96.7	97.3	96.2	96.3	95.5	98.9	97.9	
Multifamily structures.....	21.7	17.6	20.0	18.2	17.2	17.5	17.3	18.0	
Other.....	76.0	77.6	75.4	75.2	76.1	78.6	80.4	78.0	

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

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates						
			1987		1988				1989
			IV	I	II	III	IV	I ^r	
National income without capital consumption adjustment.....	3,644.4	3,943.4	3,768.3	3,821.4	3,901.1	3,975.6	4,075.6	4,178.2	
Domestic industries.....	3,614.9	3,918.6	3,737.3	3,799.1	3,879.8	3,948.9	4,046.6	4,151.0	
Private industries.....	3,085.7	3,355.2	3,196.8	3,246.7	3,320.2	3,381.8	3,471.9	3,561.4	
Agriculture, forestry, and fisheries.....	88.2	82.8	92.6	90.9	90.2	77.3	72.9	.....
Mining.....	31.0	35.9	35.2	35.3	36.1	36.5	35.7	.....
Construction.....	196.7	211.6	200.1	203.4	210.0	214.0	219.1	.....
Manufacturing.....	727.4	786.4	747.6	766.4	780.0	788.0	811.4	.....
Durable goods.....	419.4	447.8	420.6	432.7	445.9	450.4	462.1	.....
Nondurable goods.....	308.0	338.7	327.0	333.7	334.1	337.7	349.3	.....
Transportation and public utilities.....	276.8	299.9	285.8	286.4	296.8	304.0	312.4	.....
Transportation.....	120.7	131.0	124.4	124.8	129.4	133.0	136.8	.....
Communication.....	76.3	80.9	78.4	77.3	80.1	82.3	83.7	.....
Electric, gas, and sanitary services.....	79.9	88.1	83.1	84.2	87.3	88.8	91.9	.....
Wholesale trade.....	213.6	230.8	219.8	225.0	224.8	231.0	242.4	.....
Retail trade.....	316.2	339.8	324.6	331.4	336.5	342.6	348.8	.....
Finance, insurance, and real estate.....	524.0	577.1	545.9	553.6	567.2	585.1	602.5	.....
Services.....	711.6	790.8	745.1	754.4	778.7	803.2	826.6	.....
Government and government enterprises.....	529.2	563.4	540.5	552.3	559.6	567.1	574.7	589.5	
Rest of the world.....	29.5	24.9	31.0	22.4	21.3	26.8	29.0	27.2	

Table 6.18B.—Corporate Profits by Industry

[Billions of dollars]

	1987	1988	Seasonally adjusted at annual rates						
			1987		1988				1989
			IV	I	II	III	IV	I ^r	
Corporate profits with inventory valuation and capital consumption adjustments.....	310.4	328.4	316.1	316.2	326.5	330.0	340.9	319.3	
Domestic industries.....	274.0	291.3	274.6	286.0	291.1	289.2	298.8	278.8	
Financial.....	36.5	38.6	36.2	35.4	38.5	41.0	39.4	38.9	
Nonfinancial.....	237.5	252.7	238.4	250.6	252.6	248.2	259.4	239.9	
Rest of the world.....	36.4	37.1	41.4	30.2	35.4	40.8	42.1	40.4	
Corporate profits with inventory valuation adjustment.....	258.7	282.8	263.7	266.8	278.5	284.6	301.3	286.0	
Domestic industries.....	222.3	245.7	222.2	236.6	243.1	243.8	259.2	245.5	
Financial.....	30.1	30.5	28.8	27.6	30.0	32.7	31.8	31.3	
Federal Reserve banks.....	16.0	18.1	16.2	17.5	17.4	18.2	19.2	20.5	
Other.....	14.1	12.4	12.6	10.1	12.6	14.5	12.6	10.8	
Nonfinancial.....	192.1	215.1	193.4	209.0	213.1	211.1	227.4	214.2	
Manufacturing.....	96.8	114.1	101.7	110.6	114.5	111.4	120.1	.....
Durable goods.....	36.5	39.0	29.4	33.9	41.5	39.0	41.5	.....
Primary metal industries.....	1.4	4.7	2.6	3.2	5.1	5.2	5.3	.....
Fabricated metal products.....	5.7	6.9	6.7	8.0	7.5	5.4	6.8	.....
Machinery, except electrical.....	3.2	4.2	1.7	3.3	5.5	5.9	2.3	.....
Electric and electronic equipment.....	3.2	3.7	-8	1.2	4.1	4.4	5.2	.....
Motor vehicles and equipment.....	7.3	5.5	4.5	4.2	4.6	5.8	7.6	.....
Other.....	15.7	13.8	14.6	14.0	14.7	12.4	14.3	.....
Nondurable goods.....	60.3	75.2	72.4	76.8	73.0	72.3	78.6	.....
Food and kindred products.....	12.8	16.8	14.9	15.9	17.5	15.9	17.7	.....
Chemicals and allied products.....	13.5	20.2	15.3	19.1	18.6	18.4	25.0	.....
Petroleum and coal products.....	12.2	16.8	18.8	17.4	14.8	16.8	18.0	.....
Other.....	21.9	21.4	23.4	24.5	22.1	21.2	17.9	.....
Transportation and public utilities.....	34.9	38.6	36.1	34.5	38.2	39.3	42.4	.....
Wholesale and retail trade.....	42.8	39.7	43.0	43.9	37.0	36.6	41.3	.....
Other.....	17.6	22.7	12.6	20.0	23.4	23.8	23.6	.....
Rest of the world.....	36.4	37.1	41.4	30.2	35.4	40.8	42.1	40.4	

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

[Index numbers, 1982=100]

	1987	1988	Seasonally adjusted						
			1987	1988					1989
			IV	I	II	III	IV	I ¹	
Gross national product	119.1	124.1	120.8	121.8	123.3	124.9	126.2	127.8	
Personal consumption expenditures	120.4	125.6	122.5	123.2	124.9	126.5	127.9	129.5	
Durable goods	109.7	112.5	111.0	111.4	111.9	112.8	113.9	114.6	
Nondurable goods	112.6	117.2	114.3	114.6	116.7	118.2	119.4	120.8	
Services	129.0	135.2	131.5	132.6	134.4	136.0	137.8	139.6	
Gross private domestic investment									
Fixed investment	108.8	111.6	109.9	110.8	111.3	111.6	112.7	114.1	
Nonresidential	106.8	109.3	107.5	108.3	109.0	109.4	110.6	111.8	
Structures	105.1	108.3	106.4	107.5	107.8	108.5	109.4	110.7	
Producers' durable equipment	107.9	110.0	108.1	108.9	109.8	110.0	111.3	112.5	
Residential	115.9	119.5	118.3	119.2	119.3	119.4	120.1	122.0	
Change in business inventories									
Net exports of goods and services									
Exports	106.0	111.5	107.0	108.7	110.5	113.0	113.7	114.9	
Imports	100.8	105.1	103.0	103.9	105.3	105.4	106.2	108.3	
Government purchases of goods and services	119.6	124.9	121.2	122.9	124.3	125.7	126.6	128.9	
Federal	113.5	117.8	114.4	116.3	117.2	118.5	118.9	121.6	
National defense	114.0	117.6	114.8	116.6	117.4	118.0	118.4	120.9	
Nondefense	112.1	118.2	113.6	115.7	116.9	119.7	120.2	123.3	
State and local	124.1	130.2	126.1	127.8	129.5	131.0	132.3	134.3	
Addenda:									
Final sales	119.0	123.9	120.6	121.7	123.2	124.8	126.1	127.6	
Personal consumption expenditures, food	117.2	122.2	118.6	119.2	121.0	123.7	124.9	126.4	
Personal consumption expenditures, energy	91.7	92.4	92.9	91.1	92.3	93.2	92.9	93.6	
Other personal consumption expenditures	124.9	130.7	127.2	128.3	130.0	131.3	133.1	134.7	

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]

	1987	1988	Seasonally adjusted						
			1987	1988					1989
			IV	I	II	III	IV	I ¹	
Gross national product	119.1	124.1	120.8	121.8	123.3	124.9	126.2	127.8	
Final sales	119.0	123.9	120.6	121.7	123.2	124.8	126.1	127.6	
Change in business inventories									
Goods	111.0	115.1	112.1	112.6	114.3	116.2	117.2	118.1	
Final sales	110.8	114.9	111.9	112.5	114.1	116.0	117.1	118.0	
Change in business inventories									
Durable goods	107.1	108.1	107.0	107.2	107.6	108.4	109.0	109.9	
Final sales	107.0	108.2	107.1	107.3	107.7	108.5	109.2	110.0	
Change in business inventories									
Nondurable goods	113.7	119.8	115.5	116.3	118.7	121.4	122.8	123.7	
Final sales	113.5	119.6	115.3	116.1	118.5	121.2	122.5	123.4	
Change in business inventories									
Services	127.6	133.6	129.8	131.2	132.8	134.3	135.9	138.0	
Structures	110.7	114.4	112.4	113.5	113.9	114.6	115.4	117.0	

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]

	1987	1988	Seasonally adjusted						
			1987	1988					1989
			IV	I	II	III	IV	I ¹	
Gross national product	119.1	124.1	120.8	121.8	123.3	124.9	126.2	127.8	
Less: Exports of goods and services	106.0	111.5	107.0	108.7	110.5	113.0	113.7	114.9	
Plus: Imports of goods and services	100.8	105.1	103.0	103.9	105.3	105.4	106.2	108.3	
Equals: Gross domestic purchases ¹	118.7	123.5	120.5	121.4	122.9	124.2	125.5	127.2	
Less: Change in business inventories									
Is: Final sales to domestic purchasers ²	118.5	123.4	120.3	121.3	122.8	124.1	125.4	127.1	

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.

Table 7.4.—Implicit Price Deflators for Gross National Product

[Index numbers, 1982=100]

	1987	1988	Seasonally adjusted					
			1987	1988				1989
				IV	I	II	III		IV	r
Gross national product.....	117.7	121.7	118.9	119.4	121.0	122.4	124.0	125.2
Personal consumption expenditures.....	119.5	124.5	121.5	122.2	123.9	125.2	126.7	128.2
Durable goods.....	107.9	110.1	108.9	109.1	109.6	110.4	111.4	111.5
Nondurable goods.....	112.1	116.4	113.7	113.8	116.0	117.3	118.3	119.9
Services.....	128.5	134.8	131.0	132.2	134.0	135.6	137.3	139.3
Gross private domestic investment.....								
Fixed investment.....	105.2	105.7	105.4	105.3	105.1	105.3	107.2	108.0
Nonresidential.....	100.4	100.2	99.8	99.6	99.5	99.7	101.9	102.5
Structures.....	111.1	114.2	111.8	113.0	113.8	114.3	115.6	117.6
Producers' durable equipment.....	96.2	95.4	95.1	94.8	94.6	94.8	97.2	97.4
Residential.....	116.2	119.7	118.7	119.5	119.5	119.6	120.4	122.3
Change in business inventories.....								
Net exports of goods and services.....								
Exports.....	100.0	102.9	100.1	100.3	102.1	104.3	105.0	106.8
Imports.....	99.0	101.5	100.0	100.8	101.4	101.3	102.6	104.2
Government purchases of goods and services.....	118.5	123.3	119.5	121.7	122.7	123.5	125.4	126.7
Federal.....	112.7	115.9	112.6	115.2	115.3	114.9	118.1	118.5
National defense.....	111.5	114.0	111.6	112.8	113.4	114.8	115.0	116.8
Nondefense.....	117.0	123.4	116.0	125.5	122.7	115.2	129.3	123.9
State and local.....	123.0	128.7	124.9	126.5	128.1	129.6	130.7	132.8

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

Table 7.5.—Implicit Price Deflators for Gross National Product by Major Type of Product

[Index numbers, 1982=100]

	1987	1988	1989	1990	1991	1992	1993	1994
Gross national product.....	117.7	121.7	118.9	119.4	121.0	122.4	124.0	125.2
Final sales.....	117.7	121.8	119.1	119.8	121.0	122.4	124.0	125.3
Change in business inventories.....								
Goods.....	107.8	110.0	107.9	107.5	109.4	110.8	112.3	112.7
Final sales.....	107.6	109.9	107.9	107.8	109.1	110.5	112.2	112.6
Change in business inventories.....								
Durable goods.....	100.2	99.2	99.5	98.4	98.6	99.6	100.3	101.3
Final sales.....	99.9	98.8	98.8	98.0	98.3	99.0	99.9	100.8
Change in business inventories.....								
Nondurable goods.....	114.3	120.4	115.5	115.8	119.7	122.0	124.1	123.6
Final sales.....	114.3	120.4	115.9	117.0	119.4	121.4	123.9	123.8
Change in business inventories.....								
Services.....	127.5	133.6	129.7	131.2	132.8	134.3	135.9	138.1
Structures.....	114.6	118.3	116.2	117.4	117.9	118.4	119.4	121.3

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

Table 7.6.—Implicit Price Deflators for Gross National Product by Sector

[Index numbers, 1982=100]

	1987	1988	1989	1990	1991	1992	1993	1994
Gross national product.....	117.7	121.7	118.9	119.4	121.0	122.4	124.0	125.2
Gross domestic product.....	117.7	121.7	118.9	119.4	121.1	122.5	124.0	125.2
Business.....	116.0	119.7	117.1	117.4	119.0	120.4	122.0	123.0
Nonfarm.....	116.7	120.0	117.7	118.0	119.3	120.5	122.3	123.2
Nonfarm less housing.....	115.2	118.4	116.2	116.3	117.7	118.8	120.6	121.5
Housing.....	131.9	138.2	134.7	136.1	137.1	138.9	140.7	141.9
Farm.....	92.0	104.1	89.8	94.4	106.4	115.8	101.8	112.6
Statistical discrepancy.....	116.0	119.7	117.1	117.4	119.0	120.4	122.0	123.0
Households and institutions.....	131.0	138.9	134.9	135.7	138.1	139.8	142.0	144.0
Private households.....	104.8	105.8	105.0	105.0	106.1	106.4	106.9	106.9
Nonprofit institutions.....	132.9	141.3	137.1	137.9	140.4	142.2	144.5	146.6
Government.....	127.8	134.2	129.7	132.3	133.6	134.8	136.0	139.2
Federal.....	122.3	127.1	123.2	126.5	127.2	127.3	127.4	133.1
State and local.....	130.5	137.7	133.0	135.1	136.9	138.6	140.3	142.2
Rest of the world.....	119.5	124.0	120.8	121.4	123.2	124.8	126.4	127.8
Addendum:								
Gross domestic business product less housing.....	114.7							

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

Table 7.7.—Implicit Price Deflators for the Relation of Gross National Product, Net National Product, and National Income

[Index numbers, 1982=100]

	1987	1988	Seasonally adjusted					
			1987	1988				1989
				IV	I	II	III		IV	r
Gross national product.....	117.7	121.7	118.9	119.4	121.0	122.4	124.0	125.2
Less: Capital consumption allowances with capital consumption adjustment.....	104.2	105.6	104.6	105.4	105.4	105.4	106.1	106.8
Equals: Net national product.....	119.5	123.9	120.8	121.3	123.2	124.8	126.4	127.8
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises.....	117.8	123.3	117.6	120.3	121.6	126.4	124.9	126.1
Statistical discrepancy.....	116.0	119.7	117.1	117.4	119.0	120.4	122.0	123.0
Equals: National income.....	119.7	124.0	121.1	121.4	123.3	124.6	126.5	127.9

Table 7.8.—Implicit Price Deflators for Command-Basis Gross National Product

[Index numbers, 1982=100]

	1987	1988	1989	1990	1991	1992	1993	1994
Gross national product.....	117.7	121.7	118.9	119.4	121.0	122.4	124.0	125.2
Less: Net exports of goods and services.....	100.0	102.9	100.1	100.3	102.1	104.3	105.0	106.8
Exports.....	99.0	101.5	100.0	100.8	101.4	101.3	102.6	104.2
Imports.....	116.9	121.1	118.3	119.0	120.5	121.6	123.1	124.5
Equals: Gross domestic purchases.....	116.9	121.1	118.3	119.0	120.5	121.6	123.1	124.5
Plus: Command-basis net exports of goods and services.....								
Command-basis exports.....	99.0	101.5	100.0	100.8	101.4	101.3	102.6	104.2
Imports.....	99.0	101.5	100.0	100.8	101.4	101.3	102.6	104.2
Equals: Command-basis gross national product.....	117.5	121.5	118.8	119.5	120.9	122.0	123.6	124.8

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

Table 7.9.—Fixed-Weighted Price Indexes for Personal Consumption Expenditures by Major Type of Product, 1982 Weights

[Index numbers, 1982=100]

	1987	1988	1989	1990	1991	1992	1993	1994
Personal consumption expenditures.....	120.4	125.6	122.5	123.2	124.9	126.5	127.9	129.5
Durable goods.....	109.7	112.5	111.0	111.4	111.9	112.8	113.9	114.6
Motor vehicles and parts.....	115.3	117.7	117.0	117.0	116.8	117.9	118.9	120.2
Furniture and household equipment.....	102.1	103.8	102.4	102.9	103.5	104.3	104.7	104.8
Other.....	112.7	118.5	115.0	116.2	117.8	118.8	121.1	121.8
Nondurable goods.....	112.6	117.2	114.3	114.6	116.7	118.2	119.4	120.8
Food.....	117.2	122.2	118.6	119.2	121.0	123.7	124.9	126.4
Clothing and shoes.....	111.0	115.8	113.0	113.1	117.2	114.8	117.9	118.0
Gasoline and oil.....	78.4	79.1	80.6	77.2	79.0	80.9	79.2	79.3
Other nondurable goods.....	121.4	127.2	123.5	124.9	126.7	127.9	129.3	132.2
Fuel oil and coal.....	76.6	76.8	77.7	77.1	78.9	77.5	73.5	77.6
Other.....	127.6	134.1	129.8	131.5	133.2	134.8	136.9	139.6
Services.....	129.0	135.2	131.5	132.6	134.4	136.0	137.8	139.6
Housing.....	130.0	136.3	132.7	134.2	135.2	137.0	138.7	140.0
Household operation.....	118.3	119.8	118.6	118.5	119.6	119.8	121.4	122.1
Electricity and gas.....	111.8	112.6	111.7	111.6	112.2	112.2	114.6	115.1
Other.....	125.0	127.2	125.7	125.7	127.2	127.6	128.4	129.3
Transportation.....	120.3	126.3	125.1	122.5	126.7	126.9	128.8	131.7
Medical care.....	135.6	144.8	138.0	140.4	143.4	146.3	149.2	152.1
Other.....	130.2	136.6	133.1	134.6	135.9	137.2	138.7	140.4

Table 7.14.—Fixed-Weighted Price Indexes for Exports and Imports of Goods and Services, 1982 Weights

[Index numbers, 1982=100]

	1987	1988	1989	1990	1991	1992	1993	1994
Exports of goods and services.....	106.0	111.5	107.0	108.7	110.5	113.0	113.7	114.9
Merchandise.....	97.8	104.5	99.2	101.3	103.3	106.7	106.9	107.8
Durable goods.....	101.7	105.0	102.2	103.5	104.5	105.7	106.2	106.7
Nondurable goods.....	92.7	103.9	94.9	98.3	101.5	108.1	108.0	109.2
Services.....	117.7	121.7	118.6	119.4	121.0	122.3	123.7	125.1
Factor income.....	120.3	124.8	121.6	122.2	124.0	125.5	127.2	128.4
Other.....	113.1	116.1	113.1	114.4	115.7	116.7	117.7	119.4
Imports of goods and services.....	100.8	105.1	103.0	103.9	105.4	106.2	108.3	
Merchandise.....	94.7	98.9	97.1	97.9	99.4	99.2	99.7	102.2
Durable goods.....	109.7	117.8	112.4	115.4	117.4	117.9	120.2	120.7
Nondurable goods.....	79.5	79.9	81.5	80.1	81.0	80.1	78.7	83.3
Services.....	118.4	123.2	120.2	121.4	122.7	123.5	125.2	126.2
Factor income.....	119.6	124.0	120.8	121.4	123.2	124.7	126.4	127.7
Other.....	117.5	122.6	119.7	121.4	122.3	122.5	124.3	125.0

Table 7.15.—Fixed-Weighted Price Indexes for Merchandise Exports and Imports by Type of Product and by End-Use Category, 1982 Weights

[Index numbers, 1982=100]

	1987	1988	Seasonally adjusted					
			1987	1988				1989
				IV	I	II	III		IV	F
Merchandise exports	97.8	104.5	99.2	101.3	103.3	106.7	106.9	107.8
Foods, feeds, and beverages.....	82.1	99.6	83.3	88.2	94.0	109.0	108.3	109.0
Industrial supplies and materials.....	95.4	104.1	98.5	101.2	103.4	105.8	105.7	107.0
Durable goods.....	95.5	104.1	98.5	101.2	103.4	105.8	105.7	107.0
Nondurable goods.....	95.4	104.0	98.5	101.2	103.4	105.8	105.7	107.0
Capital goods, except autos.....	100.5	102.4	100.1	101.2	102.0	102.5	103.2	103.3
Autos.....	113.1	114.7	114.1	113.8	113.9	115.3	115.9	116.9
Consumer goods.....	107.4	112.2	109.2	111.0	111.6	112.4	113.6	116.2
Durable goods.....	102.2	107.8	104.0	105.4	107.0	109.1	109.3	111.3
Nondurable goods.....	111.5	115.7	113.2	115.5	115.3	115.0	116.9	120.0
Other.....	100.9	108.0	102.7	104.7	106.7	110.1	110.5	111.4
Durable goods.....	100.9	108.0	102.7	104.7	106.7	110.1	110.5	111.4
Nondurable goods.....	100.9	108.0	102.7	104.7	106.7	110.1	110.5	111.4
Merchandise imports	94.7	98.9	97.1	97.9	99.4	99.2	99.7	102.2
Foods, feeds, and beverages.....	103.6	109.9	106.2	109.1	109.6	110.3	110.6	110.0
Industrial supplies and materials, excluding petroleum.....	90.1	104.0	94.3	99.9	103.7	105.2	107.4	109.0
Durable goods.....	90.3	104.1	94.5	100.1	103.8	105.2	107.4	108.9
Nondurable goods.....	90.0	103.9	94.1	99.8	103.6	105.1	107.4	109.0
Petroleum and products.....	55.1	45.6	55.5	48.4	48.1	45.2	41.0	49.5
Capital goods, except autos.....	109.2	115.3	111.8	113.8	115.0	115.2	117.7	117.5
Autos.....	125.1	131.2	126.9	129.0	130.4	131.2	134.2	134.8
Consumer goods.....	114.8	123.2	118.1	121.2	123.5	123.4	124.5	125.2
Durable goods.....	111.8	119.7	114.6	117.6	120.2	119.7	121.2	121.6
Nondurable goods.....	119.1	128.2	123.0	126.4	128.2	128.7	129.3	130.3
Other.....	110.1	119.0	113.2	116.4	118.7	119.3	121.5	122.0
Durable goods.....	110.1	119.0	113.1	116.4	118.7	119.3	121.5	122.0
Nondurable goods.....	110.1	119.0	113.2	116.4	118.7	119.3	121.5	122.0

Table 7.17.—Fixed-Weighted Price Indexes for National Defense Purchases of Goods and Services, 1982 Weights

[Index numbers, 1982=100]

	1987	1988	Seasonally adjusted					
			1987	1988				1989
				IV	I	II	III		IV	F
National defense purchases	114.0	117.6	114.8	116.6	117.4	118.0	118.4	120.9
Durable goods	109.0	109.6	107.6	108.6	109.2	109.9	110.5	111.1
Military equipment.....	110.9	111.2	109.2	110.3	110.9	111.5	112.0	112.4
Aircraft.....	110.4	111.1	108.5	110.3	111.2	111.4	111.5	111.6
Missiles.....	119.1	113.9	112.6	112.7	112.9	114.2	115.7	114.8
Ships.....	119.7	121.2	119.8	120.4	120.3	121.7	122.3	123.3
Vehicles.....	89.8	90.1	88.4	88.1	89.7	91.2	91.4	91.5
Electronic equipment.....	106.7	107.1	106.6	106.9	106.9	107.1	107.4	108.8
Other.....	107.9	111.3	108.6	110.7	110.9	111.3	112.2	113.4
Other durable goods.....	100.5	102.3	100.5	100.9	101.8	102.7	103.8	105.1
Nondurable goods	68.7	73.1	71.3	70.1	72.3	76.4	73.4	71.9
Petroleum products.....	52.4	58.2	56.9	54.4	57.4	63.0	58.0	55.3
Ammunition.....	97.2	95.4	93.3	95.0	94.9	95.3	96.4	97.2
Other nondurable goods.....	109.6	113.8	110.6	112.0	113.3	114.4	115.4	116.9
Services	120.6	125.1	121.9	124.3	125.0	125.3	125.9	129.6
Compensation of employees.....	122.0	126.8	123.0	126.2	126.9	127.0	127.1	132.6
Military.....	121.6	126.3	122.5	125.6	126.4	126.5	126.6	131.7
Civilian.....	122.9	127.9	123.9	127.4	128.0	128.0	128.1	134.4
Other services.....	117.8	121.9	119.8	120.7	121.4	122.0	123.6	123.8
Contractual research and development.....	115.6	119.8	117.3	118.2	119.1	120.3	121.7	122.2
Installation support ¹	123.7	127.5	125.2	125.9	127.1	128.1	128.7	128.8
Weapons support ²	114.6	117.6	116.4	116.6	116.7	117.8	119.3	120.5
Personnel support ³	145.7	155.2	152.8	155.5	156.4	151.4	157.6	156.0
Transportation of materiel.....	93.0	96.1	94.6	95.6	95.0	95.7	98.1	96.6
Travel of persons.....	103.9	104.9	103.8	103.8	104.6	104.9	106.1	106.9
Other.....								
Structures	121.7	127.0	123.9	125.5	125.8	127.4	129.3	130.5
Military facilities.....	123.3	128.6	124.7	126.4	127.1	129.4	131.5	132.5
Other.....	119.5	124.6	122.8	124.2	123.8	124.6	125.9	127.6

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

Table 7.16.—Fixed-Weighted Price Indexes for Government Purchases of Goods and Services by Type, 1982 Weights

[Index numbers, 1982=100]

	1987	1988	Seasonally adjusted					
			1987	1988				1989
				IV	I	II	III		IV	F
Government purchases of goods and services	119.6	124.9	121.2	122.9	124.3	125.7	126.6	128.9
Federal	113.5	117.8	114.4	116.3	117.2	118.5	118.9	121.6
National defense.....	114.0	117.6	114.8	116.6	117.4	118.0	118.4	120.9
Durable goods.....	109.0	109.6	107.6	108.6	109.2	109.9	110.5	111.1
Nondurable goods.....	68.7	73.1	71.3	70.1	72.3	76.4	73.4	71.9
Services.....	120.6	125.1	121.9	124.3	125.0	125.3	125.9	129.6
Compensation of employees.....	122.0	126.8	123.0	126.2	126.9	127.0	127.1	132.6
Military.....	121.6	126.3	122.5	125.6	126.4	126.5	126.6	131.7
Civilian.....	122.9	127.9	123.9	127.4	128.0	128.0	128.1	134.4
Other services.....	117.8	121.9	119.8	120.7	121.4	122.0	123.6	123.8
Structures.....	121.7	127.0	123.9	125.5	125.8	127.4	129.3	130.5
Nondefense.....	112.1	118.2	113.6	115.7	116.9	119.7	120.2	123.3
Durable goods.....	99.6	101.5	99.5	100.2	101.3	101.6	103.0	104.2
Nondurable goods.....								
Commodity Credit Corporation inventory change.....								
Other nondurables.....	96.9	98.7	96.2	97.8	98.9	98.2	99.7	103.0
Services.....	120.2	124.3	121.2	123.5	124.2	124.6	125.0	129.3
Compensation of employees.....	123.0	127.9	123.9	127.4	127.9	128.0	128.1	134.4
Other services.....	115.8	118.9	116.9	117.4	118.4	119.4	120.2	121.5
Structures.....	111.3	115.3	112.2	113.5	114.8	116.1	116.6	118.3
State and local	124.1	130.2	126.1	127.8	129.5	131.0	132.3	134.3
Durable goods.....	110.6	113.4	111.1	111.9	112.8	114.0	114.8	116.2
Nondurable goods.....	95.0	97.3	96.2	95.5	97.6	98.1	98.0	101.4
Services.....	129.9	136.7	132.2	134.2	135.9	137.5	139.1	141.1
Compensation of employees.....	130.6	137.8	133.0	135.2	136.9	138.6	140.4	142.3
Other services.....	126.6	131.6	128.3	129.6	131.2	132.3	133.3	135.7
Structures.....	114.5	119.6	115.9	117.4	118.9	120.8	121.3	123.0

Table 7.18.—Current-Dollar Cost and Profit Per Unit of Constant-Dollar Gross Domestic Product of Nonfinancial Corporate Business

[Dollars]

	1987	1988	Seasonally adjusted					
			1987	1988				1989
				IV	I	II	III		IV	F
Current-dollar cost and profit per unit of constant-dollar gross domestic product ¹	1.107	1.134	1.113	1.114	1.127	1.140	1.155	1.163
Capital consumption allowances with capital consumption adjustment.....	.122	.122	.121	.121	.122	.122	.123	.125
Net domestic product.....	.985	1.012	.992	.993	1.005	1.018	1.031	1.038
Indirect business tax and nontax liability plus business transfer payments less subsidies.....	.106	.107	.105	.105	.106	.108	.108	.109
Domestic income.....	.880	.905	.887	.887	.899	.910	.923	.929
Compensation of employees.....	.732	.752	.738	.736	.747	.758	.766	.779
Corporate profits with inventory valuation and capital consumption adjustments.....	.105	.106	.103	.106	.106	.104	.107	.099
Profits tax liability.....	.044	.045	.044	.044	.046	.046	.046	.047
Profits after tax with inventory valuation and capital consumption adjustments.....	.061	.060	.059	.062	.060	.058	.061	.051
Net interest.....	.043	.048	.046	.045	.047	.048	.050	.052

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

Reconciliation and Other Special Tables

Table 1.—Revisions in Selected Component Series of the NIPA's, First Quarter of 1989

	Seasonally adjusted at annual rates			Percent change from preceding quarter at annual rates		
	Advance	Preliminary	Difference	Advance	Preliminary	
	Billions of current dollars					
GNP	5,116.8	5,105.0	-11.8	9.7	8.7	
National income		4,187.1			9.5	
Compensation of employees	3,060.3	3,060.5	.2	9.0	9.0	
Corporate profits with inventory valuation and capital consumption adjustments		319.3			-23.0	
Other	806.6	807.4	.8	28.7	29.2	
Personal income	4,312.4	4,313.6	1.2	13.2	13.4	
	Billions of constant (1982) dollars					
GNP	4,088.2	4,076.5	-11.7	5.5	4.3	
Less: Exports	535.4	541.0	5.6	10.6	15.3	
Plus: Imports	631.0	628.8	-2.2	2.3	.9	
Equals: Gross domestic purchases	4,183.9	4,164.2	-19.7	4.4	2.5	
Personal consumption expenditures	2,634.8	2,633.6	-1.2	1.3	1.1	
Nonresidential fixed investment	502.8	500.5	-2.3	9.6	7.6	
Residential investment	194.8	193.9	-.9	-3.6	-5.4	
Change in business inventories	53.8	38.0	-15.8			
Government purchases	797.7	798.3	.6	1.1	1.4	
	Index numbers, 1982=100 ¹					
GNP price index (fixed weights)	127.8	127.8	0	5.0	5.0	
GNP price index (chained weights)				4.8	4.8	
GNP implicit price deflator	125.2	125.2	0	3.9	3.9	
Gross domestic purchases price index (fixed weights)	127.2	127.2	0	5.4	5.4	

1. Not at annual rates.

NOTE.—For the first quarter of 1989, the following revised or additional major source data were incorporated: For *personal consumption expenditures*, revised retail sales for February and March; for *nonresidential fixed investment*, construction put in place in February (revised) and March, manufacturers' shipments of equipment for February (revised) and March, and partial information on plant and equipment expenditures for the quarter; for *residential investment*, construction put in place for February (revised) and March; for *change in business inventories*, manufacturing and trade inventories for February (revised) and March; for *net exports of goods and services*, merchandise exports and merchandise imports for February (revised) and March; for *government purchases of goods and services*, Federal outlays for March, and State and local construction put in place for February (revised) and March; for *wages and salaries*, revised employment, average hourly earnings, and average weekly hours for February and March; for *corporate profits*, domestic book profits for the quarter; and for *GNP prices*, merchandise export and import price indexes for March, unit-value indexes for petroleum imports for March, and residential housing prices for the quarter.

Table 2.—Reconciliation of Changes in Compensation Per Hour in the Business Economy Other Than Farm and Housing and Average Hourly Earnings in the Private Nonfarm Economy, Seasonally Adjusted

	1988			1989
	II	III	IV ^a	I ^a
1. Compensation per hour of all persons in the business economy other than farm and housing (percent change at annual rate) ¹	4.3	5.5	6.0	4.8
2. Less: Contribution of supplements.....	-9	-1	-4	-8
3. Plus: Contribution of housing and nonprofit institutions.....	.1	.2	0	0
4. Less: Contribution of employees of government enterprises, unpaid family workers, and the self-employed.....	0	0	-2	-3
5. Equals: Wages and salaries per hour of employees in the private nonfarm economy (percent change at annual rate).....	5.4	5.8	6.5	5.8
6. Less: Contribution of nonproduction workers in manufacturing.....	-3	-6	-4	-5
7. Less: Contribution of non-BLS data, detailed weighting, and seasonal adjustment.....	.4	3.0	2.8	3.3
8. Equals: Average hourly earnings, production and nonsupervisory workers in the private nonfarm economy (percent change at annual rate).....	5.2	3.4	4.2	3.0

^a Revised
^a Preliminary

1. BLS estimates of changes in hourly compensation in the nonfarm business sector for the four quarters are 4.2, 5.7, 5.2, and 5.7 percent.

Table 3.—Cyclically Adjusted Federal Receipts, Expenditures, and Surplus or Deficit (-) Based on 6-Percent Unemployment Rate Trend GNP

[Billions of dollars; quarters at seasonally adjusted annual rates]

	1987	1988	1987				1988				1989	
			I	II	III	IV	I	II	III	IV	I	
Receipts:												
Level.....	920.2	959.0	886.6	927.9	931.6	934.5	936.8	966.2	958.4	974.7	999.1	
Percentage of trend GNP.....	20.3	20.0	19.9	20.6	20.4	20.2	20.0	20.3	19.8	19.7	19.9	
Expenditures:												
Level.....	1,073.9	1,119.9	1,056.9	1,063.3	1,069.2	1,106.0	1,107.6	1,118.6	1,101.2	1,152.0	1,186.6	
Percentage of trend GNP.....	23.7	23.3	23.8	23.6	23.4	23.9	23.7	23.5	22.7	23.3	23.7	
Surplus or deficit (-):												
Level.....	-153.7	-160.8	-170.3	-135.4	-137.6	-171.5	-170.8	-152.4	-142.8	-177.3	-187.5	
Percentage of trend GNP.....	-3.4	-3.3	-3.8	-3.0	-3.0	-3.7	-3.7	-3.2	-2.9	-3.6	-3.7	
Addenda:												
6-percent unemployment rate trend GNP:												
Current dollars.....	4,540.3	4,804.5	4,448.5	4,512.5	4,573.3	4,626.8	4,672.8	4,762.7	4,845.4	4,936.9	5,013.4	
1982 dollars.....	3,858.1	3,947.5	3,825.0	3,847.0	3,869.1	3,891.3	3,913.6	3,936.1	3,958.7	3,981.4	4,004.3	

Table 4.—Gross National Product in 1987 Dollars

	1988	Seasonally adjusted at annual rates			
		1988			1989
		II	III	IV	I
GNP	4,683.7	4,671.4	4,701.8	4,735.8	4,777.6
Personal consumption expenditures	3,096.7	3,081.1	3,110.8	3,136.6	3,147.4
Durable goods.....	440.8	441.8	441.4	448.3	441.6
Nondurable goods.....	1,006.9	1,000.4	1,012.5	1,015.0	1,021.0
Services.....	1,649.0	1,638.9	1,656.8	1,673.3	1,684.8
Gross private domestic investment	747.6	741.2	750.8	750.3	758.8
Fixed investment.....	704.0	702.4	709.4	715.8	720.8
Nonresidential.....	481.1	482.1	486.8	487.3	495.5
Structures.....	138.8	138.9	139.4	139.5	141.3
Producers' durable equipment.....	342.3	343.2	347.4	347.8	354.2
Residential.....	222.9	220.3	222.6	228.4	225.3
Change in business inventories.....	43.6	38.8	41.3	34.5	38.0
Net exports of goods and services	-92.7	-84.5	-84.2	-97.0	-75.2
Exports.....	497.2	489.1	506.7	515.4	537.8
Imports.....	589.9	573.6	590.9	612.4	613.0
Government purchases of goods and services	932.1	933.7	924.5	945.9	946.7
Federal.....	374.6	377.7	367.1	380.8	378.6
National defense.....	290.8	292.6	286.3	291.0	284.9
Nondefense.....	83.7	85.1	80.8	89.8	93.7
State and local.....	557.6	555.9	557.4	565.1	568.1
Addenda:					
Gross domestic purchases.....	4,776.4	4,755.9	4,786.1	4,832.8	4,852.9
Final sales.....	4,640.1	4,632.6	4,660.5	4,701.3	4,739.6
GNP price index (fixed weighted), 1987=100.....	103.8	103.3	104.5	105.5	106.8

Table 5.—Gross National Product in 1982 and 1987 Dollars: Annual and Quarterly Percent Changes

	1988	Seasonally adjusted at annual rates			
		1988			1989
		II	III	IV	I
GNP:					
1987 dollars.....	3.5	4.0	2.6	2.9	3.6
1982 dollars.....	3.9	3.0	2.5	2.4	4.3
Personal consumption expenditures:					
1987 dollars.....	2.8	3.0	3.9	3.4	1.4
1982 dollars.....	2.8	3.0	3.9	3.5	1.1
Durable goods:					
1987 dollars.....	4.5	9.6	-4	6.4	-5.8
1982 dollars.....	4.8	9.8	-2	6.1	-4.3
Nondurable goods:					
1987 dollars.....	.9	.4	4.9	1.0	2.4
1982 dollars.....	1.0	.4	5.0	1.3	1.8
Services:					
1987 dollars.....	3.6	2.9	4.4	4.0	2.8
1982 dollars.....	3.5	2.8	4.5	4.2	2.5
Gross private domestic investment:					
1987 dollars.....	4.9	-3.6	5.3	-3	4.6
1982 dollars.....	7.0	-7.4	6.3	-4.9	8.8
Fixed investment:					
1987 dollars.....	4.5	8.5	4.0	3.7	2.8
1982 dollars.....	6.1	10.5	4.1	.8	3.8
Nonresidential:					
1987 dollars.....	7.7	12.7	4.0	.4	6.9
1982 dollars.....	9.5	15.0	4.0	-2.9	7.6
Structures:					
1987 dollars.....	-5	5.0	1.4	.3	5.3
1982 dollars.....	-3	3.3	2.6	-1.0	2.6
Producers' durable equipment:					
1987 dollars.....	11.4	16.0	5.0	.5	7.6
1982 dollars.....	13.4	19.2	4.6	-3.5	9.4
Residential:					
1987 dollars.....	-1.8	0	4.2	10.8	-5.3
1982 dollars.....	-1.7	.2	4.3	10.9	-5.4
Change in business inventories:					
1987 dollars.....					
1982 dollars.....					
Net exports of goods and services:					
1987 dollars.....					
1982 dollars.....					
Exports:					
1987 dollars.....	16.2	9.8	15.2	7.0	18.6
1982 dollars.....	18.0	9.1	14.5	6.5	15.3
Imports:					
1987 dollars.....	7.0	-6.2	12.6	15.4	.4
1982 dollars.....	8.7	-3.7	13.1	13.5	.9
Government purchases of goods and services:					
1987 dollars.....	.8	4.1	-3.9	9.6	.3
1982 dollars.....	.3	3.9	-5.2	11.9	1.4
Federal:					
1987 dollars.....	-1.9	5.6	-10.8	15.8	-2.3
1982 dollars.....	-3.0	4.7	-13.2	20.7	.4
National defense:					
1987 dollars.....	-1.5	-1.1	-8.3	6.7	-8.1
1982 dollars.....	-1.2	-1.5	-10.5	9.9	-8.5
Nondefense:					
1987 dollars.....	-3.5	33.3	-18.7	52.6	18.5
1982 dollars.....	-9.7	33.2	-22.5	71.5	39.3
State and local:					
1987 dollars.....	2.7	3.1	1.1	5.6	2.1
1982 dollars.....	2.8	3.2	1.1	6.0	2.1
Addenda:					
Gross domestic purchases:					
1987 dollars.....	2.7	2.1	2.6	4.0	1.7
1982 dollars.....	3.0	1.3	2.5	3.5	2.5
Final sales:					
1987 dollars.....	3.4	6.0	2.4	3.5	3.3
1982 dollars.....	3.7	6.3	2.0	3.5	3.5
GNP price index (fixed weighted):					
1987=100.....	3.8	4.8	4.8	4.2	5.0
1982=100.....	4.2	5.0	5.3	4.2	5.0
Real GNP, chain output measure.....	3.6	3.7	2.5	3.3	3.7

NOTE.—For background information about tables 4 and 5, see "Alternate Measures of Real GNP", SURVEY OF CURRENT BUSINESS 69 (April 1989): 27-34.

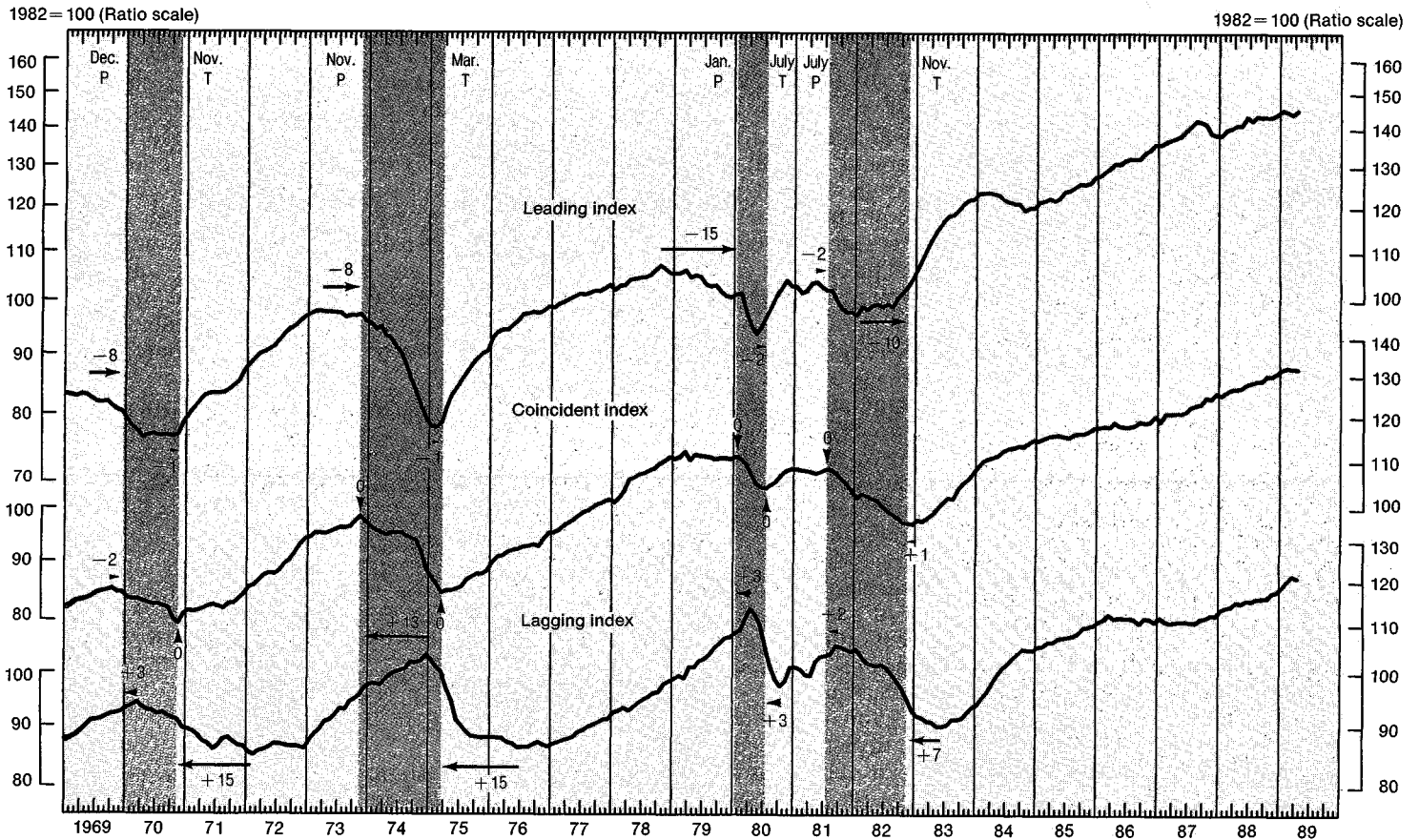
Composite Indexes of Leading, Coincident, and Lagging Indicators

Recent Data and Percent Changes

Index	1988								1989				1988			1989
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^P	II	III	IV	I
Index (1982=100)																
Leading index.....	141.5	143.9	142.7	144.1	143.7	143.9	* 144.0	144.8	145.9	145.4	* 144.6	145.7	142.3	143.5	* 144.2	* 145.3
Coincident index.....	127.6	128.5	128.9	129.3	129.3	130.6	130.6	131.4	132.4	132.7	* 132.4	132.3	127.8	129.2	130.9	* 132.5
Lagging index.....	115.3	116.0	115.8	116.4	116.4	116.5	* 117.8	* 118.1	* 119.3	* 120.7	* 121.9	121.3	115.6	116.2	* 117.5	* 120.6
Percent change from preceding month (quarter)																
Leading index.....	0	1.7	-.8	1.0	-.3	.1	.1	*.6	.8	-.3	*-.6	.8	1.7	.8	*.5	*.8
Coincident index.....	.2	.7	.3	.3	0	1.0	0	.6	.8	.2	*-.2	-.1	1.0	1.1	1.3	* 1.2
Lagging index.....	-.3	.6	-.2	.5	0	-.1	* 1.1	.3	* 1.0	* 1.2	* 1.0	-.5	1.0	.5	* 1.1	* 2.6

^P Preliminary.
^{*} Revised.
 NOTE.—Quarterly data are averages of monthly figures. Quarterly percent changes are computed from quarterly data.

Long -Term Perspective: January 1969 to April 1989



Note.—Peak (P) indicates the end of business cycle expansion and the beginning of recession (shaded area). Trough (T) indicates the end of business cycle recession and the beginning of expansion. Business cycle peaks and troughs are designated by the National Bureau of Economic Research, Inc. The numbers entered on the chart indicate the length of leads (-) and lags (+) in months from the business cycle turning dates.

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

U.S. Business Enterprises Acquired or Established by Foreign Direct Investors in 1988

OUTLAYS by foreign direct investors to acquire or establish U.S. business enterprises increased sharply to \$65.0 billion in 1988 from \$40.3 billion in 1987 (table 1).¹ Both the record level of outlays and the sharp increase in them are attributable to a number of very sizable investments made in 1988.

During the past 5 years, outlays have risen at an average rate of 55 percent per year, while the overall number of investments has increased at an average rate of only 7 percent. This disparity reflects a sharp increase in the average size of investments. In 1988 alone, the number of investments of \$1 billion or more doubled from 6 in 1987

NOTE.—James Bomkamp, Chief, Direct Investment in the United States Branch, International Investment Division, supervised the survey from which these data are drawn. Joseph F. Cherry III was project leader for editing and processing the forms. D. Richard Mauery designed the computer programs for data retrieval and analysis.

1. These data are from a BEA survey of new foreign direct investments in the United States, which covers (1) existing U.S. business enterprises in which foreign investors acquired, directly or through their U.S. affiliates, at least a 10-percent voting interest and (2) new U.S. business enterprises established by foreign investors or their U.S. affiliates. Acquisitions of additional equity or voting interests in existing U.S. affiliates are not covered.

The data presented in the article are limited to acquired or established U.S. enterprises that had total assets of over \$1 million or that owned at least 200 acres of U.S. land. Although partial reports, primarily for identification purposes, were required to be filed for investments not meeting these criteria, the data from them are not included in the accompanying tables. For 1988, 732 partial reports were filed; total assets of the U.S. business enterprises that filed partial reports were \$167.0 million.

In addition to the data on new foreign direct investments presented here, BEA also publishes quarterly balance of payments flows and the annual direct investment position for both new and existing investments. The position estimates first appear in the June issue of the SURVEY OF CURRENT BUSINESS; more detailed estimates follow in the August issue. Estimates covering the operations of U.S. affiliates of foreign companies are normally available from BEA's annual sample survey of foreign direct investment in the United States; for 1987, however, the annual survey was superseded by the benchmark survey of foreign direct investment in the United States. Results of the benchmark survey will appear in the July SURVEY.

Table 1.—Investment Outlays, Investments, and Investors, 1982–88

	Outlays (millions of dollars)							Number						
	1982	1983	1984	1985	1986	1987 ^a	1988 ^a	1982	1983	1984	1985	1986	1987 ^a	1988 ^a
Investments, total	10,817	8,091	15,197	23,106	39,177	40,310	65,019	1,108	775	764	753	1,040	978	1,012
Acquisitions	6,563	4,848	11,836	20,083	31,450	33,933	60,003	395	299	315	390	555	543	646
Establishments	4,254	3,244	3,361	3,023	7,728	6,377	5,016	713	476	449	363	485	435	366
Investors, total	10,817	8,091	15,197	23,106	39,177	40,310	65,019	1,218	850	831	817	1,121	1,051	1,090
Foreign direct investors	3,954	2,528	4,181	4,225	8,602	11,773	16,400	720	460	434	320	476	480	416
U.S. affiliates	6,863	5,564	11,016	18,881	30,575	28,536	48,619	498	390	397	497	645	571	674

^a Revised.
^b Preliminary.

to 12 (table 2A); 5 of these investments in 1988 were \$2 billion or more, compared with only 1 in 1987. Investments of \$1 billion or more accounted for 45 percent of total outlays in 1988, compared with 23 percent in 1987; they accounted for most—four-fifths—of the increase in 1988 outlays (table 2B).

The ongoing strategy of several large foreign multinational companies to expand and diversify beyond their home markets has contributed to the increase in large investments and the average size of these investments. Foreign multinationals are generally seeking to acquire U.S. companies that can round out their global market position, add manufacturing capability, provide access to new technology, or furnish a well-known brand name. The increasing number of large U.S. companies purchased by foreigners also reflects the availability, in several developed countries, of substantial funds for investment.

Probably contributing to the increase in investment outlays in 1988 was concern about possible U.S. measures to restrict foreign merger and acquisition activity. Concern was exacerbated by passage of the Omnibus Trade and Competitiveness Act of 1988, which included an amendment giving the President power to block foreign mergers and acquisitions on grounds of national security.

Several factors that have contributed to the increase in foreign direct invest-

ment in the United States in recent years continued to encourage investment in 1988. The brisk pace of U.S. economic growth has made U.S. companies attractive to foreigners by increasing the potential profitability of the acquired company. Also, growth in other developed countries, particularly in the United Kingdom, Japan, and Canada, has encouraged investment here by raising foreign companies' profitability and providing them with the

Table 2A.—Number of Investments by Size of Outlays, 1982–88

	1982	1983	1984	1985	1986	1987 ^a	1988 ^a
Total	1,108	775	764	753	1,040	978	1,012
\$2 billion or more	0	0	0	1	2	1	5
\$1 billion–\$1.9 billion	0	0	0	1	3	5	7
\$100 million–\$999 million	18	11	31	33	63	70	83
\$10 million–\$99 million	191	156	176	228	324	291	312
Less than \$10 million	899	608	557	490	648	611	605

^a Revised.
^b Preliminary.

Table 2B.—Percent Change in Investment Outlays and Number of Investments, 1983–88

	1983	1984	1985	1986	1987 ^a	1988 ^a
Investment outlays	-25	88	52	69	3	61
Number of investments	-30	-1	-1	38	-6	3
Addendum: Percent of total outlays accounted for by investments of \$1 billion or more	0	0	17	27	23	45

^a Revised.
^b Preliminary.

funds needed for investment. A large homogeneous consumer market, political stability, and an advanced technological base in the United States have also continued to give foreigners incentives to invest here. In addition, corporate restructuring in the United States, which has led many companies to shed units that were unprofitable or unrelated to their main lines of business, has continued to provide investment opportunities for foreigners.

The cumulative effect of dollar depreciation against several major currencies probably induced some foreign firms to shift operations to the United States. Dollar depreciation lowers both the cost of acquiring or establishing U.S. enterprises and the foreign-currency value of income from investments in the United States. Because these effects are offsetting, small fluctuations in the value of the dollar may have little impact on direct investment. However, because the dollar has depreciated sharply since 1985, foreign firms may have had an incentive to shift more of their operations to the United States so that their expenses, as well as their sales, would be denominated in dollars—a strategy that would help them to avoid increasing prices to U.S. consumers.

The first part of this article discusses investment transactions by industry and by country, and the second part presents selected data on the operations of the U.S. businesses acquired or established. In the analysis, information from outside sources, mainly press reports, has been used to supplement BEA's survey data.

Revisions.—Each year, preliminary data for the previous year are revised up to include survey reports received since publication of these data the year before. Typically, the revisions to investment outlays (the cost to investors of the ownership interests acquired or established) are considerably smaller than those to numbers of investments because every effort is made to include large transactions in the preliminary data. The revisions in the data on new investments have been large in past years, reflecting the large number, and total value, of investments for which reports were received too late for inclusion in preliminary totals. The 1987 revisions are particularly large—outlays were revised to \$40.3 billion from \$30.5 billion and the number of

The article presenting the latest results of BEA's annual survey on the operations of nonbank U.S. affiliates of foreign companies, which normally appears in the May issue of the SURVEY, is not in this issue because a benchmark survey, rather than the regular annual survey, was conducted for 1987. An article describing the benchmark survey is scheduled to appear in the July SURVEY. It will highlight the preliminary results of the survey and discuss major changes in U.S. affiliate operations in 1987. The next regular annual survey will cover 1988, and results will be published in the May 1990 SURVEY.

investments to 978 from 557—because the 1987 benchmark survey of foreign direct investment in the United States brought to light investments, mainly small ones, that had not been previously reported to BEA.

Investment Transactions

By type of investment, most outlays in 1988, as in past years, were for acquiring existing U.S. businesses (\$60.0 billion) rather than for establishing new U.S. businesses (\$5.0 billion) (table 3). By type of investor, \$48.6 billion of total outlays were by existing U.S. affiliates of foreign direct investors, rather than by the foreign direct investors themselves.

Industry

The 1988 increase in outlays was widespread among industries of the U.S. businesses acquired or established (table 4). Substantial increases occurred in all major industry groups except services, real estate, and finance (except banking). In services and real estate, outlays remained sizable, at \$4.7 billion and \$2.8 billion, respectively, despite the decrease from 1987 levels. Outlays in manufacturing were \$31.6 billion; more than one-half of these outlays were in "other manufacturing," mainly in publishing and rubber products. Other sizable outlays in manufacturing were in machinery and in primary and fabricated metals; one or two large transactions accounted for more than one-half of the outlays in each of these industries. Outside manufacturing, outlays

were largest in retail trade, at \$8.0 billion, and in insurance, at \$5.8 billion. Sizable outlays also occurred in petroleum, "other industries," wholesale trade, and banking. One or two large transactions accounted for more than one-half of the outlays in each industry except petroleum.

In "other manufacturing," outlays were \$16.6 billion, almost one-half of which were attributable to three large investments. The acquisition of a Pennsylvania-based magazine publisher by a U.S. affiliate of a large Australian communications concern represented the largest acquisition ever in the U.S. publishing industry and made the Australian company the largest U.S. magazine publisher in terms of circulation. In another large transaction, a British printing, publishing, and communications concern acquired a New York-based publishing and information services concern. This acquisition is the largest in a series of acquisitions of U.S. publishers that reflect the British company's strategy to build a worldwide communications business. The third large transaction in "other manufacturing" was the acquisition of an Ohio-based tire manufacturer by a Japanese tire manufacturer. This acquisition, which represents the largest single investment to date by a Japanese investor, was made to enable the Japanese manufacturer to expand in the U.S. tire market. The acquired company will sell tires to large U.S. automobile manufacturers as well as to Japanese auto manufacturers producing in the United States.

In machinery, outlays were \$6.9 billion, more than one-half of which were attributable to two large Japanese investments. In one transaction, a New York-based record company was acquired by a U.S. affiliate of a Japanese manufacturer of electronic products, which made the acquisition in order to diversify beyond the highly competitive consumer electronics market. In the other transaction, an Illinois-based manufacturer of computers and electrical products was acquired by a U.S. affiliate of a Japanese metal, petroleum refining, and petrochemical concern. The Federal Government approved the acquisition on condition that the U.S. company's defense operations be put into a trust to be run by the company's current management. The Japanese company made the acquisition in order to obtain access to the U.S. company's

Table 3.—Outlays by Type of Investment and Investor, by Industry of U.S. Business Enterprise, 1987–88

[Millions of dollars]

	1987 ^a					1988 ^a				
	Total	By type of investment		By type of investor		Total	By type of investment		By type of investor	
		Acquisitions	Establishments	Foreign direct investors	U.S. affiliates		Acquisitions	Establishments	Foreign direct investors	U.S. affiliates
All industries.....	40,310	33,933	6,377	11,773	28,536	65,019	60,003	5,016	16,400	48,619
Petroleum.....	1,107	499	609	614	493	3,956	3,927	30	200	3,756
Petroleum and coal products manufacturing.....	191	191	0	0	191	714	714	0	8	706
Other.....	917	308	609	614	303	3,242	3,212	30	192	3,050
Manufacturing.....	19,751	18,896	855	4,552	15,200	31,580	29,743	1,837	11,054	20,526
Food and kindred products.....	4,177	4,160	18	941	3,236	2,935	2,916	18	599	2,335
Beverages.....	3,084	3,072	12	12	3,072	24	19	4	15	9
Other.....	1,094	1,088	6	930	164	2,911	2,897	14	585	2,326
Chemicals and allied products.....	4,041	3,935	106	64	3,977	1,788	1,370	418	439	1,349
Industrial chemicals and synthetics.....	3,024	2,966	58	27	2,997	299	280	19	10	289
Drugs.....	85	85	0	34	51	802	440	362	362	440
Soap, cleaners, and toilet goods.....	4	4	0	0	4	(^b)	(^b)	0	(^b)	(^b)
Other.....	928	880	48	3	926	(^b)	(^b)	37	(^b)	(^b)
Primary and fabricated metals.....	1,091	923	168	515	576	3,313	3,100	212	1,573	1,740
Primary metal industries.....	199	153	46	34	165	477	319	158	198	278
Ferrous.....	24	4	21	8	17	258	252	6	66	192
Nonferrous.....	175	149	26	27	148	219	68	151	133	86
Fabricated metal products.....	892	770	122	481	411	2,836	2,781	55	1,374	1,462
Machinery.....	2,834	2,609	225	1,372	1,463	6,927	6,654	273	983	5,943
Machinery, except electrical.....	1,021	838	182	523	498	2,618	2,532	86	546	2,072
Computer and office equipment.....	429	255	174	402	27	986	950	37	30	956
Other.....	592	583	9	121	471	1,631	1,582	49	516	1,116
Electric and electronic equipment.....	1,814	1,771	43	849	965	4,309	4,122	187	437	3,872
Household audio and video, and communications equipment.....	(^b)	(^b)	(^b)	(^b)	(^b)	1,463	1,462	2	1	1,462
Electronic components and accessories.....	933	916	17	112	822	2,070	1,952	119	244	1,826
Other.....	(^b)	(^b)	(^b)	(^b)	(^b)	775	709	67	192	583
Other manufacturing.....	7,608	7,270	338	1,659	5,949	16,617	15,702	915	7,459	9,158
Textile products and apparel.....	559	544	14	16	543	540	537	3	196	344
Lumber, wood, furniture, and fixtures.....	9	9	1	1	9	(^b)	(^b)	8	6	(^b)
Paper and allied products.....	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	0	0	(^b)
Printing and publishing.....	631	631	0	130	501	8,730	8,278	452	3,392	5,338
Newspapers.....	(^b)	(^b)	0	0	(^b)	75	72	3	0	75
Other.....	(^b)	(^b)	0	130	(^b)	8,655	8,206	449	3,392	5,263
Rubber products.....	(^b)	(^b)	(^b)	(^b)	(^b)	2,977	2,975	2	2,767	210
Miscellaneous plastics products.....	504	492	12	11	493	517	499	18	39	478
Stone, clay, and glass products.....	867	616	251	643	224	1,343	1,343	(^b)	402	941
Transportation equipment.....	631	601	30	69	563	474	141	334	347	127
Motor vehicles and equipment.....	75	45	30	69	6	(^b)	(^b)	334	(^b)	(^b)
Other transportation equipment, nec.....	556	556	0	0	556	(^b)	(^b)	0	(^b)	(^b)
Instruments and related products.....	1,247	1,236	11	58	1,189	1,749	1,650	99	308	1,441
Other.....	2,432	2,425	7	674	1,758	107	107	0	3	104
Wholesale trade.....	1,271	1,245	26	104	1,166	2,299	2,184	114	143	2,156
Motor vehicles and equipment.....	0	0	0	0	0	68	35	32	39	29
Professional and commercial equipment and supplies.....	32	28	4	9	23	251	248	4	10	241
Metals and minerals, except petroleum.....	(^b)	(^b)	(^b)	6	(^b)	36	19	18	2	34
Electrical goods.....	101	100	1	2	99	(^b)	(^b)	1	1	(^b)
Machinery, equipment, and supplies.....	(^b)	(^b)	(^b)	(^b)	(^b)	65	65	0	5	60
Other durable goods.....	171	171	0	58	113	(^b)	(^b)	5	5	(^b)
Groceries and related products.....	66	66	0	0	66	1,424	1,424	0	0	1,424
Farm product raw materials.....	23	23	0	0	23	65	46	19	19	46
Other nondurable goods.....	708	699	9	28	680	121	86	35	62	59
Retail trade.....	1,212	1,210	2	738	474	7,985	7,655	330	354	7,630
General merchandise stores.....	(^b)	(^b)	0	0	(^b)	7,143	7,143	0	21	7,122
Food stores.....	72	72	1	51	21	238	238	0	0	238
Apparel and accessory stores.....	(^b)	(^b)	0	3	(^b)	397	68	329	329	68
Other.....	983	982	1	684	299	207	206	1	4	202
Banking.....	924	774	150	149	775	1,771	1,764	7	447	1,324
Finance, except banking.....	1,604	1,333	270	959	645	648	446	202	403	245
Insurance.....	165	138	28	37	128	5,793	5,791	2	335	5,458
Real estate.....	4,765	1,544	3,220	936	3,829	2,788	808	1,980	1,326	1,462
Services.....	7,630	6,771	859	2,811	4,819	4,687	4,371	316	1,160	3,527
Hotels and other lodging places.....	2,682	2,019	663	1,796	886	2,304	2,091	214	865	1,439
Business services.....	4,485	4,394	92	689	3,796	627	610	17	52	575
Computer and data processing services.....	483	474	9	469	14	359	357	2	17	341
Other business services.....	4,002	3,920	82	220	3,782	268	253	15	35	234
Motion pictures, including television tape and film.....	95	67	27	80	14	1,097	1,083	14	16	1,082
Engineering, architectural, and surveying services.....	(^b)	(^b)	0	(^b)	(^b)	78	78	0	8	70
Accounting, research, management, and related services.....	283	215	68	218	65	(^b)	(^b)	30	9	(^b)
Health services.....	3	3	0	3	0	(^b)	(^b)	0	0	(^b)
Other.....	(^b)	(^b)	9	(^b)	(^b)	474	433	41	211	264
Other industries.....	1,881	1,522	359	875	1,007	3,513	3,314	199	979	2,533
Agriculture, forestry, and fishing.....	284	137	148	155	130	93	69	24	13	80
Mining.....	854	745	109	502	352	298	213	85	212	86
Coal.....	38	14	24	2	36	(^b)	(^b)	(^b)	(^b)	(^b)
Other.....	817	731	85	500	316	(^b)	(^b)	(^b)	(^b)	(^b)
Construction.....	227	126	101	107	120	2,087	2,027	60	39	2,048
Transportation.....	(^b)	(^b)	1	(^b)	(^b)	950	943	6	685	265
Communication and public utilities.....	(^b)	(^b)	0	(^b)	(^b)	85	62	23	31	54

^a Revised.^b Preliminary.^c Suppressed to avoid disclosure of data of individual companies.^d Less than \$500,000.

NOTE.—The industry stub has been revised to conform to the revised 1987 Standard Industrial Classification.

research and development expertise in electronic parts manufacturing—particularly in the manufacture of copper foil, a material used in printed circuit boards.

Outlays in primary and fabricated metals were \$3.3 billion. Again, two investments accounted for more than one-half of the total. In one transaction, an Illinois-based manufacturer of metal cans was acquired by a U.S. affiliate of a French Government-owned aluminum manufacturer, which has acquired two other U.S. packaging concerns in recent years. The French company has now become one of the largest packaging concerns in the world. In the other transaction, a New York-based manufacturer of water heaters and air conditioners was acquired by a Japanese manufacturer of similar products as a means of extending its business to the U.S. market, where it had previously had no presence.

Outlays in food products were \$2.9 billion. In the largest transaction, a Florida-based producer of orange juice was acquired by a Canadian producer of alcoholic beverages. The Canadian company made the acquisition in order to diversify its product line in the face of declining alcoholic beverage consumption in the United States.

Outside manufacturing, outlays in retail trade, at \$8.0 billion, were mostly accounted for by the largest single transaction in 1988, in which a U.S. affiliate of a Canadian real estate developer and retailer acquired a large, Ohio-based department store chain. Parts of the acquired company were later divested to help finance the purchase. With this acquisition and another made in 1986, the Canadian developer is now the largest department store retailer in the United States in terms of sales.

Outlays in insurance were \$5.8 billion and were mostly for the acquisition of a California-based automobile and home insurer by a U.S. affiliate of a British tobacco, retailing, and financial services concern. The acquisition, which was made to fulfill the British company's long-term strategy of diversifying away from its tobacco products business, followed a lengthy takeover effort.

Outlays in petroleum were \$4.0 billion. The largest investment was by a Saudi Arabian Government-owned oil company, which acquired a 50-percent interest in a large U.S. oil company's refining assets and distribution system in the Eastern United States. As a result of the transaction, the Saudi Arabian company obtained a sizable market for its oil and the U.S. company obtained a reliable supply of crude oil for its extensive distribution system.

Outlays in "other industries," at \$3.5 billion, were mostly in construction. In the largest transaction, a Pennsylvania-based construction company was acquired by a U.S. affiliate of a British road builder.

In wholesale trade, outlays were \$2.3 billion and were mostly accounted for by the acquisition of an Illinois-based food wholesaler and corn sweetener manufacturer by a U.S. affiliate of a British sugar refiner. The British company intends to sell the food business in order to concentrate on the corn sweetener business.

Outlays in banking were \$1.8 billion. The two largest investments were by British investors. A New Jersey-based bank was acquired by a U.S. affiliate of a British bank to help build a large regional bank in the Northeast, and a Rhode Island-based regional bank was acquired by a British bank. Other investments include the acquisition of a New Hampshire-based bank by a U.S. affiliate of an Irish bank seeking to reduce its dependence on the highly regulated Irish banking industry and the acquisition of an Illinois-based bank by a U.S. affiliate of a Netherlands bank.

Unlike other nonmanufacturing industries, outlays in services, real estate, and finance (except banking) decreased from 1987 levels. In services, outlays were \$4.7 billion, down from \$7.6 billion in 1987. Almost one-half of the outlays were for hotels. The two largest investments were by Japanese investors. A U.S. affiliate of

Table 4.—Investment Outlays by Industry of U.S. Business Enterprise and by Country of Ultimate Beneficial Owner, 1982–88

	[Millions of dollars]						
	1982	1983	1984	1985	1986	1987 ^a	1988 ^a
Total	10,817	8,091	15,197	23,106	39,177	40,310	65,019
By industry:							
Petroleum.....	819	394	3,263	2,970	1,035	1,107	3,956
Manufacturing.....	2,379	3,113	3,106	12,140	16,772	19,751	31,580
Food and kindred products.....	376	691	340	3,556	1,007	4,177	2,935
Chemicals and allied products.....	363	653	378	3,280	7,063	4,041	1,788
Primary and fabricated metals.....	104	177	558	1,015	776	1,091	3,313
Machinery.....	979	470	535	1,556	2,426	2,834	6,927
Other manufacturing.....	557	1,121	1,295	2,733	5,500	7,608	16,617
Wholesale trade.....	462	198	840	804	1,640	1,271	2,299
Retail trade.....	684	95	1,154	1,217	5,249	1,212	7,985
Banking.....	427	173	910	257	288	924	1,771
Finance, except banking.....	499	457	802	489	1,781	1,604	648
Insurance.....	759	121	152	908	1,668	165	5,793
Real estate.....	3,289	2,659	2,227	1,921	5,171	4,765	2,788
Services.....	662	585	1,008	1,350	4,276	7,630	4,687
Other industries.....	837	298	1,735	1,050	1,298	1,881	3,513
By country:							
Canada.....	1,196	1,072	2,587	2,914	6,503	1,276	10,405
Europe.....	6,418	4,908	6,463	15,382	21,126	25,517	34,157
France.....	455	295	330	754	2,491	2,044	3,753
Germany.....	601	584	685	2,270	1,351	4,664	1,375
Netherlands.....	330	492	562	771	4,700	391	1,937
United Kingdom.....	3,128	2,366	3,714	6,732	8,572	15,142	21,520
Other Europe.....	1,904	1,171	1,172	4,855	4,012	3,276	5,572
Latin America.....	965	437	(^c)	589	771	1,483	106
South and Central America.....	430	291	196	88	397	355	14
Other Western Hemisphere.....	535	147	(^c)	501	375	1,128	91
Africa.....	85	180	(^c)	57	(^c)	(^c)	28
Middle East.....	864	715	919	986	680	925	1,004
Asia and Pacific.....	1,279	765	(^c)	3,138	9,450	10,928	19,278
Australia.....	75	54	(^c)	1,630	3,194	2,691	4,211
Japan.....	587	392	1,806	1,152	5,416	7,006	14,166
Other Asia and Pacific.....	617	319	251	356	840	1,231	901
United States ^b	9	14	(^c)	40	(^c)	(^c)	41
Addenda:							
European Communities (12) ³					19,034	22,895	31,175
OPEC ⁴	775	723	855	910	878	1,077	1,322

^a Revised.

^b Preliminary.

^c Suppressed to avoid disclosure of data of individual companies.

1. Where more than one investor participated in a given investment, each investor and each investor's outlays are classified by country of each ultimate beneficial owner.

2. See footnote 2 in text for explanation.

3. European Communities (12) comprises Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, United Kingdom, Portugal, and Spain.

4. OPEC is the Organization of Petroleum Exporting Countries. Its members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

NOTE.—The level of detail shown by industry of U.S. affiliate and by country of UBO in this table is less than has been shown in earlier years because, for 1987 forward, new industry and country stubs are being used. These stubs are not completely comparable to those used in prior years. The industry stubs have been revised to conform to the revised 1987 Standard Industrial Classification; country stubs have been revised to reflect geographical, rather than political or economic, groupings of countries. This table gives historical data for the major industry and country groups in the new stubs. For more detailed industry and country information for years prior to 1987, see the May 1988 SURVEY OF CURRENT BUSINESS.

a Japanese construction company acquired a hotel in Washington State and a Japanese railroad company acquired a hotel in Hawaii. Outlays in the motion picture industry were also sizable. The largest investments were by British investors in the motion picture industry, who acquired two studios—one in Texas and one in California.

Outlays in real estate were \$2.8 billion, down from \$4.8 billion in 1987. The outlays were for many small investments rather than for a few large ones. Of the five largest investments, four were by Japanese investors. The fifth was the acquisition of an office building in Texas by an Australian investor. The Japanese investments are

discussed in more detail in the next section of this article.

In finance (except banking), outlays were \$0.6 billion, down from \$1.6 billion in 1987. The largest investment was the acquisition of a Connecticut-based government securities dealer by a Japanese bank.

Table 5A.—Investment Outlays, Country of Ultimate Beneficial Owner by Industry of U.S. Business Enterprise, 1987

[Millions of dollars]

	All industries	Petroleum	Manufacturing						Wholesale trade	Retail trade	Banking	Finance, except banking	Insurance	Real estate	Services	Other industries
			Total	Food and kindred products	Chemicals and allied products	Primary and fabricated metals	Machinery	Other manufacturing								
All countries.....	40,310	1,107	19,751	4,177	4,041	1,091	2,834	7,608	1,271	1,212	924	1,604	165	4,765	7,630	1,881
Canada.....	1,276	2	735	7	(¹)	(¹)	23	373	13	0	(¹)	3	(¹)	81	(¹)	43
Europe.....	25,517	401	15,665	2,880	3,466	563	2,603	6,153	1,197	858	340	290	57	532	5,203	975
Austria.....	14	0	(¹)	0	0	0	0	(¹)	0	0	5	0	0	0	0	(¹)
Belgium.....	182	(¹)	50	(¹)	3	0	0	(¹)	0	0	0	0	0	24	5	(¹)
Denmark.....	11	0	8	0	0	0	0	8	(¹)	2	0	0	0	0	0	1
Finland.....	27	0	19	0	0	(¹)	0	7	0	0	0	0	0	0	0	1
France.....	2,044	(¹)	1,714	(¹)	116	(¹)	1,014	49	(¹)	3	0	(¹)	0	4	(¹)	67
Germany.....	4,664	(¹)	4,450	41	(¹)	5	(¹)	(¹)	9	0	0	(¹)	0	52	6	41
Ireland.....	42	0	42	3	0	0	0	39	0	0	0	0	0	3	0	0
Italy.....	268	(¹)	231	(¹)	0	0	0	(¹)	0	(¹)	0	2	0	3	8	0
Liechtenstein.....	110	0	(¹)	(¹)	0	0	0	0	(¹)	0	0	3	0	26	0	(¹)
Luxembourg.....	(¹)	0	(¹)	0	0	0	0	(¹)	0	0	0	0	0	0	0	5
Netherlands.....	391	2	90	0	(¹)	0	49	(¹)	6	(¹)	0	0	0	154	(¹)	27
Norway.....	(¹)	0	(¹)	0	0	0	0	0	0	0	0	0	0	0	0	(¹)
Spain.....	(¹)	0	(¹)	0	0	0	0	(¹)	0	0	0	0	0	0	0	0
Sweden.....	333	0	259	0	0	(¹)	187	(¹)	0	0	0	0	0	(¹)	(¹)	0
Switzerland.....	2,085	2	950	(¹)	(¹)	(¹)	2	(¹)	91	(¹)	0	11	0	41	746	(¹)
United Kingdom.....	15,142	66	7,611	(¹)	(¹)	284	751	5,153	1,015	815	335	221	57	224	4,261	536
Other.....	(¹)	0	(¹)	0	0	0	(¹)	0	(¹)	0	0	0	0	0	0	0
Latin America.....	1,483	(¹)	(¹)	0	0	0	2	(¹)	(¹)	(¹)	(¹)	(¹)	0	172	745	37
South and Central America.....	355	(¹)	2	0	0	0	2	0	4	0	(¹)	(¹)	0	111	3	13
Brazil.....	(¹)	(¹)	2	0	0	0	2	0	0	0	(¹)	(¹)	0	0	0	(¹)
Mexico.....	12	0	0	0	0	0	0	0	3	0	0	1	0	5	0	3
Panama.....	108	0	0	0	0	0	0	0	0	0	0	0	0	(¹)	1	(¹)
Venezuela.....	(¹)	(¹)	0	0	0	0	0	0	1	0	0	0	0	0	2	0
Other.....	(¹)	0	0	0	0	0	0	0	0	0	0	0	0	(¹)	0	0
Other Western Hemisphere.....	1,128	0	(¹)	0	0	0	0	(¹)	(¹)	(¹)	0	1	0	61	742	23
Bahamas.....	8	0	0	0	0	0	0	0	0	0	0	0	0	6	0	2
Bermuda.....	804	0	0	0	0	0	0	0	(¹)	(¹)	0	0	0	0	742	4
Netherlands Antilles.....	(¹)	0	(¹)	0	0	0	0	(¹)	0	0	0	0	0	(¹)	0	0
United Kingdom Islands, Caribbean.....	(¹)	0	(¹)	0	0	0	0	(¹)	0	0	0	1	0	(¹)	0	0
Other.....	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Africa.....	(¹)	(¹)	(¹)	0	0	(¹)	(¹)	(¹)	0	0	0	(¹)	0	(¹)	0	0
South Africa.....	(¹)	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
Other.....	(¹)	(¹)	(¹)	0	0	0	0	(¹)	0	0	0	0	0	(¹)	0	0
Middle East.....	925	(¹)	(¹)	0	0	0	0	(¹)	(¹)	(¹)	227	(¹)	0	68	(¹)	5
Israel.....	(¹)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kuwait.....	845	(¹)	0	0	0	0	0	0	(¹)	(¹)	227	(¹)	0	0	0	0
Lebanon.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia.....	74	0	0	0	0	0	0	0	0	0	0	0	0	65	(¹)	(¹)
United Arab Emirates.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other.....	6	0	0	0	0	0	0	0	0	(¹)	0	0	0	2	0	(¹)
Asia and Pacific.....	10,928	(¹)	3,048	1,290	(¹)	206	157	(¹)	38	182	159	1,237	(¹)	3,892	1,407	822
Australia.....	2,691	(¹)	1,752	1,200	(¹)	0	0	(¹)	0	(¹)	0	0	0	0	(¹)	668
Hong Kong.....	0	0	0	0	0	0	0	0	8	(¹)	0	0	0	2	3	2
Japan.....	7,006	100	1,071	90	(¹)	(¹)	188	28	(¹)	(¹)	156	855	(¹)	3,571	1,052	133
Malaysia.....	(¹)	0	0	0	0	0	0	0	0	0	0	0	0	3	0	(¹)
New Zealand.....	552	0	(¹)	0	0	0	0	0	0	4	0	0	0	0	0	(¹)
Philippines.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Singapore.....	0	0	1	0	0	0	0	1	0	0	3	0	0	0	0	0
South Korea.....	26	0	(¹)	0	0	0	0	(¹)	0	0	0	0	0	0	3	3
Taiwan.....	31	0	(¹)	0	0	0	0	(¹)	1	0	0	0	0	0	0	0
Other.....	(¹)	0	0	0	0	0	0	0	1	0	0	0	0	0	(¹)	0
United States ¹	(¹)	0	(¹)	0	0	4	(¹)	0	0	0	0	0	0	0	0	0
Addenda:																
European Communities (12) ²	22,895	399	14,340	2,085	3,459	347	2,378	6,071	1,093	852	335	276	57	461	4,387	694
OPEC ³	1,077	(¹)	0	0	0	0	0	0	(¹)	(¹)	227	66	0	65	(¹)	2

¹ Suppressed to avoid disclosure of data of individual companies.

* Less than \$500,000.

1. See footnote 2 in text for further explanation.

2. See footnote 3, table 4.

3. See footnote 4, table 4.

NOTE.—Data for 1987 are revised. Where more than one investor participated in a given investment, each investor and each investor's outlays are classified by the country of each individual ultimate beneficial owner.

The country stub has been revised to reflect geographical, rather than political or economic, groupings of countries.

Country

Outlays are classified by country of ultimate beneficial owner (UBO) in tables 4, 5A, and 5B.² In 1988, as in past

2. Investment outlays can be classified by country of foreign parent as well as by country of UBO. The foreign parent is the first foreign person in the ownership chain of the acquired or established U.S. business; the UBO is the person in the ownership chain, beginning with

years, British UBO's were the largest investors. They accounted for \$21.5 billion, or 33 percent, of total outlays. Of the 12 investments of \$1 billion or

the foreign parent, that is not owned more than 50 percent by another person. The country of UBO is often the same as that of the foreign parent, but it may be a different foreign country or the United States. Data classified by country of foreign parent are available in a set of supplementary tables (see box, page 28).

more, 4 were by British UBO's; these 4 accounted for 51 percent of total British outlays. The four investments were in four industries: In insurance (the purchase of the California-based insurer by the U.S. affiliate of a British tobacco, retail, and financial services concern), in publishing (the purchase of the New York-based

Table 5B.—Investment Outlays, Country of Ultimate Beneficial Owner by Industry of U.S. Business Enterprise, 1988

[Millions of dollars]

	All industries	Petroleum	Manufacturing						Wholesale trade	Retail trade	Banking	Finance, except banking	Insurance	Real estate	Services	Other industries
			Total	Food and kindred products	Chemicals and allied products	Primary and fabricated metals	Machinery	Other manufacturing								
All countries.....	65,019	3,956	31,580	2,935	1,788	3,313	6,927	16,617	2,299	7,985	1,771	648	5,793	2,788	4,687	3,513
Canada.....	10,405	(P)	2,375	1,487	0	(P)	574	(P)	(P)	7,016	0	(P)	(P)	187	98	359
Europe.....	34,157	2,672	15,440	980	1,285	1,604	3,237	8,333	2,078	566	1,743	65	5,600	808	2,385	2,801
Austria.....	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Belgium.....	1,204	(P)	446	(P)	0	0	0	(P)	0	0	(P)	0	(P)	(P)	(*)	4
Denmark.....	(P)	0	0	0	0	0	0	(P)	1	0	0	0	0	0	0	0
Finland.....	264	(P)	244	(P)	(P)	0	1	(P)	0	0	0	0	0	0	0	5
France.....	3,753	(P)	3,080	63	103	(P)	(P)	1,616	(P)	0	0	0	0	23	(P)	63
Germany.....	1,375	0	752	5	126	1	276	345	237	(P)	0	(P)	2	61	0	28
Ireland.....	567	0	0	(P)	0	0	0	(P)	0	0	(P)	0	(P)	0	(*)	0
Italy.....	313	0	0	0	4	0	0	(P)	0	0	0	0	0	7	0	0
Liechtenstein.....	37	0	0	0	0	0	0	0	(*)	0	0	0	0	37	0	0
Luxembourg.....	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Netherlands.....	1,937	(P)	1,117	(P)	(P)	0	934	2	(P)	(P)	(P)	0	0	130	3	(P)
Norway.....	(P)	0	0	0	0	0	0	(P)	0	0	0	0	0	4	0	0
Spain.....	(P)	0	0	0	0	0	0	(P)	0	0	0	0	0	0	0	0
Sweden.....	586	0	458	(P)	0	0	419	(P)	0	0	0	(P)	0	18	(P)	0
Switzerland.....	2,017	2	1,423	0	428	(P)	(P)	(P)	35	0	0	9	(P)	51	260	(P)
United Kingdom.....	21,520	1,185	7,257	244	572	211	1,496	4,733	1,733	(P)	(P)	0	5,204	355	2,000	2,368
Other.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Latin America.....	106	2	0	0	0	0	0	0	(*)	0	0	2	0	21	(P)	(P)
South and Central America.....	14	0	0	0	0	0	0	0	(*)	0	0	2	0	12	0	(*)
Brazil.....	5	0	0	0	0	0	0	0	0	0	0	2	0	3	0	(*)
Mexico.....	4	0	0	0	0	0	0	0	(*)	0	0	0	0	4	0	0
Panama.....	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Venezuela.....	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Other.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Western Hemisphere.....	91	2	0	0	0	0	0	0	0	0	0	0	0	9	(P)	(P)
Bahamas.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bermuda.....	15	0	0	0	0	0	0	0	0	0	0	0	0	(P)	(P)	0
Netherlands Antilles.....	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom Islands, Caribbean.....	(P)	0	0	0	0	0	0	0	0	0	0	0	0	(P)	(P)	0
Other.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Africa.....	28	0	(P)	0	0	0	17	(P)	0	0	0	0	0	(P)	0	0
South Africa.....	(P)	0	(P)	0	0	0	(P)	(P)	0	0	0	0	0	3	0	0
Other.....	(P)	0	(P)	0	0	0	(P)	0	0	0	0	0	0	(P)	0	0
Middle East.....	1,004	(P)	(P)	0	0	(P)	0	0	(P)	0	0	0	0	(P)	(P)	3
Israel.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kuwait.....	(P)	0	(P)	0	0	(P)	0	0	0	0	0	0	0	2	0	0
Lebanon.....	(P)	0	0	0	0	0	0	0	0	0	0	0	0	(P)	0	0
Saudi Arabia.....	(P)	0	0	0	0	0	0	0	(P)	0	0	0	0	8	(P)	0
United Arab Emirates.....	(P)	0	0	0	0	0	0	0	0	0	0	0	0	(P)	0	0
Other.....	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Asia and Pacific.....	19,278	(P)	13,700	445	498	1,685	3,088	7,984	164	403	29	564	(P)	1,724	2,063	(P)
Australia.....	4,211	(P)	(P)	5	0	0	0	(P)	(P)	(P)	0	0	0	(P)	24	(P)
Hong Kong.....	173	0	0	0	0	0	0	(P)	6	0	0	(*)	0	41	(P)	0
Japan.....	14,166	0	9,764	101	494	1,631	3,009	4,529	119	(P)	29	564	0	1,376	1,914	(P)
Malaysia.....	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand.....	125	0	0	0	0	0	0	0	(P)	0	0	0	(P)	0	0	80
Philippines.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Singapore.....	10	0	(P)	0	0	0	(P)	(P)	0	0	0	0	0	0	(P)	0
South Korea.....	101	(P)	0	0	0	0	0	0	0	0	0	0	0	0	0	(P)
Taiwan.....	(P)	0	0	0	0	0	0	0	0	0	0	0	0	(P)	0	0
Other.....	450	0	(P)	(P)	0	54	0	1	5	0	0	0	0	(P)	0	0
United States ¹	41	0	37	22	5	0	10	0	(P)	0	0	(P)	0	0	0	0
Addenda:																
European Communities (12) ²	31,175	2,660	13,243	(P)	848	(P)	2,806	7,269	2,037	566	1,743	(P)	(P)	697	2,019	2,625
OPEC ³	1,322	(P)	(P)	(P)	0	5	0	0	(P)	0	0	0	0	44	(P)	0

^P Suppressed to avoid disclosure of data of individual companies.
^{*} Less than \$500,000.

1. See footnote 2 in text for further explanation.
 2. See footnote 3, table 4.
 3. See footnote 4, table 4.

NOTE.—Data for 1988 are preliminary. Where more than one investor participated in a given investment, each investor and each investor's outlays are classified by the country of each individual ultimate beneficial owner.

The country stub has been revised to reflect geographical, rather than political or economic, groupings of countries.

publisher by a British printing, publishing, and communications concern), in construction (the purchase of the Pennsylvania-based construction company by the U.S. affiliate of a British road builder), and in wholesale trade (the purchase of the Illinois-based food wholesaler by the U.S. affiliate of a British sugar refiner). All transactions were discussed in more detail in the previous section of this article.

Japanese UBO's were the second largest investors in 1988, with \$14.2 billion in outlays. Like the British, the Japanese made 4 of the 12 investments of \$1 billion or more; these investments accounted for 42 percent of their total outlays. Three of these investments, all mentioned earlier, were in manufacturing; they were the acquisition of the New York-based record company by the U.S. affiliate of a Japanese consumer electronics manufacturer, the acquisition of the Illinois-based manufacturer of computers and electrical products by the U.S. affiliate of a Japanese metal, petroleum refining, and petrochemical company, and the acquisition of the Ohio-based tire manufacturer by a Japanese tire company. The other investment—the acquisition of the Washington State hotel by a Japanese construction company, also mentioned earlier—was in services. Outlays in real estate were also sizable, at \$1.4 billion, but these outlays reflected many small investments rather than one or two large ones. Two of the largest investments were by Japanese real estate developers; one purchased an office building in California and the other purchased land in Hawaii. Two other sizable outlays involved establishments of U.S. real estate companies—one in Hawaii and one in California. Japanese outlays in U.S. real estate have been strong for several years, reflecting, in addition to the factors mentioned earlier, the scarcity of purchasable land in Japan.

Canadian UBO's were the third largest investors, with outlays of \$10.4 billion. Two of the twelve investments of \$1 billion or more were by Canadian investors; these accounted for 77 percent of total Canadian outlays. Both acquisitions, the Ohio-based department store chain by a Canadian real estate developer and the Florida-based orange juice producer by a Canadian

alcoholic beverage manufacturer, were mentioned earlier.

Australian UBO's were the fourth largest investors, with outlays of \$4.2 billion. The outlays were mostly attributable to one investment of \$1 billion or more—specifically the acquisition, mentioned earlier, of the Pennsylvania-based publisher by the U.S. affiliate of an Australian communications concern.

French and Swiss UBO's also made sizable outlays—\$3.8 billion and \$2.0 billion, respectively. Outlays by French UBO's were mostly in primary and fabricated metals and in "other manufacturing." The outlays in primary and fabricated metals were largely attributable to one investment of \$1 billion or more—specifically the previously mentioned acquisition of the Illinois metal can manufacturer by the French Government-owned packaging company. The outlays in "other manufacturing" reflected the acquisition of a Connecticut-based encyclopedia publisher and a New York-based magazine publisher by a large French publishing concern. Outlays by Swiss UBO's were largest in "other manufacturing," reflecting the acquisition of a Texas-based medical equipment manufacturer by a Swiss manufacturer of similar products. Other large outlays were in chemicals—for the acquisition of a pharmaceutical company by a Swiss chemicals manufacturer—and in services—partly for the acquisition of a New York-based computer services concern by a Swiss investor.

Selected Operating Data

Total assets of the U.S. businesses acquired or established in 1988 were \$126.8 billion, down slightly from \$131.1 billion in 1987 (tables 6A and

6B). The decrease largely reflected an unusually large 1987 increase in assets resulting from two investments in U.S. securities firms.

U.S. businesses acquired in 1988 had assets of \$116.7 billion; almost one-third of the assets were in manufacturing. Three acquisitions—the Ohio-based manufacturer of metal cans by a French packaging company and the two magazine publishers, one by a British and one by an Australian communications company—accounted for almost one-half of the total. Assets were second largest in "other industries" and third largest in insurance. In "other industries," the acquisition of a Pennsylvania-based construction company by the U.S. affiliate of a British road builder accounted for almost one-fourth of the assets acquired. In insurance, the acquisition of a Connecticut-based fire insurance company by an insurance company in Luxembourg and the acquisition of the California-based automobile and homeowner insurer by a British tobacco company accounted for most of the assets acquired.

Acquired businesses employed 643,106 workers. The acquired company with the largest number of employees was the department store chain that was purchased by a Canadian retailer and developer. Acquired businesses owned nearly 4 million acres of land. The largest acreage obtained in a single transaction that accounted for most of the total was by a Canadian real estate concern that acquired a stake in an Illinois-based railroad company.

U.S. businesses established in 1988 had assets of \$10.1 billion, employed 33,871 workers, and owned 354,130 acres of U.S. land. Most of the acreage was owned by businesses in real estate, agriculture, and forestry.

Data Availability

Only summary data are published in this article. A set of 21 supplementary tables containing additional detail for 1987 and 1988 on the number of investments and investors, investment outlays, and selected operating data for the U.S. business enterprises acquired or established is available for \$10.00 from Economic and Statistical Analysis/BEA, U.S. Department of Commerce, Citizens and Southern National Bank, 222 Mitchell St., P.O. Box 100606, Atlanta, Georgia 30384. When ordering, refer to the "BE-13 Supplementary Tables for the May 1989 SURVEY Article," Accession No. BEA IID 89-105, and make checks payable to Economic and Statistical Analysis/BEA. Comparable tables for 1980-86 (see note to table 4 of this article) are also available from the same address: Accession No. II-275, price \$10.00.

Table 6A.—Total Assets, Sales, Net Income, Employment, and Acres of Land Owned by U.S. Business Enterprise Acquired or Established, by Industry of U.S. Business Enterprise, 1987

(Millions of dollars or number)

	Total assets of all U.S. business enterprises acquired or established	U.S. business enterprises acquired					U.S. business enterprises established				
		Total assets	Sales ¹	Net income	Number of employees	Number of acres of land owned	Total assets	Sales	Net income	Number of employees	Number of acres of land owned
All industries.....	131,122	117,219	45,235	907	374,238	282,028	13,903	3,005	-56	19,867	213,663
Petroleum.....	1,316	684	1,825	-34	1,626	1,181	632	322	-59	277	(^o)
Petroleum and coal products manufacturing.....	(^o)	(^o)	(^o)	(^o)	1,133	(^o)	0	0	0	0	0
Other.....	(^o)	(^o)	(^o)	(^o)	493	(^o)	632	322	-59	277	(^o)
Manufacturing.....	24,934	23,161	22,596	98	217,338	154,372	1,773	1,326	-4	13,319	4,048
Food and kindred products.....	3,485	3,156	4,285	129	25,144	3,382	329	(^o)	-1	(^o)	(^o)
Beverages.....	2,460	2,447	2,512	84	15,544	(^o)	13	(*)	-1	(^o)	(^o)
Other.....	1,025	709	1,772	44	9,600	(^o)	316	(^o)	-1	(^o)	0
Chemicals and allied products.....	5,237	4,976	3,367	221	20,146	17,177	260	171	-5	(^o)	(^o)
Industrial chemicals and synthetics.....	4,210	4,155	2,412	214	14,573	14,597	55	(^o)	-1	(^o)	(^o)
Drugs.....	69	69	(^o)	-10	(^o)	(^o)	0	0	0	0	0
Soap, cleaners, and toilet goods.....	(^o)	(^o)	(^o)	1	(^o)	(^o)	0	0	0	0	0
Other.....	(^o)	(^o)	843	17	4,230	(^o)	205	(^o)	-4	(^o)	(^o)
Primary and fabricated metals.....	1,903	1,605	1,795	-127	17,336	66,396	297	126	-5	757	1,252
Primary metal industries.....	931	772	1,013	(^o)	7,921	(^o)	159	7	-4	(^o)	(^o)
Ferrous.....	684	551	(^o)	(^o)	(^o)	(^o)	153	7	-4	(^o)	(^o)
Nonferrous.....	247	222	(^o)	-17	(^o)	(^o)	26	0	0	(^o)	0
Fabricated metal products.....	972	833	782	(^o)	9,415	(^o)	139	119	-1	(^o)	(^o)
Machinery.....	4,750	4,430	5,710	-35	46,449	1,519	320	249	-6	3,491	662
Machinery, except electrical.....	2,182	1,949	1,955	33	19,652	692	233	(^o)	3	(^o)	(^o)
Computer and office equipment.....	1,379	1,211	(^o)	3	(^o)	(^o)	168	(^o)	3	(^o)	(^o)
Other.....	803	738	(^o)	30	(^o)	(^o)	65	(^o)	(^o)	(^o)	80
Electric and electronic equipment.....	2,568	2,481	3,755	-67	26,797	827	86	(^o)	-8	(^o)	(^o)
Household audio and video, and communications equipment.....	1,372	1,371	(^o)	-61	13,999	(^o)	1	(*)	(^o)	(^o)	(^o)
Electronic components and accessories.....	1,088	1,058	774	-8	(^o)	(^o)	30	6	-3	(^o)	0
Other.....	107	52	(^o)	2	(^o)	0	55	(^o)	-6	(^o)	(^o)
Other manufacturing.....	9,559	8,993	7,441	-90	108,263	65,898	567	(^o)	13	7,730	1,525
Textile products and apparel.....	823	738	441	14	6,000	(^o)	85	(^o)	2	1,550	(^o)
Lumber, wood, furniture, and fixtures.....	23	10	(^o)	(^o)	(^o)	(^o)	12	(^o)	0	(^o)	(^o)
Paper and allied products.....	(^o)	(^o)	145	(^o)	1,073	522	(^o)	(^o)	0	(^o)	(^o)
Printing and publishing.....	515	515	383	(^o)	4,084	20	0	0	0	0	0
Newspapers.....	(^o)	(^o)	20	1	(^o)	(^o)	0	0	0	0	0
Other.....	(^o)	(^o)	363	(^o)	(^o)	(^o)	0	0	0	0	0
Rubber products.....	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)
Miscellaneous plastics products.....	431	407	463	17	4,060	407	24	(^o)	-1	220	(^o)
Stone, clay, and glass products.....	1,802	1,456	1,154	91	7,827	53,831	346	(^o)	(^o)	(^o)	(^o)
Transportation equipment.....	888	844	850	24	8,363	659	44	23	-1	326	258
Motor vehicles and equipment.....	89	45	73	3	773	(^o)	44	23	-1	326	258
Other transportation equipment, nec.....	799	799	778	22	7,590	(^o)	0	0	0	0	0
Instruments and related products.....	941	927	1,190	38	13,645	881	15	3	(^o)	(^o)	(^o)
Other.....	3,286	3,267	1,669	9	53,665	4,442	19	8	(^o)	(^o)	(^o)
Wholesale trade.....	1,650	1,555	2,648	48	12,014	1,682	95	166	(*)	228	18
Motor vehicles and equipment.....	0	0	0	0	0	0	0	0	0	0	0
Professional and commercial equipment and supplies.....	37	26	49	2	372	0	12	(*)	(*)	0	0
Metals and minerals, except petroleum.....	(^o)	0	0	0	0	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)
Electrical goods.....	88	61	269	2	1,414	(^o)	27	(^o)	(*)	(^o)	0
Machinery, equipment, and supplies.....	157	(^o)	(^o)	(^o)	(^o)	(^o)	21	1	74	(^o)	(^o)
Other durable goods.....	232	232	617	6	2,460	20	0	0	0	0	0
Groceries and related products.....	102	102	437	4	1,500	(^o)	0	0	0	0	0
Farm product raw materials.....	(^o)	(^o)	151	(*)	836	64	0	0	0	0	0
Other nondurable goods.....	975	962	(^o)	(^o)	(^o)	(^o)	12	(^o)	-1	46	(^o)
Retail trade.....	1,887	1,877	2,659	30	25,120	682	10	8	(*)	(^o)	(^o)
General merchandise stores.....	(^o)	(^o)	(^o)	(^o)	0	0	0	0	0	0	0
Food stores.....	137	135	(^o)	(*)	4,874	(^o)	2	(^o)	(*)	(^o)	(^o)
Apparel and accessory stores.....	(^o)	(^o)	244	(^o)	(^o)	(^o)	0	0	0	0	0
Other.....	1,161	1,153	2,002	46	13,392	655	8	(^o)	(^o)	(^o)	0
Banking.....	12,649	9,475	787	65	3,994	(^o)	3,174	77	-2	482	0
Finance, except banking.....	70,747	68,828	6,913	433	40,516	(^o)	1,918	55	10	87	0
Insurance.....	591	547	257	25	1,546	(^o)	44	5	(*)	(^o)	(^o)
Real estate.....	6,777	2,209	347	39	881	26,184	4,568	231	2	287	46,672
Services.....	5,991	4,925	3,881	160	38,781	1,923	1,066	290	-12	3,498	270
Hotels and other lodging places.....	2,087	1,243	240	-8	6,518	(^o)	844	149	18	1,908	54
Business services.....	3,554	3,452	3,377	165	28,382	76	102	(^o)	-22	1,418	(^o)
Computer and data processing services.....	819	804	570	45	3,929	0	15	8	(^o)	(^o)	(^o)
Other business services.....	2,735	2,648	2,806	120	24,453	76	87	(^o)	(^o)	(^o)	(^o)
Motion pictures, including television tape and film.....	112	84	44	5	92	0	27	5	0	0	0
Engineering, architectural, and surveying services.....	(^o)	(^o)	(^o)	-3	(^o)	(^o)	0	0	0	0	0
Accounting, research, management, and related services.....	147	63	122	4	1,268	0	84	2	-8	120	7
Health services.....	5	5	3	(*)	(^o)	0	0	0	0	0	0
Other.....	(^o)	(^o)	(^o)	-1	1,998	10	9	(^o)	(*)	(^o)	(^o)
Other industries.....	4,580	3,958	3,322	44	32,422	94,453	622	524	8	1,223	132,665
Agriculture, forestry, and fishing.....	357	175	154	1	1,644	(^o)	182	34	7	199	93,994
Mining.....	1,511	1,399	404	20	3,688	60,895	111	(^o)	1	8	(^o)
Coal.....	693	669	(^o)	(^o)	(^o)	(^o)	24	(^o)	2	(^o)	(^o)
Other.....	818	731	(^o)	(^o)	(^o)	(^o)	87	(^o)	-1	(^o)	(^o)
Construction.....	888	573	1,202	8	7,095	1,220	315	(^o)	(^o)	1,016	(^o)
Transportation.....	(^o)	(^o)	1,339	19	18,573	(^o)	14	(^o)	(^o)	0	0
Communication and public utilities.....	(^o)	(^o)	223	-4	1,422	(^o)	0	0	0	0	0

^o Suppressed to avoid disclosure of data of individual companies.

* Less than \$500,000 (±).

1. Sales, or gross operating revenue, excluding sales taxes.

NOTE.—Data for 1987 are revised. For acquired businesses, data are for, or as of the end of, the fiscal year preceding the year of acquisition; for newly established businesses, data are projections for, or as of the end of, the first full year of operation.

Table 6B.—Total Assets, Sales, Net Income, Employment, and Acres of Land Owned by U.S. Business Enterprise Acquired or Established, by Industry of U.S. Business Enterprise, 1988

[Millions of dollars or number]

	Total assets of all U.S. business enterprises acquired or established	U.S. business enterprises acquired					U.S. business enterprises established				
		Total assets	Sales ¹	Net income	Number of employees	Number of acres of land owned	Total assets	Sales	Net income	Number of employees	Number of acres of land owned
All industries.....	126,761	116,676	81,049	2,811	643,106	3,950,810	10,084	4,299	-132	33,871	354,130
Petroleum.....	6,123	6,069	9,295	394	9,470	(^o)	54	(^o)	(*)	(^o)	(^o)
Petroleum and coal products manufacturing.....	821	821	1,392	42	1,676	2,130	0	0	0	0	0
Other.....	5,302	5,248	7,902	351	7,794	(^o)	54	(^o)	(*)	(^o)	(^o)
Manufacturing.....	38,983	35,351	29,995	601	256,996	68,716	3,632	2,990	-136	25,803	11,252
Food and kindred products.....	2,363	2,337	4,038	117	25,029	16,777	26	1	-1	(^o)	(^o)
Beverages.....	26	22	15	(*)	150	436	4	1	0	(^o)	(^o)
Other.....	2,338	2,316	4,023	117	24,879	16,341	22	(^o)	-2	(^o)	(^o)
Chemicals and allied products.....	2,448	909	1,174	41	6,554	634	1,540	(^o)	(^o)	(^o)	(^o)
Industrial chemicals and synthetics.....	460	418	482	4	2,376	267	42	(^o)	-3	0	0
Drugs.....	1,580	145	188	19	1,260	42	1,435	(^o)	(^o)	(^o)	(^o)
Soap, cleaners, and toilet goods.....	(^o)	(^o)	(^o)	8	(^o)	(^o)	0	0	0	0	0
Other.....	(^o)	(^o)	(^o)	10	(^o)	(^o)	62	(^o)	3	(^o)	(^o)
Primary and fabricated metals.....	9,524	9,256	6,411	119	41,789	8,203	268	194	(^o)	(^o)	506
Primary metal industries.....	493	310	369	28	3,617	1,022	184	(^o)	(^o)	(^o)	(^o)
Ferrous.....	243	237	25	(^o)	(^o)	(^o)	7	(^o)	(^o)	(^o)	(^o)
Nonferrous.....	250	73	(^o)	2	(^o)	(^o)	177	(^o)	(^o)	(^o)	(^o)
Fabricated metal products.....	9,031	8,946	6,042	92	38,172	7,181	84	(^o)	-5	459	(^o)
Machinery.....	8,003	7,597	6,829	-302	62,598	2,903	406	315	-35	1,578	363
Machinery, except electrical.....	3,470	3,281	3,201	-1	26,592	2,006	189	234	-32	753	197
Computer and office equipment.....	1,498	1,435	917	1	8,365	100	63	(^o)	(^o)	539	(^o)
Other.....	1,973	1,846	2,284	-3	18,227	1,906	127	(^o)	(^o)	214	(^o)
Electric and electronic equipment.....	4,533	4,316	3,629	-301	36,006	897	216	82	-3	825	166
Household audio and video, and communications equipment.....	1,713	1,712	1,019	-239	6,161	256	2	(^o)	(^o)	(^o)	(^o)
Electronic components and accessories.....	2,130	1,989	1,903	-83	20,366	540	140	(^o)	-2	(^o)	(^o)
Other.....	690	615	707	22	9,479	101	74	(^o)	(*)	(^o)	(^o)
Other manufacturing.....	16,644	15,251	11,542	625	121,026	40,199	1,394	759	-89	10,106	(^o)
Textile products and apparel.....	447	444	587	19	6,744	1,906	3	2	(^o)	(^o)	(^o)
Lumber, wood, furniture, and fixtures.....	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	64	0	0	0	0
Paper and allied products.....	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	0	0	0	0	0
Printing and publishing.....	6,757	6,308	2,762	234	22,149	570	449	(^o)	(^o)	(^o)	(^o)
Newspapers.....	43	40	25	1	764	19	3	(*)	(^o)	(^o)	(^o)
Other.....	6,713	6,267	2,737	233	21,385	551	446	(^o)	(^o)	(^o)	(^o)
Rubber products.....	3,182	3,180	4,330	158	56,580	722	2	1	-1	(^o)	(^o)
Miscellaneous plastics products.....	574	528	481	36	4,539	381	46	(^o)	-1	(^o)	(^o)
Stone, clay, and glass products.....	2,900	2,890	1,898	106	16,524	35,180	10	2	0	0	0
Transportation equipment.....	915	192	164	18	2,014	115	723	215	-115	1,852	(^o)
Motor vehicles and equipment.....	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	723	215	-115	1,852	(^o)
Other transportation equipment, nec.....	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	0	0	0	0	0
Instruments and related products.....	1,491	1,394	912	44	8,922	505	97	(^o)	(^o)	(^o)	(^o)
Other.....	124	124	164	3	2,369	(^o)	0	0	0	0	0
Wholesale trade.....	3,491	3,173	5,236	80	20,084	12,114	318	354	-11	717	397
Motor vehicles and equipment.....	345	169	310	-2	2,652	(^o)	176	(^o)	-1	(^o)	(^o)
Professional and commercial equipment and supplies.....	281	278	407	1	1,817	(^o)	4	(*)	(*)	0	0
Metals and minerals, except petroleum.....	61	26	85	6	(^o)	0	34	(^o)	2	0	0
Electrical goods.....	39	38	(^o)	3	(^o)	(^o)	1	0	0	0	(^o)
Machinery, equipment, and supplies.....	79	79	111	5	519	(^o)	0	0	0	0	0
Other durable goods.....	227	207	(^o)	-6	1,180	(^o)	20	(^o)	(^o)	(^o)	(^o)
Groceries and related products.....	2,192	2,192	3,580	49	10,306	2,021	0	0	0	0	0
Farm product raw materials.....	60	41	70	3	219	(^o)	19	0	0	0	0
Other nondurable goods.....	207	143	289	22	2,693	(^o)	64	(^o)	(^o)	(^o)	(^o)
Retail trade.....	9,596	9,264	14,700	282	171,619	3,950	333	(^o)	-4	(^o)	(^o)
General merchandise stores.....	7,882	7,882	11,563	326	141,524	3,592	0	0	0	0	0
Food stores.....	511	511	2,378	(^o)	22,630	(^o)	0	0	0	0	0
Apparel and accessory stores.....	655	325	243	9	3,525	(^o)	330	(^o)	-4	(^o)	(^o)
Other.....	549	546	515	(^o)	3,940	93	3	(^o)	(*)	(^o)	(^o)
Banking.....	13,784	11,544	1,067	109	7,547	435	2,241	108	-4	65	0
Finance, except banking.....	9,415	8,884	255	(*)	651	0	531	24	-3	74	(^o)
Insurance.....	16,522	16,520	6,706	617	29,412	1,641	2	(*)	(*)	0	0
Real estate.....	3,070	825	226	29	1,443	(^o)	2,244	224	41	829	197,487
Services.....	8,319	7,925	4,322	237	73,960	10,504	394	74	-2	1,963	1,291
Hotels and other lodging places.....	2,578	2,326	731	40	27,043	9,096	252	36	-3	1,096	(^o)
Business services.....	1,298	1,263	1,156	119	10,563	82	34	12	1	86	(^o)
Computer and data processing services.....	1,003	1,001	869	104	5,910	(^o)	2	3	(*)	(^o)	(^o)
Other business services.....	295	262	287	15	4,653	(^o)	33	9	(*)	(^o)	(^o)
Motion pictures, including television tape and film.....	1,120	1,114	513	28	(^o)	120	6	0	0	0	0
Engineering, architectural, and surveying services.....	46	46	59	(*)	885	(^o)	0	0	0	0	0
Accounting, research, management, and related services.....	(^o)	(^o)	(^o)	-2	402	(^o)	30	(^o)	(*)	(^o)	(^o)
Health services.....	(^o)	(^o)	(^o)	(*)	(^o)	(^o)	0	0	0	0	0
Other.....	3,187	3,116	1,781	51	33,164	1,175	71	1	1	631	(^o)
Other industries.....	17,458	17,123	9,247	463	71,924	3,797,368	335	42	-12	352	123,458
Agriculture, forestry, and fishing.....	241	197	76	(*)	950	257,739	44	22	2	211	(^o)
Mining.....	419	199	87	-1	(^o)	(^o)	220	(^o)	(^o)	(^o)	(^o)
Coal.....	(^o)	0	0	0	0	0	(^o)	(^o)	(^o)	(^o)	(^o)
Other.....	(^o)	199	87	-1	(^o)	8,348	(^o)	1	(^o)	(^o)	(^o)
Construction.....	4,288	4,246	2,039	32	12,423	155,011	41	(*)	(*)	(^o)	(^o)
Transportation.....	12,407	12,401	6,932	439	57,236	3,376,245	6	(*)	(*)	(^o)	(^o)
Communication and public utilities.....	103	80	114	-7	(^o)	25	23	(^o)	(^o)	(^o)	0

^o Suppressed to avoid disclosure of data of individual companies.

* Less than \$500,000 (\$).

1. Sales, or gross operating revenue, excluding sales taxes.

NOTE.—Data for 1988 are preliminary. For acquired businesses, data are for, or as of the end of, the fiscal year preceding the year of acquisition; for newly established businesses, data are projections for, or as of the end of, the first full year of operation.

Papers from the Conference on Research in Income and Wealth

This issue of the SURVEY OF CURRENT BUSINESS presents the final group of papers from the "New Horizons in Data Sets" sessions from the fiftieth anniversary meeting of the Conference on Research in Income and Wealth. These two papers report statistical innovations from Statistics Canada. Other papers from the "New Horizons" sessions appeared in the November 1988 and March 1989 issues.

The paper by Peter Koumanakos reports a major potential improvement in measuring capital stock. The traditional method for obtaining an economy's stock of productive capital in Canada, as well as in the United States and in other countries, is termed the "perpetual inventory" method. The perpetual inventory method cumulates past investment flows in producers' durable equipment and in structures; adjustments are applied to allow for the decline in value or in productiveness of equipment as it ages (both these adjustments are often termed "depreciation") and for the retirement of older equipment, the accidental loss of equipment, and so forth. Depreciation and retirement adjustments are applied for each class of equipment and of structures and for each age of the existing investment.

The perpetual inventory method makes possible the integration of capital stock estimates with investment estimates from the national income and product accounts. However, the stock estimates also depend on information on depreciation and retirements, which is often not available in the required detail. What is lacking is a survey of the capital stock actually in place at a moment in time to which the estimates from the perpetual inventory method could be benchmarked. The Koumanakos paper reports the results of such a benchmark survey. The author concludes that a capital stock survey is a feasible and produces useful results.

The paper by Wolfson et al. describes a project to combine existing statistical surveys to make the information more useful for analytical purposes. Most existing statistical surveys are special, or limited, purpose collections. One survey may collect information on household consumption, for example, while another collects information on household labor force participation. Analysts, however, may need to use the information from both surveys.

One method for combining surveys is termed the "exact match" method. If a subsample of households are found that appear in two or more surveys, their records can be combined. An example of exact matching appears in the article "Enhanced Demographic-Economic Data Sets" in the November 1988 SURVEY OF CURRENT BUSINESS. Wolfson et al. report an alternative approach, the "synthetic" or "statistical match." In a statistical match, households of similar characteristics, as determined by a statistical analysis, are combined to create a "statistical household" that does not, of course, actually exist, but whose records can be used in an analysis. Wolfson's is one of the more ambitious "statistical match" undertakings.

One problem with using data created by statistical matches arises because the statistical model employed to make the match must, if the match is to be useful, rest on an economic or behavioral model. In Wolfson's project, for example, welfare reciprocity was underreported in one survey and was imputed on the basis of household characteristics that should be associated with welfare reciprocity. However, the data sets this statistical model creates cannot be used to determine whether the families whom the model predicts to be receiving welfare payments are in fact receiving them. This creates a dilemma: If a policy-relevant behavioral or economic model is not used to form the statistical match, the data will not be useful for policy analysis; but if such a model is used for the statistical match, it will not be possible to carry out an analysis of the accuracy or correctness of that behavioral or economic model, because the predictions of the model have been built into the data. The more ambitious the undertaking, the larger the number of economic or behavioral models that will be used to construct the statistically matched data set, so it may be increasingly difficult for users to determine whether the matched data set can be employed for a particular use.

The Wolfson project is, nevertheless, an imaginative and ambitious attempt to make existing data collections of a statistical agency more useful for economic policy analysis.

Jack E. Triplett

The Capital Stock Survey Project

By Peter Koumanakos

Introduction

ACCURATE capital data are critically important in the measurement of productivity. Accurate capital data are also important for measuring capacity utilization and interindustry and international competitiveness both at the aggregate and the individual industry levels. The evaluation of proposed tax policies also depends on accurate data for capital stocks; without this data, it is difficult to determine, for example, the tax liability of one industry compared with that of another industry or the impact that a change in tax laws would have on a particular industry. Accurate measures of capital stocks are important in evaluating macroeconomic policy; for example, the responsiveness of industry to changes in interest rates or in govern-

ment spending critically depends on the level of capacity utilization.

In this paper, capital is defined as a factor input that consists of commodities produced by the economic system for use in the production of other commodities. Capital stocks therefore consist of reproducible tangible assets and exclude tangible assets such as land, mineral deposits, and natural forests.

Reproducible tangible assets vary in age, in their degree of obsolescence, and in the intensity of their utilization. Consequently, although there is a substantial theoretical and technical literature about the measurement of capital, the diverse nature of capital goods and their technological evolution make the measurement of capital a difficult task.

Although there are a number of methods—such as surveys of physical assets, of book values, and of insured values—for measuring capital stocks, the "perpetual inventory" method is the one that is the most often used, primarily because of its flexibility in creating time series of capital stocks. This method requires an investment series, the relevant price indexes, service life information, and a method

NOTE.—Peter Koumanakos is the Director of the Science, Technology, and Capital Stock Division, Statistics Canada.

of depreciation. The reliability of the capital stock time series generated using this method depends on the quality of the investment data that are cumulated, the accuracy of the price indexes that are used, the realism of the service life assumptions that are made, and the method that is used to depreciate the capital assets over their service lives.

The investment series for various vintages must be combined into overall capital stock estimates that are relevant for a particular analysis. The information needed to aggregate vintages can be summarized in terms of an "efficiency function" that gives the relative efficiency of capital stocks of different ages and that is based, for example, on the data for prices from transactions in used assets. Given the efficiency functions for existing assets and the discard rates for assets by age, it is possible to employ the perpetual inventory method to obtain annual, or more frequent, time series estimates of capital stocks.

Because the perpetual inventory method requires so many assumptions and so much data, not all of which are equal to the uses made of them, it would be useful to have periodic benchmark surveys of assets actually in place at a particular time. This paper discusses the development of such a survey.

The Feasibility Study

Because of concern about the accuracy and the adequacy of the existing data for capital stocks, Statistics Canada, the Bank of Canada, the Economic Council of Canada, and the Department of Finance established the Capital Stock Survey Project in early 1982. In 1983, 125 companies were interviewed about the availability of information on economic lives of fixed assets, sales of used assets, levels of assets, and retirement policies for assets.

In these interviews, five aspects of capital data in which information was said to be unavailable or incomplete were identified. These five aspects are (1) economic service life of fixed capital assets, (2) transactions in used assets, (3) premature retirement, or discarding, of fixed capital assets in response to changes in relative factor prices or changes in technology, (4) leased fixed capital assets, and (5) the investment in fixed capital assets for pollution abatement and control. As the final phase of the feasibility study, a pilot study was sent.

The Pilot Survey of Fixed Assets

The Pilot Survey of Fixed Assets was sent to more than 1,000 establishments. The survey questionnaire asked these establishments to report information about existing capital stocks and the flow of new investment.

The questions about capital stocks requested the following information:

- The value of fixed capital assets—specifically, the total original cost for assets still in use, the total estimated current (or replacement) value of assets, the average age of assets, the estimated remaining useful life of fixed assets, and the percentage of assets leased to others;
- The percentage of structures and of machinery and equipment acquired for pollution abatement and control; and

- A disaggregation of assets into categories of building and engineering structures and into categories of machinery and equipment.

The questions about the flow of new investment requested the following information:

- The expected useful life of new assets;
- The expenditures on renovation, retrofit, refurbishing, overhaul, or rehabilitation of existing assets;
- The floor space of buildings and the number of units of machinery;
- The purpose of capital expenditures;
- The expenditures on assets for lease to and from others;
- The reasons for discards; and
- The purchases and sales of used assets.

The Results of the Pilot Survey¹

Capital stock questions

The overall rate of response to the questions about capital stocks was 77 percent, and most industries had response rates near the average. The rates of response were particularly high from the petroleum and natural gas industries, petroleum and coal products manufacturers, retail trade, and services. The rates of response were somewhat lower from the electric power utilities, primary metal and nonmetallic mineral manufacturers, and finance, insurance, and real estate industries. In general, most of the companies took the time to complete the survey.

Nearly all of the respondents to the survey reported the value of fixed capital assets in terms of total original cost for assets still in use. This response is consistent with the responses of the companies during the earlier interviews. Although some companies had expressed reservations in the interviews about the availability of the data for the total original cost of fully depreciated assets still in use, their availability does not appear to have been a serious problem for the survey respondents.

Approximately 90 percent of the respondents reported the average age of assets. This high rate of response is particularly gratifying; in the earlier interviews, the initial industry response indicated that the average age of assets would be very difficult to report.

About 75 percent of the respondents reported estimates for the remaining useful life of fixed assets. However, this question was clearly somewhat difficult for companies to answer; there was considerable interindustry variation in the rates of response to this question. The rates of response were higher from the manufacturers of paper and allied

1. For additional information, see the "Evaluation Report for the Capital Stock Survey Project, June 1986," which is available from the author.

The author would like to thank the discussant, Mr. Jacques Mairesse, Ecole Nationale de la Statistique et de l'Administration Economique, Paris, France, for his comments at the meeting of the Conference on Research in Income and Wealth.

The author would also like to thank Brian O'Reilly, Bank of Canada, Keith Patterson, Economic Council of Canada, Paul-Henri Lapointe, Department of Finance, and Richard Landry, Statistics Canada, for their contributions, which made this project possible.

products, of primary metal, and of electrical products than from the manufacturers of transportation equipment and of chemical products. It would be worthwhile to investigate the reasons for this variation in responses among industries. This overall rate of response rate should be considered positive because the initial industry response indicated that projected service lives would be very difficult to report. But these estimates must be checked to ensure that industries have not simply used tax lives to make this calculation.

Flow questions

The overall rate of response to the flow questions was nearly 100 percent. About 82 percent of the respondents reported estimates for the expected useful service life of new assets. This rate of response should be considered high, because this question asks companies to predict the future and is, therefore, inherently speculative. Moreover, although it may be relatively easy to make this estimate for well-known types of capital assets, it is more difficult to make it for new types of capital assets. For example, the rate of response from retail trade was 54 percent; this low rate was, perhaps, partly attributable to the difficulty in estimating the service life of new automated machinery, such as the integrated point-of-sale systems that are designed to facilitate inventory control.

It is clear from the survey responses that firms can report the reasons for discards and the purchases and sales of used assets, though it is difficult to assess the validity of these data. The data for discards are particularly interesting because these data from the survey may be used to cross-check the estimated level of discards in each industry with comparable data from the perpetual inventory. Virtually all of the respondents who reported data for discards also gave some reason for the discards; this response is interpreted as a positive result for the feasibility of capital stock surveys. The data for discards should be especially useful when they are regularly available. In particular, the data provided in response to this question would provide direct evidence that indicates when assets are discarded prematurely in response to changes in relative factor prices.

The expenditures on assets for lease were reported by two-thirds of the respondents in services and by one-third of the respondents in finance, insurance and real estate; additionally, a significant number of respondents in retail trade reported some leasing activity. These results suggest that assets for lease are an important part of the capital stock owned by the services industry. Moreover, the survey responses clearly indicate that companies are capable of reporting this information.

The Capital and Repair Expenditures Survey

Based on the results of the Pilot Survey of Fixed Assets, Statistics Canada revised and expanded the capital and repair expenditures survey. The revised survey collected data for the following:

- Capital expenditures—specifically, the acquisition of new assets and the renovation, retrofit, refurbishing, overhauling, and rehabilitation of existing assets;
- Expected useful service life of new assets;

- Original cost and age of assets that are discarded, retired, or destroyed;
- Sales and purchases of used assets;
- Reasons for capital expenditures and for discards;
- Expenditures for automation—for example, for robots, automated material-handling equipment, automated production machinery and equipment, and computerized, numerically controlled machine tool equipment;
- Value of work in progress at yearend; and
- Value of fixed assets—that is, the cost of accumulated capital (gross book value) and accumulated depreciation, beginning with 1987 data.

The revised survey provides detail that has not been available; for example, 30 different types of equipment have been reported and classified according to the 45 industries that buy the equipment. (See table 1.) Moreover, an analysis of the data from this survey will now yield the amount that an industry invests, the kind of machinery being purchased, and the technological and structural changes taking place.

Studies Using the Survey Data

The data from the expanded capital and repair expenditures survey will help us to improve our understanding of the nature of investment expenditures. The survey provides new information on modernization, on overhauls, and on types of equipment. Using the survey data, researchers can study various topics, such as the importance of the investment in fixed capital assets for pollution abatement and control.

For example, based on the information gathered during the pilot survey, the weighted, average age estimates for capital equipment used in some manufacturing and non-manufacturing industries were calculated. Of the industries tabulated, the oldest equipment, on average, was found in the electrical products industry, the newest in the chemicals industry. Similar estimates can be made for subsequent years from data collected from the ongoing survey.

Based on the data from the 1985 and 1986 Capital and Repair Expenditures Surveys, the new estimates of the service lives of equipment can now be compared with the existing estimates of service lives that have been used in the perpetual inventory method. The existing estimates of service lives rely primarily on the estimates made from a variety of sources, such as corporation tax returns, the relationship between capital cost allowances and investment expenditures, and tables from *Bulletin "F"*.² In most cases, the new estimates of service lives are shorter than the existing ones.³

Using the new estimates of service lives collected in the new investment survey, a number of simulations have been performed to show the impact of these data on capital stock estimates. The difference between the new and the existing estimates of the service lives of gross capital stock lies in how the new estimates are introduced; that is, the earlier the new estimates are introduced and the faster one moves

2. U.S. Department of the Treasury, Bureau of Internal Revenue, *Bulletin "F" (Revised January 1942)—Income Tax, Depreciation, Obsolescence, Estimated Useful Lives, and Depreciation Rates*, (Washington, DC: GPO, 1942).

3. Tabulations of the existing and of the new estimates of service lives by industry and by type of equipment are available from the author.

from the existing estimates to the new ones, the sooner the differences will show up in the capital stock estimates. Consequently, this difference will affect the growth rate of the gross stock estimates, but the differences in the annual growth rates will be small.

In our paper,⁴ J.C. Hwang and I used the price-age profiles of used assets that were reported in the revised capital expenditures survey to estimate the form and the rates of

economic depreciation. We concluded that the patterns of depreciation are close to the geometric form for the manufacturing sector and are accelerated (vis-a-vis straight line) for the nonmanufacturing sector.

Other studies using the survey data are under way. One study is comparing the new estimates of service lives from Canada with those from other Organization for Economic Cooperation and Development countries. Another study is comparing the estimates of fixed assets from the survey with those from administrative data.

4. "The Forms and Rates of Economic Depreciation, Canadian Experience" is available by contacting Peter Koumanakos.

Table 1.—Capital Expenditures on Machinery and

[Thousands of

Line	Industry/sector	Office furniture	Office computers	Nonoffice furniture	Scientific and medical	Heating/air conditioning	Pollution abatement	Safety and security	Sanitation equipment	Motors and generators	Heavy construction equipment	Tractors, all types	Capitalized tooling	Drilling rigs	Salvage equipment
1	Forestry.....	212	1,283	321		220	34	132		1,714	21,371	15,269	(*)		
2	Mining.....	366	351		29		(*)	3	3		1,858	285	(*)	64,206	(*)
3	Manufacturing.....	161,219	318,113	36,841	64,013	50,136	84,219	8,223	1,091	97,083	18,996	11,004	123,103	(*)	(*)
4	Food and beverage.....	14,078	28,605	16,847	4,326	27,052	2,287	1,723	612	18,864	165	2,949	1,433		
5	Rubber and plastics.....	7,447	15,021	278	3,635	614	354	403	82	238			15,767		
6	Textiles.....	19,957	4,414		875	1,461	(*)	(*)		313	1,604		3,310		
7	Wood.....	665	1,431	63	31	2,316	120	380	10	1,013	8,136	758	2,505		
8	Paper and allied industries.....	4,000	19,866	(*)	2,821	5,292	20,414	1,534	222	36,426	1,079	1,747	1,271		(*)
9	Printing and publishing.....	8,207	19,562	6,660		371		22	33	255			222		
10	Primary metal.....	1,651	10,155	(*)	8,327	1,084	45,222	494		(*)	4,457	(*)	2,348		
11	Metal fabricating.....	(*)	8,206	63	99	849	2,098	34		4,947	362		3,462		
12	Machinery.....	9,085	33,590	9,424	2,898	862	4,270	12	15	500	198		26,193	(*)	
13	Transportation equipment.....	(*)	40,390	869	2,702	4,270	1,308	954	(*)	1,884	(*)		39,817		
14	Electrical products.....	22,061	68,549	814	17,137	3,023	41	206		314	63	(*)	19,576		
15	Nonmetallic minerals.....	1,731	1,209		696	267	1,928	130		(*)	1,121	3,022	1,069		
16	Petroleum and coal products.....	9,932	8,317		2,255	(*)	300	136	(*)	5,466	(*)		55		
17	Chemicals.....	10,460	34,658	1,789	17,338	2,533	9,133	2,179	105	16,960	1,504	1,227	1,956		
18	Miscellaneous manufacturing.....	21,350	20,202	16	448		434						2,138		
19	Other manufacturing industries.....	1,599	3,938		425	(*)	(*)	(*)		22			1,981		
20	Capital charged to operating.....														
21	Utilities.....	65,924	298,606	1,376	11,752	41,250	(*)	1,973	910	22,146	8,425	1,441	28,556		
22	Air transport.....	2,791	42,471	(*)		27				(*)		(*)	6,006		
23	Rail transport.....	1,679	29,458							(*)	(*)		(*)		
24	Water transport and services.....	530	2,268	89	27	68	(*)	1,615	(*)	(*)	1,354		655		
25	Motor transport.....	5,956	12,558	628		333	(*)	207		(*)	(*)		1,224		
26	Urban transit systems.....	1,333	6,470	(*)	(*)	237			(*)	(*)			5,216		
27	Grain elevators.....	5,779	8,204		(*)		(*)			(*)					
28	Broadcasting.....	6,732	9,674	29	431	154		151					(*)		
29	Telephone and telegraph.....	35,415	164,787	(*)	(*)					(*)			7,152		
30	Gas distribution.....	4,948	21,336	(*)	11,149	40,431				(*)	1,802		7,204		
31	Other utilities.....	761	1,380							(*)	1,574	(*)	(*)		
32	Capital charged to operating.....														
33	Trade, finance, commercial.....	1,444,351	1,311,903	1,187,825	220,454	42,743	1,843	12,239	825	140,999	138,450	55,157	15,925	(*)	
34	Wholesale.....	76,673	99,982	111,614	(*)	2,882	31	(*)	134	8,022	(*)	(*)	8,826		
35	Department stores.....	11,925	14,360	69,413		157									
36	Chain stores.....	13,696	10,957	98,520		419		136							
37	Automotive trade.....	9,703	4,769	(*)	(*)	37	1,812	1,048		127,835		(*)	2,605		
38	Combination food stores.....	621	2,596	126,200		22,873				(*)					
39	Capital charged to operating.....														
40	Banks.....	96,791	186,058	(*)				5,325							
41	Insurance, trust, and loan.....	54,390	139,411	1,610											
42	Other finance.....	92,087	88,143	352,076		15,847			183	(*)	(*)	(*)			
43	Motion picture theaters.....	309	259	10,104											
44	Hotels and motels.....	858	5,747	147,526					97						
45	Other commercial.....	1,086,938	759,362	166,059	216,518	303		5,633	411	2,227	(*)	(*)	4,494	(*)	
46	Other trade, finance, commercial.....	360	259	101,720		225		(*)		264					
47	Institutions.....	107,387	114,501	158,732	358,099	4,948		1,423	667	(*)			(*)		
48	Private schools.....	14,660	3,509	3,486	(*)	(*)		(*)		(*)					
49	Universities.....	69,868	64,992	5,635	89,749	1,108		(*)		(*)			(*)		
50	Hospitals.....	21,135	45,617	113,944	266,033	3,347		1,289	645						
51	Special care institutions.....	656	261	25,359	(*)	(*)			(*)						
52	Churches.....	1,068	122	10,308		147									
53	Government departments.....	112,602	218,894	25,462	158,183	13,017	4,305	26,557	1,679	(*)	61,879	4,570	7,131		
54	Federal Government departments.....	63,813	149,160	14,484	142,708	10,929	(*)	22,795	1,330	(*)	2,089	524	5,871		
55	Provincial government departments.....	48,788	69,733	10,978	15,475	2,088	(*)	3,762	349	(*)	59,790	4,045	1,260		
56	Total.....	1,992,060	2,263,651	1,410,557	812,530	152,314	91,036	50,550	5,176	265,812	250,979	87,725	174,970	70,173	612

* Suppressed to avoid the disclosure of confidential data.

Plans

Based on the work that we have done on the capital stock survey project, we are planning to use the capital and repair expenditures survey and the data collected from it to produce an integrated system for measuring capital stocks and flows in 1989. Producing this system will require the following activities:

- Tabulating new industry benchmarks for construction and for machinery and equipment;

- Incorporating the new estimates of service lives into our calculation of fixed assets;
- Introducing new forms and new rates of depreciation that were suggested by our research; and
- Introducing the normal distribution model as our new mortality function.

We hope that this system will provide the accurate data that are needed for economic analysis.

Equipment in Canada, by Type of Asset by Industry, 1985

Canadian dollars

Autos and parts	Buses, all types	Trucks and trailers	All-terrain vehicles	Locomotives, etc.	Ships and boats	Aircraft and helicopters	Other transportation	Robotized/computerized machinery and equipment				Conventional machinery and equipment				Total	Line
								Material handling	Production process	Communication, all types	Other	Material handling	Production process	Communication, all types	Other		
1,651	(*)	18,354	3,243	374	(*)	461		(*)		(*)		6,530	21,793	(*)	1,145	95,828	1
665		3,840	(*)		(*)		(*)			26		208	46,905	(*)	1,166	122,603	2
59,874	(*)	87,266	59	(*)	1,745	2,412	3,396	18,544	810,707	10,639	2,136	99,943	5,457,649	11,173	1,342,353	8,950,025	3
30,657		47,796			870		1,507	114	42,853	560	67	19,322	510,342	1,701	11,906	786,636	4
5,599		1,315					135	(*)	41,513	(*)	(*)	2,651	138,169	747	2,908	237,232	5
(*)		352						3,329	11,295	562		419	142,236	(*)	58	179,436	6
765		8,134	59		23		806	11,295	9,455			10,696	214,321	147	1,639	265,313	7
4,547		8,107	(*)	(*)	(*)	(*)	(*)	117	341,549	79	75	10,654	1,310,038	633	3,044	1,771,963	8
1,101		3,489							9,455	131		3,589	177,932	265	2,774	237,514	9
1,664	(*)	5,577	(*)	(*)			(*)	(*)	40,620	(*)	(*)	22,524	860,895	142	4,011	1,018,898	10
491		2,034						47	21,072	(*)	207	2,261	371,327	18	998	438,693	11
826		182	(*)	(*)				22,361	57			2,561	113,305	375	7,370	232,102	12
667		1,223	(*)	(*)	1,473		32	2,295	55,773	2,960	843	5,677	596,069	648	3,781	837,492	13
184		1,333						5	73,944	4,443	(*)	2,603	176,729	3,944	6,057	401,586	14
4,878		2,356	(*)	(*)	220			14,728	20,935		26	4,565	129,034	146	2,626	193,360	15
(*)		1,078		(*)					(*)	(*)		59	58,443	(*)	(*)	87,346	16
1,157		3,616	(*)	(*)				816	108,948	195	31	9,979	454,554	1,702	(*)	687,338	17
6,944		654						73	630	276	352	2,099	90,347	316	3,676	149,955	18
242		20					8		16,430			284	113,908	70	486	139,861	19
															1,285,300	1,285,300	20
56,985	142,940	414,466	(*)	554,247	75,068	318,160	3,151	(*)		166,055	(*)	31,025	77,308	1,570,561	174,066	4,067,164	21
(*)	(*)	2,000				(*)	732			13,307	(*)		6,700	(*)	192	394,214	22
7,051	(*)	(*)		(*)								10,294	(*)	(*)	(*)	526,195	23
821		685	(*)	75,068			10	(*)				4,125		370	848	95,303	24
4,260	47,937	321,520					264			229		4,125		903	(*)	403,458	25
1,268	94,345	(*)					2,126			(*)		(*)		648	1,891	237,913	26
216		188										(*)	40,888		173	59,484	27
2,475		866					19			58,349		4,741	44,641	(*)	(*)	129,332	28
32,878		10,821	(*)			(*)				93,352		(*)	1,510,825	(*)	(*)	1,871,403	29
7,914		2,848	(*)			(*)				(*)			(*)	(*)	383	137,141	30
(*)		41,061										11,029	2,271	(*)	646	59,721	31
															153,000	153,000	32
2,113,003	6,919	663,935	532	(*)	58,621	543,736	875	21,180	8,465	14,429	1,928	128,888	145,148	38,107	233,044	8,735,443	33
34,461		67,916		(*)			202		(*)			43,862	8,489		17,613	666,978	34
(*)		6,391													(*)	102,503	35
2,263		3,183						213	(*)			4,181			(*)	136,916	36
239,639		15,667										61,722	(*)		3,520	473,281	37
2,979		(*)										(*)		(*)	400	159,182	38
															159,900	159,900	39
608										3,283		(*)		(*)	(*)	324,910	40
5,255		(*)		(*)	56,323	(*)			(*)	1,217			1,125	1,740	389,331	41	
7,717		1,890	89					563		819			30,119	15,124	608,148	42	
(*)													(*)	1,424		15,345	43
467										6,588					1,398	162,681	44
1,819,113	6,919	566,420	443	(*)	2,298	490,852	673	20,404	4,176	2,522	1,928	15,670	121,579	3,431	29,519	5,420,136	45
241		476										91	11,726	399	333	116,132	46
1,615	1,750	825	(*)							16,813		289		7,206	12,622	788,000	47
310	1,639	153												(*)	392	24,627	48
626	111	363	(*)							12,720				(*)	7,460	254,046	49
258		309								4,093		289		7,027	3,121	467,108	50
76															1,036	29,616	51
345															613	12,603	52
97,650	21,275	44,827	859	(*)	279,084	79,988	6,406	1,078	377	36,410	9,435	4,640	5,292	182,926	96,896	1,504,377	53
46,715	430	(*)	96	(*)	276,297	(*)	(*)	(*)		31,483	6,826	2,945	5,292	172,478	80,275	1,129,125	54
50,935	20,845	(*)	763	(*)	2,787	(*)	(*)	(*)	377	4,927	2,609	1,695		10,448	16,622	375,251	55
2,331,444	173,581	1,233,513	5,131	800,285	417,003	944,757	13,849	40,908	819,549	244,372	13,812	271,523	5,754,095	1,810,180	1,861,292	24,263,440	56

The Social Policy Simulation Database and Model: An Example of Survey and Administrative Data Integration

By Michael Wolfson, Stephen Gribble, Michael Bordt, Brian Murphy, and Geoff Rowe

Introduction

WHENEVER governments propose a change in the personal income tax laws or whenever special task forces or (in Canada) Royal Commissions propose changes in the structure of major transfer programs, the technique of microsimulation modeling is typically used to assess the impact of the proposals. For example, to assess the distributional impact of a change in income tax exemptions on different types of families, the Canadian Department of Finance uses a microsimulation model that recomputes the income tax liabilities for a sample of about 400,000 tax returns for a recent year; for each of these returns, the model calculates the tax liability under the proposed policy. Similarly, the Canadian Ministry of Employment and Immigration has a microsimulation model for the unemployment insurance system that is based on a sample of their internal administrative data files.

However, in Canada, microsimulation models have been available in only a few large institutions because of the relatively high cost of developing and maintaining this analytical capability. These models are located in the Federal Departments of Finance, of Employment and Immigration, and of Health and Welfare. Interested groups outside these Departments (even other Federal Departments and Provincial governments) generally do not have access to these models; consequently, they have no way to assess the published estimates of the distributional impacts of policy proposals, no way to explore the impacts in greater detail, and no way to develop comparable figures for their own proposals.

This situation is unlike that in the United States where various independent agencies—such as the Congressional Budget Office, nongovernmental research institutions, and private consulting firms—have sophisticated microsimulation capabilities. These agencies regularly provide independent analyses and forecasts of proposed changes in microeconomic policy.

The first release of the Social Policy Simulation Database and Model (SPSD/M) from Statistics Canada in the fall of 1988 has changed this situation. Using the SPSD/M, anyone can perform microsimulation impact analyses of tax and transfer program changes on a personal computer. Moreover, the level of sophistication of the SPSM approaches, or in some cases exceeds, that of the current models used by the Federal Departments.

The SPSD/M represents a product different from the traditional products—typically publications with many tables of numbers—of a national statistical agency. The SPSD/M consists of a specially designed database integrated with a

retrieval and analytical software package. The database was explicitly tailored to the intended analytical applications, unlike the more common situation in which the analysis is constrained by the data already available.

To meet the objective of public accessibility, the designers of the SPSD/M had to ensure that no individual respondents on the file are identifiable pursuant to the Statistics Act and that the database and software package are usable in a range of computing environments, especially personal computers. This paper describes the construction of the Social Policy Simulation Database and the uses of the associated Social Policy Simulation Model.

The Data Sets in the Social Policy Simulation Database (SPSD)

To provide realistic, albeit synthetic, data on individuals in household contexts, the SPSD was constructed from four major sources of microdata. The sources of these data sets are (1) the Survey of Consumer Finances, (2) personal income tax returns, (3) unemployment insurance claim histories, and (4) the Family Expenditure Survey.

The Survey of Consumer Finances (SCF)

The “host” data set is derived from Statistics Canada’s 1984 Survey of Consumer Finances. This survey is Statistics Canada’s main source of data on the distribution of income for individuals and families. (Its content is similar to that of the U.S. Census Bureau’s March supplement to the Current Population Survey.) The data collected from each household consists of demographic information, such as the family structure of the household, the labor force status and the previous year’s income by source for each household member who is 15 years of age or older, and specific characteristics of the dwelling. The 1984 survey collected data from about 98,000 individuals in approximately 36,000 households. Although this survey is rich in data on family structure and income sources, it lacks detailed information on unemployment histories, tax deductions, and consumer expenditures.

Personal income tax returns

This data set is from the 3-percent sample of personal income tax returns used in Revenue Canada’s annual *Taxation Statistics* (the “Green Book”) and by the Department of Finance’s personal income tax model. This sample consists of about 400,000 records. (It contains information comparable to that published in the U.S. *Statistics of Income*.)

Unemployment insurance claim histories

Unemployment insurance (UI) is a complex insurance and temporary income maintenance program. The administra-

NOTE.—Michael Wolfson is Associate Director General, Analytical Studies Branch, Statistics Canada. Stephen Gribble, Michael Bordt, Brian Murphy, and Geoff Rowe are Senior Research Analysts, Social and Economic Studies Division, Statistics Canada. This paper benefited from a number of helpful comments, especially those from Fritz Scheuren.

tive data collected from the program serves to track the weekly benefits and claim activities of UI recipients and to establish eligibility and entitlements by monitoring previous employment patterns and program participation of repeat, or reentrant, claims. The UI claim histories imputed to the SPSD were based on a 1-percent sample of administrative records from the population with some UI claim activity in 1984. The sample consists of about 30,000 records of individuals and represents about 40,000 claims.

The Family Expenditure Survey (FAMEX)

This survey is Statistics Canada's periodic survey that provides detailed data on household expenditure patterns. This data set contains about 10,000 household records. (It is similar to the U.S. Consumer Expenditure Survey.)

The microdata from these sources are confidential. Until now, the data from these microdata sets have been disseminated either as separate public use samples in the cases of the SCF and the FAMEX (in both of which some records and a fair number of variables are suppressed) or as summary tables of income tax data from *Taxation Statistics* and of UI claim histories. In the SPSD, the data sets from these four sources have been transformed into a single public use microdata set that retains the full household "hierarchical" structure. At the same time, the SPSD also maintains the confidentiality of the individual records since all the constituent microdata sets contain nonidentifiable records and exact matching is not used to merge these data sets.

Techniques Used to Construct the SPSD

Several key techniques were used to join the four microdata sets in constructing the SPSD.

Controlled blurring

The SPSD is much richer than the already released SCF because it is a fully hierarchical file: Each individual has a complete family and household context. "Controlled blurring," or selective randomization, of portions of the data is used to protect the identities of the individual microdata records, so the data can be released to the public.

If randomization is suitably structured, it does not adversely affect the usefulness of the database for the policy simulations for which it has been designed. Moreover, precise information about households is not generally required for the anticipated uses of the SPSD/M. For example, the precise age and sex composition and the geographic location of a household greatly increases the identifiability of a microrecord. As a result, the sex of children and the ages of household members within 5-year age-groups have been randomized (subject to some constraints to ensure "plausible" results). Similarly, by randomly reassigning the province and urban-size class codes, the geographical location of "unusual" household types (e.g., large size or multifamily) has been blurred.

Integrated weighting

This technique is used to reduce bias by forcing agreement between the sample data and the known control totals. The SCF (host survey) weights are adjusted to ensure that the population by age, sex, and Province represented by the sur-

vey corresponds to the "known" population by age, sex, and Province from the census. In addition, the survey weights are adjusted to be consistent with the control totals at the family level, such as the number of families by size and the labor force participation status of the adult family members. The procedure is a generalization of iterative proportional adjustment, or "raking" (see Deming and Stephan 1940 and Lemaitre and Dufour 1987).

Categorical matching

This technique is used to merge two data sets. A variety of methods can be used for the synthetic matching of the information from a record of the donor data set to any given record of the host data set; all of these methods are based on determining which records of both host and donor data sets are the most closely similar according to the policy relevant criteria common to both data sets (e.g., dwelling tenure, employment status, and income class). In the SPSD, the similarity of host and donor records was determined by dividing records from each data set into very fine categories—hence the term "categorical matching." The information from the donor records may then be attributed synthetically to the records of the host data set that have the most closely similar characteristics without increasing the identifiability of the donor or of the host records. There is a substantial literature on the methods and the experiences of synthetic matching, or linking, of two files; for example, see Rodgers 1984, Rubin 1986, Paass 1986 and 1988, and Singh, Armstrong, and Lemaitre 1988. (Exact matches, though sometimes technically feasible, have been avoided for confidentiality reasons.)

Specifically, categorical matching is used to add FAMEX data, UI data, and Green Book income data for high-income recipients to the SPSD. Two data sets are partitioned into identically defined "bins" of records—for example, into province, income range, and tenure. Within each corresponding pair of donor and host bins, the individual records are sorted, based on one of the continuous variables common to the two data sets (e.g., income). According to their rank order, records in a given bin are then matched one-for-one across the two data sets. Because the number of records for the two data sets in a given bin is usually not equal and because record weights are present on one or both data sets, selectively duplicating records from one or both data sets is usually necessary. Research by the staff of the Methodology Branch of Statistics Canada indicates that exactly matched files can be used to analyze and to improve the quality of public use SPSD synthetic matches (Armstrong 1989).

Conversion

This technique is being used to adjust for the underreporting of UI and welfare benefits. Research has suggested that the underreporting of UI and welfare income is probably due to item nonresponse. Selected records are identified as probable item nonrespondents, using a statistical analysis (i.e., logistic regression) to predict the probability of those reporting income from UI or welfare. These records are "converted" from zero receipts to some positive amount of UI or welfare income, and then the appropriate amount of income is imputed (Dufour 1988).

Microrecord aggregation

This technique is used to improve the representation of high-income recipients by adding tax return information on incomes by source to the SCF, or host data set, so the patterns of income composition by source at the individual microdata level are retained in the SPSD. The SCF has reporting and sampling biases that result in a lower number of high-income individuals and in a lower level of income per high-income individual than indicated by personal income tax records. These underreporting biases are corrected by synthetically matching specially adapted income tax return data to completely replace the income components on these host SCF records. The technique of microrecord aggregation provides plausible, but unidentifiable, sets of income items from the Green Book.

The Green Book file contains about 25,000 high-income tax records, which are drawn from about 135,000 high-income tax returns. With the process of microrecord aggregation, these records are clustered into sets of at least five similar records. Then weighted average values of income for each source are computed for the individual records in each cluster. Specifically, one record is randomly selected from each cluster and is given a weight of 80 percent; the remaining records in the cluster are averaged with a total weight of 20 percent. These cluster-weighted averages are considered to be nonidentifiable, just as a table of statistics based on at least five observations per cell is considered nonidentifiable; however, these cluster averages also retain many of the essential characteristics of the actual microrecords on which they are based. Microrecord aggregation simply treats these averages as if they were actual microdata records. The microrecord aggregation of these records results in a file of about 5,000 synthetic microdata records of high-income tax returns.

To match these 5,000 synthetic Green Book records to the 300 high-income SCF records, the 300 SCF records are duplicated until there are 5,000 host SCF records. Then each of these SCF high-income records is categorically matched to a similar synthetic, aggregated Green Book high-income record. In this way, detailed information on income composition by source is fully absorbed and retained in the host data set.

Stochastic imputation

This technique is used to generate synthetic data values for individual records in one data set by randomly drawing from the distributions or the density functions derived from a second data set. Specifically, it is used to add personal income tax information about various itemized deductions, exemptions, and tax credits that is required for the calculation of income tax liability to the SPSD. In adding this information, one priority is to ensure that the distribution of each of these deductions—including the numbers of tax filers reporting the deduction (or exemption or credit), the average amount claimed, and the univariate size distribution of the amounts claimed—agrees with the published results. This technique is used to assign, for example, a charitable donation that is based on the distribution of itemized donations on income tax returns within a given Province and by age, sex, and income group to each individual in the SCF. The other priority is to maintain the confidentiality of the underlying income tax information.

The source data for stochastic imputation were derived from the Green Book sample, using all 400,000 records. To join the Green Book income tax data with the host SCF sample, a set of common classifications was defined for the following variables: Province, age, sex, marital tax status, total income range, employment income range, and number of children claimed for the child care expense deduction. These variables were chosen because of their policy relevance and the feasibility of defining them similarly for both data sets. A model of the personal income tax system (the same one subsequently used for policy analysis) was applied to identify the probable tax filers and to impute marital tax status (Canada does not have joint filing) for the host SCF data set.

Using a complex set of distributional statistics generated from the Green Book file of income tax returns, it is possible to recreate the same distribution of values on the host SCF data set. For each individual record in the host data set, random numbers based on the characteristics for each of the itemized deductions and tax credits are drawn to determine which of the items were claimed. If some of the items were claimed, a synthetic value is drawn from each distribution that represents the tax returns of a similar group of people.

Special Problems and Procedures

Categorical matching of unemployment insurance (UI) data

Each of the 30,000 UI claimants' records was categorically matched to the SCF records that had some reported or "converted" UI income during the year. The UI claim history variables—which include the type of claim (e.g., regular, retirement, maternity, or fishing) and the amount of UI benefits received—and the administrative data on the claimant's age, Province, and sex were used for constructing the matching categories. After duplication to ensure that there were an equal number of records for the corresponding cells of the UI and for the host data sets, the records were matched, based on their rank order of UI benefits within the cell. The cell match and the duplication increased the number of SCF records representing the UI claimant population from 10,000 to 30,000.

The content of this data set was specially designed. Because the SPSD needed benefit payments on a calendar year, rather than on a claim, basis for consistent analysis and for input to the income tax module, constructing this component of the database required simultaneously the development of a UI simulation module and the identification of a limited set of program relevant UI variables that could serve as input to the UI simulation module. Moreover, this data set had to be rich enough to capture the weekly labor force history relevant to the application of UI program regulations, but it also had to be nonidentifiable. These objectives were accomplished by thinking in terms of an event history; therefore, the durations of various activities, rather than the weekly activity records, became the focus. The staffs of the Department of Employment and Immigration and of the Forget Royal Commission on Unemployment Insurance (Canada 1986) were very helpful in designing this data set.

Family Expenditure Survey (FAMEX) data imputations

The match using FAMEX data is principally designed to support the modeling of commodity tax incidence at the household level. The selection and the grouping of FAMEX income and expenditure variables were based on the requirements of the commodity tax model and, thus, on the structure and composition of personal expenditures in the Canadian medium-level aggregation input-output tables. Expenditures that include some indirect taxes and duties were placed in the corresponding input-output personal expenditure category. Expenditures that did not include an indirect tax or that included an indeterminate indirect tax were placed in a residual category (e.g., real estate commissions).

Additional variables (e.g., income, taxes, and savings) were also matched to complete the basic household accounting identity in which income plus other money receipts equals expenditure plus saving. Completing the household accounting identity allowed various simulation options—for example, the allocation of a change in disposable income between saving and consumption. Although a number of conceptual differences still remain between FAMEX and the system of national accounts on which the input-output tables are based, the SPSM and the national accounts household sector aggregate expenditure estimates for 1984 are reasonably close (see Adler and Wolfson 1988).

Suppression of data

Public use versions of the host SCF data set already exist. The data for all households that are, in whole or in part, already suppressed in any of the public use SCF files have also been suppressed in the SPSM.

Household duplication

Duplicates, or "clones," of individual SCF records have been created because of the categorical matching of synthetic high-income tax records and of UI claims records. If the record for at least one individual in a household has been duplicated, duplication of the records for all the other members of the household (with a corresponding reduction in the sample weight) is required. This duplication ensures that the records for all the members of the household continue to have the same weight.

The Social Policy Simulation Model (SPSM)

The SPSM is the primary input to the SPSM, and a personal computer with a hard disk is the minimal hardware required for the SPSM. The SPSM also requires a set of commodity tax rates, a set of parameters for all modeled tax and transfer programs (e.g., benefit levels, takeup rates, and tax brackets), and a set of parameters to control the flow of execution of the model.

The commodity tax rate parameters are supplied as default values. In addition, a separate, but concordant, input-output model (which includes a complete set of input-output tables) is provided as part of the SPSM/M package. Using this model, users can alter the retail sales tax rates and various "hidden" taxes—such as duties and intermediate-level commodity tax rates—and then they can derive (under alternative shifting assumptions) the equivalent retail

sales tax rates. This capability is very important in Canada where the Federal intermediate-level commodity tax generates more revenue than the corporate income tax.

The flexibility of the SPSM makes it possible, in one "run," to do one simulation, to do two simulations—comparing a base case with a variant, or reform, scenario—or, in effect, to do four simulations—comparing effective marginal tax rates (change in taxes minus transfers divided by change in income) of a base scenario with those of variant scenarios. (Note that a family's effective marginal tax rate depends not only on which particular source of income is varied but also on which member of the family receives an increment in that source of income. The SPSM can fully analyze such questions.)

The capability to do simulations of effective marginal tax rates partly addresses one major source of uncertainty in the model results—behavioral response to significant changes in tax provisions or transfer programs. According to economic theory, effective marginal tax rates are a major determinant of behavioral responses to changes in policy. Although the SPSM does not attempt to model such responses, it allows the user greater flexibility to display the individuals and households that are most likely to alter their behavioral responses, as these responses are indicated by significant changes in these rates.

The SPSM provides four kinds of outputs at the individual, at the family, or at the household level. First, the SPSM has its own cross-tabulation facility; alternatively, microdata files containing any outputs or intermediate variables that are used by the model can be written out. Second, these files can be in a compressed format ("results files") for subsequent use in other SPSM runs. Third, the files can be in a form readily usable by the personal computer SAS statistical software package. Fourth, standard format ASCII files can also be an output. This flexibility in output formats allows the convenient use of other standard packages. For example, a spreadsheet interface that can convert tabular output from the SPSM into a Lotus 1-2-3 or Symphony worksheet is provided.

Additionally, the SPSM software has been designed so that the user can modify it. Most users will want to run the model in the "black box" mode in which the range of parameters and simulation capacities is given. However, we fully expect that new policy options that we have not anticipated in the model will inevitably arise. Therefore, we have provided the facilities for modifying or adding routines to the model so that sophisticated users can customize the SPSM for a "glass box" mode of use.

Conclusions

The SPSM/M continues to be a work in progress. The first commercial release of a 1984 version of the SPSM/M was in December 1988. A 1986 version will be available in the spring of 1989.

The process of developing the SPSM/M has already had some valuable spinoffs. For example, the experience has contributed to a revision in the weighting system for Statistics Canada's monthly labor force survey; this revision is based on similar integrated weighting techniques that are being implemented. In the national accounting context, the SPSM has provided a microfoundation for the household sector (Ruggles and Ruggles 1986 and Adler and Wolfson 1988).

Moreover, the SPSM has already produced results that have been useful for policy analyses, such as the Forget Royal Commission's examination of the unemployment insurance system (Canada 1986), an Ontario special task force's review of social assistance (Ontario 1988), an analysis of the impact of Federal personal income tax reform (Maslove 1988), and the projections of the impact of Canada's aging population on the fiscal structure of the Federal Government (Fellegi 1988).

In developing the SPSM, many methodological refinements have been implemented to adjust for gaps and inaccuracies in the source data. Further improvements are possible and will continue to be made as work continues on the SPSM.

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A Comment

on

"The Social Policy Simulation Database and Model: An Example of Survey and Administrative Data Integration"

By Fritz Scheuren

IN developing a complete, static microsimulation database and model for the personal computer (PC) environment, Michael Wolfson and his colleagues are to be commended for having achieved a major breakthrough. Heretofore, such policy simulation models had to be supported by complex and expensive mainframe computer hardware and software. Consequently, the availability of the Social Policy Simulation Database and Model (SPSD/M) in the PC "medium"

makes microsimulation modeling more accessible to academics and private researchers at far lower costs; this accessibility may allow what has been a small field of economic research to explode. However, the "medium" is *not* the "message" (or, at least, not *all* of it). There is still a great deal more to do to move microsimulation from what may (charitably?) be described as an underdeveloped art towards a well-instrumented science.

Therefore, it is worth expanding on the points made, at least in part, by the authors with regard to (1) the data sets used for microsimulation modeling, (2) the techniques used

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to integrate the data sets, and (3) modeling and projection errors.

Data sets available.—Apparently in Canada and certainly in the United States, the data sets employed for microsimulation modeling were developed primarily for other purposes. Consequently, certain limitations are imposed on the microsimulation models by the data sets that are available for use. For example, the lack of economic stratification in the household surveys used imposes limits on tax policy simulations, since the top 1 percent of households pay between 20 and 30 percent of all income taxes. The concerns about the confidentiality of the data sets also limit the availability of the data sets in Canada even more, it seems, than in the United States. In fact, in Canada, unlike in the United States, there are no public-use data sets based on tax returns (e.g., see Strudler, Oh, and Scheuren 1986).

Data handling techniques.—There continues to be widespread criticism of the way in which disparate data sets are merged into microsimulation models (e.g., see Sims 1978 and Alvey and Kilss 1988b). Although the methods used for the SPSPD/M are better than average, these methods are fairly typical of the “kickapoo-joy-juice” approach to merging data sets that is often taken by researchers. For the SPSPD/M, all kinds of imputations are made and statistical matching techniques are used repeatedly. These techniques are used, not because they are known to work well, but because feasible alternative techniques do not appear to exist. The strong “brew” that is produced by this blending of various techniques, however, is very hard to justify on any grounds other than those of expediency. The work of Rubin and, more recently, of Paass may help lead us to a more statistically principled approach to the integration of data (e.g., see Rubin 1986 and 1987 and Paass 1989). Additionally, as a design issue, it appears obvious that efforts at better data integration could have major impacts (e.g., see Alvey and Kilss 1988a); there is a need to conduct more record linkage studies like those that I have had some involvement with in the 1970's (e.g., see Kilss and Scheuren 1978).

Modeling and projection errors.—The nature of most static microsimulation models is such that well-developed behavioral feedbacks are not readily available, but the SPSPD/M is a welcome exception—to the extent that the data sets brought together allow it to be. The dynamic models of Orcutt and his collaborators show promise in this regard (e.g., see Caldwell 1988). Additionally, the projection errors that are made in exogenous macro variables need to be measured and evaluated to determine the validity of the estimates produced by the model. Backcasting models to earlier years and rerunning models after time passes clearly can provide essential insights that may lead to better results.

Limited resources are usually cited as the reason that some of these problems are tackled so infrequently. With the computer revolution, which is exemplified by the SPSPD/M, however, we may begin to examine these chronic

difficulties—perhaps using, for example, the multiple imputation ideas of Rubin (1986 and 1987) to do sensitivity analyses—at a much lower cost. The formation of a panel to study microsimulation modeling by the National Academy of Science's Committee on National Statistics is an encouraging sign.

Given the current stage of development of microsimulation modeling, the definition of a good model may not necessarily be the model that fits the data perfectly; a good model may be the model that does not fit the data, but where the lack of fit suggests a better model. In this field, the iteration from model to data and then from data to model has been very slow, and the result has often been that the models and the data seem almost disconnected; in that sense, the basic scientific paradigm has failed to work as it should. However, the SPSPD/M developed by Wolfson et al. obviously exploits advanced computing techniques; their work has clearly moved us from the S.O.S. (same-old-stuff) stage of microsimulation modeling. It is hoped that their example will be contagious.

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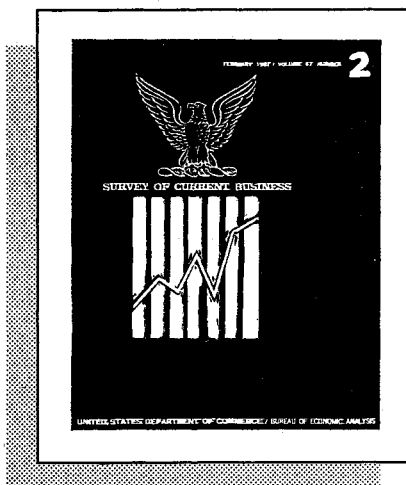
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Table with 17 columns: Units, 1987, 1988, Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec., Jan., Feb., Mar., Apr. The table is titled 'GENERAL BUSINESS INDICATORS—Continued' and contains data for 'MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS'. It is divided into 'Shipments (seas. adj.)—Continued', 'Inventories, end of year or month:', and 'Orders' sections, with further sub-categories like 'By market category', 'By industry group', and 'Supplementary series'.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1986 and methodological notes are as shown in BUSINESS STATISTICS: 1986

Table with columns for Units, Annual (1987, 1988), 1988 (Mar.-Dec.), and 1989 (Jan.-Apr.). The table contains data for CONSTRUCTION PUT IN PLACE, CONSTRUCTION CONTRACTS, HOUSING STARTS AND PERMITS, and CONSTRUCTION COST INDEXES.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1986 and methodological notes are as shown in BUSINESS STATISTICS: 1986

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LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

Main data table with multiple sections: HOURLY AND WEEKLY EARNINGS \$ (Average hourly earnings per worker, Private nonagric. payrolls, etc.), Seasonally adjusted, Indexes of avg. hourly earnings, Hourly wages, Avg. weekly earnings per worker, EMPLOYMENT COST INDEX (Civilian workers, White-collar workers, etc.), HELP-WANTED ADVERTISING (Seasonally adjusted index)

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1986 and methodological notes are as shown in Business Statistics, 1986

Table with columns for Units, Annual (1987, 1988), 1988 (Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec.), and 1989 (Jan., Feb., Mar., Apr.). Sections include WORK STOPPAGES, UNEMPLOYMENT INSURANCE * (State programs, Federal civilian employees, Veterans), and FINANCE (BANKING: Open market paper, Loans of the Farm Credit System, Federal Reserve banks, etc.).

Continuation of the FINANCE (BANKING) section, detailing various bank assets, liabilities, and reserves across multiple rows and columns.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1986 and methodological notes are as shown in BUSINESS STATISTICS: 1986

Main data table with columns for Units, Annual (1987, 1988), 1988 (Mar-Apr-May-June-July-Aug-Sept-Oct-Nov-Dec), and 1989 (Jan-Feb-Mar-Apr). Includes sections for BANKING-Continued, CONSUMER INSTALLMENT CREDIT, and FEDERAL GOVERNMENT FINANCE.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1988 and methodological notes are as shown in BUSINESS STATISTICS: 1986

Table with columns for Units, Annual (1987, 1988), 1988 (Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec.), and 1989 (Jan., Feb., Mar., Apr.). Rows include VALUE OF EXPORTS, Western Hemisphere, Asia, Africa, Australia, OPEC, Exports of U.S. merchandise, VALUE OF IMPORTS, and By commodity groups and principal commodities.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1986 and methodological notes are as shown in BUSINESS STATISTICS: 1986

Table with columns for Units, Annual (1987, 1988), 1988 (Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec), and 1989 (Jan, Feb, Mar, Apr).

CHEMICALS AND ALLIED PRODUCTS--Continued

Table with columns for Units, Annual (1987, 1988), 1988 (Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec), and 1989 (Jan, Feb, Mar, Apr). Rows include PLASTICS AND RESIN MATERIALS and PAINTS, VARNISH, AND LACQUER.

ELECTRIC POWER AND GAS

Table with columns for Units, Annual (1987, 1988), 1988 (Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec), and 1989 (Jan, Feb, Mar, Apr). Rows include ELECTRIC POWER and GAS.

FOOD AND KINDRED PRODUCTS; TOBACCO

Table with columns for Units, Annual (1987, 1988), 1988 (Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec), and 1989 (Jan, Feb, Mar, Apr). Rows include ALCOHOLIC BEVERAGES and Distilling materials produced at wineries.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1986 and methodological notes are as shown in BUSINESS STATISTICS: 1986

Table with columns: Units, Annual (1987, 1988), 1988 (Mar, Apr, May, June, July, Aug, Sept, Oct, Nov, Dec), 1989 (Jan, Feb, Mar, Apr). Rows include GRAIN AND GRAIN PRODUCTS, POULTRY AND EGGS, LIVESTOCK, MEATS, and MISCELLANEOUS FOOD PRODUCTS.

See footnotes at end of tables.

FOOTNOTES FOR PAGES S-1 THROUGH S-32

General Notes for all Pages:

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

Address requests for data to:

Statistical Series Branch
Current Business Analysis Division
Bureau of Economic Analysis
U.S. Department of Commerce
Washington, D.C. 20230

Page S-1

- † Revised series. See Tables 2.6 - 2.9 in the July 1988 SURVEY for revised estimates for 1985-87.
- ‡ 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 Oct. 1987 SURVEY, the industrial production index has been revised back to Jan. 1985. These revisions are available upon request.
- # Includes data not shown separately.
- ‡ Effective Sept. 1988 SURVEY, data have been revised back to January 1982. Revised data appear in the report "Manufacturing and Trade Inventories and Sales" CB-88-146, available from the Bureau of the Census, Washington, DC 20233.
- § Revised series. Data have been revised back to 1985. Revisions are available upon request.

Page S-3

- # Includes data for items not shown separately.
- † Revised series. Data have been revised back to 1982. A detailed description of the changes appear in the report "Manufacturers' Shipments, Inventories, and Orders: 1982-88" M3-1(88), available from the Bureau of the Census, Washington, DC 20233.
- ‡ See note "‡" for p. S-2.
- § See note "§" for p. S-2.

Page S-4

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

Page S-5

- @ 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.
- † Effective with the Feb. 1988 SURVEY, data (back to 1984, for some commodities) have been revised. Effective with July 1988 SURVEY, data (back to 1982, for some commodities) have been revised. Effective with the Feb. 1989 SURVEY, data (back to 1985, for some commodities) have been revised. These revisions are available upon request.
- ◇ See note "†" for p. S-6.
- †† See note "†" for p. S-3.

Page S-6

- § Effective with the release of the January 1988 index, all producer price indexes previously expressed on a base of 1967=100, or any other base through December 1981, have been rebased to 1982=100. Only indexes with a base later than December 1981 remain unchanged. Selection of the 1982 period was made to coincide with the reference year of the shipment weights, which have been taken primarily from the 1982 Census of Manufactures. The last rebasing of these indexes occurred in February 1971, when the 1967 base was substituted for the 1957-59 base. Historical data on the new base are available upon request. 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 release of the January 1988 index, all consumer price indexes previously expressed on a base of 1967=100, or any other base through December 1981, have been rebased to 1982-84=100. Only indexes with a base later than December 1981 remain unchanged. Selection of the 1982-84 period was made to coincide with the updated expenditure weights, which are based upon data tabulated from the Consumer Expenditure Surveys for 1982, 1983, and 1984. The last rebasing of these indexes occurred in February 1971, when the 1967 base was substituted for the 1957-59 base. Historical data on the new base are available upon request. Beginning with January 1987, data are calculated using 1982-84 expenditure patterns and updated population weights. Additional information regarding these changes is available from the Bureau of Labor Statistics, Washington, DC 20212.
- ‡ Effective with the Feb. 1989 SURVEY, data have been revised back to 1984 and are available upon request.

Page S-7

- 1. Computed from cumulative valuation total.
- 2. Index as of May 1, 1989: building, 388.0; construction, 425.7.

- # Includes data for items not shown separately.
- § Data for Mar., June, Sept., and Dec. 1988 are for five weeks; other months four weeks.
- ◇ Effective Feb. 1989 SURVEY, data for seasonally adjusted housing starts have been revised back to 1986. Effective Feb. 1988 SURVEY, data for seasonally adjusted housing starts have been revised back to 1985. These revisions are available upon request.
- † Effective May 1989 SURVEY, data for seasonally adjusted building permits have been revised back to 1987. Effective May 1988 SURVEY, data for seasonally adjusted building permits have been revised back to Jan. 1986. These revisions are available upon request.
- @ Effective July 1988 SURVEY, data have been revised back to Jan. 1985. In addition to the normal revisions to the unadjusted and seasonally adjusted data, the "Improvements" component of private residential buildings has been revised back to 1982 to adjust for a change in estimation of the monthly data. Revised data are available from the Construction Statistics Division at the Bureau of the Census, Washington, DC 20233.
- ‡ Effective July 1988 SURVEY, data have been revised back to 1985 and are available upon request.

Page S-8

- 1. Advance estimate.
- ◇ 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.
- @ Effective Oct. 1987 SURVEY, data are for mortgage loans closed as FSLIC-insured institutions. Historical data back to 1976 are available upon request.
- † Effective April 1989 SURVEY, wholesale trade data have been revised back to Jan. 1983. Revised data and a summary of changes appear in the report *Revised Monthly Wholesale Trade Sales and Inventories BW-13-88S*, available from the Bureau of the Census, Washington, DC 20233.
- ‡ Effective April 1989 SURVEY, retail trade data have been revised. Estimates of retail sales and inventories have been revised back to January 1983. A revision in 1988 revised some series back to 1978. Revised data and a summary of changes appear in the report *Revised Monthly Retail Sales and Inventories BR88-R*, available from the Bureau of the Census, Washington, DC 20233.
- †† Beginning with data for 1988, data will be reported on a quarterly basis only.

Page S-9

- 1. Advance estimate.
- # Includes data for items not shown separately.
- ◇ Effective with the January 1989 SURVEY, the seasonally adjusted labor force series have been revised back to January 1984. The January 1989 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 1984-88 revision period are in the February 1989 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 June 1988 SURVEY, data have been revised back to April 1986 (not seasonally adjusted) and January 1983 (seasonally adjusted) to reflect new benchmarks and seasonal adjustment factors. The June 1988 issue of *Employment and Earnings* contains a detailed discussion of the effects of the revisions.

Page S-11

- ‡ 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.
- § See note "§" for p. S-10.

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 1977 dollars reflect changes in purchasing power since 1977 by dividing by Consumer Price Index. Effective Feb. 1988 SURVEY, this series has been revised back to 1983 to reflect new seasonal factors for the CPI-W. Revised data are available upon request.
- §§ Wages as of May 1, 1989: Common, \$17.64; Skilled, \$23.05.
- † Excludes farm, household, and Federal workers.
- †† See note "†" for p. S-11.

9. Prices are no longer available.
 10. Based on quotations for fewer than 12 months.
 11. See note 4 for p. S-19.
 12. Series has been discontinued.
 13. Effective with the May 1989 SURVEY, data have been converted to metric units.
 14. May 1 estimate of the 1989 crop. See also note 13 for this page.
- § 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. Monthly quotation not available.
 2. See note "§" for p. S-6 regarding a change to a new reference base in 1988.
 3. See note "†" for this page.
 4. See note "‡" for this page.
 5. Series has been discontinued by the source.
 6. See note 4 for p. S-19.
- ‡ Beginning with Sept. 1988 and annual 1988 data, price represents dollars per head and is not comparable with earlier prices, which represent dollars per 100 pounds.
 † Effective with the release of 1st Qtr. 1988 data, the import price index for coffee has been discontinued by BLS and replaced in the SURVEY with the import price index for coffee and coffee substitutes. The weighting structure used for the import price index reflects U.S. foreign trade flows based on 1985 data. Indexes, beginning with 2nd Qtr. 1975, are available upon request.

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 publication standards of the Bureau of the Census.
 4. See note "§" for p. S-6 regarding a change to a new reference base in 1988.
 5. See note 4 for p. S-19.
- # Totals include data for items not shown separately.
 ◇ Effective Oct. 1988 SURVEY, the footwear production series have been revised for 1986 and 1987. These revisions are available upon request.

Page S-24

1. Reported annual total; monthly revisions are not available.
 2. See note "§" for p. S-6 regarding a change to a new reference base in 1988.
 3. Less than 500 tons.
 4. See note 4 for p. S-19.
- * New series from the American Metal Market. The composite scrap price represents the average of consumers' buying prices, delivered, at the following markets: Chicago, Pittsburgh, and Philadelphia. Annual and monthly composite price data are available back to January 1982.

Page S-25

1. Reported annual total; monthly revisions are not available.
 2. For month shown.
- @ Beginning 1987, includes foreign ores.
 † Beginning January 1982, data represent metallic (mostly aluminum) content. Data for 1981 and prior years represent aluminum content only.
 ◇ The source for these series is now the Bureau of Mines.
 § Source: *Metals Week*.

Page S-26

1. Reported annual total; monthly revisions are not available.
 2. Less than 50 tons.
- ◇ Includes secondary smelters' lead stocks in refinery shapes and in copper-base scrap.
 @ All data (except annual production figures) reflect GSA remelted zinc and zinc purchased for direct shipment.
 ‡ Source for monthly data: American Bureau of Metal Statistics. Source for annual data: Bureau of Mines.
 # Includes data not shown separately.
 § Beginning with the Aug. 1985 SURVEY, unadjusted fluid power shipments indexes are shown. Seasonally adjusted indexes are no longer available.
 * New series from The Material Handling Institute, Inc. and Cahners Economics. 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. Annual and quarterly historical data back to 1972 are available upon request.
 @@ Beginning Oct. 1986, the Lead price represents North American Mean.

Page S-27

1. See note "§" for p. S-6 regarding a change to a new reference base in 1988.
 2. Beginning January 1986, data have been restated because a new methodology has been adopted. Annual total for 1987 contains revisions not allocated to the months.
 3. Annual total includes revisions not distributed to the months.
 4. See note 4 for p. S-19.
- # Includes data for items not shown separately.
 § Includes nonmarketable catalyst coke. See also note "††" for this page.
 ◇ Includes small amounts of "other hydrocarbons and alcohol new supply (field production)," not shown separately.
 † Effective with the Oct. 1987 SURVEY, coal production data for 1986 have been revised. Effective with the May 1988 SURVEY, coal consumption and stocks back through 1986

have been revised. Effective with the Oct. 1988 SURVEY, coal production data for 1987 have been revised. These revisions are available upon request.

- @ Includes U.S. produced and imported microwave ovens and combination microwave oven/ranges.
 ‡ "Tractor shovel loaders" includes some front engine mount wheel tractors that had previously been included in "Tractors, wheel, farm, and nonfarm."
 †† Effective with the June 1988 SURVEY, data for 1987 have been revised and are available upon request.
 ‡‡ March, June, September and December are five-week months. All others consist of four weeks.

Page S-28

1. Reported annual totals; revisions not allocated to the months.
 2. See note "§" for p. S-6 regarding a change to a new reference base in 1988.
 3. See note 4 for p. S-19.
- # Includes data for items not shown separately.
 † Except for price data, see note "††" for p. S-27.

Page S-29

1. Reported annual totals; revisions not allocated to the months.
 2. See note "§" for p. S-6 regarding a change to a new reference base in 1988.
 3. See note 4 for p. S-19.
- ◇ Source: American Paper Institute. Total U.S. estimated consumption by all newspaper users.
 # Compiled by the American Newspaper Publishers Association.
 † Effective with the April 1988 SURVEY, the import price index for natural rubber has been revised. The index is now expressed on a base of 1985=100. Also new weights based on 1985 trade flows have been applied to all data from 1985 onward. Revised data are available back to 4th qtr. 1983.

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 those of building plasters.
- # Includes data for items not shown separately.
 ◇ Cumulative ginnings to the end of month indicated.
 § Bales of 480 lbs.
 † Data for 1987 have been revised and are available upon request.

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 "§" for p. S-6 regarding a change to a new reference base in 1988.
- ◇ 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).
 # Beginning 1st Qtr. 1986; quarterly data are estimated by the American Textile Manufacturers Institute based on annual data collected by the Bureau of Census.
 § Bales of 480 lbs..
 † Beginning 1st Qtr. 1987, data are not comparable with earlier periods. Girls apparel are now included with women's, misses' and juniors' and boys' apparel are now included with men's. Also, some classification changes were made.

Page S-32

1. Annual total includes revisions not distributed to the months.
 2. Production of new vehicles (thous. of units) for Apr. 1989: *passenger cars, 648; trucks and buses, 364.*
 3. Data are reported on an annual basis only.
 4. See note 4 for p. S-19.
 5. Beginning with January 1987, data include Honda, Nissan, and Toyota passenger cars produced in U.S. plants.
 6. Beginning with January 1987, data include Nissan trucks produced in U.S. plants.
 7. Beginning with 1st qtr. 1987, jeans, jean-cut casual and dungarees are included with trousers.
 8. See note "†" for this page.
 9. Effective with July 1988 SURVEY, data have been revised back to 1985 and are available upon request.
 10. Data for jumpers are included with dresses to avoid disclosing information for individual companies.
 11. Beginning Jan. 1989, Shipments of trailer bodies are included with trailer chassis to avoid disclosure of data from individual firms.
- # 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.
 ‡ Excludes railroad-owned private refrigerator cars and private line cars.
 † Effective with the Mar. 1988 SURVEY, retail inventories for trucks and buses have been restated to exclude captive imports (vehicles manufactured overseas by U.S. affiliates). These data are available back through 1966.
 ‡‡ See note "†" for page S-31.

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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; and 36 pages of tables that present over 1,900 major economic series obtained from other public and private sources. Monthly. \$6.50 single copy; \$18.00 per year.

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Business Conditions Digest. Contains tables and charts for 300 series, including business cycle indicators and other series that help evaluate business conditions. Features the composite indexes of leading, coincident, and lagging indicators. Also included are cyclical comparison charts and data sources. Monthly. \$4.00 single copy; \$44.00 per year.

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 pages. \$23.00 (GPO Stock No. 003-010-00174-7).

BEA Methodology Paper No. 1: Introduction to National Economic Accounting. (1985) Introduces the concepts of the national income and product accounts by placing these accounts within the framework of national economic accounting. Shows how the national income and product accounts, capital finance accounts, and input-output accounts—the major branches of national economic accounting in the United States—are derived from the conventional accounting statements. 19 pages. \$1.25 (GPO Stock No. 003-010-00158-5).

BEA Methodology Paper No. 2: Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends. (1985) Describes the concepts, sources, and methods of the corporate profits components of the national income and product accounts. 61 pages \$2.50 (GPO Stock No. 003-010-00143-7).

BEA Methodology Paper No. 3: Foreign Transactions. (1987) Describes the preparation of estimates in the national income and product accounts (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. 52 pages. \$2.75 (GPO Stock No. 003-010-00178-0).

BEA Methodology Paper No. 4: GNP: An Overview of Source Data and Estimating Methods. (1987) Provides 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 side 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 methodological information about GNP. 36 pages. \$2.00 (GPO Stock No. 003-010-00179-8).

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Index of Items Appearing in the National Income and Product Accounts Tables. (1987) Indexes general subject areas as well as detailed line items in the national income and product accounts tables. 18 pages. \$1.25 (GPO Stock No. 003-010-00180-1).

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.

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. 400 pages. \$18.00 (GPO Stock No. 003-010-00177-1).

Local Area Personal Income, 1981-86. (1988) 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.

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1989 RELEASE DATES FOR BEA ESTIMATES

Subject	Release Date*	Subject	Release Date*
State Personal Income, 3d quarter 1988	Jan. 24	State Personal Income, 1st quarter 1989	July 20
Gross National Product, 4th quarter 1988 (advance)	Jan. 27	Gross National Product, 2d quarter 1989 (advance)	July 27
Personal Income and Outlays, December 1988	Jan. 30	Personal Income and Outlays, June 1989	July 28
Composite Indexes of Leading, Coincident, and Lagging Indicators, December 1988	Feb. 1	Composite Indexes of Leading, Coincident, and Lagging Indicators, June 1989	Aug. 3
Gross National Product, 4th quarter 1988 (preliminary)	Feb. 28	State Per Capita Personal Income, 1988 (revised)	Aug. 23
Merchandise Trade (balance of payments basis), 4th quarter 1988	Feb. 28	Merchandise Trade (balance of payments basis), 2d quarter 1989	Aug. 28
Personal Income and Outlays, January 1989	Mar. 1	Gross National Product, 2d quarter 1989 (preliminary)	Aug. 29
Composite Indexes of Leading, Coincident, and Lagging Indicators, January 1989	Mar. 3	Corporate Profits, 2d quarter 1989	Aug. 29
Summary of International Transactions, 4th quarter 1988	Mar. 14	Personal Income and Outlays, July 1989	Aug. 30
Gross National Product, 4th quarter 1988 (final)	Mar. 23	Composite Indexes of Leading, Coincident, and Lagging Indicators, July 1989	Sept. 1
Corporate Profits, 4th quarter 1988	Mar. 23	Summary of International Transactions, 2d quarter 1989	Sept. 12
Personal Income and Outlays, February 1989	Mar. 24	Gross National Product, 2d quarter 1989 (final)	Sept. 21
Composite Indexes of Leading, Coincident, and Lagging Indicators, February 1989	Mar. 29	Corporate Profits, 2d quarter 1989 (revised)	Sept. 21
State Personal Income, 4th quarter 1988 and Per Capita Personal Income, 1988 (preliminary)	Apr. 20	Personal Income and Outlays, August 1989	Sept. 22
Gross National Product, 1st quarter 1989 (advance)	Apr. 26	Composite Indexes of Leading, Coincident, and Lagging Indicators, August 1989	Sept. 29
Corporate Profits, 4th quarter 1988 (revised)	Apr. 26	State Personal Income, 2d quarter 1989	Oct. 19
Personal Income and Outlays, March 1989	Apr. 27	Gross National Product, 3d quarter 1989 (advance)	Oct. 26
Composite Indexes of Leading, Coincident, and Lagging Indicators, March 1989	Apr. 28	Personal Income and Outlays, September 1989	Oct. 27
Metropolitan Area Personal Income, 1987	May 4	Composite Indexes of Leading, Coincident, and Lagging Indicators, September 1989	Oct. 31
Gross National Product, 1st quarter 1989 (preliminary)	May 25	Merchandise Trade (balance of payments basis), 3d quarter 1989	Nov. 28
Corporate Profits, 1st quarter 1989	May 25	Gross National Product, 3d quarter 1989 (preliminary)	Nov. 29
Merchandise Trade (balance of payments basis), 1st quarter 1989	May 26	Corporate Profits, 3d quarter 1989	Nov. 29
Personal Income and Outlays, April 1989	May 26	Personal Income and Outlays, October 1989	Nov. 30
Composite Indexes of Leading, Coincident, and Lagging Indicators, April 1989	May 31	Composite Indexes of Leading, Coincident, and Lagging Indicators, October 1989	Dec. 1
Summary of International Transactions, 1st quarter 1989	June 13	Summary of International Transactions, 3d quarter 1989	Dec. 13
Gross National Product, 1st quarter 1989 (final)	June 22	Gross National Product, 3d quarter 1989 (final)	Dec. 20
Corporate Profits, 1st quarter 1989 (revised)	June 22	Corporate Profits, 3d quarter 1989 (revised)	Dec. 20
Personal Income and Outlays, May 1989	June 23	Personal Income and Outlays, November 1989	Dec. 21
Composite Indexes of Leading, Coincident, and Lagging Indicators, May 1989	June 28	Composite Indexes of Leading, Coincident, and Lagging Indicators, November 1989	Dec. 29

* These are target dates and are subject to revision.

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