

SURVEY of CURRENT BUSINESS



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U.S. Transportation Satellite Accounts

The Domestic Orientation of Production and Sales by Foreign-Owned Manufacturers

U.S. DEPARTMENT OF COMMERCE ≈ ECONOMICS AND STATISTICS ADMINISTRATION
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SURVEY of CURRENT BUSINESS

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29 The Domestic Orientation of Production and Sales by U.S. Manufacturing Affiliates of Foreign Companies

Detailed industry data on the production of foreign-owned U.S. manufacturing affiliates and of domestically owned manufacturing firms show that in most industries, domestic content tends to account for the dominant share of output. However, the shares for U.S. affiliates tend to be lower than those for domestically owned firms across the detailed industries, and the difference at the aggregate level increases rather than decreases when industry mix is held constant. In most industries, U.S. affiliates and domestically owned manufacturers both tend to sell most of their output in the United States, but the domestic-market shares of sales for U.S. affiliates tend to be higher than those for domestically owned firms.

Regular features

1 Business Situation

The "final" estimate of real GDP indicates a 3.7-percent increase in the fourth quarter of 1997, 0.2 percentage point lower than the "preliminary" estimate; downward revisions to consumer spending and net exports more than offset an upward revision to business fixed investment. Corporate profits decreased \$9.2 billion in the fourth quarter after increasing \$32.2 billion in the third; the downturn was accounted for by the profits of domestic nonfinancial corporations. The Federal Government current deficit increased \$1.3 billion, to \$12.1 billion, in the fourth quarter; the State and local government current surplus decreased \$1.3 billion, to \$110.1 billion.

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10 State and Local Government Fiscal Position in 1997

The current surplus of State and local governments increased \$2.5 billion, to \$107.8 billion, in 1997. Receipts and current expenditures both increased at about the same pace as they had in 1996. For 1998, available information suggests some acceleration in both receipts and current expenditures and little change in the current surplus.

51 U.S. International Transactions, Fourth Quarter and Year 1997

In the fourth quarter of 1997, the U.S. current-account deficit increased to \$45.6 billion from \$43.1 billion in the third quarter; a decrease in the deficit on goods was more than offset by an increase in net unilateral transfers, a decrease in the surplus on services, and an increase in the deficit on investment income. In the capital account, outflows for U.S. assets abroad decelerated \$14.0 billion in the fourth quarter, while inflows for foreign assets in the United States decelerated only \$1.4 billion. For the year 1997, the U.S. current-account deficit increased to \$166.4 billion from \$148.2 billion in 1996; a shift to a deficit on investment income and an increase in the deficit on goods more than offset an increase in the surplus on services and a decrease in net unilateral transfers. In the capital account, outflows for U.S. assets abroad accelerated \$74.5 billion in 1997, while inflows for foreign assets in the United States accelerated \$142.9 billion.

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Gross State Product by Industry. Revised estimates of gross state product by industry for 1993–94 and new estimates for 1995–96 will be presented in the June issue of the SURVEY. The estimates incorporate the most recent annual revisions of the NIPA's and of State personal income, as well as the new and revised national estimates of gross product by industry that were published in the November 1997 SURVEY.

RECRUITMENT

Chief Economist. BEA is recruiting for the position of Chief Economist. The Chief Economist directs BEA's research program; plans and develops new concepts and methods to be implemented by the Office of the Chief Statistician and by the Associate Directors for National, Industry, International, and Regional Accounts; advises the Director of BEA on major conceptual and theoretical developments in economic accounting; and serves as BEA's liaison to the academic and research community.

This is a career reserved position in the Senior Executive Service, salary range: \$106,412–\$125,900. The application deadline is May 15, 1998. To obtain the required application and qualification information, please contact the BEA Administrative Office at (202) 606–5556. BEA is an Equal Opportunity Employer.

BUSINESS SITUATION

Ralph W. Morris prepared the first section of this article, Daniel Larkins prepared the section on corporate profits, and Benyam Tsehaye prepared the section on the government sector.

REAL GROSS domestic product (GDP) increased 3.7 percent in the fourth quarter of 1997, according to the "final" estimates of the national income and product accounts (NIPA's) (chart 1).¹ The acceleration from the 3.1-percent increase in the third quarter was more than accounted for by upturns in business inventory investment and in net exports. In contrast, consumer spending and government spending increased less than in the third quarter, and business fixed investment turned down (table 1).

The "final" estimate of the change in real GDP is 0.2 percentage point lower than the 3.9-percent increase indicated by the "preliminary" estimate reported in the March "Business Situation" (table 2). The revision is slightly less than the average revision—0.3 percentage point, without regard to the sign—from the preliminary to the final estimate for 1976–97. Downward revisions to consumer spending and net exports more than offset an upward revision to business fixed investment. In consumer spending, the largest revision was to services and primarily reflected the incorporation of newly available data on hospital expenses and on residential gas sales. In net exports, the incorporation of revised data on trade in goods and services, resulted in a slightly larger downward revision to exports than to imports. The revisions to both exports and imports were mostly to services. In business fixed investment, the upward revision was mostly to producers' durable equipment, reflecting the incorporation of revised data for shipments of commercial aircraft.

1. Quarterly estimates in the NIPA's are expressed at seasonally adjusted annual rates unless otherwise specified. Quarter-to-quarter dollar changes are differences between published estimates. Quarter-to-quarter percent changes are annualized and are calculated from unrounded data. Real estimates are expressed in chained (1992) dollars, and price indexes are chain-type indexes.

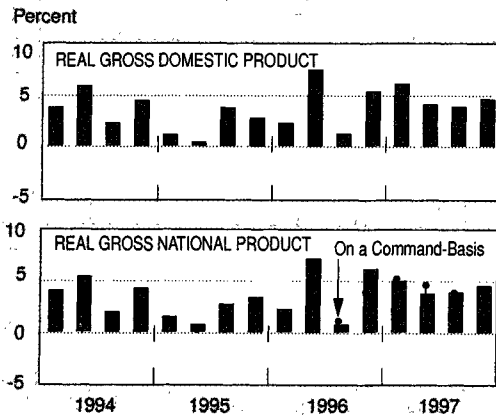
Table 1.—Real Gross Domestic Product, Real Gross Domestic Purchases, and Real Final Sales to Domestic Purchasers
[Seasonally adjusted at annual rates]

	Billions of chained (1992) dollars					Percent change from preceding quarter			
	Level	Change from preceding quarter				1997			
	1997	1997				I	II	III	IV
	IV	I	II	III	IV				
Gross domestic product	7,280.0	84.2	58.0	54.4	66.0	4.9	3.3	3.1	3.7
Less: Exports of goods and services	992.7	21.6	39.8	10.5	19.7	9.9	18.4	4.4	8.3
Plus: Imports of goods and services	1,151.8	42.3	50.2	38.0	14.7	17.9	20.5	14.6	5.3
Equals: Gross domestic purchases	7,426.1	102.5	66.0	77.7	61.5	5.9	3.7	4.3	3.4
Personal consumption expenditures	4,926.1	61.7	11.3	66.8	29.9	5.3	.9	5.6	2.5
Durable goods	659.3	20.7	-3.8	27.1	3.2	14.1	-5.4	18.4	1.9
Nondurable goods	1,460.9	16.6	-7.8	15.5	-4.6	4.7	-2.1	4.3	-1.2
Services	2,806.4	25.7	25.9	26.3	30.3	3.9	3.9	3.9	4.4
Gross private domestic fixed investment	1,154.6	10.3	32.4	37.9	5.3	3.9	12.6	14.4	1.8
Nonresidential fixed investment	872.7	8.1	28.1	37.5	-1.8	4.1	14.6	19.2	-8
Structures	195.5	-1.0	-2.4	3.2	-1.2	-2.1	-4.7	6.7	-2.3
Producers' durable equipment	684.8	9.9	32.7	36.0	-5	6.7	23.0	24.1	-3
Residential investment	286.3	2.2	4.9	1.9	6.2	3.3	7.4	2.7	9.1
Change in business inventories	74.0	30.8	13.9	-30.1	26.5				
Nonfarm	64.5	31.8	11.8	-31.8	26.2				
Farm	9.8	-1.1	2.2	2.0	.3				
Government consumption expenditures and gross investment	1,274.4	-1.3	9.6	3.3	1.0	-4	3.1	1.1	.3
Federal	456.1	-6.8	7.3	-1.3	-2.7	-5.8	6.6	-1.1	-2.3
National defense	311.1	-9.7	5.5	.9	.8	-11.8	7.5	1.2	1.0
Nondefense	144.8	2.8	1.7	-2.2	-3.2	8.0	4.9	-5.7	-8.6
State and local	818.3	5.4	2.4	4.6	3.6	2.7	1.2	2.3	1.8
Addenda:									
Final sales to domestic purchasers	7,346.9	70.4	51.6	106.2	36.0	4.0	2.9	6.0	2.0
Final sales of domestic product	7,201.1	52.4	43.6	82.6	44.2	3.0	2.5	4.7	2.3

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates usually are not additive. Chained (1992) dollar levels and residuals, which measure the extent of nonadditivity in each table, are in NIPA tables 1.2, 1.4, and 1.6. Percent changes are calculated from unrounded data. Percent changes in major aggregates are shown in NIPA table 8.1.

CHART 1

**Selected Product 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

Real final sales of domestic product increased 2.3 percent in the fourth quarter, 0.2 percentage point less than the preliminary estimate.² The revision was the same as that to GDP because business inventory investment was unrevised. Real gross domestic purchases increased 3.4 percent, 0.1 percentage point less than the preliminary estimate.

The price index for gross domestic purchases increased 1.4 percent in the fourth quarter, the same as the preliminary estimate; the index increased 1.3 percent in the third quarter. The price index for GDP increased 1.4 percent in the fourth quarter, the same as the preliminary estimate; the index increased 1.4 percent in the third quarter.

2. Final sales of domestic product equals GDP less change in business inventories.

Table 2.—Revisions to Real Gross Domestic Product and Prices, Fourth Quarter 1997

[Seasonally adjusted at annual rates]

	Percent change from preceding quarter		Final estimate minus preliminary estimate	
	Preliminary estimate	Final estimate	Percentage points	Billions of chained (1992) dollars
Gross domestic product	3.9	3.7	-0.2	-3.3
Less: Exports of goods and services	10.0	8.3	-1.7	-3.7
Goods	14.5	14.1	-4	-7
Services	-8	-5.1	-4.3	-2.7
Plus: Imports of goods and services	6.4	5.3	-1.1	-3.1
Goods	6.6	6.2	-4	-8
Services	5.4	.3	-5.1	-2.1
Equals: Gross domestic purchases	3.5	3.4	-1	-2.6
Personal consumption expenditures	3.1	2.5	-6	-7.4
Durable goods	1.7	1.9	.2	.4
Nondurable goods	-1.0	-1.2	-.2	-1.0
Services	5.4	4.4	-1.0	-6.5
Fixed investment	0	1.8	1.8	5.4
Nonresidential	-3.5	-8	2.7	6.1
Structures	-4.3	-2.3	2.0	1.0
Producers' durable equipment	-3.3	-3	3.0	5.1
Residential	9.7	9.1	-6	-4
Change in business inventories			0	
Nonfarm .....				.1
Farm				0
Government consumption expenditures and gross investment .....	.4	.3	-.1	-.3
Federal	-2.1	-2.3	-.2	-.3
National defense	1.3	1.0	-.3	-.2
Nondefense	-8.6	-8.6	0	0
State and local	1.8	1.8	0	0
Addenda:				
Final sales of domestic product	2.5	2.3	-.2	-3.4
Gross domestic purchases price index ¹	1.4	1.4	0	
GDP price index ¹	1.4	1.4	0	

1. Based on chained-type annual (1992) weights.

NOTE.—The final estimates for the fourth quarter of 1997 incorporate the following revised or additional major source data that were not available when the preliminary estimates were prepared.

Personal consumption expenditures: Revised retail sales for December, revised consumer price indexes for October through December, hospital expenses for October and November, and residential volume gas sales for November.

Nonresidential fixed investment: Revised construction put in place for November and December and revised manufacturers' shipments of machinery and equipment for December.

Residential fixed investment: Revised construction put in place for November and December.

Change in business inventories: Revised manufacturing and trade inventories for December.

Exports and imports of goods and services: Revised data on exports and imports of goods for December and revised balance-of-payments data on exports and imports of services for the fourth quarter.

Government consumption expenditures and gross investment: Revised State and local construction put in place for November and December.

Wages and salaries: Revised employment, average hourly earnings, and average weekly hours for December.

GDP prices: Revised export and import prices for September through December and revised prices of single-family homes under construction for November and December.

Real disposable personal income increased 4.5 percent, the same as the preliminary estimate. The personal saving rate was 3.9 percent, 0.1 percentage point more than the preliminary estimate.

Gross national product (GNP).—Real GNP—goods and services produced by labor and property supplied by U.S. residents—increased 3.6 percent in the fourth quarter, 0.1 percentage point less than real GDP (table 3).³ Receipts of factor income from the rest of the world changed little, and payments of factor income increased; interest income more than accounted for the increase in payments.

Real GNP on a command basis—a measure of the goods and services produced by the U.S. economy in terms of their purchasing power—increased the same as real GNP—3.6 percent—reflecting no change in the terms of trade.⁴

3. For the fourth quarter, estimates of gross national product and corporate profits are released only with the final GDP estimates. GNP equals GDP plus receipts of factor income from the rest of the world less payments of factor income to the rest of the world.

4. In the estimation of command-basis GNP the current-dollar value of the sum of exports of goods and services and of receipts of factor income is deflated by the implicit price deflator (IPD) for the sum of imports of goods and services and of payments of factor income.

The terms of trade is a measure of the relationship between the prices that are received by U.S. producers for exports of goods and services and the prices that are paid by U.S. purchasers for imports of goods and services. It is measured by the following ratio, with the decimal point shifted two places to the right: In the numerator, the IPD for the sum of exports of goods and services and of receipts of factor income; in the denominator,

Table 3.—Relation of Real Gross Domestic Product, Real Gross National Product, and Real Command-Basis Gross National Product

[Seasonally adjusted at annual rates]

	Billions of chained (1992) dollars			Percent change from preceding quarter	
	Level	Change from preceding quarter		1997	
		1997	1997		III
		IV	III	IV	
Gross domestic product	7,280.0	54.4	66.0	3.1	3.7
Plus: Receipts of factor income from the rest of the world	242.0	6.2	-5	10.9	-7
Less: Payments of factor income to the rest of the world	258.7	6.1	1.8	10.1	2.9
Equals: Gross national product	7,262.6	54.4	63.8	3.1	3.6
Less: Exports of goods and services and receipts of factor income from the rest of the world	1,234.7	17.1	18.7	5.8	6.3
Plus: Command-basis exports of goods and services and receipts of factor income	1,281.3	20.2	19.4	6.7	6.3
Equals: Command-basis gross national product	7,309.3	57.6	64.5	3.2	3.6
Addendum:					
Terms of trade ¹	103.8	.2	0	.8	0

1. Ratio of the implicit price deflator for the sum of exports of goods and services and of receipts of factor income to the corresponding implicit price deflator for imports with the decimal point shifted two places to the right.

NOTE.—Levels of these series are found in NIPA tables 1.10 and 1.11.

In the third quarter, command-basis GNP increased slightly more than real GNP—3.2 percent, compared with 3.1 percent—reflecting a slight improvement in the terms of trade.

Corporate Profits

Profits from current production—profits excluding nonoperating income such as capital gains (loses) and special charges—decreased \$9.2 billion in the fourth quarter after increasing \$32.2 billion in the third (table 4).⁵

the IPD for the sum of imports of goods and services and of payments of factor income. Changes in the terms of trade reflect the interaction of several factors, including movements in exchange rates, changes in the composition of the traded goods and services, and changes in producers' profit margins. For example, if the U.S. dollar depreciates against a foreign currency, a foreign manufacturer may choose to absorb this cost by reducing the profit margin on the product it sells to the United States, or it may choose to raise the price of the product and risk a loss in market share.

5. Profits from current production is estimated as the sum of profits before tax, the inventory valuation adjustment, and the capital consumption adjustment; it is shown in NIPA tables 1.9, 1.14, 1.16, and 6.16c in the "Selected NIPA Tables" that begin on page D-2 as corporate profits with inventory

Profits of domestic industries decreased \$5.7 billion after increasing \$33.1 billion. Profits of domestic nonfinancial corporations decreased \$10.7 billion after increasing \$31.5 billion, primarily reflecting a downturn in profits per unit; this downturn, in turn, reflected an upturn in unit labor costs and little change in prices. Profits of domestic financial corporations increased \$5.0 billion after increasing \$1.6 billion. Profits from the rest of the world decreased \$3.6 billion after decreasing \$0.9 billion; receipts turned down more sharply than payments.⁶

Cash flow from current production, a profits-related measure of internally generated funds available for investment, decreased \$4.5 billion after increasing \$17.7 billion. The ratio of cash flow to nonresidential fixed investment, an indicator of the share of the current level of investment that could be financed by internally generated funds, slipped slightly to 81.0 percent from 81.2 percent. The ratio remains in the lower part of the range in which it has fluctuated during most of this decade.

Table 4.—Corporate Profits

(Quarterly estimates seasonally adjusted at annual rates)

	Level			Change from preceding quarter		
	1997			1997		
	IV	III	IV	1997	1996	1997
Billions of dollars						
Profits from current production	818.1	32.2	-9.2	805.0	85.9	69.1
Domestic industries	721.8	33.1	-5.7	706.5	76.8	66.5
Financial	114.3	1.6	5.0	109.5	5.5	15.3
Nonfinancial	607.5	31.5	-10.7	596.9	71.2	51.1
Rest of the world	96.3	-9	-3.6	98.6	9.2	2.7
Receipts (inflows)	145.0	2.2	-5.5	145.9	12.5	13.2
Payments (outflows)	48.7	3.1	-1.9	47.3	3.2	10.6
IVA	9.2	-2.3	5.6	5.5	21.8	8.0
CCAAdj	71.6	.9	1.3	69.7	10.2	7.9
Profits before tax	737.3	33.6	-16.1	729.8	54.0	53.2
Profits tax liability	253.6	13.7	-4.6	249.4	15.8	20.4
Profits after tax	483.7	19.9	-11.5	480.3	38.2	32.7
Cash flow from current production	703.4	17.7	-4.5	695.1	53.0	40.8
Profits by industry:						
Corporate profits with IVA	746.5	31.4	-10.6	735.3	75.7	61.2
Domestic industries	650.2	32.3	-7.0	636.7	66.5	58.5
Financial	124.5	1.9	5.1	119.5	5.9	16.0
Nonfinancial	525.7	30.4	-12.1	517.2	60.6	42.5
Manufacturing	229.0	19.4	-11.4	224.7	24.2	19.2
Transportation and public utilities	91.5	.4	1.5	90.7	5.3	-1.0
Wholesale trade	51.7	4.6	-2.4	51.1	11.4	12.8
Retail trade	55.2	3.0	-2.7	55.8	7.0	6.9
Other	98.2	2.9	2.9	95.0	12.7	4.7
Rest of the world	96.3	-9	-3.6	98.6	9.2	2.7
Dollars						
Unit price, costs, and profits of nonfinancial corporations:						
Unit price	1.073	0	.001	1.072	.013	.009
Unit labor cost .....	.702	-.003	.007	.698	.003	.008
Unit nonlabor cost .....	.227	-.001	-.001	.229	-.002	-.003
Unit profits from current production .....	.145	.005	-.004	.145	.012	.005

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

Industry profits.—Industry profits decreased \$10.6 billion after increasing \$31.4 billion.⁷ The downturn was accounted for by domestic nonfinancial corporations. Most manufacturing industries contributed to the downturn; however, food and kindred products increased more in the fourth quarter than in the third. Wholesale trade and retail trade also turned down. In contrast, transportation and public utilities increased more in the fourth quarter than in the third. "Other" nonfinancial corporations increased the same amount as in the third quarter.

Related measures.—Profits before tax (PBT) decreased \$16.1 billion after increasing \$33.6 billion. The difference between the \$16.1 decrease in PBT and the \$9.2 billion decrease in profits from current production mainly reflected larger negative inventory profits in the fourth quarter than in the third.⁸

valuation and capital consumption adjustments. These adjustments convert inventory withdrawals and depreciation charges reported to businesses to a current-replacement-cost basis.

6. Profits from the rest of the world is calculated as (1) receipts by U.S. residents of earnings from their foreign affiliates plus dividends received by U.S. residents from unaffiliated foreign corporations minus (2) payments by U.S. affiliates of earnings to their foreign parents plus dividends paid by U.S. corporations to unaffiliated foreign residents. These estimates are derived from BEA's international transactions accounts.

7. Industry profits, which are estimated as the sum of corporate profits before tax and the inventory valuation adjustment, are shown in NIPA table 6.16c (on page D-16). Estimates of the capital consumption adjustment do not exist at a detailed industry level; they are available only for total financial and total nonfinancial industries.

8. As prices change, companies that value inventory withdrawals at original acquisition (historical) costs may realize inventory profits or losses. Inventory profits—a capital-gains-like element in profits—result from an

The year 1997.—For the year 1997, profits from current production increased \$69.1 billion (or 9.4 percent) to a level of \$805.0 billion; in 1996, the increase was \$85.9 billion (13.2 percent). Profits of domestic nonfinancial corporations increased \$51.1 billion after increasing \$71.2 billion, reflecting a slowdown in profits per unit; the slowdown in unit profits, in turn, reflected a slowdown in unit prices and a step-up in unit labor costs. The foreign component of profits also increased less than in 1997, \$2.7 billion, than in 1996, \$9.2 billion. In contrast to these slowdowns, profits of domestic financial corporations increased \$15.3 billion after increasing \$5.5 billion.

Industry profits increased \$61.2 billion after increasing \$75.7 billion. The slowdown was more than accounted for by domestic nonfinancial corporations. Profits in the transportation and utilities group turned down, and profits in manufacturing and in “other” nonfinancial corporations increased less than in 1996.

PBT increased \$53.2 billion, about the same amount as in 1996. Inventory profits—the main difference between PBT and profits from current production—turned negative for the first time since 1991.

Government Sector

The combined current surplus, which measures the net saving of the Federal Government and State and local governments, decreased \$2.6 billion in the fourth quarter, to \$98.0 billion (table 5).⁹ The fourth-quarter decrease in the fiscal position of the government sector was the first since the third quarter of 1995. The decrease was equally attributable to an increase in the Federal Government deficit and a decrease in the State and local government surplus.¹⁰

Federal

The Federal Government current deficit increased \$1.3 billion, to \$12.1 billion, in the fourth quarter, the first increase in seven quarters. The deficit decreased \$26.0 billion in the third quarter.

increase in inventory prices, and inventory losses—a capital-loss-like element in profits—result from a decrease in inventory prices. In the NIPA's, inventory profits or losses are shown as adjustments to business income (corporate profits and proprietors' income); they are shown as the inventory valuation adjustment with the sign reversed.

9. Net government saving equals gross saving less consumption of fixed capital.

10. The NIPA estimates for the government sector are derived from financial statements for the Federal Government and for State and local governments but differ from them in several respects. The major differences are shown in NIPA tables 3.18B and 3.19, which reconcile the NIPA estimates with government financial statements; these tables were published in the October 1997 SURVEY OF CURRENT BUSINESS on pages 11–13.

Receipts.—Federal receipts increased \$25.6 billion in the fourth quarter after increasing \$32.5 billion in the third. The deceleration resulted from a downturn in corporate profits tax accruals that more than offset accelerations in personal tax and nontax receipts and contributions for social insurance.

Corporate profits tax accruals decreased \$3.8 billion after increasing \$11.6 billion; the downturn reflected the downturn in domestic corporate profits.

Indirect business tax and nontax accruals decreased \$0.1 billion after increasing \$0.2 billion. Customs duties turned down, but excise taxes accelerated. Within excise taxes, air transport taxes increased \$1.5 billion after increasing \$0.3 billion, as a result of several provisions of the Taxpayer Relief Act of 1997 that became effective October 1.

Personal tax and nontax receipts increased \$19.1 billion after increasing \$14.0 billion. Receipts from income taxes increased \$18.4 billion after increasing \$14.4 billion; the acceleration was more than accounted for by an acceleration in withheld income taxes, reflecting higher growth in wage and salary disbursements. “Estimated income tax payments and final settlements, less refunds” increased \$1.5 billion after increasing \$4.3 billion. Estate and gift taxes increased \$0.7 billion after decreasing \$0.4 billion.

Contributions for social insurance increased \$10.4 billion after increasing \$6.7 billion. Reflecting stronger fourth-quarter wage and salary disbursements, contributions to the old-age, survivors, disability and hospital insurance and to the State unemployment insurance trust funds increased \$10.2 billion after increasing \$6.1 billion.

Current expenditures.—Current expenditures increased \$26.9 billion in the fourth quarter after increasing \$6.6 billion in the third. The acceleration was mostly accounted for by step-ups in transfer payments (net), in grants-in-aid to State and local governments, and in consumption expenditures.

Transfer payments (net) increased \$15.7 billion after increasing \$3.1 billion. Transfer payments to the rest of the world increased \$11.6 billion after decreasing \$0.8 billion; the upturn was accounted for by the yearly payment to Israel of \$3.0 billion—\$12.0 billion at an annual rate—in economic support and other payments. Transfer payments to persons increased \$4.1 billion after increasing \$4.0 billion.

Grants-in-aid to State and local governments increased \$6.4 billion after increasing \$1.7 billion. The acceleration was accounted for by upturns in

grants for medicaid, health care, and family assistance that were only partly offset by downturns in grants for education, mass transit, highways, and other programs.

Consumption expenditures increased \$3.7 billion after increasing \$0.5 billion. Expenditures for national defense increased \$2.8 billion after increasing \$0.3 billion; the acceleration was primarily accounted for by an upturn in expenditures for durable goods, mainly for aircraft parts and for parts of other military durable goods. Nondefense expenditures increased \$0.9 billion after increasing \$0.2 billion.

Subsidies less current surplus of government enterprises increased \$1.1 billion after decreasing \$0.2 billion. The upturn was mostly accounted for by a downturn in the surplus of government enterprises.

Net interest paid increased \$0.1 billion after increasing \$1.4 billion. The deceleration was mainly accounted for by an upturn in gross interest received from persons, business, and the rest of the world, which increased \$0.2 billion after decreasing \$0.7 billion.

State and local

The State and local government current surplus decreased \$1.3 billion, to \$110.1 billion, in the fourth quarter after increasing \$6.5 billion in the third. The downturn was mostly attributable to a deceleration in receipts.

Receipts increased \$12.6 billion after increasing \$19.1 billion. The deceleration was more than accounted for by a deceleration in indirect business tax and nontax accruals and a downturn in corporate profits tax accruals.

Indirect business tax and nontax accruals increased \$0.5 billion after increasing \$9.0 billion; the deceleration was more than accounted for by a downturn in "other tax and nontax accruals" and a deceleration in sales taxes. "Other tax and nontax accruals" decreased \$2.8 billion after increasing \$4.6 billion; these accruals had been boosted in the third quarter by a payment of \$0.92 billion— or \$3.7 billion at an annual rate—to two States by tobacco companies as out-of-court settlements of lawsuits. Sales taxes increased \$0.9 billion after increasing \$2.8 billion; the deceleration primarily reflected a deceleration in retail sales.

Corporate profits tax accruals decreased \$0.8 billion after increasing \$2.1 billion; the downturn reflected the downturn in domestic corporate profits. As previously noted, Federal

grants-in-aid increased \$6.4 billion after increasing \$1.7 billion. Personal tax and nontax receipts increased \$5.0 billion after increasing \$4.8 billion.

Current expenditures increased \$13.8 billion after increasing \$12.6 billion. The acceleration was more than accounted for by consumption expenditures, which increased \$10.3 billion after increasing \$8.7 billion, largely because of accelerations in "other" services and in nondurable goods. Transfer payments to persons increased \$4.7 billion after increasing \$4.5 billion.

Table 5.—Government Sector Receipts and Current Expenditures

[Billions of dollars, seasonally adjusted at annual rates]

	Level		Change from preceding quarter			
	1997	1996	1997			
	IV	IV	I	II	III	IV
Government sector						
Receipts	2,648.5	52.3	47.6	40.2	49.9	31.8
Current expenditures	2,550.5	32.2	21.6	21.3	17.4	34.4
Current surplus or deficit(−)	98.0	20.1	26.0	18.9	32.5	−2.6
Social insurance funds	142.8	2.3	−2.1	2.1	3.8	7.0
Other	−44.8	17.8	28.1	16.8	28.8	−9.7
Federal Government						
Receipts	1,767.4	43.0	33.7	34.0	32.5	25.6
Personal tax and nontax receipts	801.0	21.8	29.4	21.0	14.0	19.1
Corporate profits tax accruals	215.5	−4.7	12.9	2.8	11.6	−3.8
Indirect business tax and nontax accruals	92.3	18.7	−22.0	4.0	.2	−1
Contributions for social insurance	658.6	7.2	13.3	6.2	6.7	10.4
Current expenditures	1,779.5	20.6	12.0	15.2	6.6	26.9
Consumption expenditures	468.4	−4	4.4	6.2	.5	3.7
National defense	314.4	−1.7	−1.2	4.9	.3	2.8
Nondefense	154.0	1.4	5.7	1.2	.2	.9
Transfer payments (net)	810.2	15.8	8.6	5.5	3.1	15.7
To persons	788.6	4.7	21.1	5.0	4.0	4.1
To the rest of the world	21.6	11.0	−12.4	.3	−8	11.6
Grants-in-aid to State and local governments	230.6	−1.2	2.1	2.9	1.7	6.4
Net interest paid	231.3	5.2	−2.9	0.9	1.4	.1
Subsidies less current surplus of government enterprises	39.0	1.1	−1	−3	−2	1.1
Subsidies	34.5	.3	.4	.5	0	.2
Of which: Agricultural subsidies	8.0	.1	.0	.1	0	.5
Less: Current surplus of government enterprises	−4.5	−9	.4	.8	.3	−9
Less: Wage accruals less disbursements	0	0	0	0	0	0
Current surplus or deficit (−)	−12.1	22.4	21.6	18.7	26.0	−1.3
Social insurance funds	71.3	2.4	−1.9	1.7	4.0	6.9
Other	−83.4	20.1	23.5	17.0	22.0	−8.2
State and local governments						
Receipts	1,111.7	8.2	16.0	9.1	19.1	12.6
Personal tax and nontax receipts	221.1	3.4	3.6	2.6	4.8	5.0
Corporate profits tax accruals	38.1	−9	2.4	.4	2.1	−8
Indirect business tax and nontax accruals	533.5	5.7	6.9	2.0	9.0	.5
Contributions for social insurance	88.4	1.1	1.1	1.2	1.4	1.6
Federal grants-in-aid	230.6	−1.2	2.1	2.9	1.7	6.4
Current expenditures	1,001.5	10.3	11.6	9.0	12.6	13.8
Consumption expenditures	776.4	7.4	8.4	5.7	8.7	10.3
Transfer payments to persons	318.7	4.0	4.5	4.4	4.5	4.7
Net interest paid	−66.3	−8	−1.0	−9	−7	−7
Less: Dividends received by government	14.9	.3	.3	.4	0	.2
Subsidies less current surplus of government enterprises	−12.4	−1	.2	.1	.1	−3
Subsidies	0.3	0	0	0	0	0
Less: Current surplus of government enterprises	12.7	0	−1	−2	−1	.3
Less: Wage accruals less disbursements	0	0	0	0	0	0
Current surplus or deficit (−)	110.1	−2.2	4.3	.2	6.5	−1.3
Social insurance funds	71.5	−1	−1	.3	−2	.1
Other	38.6	−2.2	4.6	−2	6.7	−1.4


NOTE.—Dollar levels are found in NIPA tables 3.1, 3.2, and 3.3.

The Government Sector in 1997

The combined fiscal position of the Federal Government and State and local governments shifted from a current deficit of \$5.1 billion in 1996 to a current surplus of \$79.0 billion in 1997, the first surplus since 1979.¹¹ The shift in the fiscal position was primarily accounted for by a substantial decrease in the Federal current deficit.

The Federal current deficit decreased \$81.7 billion, to \$28.8 billion, the smallest Federal deficit since 1979; the decrease was attributable to a much larger increase in receipts than in current expenditures.¹² Federal receipts increased \$135.8 billion; the increase was more than accounted for by increases in personal tax and

nontax receipts, contributions for social insurance, and corporate profits tax accruals. Federal current expenditures increased \$54.1 billion; the increase was mostly accounted for by increases in transfer payments (net) and consumption expenditures.

The State and local government current surplus increased \$2.5 billion, to \$107.8 billion; the increase was attributable to a slightly larger increase in receipts than in current expenditures.¹³ Receipts increased \$47.0 billion; all categories of receipts increased, but the largest increases were in indirect business tax and nontax accruals and in personal tax and nontax receipts. Current expenditures increased \$44.6 billion; the increase was more than accounted for by consumption expenditures and transfer payments to persons. 

11. For NIPA estimates of government receipts and current expenditures for calendar years 1996 and 1997, see NIPA tables 3.1, 3.2, and 3.3 in this issue.

12. The NIPA budget estimates differ from the official Federal budget estimates in several respects, including the timing of transactions, the treatment of investment, and other coverage differences. For more information, see "Federal Budget Estimates, Fiscal Year 1999," SURVEY 78 (March 1998): 8-16.

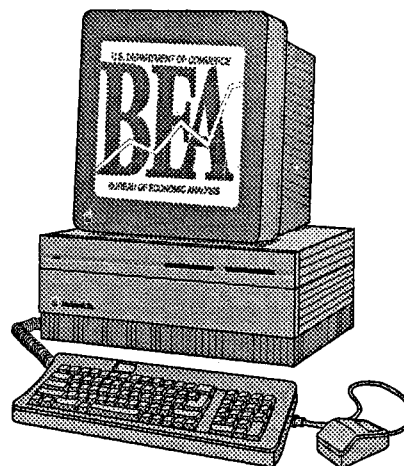
13. For more information, see "State and Local Government Fiscal Position in 1997" in this issue.

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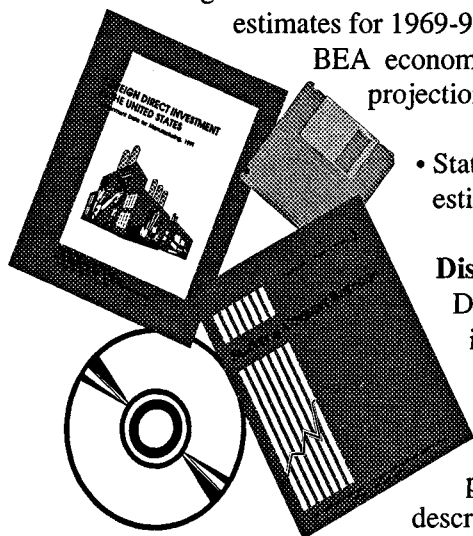


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State and Local Government Fiscal Position in 1997

By Florence Campi and David F. Sullivan

THE CURRENT surplus of State and local governments, which is a measure of the net saving by these governments, increased \$2.5 billion, to \$107.8 billion, in 1997 from \$105.3 billion in 1996 (table 1, chart 1).¹ As in recent years, little of the increase in the current surplus was accounted for by employee retirement, workers' compensation, or other social insurance funds; instead, it was mainly accounted for by general receipts and by current expenditures for other programs, which include education, medical care, highways, and police. The social insurance funds surplus increased \$0.1 billion, to \$71.4 billion, and the "other" funds surplus increased \$2.2 billion, to \$36.3 billion.²

Receipts

State and local government receipts increased 4.5 percent, to \$1,090.4 billion, in 1997 after increasing 4.4 percent in 1996 (table 2). General own-source receipts—that is, receipts exclud-

ing contributions for social insurance and Federal grants-in-aid—increased 4.9 percent in 1997, compared with a 4.8-percent increase in 1996. All the major components of receipts increased.

Personal tax and nontax receipts.—Personal tax and nontax receipts, which accounted for about 20 percent of total State and local government receipts, increased 7.0 percent, to \$214.3 billion, in 1997, an acceleration from a 5.7-percent increase in 1996. Personal income tax receipts increased 7.2 percent, to \$159.8 billion, after a 6.3-percent increase. Personal income accelerated only slightly to a 5.8-percent increase from a 5.6-percent increase. The faster acceleration in personal income taxes than in personal income is within the normal range of variation, but it may also reflect increases in taxes on other types of income, such as capital gains. State legislative actions reduced income tax receipts by \$0.6 billion in 1997; excluding these actions, income tax receipts would have increased 7.6 percent.

Personal nontax receipts (largely fines, donations, and unclaimed bank deposits) increased

1. The NIPA current surplus or deficit reflects the treatment of government investment that was introduced in January 1996. Current expenditures now include (1) consumption of fixed capital for general government in consumption expenditures, and (2) consumption of fixed capital for government enterprises as an expense in the calculation of the current surplus of government enterprises. Gross investment in fixed assets by general government and government enterprises is no longer classified as a current-account expenditure in the year the asset is purchased but is classified, instead, as an expenditure over the service life of the asset.

2. The social insurance funds surplus is calculated as the sum of receipts from personal contributions and employer contributions for social insurance plus interest and dividends received less transfer payments and administrative expenses (consumption expenditures) of social insurance funds. The detailed estimates of social insurance funds receipts and current expenditures are shown annually in NIPA table 3.14, most recently in the August 1997 SURVEY.

Table 1.—State and Local Government Receipts, Current Expenditures, and Current Surplus or Deficit, NIPA Basis

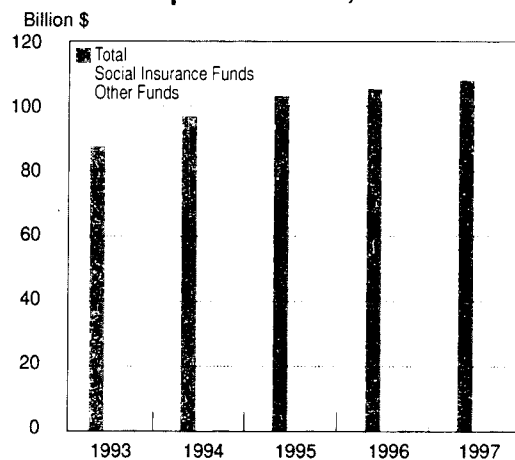
[Billions of dollars]

	Calendar years				
	1993	1994	1995	1996	1997
Receipts	894.4	949.2	999.0	1,043.4	1,090.4
Current expenditures	807.0	852.3	895.9	938.0	982.6
Current surplus or deficit (-)	87.4	96.8	103.1	105.3	107.8
Social insurance funds	67.8	68.9	70.5	71.3	71.4
Other funds	19.7	27.9	32.5	34.1	36.3

NOTE.—The estimates for 1996–97 are in NIPA table 3.3 of this issue of the SURVEY OF CURRENT BUSINESS; the estimates for 1992–96 are in NIPA table 3.3 of the August 1997 issue. NIPA National income and product accounts

CHART 1

State and Local Government Current Surplus or Deficit, NIPA Basis



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

7.6 percent after a 7.9-percent increase. "Other" personal tax receipts increased 5.4 percent after a 0.4-percent decrease; the upturn was accounted for by upturns in motor vehicle license taxes and in other taxes (largely hunting, fishing, and other personal licenses).³

Corporate profits tax accruals.—Corporate profits tax accruals, which accounted for about 3 percent of total receipts, increased 9.0 percent in 1997, following a 10.9-percent increase in 1996. The deceleration reflected a deceleration in corporate profits. Corporate profits before tax increased 7.9 percent after increasing 8.7 percent.

Indirect business tax and nontax accruals.—Indirect business tax and nontax accruals, which accounted for about 48 percent of total receipts, decelerated slightly in 1997; they increased 3.8 percent, to \$528.1 billion, in 1997 and 4.0 percent in 1996.⁴ Sales taxes, which accounted for about 49 percent of indirect business tax and nontax accruals, continued to decelerate; they increased 3.0 percent, to \$257.4 billion, in 1997 and 4.3 percent in 1996. All the components of sales taxes except taxes on alcoholic beverages and on insurance receipts decelerated; both these com-

ponents accelerated. The deceleration in general sales taxes is partly attributable to a deceleration in retail sales, which increased 4.1 percent in 1997 after increasing 5.2 percent in 1996. Tobacco sales taxes decreased \$0.2 billion in 1997. Legislative actions reduced sales taxes only slightly in 1997; excluding these actions, sales taxes would still have increased 3.0 percent in 1997.

Property taxes, which accounted for about 40 percent of indirect business tax and nontax accruals, accelerated in 1997; they increased 3.2 percent, to \$208.8 billion, after decelerating for 7 years.

"Other" indirect business tax and nontax accruals increased 9.2 percent, to \$62.0 billion, in 1997 after increasing 8.2 percent in 1996. The acceleration was primarily accounted for by motor vehicle license taxes and indirect business nontax accruals. The pickup in nontaxes was attributable to payments of \$0.9 billion to two States by tobacco companies as a result of out-of-court settlements of lawsuits. Severance taxes and "other" indirect business taxes decelerated.

Other receipts.—Contributions for social insurance, which accounted for about 8 percent of total receipts, increased 5.9 percent, to \$86.2 billion in 1997, an acceleration from a 5.3-percent increase in 1996. Employer contributions accelerated, primarily reflecting an acceleration in private workers' compensation contributions. Per-

3. The detailed estimates of personal tax and nontax receipts are shown annually in NIPA table 3.4, most recently in the August 1997 SURVEY.

4. The detailed estimates of indirect business tax and nontax accruals are shown annually in NIPA table 3.5, most recently in the August 1997 SURVEY.

Table 2.—State and Local Government Receipts, NIPA Basis

	Calendar years								
	Billions of dollars					Percent change			
	1993	1994	1995	1996	1997	1994	1995	1996	1997
Receipts	894.4	949.2	999.0	1,043.4	1,090.4	6.1	5.2	4.4	4.5
General own-source receipts	639.9	676.5	709.8	743.7	780.1	5.7	4.9	4.8	4.9
Personal tax and nontax receipts	167.4	176.8	189.4	200.2	214.3	5.6	7.1	5.7	7.0
Income taxes	124.2	131.2	140.3	149.1	159.8	5.6	6.9	6.3	7.2
Nontaxes	23.4	24.8	26.7	28.8	31.0	6.0	7.7	7.9	7.6
Other	19.8	20.8	22.4	22.3	23.5	5.1	7.7	-4	5.4
Corporate profits tax accruals	26.9	29.9	31.1	34.5	37.6	11.2	4.0	10.9	9.0
Indirect business tax and nontax accruals	445.6	469.8	489.3	508.9	528.1	5.4	4.2	4.0	3.8
Sales taxes	214.8	228.2	239.4	249.8	257.4	6.2	4.9	4.3	3.0
Property taxes	185.0	191.4	197.4	202.3	208.8	3.5	3.1	2.5	3.2
Other	45.9	50.2	52.5	56.8	62.0	9.4	4.6	8.2	9.2
Contributions for social insurance	68.7	73.4	77.3	81.4	86.2	6.8	5.3	5.3	5.9
Federal grants-in-aid	185.8	199.2	211.9	218.3	224.2	7.2	6.4	3.0	2.7
Addenda: Receipts excluding selected law changes:¹									
Total	893.7	947.4	997.3	1,042.7	1,090.3	6.0	5.3	4.6	4.6
General own-source receipts	639.2	674.8	708.1	743.0	780.1	5.6	4.9	4.9	5.0

1. Estimates of the effect of law changes on receipts are calculated as follows. For changes of which BEA is aware (hence the use of "selected" in the line title in the table), the estimate is the amount of the change over the 12-month period after the change is introduced. For personal taxes, the change is introduced when the tax is paid or refunded or when the withholding is changed. For indirect business taxes, the change is introduced to coincide with the transaction affected. The calculations are made by months for personal taxes and nontaxes (because they are used to prepare monthly estimates of disposable personal income) and by quarters for other taxes. Two characteristics of the resulting estimates should be noted. First, aggregation of the monthly or quarterly estimates to calendar years may give results that appear anomalous. For example, a sales tax imposed for 1 year beginning July 1 would be recorded as follows: (a) For quarters, an increase in receipts by the amount of the 12-month yield in the third quarter of that

year and a decrease by the same amount in the third quarter of the following year, and (b) for calendar years, an increase in receipts by the amount of the 12-month yield divided by 2 in the year that the increase takes place, no change in receipts in the following year, and a decrease by the amount of the 12-month yield divided by 2 in the year after that (that is, 2 years after the increase). Second, a law change after July, which is the beginning of the fiscal year for many States, would have more impact on receipts of the next calendar year than on those of the calendar year in which it occurs.

The effects of tax law changes that are excluded from receipts to derive the addenda items in the table cover the changes beginning with those introduced in 1992. The 12-month effects, recorded for calendar years as described above, are cumulated.

NIPA National income and product accounts

sonal contributions decelerated, primarily reflecting a deceleration in contributions for temporary disability insurance.

Federal grants-in-aid to State and local governments, which accounted for about 21 percent of total receipts, increased 2.7 percent, to \$224.2 billion, after increasing 3.0 percent in 1996. Most categories of grants increased, but grants for cash benefits (public assistance), education, and health care decreased.⁵

Current expenditures

Current expenditures increased 4.8 percent, to \$982.6 billion, in 1997 (table 3). The increase was more than accounted for by increases in consumption expenditures and transfer payments to persons.

Consumption expenditures.—Consumption expenditures—which consist primarily of compensation of employees and net purchases of goods and services from businesses—increased 4.4 percent, to \$762.9 billion, in 1997 after increasing 4.6 percent in 1996. The deceleration primarily reflected decelerations in expenditures for durable goods other than equipment and in expenditures for nondurable goods. The deceleration in nondurable goods largely reflected a decrease in petroleum prices.

Compensation of general government employees, which accounted for about 75 percent of

consumption expenditures, increased 4.3 percent, to \$570.6 billion, in 1997 after increasing 4.1 percent in 1996 (table 4). State and local government employment increased 1.6 percent in 1997 after increasing 1.3 percent in 1996. The employment cost index for the wages and salaries of State and local government workers increased 2.7 percent in 1997, slightly less than in 1996.⁶

In the NIPA's, consumption expenditures are net of receipts for certain goods and services that are defined as government sales and that are subtracted in the estimation of consumption expenditures; the largest components of government sales are tuition charges and health and hospital charges. Government sales decelerated in 1997, reflecting decelerations in sales of nondurable goods and of services.⁷

Consumption of general government fixed capital, or depreciation, increased 4.2 percent in 1997, compared with a 4.4-percent increase in 1996.

Real consumption expenditures accelerated to a 2.0-percent increase in 1997 from a 1.2-percent increase in 1996 (table 4). Most of the acceleration was accounted for by compensation of general government employees, which increased 1.5 percent after increasing 0.4 percent, reflecting the acceleration in State and local government employment.

6. The employment cost index and the employment figures are reported in the U.S. Department of Labor, Bureau of Labor Statistics, *Employment Cost Index: Historical Listing* (January 1998); *Current Employment Statistics* (June 1997); and *The Employment Situation News Release* (March 6, 1998).

7. The detailed estimates of government sales are shown annually in NIPA table 3.9, most recently in the August 1997 SURVEY.

Table 3.—State and Local Government Current Expenditures, NIPA Basis

	Calendar years								
	Billions of dollars					Percent change			
	1993	1994	1995	1996	1997	1994	1995	1996	1997
Current expenditures	807.0	852.3	895.9	938.0	982.6	5.6	5.1	4.7	4.8
Consumption expenditures	631.6	663.8	698.6	730.9	762.9	5.1	5.2	4.6	4.4
Transfer payments to persons	247.2	264.3	280.6	294.8	311.8	6.9	6.2	5.1	5.8
Benefits from social insurance funds	66.0	71.1	76.8	83.5	91.0	7.7	8.0	8.7	9.0
Medical care	132.5	141.7	151.3	159.9	171.0	6.9	6.8	5.7	6.9
Family assistance	24.0	24.3	23.3	21.7	18.8	1.3	-4.1	-6.9	-13.4
All other	24.6	27.2	29.2	29.7	31.1	10.6	7.4	1.7	4.7
Net interest paid	-52.4	-55.1	-59.6	-61.7	-65.2	.....	.....	.....	.....
Interest paid	64.5	63.7	64.1	64.6	64.6	-1.2	.6	.8	.0
Less: Interest received by government	116.9	118.8	123.7	126.3	129.8	1.6	4.1	2.1	2.8
Social insurance funds	59.9	61.4	64.3	67.1	69.7	2.5	4.7	4.4	3.9
Other	57.0	57.4	59.4	59.2	60.1	.7	3.4	-3	1.5
Less: Dividends received by government	10.5	11.4	12.5	13.6	14.6	8.6	9.6	8.8	7.4
Social insurance funds	10.3	11.2	12.3	13.4	14.4	8.7	9.8	8.9	7.5
Other .....	.2	.2	.2	.2	.2	0	0	0	0
Subsidies less current surplus of government enterprises	-9.0	-9.3	-11.2	-12.3	-12.2	.....	.....	.....	.....
Subsidies .....	.4	.4	.3	.3	.3	0	-25.0	0	0
Less: Current surplus of government enterprises	9.3	9.7	11.5	12.7	12.6	4.3	18.6	10.4	-8
Less: Wage accruals less disbursements	0	0	0	0	0	.....	.....	.....	.....

NIPA National income and product accounts

Transfer payments to persons.—Transfer payments to persons—which include medicaid, employee retirement benefits, and family assistance payments—increased 5.8 percent, to \$311.8 billion, in 1997 after increasing 5.1 percent in 1996 (table 3).

Benefits from social insurance funds increased 9.0 percent, to \$91.0 billion, in 1997 after an 8.7-percent increase in 1996. State and local employee retirement payments have continued to increase about 10 percent a year, workers' compensation payments increased 2.2 percent in 1997, and temporary disability insurance has declined since 1994. Medical care transfers (primarily medicaid), which accounted for about 55 percent of transfer payments, increased 6.9 percent, to \$171.0 billion, in 1997 after increasing 5.7 percent

in 1996.⁸ Family assistance, which has decreased since 1994, decreased 13.4 percent, to \$18.8 billion, in 1997.⁹ All other transfer payments (including those for education and for employment and training) increased 4.7 percent, to \$31.1 billion, in 1997.

Other current expenditures.—Net interest paid (interest paid by State and local governments less interest received by them) has become more negative each year since 1993, because interest received has increased more than interest paid. In 1997, interest received increased 2.8 percent, and interest paid was unchanged. Interest received

8. The detailed estimates of government transfer payments to persons are shown annually in NIPA table 3.12, most recently in the August 1997 SURVEY.

9. Through 1995, family assistance consists of aid to families with dependent children; beginning in 1996, it also includes additional programs under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996.

Table 4.—State and Local Government Consumption Expenditures and Gross Investment, NIPA Basis

	Calendar years									
	1993	1994	1995	1996	1997	1994	1995	1996	1997	
	Billions of dollars					Percent change				
Consumption expenditures and gross investment	765.0	802.8	846.0	886.7	928.9	4.9	5.4	4.8	4.8	
Consumption expenditures	631.6	663.8	698.6	730.9	762.9	5.1	5.2	4.6	4.4	
Durable goods	13.2	13.9	14.7	15.3	15.8	5.3	5.8	4.1	3.3	
Nondurable goods	64.3	67.8	73.0	78.2	80.6	5.4	7.7	7.1	3.1	
Services	554.2	582.1	610.9	637.5	666.5	5.0	4.9	4.4	4.5	
Compensation of general government employees except force-account construction ¹	479.5	502.6	525.5	547.2	570.6	4.8	4.6	4.1	4.3	
Consumption of general government fixed capital	48.8	51.3	54.2	56.6	59.0	5.1	5.7	4.4	4.2	
Other services	25.9	28.1	31.2	33.7	36.9	8.5	11.0	8.0	9.5	
Gross investment	133.4	138.9	147.4	155.7	166.0	4.1	6.1	5.6	6.6	
Structures	108.7	113.4	121.0	128.5	138.4	4.3	6.7	6.2	7.7	
Equipment	24.7	25.6	26.4	27.3	27.6	3.6	3.1	3.4	1.1	
	Billions of chained (1992) dollars									
Consumption expenditures and gross investment	746.4	765.7	781.6	793.7	812.7	2.6	2.1	1.5	2.4	
Consumption expenditures	615.8	633.4	646.0	653.6	666.6	2.9	2.0	1.2	2.0	
Durable goods	13.0	13.6	13.9	14.4	14.8	4.6	2.2	3.6	2.8	
Nondurable goods	64.0	67.4	69.2	71.5	74.1	5.3	2.7	3.3	3.6	
Services	538.9	552.5	563.0	567.9	577.9	2.5	1.9	.9	1.8	
Compensation of general government employees except force-account construction ¹	463.2	471.6	478.2	479.9	486.9	1.8	1.4	.4	1.5	
Consumption of general government fixed capital	48.1	49.4	50.7	52.0	53.4	2.7	2.6	2.6	2.7	
Other services	27.5	32.1	35.1	37.4	39.4	16.7	9.3	6.6	5.3	
Gross investment	130.6	132.2	135.6	140.1	146.1	1.2	2.6	3.3	4.3	
Structures	106.1	107.1	109.5	112.8	117.4	.9	2.2	3.0	4.1	
Equipment	24.5	25.2	26.1	27.4	28.8	2.9	3.6	5.0	5.1	
Residual	0	-7	-1.1	-1.7	-2.1					
	Index numbers, 1992=100									
Addenda:²										
Consumption expenditures:										
Quantity index	102.03	104.94	107.02	108.28	110.44	2.9	2.0	1.2	2.0	
Price index	102.56	104.80	108.14	111.84	114.44	2.2	3.2	3.4	2.3	
Gross investment:										
Quantity index	98.81	100.06	102.60	106.03	110.52	1.3	2.5	3.3	4.2	
Price index	102.17	105.06	108.69	111.14	113.71	2.8	3.5	2.3	2.3	

1. Compensation of government employees engaged in new force-account construction and related expenditures for goods and services are classified as investment in structures.

2. Quantity and price indexes are chain-type indexes. The indexes are shown in NIPA table 7.11. For a discussion of the indexes, see "Preview of the Comprehensive Revision of the National Income and Product Accounts: BEA's New Featured Measures of Output and Prices," in the July 1995 SURVEY.

NOTES.—The current-dollar estimates are shown in NIPA table 3.7.

Real estimates are expressed in chained (1992) dollars, which are shown in NIPA table 3.8. Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines.

NIPA National income and product accounts

by social insurance funds increased 3.9 percent; general government interest received increased 1.5 percent. Dividends received, primarily by State and local government pension funds, increased 7.4 percent after an increase of 8.8 percent.

The current surplus of government enterprises—certain government agencies that operate like businesses, such as water and sewerage facilities, public utilities, lotteries, and public transit—decreased slightly to \$12.6 billion in 1997 after 10 consecutive years of increases.¹⁰ The downturn reflected a downturn in Federal subsidies paid to housing and urban renewal enterprises and to public transit enterprises; other enterprise revenues and current expenditures increased at about the same rate in 1997 as in 1996.

Gross investment

Government expenditures for structures and equipment are now classified as “gross investment” (see footnote 1) and do not directly affect the NIPA current surplus (or deficit), but they remain an important activity of State and local governments. State and local government gross investment increased 6.6 percent, to \$166.0 billion, in 1997 after an increase of 5.6 percent in 1996 (table 4).¹¹

Gross investment in structures increased 7.7 percent, to \$138.4 billion, in 1997 after increasing 6.2 percent in 1996. Investment in buildings accelerated, reflecting increases of 8 percent or more in all types of buildings. In structures other than buildings, the largest increases were in conservation and development and in “other” construction (which consists primarily of electric and gas facilities, transit systems, and airfields). Investment in highways and streets increased 7.7 percent, or \$3.4 billion, to \$47.5 billion. Construction of water systems increased 7.3 percent; construction of sewer systems increased 1.6 percent.

Gross investment in equipment increased 1.1 percent, to \$27.6 billion, in 1997 after a 3.4-percent increase in 1996. The deceleration largely reflected a continuing decline in computer prices.

In real terms, gross investment accelerated, primarily reflecting an acceleration in structures. Structures increased 4.1 percent after an increase of 3.0 percent. Real investment in equipment increased 5.1 percent after an increase of 5.0 percent.

10. The detailed estimates of current surplus of government enterprises are shown annually in NIPA table 3.13, most recently in the August 1997 SURVEY.

11. The detailed estimates of gross government investment by type are shown annually in NIPA tables 5.14 and 5.15, most recently in the August 1997 SURVEY.

The steady growth in real equipment investment contrasts with the deceleration in current-dollar equipment investment; the contrasting movements are partly the result of the continuing decline in computer prices.

Fiscal position in 1998¹²

A major factor affecting the State and local fiscal position in 1998 will be the pace of overall economic activity during the year. In the *Economic Report of the President*, real gross domestic product in 1998 is projected to grow more slowly than in 1997, the unemployment rate is projected to be unchanged, and the rate of inflation is projected to step up slightly.¹³

Receipts.—In State and local government receipts, the growth of the economy will have the largest effect on personal income taxes, corporate profits tax accruals, and sales taxes, which together account for approximately two-fifths of total receipts. Federal grants-in-aid, which are determined by the Federal Government, account for approximately one-fifth of receipts.¹⁴ Business and personal property taxes account for about one-fifth of total receipts, and other personal and business taxes and nontaxes and contributions for social insurance, which are influenced by such factors as State and local government employment and fiscal policies, and by changes in demographics, account for the remaining one-fifth.

Total receipts in 1998 are expected to increase \$50-\$55 billion, to \$1,140-\$1,145 billion. Personal tax and nontax receipts are likely to decelerate because of an expected deceleration in personal income taxes. The deceleration is partly attributable to the effect of the projected slowdown in economic growth; in addition, State tax law changes already enacted are expected to reduce personal income taxes more in 1998 than in 1997. Sales tax receipts are also expected to decelerate in 1998; tax law changes already enacted are expected to have little effect. Corporate tax accruals are unlikely to match the large increases

12. One of the reasons that BEA prepares these projections is that source data for a number of the components of State and local government receipts and expenditures are not available at the time NIPA estimates are made. For these components, estimates are made using indicator series or judgmental trends. These trends are used in conjunction with the available source data to prepare the current quarterly NIPA estimates. For more information, see “A Guide to the NIPAs,” SURVEY 78 (March 1998): 56-61.

13. *Economic Report of the President* (Washington, DC: U.S. Government Printing Office, February 1998).

14. Grants-in-aid have been appropriated for fiscal year 1998 and estimated for fiscal year 1999; they are shown in the 1999 *Budget Appendix of the United States* (Washington, DC: U.S. Government Printing Office, 1998) and in “Federal Budget Estimates, Fiscal Year 1999,” SURVEY 78 (March 1998): 8-16.

in 1996 and 1997. Property tax accruals, which are related to property values and to changes in investment as well as to the national economy, are expected to increase at about the same rate as in 1997. Reflecting all these changes, general own-source receipts are expected to increase less in 1998 than in 1997.

Federal grants-in-aid are expected to increase about 7 percent in 1998. This increase represents an acceleration after 2 years of deceleration. Almost all of the grants programs are expected to increase; the largest increases are expected in the programs for health care, community development, cash benefits (public assistance), and "all other."¹⁵

Contributions for social insurance are assumed to increase at about the same rate in 1998 as in 1997.


Current expenditures.—Evidence from State and local budgets suggests that expenditures for current operations will accelerate in 1998. Current expenditures are likely to increase \$50-\$55 billion, to \$1,033-\$1,038 billion. Consumption expenditures are likely to accelerate in 1998; the acceleration is expected to be widespread among the components of consumption expenditures.

Transfer payments, which are partly funded by Federal grants-in-aid, are likely to increase slightly more in 1998 than in 1997. Benefits from

social insurance are likely to increase at about the same rate.

Net interest paid in 1998 will be affected by the refinancing of debt and new borrowing at relatively low rates. Interest paid and interest received are likely to increase slowly again; dividends received is likely to increase at about the same rate as in 1997.

Current surplus or deficit.—These changes in receipts and in current expenditures would result in a NIPA surplus of \$107-\$112 billion in 1998. The social insurance funds surplus is expected to increase about \$1 billion, and the "other funds" surplus is likely to increase slightly.

Gross investment.—Gross investment is likely to increase in 1998. New borrowing by State and local governments, which is used to finance gross investment, increased in 1997. Most categories of structures are expected to increase in 1998, but at slower rates than in 1997. The largest increases are expected in educational and "other" buildings (including offices, police and fire stations, courthouses, and prisons). Water and sewer construction are also expected to remain relatively strong. Highway construction is expected to increase in 1998. Recently proposed Federal legislation on transportation increases the likelihood that it will accelerate: Presidential and congressional proposals currently under consideration, if enacted, would increase Federal funding for State and local government investment in transportation facilities, including highways. 

15. "All other" grants consists of a variety of programs; the largest programs are human development services, employment training, unemployment insurance trust fund administrative expenditures, disaster relief, justice assistance, and atomic energy defense activities.

U.S. Transportation Satellite Accounts for 1992

By Bingsong Fang, Xiaoli Han, Ann M. Lawson, and Sherlene K.S. Lum

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THIS ARTICLE introduces the transportation satellite accounts (TSA's), which are an extension of the U.S. input-output (I-O) accounts.¹ Satellite accounts rearrange information from the basic economic accounts for the purpose of analyzing important economic activities more completely than is otherwise possible. They expand the analytical capacity of the basic accounts without overburdening them with details or interfering with their general-purpose orientation. The TSA's were jointly developed by the Bureau of Transportation Statistics (BTS) of the U.S. Department of Transportation and the Bureau of Economic Analysis (BEA).² In 1994, BEA introduced a set of prototype economic and environmental satellite accounts and a satellite account for research and development expenditures; BEA is also developing satellite accounts for travel and tourism that will be introduced in a few months.³

Like other satellite accounts, the TSA's provide a more comprehensive measure of an economic activity by bringing together components of that activity wherever they occur throughout the economy, including activities which are internal to the firm and for which there are no observable

prices. In this case, the activity is transportation, and the intrafirm transportation activities identified in the TSA's include, for example, the transportation activities that are conducted by a grocery company's truck fleet when it moves goods from warehouses to the retail outlets of the grocery store chain. The TSA's identify and aggregate such transportation activities whether they are purchased from other firms or performed by other units in the same firm and present the data on both an industry and a commodity basis.

The TSA's are based on and are an extension of the I-O accounts. They are the result of rearranging the 1992 I-O data using additional information from other sources of transportation data so as to provide a unified picture of the impact of transportation on the U.S. economy. The TSA's cover both the transportation activities conducted on a for-hire basis, which are identified as transportation within the published I-O accounts, and those conducted by businesses for their own use, which—though included—are not separately identified as transportation activities in the I-O accounts. The estimates from the TSA's, therefore, have several major advantages for transportation analyses.

First, the TSA estimates provide a more comprehensive measure of all transportation activities, both in terms of their contribution to the economy and their use of inputs from other industries in the economy. For example, the value added of transportation industries as defined in the TSA's represents 5.0 percent of gross domestic product (GDP) in 1992. In contrast, the total value added of all transportation industries identified in the I-O accounts is 3.1 percent of GDP for the same year.⁴ In addition, the TSA's show that transportation industries used \$33.2 billion of petroleum products in 1992, while the I-O accounts show that transportation industries used \$21.6 billion of these products in the same year.

1. For a description of the I-O accounts, see Ann M. Lawson, "Benchmark Input-Output Accounts for the U.S. Economy, 1992: Make, Use, and Supplementary Tables," *SURVEY OF CURRENT BUSINESS* 77 (November 1997): 36-82; and "Benchmark Input-Output Accounts for the U.S. Economy, 1992: Requirements Tables," *SURVEY* 77 (December 1997): 22-47.

2. The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) established BTS and charged it with carrying out various statistical functions, including "compiling, analyzing, and publishing a comprehensive set of transportation statistics to provide timely summaries and totals (including industry-wide aggregates and multi-year averages) of transportation-related information." ISTEA also mandated that "such statistics shall be suitable for conducting cost-benefit studies (including comparisons among individual transportation modes and intermodal transport systems) and shall include information on—(A) productivity in various parts of the transportation sector." See appendix A of *The Bureau of Transportation Statistics—Priorities for the Future* (National Academy Press, 1997) by the National Research Council. In its first annual report to the U.S. Congress, BTS recommended that special studies be undertaken to measure total transportation services in a way that is consistent with the national economic accounts. See pages 4-5 of the *Transportation Statistics Annual Report, 1994*, prepared by BTS.

3. For a description of the environmental satellite accounts, see "Integrated Economic and Environmental Satellite Accounts" and "Accounting for Mineral Resources: Issues and BEA's Initial Estimates," *SURVEY* 74 (April 1994): 33-72; for a description of the research and development account, see "A Satellite Account for Research and Development," *SURVEY* 74 (November 1994): 37-71. For the travel and tourism satellite accounts, BEA is proceeding with funding provided by the International Trade Administration of the Department of Commerce.

4. Industries in the I-O accounts that provide transportation commodities for hire as their primary products include the following: Railroads and related services and passenger ground transportation; motor freight transportation and warehousing; water transportation; air transportation; pipelines, freight forwarders, and related services; and State and local government passenger transit. These industries are described in table 2.

Second, the TSA estimates show more accurately the total use of transportation across industries, as shown in table 1. For example, in the 1-o estimates, the largest user of transportation was manufacturing (\$80.2 billion, 21.0 percent), followed by motor freight and warehousing (\$35.0 billion, 9.2 percent), services (\$21.5 billion, 5.6 percent), and air transportation (\$14.4 billion, 3.8 percent). In the TSA estimates, the largest user was still manufacturing (\$102.0 billion, 18.7 percent), but the next largest user was services (\$63.5 billion, 11.6 percent), followed by construction (\$52.2 billion, 9.6 percent) and wholesale and retail trade (\$51.8 billion, 9.5 percent).

Third, the TSA estimates on transportation are not affected by changes in the way transportation is provided, and therefore they provide a more reliable representation of transportation in the economy. For example, when a grocery company contracts out its internal trucking operations to a common carrier trucking company, the 1-o estimates show an increase in the output of transportation; when the company switches back to its internal operations for its trucking needs, the 1-o estimates show a decrease in the output of transportation. In contrast, the TSA estimates remain unchanged in both cases.

The first section of this article explains why the TSA's were developed. The second section provides a conceptual overview of the TSA's, including their relationship to the 1-o accounts. The third section describes the major components of the TSA's. The fourth section provides a methodological overview of the estimation

and derivation of the TSA's. The final section summarizes the TSA estimates for 1992.

Background

Current statistics on transportation from the 1-o accounts and other data sources do not provide a comprehensive and consistent view of transportation activities in the economy. Specifically, the 1-o accounts separately identify only transportation that is provided on a for-hire basis—that is, services provided by common carriers of freight and passengers—but not those that are provided by a business for its own use—for example, delivery of furniture by a retailer using either an owned or leased truck.

Current measures of transportation activities

The current statistics on transportation from various public and private sources are presented in different ways, reflecting the multifaceted nature of transportation and the variety of uses for the statistics. The major methods of presentation include the following:

- *By what is transported:* The transportation statistics are divided into two broad groups—the conveyance of goods (freight transportation) and the conveyance of people (passenger transportation).
- *By mode of transportation:* The statistics are organized according to the means of transportation, such as rail, urban transit, highway, air, water, and pipeline.
- *By industry provider of transportation:* The statistics focus on those businesses or estab-

Table 1.—Total Use of Transportation Across Industries

Industry	Commodity					
	Millions of dollars at producers' prices			Percent		
	For-hire transportation	Own-account transportation	Total transportation	Share of total for-hire transportation	Share of total own-account transportation	Share of total transportation
Agriculture, forestry, and fisheries	5,720	13,177	18,897	1.5	8.0	3.5
Mining	2,810	3,870	6,680	.7	2.3	1.2
Construction	13,286	38,950	52,235	3.5	23.5	9.6
Manufacturing	80,248	21,806	102,054	21.0	13.2	18.7
Railroads and related services; passenger ground transportation	3,470	.....	3,470	.9	.....	.6
Motor freight transportation and warehousing	35,049	.....	35,049	9.2	.....	6.4
Water transportation	5,889	.....	5,889	1.5	.....	1.1
Air transportation	14,409	.....	14,409	3.8	.....	2.6
Pipelines, freight forwarders, and related services	1,294	.....	1,294	.3	.....	.2
State and local government passenger transit	173	.....	173	(*)	.....	(*)
Own-account transportation	1,306	.....	1,306	.3	.....	.2
Communications and utilities	8,803	1,187	9,990	2.3	.7	1.8
Wholesale and retail trade	8,963	42,819	51,783	2.4	25.9	9.5
Finance, insurance, and real estate	10,523	899	11,422	2.8	.5	2.1
Services	21,482	42,035	63,517	5.6	25.4	11.6
Other ¹	4,500	718	5,218	1.2	.4	1.0
Total commodity output	381,300	165,461	546,761	100.0	100.0	100.0

* Less than 0.1 percent.

1. "Other" consists of government enterprises (except state and local government passenger transit) and other input-output special industries. See Ann M. Lawson, "Benchmark Input-Output

Accounts for the U.S. Economy, 1992: Make, Use, and Supplementary Tables," SURVEY OF CURRENT BUSINESS 77 (November 1997): 58-62.

lishments that sell transportation in the marketplace. These establishments as a group are referred to as an industry, such as the air transportation industry, water transportation industry, and motor freight transportation industry.

Though useful for certain analytical purposes, the existing transportation data do not provide a comprehensive and comparable measure of the contribution of all transportation activities to an economy for two reasons.

First, they do not identify those transportation activities for which there are no corresponding, identifiable market transactions. Second, the data are often presented in a way that does not provide a common basis for comparison.

In the first case, the I-O accounts identify only for-hire transportation activities. Most of the estimates on transportation in the I-O accounts are based on data from the Census Bureau⁵ that are collected at the establishment level of detail and are classified on the basis of the 1987 Standard Industrial Classification (SIC) system.⁶ Two types of establishments are distinguished in the SIC: *Operating* establishments primarily produce goods or provide services for personal or household use or for use by other enterprises; *auxiliary* establishments primarily perform management or support services within the same enterprise.⁷ If transportation activities are conducted by an operating establishment, the activities are referred to as “for-hire” transportation, and the establishment is classified as transportation in the SIC system. If transportation activities are conducted as a support activity by an operating establishment within a

5. The Census Bureau collects information—such as revenues, payroll, and employment—for all for-hire transportation industries except railroads and air transportation in the quinquennial Census of Transportation, Communications, and Utilities (TCU). In addition, the Census publishes in the quinquennial TCU data collected by other sources on railroads and air transportation. Data on railroad transportation were collected by the Association of American Railroads. Data on air transportation were collected by the Office of Airline Statistics, U.S. Department of Transportation.

Data on revenues and expenses for the trucking and warehousing industries are from the annual Motor Freight Transportation and Warehousing Survey. Data on flows of commodities are from the Commodity Flow Survey, and those on flows of passengers are from the American Travel Survey, both of which are collected every 5 years. Data on the physical and operational characteristics of trucks are collected from the Truck Inventory and Use Survey, which is conducted at the same time as the quinquennial census.

6. The SIC system defines an establishment as an economic unit that is typically at a single location where business is conducted or where services or industrial operations are performed. An establishment is classified into an industry on the basis of the primary activity of the establishment, which is the activity that makes up the largest proportion of the establishment's output. All other activities of the establishment are secondary. See Office of Management and Budget, *Standard Industrial Classification Manual, 1987* (Springfield, Virginia: National Technical Information Service): 12–18 and 265.

7. Auxiliaries that primarily produce goods and services for other establishments of the same enterprise are generally classified as establishments in the industry where the goods or services are primary.

nontransportation enterprise, they are referred to as “own-account” transportation. Data on these own-account transportation activities are not identified separately from the primary activity of the establishment; hence they are not classified as transportation in the SIC system. In the SIC system, an exception is made for auxiliary establishments primarily engaged in long-distance trucking, stevedoring, water and pipeline transportation within nontransportation enterprises; these establishments are classified as for-hire transportation operating units in the SIC system, but auxiliary establishments performing other types of transportation activities are not.⁸

In the second case, there are different forms of limitations in the transportation statistics. Data from many sources, including various government transportation agencies and trade organizations, provide information on the physical characteristics of the transportation system—such as number of trips taken, number of people and tonnage of goods transported, and number of firms providing specific types of transportation. Though they usually cover all the activities for specific modes of transportation, two characteristics limit their usefulness. First, they are often measured in physical units, such as ton-miles and passenger-miles, rather than in dollar

8. Under the newly developed North American Industrial Classification System (NAICS), an auxiliary establishment is classified according to the nature of its own activity. Therefore, auxiliary establishments primarily engaged in transportation activities are classified as transportation.

Acknowledgments

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Bingsong Fang and Xiaoli Han from BTS developed the framework for the accounts and designed the data processing system. They developed the estimates with Simon Randrianarivel from BTS and Belinda L. Bonds from BEA. Also from BEA, Brian D. Kajutti and John Turner assisted with the computer programming and data processing; Mark A. Planting and Karen J. Horowitz provided valuable comments during the review of the estimates; and Mary L. Roy and Kimberly A. Mourey coordinated the preparation of the article. Other contributors were Timothy D. Aylor, William McCarthy, and Robert E. Yuskavage from BEA and David P. Vogt from Oak Ridge National Laboratory.

values. Second, they are generally presented by mode of transportation, and detailed information on industry distributions of their use are not available. As a result, it is very difficult to use these data with data from the national economic accounts for industry analysis.

Satellite accounts

In general, satellite accounts are frameworks designed to expand the analytical capacity of the "basic" economic accounts without overburdening them with details or interfering with their general-purpose orientation. Satellite accounts, which are meant to supplement rather than to replace the existing accounts, organize information in an internally consistent way that suits their particular analytical focus, while maintaining links to the existing accounts. They typically expand a particular segment of the existing accounts with more details and additional dimensions of information, including nonmonetary information; in addition, they may use definitions and classifications that differ from those in the existing accounts. Depending on the analytical focus, the production boundary of the national accounts can be maintained or modified.⁹

In the United States, satellite accounts have been used to extend the analytical capacity of the national economic accounts in two ways. In 1994, BEA released the Integrated Economic and Environmental Satellite Accounts (IEESA's) and a satellite account for research and development expenditures. BEA also has produced supplementary balance of payments accounts that record U.S. trade and capital flows on an ownership basis rather than a residence basis. Currently, BEA is working with the International Trade Administration to develop satellite accounts for travel and tourism.

The 1993 manual of the System of National Accounts (SNA) recommends using satellite accounts to handle such situations as measuring own-account transportation.¹⁰ Own-account transportation in the TSA's is what is referred to as an "auxiliary" activity in the SIC and as an "ancillary" activity in the SNA manual. According to the SNA manual, an ancillary unit is one whose sole function is to produce one or more common types of services for intermediate consumption within the same enterprise. In the SNA,

ancillary units are not treated as separate units. However, it is suggested that for some types of analysis it may be useful and necessary to estimate and record the activities of ancillary units separately—preferably by using satellite accounts. In addition, the UN handbook of input-output accounts suggests the satellite account approach to estimating own-account transportation and including it in the output of the transportation industry.¹¹ The satellite account approach has also been used for own-account transportation in other countries. For example, France's Department of Transportation and Tourism developed national transportation satellite accounts in 1992.¹²

Conceptual Overview

As a satellite to the 1992 benchmark I-O accounts, the TSA's focus on transportation-related activities by industries. Its primary purpose is to provide a systematic and consistent framework and data set for conducting analytical studies of the role of transportation in the economy on both an industry and commodity basis.

Boundary of transportation

Transportation in the TSA's includes all activities related to the use of vehicles (such as trucks, aircraft, and boats) and of related structures (such as highways, airports, and port facilities) for the movement of goods and passengers. Specifically, transportation in the TSA's consists of six groups of for-hire transportation industries from the I-O accounts and a single group for own-account transportation. Table 2 lists all the for-hire transportation industries and one own-account transportation industry in the TSA's. The table also shows the major output components of these industries.

Relationship to the I-O accounts

The TSA's are a satellite to the I-O accounts. This relationship facilitates the construction and application of the TSA's in two ways. First, the I-O accounts provide detailed estimates of the intermediate purchases by industries, including the for-hire transportation industries; this detailed information can be used to prepare

11. United Nations, Statistics Division, *Handbook of National Accounting—Input-Output Table Compilation and Analysis*, Manuscript (November 1997): 149–50.

12. France's satellite account provides estimates of transportation expenditures by transportation modes in a framework similar to BEA's national income and product accounts. See Commission Des Comites Des Transports de la Nation, *Le Compte Satellite Des Transports En 1992*.

9. For a discussion of the purposes and characteristics of satellite accounts, see Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank, *System of National Accounts 1993*, pages 489–518.

10. See *SNA 1993*, page 490.

the TSA estimates. Second, the I-O accounts provide an analytical framework with detailed linkages among industries and between industries and final demand; this framework facilitates the estimates of the interdependencies between transportation and the rest of the economy.

What is the same.—The TSA's maintain the following I-O account treatments:

- The measurement of the value of own-account transportation activities is similar to that of own-account construction activities in the I-O accounts; that is, the intermediate inputs and the value-added inputs associated with the own-account construction, such as capital consumption allowance and labor costs, are moved—or, using I-O terminology, “redefined”—to the other industries in which the activities are primary. In the TSA's, these inputs are similarly redefined, but to a new industry—own-account transportation.

- The overall industry and commodity classification system and the special definitions and conventions in the I-O accounts are used in the TSA's except for the single new industry and commodity (own-account transportation).
- The total value added for all industries, or GDP, is the same in the TSA's as in the I-O accounts.¹³
- The general valuation conventions used in the TSA's are consistent with those in the I-O accounts. In particular, all transactions are valued in producers' prices, and

13. Though total value added for the total economy remains unchanged, the value-added estimate for transportation industries is increased by the amount of the value added of the own-account transportation that is subtracted from other industries' value added. In addition, though the output for each industry remains unchanged, the total output for all industries is increased by the amount of output identified for the own-account transportation industry; this is because the total of all purchases of intermediate inputs—including own-account transportation commodities—by industries is increased by the same amount as the sum of the own-account transportation industry output.

Table 2.—Components of Transportation Industry and Industry Output

Industry	Industry components	Industry output
For-hire transportation industries		
Railroads and related services; passenger ground transportation.	Railroads, including AMTRAK Switching and terminal companies Freight car rental Private local and suburban passenger transportation Intercity, rural, and other bus services, including charter and school buses Bus terminal and service facilities Taxicabs	Total operating revenues Less: Rental receipts
Motor freight transportation and warehousing.	Trucking and courier services, except air Public warehousing and storage Trucking terminal facilities	Total operating revenues Plus: Trucking receipts of construction firms Warehousing revenues of wholesalers Delivery and storage charges of retailers Less: Merchandise sales Rental receipts
Water transportation	Deep sea and other water transportation of freight Water transportation of passengers Services incidental to water transportation, including marinas and other services	Total operating revenues Plus: Docking and boat cleaning and maintenance at retailers Federal excise tax on cruise ship receipts Less: Merchandise sales Boat repair at marinas
Air transportation	Domestic and international passenger and freight air transportation ... Airport terminal services	Total operating revenues Plus: Federal taxes on air fares, air freight, and air facilities Aircraft storage and services by wholesalers and retailers Less: Rental receipts Flight training and instruction
Pipelines, freight forwarders, and related services.	Refined petroleum pipelines Other pipelines, including crude petroleum and natural gas Arrangement of freight and passenger transportation, including freight forwarding Miscellaneous services incidental to transportation	Total operating revenues Plus: Pipeline receipts by wholesalers Less: Rental receipts
State and local government passenger transit.	State and local government passenger transit	Total operating revenues Less: Operating subsidies
Own-account transportation industries		
Own-account transportation	Private trucking and bus operations in all nontransportation industries	Total operating expenses of highway motor vehicles and overhead expenses Less: Expenses on advertising, depository institutions, security and commodity brokers, and other services unrelated to own-account transportation operations

the valuations of purchases for final use are unchanged.

What is different.—The TSA's differ from the I-O accounts in the following ways:

- They introduce a new industry called "own-account transportation" whose output is a new commodity called "own-account transportation." The own-account transportation commodity is only produced by the own-account transportation industry, and the own-account transportation industry only produces the own-account transportation commodity.
- The treatment of own-account transportation provided by an industry for its own use in the TSA's is different from the treatment of for-hire transportation used by an industry in the I-O accounts. In the TSA's, the use of own-account transportation by an industry includes the costs of operating the industry's own trucks and buses, whether those trucks are used to move the industry's intermediate inputs or its output. In the I-O accounts, the use of for-hire transportation by an industry includes only those transportation expenses associated with moving intermediate inputs to the industry plus the expenses for certain direct use of transportation commodities. For example, if a for-hire truck carries wheat from a farm to a mill, the I-O use table shows this activity as the mill using the trucking services, whether the services are purchased by the farm or the mill. If an own-account truck of the mill is used, the TSA use table shows this activity as the mill using the services; however, if an own-account truck of the farm provides the same services, the TSA use table shows this activity as the farm using the services.

Future work

The TSA's now provide a comprehensive picture of all for-hire and most own-account transportation activities. Future work could proceed in several directions to improve and extend the accounts. These include the following:

- The TSA's omit own-account transportation activities through modes other than truck and bus—such as the business use of automobiles and water transportation. These omissions can be addressed as additional information becomes available. For example, when the capital flow table for the

1992 benchmark I-O accounts is published by BEA later this year, additional information on the business use of automobiles will be available upon which to base estimates of related operating expenses for own-account transportation activities in the TSA's.¹⁴

- The accounts may be expanded to include the service values of government-owned transportation capital, such as highway infrastructure, and to include transportation provided by households for their own use, such as commuting to and from work in a privately owned automobile. Inclusion of these services in the TSA's would result in the expansion of the production boundary beyond that of the I-O accounts.
- Because the value of own-account transportation output cannot be measured directly, its output in the current TSA's is valued by summing the costs of all the intermediate inputs and the value-added inputs of compensation, indirect business taxes, and capital consumption allowances that are used for its production. Though this approach is frequently used to measure the value of own-account types of production, the resulting estimates of output are understated because they do not include profits. As a result, such estimates have limited value for productivity analyses and similar types of studies. An alternative approach would be to value own-account transportation output as the product of a quantity measure of output and the market price for a similar service. This approach requires the development of quantity and price estimates of for-hire transportation. Before this approach can be implemented, however, quantity measures for transportation activities at the detailed industry-level must be developed. For the TSA's, consistent measures of the related inputs would also have to be estimated.
- The treatment of own-account transportation used by industries in the TSA's may also be improved. Ideally, the TSA's should treat the use of own-account transportation as the I-O accounts treat the use of for-hire transportation, but doing so requires detailed information on the type of commodities carried by own-account trucks and on the

14. The capital flow table (CFT) shows how much each industry used of each type of new structures and equipment contained in gross private fixed investment (GPI) in the I-O use table. In other words, the CFT disaggregates GPI to show the flows of structures and equipment to using industries.

origin and destination of the transported commodities.

Components of the Transportation Satellite Accounts

The TSA's consist of four tables. The TSA make table (table 3) and the TSA use table (table 4) present for-hire and own-account transportation in a complete I-O framework. The TSA direct requirements table (table 5) presents the industry use of intermediate and value added inputs as a percentage of the industry output. The TSA total requirements table (table 6) presents industry-by-commodity output multipliers.¹⁵ This section presents the four TSA tables and their descriptions.

TSA make table

The TSA make table is an I-O make table with an additional column for own-account transportation as a commodity and an additional row for an aggregation of all redefined industry own-account transportation activities as an industry. An I-O make table shows the value in producers' prices of each commodity produced by each industry. In each row, the cell on the main diagonal shows the value of the production of the commodity for which the industry has been designated the primary producer. The other cells in the row show the value of the production of commodities for which the industry is a secondary

producer. The sum of all the entries in a row is the total output of that industry.

In the TSA make table, the own-account transportation industry produces only the own-account transportation commodity, and the own-account transportation commodity is produced only by the own-account transportation industry. Therefore, the cell value at the intersection of the additional column and row equals the total output of own-account transportation; all other cell entries in the own-account transportation column and row are zero. The data shown in the other parts of the TSA make table are the same as those provided in the 1992 I-O make table.

TSA use table

The TSA use table is an I-O use table with an additional row for the own-account transportation commodity and an additional column for the aggregation of all redefined industry own-account transportation activities as an industry. An I-O use table shows the values in producers' prices of own-account transportation and all other intermediate and value-added inputs used by industries or final users. The cell in each row of a given column shows the commodity that is used by the industry or final user in that column. The sum of all the entries in a row is the total output of the commodity in that row, and the sum of all the entries in a column is the total output of the industry in that column.

In the TSA use table, the use of the own-account transportation commodity is shown in the own-account transportation row. By assumption, the following cell values are equal to zero: The

Table 3.—The TSA Make of Commodities by Industries, 1992
[Millions of dollars at producers' prices]

Industry	Commodity														Total industry output			
	Agriculture, forestry, and fisheries	Mining	Construction	Manufacturing	Transportation						Communications and utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services		Other ¹		
					Railroad and passenger ground	Motor freight and warehousing	Water	Air	Pipelines and freight forwarders	Own-account transportation								
Agriculture, forestry, and fisheries	235,591	0	0	1,022	0	11	0	0	0	0	0	0	0	0	1,038	0	237,662	
Mining	0	147,001	0	9,716	0	0	0	0	0	0	0	0	0	0	0	0	156,717	
Construction	0	0	679,330	0	0	0	0	0	0	0	0	0	0	0	0	0	679,330	
Manufacturing	0	561	0	2,879,654	0	0	0	0	0	0	0	43	0	0	69,509	1,536	2,951,303	
Railroads and related services; passenger ground transportation	0	0	0	0	55,576	174	0	0	0	0	0	0	0	0	0	0	4	55,754
Motor freight transportation and warehousing	0	0	0	0	0	155,590	0	0	0	0	0	11,363	0	0	0	0	166,953	
Water transportation	0	0	0	0	0	0	32,440	0	0	0	0	0	0	0	0	0	32,440	
Air transportation	0	0	0	0	0	0	0	94,141	0	0	0	0	0	0	0	0	94,141	
Pipelines, freight forwarders, and related services	0	0	0	0	542	1,320	194	2,632	28,928	0	0	0	0	0	0	0	33,616	
State and local government passenger transit	0	0	0	0	5,876	0	0	0	0	0	0	0	0	0	0	0	5,876	
Own-account transportation	0	0	0	0	0	0	0	0	0	165,461	0	0	0	0	0	0	165,461	
Communications and utilities	0	0	0	0	0	0	0	0	0	0	491,312	0	0	28,838	538	0	520,688	
Wholesale and retail trade	0	0	0	0	0	0	0	0	0	0	0	1,091,489	0	0	0	0	1,091,489	
Finance, insurance, and real estate	0	0	0	0	0	0	0	0	0	0	0	0	1,629,618	25,114	0	0	1,654,732	
Services	0	0	0	8	0	15	0	0	38	0	0	0	666	2,226,302	521	0	2,227,550	
Other ¹	0	0	0	37	64	0	1,713	2,046	0	0	48,012	3,659	9,132	3,301	846,432	521	914,396	
Total commodity output	235,591	147,562	679,330	2,890,437	62,058	157,110	34,347	98,819	28,966	165,461	550,730	1,095,148	1,639,416	2,354,102	849,031	0	10,988,108	

1. "Other" consists of government enterprises (except state and local government passenger transit) and other input-output special industries. See Ann M. Lawson, "Benchmark Input-Output Accounts for the U.S. Economy, 1992: Make, Use, and Supplementary Tables," SURVEY OF CURRENT BUSINESS 77 (November 1997): 58-62.

to deliver a dollar of each commodity to final users. Because each of these sums is a dollar multiple of the initial dollar spent for a commodity group's output, the sum is often referred to as an "industry output multiplier." These multipliers can be used to estimate the impact of changes in the final uses of commodities on total industry output.¹⁷

Methodological Overview

The TSA's were estimated in two broad steps. First, the inputs used by each industry for its own-account transportation activities were estimated. Second, these estimates were used with the I-O make and use tables to derive the TSA tables. The following sections describe these two steps in more detail. The major sources of data are identified in table 7.

Estimating the transportation inputs

Transportation inputs include both intermediate inputs and value-added inputs. The value of these inputs for each industry in the I-O use table is for a combination of all uses. The TSA transportation estimates were separated from all other uses through the following steps.

- *Identifying the transportation-related inputs.*—A set of commodity inputs that are unique to or are mostly used for transportation were identified from the estimates underlying the I-O accounts. These inputs, which are called

"transportation-related inputs" (TRI's), consist of motor gasoline, light fuel oil, liquefied petroleum gases, tires, motor vehicle parts, and automotive repair services.

- *Developing industry distribution weights.*—Distribution weights were developed that can be used separately or in combination to distribute TRI commodities to using industries. Nine sets of weights were developed using industry-level information for the number of buses, the number of trucks, miles driven by trucks, and fuels used by trucks. These weights were based on several data sources, the most important of which are the Truck Inventory and Use Survey from the Census Bureau and the occupational employment data from the Bureau of Labor Statistics and the Census Bureau.
- *Distributing TRI's.*—For each TRI commodity, an estimate was made of its total usage for nontransportation purposes, such as gasoline used for heating or for operating machinery; this nontransportation use was subtracted from the total output of the commodity. The remaining amount of the commodity was then distributed to different transportation modes. Finally, for modes for which the current TSA's provide estimates of own-account transportation, the distribution weights were matched with and applied to the TRI's.
- *Estimating other inputs.*—Transportation activities require certain inputs that are not uniquely or mainly used for transportation. For example, office supplies and accounting services are shared by transportation and all other production activities. The transportation use of these commodities was estimated

17. For more information on the derivation of the industry-by-commodity total requirements table, see Appendix D in U.S. Department of Commerce, Bureau of Economic Analysis, *Benchmark Input-Output Accounts of the United States, 1987* (Washington, DC: U.S. Government Printing Office, November 1994).

Table 7.—Principal Data Sources

Data	Sources
Estimates of input-output accounts, 1992	U.S. Department of Commerce, Bureau of Economic Analysis, <i>Benchmark Input-Output Accounts for the U.S. Economy, 1992</i> (forthcoming) and detailed underlying data files for the I-O accounts.
Trucks, truck mileage, fuel use by industry, 1992	U.S. Department of Commerce, Census Bureau, 1992 Census of Transportation, <i>Truck Inventory and Use Survey—United States</i> , May 1995.
Statistics on occupation and industry, 1990	Census Bureau, 1990 Census of Population and Housing, <i>Occupation and Industry—National and State Totals</i> (CD-ROM), March 1995.
Employment of truck drivers by industry, 1992	U.S. Department of Labor, Bureau of Labor Statistics, Employment Projection Division, <i>Industry-Occupation Employment Matrix, 1983-1993</i> (Diskettes).
Energy use, 1992	U.S. Department of Energy, Energy Information Administration, <i>Annual Energy Review</i> , historical data for 1949-1996. EIA Website.
Energy use by transportation modes, 1992	U.S. Department of Energy, Oak Ridge National Laboratory, <i>Transportation Energy Data Book: Edition 14</i> , May 1994.
Vehicle miles of travel by type of vehicles, 1992	U.S. Department of Transportation, Federal Highway Administration, <i>Highway Statistics 1993</i> .

for each industry using the relationships from for-hire transportation industries.¹⁸

Two assumptions underlie these TSA procedures: First, that the distribution weights selected are reliable predictors of the use of TRI's for own-account transportation; second, that the distribution of commodity inputs (except for some value-added inputs) within a for-hire transportation industry is similar to the distribution of these inputs within a nontransportation industry for its transportation-related activities.

Deriving the TSA make and use tables

The TSA make and use tables are I-O make and use tables that have been modified using the estimates of transportation inputs. First, the estimates of transportation inputs for each industry are arranged in a transportation input matrix so that its rows and columns correspond to those in the intermediate industry portion of the I-O use table.¹⁹ Second, this input matrix is subtracted from the intermediate industry portion of the I-O use table; the result is a residual use table that shows the intermediate and value-added inputs to industries for nontransportation activities. Third, the TSA make table is derived by adding an additional column and an additional row—representing own-account transportation—to the I-O make table. Fourth, the TSA use table is derived by combining the residual use table derived above, an own-account transportation column with row totals from the transportation input matrix, an own-account transportation row with column totals from the transportation input matrix, and the final-demand portion of the I-O use table.

Estimates of Transportation for 1992

This section discusses how the results from the TSA's can be used to assess the size and impact of transportation in the U.S. economy.

Transportation as a share of GDP

From the TSA's, a measure of transportation value added on an expanded industry basis provides a picture of transportation in comparison to the

18. Adjustments were made before and after applying the for-hire relationship. First, some commodities, such as advertising and brokerage services that are used by for-hire transportation industries but not by other industries for own-account transportation, were excluded. Second, estimates were made to reflect the total use in the I-O accounts. Third, the estimates of value-added inputs were adjusted to exclude profits.

19. Inputs for for-hire transportation industries in this matrix are all zeros because it is assumed that these industries do not have any own-account transportation activities.

economy as a whole that is more comprehensive than that provided by the corresponding industry-basis measure found in the I-O accounts. Comparisons of aggregate measures such as total value added between for-hire and own-account transportation indicate the importance of including own-account transportation in the analyses of transportation.

Own-account transportation activities generated \$121.5 billion of value added in 1992, and for-hire transportation generated \$191.6 billion. Together, these activities accounted for 5.0 percent of U.S. GDP in 1992—3.1 percent from for-hire and 1.9 percent from own-account.

Use of transportation by industry

The biggest industry user of own-account transportation services was the wholesale and retail industry group, which generated and used \$42.8 billion of the output of such services, accounting for 25.9 percent of total own-account transportation (table 1); in contrast, this industry group used only \$9.0 billion of for-hire transportation services output.²⁰ The next largest group was services, which used \$42.0 billion, accounting for 25.4 percent of the own-account total; this in-

20. See the section "Conceptual Overview" for an explanation of the different treatment of the uses of own-account and for-hire transportation in the TSA's.

Data Availability

This article presents the aggregated estimates of the 1992 transportation satellite accounts (TSA's). Summary estimates for 99 industries at the I-O summary level and detailed estimates for 499 industries at the I-O six-digit level are available on the following diskettes:

- The summary estimates for the make, use, direct requirements, and industry-by-commodity total requirements tables (one diskette)—product number NDN-0193, price \$20.00.
- The estimates at the I-O six-digit level of the make, use, and direct requirements tables (three diskettes)—product number NDN-0194, price \$60.00.
- The estimates at the I-O six-digit level of industry-by-commodity total requirements (one diskette)—product number NDN-0195, price \$20.00.

To order using Visa or MasterCard, contact the BEA Order Desk at 1-800-704-0415 (outside the United States, call 202-606-9666). To order by mail, send a check made payable to "Bureau of Economic Analysis, BE-53" to BEA Order Desk, BE-53, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230.

dustry group used only \$21.5 billion of for-hire services. The smallest user (excluding the group "other") was the finance, insurance, and real estate industry group.

Alternatively, measuring the use of own-account transportation as a share of an industry's total output (in I-O terminology, the direct requirements for own-account transportation) presents a different picture. According to this measure, the construction industry group was the largest user among all industry groups, at 5.7 percent. In contrast, the share for the wholesale and retail industry group, which was the largest user in absolute terms, was 3.9 percent, less than the share for agriculture (5.5 percent), which was only the fifth largest user in absolute terms. The finance, insurance, and real estate industry group had the smallest share.

The same measure for for-hire transportation shows the direct importance of for-hire transportation services in an industry's total output. Except for the transportation industries, manufacturing had the largest direct requirement of for-hire transportation services, at 2.7 percent. The industry groups of trade, of finance, insurance, and real estate, of services, and of "other" each had less than 1 percent.

Transportation cost by commodities


The use of transportation on an industry basis differs from that on a commodity basis because many industries produce more than one commodity and many commodities are produced by more than one industry. To analyze the importance of direct transportation costs in the producers' prices of commodities, both own-account transportation costs and for-hire transportation costs were distributed on a commodity-by-commodity basis.²¹

Among nontransportation commodity groups, agriculture, forestry, and fisheries had the highest

transportation content (8.0 percent), followed by construction (7.7 percent), reflecting the general pattern of the use of transportation by industry. For both commodity groups, own-account transportation costs had a larger share in the total transportation cost than for-hire. The services commodity group had a transportation content of 2.8 percent, of which 1.8 percentage points were own-account and 1.0 percentage point were for-hire. The commodities of finance, insurance, and real estate and "other" had the lowest transportation content, at less than 1 percent each.

Transportation and multipliers

The multipliers derived from the TSA's capture the total interdependence between transportation and the rest of the economy. Excluding changes in the final demand for transportation services itself, transportation as a combined group of industries, including both for-hire and own-account, was most affected by the changes in the final demand for agriculture, forestry, and fisheries commodities. For example, a 1-dollar increase in the demand for these commodities caused an increase of 14.2 cents in total transportation industry output, while a 1-dollar increase for services commodities caused only a 5.4-cent increase. For own-account transportation alone, the response pattern was similar, but for-hire transportation alone was more responsive to the changes in demand for communications and utilities and for manufacturing commodities.

The changes in demand for transportation services also induce changes in the output of transportation and of all other industries. This effect can be measured by the total industry output multiplier. The pipelines and freight forwarders group had the lowest total industry output multiplier, at 1.7. The multiplier for each of the other transportation groups was above 1.9. Overall, the economy's response to changes in demand for transportation was larger than that for communications and utilities, for trade, for finance, insurance, and real estate, and for services, but less than that for agricultural, construction, and manufacturing commodities. 

21. The total direct use of own-account transportation for an industry from the TSA use table is distributed to the commodities produced by the industry, using the industry's output mix from the I-O make table. Repeating this procedure for every industry results in a table that shows the contributions of own-account transportation within each industry to the output of various commodities, that is, the direct costs of own-account transportation in the producers' prices of commodities.

The direct costs of for-hire transportation are distributed to commodities in the same manner. If a commodity is produced in more than one industry, then the commodity will receive the distributed own-account and for-hire transportation costs from more than one industry; the sum of all these costs is the direct cost of transportation in the producers' prices of that commodity.

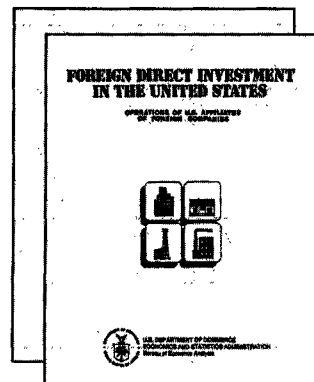
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The Domestic Orientation of Production and Sales by U.S. Manufacturing Affiliates of Foreign Companies

By William J. Zeile

SINCE THE surge in foreign direct investment in the United States in the late 1980's, much attention has focused on the role of foreign-owned firms in the U.S. economy, particularly in manufacturing.¹ A question that is frequently posed concerns the degree to which U.S. affiliates of foreign companies are integrated into the U.S. economy through their sourcing behavior and value-added activity. A related question is whether U.S. manufacturing affiliates in comparison with domestically owned firms are more oriented toward producing for the U.S. market or for their home-country and other foreign markets.

Data from the benchmark and annual surveys of foreign direct investment in the United States that are conducted by the Bureau of Economic Analysis (BEA) can be used to gauge the domestic content of output by U.S. affiliates of foreign companies.² For affiliates in manufacturing,³ aggregate estimates presented in two previous articles in the SURVEY OF CURRENT BUSINESS show a high share of domestic content in output; in each of the years examined, about 90 percent of the output of these affiliates was accounted for by the affiliates' own value added and by the value of inputs purchased from suppliers located in the United States.⁴ In both

articles, imports are estimated to have accounted for less than 20 percent of the intermediate inputs purchased by all manufacturing affiliates. In addition, the second article shows that import shares of affiliate purchases of intermediate inputs in 1991 were generally low across more detailed manufacturing industries; however, in a few industries, the import shares were quite high—more than 30 percent—particularly for Japanese-owned affiliates.

An outstanding question from these results is the degree to which the domestic content for affiliates in manufacturing differs from that for domestically owned manufacturers, both in the aggregate and across detailed industries. A related question is the degree to which any observed differences in domestic content at the aggregate level reflect systematic differences in behavior across industries rather than differences in a few specific industries or differences in the types of industries in which affiliates and domestically owned companies are concentrated.

In this article, measures of domestic content for U.S. manufacturing affiliates in 1989 and 1994 are compared with measures of domestic content for domestically owned U.S. parent companies in manufacturing (which in 1994 accounted for more than one-half of the gross output of all domestically owned U.S. companies in manufacturing); the data are from BEA's 1989 and 1994 benchmark surveys of U.S. direct investment abroad.⁵ Domestically owned U.S. parent companies are an appropriate comparison group

1. As an indicator of the increased importance of foreign-owned affiliates in U.S. manufacturing, the share of U.S. manufacturing employment that is accounted for by U.S. affiliates of foreign companies increased steadily from 7.6 percent in 1987 to 11.7 percent in 1994 before dipping to 11.4 percent in 1995. The employment shares for 1990–95 are shown in table 12 of "Foreign Direct Investment in the United States: New Investment in 1996 and Affiliate Operations in 1995," SURVEY OF CURRENT BUSINESS 77 (June 1997): 54.

2. In this article, the term "domestic content" refers to the difference between gross output and direct imports of intermediate inputs. This terminology is used for analytical purposes only and does not constitute an official definition.

3. In BEA's data on direct investment, manufacturing excludes petroleum and coal products manufacturing, which is classified under the major industry "petroleum."

4. See Jeffrey H. Lowe, "Gross Product of U.S. Affiliates of Foreign Companies, 1977–87," SURVEY 70 (June 1990): 45–53; and William J. Zeile, "Merchandise Trade of U.S. Affiliates of Foreign Companies," SURVEY 73 (October 1993): 52–65.

In addition, estimates of domestic content for all nonbank U.S. affiliates were presented as supplementary items in two articles in the SURVEY

that featured an alternative disaggregation of the U.S. current account based on ownership. See J. Steven Landefeld, Obie G. Whichard, and Jeffrey H. Lowe, "Alternative Frameworks for U.S. International Transactions," SURVEY 73 (December 1993): 50–61; and Obie G. Whichard and Jeffrey H. Lowe, "An Ownership-Based Disaggregation of the U.S. Current Account, 1982–93," SURVEY 75 (October 1995): 52–61.

5. In addition to the two SURVEY articles cited above, the analysis in this article builds on earlier work by the author that will be presented in William J. Zeile, "Imported Inputs and the Domestic Content of Production by Foreign-Owned Manufacturing Affiliates in the United States," in *Geography and Ownership as Bases for Economic Accounting*, ed. Robert E. Baldwin, Robert E. Lipsey, and J. David Richardson (Chicago: University of Chicago Press, forthcoming in 1998).

because of their similarity with U.S. affiliates in terms of size and international orientation. In addition, the data for U.S. parent companies are highly comparable with those for U.S. affiliates because the data for both are collected at the enterprise level and are based on the same concepts and definitions.⁶

Domestic content is analyzed in terms of three related measures that provide information about the inputs used in production: (1) The domestic content of gross output, (2) the value-added share of gross output, and (3) the import share of intermediate inputs. The first measure is the broadest measure of domestic content: It shows the share of a company's gross output (sales plus inventory change) that is accounted for by wages and salaries, profits, and other incomes earned through its production in the United States and by the value of raw materials, components, and other intermediate inputs that are purchased from U.S. suppliers.

The domestic content of output is determined by two decisions that are captured by the second and third measures: The "make or buy" decision and the "import or procure locally" decision. The "make or buy" decision determines the degree of vertical integration in firm production, which is reflected in the share of output accounted for by the firm's own value added. The "import or procure locally" decision, which determines the firm's linkages to domestic suppliers, is captured by the share of imports in its intermediate inputs.⁷

In addition, the market orientation of affiliate output is analyzed in terms of the export share of sales. This measure shows the degree to which affiliates target their output to markets abroad rather than to the U.S. market.

The analysis in this article includes more detailed information than previous SURVEY articles, and it introduces a number of new features. First, each of the four measures for affiliates is compared with the corresponding measure for domestically owned companies in the same industries; the comparisons are made across 32 detailed manufacturing industries. Second, for affiliates in selected industries, data for a fixed panel of affiliates for 1988–94 are used to assess changes in affiliate behavior over time. Third, differences in affiliate domestic content and market orientation by country of ownership are

systematically examined through comparisons of averages for the four measures that are adjusted for industry effects.

The overall profile of affiliate operations that emerges from this analysis reveals both similarities and differences between U.S. affiliates and domestically owned manufacturers. For both groups of firms, domestic content accounts for a high share of output. However, the share for affiliates is not quite as high as that for the domestically owned firms; the domestic-content share for affiliates tends to be lower than that for domestically owned companies across the detailed industries, and the difference at the aggregate level increases, rather than decreases, when industry mix is held constant.

The differences in content are attributable to differences in both value-added shares and the sourcing of intermediate inputs. Value added within the firm accounts for less than one-half of the value of output for both affiliates and domestically owned firms, but the value-added share for affiliates is somewhat smaller than the share for the domestically owned firms. Both affiliates and domestically owned firms purchase most of their inputs from domestic suppliers, but the share of imports in intermediate inputs is much higher for affiliates, largely due to their use of inputs purchased from their foreign parent companies and other affiliated foreign suppliers. With respect to market orientation, both U.S. affiliates and domestically owned manufacturers sell most of their output in the United States, but the share of exports in sales is somewhat smaller for affiliates than for the domestically owned firms.

The following are among the specific findings:

- The domestic content of gross output for all manufacturing affiliates is 87 percent, compared with 93 percent for domestically owned manufacturing companies. In most industries, the measure for affiliates is just below that for domestically owned companies.
- The domestic-content share for affiliates tends to be lowest in industries in machinery, transportation equipment, and instruments manufacturing—industries whose intermediate inputs consist mainly of manufactured components rather than commodity-type bulk materials.
- The value-added share of gross output for all manufacturing affiliates is 30 percent, compared with 37 percent for domestically owned manufacturing companies. In most of the 32 manufacturing industries, the value-added

6. See the section "Data used to construct measures" in the appendix.

7. See the discussion of affiliate linkages with host-country suppliers in John H. Dunning, *Multinational Enterprises and the Global Economy* (Wokingham, England: Addison-Wesley, 1993): 446–459.

share for affiliates is more than 20 percent lower than that for domestically owned companies.

- Affiliates rely on imports to a much greater degree than do domestically owned companies. The share of intermediate inputs that are imported is 19 percent for all manufacturing affiliates, compared with 11 percent for domestically owned companies. In about two-thirds of the 32 industries, the import share of intermediate inputs for affiliates is more than twice that for domestically owned companies.
- About two-thirds of the imports by U.S. manufacturing affiliates are obtained from the affiliates' foreign parent companies or other foreign firms with which the parents are associated.
- Production by U.S. manufacturing affiliates is strongly oriented toward the domestic market: The export share of sales for all manufacturing affiliates is only 10 percent, compared with 14 percent for domestically owned companies. The export share for affiliates is lower than that for domestically owned companies in about two-thirds of the 32 industries.
- For affiliates in the electronic components and motor vehicle industries, domestic content has increased over time, reflecting a decrease in the import share of intermediate inputs. In other machinery-type industries, however, the domestic-content and import-share measures for affiliates show no sustained trend. For affiliates in construction machinery, metalworking machinery, and instruments, the export share of sales has increased.
- German-, Swiss-, and Japanese-owned affiliates have the lowest average domestic content in comparison with domestically owned U.S. parent companies in comparable industries. The relatively low domestic content for German- and Swiss-owned affiliates reflects their relatively high reliance on imports for their purchased inputs. For Japanese-owned affiliates, the relatively low domestic content reflects a relatively low share of value added in gross output and a high share of imports in intermediate inputs.
- British-owned affiliates have the highest average domestic content, the highest average value-added share, and the lowest average import share of purchased inputs. The measures for these affiliates are closest to those

for domestically owned companies in comparable industries, perhaps reflecting the fact that, compared with investments from other countries, British direct investment in U.S. manufacturing industries tends to be older and has almost exclusively taken the form of acquisitions of existing U.S. companies.

- For most of the investing countries, the average export share of sales for affiliates does not differ significantly from the export share for domestically owned companies. However, Japanese-owned affiliates have a high average share of exports in sales in comparison with domestically owned companies, particularly in such primary resource-intensive industries as lumber and wood products and food and kindred products other than beverages.

The next section of the article discusses the measures of domestic content and market orientation. The article then compares the industry-level estimates of the measures for U.S. affiliates with those for domestically owned manufacturing companies. Next, the article examines changes over time in the measures for a panel of affiliates in selected industries. It then examines differences in affiliate behavior by country of ultimate beneficial owner (UBO).⁸ Finally, the article examines differences in the geographic pattern of international purchases and sales of affiliates by country of ownership. An appendix discusses the data used to construct the measures and investigates the extent to which the results are affected by imports unrelated to manufacturing production in the data for affiliates.

Measures of Content and Market Orientation

Data from BEA's benchmark and annual surveys of foreign direct investment in the United States were used to construct three measures that reveal information about the content of output of U.S. manufacturing affiliates: The domestic content of gross output, the value-added share of gross output, and the import share of intermediate inputs.

8. The UBO is that person, proceeding up a U.S. affiliate's ownership chain, beginning with and including the foreign parent, that is not owned more than 50 percent by another person. "Person" is broadly defined to include any individual, corporation, branch, partnership, associated group, association, estate, trust, or other organization and any government (including any corporation, institution, or other entity or instrumentality of a government). The foreign parent is the first foreign person in the affiliate's ownership chain. Unlike the foreign parent, the UBO of an affiliate is identified to ascertain the person that ultimately owns or controls the U.S. affiliate and that, therefore, ultimately derives the benefits from owning or controlling the affiliate.

The domestic content of gross output can be expressed as follows:

$$(1) \text{ Domestic Content of Gross Output} \\ = (\text{Gross Output} - \text{Imports}) / \text{Gross Output},$$

where gross output is computed as sales plus the change in end-of-year inventories (table 1).⁹ As defined, domestic content for a U.S. affiliate is that portion of its gross output that is accounted for by wages and salaries, profits, and other incomes earned within the affiliates themselves and by the value of raw materials, components, and other inputs purchased from domestic suppliers.

Conceptually, gross output for a firm is equal to its value added, or gross product originating in the firm, plus the value of intermediate inputs purchased from others.¹⁰ Because value added by an affiliate represents production in the country in which the affiliate is located, other things being equal, a higher share of value added in total output implies higher domestic content.¹¹ This share can be expressed as follows:

$$(2) \text{ Value-Added Share of Gross Output} \\ = \text{Gross Product} / \text{Gross Output}$$

For a U.S. affiliate, the value-added share measures the portion of the affiliate's gross output that is accounted for by incomes earned by labor, capital, and other factors of production employed within the firm.

The other component of a firm's gross output is its intermediate inputs. These inputs can be procured either domestically or through imports. Other things being equal, a higher share of imports in intermediate inputs implies lower domestic content. This share can be expressed as follows:

$$(3) \text{ Import Share of Intermediate Inputs} \\ = \text{Imports} / \text{Intermediate Inputs} \\ = \text{Imports} / (\text{Gross Output} - \text{Gross Product}),$$

where intermediate inputs is computed as a residual from the data on affiliates' gross output and gross product.¹² The import share of raw materials, components, and other purchased inputs provides a measure of the affiliates' reliance on imported versus domestically produced goods and services.

9. The data for affiliates are enterprise data that include some output unrelated to manufacturing: In 1994, about 15 percent of the sales by affiliates classified in manufacturing were accounted for by sales associated with secondary activities in other industries, most notably wholesale trade.

10. Intermediate inputs are goods and services that are consumed in production and that are purchased from other U.S. or foreign businesses.

11. However, in terms of the distribution of value added in the form of payments factors to production, some of the value added of an affiliate can be viewed as "foreign" insofar as it includes property income paid to the affiliate's foreign owners.

12. It should be noted that measures (1) and (3) capture direct (or first-round) imports only—they exclude any imports (direct or indirect) that may be embodied in the inputs purchased from domestic distributors or manufacturers. These measures also exclude purchases of services from abroad, because the benchmark and annual data on affiliate imports cover only imports of goods. In addition, it should be understood that the split between the domestic and foreign components in the measures is based on the geographic location of the suppliers of intermediate inputs—that is, whether or not the suppliers are located within the borders of the United States—not on their country of ownership; thus, intermediate inputs that are supplied to a U.S. affiliate by another U.S. affiliate are included in the domestic components.

Table 1.—Construction of Measures of the Domestic Versus Foreign Orientation of Production and Sales for U.S. Affiliates and Domestically Owned U.S. Parent Companies in Manufacturing, 1989 and 1994

Line		U.S. affiliates		U.S. parents	
		1989	1994	1989	1994
Millions of dollars					
1	Sales	325,307	512,568	1,362,291	1,681,149
2	Inventories, end of current year	47,531	67,610	171,629	179,261
3	Inventories, end of previous year	42,022	62,902	n.a.	n.a.
4	Inventory change (line 2 - line 3) ¹	5,509	4,708	7,086	11,846
5	Gross output (line 1 + line 4)	330,816	517,276	1,369,377	1,692,995
6	Gross product	101,346	153,643	522,726	631,380
7	Intermediate inputs (line 5 - line 6)	229,470	363,633	846,650	1,061,615
8	Imports of goods	38,596	67,576	91,731	120,388
9	Exports of goods	29,355	48,815	158,892	234,221
10	Domestic content (line 5 - line 8) ²	292,220	449,700	1,277,646	1,572,607
Percent					
11	Domestic content as a percentage of gross output ((line 10 / line 5) * 100)	88.3	86.9	93.3	92.9
12	Value added as a percentage of gross output ((line 6 / line 5) * 100)	30.6	29.7	38.2	37.3
13	Imports as a percentage of intermediate inputs ((line 8 / line 7) * 100)	16.8	18.7	10.8	11.3
14	Exports as a percentage of sales ((line 9 / line 1) * 100)	9.0	9.5	11.7	13.9

1. For domestically owned U.S. parent companies, the change in inventories in 1993-94 was estimated by applying to the U.S.-parent-company data on inventories in 1994 the percentage by which inventories in the 1993 balance sheet differed from inventories in the 1994 balance sheet for U.S. manufacturing corporations reporting in *Corporation Source Book of Statistics of Income*, Washington, D.C.: Internal Revenue Service, U.S. Department of Treasury. The change in inven-

ories in 1988-89 was similarly estimated using the balance sheet data on inventories for 1988 and 1989 reported in *Statistics of Income*.

2. Includes imported services and any imports that may be embodied in domestic purchases. n.a. Not available.

The market orientation of affiliates is measured by the export share of sales, which is expressed as follows:¹³

$$(4) \text{ Export Share of Sales} = \text{Exports} / \text{Sales}$$

This ratio measures the propensity of affiliates to sell their output abroad rather than to customers in the United States.

For this article, the four measures have been constructed for U.S. manufacturing affiliates at the level of 32 detailed manufacturing industries. For comparative purposes, each of these measures has been constructed by industry for a group of domestically owned companies in manufacturing—specifically, domestically owned U.S. parent companies in manufacturing. Domestically owned U.S. parent companies are highly comparable with U.S. affiliates because of their typically large size and their international orientation. In addition, these companies account for a large share of the total output of all domestically owned manufacturing companies—more than one-half of total output in 1994 (see the section “Data used to construct measures” in the appendix). In the rest of this article, the term “domestically owned companies” refers to “domestically owned U.S. parent companies.”

13. The data for affiliate exports cover only exports of goods; they exclude exports of services. However, for manufacturing affiliates, exports of services tend to be very small: In 1994, services sold to foreign persons accounted for only 0.3 percent of the total sales of manufacturing affiliates.

Industry-Level Results

In this section, the measures of content and market orientation at the industry level for U.S. affiliates are compared with those for domestically owned companies. The comparisons are made across 32 detailed manufacturing industries for 1989 and 1994.¹⁴

Content of output

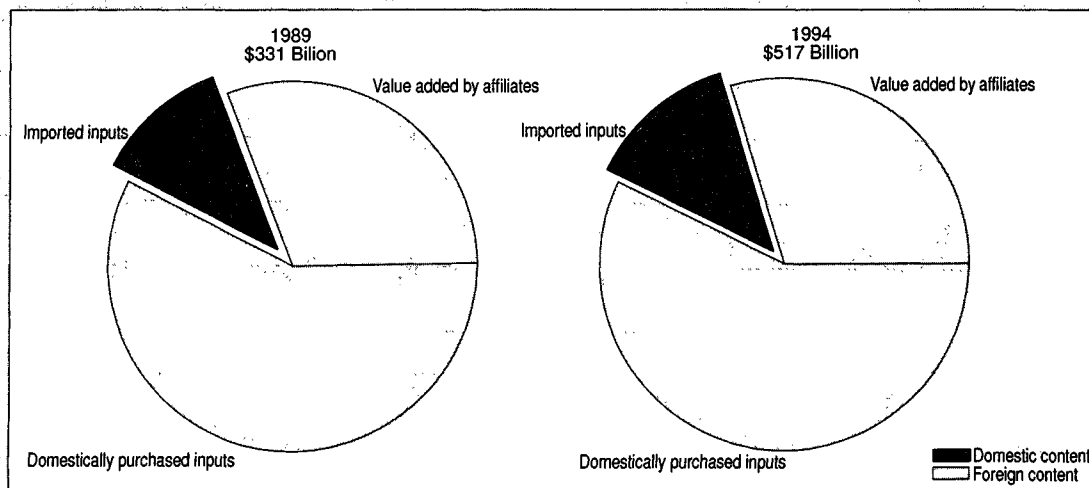
Domestic content.—In the aggregate, U.S. manufacturing affiliates display a high level of domestic content. In 1994, the domestic content of gross output for all manufacturing affiliates was 87 percent, compared with 93 percent for all domestically owned manufacturing companies (table 2). Of the domestic content, one-third represents value added by the affiliates, and two-thirds represents intermediate inputs purchased domestically (chart 1). The shares were similar in 1989.

The difference between the aggregate domestic-content shares for affiliates and the aggregate shares for domestically owned companies is more than accounted for by differences in domestic content within the 32 industries: As shown in the addendum to table 2, the aggregate domestic-content share for affiliates in 1994 would be reduced to 84 percent if the industry composition

14. It should be noted that differences between the measures for 1989 and 1994 may reflect changes in the population of affiliates through new investments or sell-offs as well as changes in the behavior of given affiliates. In addition, differences for individual industries may reflect changes in industry classification.

CHART 1

Content of Gross Output of U.S. Affiliates in Manufacturing



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

of output for affiliates was the same as that for domestically owned companies.

By industry, the domestic content of affiliate output in 1989 and 1994 was more than 90 percent in about one-half of the 32 industries, and it was more than 80 percent in over four-fifths of the industries. In both years, the domestic content for affiliates was lower than that for domestically owned companies in all but two industries. However, in about two-thirds of the industries, the domestic-content shares of gross output for affiliates were within 10 percent of those for domestically owned companies.¹⁵

Both in absolute terms and in relation to the domestically owned companies, the domestic-content shares for affiliates tend to be lowest in "machinery-type" industries, which are de-

15. Across the 32 industries, the coefficient of correlation between the domestic-content measures for U.S. affiliates and the domestically owned companies is 0.68 in 1989 and 0.79 in 1994.

finer here as the 12 industries in machinery, transportation equipment, and instruments manufacturing.¹⁶ The intermediate inputs of these industries consist mainly of manufactured components, which may be subject to product differentiation across foreign and domestic suppliers, rather than of commodity-type bulk materials, which in the United States generally can be procured most cheaply from domestic suppliers because of transportation costs. In addition, because manufacturing in these industries involves the assembly of components, their production processes can often be separated into distinct

16. The 12 industries are construction and mining machinery; metalworking machinery; special industrial machinery; general industrial machinery; computer and office equipment; other industrial machinery and equipment; audio, video, and communications equipment; electronic components and accessories; household appliances and other electrical machinery; motor vehicles and equipment; other transportation equipment; and instruments and related products.

In 1994, these industries accounted for 32 percent of the gross output of all manufacturing affiliates and for 50 percent of the gross output of all domestically owned companies in manufacturing.

Table 2.—Domestic-Content Share of Gross Output for U.S. Affiliates and Domestically Owned U.S. Parent Companies in Manufacturing, by Industry, 1989 and 1994

	Domestic content as a percentage of gross output				Ratio of measure for U.S. affiliates to measure for U.S. parent companies		Addendum: Percent distribution of gross output in 1994	
	U.S. affiliates		U.S. parent companies		1989	1994	U.S. affiliates	U.S. parent companies
	1989	1994	1989	1994				
Manufacturing ¹	88.3	86.9	93.3	92.9	0.95	0.94	100	100
Beverages	88.4	89.2	99.1	98.6	.89	.90	1	5
Other food and kindred products	95.6	94.2	98.6	98.2	.97	.96	8	9
Textile mill products	85.8	94.5	99.4	98.0	.86	.96	1	1
Apparel and other textile products	91.9	91.4	94.8	94.2	.97	.97	1	1
Lumber and wood products	94.9	94.4	98.7	98.9	.96	.95	(*)	1
Furniture and fixtures	81.3	95.6	97.3	97.9	.84	.98	1	1
Paper and allied products	91.1	92.5	98.0	97.4	.93	.95	2	6
Printing and publishing	98.9	98.7	97.6	98.7	1.01	1.00	4	3
Industrial chemicals and synthetics	91.2	90.5	95.1	94.5	.96	.96	13	5
Drugs	88.8	87.1	97.4	97.0	.91	.90	8	5
Soap, cleaners, and toilet goods	97.6	97.5	95.2	97.0	1.03	1.01	4	2
Other chemicals	91.7	87.4	97.0	98.3	.95	.89	3	2
Rubber products	92.1	82.5	93.9	92.8	.98	.89	2	1
Miscellaneous plastics products	88.9	89.0	98.0	97.6	.91	.91	1	1
Glass products	92.5	90.9	98.7	98.9	.94	.92	1	1
Stone, clay, and concrete products	95.8	95.1	97.9	97.7	.98	.97	3	1
Primary ferrous metals	92.0	89.2	95.8	95.3	.96	.94	4	1
Primary nonferrous metals	82.1	82.4	92.5	93.9	.89	.88	3	2
Fabricated metal products	93.7	90.8	98.3	97.8	.95	.93	5	2
Construction and mining machinery ²	85.7	71.7	88.5	89.1	.97	.80	2	1
Metalworking machinery ²	79.5	82.5	92.3	95.7	.86	.86	1	(*)
Special industrial machinery ²	88.1	82.4	96.1	96.6	.92	.85	1	(*)
General industrial machinery ²	72.7	86.9	97.4	90.1	.75	.97	2	1
Computer and office equipment ²	71.2	66.5	86.7	80.4	.82	.83	2	6
Other industrial machinery and equipment ²	92.2	83.0	93.4	94.2	.99	.88	2	2
Audio, video, and communications equipment ²	66.5	68.9	93.7	91.4	.71	.75	4	1
Electronic components and accessories ²	77.3	78.8	87.9	91.2	.88	.86	2	6
Household appliances and other electrical machinery ²	87.2	82.2	98.0	96.7	.89	.85	6	3
Motor vehicles and equipment ²	57.3	74.2	81.5	83.9	.70	.88	6	18
Other transportation equipment ²	82.7	83.8	97.5	96.1	.85	.87	1	7
Instruments and related products ²	90.0	90.9	95.3	94.3	.94	.96	3	4
Other manufacturing	91.9	91.9	97.2	95.1	.95	.97	2	1
Addendum:								
Manufacturing, standardized for industry mix ³	82.0	84.0	93.3	92.9	.88	.90		

* Less than 0.5 percent.

1. Excludes petroleum and coal products manufacturing, which, in BEA's data on direct investment, is classified under the major industry "petroleum."

2. "Machinery-type" industries.

3. The measures shown in columns 1-4 of this line were derived as weighted averages of the measures for individual industries, using—for both U.S. affiliates and U.S. parent companies—the industry shares in U.S.-parent-company gross output as the weights. For U.S. parents, the

measures so derived are identical to those shown in line 1. For U.S. affiliates, they show what the domestic-content shares would have been if the shares for each industry had been as shown, but the industry composition of output had been the same as that for U.S. parents. With industry mix differences thus controlled for, the ratios of the measures for affiliates to the measures for U.S. parents (shown in columns 5 and 6) indicate differences in domestic content attributable to within-industry differences alone.

NOTE.—See the section in the appendix on data used to construct measures.

stages that can be performed in different locations, permitting a greater degree of outsourcing in a firm's production. Finally, the relatively low domestic content in these industries may reflect the existence of some direct investment in final-assembly operations that were put in place in response to potential or actual barriers to the importation of final goods produced by the foreign parent firms.

In 1994, the domestic-content shares for affiliates were less than 75 percent in four industries, all of which are machinery-type industries: Computer and office equipment (67 percent); audio, video, and communications equipment (69 percent); construction and mining machinery (72 percent); and motor vehicles and equipment (74 percent).¹⁷ The relatively low domestic content

in these industries reflects their reliance on foreign sources for the affiliates' intermediate inputs; imports accounted for more than 30 percent of affiliate purchases of intermediate inputs in each industry. In the computer and motor vehicle industries, the low domestic-content share also reflects a low share of value added in gross output.

Value-added shares.—In 1994, value added accounted for 30 percent of the gross output of all manufacturing affiliates, compared with a value-added share of 37 percent for domestically owned companies in manufacturing (table 3). The difference in shares at the aggregate level is more than accounted for by differences within the 32 industries: The value-added share for all affiliates would have been 27 percent if the industry

17. A substantial portion of the data for affiliates in motor vehicles and equipment is accounted for by affiliates that produce motor vehicle parts and accessories. In addition, some of the largest affiliates with operations in automobile manufacturing are classified in wholesale trade (where their sales are largest) rather than in manufacturing. In 1994, five affiliates that were classified in motor vehicles wholesale trade had at least one-fourth of their sales in motor vehicles manufacturing; these affiliates were primarily engaged

in the distribution of vehicles or parts manufactured by their foreign parents. As might be expected, their domestic-content share of output—60 percent—was significantly below that of the affiliates classified as manufacturers of motor vehicles and equipment.

Table 3.—Value-Added Share of Gross Output for U.S. Affiliates and Domestically Owned U.S. Parent Companies in Manufacturing, by Industry, 1989 and 1994

	Value added as a percentage of gross output				Ratio of measure for U.S. affiliates to measure for U.S. parent companies	
	U.S. affiliates		U.S. parent companies		1989	1994
	1989	1994	1989	1994		
Manufacturing ¹	30.6	29.7	38.2	37.3	0.80	0.80
Beverages	32.0	30.9	45.3	42.4	.71	.73
Other food and kindred products	21.7	23.9	29.2	24.8	.74	.87
Textile mill products	31.8	36.9	38.8	39.8	.82	.93
Apparel and other textile products	28.2	32.6	37.6	38.9	.75	.84
Lumber and wood products	33.5	32.3	32.4	33.5	1.03	.96
Furniture and fixtures	25.4	21.0	40.4	41.2	.63	.51
Paper and allied products	37.2	31.8	42.3	38.0	.88	.84
Printing and publishing	29.9	38.7	41.8	45.8	.72	.84
Industrial chemicals and synthetics	35.6	35.8	43.5	38.5	.82	.93
Drugs	37.9	35.1	54.4	46.0	.70	.76
Soap, cleaners, and toilet goods	23.1	26.0	33.0	36.8	.70	.71
Other chemicals	28.0	25.6	36.8	35.0	.76	.73
Rubber products	33.9	37.3	41.8	44.7	.81	.83
Miscellaneous plastics products	26.6	29.0	34.9	37.2	.76	.78
Glass products	39.6	33.2	51.9	43.9	.76	.76
Stone, clay, and concrete products	33.6	36.0	38.9	31.9	.86	1.13
Primary ferrous metals	27.7	27.5	35.3	35.6	.79	.77
Primary nonferrous metals	24.7	19.7	40.1	30.3	.62	.65
Fabricated metal products	33.2	26.9	33.1	38.9	1.00	.69
Construction and mining machinery ²	27.4	23.8	34.2	34.5	.80	.69
Metalworking machinery ²	32.1	31.1	34.1	34.4	.94	.91
Special industrial machinery ²	33.8	27.0	40.6	39.3	.83	.69
General industrial machinery ²	32.9	36.9	44.2	45.6	.74	.81
Computer and office equipment ²	41.6	15.4	45.0	36.0	.93	.43
Other industrial machinery and equipment ²	28.9	26.6	37.4	33.3	.77	.80
Audio, video, and communications equipment ²	29.3	24.4	37.4	31.4	.78	.78
Electronic components and accessories ²	32.9	27.1	43.8	36.3	.75	.75
Household appliances and other electrical machinery ²	28.9	29.9	41.6	42.1	.69	.71
Motor vehicles and equipment ²	12.9	18.9	27.5	33.4	.47	.57
Other transportation equipment ²	26.8	29.0	43.2	44.3	.62	.66
Instruments and related products ²	37.3	38.9	49.1	49.9	.76	.78
Other manufacturing	39.6	37.2	39.9	43.1	.99	.86
Addendum:						
Manufacturing, standardized for industry mix ³	28.0	27.0	38.2	37.3	.73	.72

1. See table 2, footnote 1.
 2. "Machinery-type" industries.
 3. See table 2, footnote 3.

NOTE.—See the section in the appendix on data used to construct measures.

composition of output for affiliates had been the same as that for domestically owned companies.

By industry, the value-added shares of gross output for affiliates were less than 40 percent in all 32 industries and were less than 30 percent in 17 industries. The value-added shares were lowest in computer and office equipment (15 percent), motor vehicles and equipment (19 percent), and primary nonferrous metals (20 percent). The value-added shares for domestically owned companies in these industries were also relatively low.¹⁸

The value-added shares for affiliates were lower than those for domestically owned companies in 30 industries in 1989 and in 31 industries in 1994; in most industries, the shares for affiliates were at least 20 percent lower than those

18. The value-added shares for affiliates and for domestically owned companies tend to be higher or lower in the same industries: Across the 32 industries, the coefficient of correlation between the value-added shares for U.S. affiliates and those for domestically owned companies is 0.69 in 1989 and 0.61 in 1994. For both U.S. affiliates and domestically owned companies, the machinery-type industries are among the industries with the highest and lowest value-added shares.

for domestically owned companies. In both years, the value-added shares for affiliates were more than 30 percent lower than those for domestically owned companies in four industries—furniture and fixtures, primary nonferrous metals, motor vehicles and equipment, and other transportation equipment—indicating that the production operations of affiliates in these industries tend to be much less vertically integrated than the operations of their domestically owned counterparts.

Imported inputs.—Both in the aggregate and across industries, affiliates purchase most of their intermediate inputs from domestic suppliers, but they rely on imports to a much greater degree than do domestically owned companies. In 1994, the import share of intermediate inputs purchased by all manufacturing affiliates was 19 percent, compared with an import share of 11 percent for domestically owned companies in

Table 4.—Import Share of Intermediate Inputs for U.S. Affiliates and Domestically Owned U.S. Parent Companies in Manufacturing, by Industry, 1989 and 1994

	Imports as a percentage of intermediate inputs				Ratio of measure for U.S. affiliates to measure for U.S. parent companies	
	U.S. affiliates		U.S. parent companies		1989	1994
	1989	1994	1989	1994		
Manufacturing ¹	16.8	18.7	10.8	11.3	1.55	1.65
Beverages	17.0	15.6	1.7	2.4	9.92	6.38
Other food and kindred products	5.6	7.6	1.9	2.4	2.93	3.16
Textile mill products	20.8	8.8	1.0	3.4	20.79	2.58
Apparel and other textile products	11.3	12.7	8.4	9.5	1.36	1.33
Lumber and wood products	7.7	8.3	1.9	1.7	3.95	4.92
Furniture and fixtures	25.0	5.6	4.6	3.5	5.47	1.60
Paper and allied products	14.1	11.0	3.6	4.2	3.98	2.59
Printing and publishing	1.5	2.1	4.2	2.4	.37	.90
Industrial chemicals and synthetics	13.6	14.8	8.7	9.0	1.57	1.65
Drugs	18.1	19.9	5.6	5.6	3.22	3.59
Soap, cleaners, and toilet goods	3.1	3.4	7.2	4.7	.44	.71
Other chemicals	11.5	17.0	4.7	2.6	2.46	6.48
Rubber products	11.9	27.9	10.5	13.1	1.13	2.13
Miscellaneous plastics products	15.0	15.5	3.0	3.9	5.00	3.99
Glass products	12.4	13.6	2.8	1.9	4.52	7.19
Stone, clay, and concrete products	6.3	7.7	3.5	3.4	1.83	2.27
Primary ferrous metals	11.1	14.8	6.4	7.2	1.72	2.05
Primary nonferrous metals	23.8	21.9	12.6	8.8	1.89	2.50
Fabricated metal products	9.4	12.5	2.5	3.7	3.72	3.40
Construction and mining machinery ²	19.7	37.1	17.5	16.6	1.13	2.23
Metaworking machinery ²	30.2	25.5	11.7	6.6	2.57	3.88
Special industrial machinery ²	18.0	24.1	6.5	5.6	2.75	4.34
General industrial machinery ²	40.7	20.7	4.7	18.3	8.70	1.13
Computer and office equipment ²	49.4	39.6	24.1	30.6	2.05	1.29
Other industrial machinery and equipment ²	11.0	23.2	10.6	8.7	1.04	2.66
Audio, video, and communications equipment ²	47.4	41.1	10.0	12.5	4.74	3.30
Electronic components and accessories ²	33.8	29.1	21.5	13.8	1.57	2.11
Household appliances and other electrical machinery ²	18.0	25.4	3.3	5.7	5.39	4.43
Motor vehicles and equipment ²	49.1	31.8	25.5	24.1	1.93	1.32
Other transportation equipment ²	23.7	22.8	4.4	7.1	5.38	3.23
Instruments and related products ²	15.9	14.9	9.2	11.4	1.73	1.31
Other manufacturing	13.4	12.9	4.6	8.7	2.90	1.49
Addendum:						
Manufacturing, standardized for industry mix ³	24.9	20.6	10.8	11.3	2.29	1.82

1. See table 2, footnote 1.

2. "Machinery-type" industries

3. The measures shown in columns 1-4 of this line were derived as weighted averages of the measures for individual industries, using the industry shares in U.S.-parent-company intermediate inputs as the weights. See table 2, footnote 3.

NOTE.—See the section in the appendix on data used to construct measures.

manufacturing (table 4).¹⁹ As with the domestic-content and value-added shares, the difference between the import shares at the aggregate level is more than accounted for by differences within industries: The import share for affiliates would have been 21 percent if the industry composition of output for affiliates had been the same as that for domestically owned companies.

In both 1989 and 1994, the import shares of intermediate inputs were higher for affiliates than for domestically owned companies in all but two industries (printing and publishing and soap, cleaners, and toilet goods). In about two-thirds of the industries, the import shares for affiliates were more than twice as high as those for domestically owned companies. However, in many of these industries, the high ratios reflect very low import shares for domestically owned companies; for example, in the three industries in which the ratios were higher than 6 in 1994—glass products, other chemicals, and beverages—the import shares for domestically owned companies were lower than 3 percent.²⁰

For both U.S. affiliates and domestically owned companies, the import shares of intermediate inputs have tended to be highest in machinery-type industries: In 1994, these industries accounted for 9 of the 10 industries with the highest import shares for U.S. affiliates and for 7 of the 10 industries with the highest import shares for domestically owned companies.²¹ For affiliates, the import shares were highest in audio, video, and communications equipment (41 percent) and in computer and office equipment (40 percent). For domestically owned companies, the import shares were highest in computer and office equipment (31 percent) and in motor vehicles and equipment (24 percent).

In five machinery-type industries—household appliances and other electrical machinery; special

industrial machinery; metalworking machinery; audio, video, and communications equipment; and “other” transportation equipment—the import shares for affiliates in 1994 were more than three times as high as the shares for the domestically owned companies. The relatively high import shares for these affiliates appear to reflect a high reliance on their parent companies for specialized inputs; in each industry, more than two-thirds of the affiliates’ imports were from their foreign parents and other members of their foreign parent groups (table 5).²² In some cases, this reliance may reflect direct invest-

22. The foreign parent group consists of (1) the foreign parent, (2) any foreign person, proceeding up the foreign parent’s ownership chain, that owns more than 50 percent of the person below it, up to and including the ultimate beneficial owner, and (3) any foreign person, proceeding down the ownership chain(s) of each of these members, that is owned more than 50 percent by the person above it.

Table 5.—Intrafirm Imports of U.S. Affiliates as a Percentage of Affiliates’ Total Imports and Intermediate Inputs, 1989 and 1994

	Intrafirm imports as a percentage of total imports		Intrafirm imports as a percentage of intermediate inputs	
	1989	1994	1989	1994
	Manufacturing¹	69.0	69.7	11.6	12.9
Beverages	54.4	67.5	9.3	10.5
Other food and kindred products	39.9	56.4	2.3	4.3
Textile mill products	55.0	54.8	11.4	4.8
Apparel and other textile products	72.0	52.9	8.2	6.7
Lumber and wood products	27.0	55.2	2.1	4.6
Furniture and fixtures	79.3	50.5	19.9	2.8
Paper and allied products	67.8	65.0	9.6	7.1
Printing and publishing	38.1	48.4	.6	1.0
Industrial chemicals and synthetics	63.1	48.0	8.6	7.1
Drugs	94.5	90.2	17.1	18.0
Soap, cleaners, and toilet goods	44.3	75.8	1.4	2.5
Other chemicals	75.8	93.2	8.7	15.8
Rubber products	57.3	64.6	6.8	18.0
Miscellaneous plastics products	91.9	41.0	13.8	6.3
Glass products	57.7	92.9	7.2	12.7
Stone, clay, and concrete products	37.4	48.4	2.4	3.7
Primary ferrous metals	52.8	51.2	5.8	7.6
Primary nonferrous metals	71.7	76.1	17.0	16.6
Fabricated metal products	59.1	70.1	5.6	8.8
Construction and mining machinery ²	60.5	73.6	11.9	27.3
Metalworking machinery ²	89.8	70.5	27.1	18.0
Special industrial machinery ²	69.3	76.3	12.4	18.4
General industrial machinery ²	90.6	82.5	36.9	17.1
Computer and office equipment ²	93.9	42.9	46.3	17.0
Other industrial machinery and equipment ²	65.0	80.6	7.2	18.7
Audio, video, and communications equipment ²	52.6	70.7	24.9	29.1
Electronic components and accessories ²	62.9	56.0	21.3	16.3
Household appliances and other electrical machinery ²	77.8	67.9	14.0	17.3
Motor vehicles and equipment ²	95.2	92.3	46.7	29.4
Other transportation equipment ²	88.5	87.7	21.0	20.0
Instruments and related products ²	72.9	71.3	11.6	10.6
Other manufacturing	32.1	48.0	4.3	6.2

1. See table 2, footnote 1.

2. “Machinery-type” industries

NOTES.—Intrafirm imports are imports by affiliates from their foreign parent groups (see footnote 22 in the text).

See the section in the appendix on data used to construct measures.

19. As noted before, these estimates understate the import content of intermediate inputs to the extent that imports are embodied in the inputs purchased from domestic suppliers. A rough estimate indicates that the share of imports in inputs purchased from domestic suppliers may be as high as 7 percent for all manufacturing affiliates and as high as 4 percent for all domestically owned companies in manufacturing. This share, which probably represents an upper bound, is based on an estimate of the imports used by all manufacturing establishments computed from data in BEA’s 1992 benchmark input-output accounts. Adding the estimated value of imports in domestically supplied intermediate inputs to the data on direct imports, the respective import shares of intermediate inputs for U.S. manufacturing affiliates and domestically owned U.S. parent companies in manufacturing in 1994 are estimated to be 24 percent and 15 percent; their domestic content shares are estimated to be 83 percent and 90 percent.

20. The relatively high import share for affiliates in the beverage industry appears to reflect their secondary operations in wholesale trade: As shown in the appendix, most of the imports by these affiliates are goods for resale without further manufacture by the affiliates.

21. Across the 32 industries, the coefficient of correlation between the import share of intermediate inputs for U.S. affiliates and that for the domestically owned companies is 0.65 in 1989 and 0.74 in 1994.

ment in final-assembly operations by the parent companies that may have been in response to potential or actual trade barriers.

Intrafirm imports accounted for about two-thirds of the imports by all manufacturing affiliates in both 1989 and 1994. By industry, the intrafirm shares of affiliate imports have been particularly high in the drug industry and in most of the machinery-type industries. In a number of machinery-type industries, intrafirm imports have accounted for a substantial share—more than 20 percent—of the affiliates' total purchases of intermediate inputs, suggesting that affiliates in these industries may rely extensively on their parent companies (or other foreign firms with which the parents have ownership ties) for customized parts and other inputs subject to product differentiation across firms. In many cases, foreign multinationals with affiliates in these industries may be able to realize economies of scale in the design and production of firm-specific parts and

components by concentrating their production in one location rather than trying to produce the parts in each country in which they have affiliates.

Market for output

Production by U.S. manufacturing affiliates is targeted for the U.S. market even more than the production by domestically owned manufacturers. For all manufacturing affiliates combined, exports accounted for only about 10 percent of total sales in 1994, compared with 14 percent of total sales for the domestically owned companies (table 6).²³

The export shares for affiliates were less than those for domestically owned companies in 20 industries in 1989 and in 22 industries in 1994. The

23. The low export share for affiliates in comparison with that for domestically owned companies in manufacturing does not reflect differences in industry mix: As shown in the addendum to table 6, the aggregate share for affiliates would be 9.4 percent instead of 9.5 percent if the industry composition of output for affiliates was the same as that for domestically owned companies.

Table 6.—Export Share of Sales for U.S. Affiliates and Domestically Owned U.S. Parent Companies in Manufacturing, by Industry, 1989 and 1994

	Exports as a percentage of sales				Ratio of measure for U.S. affiliates to measure for U.S. parent companies	
	U.S. affiliates		U.S. parent companies		1989	1994
	1989	1994	1989	1994		
Manufacturing ¹	9.0	9.5	11.7	13.9	0.77	0.68
Beverages	2.0	4.1	6.1	5.9	.33	.69
Other food and kindred products	3.6	5.2	5.4	8.4	.67	.62
Textile mill products	6.2	7.3	4.4	5.7	1.41	1.28
Apparel and other textile products	4.6	3.6	2.1	2.6	2.22	1.36
Lumber and wood products	B	A	12.9	8.4	(D)	(D)
Furniture and fixtures	A	A	3.2	5.8	(D)	(D)
Paper and allied products	8.8	11.0	7.3	10.0	1.20	1.11
Printing and publishing	1.6	1.6	.7	1.4	2.31	1.14
Industrial chemicals and synthetics	13.4	12.8	12.5	17.9	1.07	.71
Drugs	5.7	7.4	10.3	9.6	.55	.77
Soap, cleaners, and toilet goods	2.3	4.1	3.8	4.4	.60	.93
Other chemicals	10.0	10.8	11.9	12.6	.84	.86
Rubber products	5.6	9.0	7.8	9.2	.72	.98
Miscellaneous plastics products	4.8	5.8	6.5	8.1	.74	.72
Glass products	7.9	5.7	7.2	9.7	1.09	.59
Stone, clay, and concrete products	2.0	2.8	3.9	6.1	.52	.46
Primary ferrous metals	2.8	2.5	3.7	6.9	.75	.37
Primary nonferrous metals	9.6	10.6	10.0	10.9	.96	.97
Fabricated metal products	7.3	7.0	5.8	8.0	1.27	.88
Construction and mining machinery ²	11.0	18.1	19.1	28.4	.58	.64
Metalworking machinery ²	8.9	12.0	13.6	8.1	.65	1.47
Special industrial machinery ²	12.4	17.2	16.6	25.3	.75	.68
General industrial machinery ²	8.4	9.3	16.3	19.2	.52	.49
Computer and office equipment ²	21.1	12.1	22.8	25.8	.93	.47
Other industrial machinery and equipment ²	5.2	11.9	12.7	15.5	.41	.77
Audio, video, and communications equipment ²	27.7	14.5	11.4	14.0	2.42	1.03
Electronic components and accessories ²	16.1	15.7	22.5	22.2	.72	.71
Household appliances and other electrical machinery ²	9.9	16.2	8.5	12.3	1.15	1.31
Motor vehicles and equipment ²	3.8	6.1	13.8	15.0	.28	.41
Other transportation equipment ²	19.3	14.3	20.3	25.5	.95	.56
Instruments and related products ²	13.7	17.5	15.5	16.5	.88	1.06
Other manufacturing	8.8	19.8	6.0	11.0	1.47	1.80
Addendum:						
Manufacturing, standardized for industry mix ³	9.9	9.4	11.7	13.9	.85	.68

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

1. See table 2, footnote 1.

2. "Machinery-type" industries

3. The measures shown in columns 1-4 of this line were derived as weighted averages of the measures for individual industries, using the industry shares in U.S.-parent-company sales as

the weights. See table 2, footnote 3.

NOTES.—See the section in the appendix on data used to construct measures.

Size ranges are given in the percentage cells that are suppressed; these ranges are A—0.01 to 19.9; B—20.0 to 39.9; C—40.0 to 59.9; E—60.0 to 79.9; F—80.0 to 100.

lower export propensity of U.S. affiliates suggests that the affiliates operate in the United States to service the U.S. market rather than to exploit any locational advantages associated with production in the United States (such as proximity to U.S. research centers) to service worldwide markets. Foreign multinationals appear to service non-U.S. markets primarily through sales by the parent companies or affiliates located in other countries.

For both U.S. affiliates and the domestically owned companies, the export shares of sales have tended to be highest in machinery-type industries.²⁴ In most of these industries, the export shares for affiliates were substantially lower than those for the domestically owned companies in

24. The export shares of sales for U.S. affiliates and domestically owned companies tend to be higher or lower in the same industries: Across the 32 industries, the coefficient of correlation between the export share for U.S. affiliates and that for domestically owned companies is 0.69 in 1989 and 0.75 in 1994.

Table 7.—Intrafirm Exports of U.S. Affiliates as a Percentage of Affiliates' Total Exports and Sales, 1989 and 1994

	Intrafirm exports as a percentage of total exports		Intrafirm exports as a percentage of sales	
	1989	1994	1989	1994
Manufacturing ¹	25.3	28.4	3.2	2.7
Beverages	33.3	41.6	1.0	1.7
Other food and kindred products	33.1	35.9	1.5	1.9
Textile mill products	23.2	16.4	2.1	1.2
Apparel and other textile products	90.5	53.8	5.5	1.9
Lumber and wood products	26.7	23.6	(D)	(D)
Furniture and fixtures	94.1	1.2	(D)	(*)
Paper and allied products	45.0	37.2	6.2	4.1
Printing and publishing	20.3	31.2	.5	.5
Industrial chemicals and synthetics	21.8	17.8	4.5	2.3
Drugs	50.4	54.6	4.6	4.0
Soap, cleaners, and toilet goods	15.3	50.7	.4	2.1
Other chemicals	11.9	48.5	1.6	5.3
Rubber products	26.0	21.4	2.2	1.9
Miscellaneous plastics products	42.6	17.2	2.7	1.0
Glass products	14.3	9.0	1.9	.5
Stone, clay, and concrete products	10.0	13.2	.3	.4
Primary ferrous metals	27.3	16.1	1.0	.4
Primary nonferrous metals	42.1	37.4	5.3	4.0
Fabricated metal products	11.5	14.3	1.2	1.0
Construction and mining machinery ²	11.2	24.7	1.7	4.5
Metalworking machinery ²	49.2	33.0	6.2	4.0
Special industrial machinery ²	29.5	14.4	5.5	2.5
General industrial machinery ²	55.7	26.0	6.7	2.4
Computer and office equipment ²	23.9	33.5	8.6	4.0
Other industrial machinery and equipment ²	26.9	24.1	1.9	2.9
Audio, video, and communications equipment ²	13.6	29.4	5.2	4.3
Electronic components and accessories ²	38.7	24.4	9.2	3.8
Household appliances and other electrical machinery ²	39.0	30.0	5.3	4.9
Motor vehicles and equipment ²	21.0	32.1	.9	2.0
Other transportation equipment ²	14.1	24.4	3.6	3.5
Instruments and related products ²	29.0	25.2	6.3	4.4
Other manufacturing	29.6	27.3	4.3	5.4

* Less than 0.05 percent.

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

1. See table 2, footnote 1.

2. "Machinery-type" industries.

NOTES.—Intrafirm exports are exports by affiliates to their foreign parent groups. See the section in the appendix on data used to construct measures.

both 1989 and 1994; in motor vehicles and equipment, the export share for affiliates was less than one-half as much as the share for the domestically owned companies. However, in audio, video, and communications equipment and in household appliances and other electrical machinery, the export shares for affiliates were higher than those for the domestically owned companies.

In contrast to affiliate imports, which have been dominated by trade with the affiliates' foreign parent groups, affiliate exports have been mainly accounted for by trade with unrelated parties (table 7). In both 1989 and 1994, intrafirm exports accounted for only one-fourth of the total exports of all manufacturing affiliates and for less than one-half of affiliate exports in all but a few industries. In 1994, intrafirm exports accounted for less than 3 percent of total sales and for less than 6 percent of sales for any of the 32 industries.

Trends in Content and Market Orientation

This section examines the changes in the domestic content of production and in the market orientation of sales for a panel of U.S. manufacturing affiliates in 1988–94.

In the case of investment in new manufacturing facilities—often referred to as “greenfield” investment—foreign direct investment typically begins with affiliates undertaking final assembly operations that rely heavily on components and parts from the foreign parent or other suppliers abroad. Over time, these affiliates are expected to increase the domestic content of their output through vertical expansion of their production operations, which results in a higher share of value added in gross output, and through increased procurement from domestic suppliers, which results in a lower share of imports in intermediate inputs. In addition, affiliates that were initially set up to service the domestic market begin with a very low export share of sales, but this share is expected to increase with the expanded scale of production operations over time.

For U.S. affiliates, however, the expected pattern of affiliate behavior over time is more ambiguous, because much of the foreign direct investment in U.S. manufacturing industries has been to acquire existing U.S. companies. In some cases, an acquisition may simply represent a change in management and results in no change in domestic content or the international orientation of sales. In other cases, the domestic content of an acquired firm might decrease, as the firm's

operations become more integrated with those of its foreign parent.

To investigate changes in domestic content and market orientation that are isolated from the effects of changes in the population of affiliates, a panel was constructed of affiliates that were classified in the 12 machinery-type industries in 1994 and that existed in each of the years 1987-94 (see the section "Data used to construct measures" in the appendix).²⁵ Affiliates in the machinery-type industries are of special interest because the shares of both imports in intermediate inputs and exports in sales tend to be the highest in these industries. The affiliates in the panel account for a dominant share—69 percent—of the gross output of all affiliates in machinery-type industries in 1994.

Aggregating the data for affiliates in the panel, the four measures have been computed at the industry level for each of the years 1988-94. The results show little sustained change in affiliate behavior; in most industries, the four measures are either steady or fluctuate without showing a trend (table 8). However, in the few industries in which a sustained trend is shown, the movement is in the direction described in the discussion on greenfield investment.

25. As noted earlier, differences between years in the measures for the universe of affiliates may reflect not only changes in the behavior of individual affiliates but also changes in the population of affiliates. While working with a panel of affiliates is an important step towards isolating changes in the behavior of economic entities from changes in the population of entities, there may be some problems in drawing inferences based on changes in operating behavior even for the same set of affiliates, because some of these affiliates may have acquired or sold off operating units during this period.

In two industries—electronic components and motor vehicles—the domestic content of affiliate output trends upward, reflecting, in each industry, a sustained decrease in the import share of the affiliates' intermediate inputs—from more than 50 percent in 1988 to less than 35 percent in 1994 (chart 2). The upward trend in domestic content for affiliates in the motor vehicles industry is consistent with expectations, given that this industry has been characterized by a high degree of greenfield investment in relation to foreign acquisition activity.

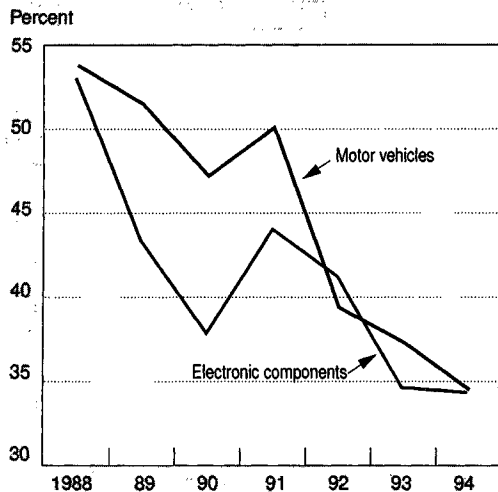
In a number of industries, the import shares of intermediate inputs drop sharply between 1988 and 1989, perhaps because of lagged substitution effects in response to the substantial depreciation of the U.S. dollar in international currency markets in 1985-88.²⁶ After this drop, the import shares fluctuate in most industries but show a high degree of stability in two industries: Metalworking machinery and household appliances and other electrical machinery.

The export shares of affiliate sales trend upward in three industries: Construction machinery, metalworking machinery, and instruments and related products (chart 3). In each of these industries, the export share has more than doubled since 1988, suggesting an expanded orientation toward world markets that reflected locational advantages associated with production in the

26. In 1985-88, the multilateral trade-weighted value of the U.S. dollar in real terms depreciated 33 percent. See the *Economic Report of the President* (Washington, DC: U.S. Government Printing Office, February 1997): Table B-108.

CHART 2

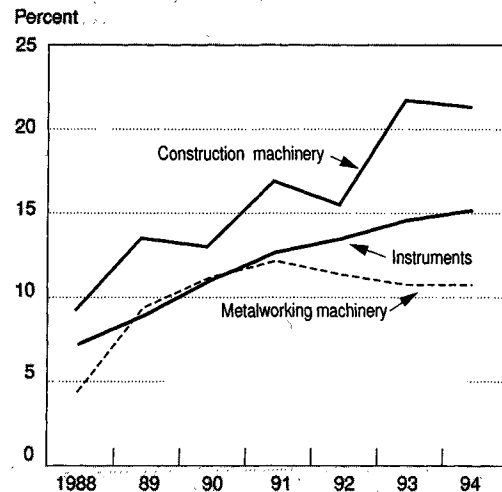
**Import Share of Intermediate Inputs:
Selected Industries, 1988-94**



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

CHART 3

**Export Share of Sales:
Selected Industries, 1988-94**



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

United States. Particularly in an industry such as instruments, in which the United States is very competitive in world markets, affiliates initially set up to service the U.S. market may turn increasingly to exports as they expand operations.²⁷

27. Census Bureau data on trade in goods by product indicate that U.S. exports of professional, scientific, and controlling instruments were about double U.S. imports in each of the years 1988–94.

Comparisons by Country of Ownership

This section examines the differences in the four measures of domestic content and market orientation among affiliates with ultimate beneficial owners in six major investing countries: Canada, France, Germany, Switzerland, the United Kingdom, and Japan. In terms of affiliate value added and gross output, these six countries are the largest investing countries in U.S. manufactur-

Table 8.—Measures for a Panel of U.S. Affiliates in Machinery-Type Industries, 1988–94

	1988	1989	1990	1991	1992	1993	1994
Domestic content as a percentage of gross output:							
Construction and mining machinery	72.8	77.2	77.7	83.2	78.0	76.1	70.3
Metalworking machinery	76.9	81.6	81.1	81.1	80.7	80.5	80.3
Special industrial machinery	85.7	85.6	87.0	84.5	86.4	85.8	84.8
General industrial machinery	83.0	85.1	85.5	86.4	87.7	88.6	86.3
Computer and office equipment	E	C	C	C	C	60.2	75.0
Other industrial machinery and equipment	85.9	85.0	83.2	68.5	83.0	75.7	75.5
Audio, video, and communications, equipment	62.2	65.2	64.8	71.8	67.6	69.0	68.1
Electronic components and accessories	62.7	69.0	71.7	68.9	71.9	74.8	74.5
Household appliances and other electrical machinery	78.7	82.1	80.6	81.5	81.4	79.9	80.3
Motor vehicles and equipment	54.7	55.3	59.7	58.5	67.2	68.9	71.3
Other transportation equipment	70.3	78.6	80.9	82.3	83.0	78.9	76.4
Instruments and related products	87.3	89.1	89.7	91.7	91.7	91.2	90.7
Value added as a percentage of gross output:							
Construction and mining machinery	24.2	23.8	23.9	27.5	26.1	21.6	21.1
Metalworking machinery	30.9	31.5	35.9	34.1	34.7	34.7	33.9
Special industrial machinery	25.9	27.0	25.3	27.8	29.4	30.2	29.2
General industrial machinery	32.8	38.2	38.4	39.7	36.3	37.7	38.7
Computer and office equipment	C	C	C	C	B	21.2	43.6
Other industrial machinery and equipment	21.4	25.6	30.6	24.1	23.5	24.4	25.0
Audio, video, and communications, equipment	23.8	27.3	26.7	24.8	28.1	26.5	24.2
Electronic components and accessories	29.5	28.6	25.3	29.4	31.9	27.2	25.8
Household appliances and other electrical machinery	29.3	28.7	28.5	30.2	29.3	27.5	27.2
Motor vehicles and equipment	15.8	13.1	14.5	17.2	16.9	16.5	17.0
Other transportation equipment	25.3	30.2	32.1	27.3	31.5	28.9	25.5
Instruments and related products	35.0	36.3	36.8	40.1	41.6	40.9	39.6
Imports as a percentage of intermediate inputs:							
Construction and mining machinery	35.9	29.9	29.3	23.2	29.8	30.5	37.6
Metalworking machinery	33.4	26.9	29.5	28.6	29.6	29.9	29.8
Special industrial machinery	19.3	19.7	17.4	21.5	19.3	20.4	21.4
General industrial machinery	25.3	24.0	23.5	22.6	19.3	18.3	22.4
Computer and office equipment	E	F	F	F	E	50.5	44.3
Other industrial machinery and equipment	17.9	20.2	24.2	41.5	22.2	32.1	32.6
Audio, video, and communications, equipment	49.6	47.9	48.0	37.5	45.1	42.2	42.1
Electronic components and accessories	53.1	43.4	37.9	44.1	41.3	34.7	34.4
Household appliances and other electrical machinery	30.1	25.0	27.2	26.6	26.3	27.7	27.1
Motor vehicles and equipment	53.8	51.5	47.2	50.1	39.4	37.3	34.5
Other transportation equipment	39.8	30.7	28.1	24.3	24.9	29.7	31.7
Instruments and related products	19.6	17.2	16.2	13.8	14.2	14.9	15.3
Exports as a percentage of sales:							
Construction and mining machinery	9.3	13.6	13.1	17.0	15.6	21.8	21.4
Metalworking machinery	4.4	9.4	11.2	12.2	11.4	10.8	10.8
Special industrial machinery	16.3	12.6	16.1	19.5	19.2	18.7	14.5
General industrial machinery	3.6	5.8	7.0	6.1	5.3	4.8	8.7
Computer and office equipment	A	B	22.0	21.8	18.5	18.5	21.2
Other industrial machinery and equipment	6.7	6.9	10.3	10.9	10.4	10.1	10.1
Audio, video, and communications, equipment	28.3	27.3	24.6	8.7	9.4	9.1	15.0
Electronic components and accessories	8.3	12.5	16.7	17.8	17.6	14.0	14.1
Household appliances and other electrical machinery	11.6	11.5	15.1	17.4	13.3	20.0	16.1
Motor vehicles and equipment	4.3	3.2	3.6	5.4	8.4	6.0	5.3
Other transportation equipment	13.7	23.0	16.0	13.4	18.4	17.3	15.4
Instruments and related products	7.2	8.9	11.0	12.7	13.5	14.6	15.2
Addendum:							
Multilateral trade-weighted value of the U.S. dollar, adjusted by changes in consumer prices (March 1973 = 100) ¹	88.2	94.4	86.0	86.5	83.4	90.0	88.7

1. *Economic Report of the President* (Washington, DC: U.S. Government Printing Office, February 1997): Table B-108.

NOTES.—Industry-level measures were constructed from data for a fixed panel of affiliates clas-

sified in the industry in 1994; the panel consists of affiliates that existed in 1987 and were fully operational in each of the years 1988–94.

Size ranges are given in the percentage cells that are suppressed; these ranges are A—0.01 to 19.9; B—20.0 to 39.9; C—40.0 to 59.9; E—60.0 to 79.9; F—80.0 to 100.

ing; in 1994, the manufacturing affiliates of these countries accounted for about 80 percent of both the value added and the gross output of all U.S. manufacturing affiliates.

Comparisons among the investing countries' affiliates are made in terms of mean values of affiliate-level measures "normalized" by industry; to normalize, each measure for a given affiliate was divided by the corresponding industry-level measure for domestically owned U.S. parent companies in the affiliate's industry.

The mean values for samples of affiliates of each country for 1989 and 1994 are shown in tables 9.1 and 9.2, respectively. The samples of affiliates consist of the affiliates in all the manufacturing industries and the affiliates in two industry subgroups: Machinery-type industries and all the other manufacturing industries.²⁸

28. Each sample consists of all the manufacturing affiliates that had at least \$5 million in sales. Smaller affiliates were excluded to prevent the averages from being skewed by the presence of large outliers that may result when the denominator (total output, purchased inputs, or sales) in the measure for an affiliate is very small. The extreme measures for some small affiliates may reflect the start-up or shutdown of affiliate operations in the year for which the measures are constructed.

A mean value of 1 indicates that the measure for affiliates, on average, equals that for the domestically owned companies in comparable industries.²⁹ For affiliates of each investing country, a *t* test was performed to determine if the mean is significantly different from 1, which would indicate that the measure for affiliates differs systematically from the measure for the domestically owned companies.

Content of output

In 1994, German-, Swiss-, and Japanese-owned affiliates show the lowest average domestic content in relation to domestically owned companies in comparable industries. For German- and Swiss-owned affiliates, the mean value for

29. In interpreting the figures in tables 9.1 and 9.2, it should be noted that the all-country averages for the normalized measures are conceptually different from the aggregate ratios shown in tables 2-4 and 6, because in those tables, the numerator of each ratio is the industry-level measure for the affiliates and is constructed by aggregating the data for all the affiliates in the industry. In contrast, the figures in tables 9.1 and 9.2 are unweighted averages (across the sample of affiliates) of the affiliate-level measures relative to the industry-level measures for U.S. parent companies in corresponding industries.

Table 9.1.—Means of Normalized Measures for U.S. Affiliates, by Country of UBO, 1989

[Standard deviations in parentheses]

	All countries	Canada	France	Germany	Switzerland	United Kingdom	Japan	Other countries
Domestic content as a percentage of gross output:								
All industries	0.88 (.27)	0.92 (.19)	0.89 (.21)	0.84 (.21)	0.87 (.19)	0.96 (.15)	0.81 (.45)	0.88 (.21)
Machinery-type industries .....	.84 (.28)	.97 ^a (.19)	.83 (.27)	.80 (.23)	.82 (.25)	.96 (.18)	.75 (.40)	.83 (.26)
Other industries .....	.90 (.25)	.91 (.18)	.91 (.17)	.88 (.18)	.91 (.15)	.97 (.12)	.84 (.49)	.90 (.18)
Value added as a percentage of gross output:								
All industries .....	.72 (.52)	.76 (.38)	.70 (.38)	.72 (.42)	.76 (.36)	.83 (.37)	.66 (.62)	.68 (.68)
Machinery-type industries .....	.66 (.62)	.78 (.36)	.57 (.35)	.69 (.38)	.81 (.40)	.82 (.37)	.51 (.54)	.57 (1.05)
Other industries .....	.76 (.45)	.76 (.39)	.75 (.38)	.75 (.44)	.74 (.33)	.84 (.37)	.76 (.66)	.72 (.40)
Imports as a percentage of intermediate inputs:								
All industries	4.43 (9.80)	4.70 (9.47)	5.25 (8.93)	5.04 (7.00)	4.34 (5.42)	2.18 (3.82)	4.66 (15.87)	4.88 (9.25)
Machinery-type industries	3.51 (4.79)	2.00 ^a (3.71)	4.71 (6.29)	4.62 (4.90)	3.82 (3.68)	1.66 (2.31)	3.73 (5.36)	3.99 (5.39)
Other industries	4.98 (11.81)	5.67 (10.66)	5.47 (9.85)	5.39 (8.36)	4.63 (6.20)	2.62 (4.71)	5.33 (20.34)	5.29 (10.55)
Exports as a percentage of total sales:								
All industries	1.18 (3.10)	.77 ^a (1.88)	1.36 ^a (2.34)	.96 ^a (1.57)	.81 ^a (1.20)	.93 ^a (2.22)	1.73 (4.30)	1.30 ^a (4.09)
Machinery-type industries .....	.73 (.96)	.53 (.77)	1.16 ^a (1.70)	.66 (.82)	.76 ^a (.81)	.78 (1.01)	.64 (.96)	.78 (.85)
Other industries	1.45 (3.83)	.86 ^a (2.14)	1.44 ^a (2.57)	1.21 ^a (1.96)	.84 ^a (1.37)	1.07 ^a (2.88)	2.53 (5.46)	1.55 ^a (4.89)
Addenda: Number of affiliates:								
All industries	1,441	163	99	253	89	220	264	353
Machinery-type industries	543	43	29	115	32	101	111	112
Other industries	898	120	70	138	57	119	153	241

^a Not statistically different from 1 at the 95-percent confidence level.

NOTES.—To normalize, the measure of content calculated for each affiliate was divided by the corresponding aggregate measure for domestically owned U.S. parent companies classified in the

affiliate's industry.

The sample consists of all manufacturing affiliates that existed in both 1988 and 1989 and had at least \$5 million in sales in 1989.

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all manufacturing industries is 0.88, indicating that their domestic content averages 12 percent less than that of domestically owned companies in comparable industries (table 9.2). For Japanese-owned affiliates, the domestic content averages 11 percent less than that for domestically owned companies. In machinery-type industries, the domestic content for German-, Swiss-, and Japanese-owned affiliates averages 15–17 percent less than that for domestically owned companies.

The relatively low domestic content for German- and Swiss-owned affiliates reflects a relatively high reliance on foreign sources for their intermediate inputs; the import shares of their purchased inputs average almost four times that of the domestically owned companies.³⁰ For Japanese-owned affiliates, the relatively low domestic content reflects a relatively low share of value added in gross output (averaging two-thirds of the share for domestically owned companies)

as well as a high import share of purchased intermediate inputs. The relatively low value-added share for Japanese-owned affiliates (particularly in machinery-type industries) is consistent with established patterns of organizing production in Japan, where manufacturing companies tend to rely heavily on subcontracting.³¹

The average domestic content of Japanese-owned affiliates is substantially higher in 1994 than in 1989. In 1989, Japanese-owned affiliates show the lowest domestic content among the six investing countries, averaging 81 percent of that of domestically owned companies in all industries and 75 percent of that of domestically owned companies in machinery-type industries (table 9.1). In machinery-type industries, the low domestic content partly reflects a lower share of value added in the total output of Japanese-owned affiliates (averaging only one-half of the share for domestically owned companies). In all industries, the import share of intermedi-

30. As shown in the appendix, the high import share for Swiss-owned affiliates partly reflects substantial imports of goods for resale without further manufacture by the affiliates.

31. See, for example, Masahiko Aoki, "Toward an Economic Model of the Japanese Firm," *Journal of Economic Literature* 28 (March 1990): 1–27.

Table 9.2.—Means of Normalized Measures for U.S. Affiliates, by Country of UBO, 1994

[Standard deviations in parentheses]

	All countries	Canada	France	Germany	Switzerland	United Kingdom	Japan	Other countries
Domestic content as a percentage of gross output:								
All industries	0.91 (.20)	0.93 (.19)	0.91 (.19)	0.88 (.20)	0.88 (.18)	0.96 (.16)	0.89 (.23)	0.90 (.20)
Machinery-type industries .....	.88 (.24)	.99 ^a (.19)	.90 (.23)	.85 (.20)	.83 (.21)	.97 ^a (.20)	.84 (.26)	.90 (.24)
Other industries .....	.92 (.18)	.92 (.19)	.92 (.16)	.91 (.18)	.91 (.16)	.96 (.13)	.93 (.19)	.91 (.18)
Value added as a percentage of gross output:								
All industries .....	.74 (.53)	.75 (.49)	.77 (.62)	.78 (.39)	.83 (.44)	.83 (.44)	.67 (.62)	.71 (.52)
Machinery-type industries .....	.71 (.57)	.79 (.61)	.65 (.74)	.75 (.39)	.78 (.42)	.82 (.42)	.61 (.74)	.71 (.41)
Other industries .....	.76 (.50)	.74 (.45)	.83 (.54)	.82 (.39)	.85 (.45)	.84 (.46)	.72 (.52)	.71 (.56)
Imports as a percentage of intermediate inputs:								
All industries	3.20 (5.83)	3.46 (7.36)	3.01 (5.68)	3.86 (6.02)	3.88 (5.29)	2.01 (3.93)	2.98 (5.75)	3.49 (5.98)
Machinery-type industries	2.40 (3.05)	1.44 ^a (2.97)	1.96 (2.90)	3.15 (3.29)	3.40 (3.52)	1.41 ^a (2.34)	2.51 (2.92)	2.36 (3.13)
Other industries	3.68 (6.93)	4.06 (8.13)	3.52 (6.59)	4.51 (7.68)	4.15 (6.05)	2.39 (4.63)	3.31 (7.06)	4.07 (6.94)
Exports as a percentage of total sales:								
All industries	1.04 ^a (2.01)	.99 ^a (1.84)	1.06 ^a (1.39)	.94 ^a (1.46)	.91 ^a (1.19)	.82 (1.43)	1.18 (2.08)	1.09 ^a (2.73)
Machinery-type industries	0.87 (1.03)	0.85 ^a (1.20)	1.02 ^a (1.10)	0.80 (.89)	0.76 (.73)	0.68 (.68)	0.83 (1.04)	1.08 ^a (1.24)
Other industries	1.15 (2.41)	1.03 ^a (2.00)	1.08 ^a (1.51)	1.07 ^a (1.83)	0.99 ^a (1.38)	0.91 ^a (1.74)	1.43 (2.53)	1.10 ^a (3.24)
Addenda: Number of affiliates:								
All industries	2,236	219	157	323	116	272	627	522
Machinery-type industries	836	50	52	155	41	105	256	177
Other industries	1,400	169	105	168	75	167	371	345

^a Not statistically different from 1 at the 95-percent confidence level.

NOTES.—To normalize, the measure of content calculated for each affiliate was divided by the corresponding aggregate measure for domestically owned U.S. parent companies classified in the

affiliate's industry.

The sample consists of all manufacturing affiliates that existed in both 1993 and 1994 and had at least \$5 million in sales in 1994.
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ate inputs is much higher in 1989 (averaging more than four times that of domestically owned companies) than in 1994.

In both 1989 and 1994, British-owned affiliates had the highest share of domestic content (in 1994, it averaged 96 percent of that for domestically owned companies), the highest value-added share (83 percent of the share for the domestically owned companies), and the lowest import share of intermediate inputs (but twice that of the domestically owned companies). In 1994, both the domestic content and the import share of purchased inputs for British-owned affiliates in machinery-type industries are barely distinguishable from those for domestically owned companies. This similarity may reflect the fact that British direct investment in U.S. manufacturing industries tends to be older and has almost exclusively been to acquire existing U.S. companies.³²

Canadian-owned affiliates in machinery-type industries also show a high share of domestic content and a low share of imports in intermediate inputs; in 1994, both measures were similar to those for domestically owned companies.³³ However, for Canadian-owned affiliates in other manufacturing industries, the domestic-content share is relatively low (averaging 92 percent of that for domestically owned companies in 1994) and the import share of intermediate inputs is very high (averaging more than four times that of domestically owned companies). The high import share may be related to the relatively low costs of shipping bulk materials (which serve as intermediate inputs in many of these industries) from Canadian parent companies to their U.S. affiliates due to Canada's proximity to the United States.

Market for output

For most of the major investing countries, the average export shares of sales for affiliates in all industries do not differ significantly from the export shares for the domestically owned companies. Japanese-owned affiliates stand out as having high average export shares of sales in relation to those of domestically owned companies

(averaging 18 percent higher in 1994), particularly in industries other than machinery-type industries (43 percent higher), in which the export shares for both the domestically owned companies and affiliates are generally low. Among specific industries, the export shares for Japanese-owned affiliates average more than eight times the aggregate share for domestically owned companies in lumber and wood products and more than three times the aggregate share for the domestically owned companies in other food and kindred products. In other food and kindred products, exports on average account for more than one-fourth of the sales of Japanese-owned affiliates, reflecting very high export shares for affiliates specializing in seafood products, meat products, and preserved fruits and vegetables. The relatively high export activity in these industries suggests that some Japanese investments in the United States are aimed at obtaining access to primary resources in which the United States is relatively abundant (with some processing taking place in the United States in order to reduce transportation and other costs) rather than at increasing sales to the U.S. market.

In machinery-type industries, Japanese-owned affiliates, together with German-, Swiss- and British-owned affiliates, on average, have substantially lower export shares than domestically owned companies, indicating that their production in these industries is much more oriented toward the domestic market.

Geographic Pattern of International Purchases and Sales

This section examines differences in the geographic pattern of international purchases and of sales by manufacturing affiliates in 1992, on the basis of data collected in the 1992 benchmark survey of foreign direct investment in the United States.

Aggregate figures on the geographic origin of intermediate inputs purchased from abroad by U.S. manufacturing affiliates of the six major investing countries show considerable diversity in the reliance on the investing country for imported intermediate inputs. Imports from the ultimate beneficial owner (UBO) country account for almost 90 percent of the imported inputs of Japanese-owned affiliates and for about three-fourths of the imported inputs of German- and Swiss-owned affiliates (table 10). In contrast, imports from the investing country account for only one-third of the inputs imported by

32. Outlays to acquire existing U.S. businesses accounted for 96 percent of the total outlays by British direct investors to acquire or establish U.S. manufacturing enterprises in 1987-92, according to data from BEA's survey of new investment; in comparison, 86 percent of total outlays by Japanese direct investors and 92 percent of total outlays by direct investors from all countries were to acquire existing U.S. businesses.

33. The relatively high domestic content for these Canadian-owned affiliates may also reflect the fact that Canadian direct investment has mainly been to acquire existing U.S. companies: Outlays to acquire existing U.S. businesses accounted for 97 percent of the total outlays by Canadian direct investors in 1987-92.

Table 10.—Geographic Origin of Imports by Manufacturing Affiliates of Selected UBO Countries, 1992

[Percentage of imports from all countries]

Country of origin	Country of UBO					
	Canada	France	Germany	Switzerland	United Kingdom	Japan
All industries						
All countries	100.0	100.0	100.0	100.0	100.0	100.0
Canada	66.6	12.9	6.4	3.4	7.0	2.1
Europe	11.9	50.9	85.7	87.6	68.6	1.6
France	A	34.3	.9	3.2	4.3	.2
Germany	1.3	2.4	78.6	3.8	2.8	.3
Switzerland .....	.2	.1	.3	76.3	A	(*)
United Kingdom	4.1	1.5	.9	1.2	39.4	.2
Other	A	12.6	5.0	3.1	A	.9
Latin America and Other Western Hemisphere	12.0	11.8	2.7	3.6	8.3	3.0
Mexico	A	8.7	1.5	A	1.0	2.5
Other	A	3.0	1.2	A	7.3	.5
Africa	A	1.9	(*)	A	2.1	(*)
Middle East	0	0	(*)	0	0	(*)
Asia and Pacific	7.7	22.2	3.4	4.4	13.0	90.8
Japan	A	4.9	2.3	2.5	2.5	86.6
Other	A	17.3	1.1	1.9	10.5	4.2
Unallocated	A	.3	1.7	A	1.0	2.4
Machinery-type industries						
All countries	100.0	100.0	100.0	100.0	100.0	100.0
Canada	92.1	6.7	1.4	.3	9.2	.5
Europe	1.2	35.1	90.3		92.2	1.2
France	(*)	24.3	.6	(*)	1.1	A
Germany	A	1.6	85.9	9.1	5.0	.2
Switzerland	0	0	.1	78.1	A	(*)
United Kingdom	A	1.0	A	1.1	44.5	A
Other .....	.5	8.3	A	3.9	A	.8
Latin America and Other Western Hemisphere	0	A	1.1	A	1.1	3.0
Mexico	0	A	.5	(*)	1.0	3.0
Other	0	A	.6	A	.2	.1
Africa	0	0	(*)	0	0	0
Middle East	0	0	0	0	0	0
Asia and Pacific	A	44.9	3.8	7.0	30.5	92.6
Japan	A	9.6	3.1	1.9	8.0	88.7
Other	A	35.3	.8	5.2	22.5	3.9
Unallocated	A	A	3.4	A	1.0	2.7
Other industries						
All countries	100.0	100.0	100.0	100.0	100.0	100.0
Canada	59.7	17.6	10.0	4.5	6.5	10.4
Europe	14.7	63.0	82.4	86.0	71.3	4.0
France	A	42.0	1.1	4.3	5.1	A
Germany	A	3.0	73.3	1.9	2.2	1.1
Switzerland .....	.3	.2	.5	75.7	A	0
United Kingdom	A	1.9	A	1.3	38.1	A
Other	A	15.8	A	2.9	A	.9
Latin America and Other Western Hemisphere	15.2	A	3.9	A	10.2	3.0
Mexico	A	A	2.2	A	1.0	.4
Other	A	A	1.7	A	9.2	2.7
Africa	A	3.4	A	A	2.6	A
Middle East	0	0	A	0	0	A
Asia and Pacific	A	4.9	3.1	3.4	8.4	81.7
Japan	A	1.4	1.8	2.7	1.0	75.7
Other	A	3.5	1.4	.7	7.4	6.0
Unallocated	A	A	.5	1.1	1.1	.6

* Less than 0.05 percent.

A—0.01 to 19.9; B—20.0 to 39.9; C—40.0 to 59.9; E—60.0 to 79.9; F—80.0 to 100.
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NOTE.—Size ranges are given in the percentage cells that are suppressed; these ranges are

Table 11.—Geographic Destination of Exports by Manufacturing Affiliates of Selected UBO Countries, 1992

[Percentage of exports to all countries]

Country of destination	Country of UBO					
	Canada	France	Germany	Switzerland	United Kingdom	Japan
All industries						
All countries	100.0	100.0	100.0	100.0	100.0	100.0
Canada	30.8	23.4	20.6	16.6	16.9	16.4
Europe	27.5	37.3	38.6	46.0	38.2	17.7
France	3.1	21.3	2.0	2.5	3.4	2.1
Germany	3.6	4.8	24.5	4.5	4.9	4.0
Switzerland	A	.6	.4	26.8	.9	.4
United Kingdom	4.4	3.2	2.3	3.5	18.4	4.2
Other	A	7.3	9.4	8.6	10.6	7.0
Latin America and Other Western Hemisphere	13.1	10.8	8.8	9.0	7.7	8.8
Mexico	4.8	6.8	4.8	3.6	3.8	5.9
Other	8.4	4.0	4.1	5.4	3.9	2.9
Africa .....	.5	.6	.8	4.0	.6	.7
Middle East .....	.8	.8	.6	2.3	3.5	.4
Asia and Pacific	25.7	21.6	25.8	17.6	24.9	52.1
Japan	10.2	9.5	6.4	3.9	11.0	38.4
Other	15.6	12.1	19.4	13.7	13.8	13.6
Unallocated	1.6	5.6	4.8	4.5	8.1	4.0
Machinery-type industries						
All countries	100.0	100.0	100.0	100.0	100.0	100.0
Canada	49.8	18.8	18.9	13.8	16.7	17.8
Europe	13.3	37.6	52.6	32.5	43.4	18.1
France	2.8	29.3	4.2	2.1	4.0	1.8
Germany	1.2	1.1	41.7	5.1	7.0	3.4
Switzerland	A	.2	.2	12.3	.1	A
United Kingdom	4.6	2.3	1.9	4.7	24.8	4.8
Other	A	4.8	4.5	8.3	7.5	A
Latin America and Other Western Hemisphere	17.6	14.4	7.4	8.2	7.3	11.1
Mexico	8.0	8.0	4.8	4.7	4.3	7.8
Other	9.6	6.4	2.6	3.5	2.9	3.3
Africa	A	.7	.1	7.9	.7	.9
Middle East	A	.9	.4	A	1.1	.3
Asia and Pacific	17.3	22.8	16.2	29.4	17.5	46.9
Japan	A	10.7	4.4	4.8	5.4	29.4
Other	A	12.1	11.8	24.7	12.1	17.5
Unallocated	1.8	4.8	4.4	A	13.5	4.7
Affiliates in other manufacturing industries						
All countries	100.0	100.0	100.0	100.0	100.0	100.0
Canada	26.3	26.7	21.4	19.1	17.1	14.4
Europe	30.8	37.1	32.0	58.0	35.4	17.1
France	3.1	15.7	.9	2.9	3.2	2.4
Germany	4.2	7.5	16.3	4.1	3.8	4.7
Switzerland	A	1.0	.5	39.8	1.3	A
United Kingdom	4.3	3.8	2.5	2.4	14.8	3.5
Other	A	9.2	11.7	8.9	12.4	A
Latin America and Other Western Hemisphere	12.1	8.2	9.5	9.7	8.0	5.6
Mexico	4.0	5.8	4.7	2.6	3.5	3.4
Other	8.1	2.3	4.7	7.1	4.5	2.3
Africa	A	.6	1.2	.6	.6	.3
Middle East	A	.7	.7	A	4.9	.5
Asia and Pacific	27.7	20.8	30.3	7.0	29.0	59.1
Japan	A	8.6	7.3	3.1	14.2	50.7
Other	A	12.2	23.0	3.9	4.1	8.4
Unallocated	1.6	6.1	4.9	A	5.1	2.9

NOTE.—Size ranges are given in the percentage cells that are suppressed; these ranges are A—0.01 to 19.9; B—20.0 to 39.9; C—40.0 to 59.9; E—60.0 to 79.9; F—80.0 to 100.
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French- and British-owned affiliates. In machinery-type industries, French- and British-owned affiliates purchase a substantial share of their imported inputs from the developing and newly industrializing countries of East Asia. For affiliates in all six countries, more than 80 percent of the imports from the investing country are intrafirm imports from the affiliates' foreign parent groups.³⁴

The destinations of foreign sales by U.S. manufacturing affiliates of the six countries are less geographically concentrated than the origins of affiliate imports. In most cases, exports to the investing country account for 20–30 percent of all affiliate exports (table 11). The investing-country share is largest for Japanese-owned affiliates (38 percent); exports to Japan account for one-half of the exports by Japanese-owned affiliates in industries other than machinery-type industries. In machinery-type industries, the share of exports to the investing country is largest for German-owned affiliates (42 percent).

Appendix

Data used to construct measures

The measures of domestic content and market orientation that are examined in this article are based on BEA's data for U.S. affiliates of foreign companies and U.S. parent companies of foreign affiliates. For analytical purposes, adjustments have been made to these data; hence their presentation in this article differs in a number of ways from the standard presentation in BEA publications.

The data used to construct the measures of content and market orientation for U.S. manufacturing affiliates are from BEA's benchmark and annual surveys of foreign direct investment in the United States. These data are collected at the enterprise level from reports by fully consolidated enterprises. All of the data for an affiliate are assigned to the affiliate's "primary" industry—the industry in which it has the most sales—even though the affiliate may have production and sales in more than one industry. As a result, data for a given manufacturing industry may include some data for secondary activities in other industries.³⁵

34. However, imports from the investing country do not account for a uniformly large share of the affiliates' imports from their foreign parent groups: Only 56 percent of the intrafirm imports by British-owned affiliates originate in the United Kingdom and only 69 percent of the intrafirm imports by French-owned affiliates originate in France.

35. The data on affiliate sales can be broken down by each industry in which the given affiliate reports sales. In 1994, manufacturing sales accounted

The data used to construct the four measures for domestically owned U.S. parent companies are from BEA's benchmark surveys of U.S. direct investment abroad for 1989 and 1994. Because some U.S. parent companies are also U.S. affiliates of foreign companies, the data on U.S. parent companies have been adjusted to exclude U.S. parents that are foreign owned. (In 1994, foreign-owned U.S. parents accounted for 12 percent of the gross output of all U.S. parent companies in manufacturing.)

Domestically owned U.S. parent companies in manufacturing are used in the comparisons for four reasons. First, these companies are very similar to U.S. affiliates because of their international orientation and typically large size. Second, both the data for these companies and those for U.S. affiliates are collected at the enterprise level, using the same survey methods and the same procedures for industry classification.³⁶ Third, the data covering U.S. parent companies provide the only directly collected industry-level data on the imported intermediate inputs used by domestically owned U.S. companies.³⁷ Fourth, domestically owned U.S. parent companies in manufacturing can be viewed as representative of U.S. manufacturing companies insofar as they account for a large share—more than one-half—of the gross output of all domestically owned U.S. companies in manufacturing.³⁸

The industry-level measures for U.S. affiliates and domestically owned U.S. parent companies were constructed for 32 detailed manufacturing

for 85 percent of the total sales of affiliates classified in manufacturing; about 7 percent of their sales were accounted for by sales in wholesale trade.

36. Like the data for U.S. manufacturing affiliates, the data for U.S. parent companies classified in manufacturing include some data related to the companies' secondary activities in nonmanufacturing industries: In 1994, nonmanufacturing sales accounted for 15 percent of the total sales of U.S. parent companies in manufacturing.

37. Some researchers have constructed indirect estimates of imported inputs used in U.S. manufacturing industries by combining input-output data with data on imports classified by the industries producing the imported goods. These estimates are based on the assumption that the share of imports in the goods supplied by an industry is identical for all industries using the supplying industry's goods as intermediate inputs.

38. In 1994, domestically owned U.S. parent companies in manufacturing accounted for 56 percent of the gross output of all domestically owned companies in manufacturing. To compute this share, the gross output of U.S. corporations in manufacturing was computed from data in 1994 *Corporation Source Book of Statistics of Income* from the Internal Revenue Service (IRS); the gross output of domestically owned U.S. manufacturing companies was derived by subtracting the gross output of U.S. manufacturing affiliates from the gross output of U.S. corporations in manufacturing. (This share may be understated because of potential double-counting in the IRS data due to less than fully consolidated reporting by some U.S. corporations.)

Of the 32 manufacturing industries in table 2, domestically owned U.S. parent companies accounted for more than one-half of the gross output of all domestically owned companies in 17 industries, including 8 of the 12 machinery-type industries. The shares were less than 20 percent in the lumber and wood products, fabricated metal products, and other manufacturing industries. (Because the level of consolidation for company reports to the IRS may differ from that required in BEA's surveys of direct investment, these shares by detailed industry are approximate.)

industries (tables 2–7); this presentation is more detailed than the industry presentation in BEA's standard tables for either U.S. affiliates or U.S. parent companies.³⁹ Specifically, the industries are disaggregated to represent the production stages or processes in an industry group; for example, lumber and wood products is separated from furniture and fixtures. In addition, more detail is shown for industries that are usually grouped in "other industrial machinery and equipment."

For *industry-level results*, the data used to construct the measures for the manufacturing affiliates in 1994 are restricted to affiliates that also existed in 1993, so that the change-in-inventories component of gross output could be computed from reported data on inventory levels. This group of affiliates accounts for 98 percent of the gross product and sales of manufacturing affiliates in the universe in 1994. Similarly, the data used to construct the measures for affiliates in 1989 are restricted to those for affiliates that also existed in 1988. For domestically owned U.S. parent companies, the change-in-inventories component of total output was estimated (table 1), because data on U.S.-parent-company inventories are collected only in benchmark survey years.

For *changes in behavior over time*, panel data for affiliates classified in machinery-type industries are used in order to isolate changes in affiliate behavior from changes in the population of affiliates. The panel consists of 371 affiliates that were classified in machinery-type industries in 1994 and that existed in each of the years 1987–94.⁴⁰ The panel affiliates accounted for only about one-third of the 1,110 affiliates that were classified in machinery-type industries in 1994, but they accounted for 69 percent of the gross output of all affiliates in those industries in 1994; in 9 of the 12 industries, they accounted for more than one-half of the gross output (table 12).⁴¹ The panel data include data for inventories for 1987 and data for each of the items needed to compute the measures of content and market orientation for

Table 12.—Gross Output of Affiliates in the Panel as a Percentage of Gross Output of All Affiliates in the Industry, Machinery-Type Industries, 1994

Construction and mining machinery	58.6
Metalworking machinery	45.8
Special industrial machinery	56.0
General industrial machinery	85.3
Computer and office equipment	15.4
Other industrial machinery and equipment	43.0
Audio and video, and communications, equipment	92.6
Electronic components and accessories	65.6
Household appliances and other electrical machinery	76.8
Motor vehicles and equipment	72.5
Other transportation equipment	59.2
Instruments and related products	76.4

1988–94. Aggregating the data for affiliates in the panel, the four measures were computed at the industry level for each of the years 1988–94.

For *comparisons by country of ownership*, the four measures for 1989 and 1994 were constructed at the affiliate level for affiliates that also existed the previous year (so that the change-in-inventories component of affiliate gross output could be computed). To control for industry-mix effects in the comparisons, the affiliate-level measures were normalized by dividing the measure for each affiliate by the corresponding industry-level measure for domestically owned U.S. parent companies in the affiliate's industry. The comparisons are made in terms of unweighted averages of the normalized measures across samples of affiliates. The samples are restricted to manufacturing affiliates that had at least \$5 million in sales in order to prevent the averages from being skewed by the presence of large outliers that may result when the denominator (total output, purchased inputs, or sales) in the measure for an affiliate is very small.

Intended use of imports by U.S. affiliates

The results reported for U.S. affiliates—particularly the import share of their intermediate inputs—may be biased by the inclusion of imports that are unrelated to their manufacturing production. Some affiliates classified in manufacturing may have substantial imports of goods for resale without further manufacture as a result of their secondary operations in wholesale trade.

The degree of this bias can be examined using BEA's data on U.S. affiliate operations in 1994, which provide information on the intended use of affiliate imports. Specifically, the data include the value of that portion of affiliate imports that consists of the goods intended for further processing, assembly, or manufacture by the affiliate (in contrast to goods intended for resale without

39. For examples of the standard level of detail, see tables 19.1 and 19.2 in "Foreign Direct Investment in the United States: New Investment in 1996 and Affiliate Operations in 1995," and tables 17.1 and 17.2 in "U.S. Multinational Companies: Operations in 1995," SURVEY 77 (October 1997). For the most detailed presentation, see table A-1 in *Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies, Revised 1994 Estimates* (Washington, DC: U.S. Government Printing Office, June 1997).

40. The panel is based on the industry classification of the affiliates in 1994; however, some of the affiliates that were classified in a given industry in 1994 may have been classified in other industries in other years covered by the panel.

41. However, the affiliates in the panel accounted for only 15 percent of the total output of affiliates in computer and office equipment, so the behavior of the affiliates in the panel may not be generalized to that of all affiliates in this industry.

further manufacture or to capital goods intended as additions to the affiliate's capital stock).⁴²

In 1994, imports of goods for further manufacture accounted for 53 percent of the total imports of the affiliates in manufacturing (table 13, column 3). The shares of affiliate imports accounted for by goods intended for further manufacture were less than 50 percent in one-half of the 32 industries and were less than 30 percent in five of them—beverages, rubber products, glass products, household appliances and other electrical equipment, and instruments.

The degree of bias that is introduced by the inclusion of these imports can be assessed by reconstructing the measure for a restricted sample

of affiliates for whom goods intended for further manufacture account for at least 50 percent of imports. Table 13 shows the industry-level import-share measures for this restricted sample of affiliates (column 4) in comparison with the measures for all manufacturing affiliates (column 1); the last two columns show the ratios of these measures to the corresponding measure for domestically owned U.S. parent companies.⁴³

In most industries, the import shares for the full and restricted samples of affiliates are very similar, both in absolute terms and relative to the measures for the domestically owned companies. In a few industries, however, the import-share measures are substantially lower for affiliates in

42. Data on imports intended for further manufacture have been collected annually beginning with the 1992 benchmark survey. The benchmark-survey data also include separate data on imports of goods for resale without further manufacture and on imports of capital equipment; in 1992, imports for resale accounted for 95 percent of manufacturing affiliates' imports of goods that were not intended for further manufacture.

43. For most of the affiliates in the restricted sample, the shares of imports accounted for by goods intended for further manufacture are much higher than 50 percent. As shown in column 6 of table 13, imports for further manufacture accounted for 88 percent of the total imports of affiliates in the restricted sample; at the industry level, the shares in two-thirds of the 32 industries are more than 90 percent.

Table 13.—Import-Share Measures for Full and Restricted Samples of U.S. Manufacturing Affiliates, by Industry, 1994

	Full sample			Restricted sample ¹			Addenda:	
	Imports as a percentage of intermediate inputs	Imports of goods for further manufacture as a percentage of intermediate inputs	Imports of goods for further manufacture as a percentage of total imports	Imports as a percentage of intermediate inputs	Imports of goods for further manufacture as a percentage of intermediate inputs	Imports of goods for further manufacture as a percentage of total imports	Imports as a percentage of intermediate inputs: Ratio of measure for U.S. affiliates to measure for U.S. parent companies ²	
	(1)	(2)	(3)	(4)	(5)	(6)	Full sample (7)	Restricted sample (8)
Manufacturing³	18.7	10.0	53.3	17.2	15.2	88.0	1.65	1.52
Beverages	15.6	A	A	.2	.2	100.0	6.38	.07
Other food products	7.6	A	C	8.0	7.4	93.3	3.16	3.30
Textile mill products	8.8	4.2	48.5	5.8	5.8	99.0	2.58	1.72
Apparel and other textile products	12.7	9.3	72.9	12.4	10.2	82.4	1.33	1.30
Lumber and wood products	8.3	5.6	67.4	6.3	6.3	100.0	4.92	3.70
Furniture and fixtures	5.6	4.5	80.7	4.9	4.9	100.0	1.60	1.41
Paper and allied products	11.0	7.7	70.3	9.4	8.2	87.2	2.59	2.23
Printing and publishing	2.1	.9	40.6	1.3	1.2	98.6	.90	.53
Industrial chemicals and synthetics	14.8	7.8	52.6	13.0	10.8	83.4	1.65	1.45
Drugs	19.9	10.8	54.5	18.1	15.1	83.2	3.59	3.26
Soap, cleaners, and toilet goods	3.4	1.6	47.6	3.8	3.6	95.8	.71	.80
Other chemicals	17.0	11.4	67.0	22.7	21.9	96.5	6.48	8.66
Rubber products	27.9	5.0	17.8	16.2	14.9	92.2	2.13	1.24
Miscellaneous plastics products	15.5	5.2	33.7	6.5	6.2	95.5	3.99	1.67
Glass products	13.6	3.6	26.4	10.6	10.6	100.0	7.19	5.60
Stone, clay, and concrete products	7.7	3.5	45.2	5.6	4.7	82.8	2.27	1.67
Primary ferrous metals	14.8	8.9	60.1	15.7	15.2	97.1	2.05	2.17
Primary nonferrous metals	21.9	14.0	64.2	23.0	16.3	71.2	2.50	2.62
Fabricated metal products	12.5	4.0	31.9	8.5	6.3	74.4	3.40	2.30
Construction and mining machinery	37.1	19.5	52.7	34.9	26.7	76.5	2.23	2.10
Metalworking machinery	25.5	12.4	48.8	22.2	22.2	100.0	3.88	3.39
Special industrial machinery	24.1	18.0	74.6	27.6	25.8	93.4	4.34	4.98
General industrial machinery	20.7	9.5	46.0	14.7	11.4	78.1	1.13	.80
Computer and office equipment	39.6	22.8	57.6	43.3	33.0	76.3	1.29	1.41
Other industrial machinery and equipment	23.2	10.6	45.9	17.3	16.6	95.9	2.66	1.98
Audio, video, and communications equipment	41.1	29.2	71.1	45.4	44.1	97.1	3.30	3.64
Electronic components and accessories	29.1	11.8	40.6	21.4	21.3	99.2	2.11	1.55
Household appliances and other electrical machinery	25.4	6.2	24.5	11.6	11.5	99.5	4.43	2.02
Motor vehicles and equipment	31.8	23.8	74.7	32.2	29.3	91.1	1.32	1.33
Other transportation equipment	22.8	10.6	46.5	15.2	14.6	95.6	3.23	2.16
Instruments and related products	14.9	4.4	29.2	9.3	8.6	91.8	1.31	.82
Other manufacturing	12.9	9.6	74.5	13.1	10.9	83.6	1.49	1.51

1. Restricted to manufacturing affiliates that had at least \$5 million in sales and whose imports, if any, consisted mainly of goods intended for further processing, assembly, or manufacture by the affiliate.
2. Import share for the given sample of affiliates divided by the import share for domestically owned U.S. parent companies shown in table 4.

3. See table 2, footnote 1.
NOTE.—Size ranges are given in the percentage cells that are suppressed; these ranges are A—0.01 to 19.9; B—20.0 to 39.9; C—40.0 to 59.9; E—60.0 to 79.9; F—80.0 to 100.

the restricted sample, indicating that the measures for the full sample are biased by the inclusion of imports that are unrelated to manufacturing production. The bias is particularly pronounced in beverages, rubber products, miscellaneous plastics products, and household appliances.

The restricted sample of affiliates was also used to evaluate the degree to which the comparisons by country of ownership in table 9.2 reflect imports unrelated to manufacturing production. Table 14 presents the mean values of the normalized measures for affiliates of each country based on the restricted sample. For the import-share measure, the means shown in table 14 for the restricted sample are generally


lower than the means shown in table 9.2 for the full sample; however the overall pattern across countries is very similar. In both tables, German-owned affiliates have very high import shares, and British-owned affiliates have relatively low shares. The rankings among countries in terms of the import shares are also similar for Canadian- and Japanese-owned affiliates. For French- and Swiss-owned affiliates, however, the average import shares are substantially lower in the restricted sample than in the full sample, indicating that the shares in the full sample are inflated by imports unrelated to their manufacturing production. 

Table 14.—Means of Normalized Measures for Restricted Sample of Manufacturing Affiliates, by Country of UBO, 1994

[Standard deviations in parentheses]

	All countries	Canada	France	Germany	Switzerland	United Kingdom	Japan	Other countries
Domestic content as a percentage of gross output:								
All industries	0.93 (.21)	0.95 (.19)	0.92 (.21)	0.89 (.22)	0.91 (.18)	0.99 ^a (.15)	0.91 (.24)	0.93 (.19)
Machinery-type industries .....	.90 (.24)	1.03 ^a (.12)	.86 (.28)	.85 (.23)	.87 (.21)	1.00 ^a (.20)	.85 (.27)	.93 (.22)
Other industries .....	.94 (.18)	.92 (.20)	.95 ^a (.16)	.92 (.20)	.93 (.17)	.98 ^a (.12)	.95 (.19)	.94 (.18)
Value added as a percentage of gross output:								
All industries .....	.73 (.50)	.71 (.51)	.74 (.74)	.77 (.43)	.83 (.51)	.83 (.49)	.68 (.50)	.72 (.47)
Machinery-type industries .....	.71 (.49)	.80 ^a (.69)	.52 (.84)	.73 (.44)	.80 ^a (.53)	.84 (.44)	.66 (.41)	.70 (.46)
Other industries .....	.75 (.51)	.69 (.45)	.85 ^a (.66)	.80 (.42)	.84 (.50)	.83 (.52)	.70 (.55)	.72 (.48)
Imports as a percentage of intermediate inputs:								
All industries	2.70 (6.08)	3.12 (8.07)	2.28 (4.26)	3.61 (6.62)	3.10 (5.42)	1.63 (4.05)	2.50 (6.00)	2.84 (6.10)
Machinery-type industries	2.16 (3.02)	.77 ^a (1.29)	2.29 ^a (3.56)	3.14 (3.75)	2.66 (3.06)	1.13 ^a (2.36)	2.27 (2.65)	2.09 (3.20)
Other industries	3.01 (7.24)	3.79 (9.01)	2.27 (4.61)	4.02 (8.35)	3.28 (6.15)	1.92 (4.75)	2.66 (7.49)	3.19 (7.04)
Exports as a percentage of total sales:								
All industries	1.04 ^a (1.96)	1.10 ^a (2.07)	.97 ^a (1.50)	.86 ^a (1.59)	.90 ^a (1.19)	.77 ^a (1.56)	1.25 (2.29)	1.01 ^a (2.03)
Machinery-type industries .....	.87 (1.13)	.97 ^a (1.33)	1.05 ^a (1.23)	.74 (.90)	.86 ^a (.76)	.61 (.71)	.85 ^a (1.11)	1.09 ^a (1.43)
Other industries	1.13 ^a (2.29)	1.14 ^a (2.23)	.92 ^a (1.63)	.96 ^a (2.01)	.91 ^a (1.33)	.86 ^a (1.89)	1.53 (2.80)	.98 ^a (2.26)
Addenda: Number of affiliates:								
All industries	1,436	159	90	194	62	173	419	339
Machinery-type industries	518	35	31	90	18	64	172	108
Other industries	918	124	59	104	44	109	247	231

^a Not statistically different from 1 at the 95-percent confidence level.

NOTES.—To normalize, the measure of content calculated for each affiliate was divided by the corresponding aggregate measure for U.S. parent companies classified in the industry of the affiliate.

The sample is restricted to manufacturing affiliates that had at least \$5 million in sales and whose imports, if any, consisted mainly of goods intended for further processing, assembly, or manufacture by the affiliate.

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U.S. International Transactions, Fourth Quarter and Year 1997

By Christopher L. Bach

FOURTH QUARTER 1997

THE U.S. current-account deficit increased to \$45.6 billion in the fourth quarter from \$43.1 billion (revised) in the third (table A, table 1).¹ A decrease in the deficit on goods was more than offset by an increase in net unilateral transfers, a decrease in the surplus on services, and an increase in the deficit on investment income.

In the capital account, net recorded inflows were \$85.2 billion in the fourth quarter, compared with net inflows of \$72.6 billion in the third. The step-up in net inflows reflected a larger slowdown

in the increase in U.S. assets abroad than in the increase in foreign assets in the United States.

The statistical discrepancy—errors and omissions in recorded transactions—was a negative \$39.6 billion in the fourth quarter, compared with a negative \$29.5 billion in the third. In the fourth quarter, and perhaps in the third, the size of the discrepancy is believed to reflect the imperfect recording of short-term capital flows.

The following are highlights for the fourth quarter of 1997:

- The deficit on goods fell as exports resumed their rise.
- Net U.S. purchases of foreign securities were sharply lower, reflecting uncertainties created by financial problems in Asia. Direct investment outflows were sharply higher, off-

1. Quarterly estimates of U.S. current- and capital-account components are seasonally adjusted when statistically significant seasonal patterns are present. The accompanying tables present both adjusted and unadjusted estimates.

Table A.—Summary of U.S. International Transactions

[Millions of dollars, seasonally adjusted]

Line	Lines in tables 1 and 10 in which transactions are included indicated in ()	1996	1997 ^P	Change: 1996-97	1996				1997				Change: 1997 III-IV
					I	II	III	IV	I ^r	II ^r	III ^r	IV ^P	
1	Exports of goods, services, and income (1)	1,055,233	1,167,610	112,377	256,382	262,335	261,979	274,545	279,320	293,668	295,527	299,096	3,569
2	Goods, adjusted, excluding military (2)	612,069	678,348	66,279	150,048	153,411	150,764	157,846	162,341	171,227	170,255	174,525	4,270
3	Services (3)	236,764	253,220	16,456	57,057	58,736	59,322	61,656	61,736	63,335	64,397	63,754	-643
4	Income receipts on investments (11)	206,400	236,043	29,643	49,277	50,188	51,893	55,043	55,243	59,106	60,875	60,817	-58
5	Imports of goods, services, and income (15)	-1,163,450	-1,295,530	-132,080	-278,860	-289,231	-295,865	-299,493	-310,659	-322,608	-329,571	-332,691	-3,120
6	Goods, adjusted, excluding military (16)	-803,239	-877,282	-74,043	-192,973	-200,973	-203,257	-206,036	-212,185	-218,415	-222,256	-224,426	-2,170
7	Services (17)	-156,634	-167,929	-11,295	-38,671	-38,953	-39,345	-39,664	-41,216	-41,817	-42,303	-42,592	-289
8	Income payments on investments (25)	-203,577	-250,320	-46,743	-47,216	-49,305	-53,263	-53,793	-57,258	-62,376	-65,012	-65,673	-661
9	Unilateral transfers (29)	-39,968	-38,526	1,442	-10,406	-8,689	-8,947	-11,926	-8,577	-8,855	-9,070	-12,024	-2,954
10	U.S. assets abroad, net (increase/capital outflow (-)) (33)	-352,444	-426,938	-74,494	-70,768	-49,698	-77,542	-154,436	-128,297	-91,264	-110,696	-96,678	14,018
11	U.S. official reserve assets, net (34)	6,668	-1,010	-7,678	17	-523	7,489	-315	4,480	-236	-730	-4,524	-3,794
12	U.S. Government assets, other than official reserve assets, net (39)	-690	177	867	-210	-358	162	-284	-21	-268	461	5	-456
13	U.S. private assets, net (43)	-358,422	-426,105	-67,683	-70,575	-48,817	-85,193	-153,837	-132,756	-90,760	-110,427	-92,159	18,268
14	Foreign assets in the United States, net (increase/ capital inflow (+)) (48)	547,555	690,497	142,942	88,233	106,114	158,629	194,579	182,282	143,059	183,292	181,863	-1,429
15	Foreign official assets, net (49)	122,354	18,157	-104,197	52,014	13,154	24,089	33,097	28,891	-5,374	21,867	-27,227	-49,094
16	Other foreign assets, net (56)	425,201	672,340	247,139	36,219	92,960	134,540	161,482	153,391	148,433	161,425	209,090	47,665
17	Allocations of special drawing rights (62) .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	Statistical discrepancy (63)	-46,927	-97,113	-50,186	15,419	-20,831	-38,254	-3,269	-14,069	-14,000	-29,482	-39,566	-10,084
Memoranda:													
19	Balance on goods (64)	-191,170	-198,934	-7,764	-42,925	-47,562	-52,493	-48,190	-49,844	-47,188	-52,001	-49,901	2,100
20	Balance on goods and services (66)	-111,040	-113,643	-2,603	-24,539	-27,779	-32,516	-26,198	-29,324	-25,670	-29,907	-28,739	1,168
21	Balance on investment income (67)	2,824	-14,277	-17,101	2,061	883	-1,370	1,250	-2,015	-3,270	-4,137	-4,856	-719
22	Balance on current account (70)	-148,184	-166,446	-18,262	-32,884	-35,585	-42,833	-36,874	-39,916	-37,795	-43,114	-45,619	-2,505
23	Net capital flows (33 and 48)	195,111	283,559	68,448	17,465	56,416	81,087	40,143	53,985	51,795	72,596	85,185	12,589

^r Revised.

^P Preliminary.

setting some of the decline in outflows for net securities purchases.

- U.S. banks borrowed heavily to fund strong demand for credit at financial centers in the Caribbean and the United Kingdom and to replace the drop-off in deposit inflows to foreign-owned banks in the United States. In addition, some foreigners elected to hold deposits at banks in the United States, rather than at foreign banking institutions, in the face of uncertainties created by deteriorating economic and financial conditions in Asia.

U.S. dollar in exchange markets

In the fourth quarter, the U.S. dollar depreciated 1 percent on a trade-weighted quarterly average basis against the currencies of 10 industrial countries. Against the European currencies, the dollar depreciated 3–4 percent. Against the Japanese yen, the dollar appreciated 6 percent. Against the currencies of developing countries in Asia, appreciation was substantial: 7 percent against the Singapore dollar, 10 percent against the Taiwan dollar, 24 percent against the Thai baht, 25 percent against the Malaysian ringgit, 31 percent against the South Korean won, and 47 percent against the Indonesian rupiah (table B, chart 1).

The U.S. dollar depreciated 3–4 percent against most European currencies in the quarter. Weakness of the dollar for much of the quarter partly reflected a decision by German monetary authorities to raise short-term interest rates 30 basis points in early October. By the end of the quarter, the market had pushed German rates up further, leading to a more rapid rise in German rates than in U.S. rates and a narrowing of the interest differential in favor of U.S. assets (charts 2 and 3). The dollar strengthened late in the quarter, partly because the U.S. economy came to be seen as less vulnerable to the financial problems in Asia than the European economies. In addition, at the end of the quarter, German and other European officials reached an understanding to orient interest rates toward the lowest interest rates among “core” countries of the European Monetary Union.

The U.S. dollar appreciated 6 percent against the Japanese yen, as additional evidence accumulated of slowing economic growth in Japan. Negative prospects about future economic growth were exacerbated when several large, prominent, financial institutions failed in November. By early December, concerns over creditworthiness led to a widening to 100 basis points of the

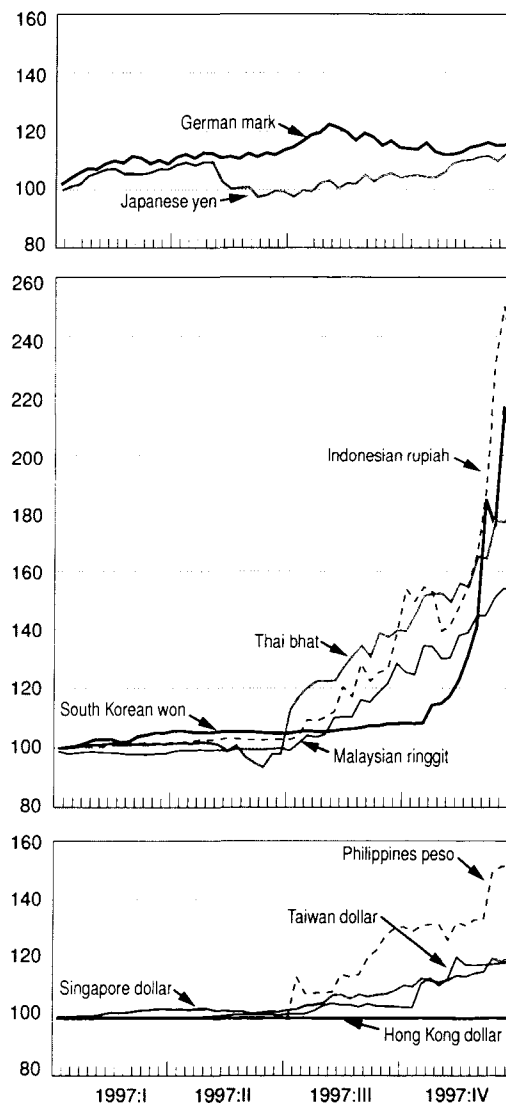
premium paid by some Japanese banks over non-Japanese banks for dollar funding. Falling equity prices, asset values, and currency prices in developing Asian countries also adversely affected the Japanese economy and exchange rate. Late in December, Japanese monetary authorities confirmed that they had intervened to support the yen in exchange markets.

In late October, the Hong Kong Monetary Authority moved to defend the tie of the Hong Kong dollar to the U.S. dollar, despite the round of

CHART 1

Indexes of Foreign Currency Price of the U.S. Dollar

December 31, 1996=100



Indexes prepared by BEA from weekly data.

Data: Federal Reserve Board and The Wall Street Journal

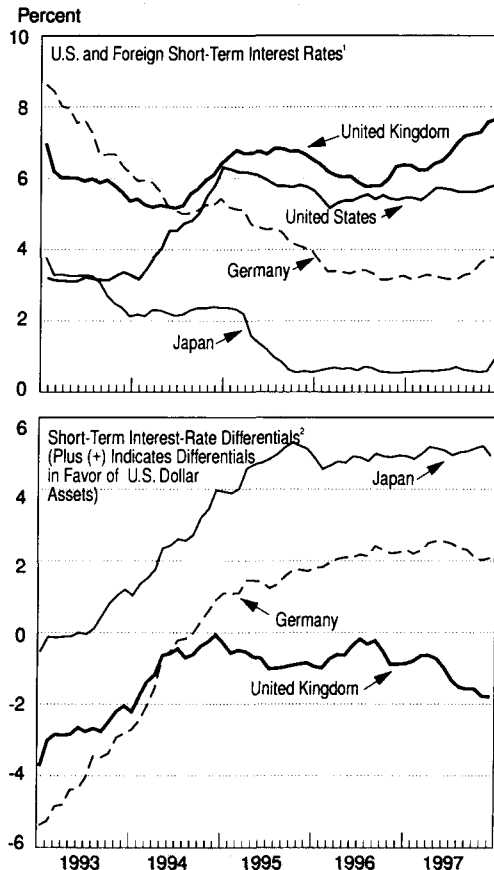
U.S. Department of Commerce, Bureau of Economic Analysis

competitive currency devaluations just completed by other developing countries in Asia, including Taiwan. A sharp rise in interest rates halted depreciation of the Hong Kong dollar, but led to a sudden, sizable drop in prices on the Hong Kong

stock exchange, which in turn triggered temporary sharp price declines in stock markets around the world and sharply raised risk premiums in world bond markets. In November, the Republic of Korea announced that it would no longer

CHART 2

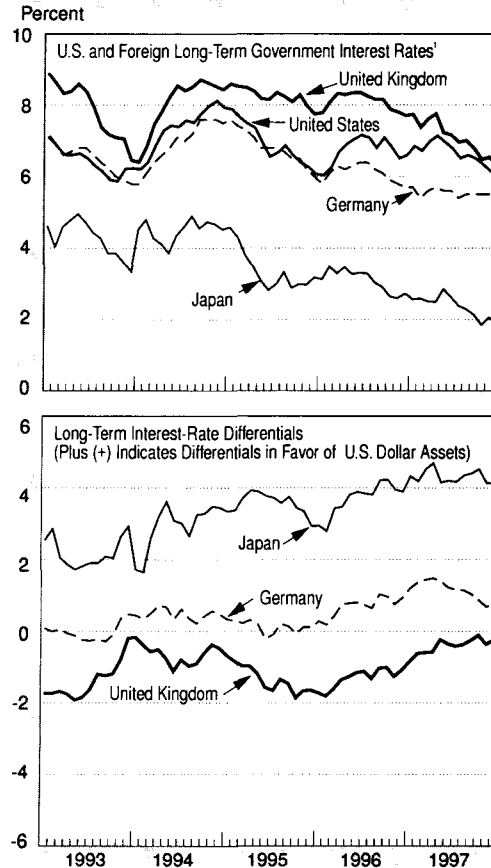
Short-Term Interest Rates



1. Interest rates for 90-day deposits.
 2. U.S. interest rates less respective foreign interest rates.
 Data: OECD.
 U.S. Department of Commerce, Bureau of Economic Analysis

CHART 3

Long-Term Interest Rates



1. Secondary-market yields on long-term government bonds—U.S. (composite over 10 years); Germany (7-15 year public sector bonds); U.K. (20-year government bonds); Japan (Central Government 10-year benchmark bond)
 2. U.S. interest rates less respective foreign interest rates.
 Data: OECD.
 U.S. Department of Commerce, Bureau of Economic Analysis

Table B.—Indexes of Foreign Currency Price of the U.S. Dollar
 [March 1973=100]

	1996		1997				1996		1997									
	IV	I	II	III	IV	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Trade-weighted average against 10 currencies ¹	87.9	93.7	95.7	98.6	97.4	88.7	91.0	94.5	95.6	96.4	95.3	95.4	97.5	100.0	98.3	97.1	96.4	98.8
Selected currencies: ²																		
Canada	135.5	136.4	139.1	139.0	141.3	136.7	135.4	136.0	137.7	139.9	138.5	138.9	138.2	139.5	139.2	139.1	141.7	143.2
European currencies:																		
Belgium	80.1	86.8	89.8	94.7	92.0	81.2	84.0	87.7	88.7	89.6	89.3	90.5	94.0	96.5	93.6	92.0	90.7	93.3
France	114.6	123.9	128.0	134.7	130.3	116.1	119.9	125.2	126.6	127.7	127.3	129.1	134.0	137.3	132.9	130.6	128.4	131.9
Germany	54.4	58.9	61.0	64.2	62.4	55.2	57.0	59.5	60.2	60.9	60.6	61.4	63.8	65.4	63.5	62.5	61.6	63.2
Italy	267.9	288.3	297.6	310.1	302.8	269.0	276.0	291.3	297.7	298.2	296.4	298.3	307.3	316.3	306.8	302.9	298.7	306.9
Netherlands	59.8	64.9	67.2	70.9	68.9	60.7	62.8	65.5	66.4	67.1	66.8	67.7	70.4	72.1	70.1	69.0	68.0	69.8
Switzerland	40.0	44.6	44.9	46.3	44.5	41.3	43.2	45.2	45.5	45.4	44.5	44.8	46.1	47.0	45.7	45.1	43.7	44.7
United Kingdom	151.0	151.6	151.2	152.2	148.9	148.6	149.1	152.1	153.6	151.7	151.5	150.3	148.1	154.2	154.4	151.4	146.4	149.0
Japan	43.1	46.3	45.7	45.1	47.9	43.5	45.0	47.0	46.9	48.0	45.5	43.7	44.1	45.0	46.2	46.2	47.9	49.5

1. Currencies of Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, and United Kingdom. Data: Federal Reserve Board. Monthly and quarterly average rates. Index rebased by BEA.
 2. Data: Federal Reserve Board. Monthly and quarterly average rates. Indexes prepared by BEA.

support the won in exchange markets and, experiencing a large number of corporate failures and an inability to pay interest on its foreign currency debt, applied to the International Monetary Fund (IMF) for assistance. An IMF rescue package was approved in early December for Korea. An IMF rescue package for Indonesia had previously been approved in November.

Current Account

Goods and services

The deficit on goods and services decreased to \$28.7 billion in the fourth quarter from \$29.9 billion in the third. The deficit on goods decreased, and the surplus on services decreased.

Goods.—The deficit on goods decreased to \$49.9 billion in the fourth quarter from \$52.0 billion in the third. The reduction resulted from a larger increase in exports than in imports (table A, table 2).

Exports.—Exports increased \$4.3 billion, or 3 percent, to \$174.5 billion in the fourth quarter. Quantity, measured in chained (1992) dollars, also increased 3 percent. Prices were unchanged.

Nonagricultural goods increased \$3.5 billion, or 2 percent, to \$159.2 billion. Quantity increased 3 percent, and prices decreased 1 percent. In value, capital goods accounted for nearly two-thirds of the increase. Gains for the quarter included record deliveries of civilian aircraft, mostly in December, over two-thirds of which was to Saudi Arabia. The bunching of deliveries late in the quarter reflected a makeup for production that was curtailed by parts shortages during the summer and autumn months. Excluding civilian aircraft and parts, capital goods were virtually unchanged. Automotive products increased to both Canada and Mexico. Consumer goods, mostly to Western Europe, also increased. Nonagricultural industrial supplies and materials changed little; they had decreased in the third quarter when nonmonetary gold shipments had dropped sharply.

Agricultural exports increased \$0.8 billion, or 6 percent, to \$15.4 billion. Quantity increased 7 percent, and prices fell 1 percent. In value, an especially strong increase in soybeans more than accounted for the rise, with large shipments to Asia, Western Europe, and Latin America.

Imports.—Imports increased \$2.2 billion, or 1 percent, to \$224.4 billion in the fourth quarter. Quantity, measured in chained (1992) dol-

lars, increased 2 percent, and prices decreased 1 percent.

All of the increase was accounted for by non-petroleum products, which increased \$2.2 billion, or 1 percent, to \$206.8 billion. Quantity increased 2 percent, and prices decreased 1 percent. In value, consumer goods accounted for nearly all of the increase, with over one-half of the increase from Western Europe and other large increases from Japan, Latin America, and Canada. Consumer goods from China declined. Capital goods increased slightly; an increase in most types of machinery, mostly from Japan, was partly offset by declines in computers and parts, mostly from Singapore, and in semiconductors, all from Japan. Nonpetroleum industrial supplies and materials rose slightly. Automotive imports fell; the decline consisted largely of autos from Japan.

Petroleum imports were unchanged at \$17.6 billion. The average number of barrels imported daily decreased to 10.87 million from 10.96 million, but the average price per barrel increased to \$17.72 from \$17.58. Both consumption and production increased, while inventories fell.

Balances by area.—The deficit on goods decreased to \$49.9 billion in the fourth quarter from \$52.0 billion in the third. The deficit with Asia, excluding Japan, fell \$5.1 billion, to \$23.1 billion, more than accounting for the decrease in the global deficit; the deficit with China—which declined \$2.3 billion, to \$12.9 billion—accounted for nearly one-half of the reduction. Trade with the newly industrialized countries was mixed, as a lower deficit with Taiwan and a higher surplus with Hong Kong were partly offset by higher deficits with the Republic of Korea and Singapore.

The decrease in the deficit with Asia, excluding Japan, was partly offset by an increase in the deficit with industrial countries to \$24.7 billion from \$21.1 billion. Most of the increase was with Canada, followed by Western Europe and Japan.

Services.—The surplus on services decreased to \$21.2 billion in the fourth quarter from \$22.1 billion in the third (table A, table 3). Most major categories of service receipts decreased, more than offsetting the rise in “other” transportation receipts. Within service payments, travel, passenger fares, “other” transportation, and direct defense expenditures abroad increased, and royalties and license fees and “other” services decreased.

Foreign visitors spent \$18.5 billion on travel in the United States, down 1 percent. Receipts from overseas visitors (excluding Canada and Mexico)

were \$16.0 billion, down 1 percent; a decline in visitors from Asia as a result of the financial problems in the region partly offset continued growth in visitors from the rest of the world. However, receipts from Canada and Mexico were both down. U.S. travelers spent \$13.2 billion abroad, up 3 percent. Payments by U.S. travelers overseas were \$10.5 billion, up 5 percent; payments to Canada were unchanged, and payments to Mexico were down.

Passenger fare receipts were \$5.4 billion, down 1 percent, and passenger fare payments were \$4.3 billion, up 3 percent.

"Other" transportation receipts increased \$0.3 billion, to \$7.2 billion, as a result of higher port expenditure receipts and freight receipts. "Other" transportation payments increased \$0.1 billion, to \$7.5 billion, as a result of higher port expenditure payments.

Royalties and license fee receipts were unchanged at \$7.5 billion, and royalties and license fee payments decreased \$0.2 billion, to \$1.8 billion.

"Other" private service receipts decreased to \$21.0 billion from \$21.3 billion, largely as a result of a decrease in affiliated services. Among unaffiliated services, receipts on financial services decreased, as foreign activity dropped sharply in U.S. financial markets in response to market concerns over Asian financial problems. "Other" private service payments decreased to \$12.0 billion from \$12.3 billion, as affiliated service payments declined. Among unaffiliated services, payments on financial services abroad decreased, as U.S. activity in foreign financial markets dropped sharply in response to the same concerns about Asian financial problems.

Transfers under U.S. military sales contracts were \$4.0 billion, down from \$4.3 billion; despite the decline, deliveries in the fourth quarter remained above the levels of most recent quarters. Direct defense expenditures abroad were \$3.1 billion, up from \$2.9 billion. Increased maneuvers in the Persian Gulf in response to tensions in Iraq and higher purchases of contractual services boosted expenditures.

Investment income

The deficit on investment income increased to \$4.9 billion in the fourth quarter from \$4.1 billion in the third, as payments increased more than receipts (table A).

Direct investment income.—Receipts of income on U.S. direct investment abroad, which consist of

earnings and interest, decreased to \$27.2 billion in the fourth quarter from \$28.2 billion in the third. A \$1.1 billion decrease in earnings more than accounted for the drop. Earnings increased for affiliates in Western Europe, but they decreased for Canada, Other Western Hemisphere, and Asia. Within Asia, decreases were largest in Hong Kong and Japan, where about half of U.S. direct investment in Asia is located. For Indonesia, Korea, and Thailand, which experienced the largest currency depreciations and account for about 17 percent of investment in Asia, earnings were down slightly.

Payments of income on foreign direct investment in the United States decreased to \$11.1 billion in the fourth quarter from \$11.7 billion in the third, reflecting a decrease in earnings. The largest decrease was in affiliates of Western European parents and was concentrated in chemicals, machinery, and petroleum.

"Other" private and U.S. Government income.—Receipts of income on "other" private investment increased to \$32.8 billion in the fourth quarter from \$31.8 billion in the third, mostly as a result of higher outstanding bank claims. Payments of income on "other" private investment increased to \$30.9 billion from \$29.9 billion, as a result of higher outstanding bank liabilities.

Receipts of income on U.S. Government assets decreased slightly to \$0.8 billion in the fourth quarter. Payments of income on U.S. Government liabilities increased to \$23.7 billion from \$23.5 billion.

Unilateral transfers

Net unilateral transfers were \$12.0 billion in the fourth quarter, up from \$9.1 billion in the third (table A, table 1). Nearly all of the increase was attributable to U.S. Government grants, which rose to \$5.1 billion from \$2.2 billion as a result of cash grants to Israel—\$1.8 billion under the credit waiver program to finance military purchases and \$1.2 billion to finance economic purchases. Normally, these funds are drawn in their entirety as soon as the U.S. Congress appropriates the funds early in the new fiscal year, usually in October. This year, because of delays in the budget process, these funds were appropriated and drawn in December.

Capital Account

Net recorded capital inflows—that is, the difference between changes in net U.S. assets abroad and changes in net foreign assets in the United States—were \$85.2 billion in the fourth quarter, compared with net inflows of \$72.6 billion in the third. The step-up in net inflows from the third to the fourth quarter reflected a larger slowdown in the increase in U.S. assets abroad than in the increase in foreign assets in the United States.

U.S. assets abroad

U.S. assets abroad increased \$96.7 billion in the fourth quarter, compared with an increase of \$110.7 billion in the third. The slowdown reflected sharply lower net outflows for U.S. purchases of foreign securities. Direct investment outflows increased sharply.

U.S. official reserve assets.—U.S. official reserve assets increased \$4.5 billion in the fourth quarter, compared with an increase of \$0.7 billion in the third. In the fourth quarter, the U.S. reserve position with the International Monetary Fund (IMF) increased \$4.2 billion, mainly reflecting drawings by Indonesia and Korea on the IMF's credit facilities (table C, table 1).

Claims reported by U.S. banks.—U.S. claims on foreigners reported by U.S. banks increased \$30.5 billion in the fourth quarter, compared with an increase of \$30.6 billion in the third (table 8). Banks' own claims payable in dollars increased strongly in the fourth quarter, by \$48.1 billion, in response to heightened demands for credit in the Eurodollar market, particularly by banks in the Caribbean and the United Kingdom. U.S.-owned

banks supplied funds to meet heavy foreign purchases of U.S. Treasury securities in October; to meet strong interbank demand for credit, particularly in Europe, toward the end of the quarter; and to provide liquidity at a time when overseas markets were reacting to deteriorating financial conditions in Asia. Foreign-owned banks also supplied funds to the interbank market in Europe, but on a smaller scale than U.S.-owned banks. U.S. banks' domestic customers' claims fell sharply, \$12.6 billion, as U.S. residents reduced their deposits with banks in foreign financial centers, possibly in response to concerns about the Asian financial situation.

Foreign securities.—Net U.S. purchases of foreign securities were \$3.7 billion in the fourth quarter, down sharply from \$39.2 billion in the third (table 6).

Net U.S. purchases of foreign bonds fell to \$6.3 billion from \$23.7 billion, largely as a result of a drop in foreign new issues in the United States to \$12.5 billion from \$23.6 billion. Uncertainties about credit risks of new bond issues by emerging market countries in Asia as well as Latin America led to a sharp reduction in new bond issues in the U.S. market. Corporations in these areas had been heavy borrowers in the first half of the year, but by the fourth quarter, risk premiums on new issues by Asian emerging countries had risen 180–200 basis points from the first half of the year, effectively curtailing much borrowing. Some borrowing may have shifted to the banking markets. New issues from the emerging market countries in Latin America were also adversely affected by the Asian developments, although the risk premiums on these issues rose only 40–60 basis points. Borrowing by Latin

Table C.—Selected Transactions With Official Agencies

[Millions of dollars]

	1996	1997 ^P	Change: 1996–97	1996				1997				Change: 1997 III–IV
				I	II	III	IV	I	II	III ^r	IV ^P	
Changes in foreign official assets in the United States, net (decrease –) (table 1, line 49)	122,354	18,157	-104,197	52,014	13,154	24,089	33,097	28,891	-5,374	21,867	-27,227	-49,094
Industrial countries ¹	65,498	11,188	-54,310	39,787	9,434	11,367	4,910	18,013	6,326	4,944	-18,095	-23,039
Members of OPEC ²	12,278	12,782	504	-1,539	5,239	5,263	3,315	9,272	2,287	2,619	-1,396	-4,015
Other countries	44,578	-5,813	-50,391	13,766	-1,519	7,459	24,872	1,606	-13,987	14,304	-7,736	-22,040
Changes in U.S. official reserve assets, net (increase –) (table 1, line 34)	6,668	-1,010	-7,678	17	-523	7,489	-315	4,480	-236	-730	-4,524	-3,794
Activity under U.S. official reciprocal currency arrangements with foreign monetary authorities: ³												
Foreign drawings, or repayments (–), net	-8,300	-3,500	4,800	-1,300		-7,000		-3,500				
Drawings												
Repayments	-8,300	-3,500	4,800	-1,300		-7,000		-3,500				

^r Revised.

^P Preliminary.

1. Western Europe, Canada, Japan, Australia, New Zealand, and South Africa.

2. Based on data for Ecuador, Venezuela, Indonesia, and other Asian and African oil-exporting countries. Beginning in January 1993, excludes Ecuador.

3. Consists of transactions of the Federal Reserve System and the U.S. Treasury Department's Exchange Stabilization Fund.

America dropped to \$1.5 billion from \$6.8 billion, and by other emerging market countries (mainly Asia) to \$3.6 billion from \$9.1 billion. Issues from Eastern Europe were delayed. Borrowing by corporations in Western Europe was \$6.0 billion, up from \$5.5 billion. In total, foreign new bond issues in the United States dropped to their lowest level since the second quarter of 1996. Trading activity in bonds—gross purchases plus gross sales—increased less than 1 percent.

U.S. transactions in foreign stocks shifted to net sales of \$2.6 billion from net purchases of \$15.6 billion. Transactions in Japanese stocks shifted to net sales of \$4.2 billion from net purchases of \$3.1 billion, reflecting weak economic prospects for that country and large declines in stock prices and currency values of Japan and other Asian countries. The repercussions of Asian developments were also felt in the European markets, where U.S. transactions shifted to net sales of \$0.1 billion from net purchases of \$7.9 billion; the shift was partly in response to the sharp, but temporary, pullback in European stock prices that quickly followed the sudden drop in Hong Kong stock prices at the end of October. Trading activity in stocks increased 6 percent.

Direct investment.—Net capital outflows for U.S. direct investment abroad were \$32.9 billion in the fourth quarter, up from \$22.8 billion in the third (table 5). Equity capital outflows increased \$8.6 billion, and reinvested earnings increased \$1.8 billion. Equity capital outflows financed several exceptionally large mergers, particularly in the European investment management and securities industries.

Foreign assets in the United States

Foreign assets in the United States increased \$181.9 billion in the fourth quarter, compared with an increase of \$183.3 billion in the third. U.S. banks acquired an exceptionally large amount of foreign funds in the fourth quarter. These inflows were partly offset by a sharp reduction in inflows for net foreign purchases of U.S. securities other than U.S. Treasury securities and by a decrease in foreign official assets in the United States.

Foreign official assets.—Foreign official assets in the United States decreased \$27.2 billion in the fourth quarter, following a \$21.9 billion increase in the third. In the fourth quarter, industrial countries accounted for about two-thirds of the decrease, partly through intervention sales in

exchange markets, and developing countries accounted for one-third. Dollar assets of developing Asian countries were mixed; some countries sold dollar assets in response to financial problems, and others purchased dollar assets (table C, table 1).

Liabilities reported by banks.—U.S. liabilities reported by U.S. banks, excluding U.S. Treasury securities, increased \$87.0 billion in the fourth quarter, up sharply from an increase of \$10.1 billion in the third (table 9). U.S.-owned banks borrowed heavily from banks in financial centers in the Caribbean and the United Kingdom in order to fund especially strong interbank demand in the Eurodollar market, particularly toward the end of the quarter. In addition, some inflows were in response to the desire to hold liquid dollar assets at a time when financial conditions in Asia were deteriorating. In contrast, most foreign-owned banks in the United States borrowed little from financial centers abroad. However, Japanese-owned banks in the United States borrowed heavily from parent banks in Japan in order to replace deposit inflows that fell sharply in response to adverse developments both in Japan and throughout Asia.

U.S. Treasury securities.—Net foreign purchases of U.S. Treasury securities remained strong at \$33.8 billion in the fourth quarter, down \$2.5 billion from the third (table 9). The U.S. Treasury bond market continued to rally in the fourth quarter, benefiting from continued low inflation and news of a pending Federal budget surplus. These conditions, together with a desire to hold U.S. Treasury securities as the seriousness of the Asian situation became evident, led to exceptionally large purchases in October, nearly all from Western Europe. Net purchases weakened significantly in November and shifted to net sales in December—partly as Japan sold securities to meet liquidity needs, perhaps to fund banks in the United States whose borrowing costs escalated after several prominent financial institutions in Japan failed in November, and partly as investors in Western European countries reassessed their outlook following the initial reaction to the financial problems in Asia. Net purchases through the Caribbean picked up substantially, perhaps reflecting a shift of transactions from other market centers. Trading activity in U.S. Treasury securities decreased 5 percent.

U.S. currency flows.—Net outflows of U.S. currency were \$9.9 billion in the fourth quarter, up

from \$6.6 billion in the third (table 9). Much of the growth in recent quarters was concentrated in Russia and other states of the Commonwealth of Independent States. Elsewhere, the demand for U.S. banknotes has been relatively stable.

Other U.S. securities.—Net foreign purchases of U.S. securities other than U.S. Treasury securities were \$38.4 billion in the fourth quarter, down from \$60.4 billion in the third quarter (table 6).

Net foreign purchases of U.S. stocks were \$11.8 billion, down from \$23.2 billion. Transactions by brokers and dealers in the Caribbean shifted to net sales of \$4.6 billion from net purchases of \$6.3 billion, most likely reflecting both the temporary 7-percent decline in U.S. stock prices at the end of October and uncertainties created by financial problems in Asia. However, net purchases by Western Europeans continued unabated, rising to \$16.7 billion from \$15.1 billion. Trading activity in stocks increased 10 percent.

Net foreign purchases of U.S. bonds were \$26.6 billion, down from \$37.2 billion. The decline was more than accounted for by a sharp drop in new issues sold abroad by U.S. corporations to \$8.2 billion from \$27.5 billion. As the financial situation in Asia deteriorated, many new issues were postponed or borrowing shifted to banking markets, either in the United States or abroad, as borrowers reassessed their funding needs in the face of a possible economic slowdown in Asia. Trading activity in bonds decreased 13 percent.

Direct investment.—Net capital inflows for foreign direct investment in the United States were \$24.6 billion in the fourth quarter, down from \$25.9 billion in the third (table 5). A \$5.1 billion decrease in intercompany debt inflows and a \$1.2 billion decrease in reinvested earnings were partly offset by a \$5.0 billion increase in equity capital inflows. For intercompany debt, both receivables and payables registered especially large

swings; Other Western Europe and Australia contributed the most to the net decrease. Equity inflows included especially large acquisitions of U.S. pharmaceutical and U.S. insurance companies by Western European companies but primarily reflected capital contributions to existing U.S. affiliates.

THE YEAR 1997

The U.S. current-account deficit increased to \$166.4 billion in 1997 from \$148.2 billion in 1996. The increase was more than accounted for by a shift to a deficit on investment income and an increase in the goods deficit. The surplus on services increased, and net unilateral transfers decreased (table D).

In the capital account, net inflows in 1997 were higher than in 1996—\$263.6 billion, compared with \$195.1 billion—reflecting a larger step-up in the increase in foreign assets in the United States than in the increase in U.S. assets abroad.

The statistical discrepancy—errors and omissions in recorded transactions—was a negative \$97.1 billion in 1997, compared with a negative \$46.9 billion in 1996. Much of increase occurred in the last half of the year; in the fourth quarter, and perhaps in the third, the size of the discrepancy is believed to reflect the imperfect recording of short-term capital flows.

The following are highlights for the year 1997:

- Goods exports and goods imports both accelerated in 1997. Exports increased nearly twice as fast as in 1996 in response to a pickup in economic activity in industrial countries abroad in the last half of 1996 and in 1997; export growth was between the strong increases in 1994 and 1995. Imports increased somewhat more rapidly in 1997 than in 1996, reflecting more rapid growth in the U.S.

Table D.—Selected Balances on U.S. International Transactions

(Millions of dollars, quarters seasonally adjusted)

	1995	1996	1997 ^P	1997			
				I ^r	II ^r	III ^r	IV ^P
Goods, net	-173,560	-191,170	-198,934	-49,844	-47,188	-52,001	-49,901
Services, net	71,703	80,130	85,291	20,520	21,518	22,094	21,162
Investment income, net	6,808	2,824	-14,277	-2,015	-3,270	-4,137	-4,856
Direct, net	60,004	66,758	67,700	17,326	17,722	16,523	16,128
Other private, net	3,388	2,763	5,566	963	810	1,930	1,863
U.S. Government, net	-56,584	-66,698	-87,543	-20,304	-21,802	-22,590	-22,847
Unilateral transfers, net	-34,046	-39,968	-38,526	-8,577	-8,855	-9,070	-12,024
Current account balance	-129,095	-148,184	-166,446	-39,916	-37,795	-43,114	-45,619

^r Revised.

^P Preliminary.

economy over the past 2 years; however, import growth remained well below the sizable increases in 1994 and 1995.

- Net U.S. purchases of foreign securities were sharply lower in 1997 than in 1996; although purchases in the first three quarters were ahead of the pace of a year earlier, uncertainties and higher risks created by Asian financial conditions sharply curtailed net purchases in the fourth quarter. In contrast, net foreign purchases of U.S. securities other than U.S. Treasury securities were substantially higher in 1997 than in 1996, despite a slowdown in the fourth quarter when foreign investors reassessed the impact of financial conditions in Asia. Net foreign purchases of U.S. Treasury securities remained strong.
- The increase in credit extended by U.S. banks to their offices abroad in 1997 was in response to the heightened level of financial activity in interbank markets abroad, to the strong pace of merger and acquisition activity, particularly in Western Europe, and to the unique set of developments in the fourth quarter that led U.S. banks to provide liquidity in response to developments in Asia. During the first three quarters, U.S. banks borrowed relatively small amounts from abroad to finance this overseas lending, but in the fourth quarter, heavy borrowing from foreign banks and the receipt of funds in response to uncertainties created by financial developments in Asia led to very large net inflows of capital to U.S. banks.
- Foreign official assets in the United States increased much less in 1997 than in 1996.

U.S. dollar in exchange markets

The dollar appreciated 11 percent on a trade-weighted basis against the currencies of 10 industrial countries in 1997. Appreciation against the German mark and most other major European currencies averaged 14 percent, and appreciation against the Japanese yen was also 14 percent. Appreciation was even larger against the currencies of many developing countries in Asia: 19 percent against the Taiwan dollar, 20 percent against the Singapore dollar, 53 percent against the Malaysian ringgit, 82 percent against the Thai baht, 100 percent against the South Korean won, and 230 percent against the Indonesian rupiah (table B, chart 1).

Early in 1997, the dollar advanced sharply against the European currencies, encouraged by a

further increase in short- and long-term interest-rate differentials in favor of U.S. dollar assets. U.S. interest rates were pushed higher, partly by a strengthening in U.S. economic activity and partly by expectations that U.S. monetary policy might be tightened. In late March, the Federal Reserve Board raised the target federal funds rate 25 basis points. Subsequently, through the summer months, the U.S. expansion continued while inflation remained low, and the dollar reached an 8-year high in August against the German mark and registered strong increases against other European currencies. During this period, German economic growth remained below that of the United States. In October and November, a strengthening in German economic growth and a rise in German and other European interest rates led to a temporary strengthening of the mark and other European currencies against the dollar. Nonetheless, interest-rate differentials in favor of dollar assets remained large (charts 2 and 3). At times during the last half of the year, there were concerns that the European Monetary Union (EMU) would include a broad group of currencies and thus would result in a "weak" single currency. There were also temporary concerns that France and, perhaps, Germany might not meet the requirements for participation in the EMU. However, by yearend, European countries had made major progress in converging their interest rates and lowering inflation, in reducing central government fiscal deficits relative to gross domestic product, and in increasing the growth rates of their economies. In addition, at yearend, German and other European officials reached an understanding to orient interest rates toward the lowest rates among "core" countries of the EMU.

The dollar also appreciated strongly against the Japanese yen, especially in the first and fourth quarters. Early in the year, there was concern about the economic health of Japanese financial institutions, particularly banks and brokerage firms. Subsequently, it became apparent that Japanese growth would, at best, be moderate, and interest-rate differentials in favor of U.S. assets remained large (charts 2 and 3). Additional evidence of weakening Japanese growth accumulated over the last half of the year, and several large, prominent Japanese financial institutions failed in November. During the last half of the year, currency devaluations and declining stock prices in many other Asian countries had negative repercussions on the Japanese economy and were additional factors holding down the value of the yen against the dollar.

Several Asian countries were unable to maintain their currencies' fixed exchange rates against the U.S. dollar during the last half of the year. Efforts to do so led initially to the loss of large amounts of reserve assets and then to decisions by many countries to permit their currencies to fluctuate freely in exchange markets. A decision by Thailand in July to break its link with the dollar was followed by similar decisions by Indonesia in August, by Malaysia and the Philippines in September, by Taiwan in October, and by the Republic of Korea in November. Currency values relative to the dollar fell sharply immediately following these decisions and continued to depreciate through yearend. The declines in currency values, stock prices, and financial asset values reduced prospects for economic growth in the region and had a major impact on international capital flows, including those to the United States. The spread of the economic difficulties to the regional banking centers of Hong Kong and Singapore reflected the dominant role of these regional centers in financing local economies. The economic difficulties also adversely affected Japan, another major supplier of banking capital to the region.

Current Account

Goods and services

The deficit on goods and services increased to \$113.6 billion in 1997 from \$111.0 billion in 1996. The larger deficit on goods more than accounted

for the increase; the surplus on services increased (table D).

Goods.—The deficit on goods increased to \$198.9 billion in 1997 from \$191.2 billion in 1996. Both exports and imports increased substantially, but the increase in imports exceeded that in exports.

Goods exports increased \$66.3 billion, or 11 percent, to \$678.3 billion. The 11-percent increase was up sharply from a 6-percent increase in 1996 and was between the strong increases of 10 percent and 15 percent in 1994 and 1995, respectively. Agricultural exports decreased \$3.1 billion, while nonagricultural exports increased \$69.4 billion, more than double the increase in 1996 (tables E and F).

Goods imports increased \$74.0 billion, or 9 percent, to \$877.3 billion. The 9-percent increase exceeded the 7-percent increase in 1996 but was well below the sizable increases of 13 percent and 12 percent in 1994 and 1995, respectively. An increase in the volume of petroleum imports was more than offset by a sharp decline in prices, leading to a \$0.7 billion reduction in petroleum imports for the year. Nonpetroleum imports increased \$74.7 billion, double the increase in 1996.

U.S. exports increased substantially in 1997, reflecting considerably faster economic expansion abroad in industrial countries and in Latin America (especially Mexico) and slightly slower economic expansion in the developing countries of Asia. Economic expansion accelerated in Canada, the United Kingdom, Germany, and

Table E.—U.S. Trade in Goods, Current and Chained (1992) Dollars

[Balance of payments basis, millions of dollars, quarters seasonally adjusted]

	Current dollars							Chained (1992) dollars ¹						
	1995	1996	1997 ^P	1997				1995	1996	1997 ^P	1997			
				I ^r	II ^r	III ^r	IV ^P				I ^r	II ^r	III ^r	IV ^P
Exports	575,871	612,069	678,348	162,341	171,227	170,255	174,525	565,887	622,803	716,675	169,813	180,049	180,355	186,458
Agricultural products	57,229	61,488	58,414	14,352	14,137	14,559	15,366	49,484	48,569	49,430	11,950	11,820	12,391	13,269
Nonagricultural products	518,642	550,581	619,934	147,989	157,090	155,696	159,159	516,856	575,745	670,523	158,616	169,278	168,685	173,944
Foods, feeds, and beverages	50,472	55,533	51,371	12,861	12,224	12,485	13,801	44,476	43,978	44,045	10,862	10,290	10,744	12,149
Industrial supplies and materials	146,374	147,973	158,102	38,451	40,733	39,605	39,313	120,631	127,873	137,125	33,291	35,328	34,231	34,275
Capital goods, except automotive	233,776	253,141	294,122	68,899	74,129	74,505	76,589	263,489	310,356	387,815	88,902	97,027	98,944	102,942
Automotive vehicles, parts, and engines	61,828	65,022	73,391	17,669	18,292	18,213	19,217	59,955	62,385	69,828	16,844	17,404	17,313	18,267
Consumer goods (nonfood), except automotive	64,425	70,138	77,418	18,792	19,699	19,222	19,705	62,607	67,260	73,713	17,931	18,797	18,272	18,713
Exports, n.e.c.	18,996	20,262	23,944	5,669	6,150	6,225	5,900	17,961	19,553	23,750	5,602	6,077	6,200	5,871
Imports	749,431	803,239	877,282	212,185	218,415	222,256	224,426	741,078	817,392	935,491	221,026	232,852	238,728	242,885
Petroleum and products	56,155	72,744	72,053	19,153	17,732	17,581	17,587	59,285	63,823	66,966	15,521	17,017	17,287	17,141
Nonpetroleum products	693,276	730,495	805,229	193,032	200,683	204,675	206,839	680,515	751,801	868,677	205,572	215,788	221,510	225,807
Foods, feeds, and beverages	33,176	35,711	39,704	9,516	9,997	10,148	10,043	29,319	32,253	35,506	8,550	8,839	9,069	9,048
Industrial supplies and materials	184,987	209,497	217,397	54,904	55,023	53,621	53,849	176,418	189,345	200,243	47,909	51,471	50,348	50,515
Capital goods, except automotive	221,429	229,049	254,167	59,344	62,940	65,634	66,249	246,462	294,526	377,732	85,142	92,423	98,402	101,765
Automotive vehicles, parts, and engines	123,796	128,938	140,720	35,406	34,430	35,772	35,112	114,769	118,781	129,337	32,602	31,733	32,848	32,154
Consumer goods (nonfood), except automotive	159,906	171,007	192,947	45,321	48,031	48,787	50,808	155,136	165,317	188,680	44,130	46,905	47,784	49,861
Imports, n.e.c., and U.S. goods returned	26,137	29,037	32,347	7,694	7,994	8,294	8,365	24,337	27,032	30,384	7,184	7,513	7,795	7,892

^r Revised.

^P Preliminary.

1. Because chain indexes use weights of more than one period, the corresponding chained-dollar estimates are usually not additive.

most other countries in Europe. Expansion in Japan slowed sharply. Expansion in the developing countries in Asia slowed, as it has every year since 1994 (chart 4).

U.S. imports accelerated in 1997, reflecting faster growth in the U.S. economy. Growth in U.S. real gross domestic product (GDP) was 3.8 percent in 1997, above the 2.8 percent growth in 1996 and 2.0 percent growth in 1995.²

Domestic prices of exports decreased in 1997; the largest declines were in foods and many types of capital goods (table G). Prices of total industrial supplies and materials, automotive products, and consumer goods changed little. However, prices increased significantly for most major categories when converted into foreign currencies, as depreciation of foreign currencies more than offset the decrease in domestic prices or added to small domestic price increases (table H).

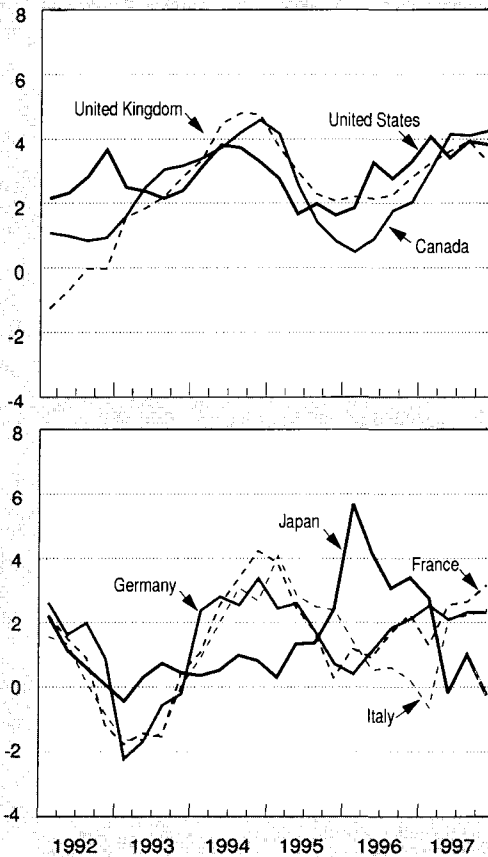
Dollar prices of most imports decreased or changed little. Prices of many capital goods, nonpetroleum industrial supplies and materials, petroleum products, and consumer goods were all lower (table G).

Exports.—Nonagricultural exports increased \$69.4 billion, or 13 percent, to \$619.9 billion in 1997, up sharply from a 6-percent increase in 1996. Quantity increased 17 percent, following an 11-percent increase. In value, capital goods increased \$41.0 billion in 1997, up from an increase of \$19.4 billion in 1996, and total industrial supplies and materials increased \$10.1 billion, up from an increase of \$1.6 billion. Automotive products and consumer

CHART 4

**Major Industrial Countries:
Real GDP**

Percent change from four quarters earlier



Data: International Monetary Fund.

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

2. GDP estimates are shown in table 1.2 on page D-2 in this issue.

Table F.—Percent Changes in U.S. Trade in Goods, Current and Chained (1992) Dollars

[Balance of payments basis]

	Current dollars			Chained (1992) dollars		
	1995	1996	1997 ^a	1995	1996	1997 ^a
Exports	14.6	6.3	10.8	12.6	10.1	15.1
Agricultural products	21.6	7.4	-5.0	11.5	-1.8	1.8
Nonagricultural products	13.9	6.2	12.6	12.8	11.4	16.5
Foods, feeds, and beverages	20.3	10.0	-7.5	10.8	-1.1	.2
Industrial supplies and materials	20.4	1.1	6.8	6.2	6.0	7.2
Capital goods, except automotive	13.9	8.3	16.2	20.6	17.8	25.0
Automotive vehicles, parts, and engines	7.0	5.2	12.9	5.7	4.1	11.9
Consumer goods (nonfood), except automotive	7.4	8.9	10.4	6.0	7.4	9.6
Exports, n.e.c.	19.6	6.7	18.2	15.8	8.9	21.5
Imports	12.1	7.2	9.2	9.6	10.3	14.4
Petroleum and products	9.5	29.5	-9	-1.5	7.7	4.9
Nonpetroleum products	12.3	5.4	10.2	10.6	10.5	15.5
Foods, feeds, and beverages	7.2	7.6	11.2	2.2	10.0	10.1
Industrial supplies and materials	12.2	13.2	3.8	2.2	7.3	5.8
Capital goods, except automotive	20.1	3.4	11.0	25.1	19.5	28.3
Automotive vehicles, parts, and engines	4.7	4.2	9.1	1.7	3.5	8.9
Consumer goods (nonfood), except automotive	9.3	6.9	12.8	7.7	6.6	14.1
Imports, n.e.c., and U.S. goods returned	9.9	11.1	11.4	5.6	11.1	12.4

^a Preliminary.

goods also increased significantly more in 1997 than in 1996 (chart 5).

Capital goods jumped \$41.0 billion, or 16 percent, to \$294.1 billion, following an 8-percent increase; in both dollar and percentage terms, this jump exceeded the sizable increases in 1994 and 1995. Quantity increased 25 percent, following an 18-percent increase. In value, exports to all major areas rose strongly in 1997; Latin America (\$11.3 billion), Western Europe (\$11.1 billion), and Asia, excluding Japan (\$9.2 billion) accounted for over three-fourths of the increase. The gains in 1996 were as follows: Latin America (\$3.9 billion), Western Europe (\$2.0 billion), and Asia, excluding Japan (\$6.6 billion).

About one-fourth of the jump in 1997 in capital goods was attributable to civilian aircraft, en-

gines, and parts, which rose \$10.6 billion, more than double a 1996 increase that in turn followed declines in 1993–95. The strength in 1997 occurred in the first half of the year, as production problems and parts shortages curtailed shipments in the last half. Although there were scattered cancellations of future deliveries by Asian countries, there was no effect on deliveries in 1997.

Table G.—Percent Changes in U.S. Goods Trade Chain-Weighted Price Indexes

[Based on index numbers (1992=100)]

	1995	1996	1997 ^P
Exports	1.7	-3.3	-3.7
Agricultural products	9.2	9.4	-6.6
Nonagricultural products	1.0	-4.8	-3.3
Foods, feeds, and beverages	8.6	11.3	-7.7
Industrial supplies and materials	13.3	-4.6	-3
Capital goods, except automotive	-5.6	-8.0	-7.0
Computers, peripherals, and parts	-18.8	-24.5	-24.7
Civilian aircraft, engines, and parts	3.4	4.0	3.7
Other capital goods	-3.7	-5.6	-4.2
Automotive vehicles, parts, and engines	1.3	1.2	.8
Consumer goods (nonfood), except automotive	1.4	1.4	.7
Exports, n.e.c.	3.2	-2.1	-2.7
Imports	2.2	-2.8	-4.6
Petroleum and products	11.2	20.4	-5.6
Nonpetroleum products	1.6	-4.6	-4.6
Foods, feeds, and beverages	4.9	-2.2	1.0
Industrial supplies and materials	9.6	5.6	-1.9
Capital goods, except automotive	-4.1	-13.4	-13.5
Computers, peripherals, and parts	-14.4	-18.1	-20.8
Civilian aircraft, engines, and parts	2.4	4.3	4.1
Other capital goods	-5	-12.8	-11.8
Automotive vehicles, parts, and engines	3.0	.6	.2
Consumer goods (nonfood), except automotive	1.5	.3	-1.1
Imports, n.e.c., and U.S. goods returned	4.1	0	-8

^P Preliminary.

Table H.—Percent Changes in Foreign Currency Cost of U.S. Exports of Goods

[Based on index numbers (1992=100)]

	1995	1996	1997 ^P
Exports	-6.1	0.1	6.3
Agricultural products	.8	13.4	3.0
Nonagricultural products	-6.8	-1.4	6.6
Foods, feeds, and beverages	.3	15.3	1.8
Industrial supplies and materials	4.6	-1.2	9.9
Capital goods, except automotive	-12.9	-4.7	2.6
Computers, peripherals, and parts	-25.0	-21.8	-16.9
Civilian aircraft, engines, and parts	-4.5	7.8	14.4
Other capital goods	-11.1	-2.2	5.7
Automotive vehicles, parts, and engines	-6.5	4.8	11.2
Consumer goods (nonfood), except automotive	-6.4	5.0	11.1
Exports, n.e.c.	-4.7	1.4	7.3

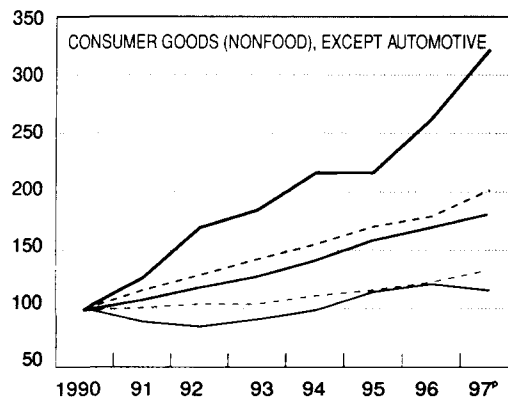
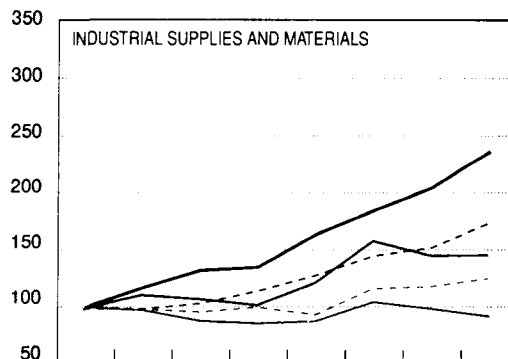
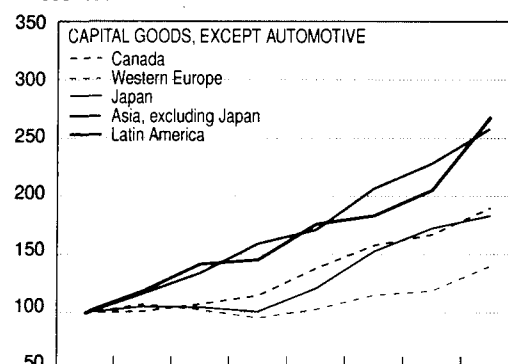
^P Preliminary.

NOTE.—Chain-weighted price indexes multiplied by trade-weighted exchange rate index of the currencies of Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, and United Kingdom.

CHART 5

Growth in Exports by Selected Commodity Categories and Areas

1990=100



^P Preliminary

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

Excluding civilian aircraft, engines, and parts, capital goods increased \$30.4 billion, or 14 percent, to \$252.7 billion. This double-digit growth rate is more in line with the growth rates of 16 percent in 1994 and 19 percent in 1995 than with the 7-percent growth rate in 1996. Computers, peripherals, and parts strengthened in 1997, but the increase was less than in 1995; in 1997, ex-

ports were particularly strong to the Netherlands and the United Kingdom. Semiconductors continued to rise, but the increase was modest in comparison with the increase in 1995, which was three times as large; higher exports to Asia and Mexico more than accounted for the rise in 1997. Telecommunications equipment jumped, led by stronger sales to Mexico and Brazil, but the in-

Table I.—U.S. Trade in Capital Goods, Except Automotive

[Balance of payments basis, millions of dollars]

	1992	1993	1994	1995	1996	1997 ^P
Exports	176,070	182,096	205,248	233,776	253,141	294,122
Computers, peripherals, and parts	28,763	29,317	33,320	39,654	43,719	49,276
Semiconductors	15,987	19,122	25,178	34,153	35,768	38,823
Telecommunications equipment	11,450	13,513	16,296	20,248	20,323	23,795
Scientific, hospital, and medical equipment and parts	9,930	10,569	11,523	13,073	14,747	16,160
Industrial, agricultural, and service industry machinery	26,291	28,422	31,922	37,088	40,096	45,564
Machine tools, metalworking equipment, and control instruments	9,836	10,650	12,320	14,259	15,606	18,236
Oil drilling, mining, and construction machinery	9,620	9,474	10,216	11,514	12,693	14,824
Industrial engines, pumps, and compressors	6,658	7,506	9,176	10,160	10,287	12,518
Electric generating machinery, electric apparatus, and parts	15,480	16,959	19,674	23,040	24,113	27,940
Civilian aircraft, engines, parts	37,725	32,678	31,475	26,129	30,792	41,398
Other capital goods, n.e.c.	4,330	3,886	4,148	4,458	4,997	5,588
Imports	134,252	152,305	184,369	221,429	229,049	254,167
Computers, peripherals, and parts	31,686	38,026	46,160	56,276	61,515	70,186
Semiconductors	15,475	19,482	26,156	39,042	36,707	36,868
Telecommunications equipment	10,776	11,275	14,184	15,332	14,375	15,601
Scientific, hospital, and medical equipment and parts	5,436	5,746	5,908	6,669	7,208	8,151
Industrial, agricultural, and service industry machinery	23,358	26,149	31,852	36,707	37,671	41,287
Machine tools, metalworking equipment, and control instruments	7,055	8,040	9,804	12,244	13,463	14,959
Oil drilling, mining, and construction machinery	2,948	4,314	5,325	5,481	5,685	6,656
Industrial engines, pumps, and compressors	3,618	4,094	5,758	6,176	6,266	6,528
Electric generating machinery, electric apparatus, and parts	15,336	17,421	20,030	24,150	24,749	27,921
Civilian aircraft, engines, parts	12,581	11,275	11,298	10,709	12,671	16,664
Other capital goods, n.e.c.	5,983	6,483	7,894	8,643	8,739	9,346

^P Preliminary.

Table J.—U.S. Trade in Industrial Supplies and Materials, Excluding Agricultural Products

[Balance of payments basis, millions of dollars]

	1992	1993	1994	1995	1996	1997 ^P
Exports	101,688	105,002	112,558	135,485	137,935	147,373
Energy products	14,364	12,713	12,041	13,777	15,533	16,266
Chemicals, excluding medicinals	29,840	30,082	35,137	42,985	42,472	46,843
Paper and paper base stocks	9,298	8,483	10,104	14,488	12,482	12,782
Textile supplies and related materials	6,809	6,999	8,183	9,284	9,555	10,703
Building materials, except metals	8,078	8,751	8,839	9,061	9,261	9,477
Other nonmetals	10,302	10,750	11,900	13,410	15,262	16,641
Metals and nonmetallic products	22,997	27,224	26,354	32,480	33,370	34,661
Steelmaking materials and iron and steel products	5,405	5,443	5,789	8,575	7,564	8,155
Nonferrous metals	10,963	14,649	12,279	14,602	15,480	15,020
Other metals and nonmetallic products	6,629	7,132	8,286	9,303	10,326	11,486
Imports	136,035	147,879	160,224	179,416	203,036	211,150
Energy products	56,820	57,390	58,080	62,159	80,278	80,276
Chemicals, excluding medicinals	16,872	18,081	21,359	25,551	26,897	29,159
Paper and paper base stocks	8,232	8,320	8,931	12,880	10,871	10,681
Textile supplies and related materials	6,866	7,550	8,182	8,617	8,843	10,109
Building materials, except metals	8,282	10,556	12,684	12,819	15,035	16,833
Other nonmetals	9,455	10,330	11,047	12,503	13,353	14,139
Metals and nonmetallic products	29,508	35,652	39,941	44,887	47,759	49,953
Steelmaking materials and iron and steel products	12,603	13,591	18,377	19,134	20,265	21,167
Nonferrous metals	13,228	18,128	16,728	20,260	21,679	22,034
Other metals and nonmetallic products	3,677	3,933	4,836	5,493	5,815	6,752

^P Preliminary.

crease was less than those in 1994 and in 1995. Most types of heavy machinery also contributed to the rise in capital goods exports in 1997; the increase exceeded that in the peak year of 1995 (table I).

Nonagricultural industrial supplies and materials increased \$9.4 billion, or 7 percent, to \$147.4 billion in 1997, compared with a 2-percent increase in 1996. Quantity increased 7 percent, following a 6-percent increase. In value, chemicals, textiles, and metals and nonmetallic products were all higher. Chemicals increased 10 percent, or \$4.4 billion, compared with a decrease of 1 percent; nearly one-half of the increase was to Canada and Mexico. Textile supplies increased 12 percent, or \$1.2 billion. Within metals, iron and steel products and steelmaking materials increased, and nonmonetary gold fell sharply after a sizable increase in 1996 (table J).

Automotive products increased \$8.4 billion, or 13 percent, to \$73.4 billion in 1997, following a 5-percent increase in 1996. Quantity increased 12 percent, following a 4-percent increase. In value, the surge was due to a 17-percent increase in engines and parts, largely to Mexico. In 1995, shipments to Mexico were held down as a result of the December 1994 currency devaluation and economic recession in 1995, but they grew rapidly in both 1996 and 1997 as auto manufacturers shifted production to Mexico. Shipments of engines and parts, as well as of completed autos, to Canada also accelerated sharply in 1997.

Consumer goods increased \$7.3 billion, or 10 percent, to \$77.4 billion, up from a 9-percent increase. Quantity increased 10 percent, following an 8-percent increase. In value, shipments picked up substantially to Canada and Mexico.

Agricultural products decreased \$3.1 billion, or 5 percent, to \$58.4 billion, in contrast to a 7-percent increase in 1996. The decrease was more than accounted for by a 7-percent decline in prices; prices had increased 9 percent in 1996 when production shortages had driven prices for grains and soybeans to record levels. Quantity increased 2 percent, following a 2-percent decrease. In value, sharply reduced shipments of corn and wheat more than accounted for the decline. The largest declines were to Asia and Mexico.

Corn dropped \$3.2 billion, or 36 percent, to \$5.7 billion. Prices fell 27 percent, as world supplies improved, while quantity declined 8 percent. Shipments to Asia and Mexico dropped the most.

Wheat dropped \$2.2 billion, or 34 percent to \$4.2 billion. Prices dropped 20 percent, as world supplies improved, while quantity dropped 16

percent. Shipments to Asia and Latin America dropped the most.

Soybeans increased \$0.1 billion, or 1 percent, to \$7.5 billion, following increases of 36 percent in 1996 and 24 percent in 1995. Shipments increased to Latin America. In the fourth quarter, shipments increased sharply when the United States had a record crop and supplies abroad remained tight.

Imports.—Nonpetroleum imports increased \$74.7 billion, or 10 percent, to \$805.2 billion in 1997, up from a 5-percent increase in 1996. Quantity increased 16 percent, up from a 10-percent increase. In value, capital goods increased \$25.1 billion, up from a \$7.6 billion increase, and consumer goods increased \$21.9 billion, up from an \$11.1 billion increase. Automotive products also increased. Petroleum imports fell after a substantial increase in 1996 (chart 6).

Capital goods increased \$25.1 billion, or 11 percent, to \$254.2 billion, compared with a 3-percent increase in 1996. Quantity increased 28 percent, following a 20-percent increase. Computers, peripherals, and parts increased \$8.7 billion, or 14 percent, up from an increase of 9 percent in 1996 but below the 21-percent and 22-percent increases in 1994 and 1995, respectively. Semiconductors increased \$0.2 billion, rebounding from a 6-percent decline in 1996 that resulted from overproduction. As with computers, peripherals, and parts, imports came primarily from Asia, excluding Japan. Telecommunications equipment increased \$1.2 billion, rebounding from a \$1.0 billion decrease in 1996. Machinery increased strongly in 1997, following a lackluster performance in 1996 and larger increases in 1994 and 1995. Within this group, industrial, agricultural, and service industry machinery increased \$3.6 billion, or 10 percent, and electric generating machinery, electric apparatus, and parts increased \$3.2 billion, or 13 percent. Civilian aircraft, engines, and parts were sharply higher, increasing \$4.0 billion, or 32 percent (table I).

Consumer goods increased \$22.0 billion, or 13 percent, to \$192.9 billion, up from a 7-percent increase. Quantity increased 14 percent, up from a 7-percent increase. In value, imports from China increased \$7.1 billion, accounting for 33 percent of the growth. Other sizable increases were from Mexico and Canada. Three-fifths of the increase was accounted for by nondurable goods, mainly apparel, footwear, and household goods. Two-fifths of the increase was accounted for by durable goods, mainly household goods and recreational equipment.

Automotive products increased \$11.8 billion, or 9 percent, to \$140.7 billion, following a 4-percent increase. Quantity increased 9 percent, following a 3-percent increase. In value, imports of autos from Germany, Canada, and Japan were higher than in 1996.

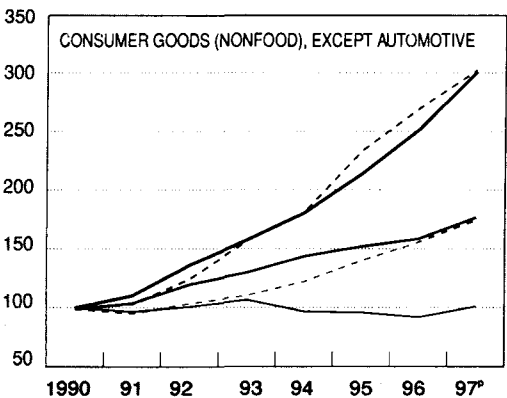
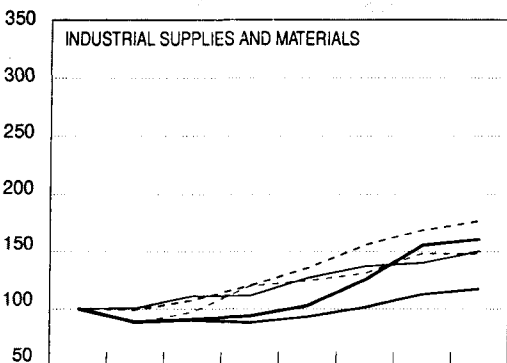
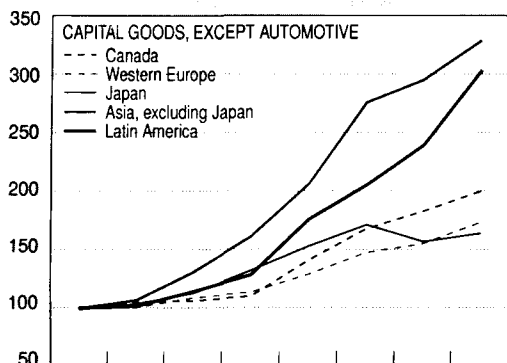
Nonpetroleum industrial supplies and materials increased \$8.6 billion, or 6 percent, to \$145.3 billion, following a 6-percent increase. Quantity increased 6 percent, following an 8-percent in-

crease. In value, chemicals increased \$2.3 billion, or 8 percent. A 6-percent rise in industrial production in the United States led to strong imports and rising prices for most imported chemical products. Metals and nonmetallic products increased \$2.2 billion, or 5 percent; the increase was held down by a decrease in nonmonetary gold. Building materials increased \$1.8 billion, or 12 percent; paper and paper based stocks declined. Textile supplies increased \$1.3 billion, or 14 percent (table J).

CHART 6

Growth in Imports by Selected Commodity Categories and Areas

1990=100



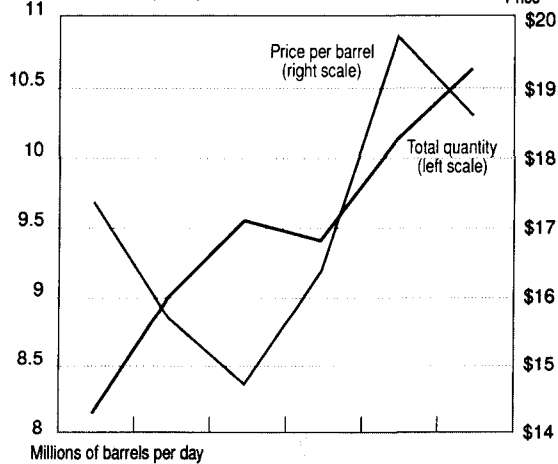
p Preliminary

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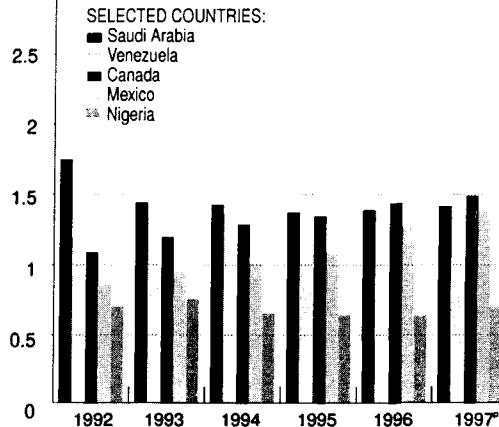
CHART 7

U.S. Petroleum Imports and Price, Total and from Selected Countries

Millions of barrels per day



Millions of barrels per day



p Preliminary

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

increases in capital goods, automotive products, and consumer goods that followed sharp declines in these categories in 1996.

The deficit with Latin America decreased to \$8.9 billion from \$17.2 billion. Sharply higher exports, mostly of capital goods but also of total industrial supplies and materials and automotive products, were only partly offset by continued strength in most import categories, except petroleum imports, which changed little.

The deficit with the Asia, excluding Japan, increased to \$90.0 billion from \$77.4 billion. Exports of capital goods recovered somewhat from the sharp slowdown in 1996, and total industrial supplies and materials were unchanged. Imports of capital goods, largely computers and semiconductors, picked up somewhat (but those from Hong Kong, the Republic of Korea, Singapore, and Taiwan, collectively, increased about the same amount as in 1996), while imports of consumer goods from China accelerated sharply.

Services.—The surplus on services increased to \$85.3 billion in 1997 from \$80.1 billion in 1996, a smaller increase than in 1996. In 1997, service receipts increased to \$253.2 billion from \$236.8

billion, and service payments increased to \$167.9 billion from \$156.6 billion (table L).

Foreign visitors spent \$74.4 billion for travel in the United States in 1997, an increase of 6 percent. Receipts from overseas (excluding Canada and Mexico) increased 7 percent, following an 11-percent increase; the growth in visitors from Western Europe was less than in 1996, partly reflecting the restraining effect of dollar appreciation against the European currencies. The growth in visitors from Asia was also less; it was held down by a decline in visitors in the fourth quarter when financial conditions in Asia deteriorated. Receipts from Canada were unchanged, and receipts from Mexico increased.

U.S. residents spent \$52.0 billion for travel abroad in 1997, an increase of 7 percent. Expenditures overseas increased 7 percent, following a 5-percent increase; the growth in travelers to Western Europe and Japan were both up 11 percent, as U.S. income continued to rise strongly and the dollar appreciated. Expenditures in Canada were down, and expenditures in Mexico increased.

“Other” transportation receipts were \$28.2 billion in 1997, up 4 percent after a 1-percent

Table L.—Services

(Millions of dollars, quarters seasonally adjusted)

	1995	1996	1997 ^P	1997			
				I ^r	II ^r	III ^r	IV ^P
Exports	218,739	236,764	253,220	61,736	63,335	64,397	63,754
Travel	63,395	69,908	74,407	18,585	18,634	18,732	18,456
Passenger fares	19,125	20,557	21,710	5,316	5,508	5,468	5,418
Other transportation	27,412	27,216	28,194	7,001	7,045	6,939	7,210
Royalties and license fees	27,383	29,974	30,269	7,688	7,608	7,520	7,452
Other private services	66,850	73,569	82,681	19,753	20,622	21,277	21,031
Affiliated services	20,272	22,810	25,483	6,103	6,425	6,622	6,334
Unaffiliated services	46,578	50,759	57,198	13,650	14,197	14,655	14,697
Education	7,512	7,807	8,134	1,986	2,003	2,074	2,071
Financial	7,029	8,034	10,104	2,259	2,492	2,701	2,652
Insurance	1,390	2,121	2,558	620	637	648	654
Telecommunications	3,183	3,405	3,596	845	895	913	944
Business, professional, and technical	17,765	19,247	22,116	5,287	5,543	5,642	5,644
Other	9,699	10,145	10,690	2,653	2,627	2,677	2,732
Military transactions ¹	13,756	14,647	15,175	3,190	3,727	4,261	3,997
U.S. Government receipts	818	893	784	203	191	200	190
Imports	147,036	156,634	167,929	41,216	41,817	42,303	42,592
Travel	46,053	48,739	52,029	13,004	12,989	12,813	13,224
Passenger fares	14,433	15,776	16,927	4,272	4,190	4,166	4,298
Other transportation	28,249	28,453	29,771	7,377	7,541	7,368	7,484
Royalties and license fees	6,503	7,322	7,512	1,797	1,846	2,043	1,826
Other private services	39,285	42,796	47,548	11,327	11,893	12,320	12,009
Affiliated services	13,597	16,026	17,610	4,227	4,368	4,600	4,415
Unaffiliated services	25,689	26,770	29,938	7,100	7,525	7,720	7,594
Education	949	1,041	1,131	276	279	285	291
Financial	2,472	3,184	4,059	888	1,106	1,182	883
Insurance	5,383	4,387	4,817	1,139	1,195	1,232	1,251
Telecommunications	7,773	8,385	8,576	2,076	2,137	2,157	2,205
Business, professional, and technical	4,691	5,253	6,464	1,540	1,612	1,648	1,664
Other	4,420	4,520	4,891	1,180	1,196	1,215	1,299
Direct defense expenditures ²	9,890	10,861	11,345	2,753	2,679	2,863	3,050
U.S. Government payments	2,623	2,687	2,796	686	679	730	701

^r Revised.

^P Preliminary.

1. Consists of transfers under U.S. military agency sales contracts. Includes goods which cannot

be separately identified.

2. Consists of imports of U.S. defense agencies. Includes goods which cannot be separately identified.

decrease in 1996. The increase in overseas demand for U.S. goods exports, particularly by Western Europe and Latin America, had the greatest impact on air export volumes, resulting in substantial growth in air freight receipts; ocean export volumes decreased slightly. Port service receipts were up slightly.

“Other” transportation payments were \$29.8 billion in 1997, up 5 percent after a 1-percent increase in 1996. Like receipts, the increase in payments was strong for Western Europe and Latin America. Freight payments increased: While ocean freight payments were held down by the continued erosion of liner freight rates, particularly on imports from Asia due to overcapacity on that trade route, air freight payments continued to rise, partly because of a jump in import tonnage carried by Asian airlines. Air port service payments increased, reflecting both larger import and export volumes carried by U.S. airlines, and ocean port service payments decreased for the second consecutive year.

“Other” private service receipts were \$82.7 billion in 1997, up from \$73.6 billion in 1996. Affiliated services increased about the same amount in 1997 as in 1996. Among unaffiliated services, business, professional, and technical services increased more rapidly in 1997 than in 1996. Financial services also increased more rapidly than in 1996, reflecting heightened activity in U.S. financial markets that was tempered late in the year by repercussions from financial problems in Asia.

“Other” private service payments were \$47.5 billion in 1997, up from \$42.8 billion in 1996. Affiliated services increased less in 1997 than in

1996. Among unaffiliated services, business, professional, and technical services increased more rapidly in 1997 than in 1996. Financial services increased only slightly more rapidly than in 1996: Activity in financial markets abroad was particularly high in the second and third quarters, but fell sharply in the fourth quarter as a result of repercussions from financial problems in Asia.

Transfers under U.S. military sales contracts increased to \$15.2 billion in 1997, up from \$14.6 billion in 1996. Most of the increase was in the delivery of aircraft, missiles, and weapons systems to Turkey, Saudi Arabia, and Taiwan.

Direct defense expenditures abroad were \$11.3 billion in 1997, up from \$10.9 billion in 1996. Much of the increase was attributable to higher personnel expenditures. Key developments within the year included the continuation of the U.S. peace-keeping mission to Bosnia at half the troop strength of 1996 and, toward yearend, the repositioning of U.S. troops to the Persian Gulf area as tensions escalated with Iraq over the access of United Nations’ weapons inspection teams to Iraqi facilities.

Investment income

The balance on investment income shifted to a deficit of \$14.3 billion in 1997 from a surplus of \$2.8 billion in 1996 (table D). “Other” private receipts increased much more strongly than in 1996; direct investment receipts also increased more strongly. All types of payments—U.S. Government, “other” private, and direct investment—increased substantially more than in 1996.

Table M.—Direct Investment Income and Capital

[Millions of dollars, quarters seasonally adjusted]

(Credits +; debits -)	1995	1996	1997 ^P	1997			
				I ^r	II ^r	III ^r	IV ^r
Income							
Income receipts on U.S. direct investment abroad	90,349	98,890	109,227	25,864	27,963	28,189	27,209
Distributed earnings	32,991	37,629	40,778	9,036	10,975	11,835	8,932
Reinvested earnings	54,007	57,885	63,955	15,938	15,933	15,135	16,949
Interest, net	3,350	3,377	4,491	890	1,055	1,219	1,328
Income payments on foreign direct investment in the United States	-30,345	-32,132	-41,527	-8,538	-10,241	-11,666	-11,081
Distributed earnings	-12,254	-12,024	-10,953	-2,200	-3,575	-2,299	-2,879
Reinvested earnings	-9,826	-12,187	-20,355	-4,229	-3,894	-6,707	-5,525
Interest, net	-8,265	-7,921	-10,217	-2,110	-2,772	-2,660	-2,677
Capital							
U.S. direct investment abroad (increase/capital outflow (-))	-86,737	-87,813	-119,443	-26,754	-36,988	-22,763	-32,936
Equity capital	-36,611	-21,605	-48,054	-11,252	-10,036	-9,102	-17,664
Reinvested earnings	-54,007	-57,885	-63,955	-15,938	-15,933	-15,135	-16,949
Intercompany debt	3,881	-8,323	-7,433	436	-11,019	1,474	1,677
Foreign direct investment in the United States (increase/capital inflow (+))	67,526	76,955	107,927	30,685	26,652	25,949	24,641
Equity capital	45,057	53,030	47,849	11,799	8,558	11,265	16,226
Reinvested earnings	9,926	12,187	20,355	4,229	3,894	6,707	5,525
Intercompany debt	12,643	11,739	39,724	14,657	14,200	7,977	2,890

^r Revised.

^P Preliminary.

Direct investment income.—Receipts of income on U.S. direct investment abroad were \$109.2 billion in 1997, compared with \$98.9 billion in 1996 (table M, chart 8). The increase was about the same as that in 1996, but both years trailed an increase in 1995 that was more than twice as large. Most of the increase in earnings in 1997 was in finance, wholesale trade, services, and “other” industries. Earnings of manufacturing affiliates increased moderately (chart 9).

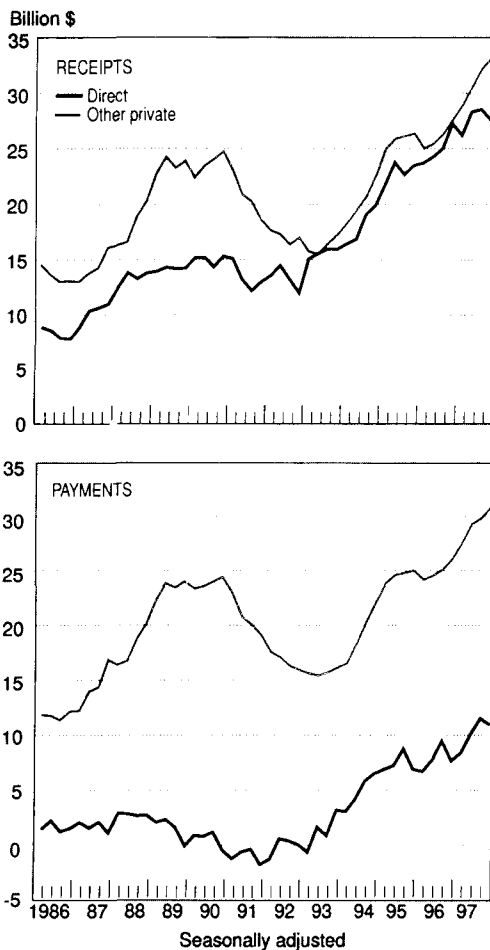
Payments of income on foreign direct investment in the United States were a record \$41.5 billion in 1997, up sharply from the previous record of \$32.1 billion in 1996 (table M, chart 8). Earnings in “other” industries increased \$4.5 billion, mainly in insurance and finance, following a decline in 1996. Earnings in manufacturing increased \$2.0 billion, more than twice the increase in 1996; more than half of the increase in 1997 was

in machinery. Earnings in petroleum increased \$0.6 billion (chart 10).

“Other” private and U.S. Government income.—Receipts of income on “other” private investment increased to a record \$123.3 billion in 1997, up from the previous record of \$102.9 billion in 1996 (table N, chart 8). All the major components increased, led by higher interest income receipts by banks and nonbanks, as increased financial activity resulted in higher outstanding claims on foreigners. Income receipts from stocks and bonds reflected an increase in U.S. holdings of foreign securities.

CHART 8

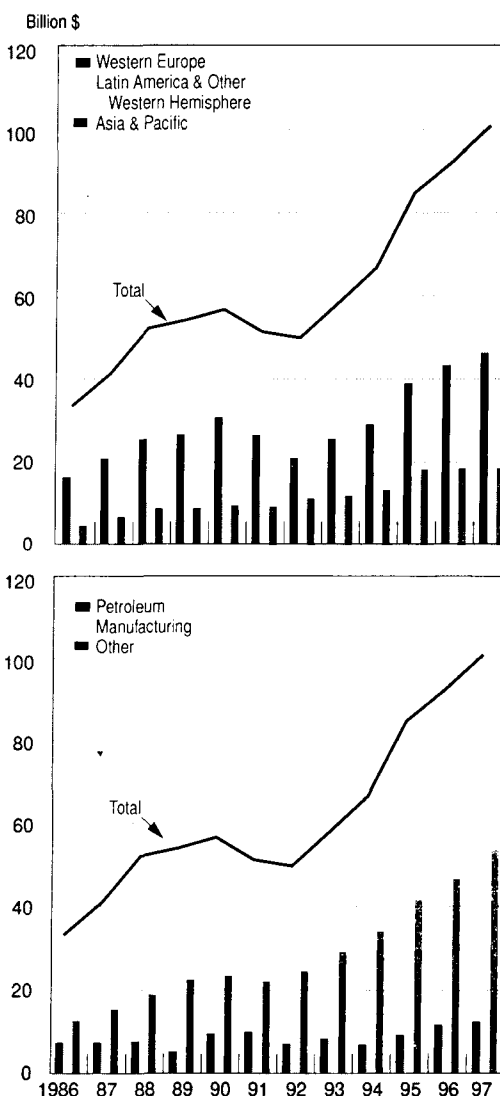
Private Investment Income



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

CHART 9

Earnings on U.S. Direct Investment Abroad



NOTE.—To be consistent with earnings by area and by industry, total earnings are shown in this chart without the current-cost adjustment and after deduction of withholding taxes, the only basis on which area and industry data are available.

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

Receipts of income on U.S. Government assets decreased to \$3.5 billion from \$4.6 billion (table O).

Payments of income on "other" private investment increased to a record \$117.7 billion from the previous record of \$100.1 billion in 1996 (table N, chart 8). Payments of interest on U.S. corporate bonds increased the most, largely as a result of higher foreign holdings. Payments of interest on U.S. bank liabilities reflected higher outstanding liabilities, as interest rates changed little.

Payments of income on U.S. Government liabilities were a record \$91.1 billion, up from the previous record of \$71.3 billion, as a result of a large increase in foreign holdings of U.S. Treasury securities (table O).

Table N.—Other Private Income
[Billions of dollars]

	1995	1996	1997 ^P
Receipts	101.8	102.9	123.3
Dividends	17.9	20.7	24.7
Interest on bonds	26.9	26.0	28.0
Interest on bank claims	31.0	29.6	36.7
Interest on other claims ¹	26.0	26.6	33.9
Payments	98.4	100.1	117.7
Dividends	11.2	12.3	14.3
Interest on bonds	29.1	33.5	40.2
Interest on bank liabilities	42.7	37.7	42.8
Interest on other liabilities ¹	15.4	16.6	20.4

^P Preliminary.
1. Primarily income of business concerns other than banks.
NOTE.—Excludes direct investment income receipts and payments.

Table O.—Selected U.S. Government Transactions
[Millions of dollars]

	1995	1996	1997 ^P	1997			
				I	II	III ^R	IV ^P
U.S. Government grants	-11,096	-14,933	-11,688	-2,109	-2,245	-2,231	-5,103
Disbursed	-11,096	-14,933	-11,688	-2,109	-2,245	-2,231	-5,103
For debt forgiveness	-434	-	-179	-	-69	-89	-21
Other disbursements	-10,662	-14,933	-11,509	-2,109	-2,176	-2,142	-5,082
Received	-	-	-	-	-	-	-
For Defense Cooperation Account	-	-	-	-	-	-	-
Other receipts	-	-	-	-	-	-	-
U.S. Government credits and other long-term assets	-4,803	-4,930	-5,237	-1,107	-1,613	-1,415	-1,102
For debt rescheduling	-1,067	-876	-1,114	-80	-593	-352	-89
Other disbursements	-3,736	-4,054	-4,123	-1,027	-1,020	-1,063	-1,013
Repayments of U.S. Government credits and other long-term assets	4,115	4,134	5,439	1,111	1,358	1,876	1,094
From debt rescheduling	174	373	878	26	480	323	49
From debt forgiveness	408	-	138	-	66	63	9
Other repayments	3,533	3,761	4,423	1,085	812	1,490	1,036
U.S. Government receipts of income	4,695	4,644	3,538	955	747	1,019	817
From debt rescheduling	103	150	174	45	80	26	23
From debt forgiveness	26	-	39	-	1	25	13
Other receipts	4,567	4,494	3,325	910	666	968	781
U.S. Government payments of income	-61,279	-71,342	-91,081	-21,139	-22,794	-23,469	-23,679

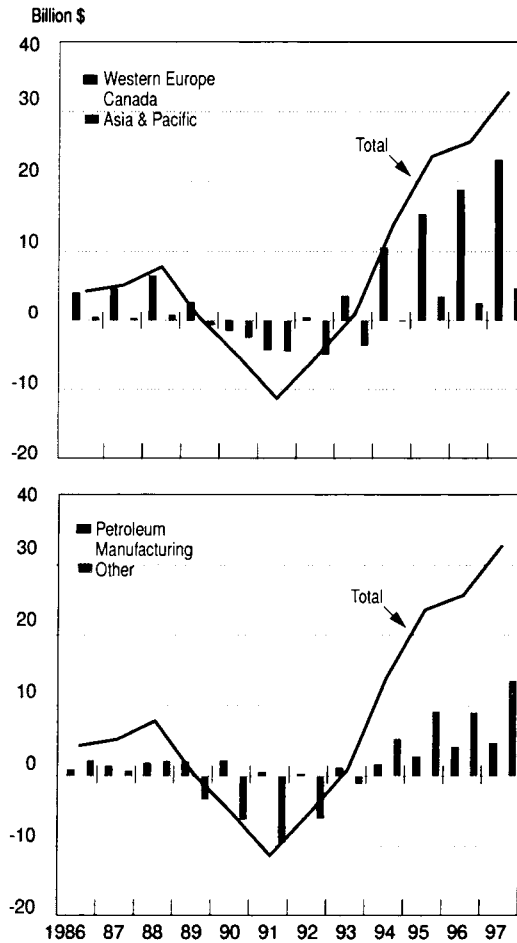
^R Revised.
^P Preliminary.

Unilateral transfers

Net unilateral transfers were \$38.5 billion in 1997, compared with \$40.0 billion in 1996. U.S. Government grants decreased to \$11.7 billion from \$14.9 billion (table O); they had been boosted to an unusually high level in early 1996 as the Federal Government resumed operations after the budget deadlock and U.S. Government shutdown at the end of 1995. Grant disbursements for debt forgiveness were \$0.2 billion in 1997, compared with none in 1996. The decrease in grants was partly offset by an increase in private remittances and other transfers.

CHART 10

Earnings on Foreign Direct Investment in the United States



NOTE.—To be consistent with earnings by area and by industry, total earnings are shown in this chart without the current-cost adjustment and after deduction of withholding taxes, the only basis on which area and industry data are available.

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

Capital Account

Net recorded capital inflows—that is, the difference between changes in net U.S. assets abroad and changes in net foreign assets in the United States—were \$263.6 billion in 1997, compared with \$195.1 billion in 1996, reflecting a larger step-up in the increase in foreign assets in the United States than in the increase in U.S. assets abroad.

U.S. assets abroad

U.S. assets abroad increased \$426.9 billion in 1997, compared with an increase of \$352.4 billion in 1996. The increases in U.S. claims on foreigners

reported by U.S. banks and in U.S. direct investment outflows were both higher in 1997 than in 1996. Net U.S. purchases of foreign securities were lower.

U.S. official reserve assets.—U.S. official reserve assets increased \$1.0 billion in 1997, compared with a decrease of \$6.7 billion in 1996. In 1997, reserve assets decreased in the first quarter, when Mexico made the last repayment on its medium-term swap arrangement with the United States, and increased in the fourth, when the U.S. reserve position with the IMF increased, mainly reflecting drawings by Indonesia and the Republic of Korea on the IMF's credit facilities. U.S. mone-

Table P.—Private Capital Flows, Net

[Billions of dollars]

Claims (increase/capital outflow (-)); liabilities (increase/capital inflow (+))	1995	1996	1997 ^P	1997			
				I	II	III ^r	IV ^P
Private capital flows	43.6	66.9	246.2	20.6	57.6	50.9	116.9
Bank-reported capital, net ¹	-44.9	-88.4	-8.6	-44.6	.1	-20.5	56.4
U.S. claims	-75.1	-98.2	-151.1	-62.0	-28.0	-30.6	-30.5
U.S. liabilities ¹	30.2	9.8	142.5	17.4	28.1	10.1	86.9
Securities, net	95.8	181.2	273.1	72.0	74.9	57.5	68.5
Net U.S. purchases of foreign securities	-100.1	-108.2	-79.3	-14.6	-21.9	-39.2	-3.7
Stocks	-50.4	-58.8	-38.0	-11.8	-13.3	-15.6	2.6
Bonds	-49.7	-49.4	-41.3	-2.8	-8.6	-23.6	-6.3
Net foreign purchases of U.S. securities	195.9	289.4	352.4	86.6	96.8	96.7	72.2
U.S. Treasury securities	99.5	155.6	163.1	47.8	45.1	36.3	33.8
Other than U.S. Treasury securities	96.4	133.8	189.3	38.8	51.7	60.4	38.4
Stocks	13.5	12.6	66.9	10.2	21.7	23.2	11.8
Bonds	82.9	121.2	122.4	28.6	30.0	37.2	26.6
U.S. currency flows, net	12.3	17.3	24.8	3.5	4.8	6.6	9.9
Direct investment, net	-19.2	-10.8	-11.5	4.0	-10.3	3.1	-8.3
U.S. direct investment abroad	-86.7	-87.8	-119.4	-26.7	-37.0	-22.8	-32.9
Foreign direct investment in the United States	67.5	77.0	107.9	30.7	26.7	25.9	24.6
Nonbank-reported capital, net	-4	-32.4	-31.6	-14.3	-11.9	4.2	-9.6
U.S. claims	-35.0	-64.2	-76.3	-29.5	-4.0	-17.8	-25.0
U.S. liabilities	34.6	31.8	44.7	15.2	-7.9	22.0	15.4

^r Revised.

^P Preliminary.

1. Liabilities exclude U.S. Treasury securities.

Table Q.—U.S. Bank-Reported Claims and Liabilities by Type

[Billions of dollars]

	1995	1996	1997 ^P	1997			
				I	II	III ^r	IV ^P
Claims on foreigners reported by U.S. banks (increase/capital outflow (-))	-75.1	-98.2	-151.1	-62.0	-27.9	-30.6	-30.5
Banks' claims for own accounts, payable in dollars:							
Own foreign offices	-24.4	-35.1	-86.1	-17.8	-19.1	5.0	-54.2
Unaffiliated banks	8.8	-11.9	4.4	-4.9	-1.1	14.8	-4.4
Public borrowers and other foreigners	-31.6	-21.2	-22.6	-13.2	5.2	-25.0	10.5
Banks' claims for domestic customers' accounts, payable in dollars	-19.4	-26.8	-27.5	-19.6	.2	-19.0	10.9
Claims payable in foreign currencies	-8.5	-3.1	-19.3	-6.5	-13.2	-6.4	6.7
Liabilities to foreigners reported by U.S. banks (excluding U.S. Treasury securities) (increase/capital inflow (+))¹	30.2	9.8	142.5	17.4	28.1	10.1	87.0
Banks' liabilities for own accounts, payable in dollars:							
Own foreign offices .....	.8	5.2	82.5	12.0	5.1	-8.1	73.5
Unaffiliated banks	3.4	-10.1	-3.5	-7.1	3.2	-5.5	5.9
Other private foreigners and international financial institutions	7.1	14.5	17.2	7.7	4.0	1.5	4.1
Banks' custody liabilities, payable in dollars	-1.7	2.7	26.6	-4.2	16.7	11.2	2.9
Liabilities payable in foreign currencies	20.5	-2.6	19.7	9.0	-9	11.0	.6

^r Revised.

^P Preliminary.

1. Excludes liabilities to foreign official agencies.

tary authorities did not intervene in the foreign exchange markets in 1997 (table C).

Claims reported by banks.—Claims on foreigners reported by U.S. banks increased \$151.1 billion in 1997, compared with an increase of \$98.2 billion in 1996 (tables P and Q).

Banks' own claims payable in dollars increased \$104.2 billion in 1997, up sharply from an increase of \$68.3 billion in 1996. The 1997 increase was just under the record \$104.3 billion increase in 1982. Foreign-owned banks accounted for much of the increase in claims in 1997. Outflows were especially strong in the first half of the year, when foreign-owned banks extended \$65.0 billion in credit, but their lending slowed to \$12.3 billion in the second half. In the first half, foreign-owned banks shifted the booking of international loans from overseas to their U.S. offices, but this practice ended abruptly in the third quarter. The lending supported buoyant credit conditions in Europe, where consolidation and merger and acquisition activity among both industrial companies and major European banking groups accelerated in preparation for the beginning of the European Monetary Union. The lending also supported, through October, strong foreign purchases of U.S. Treasury bonds, as bond prices rose and the dollar appreciated. In the fourth quarter, foreign-owned banks were joined by U.S.-owned banks in meeting the surge in borrowing abroad that was partly attributable to uncertainties created by financial problems in Asia and to the desire of many foreign borrowers to enter into shorter term borrowing arrangements.

U.S.-owned banks did not participate in the cross-border funding of financial activity in Europe or elsewhere during the first three quarters; their claims decreased \$10.2 billion during this period. In the fourth quarter, however, U.S.-owned banks provided \$37.2 billion in credit to meet a surge in demand for credit by banks in financial centers in the Caribbean and the United Kingdom. Much of the increased lending financed unusually strong purchases of U.S. Treasury securities in October and met a step-up in credit demand toward the end of the quarter. However, some lending provided dollar credits during a period of uncertainty when the Asian financial situation depressed credit availability and Asian currencies depreciated rapidly. Uncertainty also adversely affected the bond markets worldwide. With the temporary drying up of available funds, particularly for less than highly rated borrowers, some borrowing was shifted to

the banking markets, particularly borrowing for working capital purposes.

Banks' claims on other private foreigners and foreign public borrowers increased \$22.6 billion in 1997, following a \$21.2 billion increase in 1996. A large part of the 1997 increase occurred in the third quarter, when U.S. securities dealers lent to international bond mutual funds in the Caribbean to finance purchases of U.S. Treasury securities, largely in the form of repurchase agreements. The step-up in lending to public (sovereign) borrowers in Latin America in the fourth quarter reflected a shift of borrowing to the bank markets when risk premiums on emerging market new issues rose sharply as a result of financial problems in Asia.

Banks' own claims payable in foreign currencies increased \$20.8 billion in 1997, compared with a decrease of \$5.4 billion in 1996. Most of the increase in 1997 was in the first half of the year and was mostly to Western Europe.

Banks' domestic customers' claims increased \$26.0 billion in 1997, down from an increase of \$35.3 billion in 1996. In 1997, the increase in deposits abroad was sharply lower, and less commercial paper was issued in the United States by foreigners. Outstanding collections shifted to an increase.

Foreign securities.—Net U.S. purchases of foreign securities were \$79.3 billion in 1997, down from \$108.2 billion in 1996; a sharp decline occurred in the fourth quarter, reflecting uncertainties created by Asian financial problems. For the year, net U.S. purchases of foreign stocks were \$38.0 billion, down from \$58.8 billion, and net purchases of foreign bonds were \$41.3 billion, down from \$49.4 billion (table P, charts 11 and 14).

A decline of 97 basis points in U.S. corporate Aaa rates from a high in April sharply reduced the cost of borrowing in the United States in 1997. Lower U.S. rates than foreign rates and longer maturities available in the U.S. market than in foreign markets led to record borrowing in the first three quarters of the year before uncertainties and elevated risk premiums for most borrowers from Asia and Latin America slowed borrowing in the fourth quarter. Stock prices in most foreign markets were sharply higher, particularly in Western Europe where gains averaged more than 40 percent in local currencies even after sharp, but temporary, retrenchments in the fourth quarter. Stock prices in Latin America also pulled back sharply in the fourth quarter but were up 28 percent for the year. However, stock prices in Asian countries, including Japan, fell

nearly 40 percent for the year, mostly in the last half (chart 12).

U.S. institutional investors maintained their cross-border portfolio holdings in 1997. The value of U.S. pension fund assets invested abroad as a share of total U.S. pension fund assets increased to approximately 18 percent late in 1997 from 14 percent late in 1996, reflecting strong price gains and, to a lesser extent, new investments. The share of total capital flows into U.S. equity mutual funds that was invested abroad in 1997 remained unchanged at approximately 11 percent. The value of U.S. equity mutual fund assets invested abroad as a share of total U.S. equity mutual fund assets decreased to approximately 15 percent at yearend 1997 from 16 percent at yearend 1996.

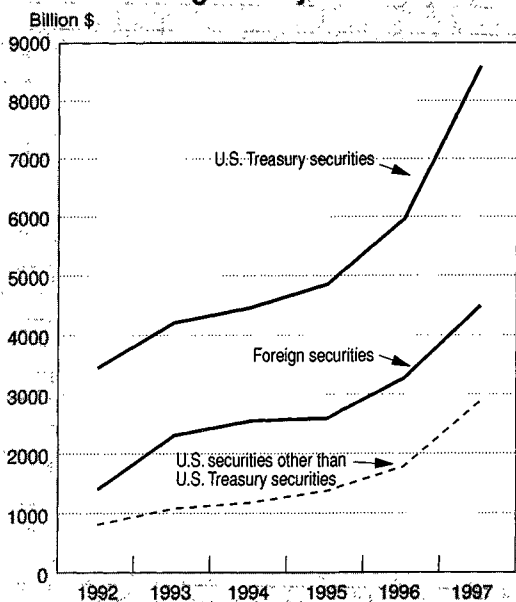
Net U.S. purchases of foreign stocks were \$38.0 billion in 1997, down from \$58.8 billion in 1996. Net purchases in the first three quarters of 1997 were just under the strong net purchases in first three quarters of 1996. However, declines in Asian currency markets and equity markets in the fourth quarter led to a sharp and substantial shift to net sales for the quarter in most major countries and areas, including many countries in Western Europe, as investors became cautious of the economic and financial implications of developments in Asia. For the year 1997, net purchases from Western Europe, at

\$13.3 billion, were less than half the 1996 total: There were large slowdowns or shifts to net sales with France, Germany, and Switzerland; however, net purchases from the United Kingdom increased. Transactions with Canada declined to net purchases of \$1.3 billion from net purchases of \$3.5 billion, and transactions with Latin America slowed to net purchases of \$0.3 billion from net purchases of \$3.6 billion. Net purchases from Japan declined slightly to \$9.4 billion. Net purchases in other markets, mostly Asian emerging markets, slowed to \$5.3 billion from \$8.6 billion; emerging-market countries account for only 6 percent of U.S. holdings of foreign equities. Trading activity in stocks—gross purchases plus gross sales—increased 53 percent in 1997.

Net U.S. purchases of foreign bonds were \$41.3 billion, down from \$49.4 billion. However, new issues placed in U.S. markets increased \$14.1 billion to \$66.5 billion. The continued strength in new issues reflected low U.S. long-term rates, compared with foreign rates, and heavy financing needs of foreign governments and corporations. The pace of new issues was stronger in the first three quarters of 1997 than in the first three quarters of 1996, but fell off sharply in the fourth quarter when the market placed substantial risk premiums on new issues from emerging-market countries, more so for Asian issues than for Latin American issues (chart 13).

CHART 11

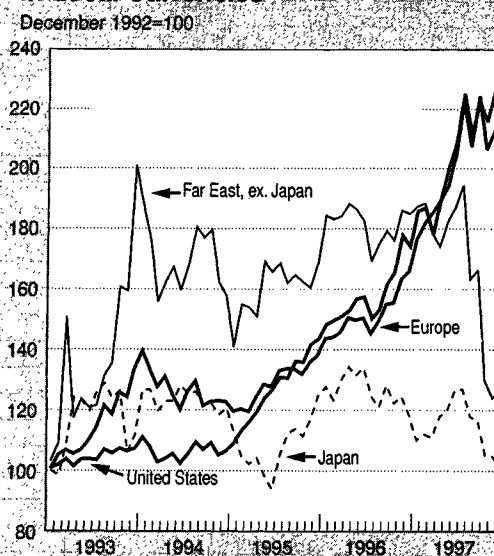
Gross Trading Activity



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

CHART 12

Selected Stock Price Indexes in Local Currencies



Source: Morgan Stanley Capital International. Indexes rebased by BEA.

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

Transactions in outstanding bonds shifted to net sales of \$9.3 billion from net purchases of \$13.1 billion. Net purchases in the United Kingdom, where much of the trading takes place, slowed substantially to \$2.3 billion from \$17.6 billion. Much of the reduction occurred in the first half of the year; there was renewed interest, particularly in British "gilt-edged" securities, in the last half. Trading activity in bonds increased 33 percent in 1997.

Direct investment.—Net capital outflows for U.S. direct investment abroad were \$119.4 billion in 1997, up from \$87.8 billion in 1996. Equity capital outflows more than doubled, and reinvested earnings were higher. In contrast, intercompany debt outflows were lower (table M).

Equity capital outflows were a record \$48.1 billion, up from \$21.6 billion in 1996 and well above the previous record of \$36.6 billion in 1995. The outflows in 1997 reflected numerous multibillion dollar acquisitions. Several of the largest transactions occurred in the finance industry, where consolidations and restructurings were propelled partly by the continuing integration of capital markets around the world and partly by the advent of the European Monetary Union. Additional large investments occurred in public utilities (electric power and telecommunications); these transactions partly reflected the desire to capitalize on new market opportunities provided by privatizations of State-owned

enterprises and partly reflected the desire to enter foreign markets where the potential for growth was greater than in the United States. Western Europe accounted for nearly 60 percent of equity outflows in 1997.

Reinvested earnings were \$64.0 billion, up from \$57.9 billion; the largest increase was in Western Europe.

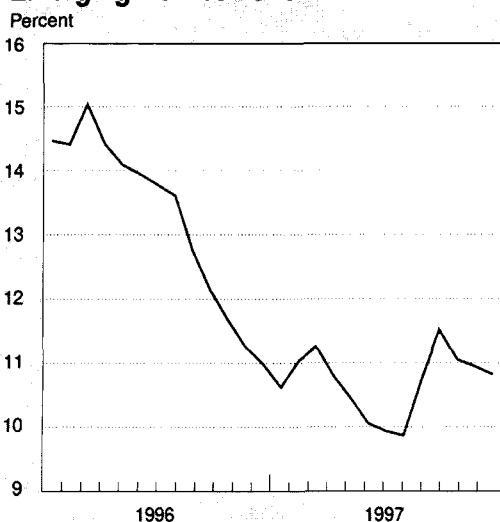
Intercompany debt outflows were \$7.4 billion, down from \$8.3 billion. Although little changed for the year, debt flows fluctuated widely during the year, particularly as U.S. parents borrowed or loaned funds to their finance affiliates abroad.

Foreign assets in the United States

Foreign assets in the United States increased \$690.5 billion in 1997, compared with an increase of \$547.6 billion in 1996. The increases in U.S. liabilities reported by U.S. banks, in net inflows

CHART 13

Emerging Market Bond Yields

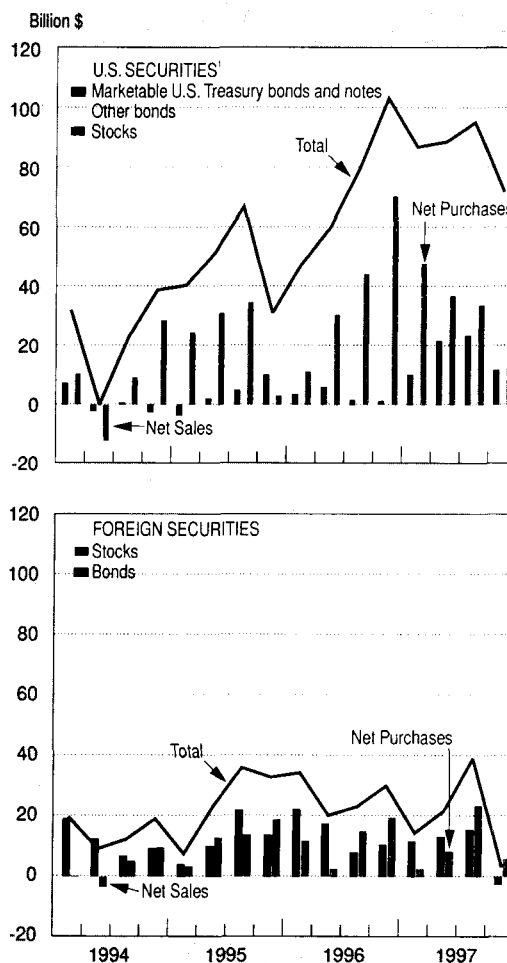


Source: J.P. Morgan. Emerging Market Bond Index Plus, EMBI+, represents external currency denominated debt in emerging markets. It is comprised mostly of U.S. dollar issues.

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

CHART 14

Securities Transactions



1. Excluding transactions of foreign official agencies.

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

for foreign direct investment in the United States, and in net foreign purchases of U.S. securities other than U.S. Treasury securities were all substantially larger in 1997 than in 1996. The increase in foreign official assets in the United States was substantially smaller.

Foreign official assets.—Foreign official assets in the United States increased \$18.2 billion in 1997, compared with an increase of \$122.4 billion in 1996, as both industrial and developing countries slowed their accumulation of dollar assets (table C). Dollar assets of industrial countries increased \$11.2 billion, down from an increase of \$65.5 billion. The accumulation was in the first three quarters; in the fourth, there were net sales, partly to support certain currencies in exchange markets.

Assets of developing countries increased \$7.0 billion, following an increase of \$56.9 billion. While most developing countries had accumulated dollar assets in 1996, many sold dollar assets in 1997. In 1997, large increases by several countries in Latin America and Asia were offset in large part by decreases by several emerging-market countries in Asia.

Liabilities reported by banks.—U.S. liabilities to foreigners reported by U.S. banks, excluding U.S. Treasury securities, increased \$142.5 billion in 1997, compared with an increase of \$9.8 billion in 1996; the previous record inflow was \$104.3 billion in 1994 (tables P and Q).

U.S.-owned banks' liabilities payable in dollars increased little during the first three quarters of 1997. Given the strong growth in domestic deposits, U.S.-owned banks had little need to borrow from abroad to meet either domestic or foreign demand for credit. In the fourth quarter, U.S.-owned banks borrowed heavily to fund the strong demand for credit at financial centers in the Caribbean and the United Kingdom, as well as in other countries in Western Europe, particularly toward the end of the quarter. In addition, some foreigners elected to hold dollar deposits at U.S. banking institutions rather than at foreign banking institutions, in the face of uncertainties created by the deteriorating financial situation in Asia.

Foreign-owned banks' liabilities increased only moderately in the first half of the year. During the first half, funds drawn from related branches in the Caribbean complemented funds raised in the United States to finance increased dollar lending in the United States and overseas. In the fourth quarter, the surge in borrowing was

attributable to transactions of Japanese-owned banks and, to a small extent, of other Asian-owned banks in the United States. Repercussions from Asian financial problems led to a substantial loss in deposit inflows to Japanese banks located in the United States. In order to replace these inflows and to continue to meet their loan commitments, Japanese banks borrowed heavily from their parent offices in Japan rather than borrow in the U.S. interbank market where borrowing costs had risen sharply to reflect the failure of several Japanese banking and securities firms. In order to provide these funds, parent banks in Japan may have liquidated holdings of U.S. Treasury securities. European-owned banks in the United States also accelerated their foreign borrowing in the fourth quarter, mostly to finance overseas lending.

Banks' liabilities to "other" private foreigners increased \$19.3 billion in 1997, following an increase of \$11.5 billion in 1996. Most of the borrowing in 1997 was by U.S. securities dealers from international bond mutual funds in the Caribbean and was likely in the form of repurchase agreements.

Banks' custody liabilities increased \$26.6 billion in 1997, compared with an increase of \$2.7 billion in 1996. Much of the increase in 1997 reflected strong borrowing from banks in the United Kingdom and Caribbean by U.S. nonbanking concerns.

Banks' liabilities payable in foreign currencies increased \$19.7 billion in 1997, compared with a decrease of \$2.6 billion in 1996. Most of the increase in 1997 was in liabilities to Japan, the Caribbean, and Western Europe.

U.S. Treasury securities.—Net foreign purchases of U.S. Treasury securities were a record \$163.1 billion in 1997, up from the previous record of \$155.6 billion in 1996. Net purchases in the first three quarters of 1997 were well ahead of net purchases in the first three quarters of 1996, but they fell off in the fourth quarter (table P, charts 11 and 14).

Economic conditions in the United States were particularly favorable for bonds. Low inflation and the prospects of a dwindling supply of U.S. Treasury bonds as the Federal budget deficit moved toward a surplus led to the lowest yields since 1993. Yield differentials in favor of U.S. Treasury bonds over German and Japanese Government bonds widened in the early months of the year, but even with some narrowing later in the year, differentials in favor of U.S. Treasury bonds remained sizable (chart 3). Dollar

appreciation increased the attractiveness of U.S. Treasury bonds and complemented large price appreciation.

Net purchases by Western Europeans increased substantially. Early in the year, the strength was attributable to a rise in the interest-rate differential in favor of U.S. Treasury bonds, and in the July-October period, it was related indirectly to preparations for the European Monetary Union and the desire to hold dollar assets when financial difficulties in Asia first became evident. In contrast, net purchases by Japan were sharply lower in 1997 than in 1996; net sales began in the third quarter and accelerated in the fourth as balance sheets of Japanese financial institutions weakened. Net purchases by Asian countries other than Japan were also sharply lower in 1997 than in 1996; there were few net purchases over the last three quarters. Net purchases by international bond mutual funds in the Caribbean fell substantially, reflecting net sales in the first three quarters when international bond funds took profits before a shift to net purchases in the fourth. Trading activity in U.S. Treasury bonds increased 37 percent in 1997.

U.S. currency flows.—Net outflows of U.S. currency were \$24.8 billion in 1997, compared with \$17.3 billion in 1996 (table P). A large part of the increase in currency outflows in 1997, and since 1994, has been to Russia and the other states in the Commonwealth of Independent States. Pur-

chases of U.S. currency by these areas have not declined, even after their political and economic situations have stabilized. Their high demand most likely reflects the underdevelopment of their financial sector, as well as strengthening in their income and consumption. At the end of 1997, dollar purchases in Russia increased, likely reflecting concern about the ruble redenomination. Elsewhere in the world, the demand for U.S. bank notes has been relatively stable.

Other U.S. securities.—Net foreign purchases of U.S. securities other than U.S. Treasury securities were a record \$189.3 billion in 1997, compared with the previous record of \$133.8 billion in 1996. Net foreign purchases of U.S. stocks increased more than fivefold—to \$66.9 billion from \$12.6 billion (table P, charts 11 and 14).

U.S. stock prices continued to advance; the Standard and Poor's 500 index rose 32 percent in 1997. Falling U.S. interest rates, low U.S. inflation, strong corporate earnings, and rising valuations placed on those earnings pushed U.S. stock prices to record highs. After rising early in the year, yields on U.S. corporate bonds declined an average of 85 basis points through yearend 1997, leading to an average price rise of 14 percent.

Net foreign purchases of U.S. stocks surged to a record \$66.9 billion—over five times the purchases of \$12.6 billion in 1996 and over three times the previous record of \$19.0 billion in 1993. The increase in the demand for U.S. stocks was

Table R.—New International Bond Issues by U.S. Borrowers

[Millions of dollars]

	1995	1996	1997 ^P	1997			
				I	II	III ^r	IV ^P
Total	71,400	64,858	91,411	24,616	26,889	30,492	9,414
By issuer:							
Industrial corporations	3,540	2,410	7,810	2,303	1,113	3,592	803
Banking corporations ¹	10,967	15,539	23,543	8,034	5,943	7,376	2,190
Nonbank financial corporations ²	35,571	27,741	44,014	9,250	14,884	15,855	4,025
U.S. federally sponsored agencies	12,139	11,413	11,278	3,876	3,170	3,016	1,216
All other borrowers	9,183	7,755	4,766	1,153	1,779	654	1,181
By instrument:							
Of which: Issued through medium-term note programs	14,233	13,869	6,259	2,045	1,919	2,033	262
Straight fixed-rate bonds	49,339	39,254	53,240	12,856	16,014	18,999	5,371
Floating-rate notes	19,662	24,195	34,967	11,206	10,816	10,006	2,940
Zero-coupon bonds	1,037	298	2,059	554	59	688	757
Bonds convertible into stock	1,167	801	601	.....	.....	601	.....
Other debt instruments	195	310	544	.....	.....	198	346
By currency:							
U.S. dollars	43,869	39,572	61,165	17,599	18,802	19,060	5,703
Foreign currencies	27,531	25,286	30,246	7,017	8,087	11,431	3,711
Japanese yen	6,112	5,416	2,774	699	690	1,014	372
Swiss franc	4,148	1,762	3,331	737	860	953	782
German mark	8,664	8,372	4,751	1,331	1,073	2,255	92
British pound	978	2,363	6,432	2,461	1,212	2,421	337
European currency unit	488	.....	456	.....	171	285	.....
Canadian dollar	346	147	257	102	144	12	.....
Other currencies	6,795	7,226	12,244	1,687	3,937	4,491	2,128

^P Preliminary.
^r Revised.

1. Includes banks and bank holding companies.
2. Principally credit, securities, brokerage, and insurance companies.

considerably stronger than those in most quarters in recent years. Purchases from Western Europe continued unabated during the fourth quarter; the large shift to net sales occurred in transactions conducted through brokers and dealers in the Caribbean. Trading activity in stocks was 56 percent higher than in 1996.

Net foreign purchases of U.S. bonds were a record \$122.4 billion, slightly higher than the previous record of \$121.2 billion in 1996. New issues sold abroad by U.S. corporations were \$80.1 billion, up from \$53.4 billion, reflecting continued strong demand from Western Europe for new issues, many of which were part of global launch programs or asset-backed securities; issues of asset-backed securities were strongest in the third and fourth quarters. Both bank and nonbank financial institutions stepped up their borrowing considerably. By type of instrument, straight fixed-rate instruments increased considerably more than floating-rate instruments. The dollar was increasingly favored as the most popular currency of issue. New issues fell by two-thirds in the fourth quarter in response to uncertainties created by the situation in Asia (table R). Net foreign purchases of outstanding U.S. bonds slowed, partly because foreigners

sold bonds to realize capital gains resulting from the large run-up in bond prices. Trading activity in bonds was 48 percent higher than in 1996.

Direct investment.—Net capital inflows for foreign direct investment in the United States were a record \$107.9 billion in 1997, up from the previous record of \$77.0 billion in 1996. Intercompany debt inflows increased sharply, reinvested earnings increased, and equity capital inflows decreased (table M).

Intercompany debt inflows were \$39.7 billion, up from \$11.7 billion. Inflows in 1997 were dominated by a few exceptionally large transactions by a number of European financial institutions who loaned large amounts to their finance affiliates in the United States. In addition, other large inflows of funds to financial institutions occurred from the Caribbean. Reinvested earnings were \$20.4 billion, up from \$12.2 billion; increases were strong for affiliates of Western European and Japanese parents. Equity capital inflows were \$47.8 billion, down from \$53.0 billion; new acquisitions trailed those in 1996 because several large-scale transactions in 1996 were not matched by comparable transactions in 1997.


Tables 1 through 10 follow. 

Table 1.—U.S. International Transactions
(Millions of dollars)

Table with columns: Line, (Credits +; debits -) 1, 1996, 1997 P, Not seasonally adjusted (1997: I, II, III, IV P), Seasonally adjusted (1997: I, II, III, IV P). Rows include Exports of goods, services, and income; Imports of goods, services, and income; U.S. assets abroad; Foreign assets in the United States; and Allocations of special drawing rights.

See footnotes on page 91.

Table 7.—Claims on and Liabilities to Unaffiliated Foreigners Reported by U.S. Nonbanking Concerns

(Millions of dollars)

Line	(Credits +; increase in U.S. liabilities or decrease in U.S. assets. Debits -; decrease in U.S. liabilities or increase in U.S. assets.)	1996	1997 ^P	Not seasonally adjusted								Amounts outstanding Dec. 31, 1997
				1996				1997				
				I	II	III	IV	I	II	III ¹	IV ¹	
A1	Claims, total (table 1, line 46)	-64,234	-76,298	-15,778	-5,047	-17,294	-26,115	-29,466	-3,984	-17,848	-25,000	449,040
2	Financial claims	-61,568	-76,021	-16,257	-4,832	-17,774	-22,705	-30,369	-4,005	-16,647	-25,000	420,239
3	Denominated in U.S. dollars	-41,661	-61,437	-4,470	-4,891	-8,639	-23,661	-26,035	2,596	-12,998	-25,000	332,387
4	Denominated in foreign currencies	-19,907	-14,583	-11,787	59	-9,135	956	-4,334	-6,601	-3,648		87,852
5	By type: Deposits ²	-60,856	-75,859	-16,147	-4,672	-17,563	-22,474	-30,823	-3,749	-16,287	-25,000	415,206
6	Other claims ^{2,3}	-712	-162	-110	-160	-211	-231	454	-256	-360		5,033
7	By area: Industrial countries ⁴	-29,780	-26,878	-14,987	6,319	-8,112	-13,000	-16,197	-2,656	-8,025		168,270
8	Of which United Kingdom	-18,167	-15,681	-10,672	3,180	-4,072	-6,603	-8,873	-4,827	-1,981		80,468
9	Canada	-1,061	2,814	-141	55	3,126	-4,101	894	2,843	-923		8,418
10	Caribbean banking centers ⁵	-30,719	-48,294	-1,234	-10,854	-9,399	-9,232	-14,279	-957	-8,058	-25,000	238,835
11	Other	-1,069	-848	-36	-297	-263	-473	107	-392	-563		13,134
12	Commercial claims	-2,666	-278	479	-215	480	-3,410	903	21	-1,202		28,802
13	Denominated in U.S. dollars	-2,657	168	410	-166	432	-3,333	916	148	-896		27,060
14	Denominated in foreign currencies	-9	-446	69	-49	48	-77	-13	-127	-306		1,742
15	By type: Trade receivables	-2,227	673	875	-153	266	-3,215	1,015	-52	-290		25,148
16	Advance payments and other claims	-439	-951	-396	-62	214	-195	-112	73	-912		3,654
17	By area: Industrial countries ⁴	-1,161	-348	-231	-72	645	-1,503	485	159	-992		16,071
18	Members of OPEC ⁶	-278	29	-100	120	-91	-207	68	83	-122		1,979
19	Other	-1,227	41	810	-263	-74	-1,700	350	-221	-88		10,752
B1	Liabilities, total (table 1, line 60)	31,786	44,740	6,800	7,288	20,610	-2,912	15,210	-7,916	22,046	15,400	321,788
2	Financial liabilities	26,194	41,780	5,774	7,108	18,375	-5,063	13,863	-8,161	20,678	15,400	287,212
3	Denominated in U.S. dollars	12,420	47,270	3,574	3,100	11,156	-5,410	11,301	-3,713	24,282	15,400	252,462
4	Denominated in foreign currencies	13,774	-1,490	2,200	4,008	7,219	347	2,562	-448	-3,604		34,750
5	By area: Industrial countries ⁴	27,031	18,900	10,054	6,530	10,247	200	11,177	-1,118	8,841		94,490
6	Of which United Kingdom	25,140	20,721	7,757	7,738	9,176	469	11,896	167	8,658		82,714
7	Caribbean banking centers ⁵	-657	22,600	-4,105	900	7,897	-5,349	2,300	-7,000	11,900	15,400	176,000
8	Other	-180	280	-175	-322	231	86	386	-43	-63		16,722
9	Commercial liabilities	5,592	2,960	1,026	180	2,235	2,151	1,347	245	1,368		34,576
10	Denominated in U.S. dollars	5,919	2,896	1,338	102	2,356	2,123	1,434	236	1,226		33,405
11	Denominated in foreign currencies	-327	64	-312	78	-121	28	-87	9	142		1,171
12	By type: Trade payables	1,506	-1,761	-198	266	524	914	-1,200	-393	-168		10,954
13	Advance receipts and other liabilities	4,086	4,721	1,224	-86	1,711	1,237	2,547	638	1,536		23,622
14	By area: Industrial countries ⁴	3,967	1,511	1,371	-143	1,217	1,522	637	46	828		15,802
15	Members of OPEC ⁶	632	1,095	-225	304	260	293	308	131	656		4,005
16	Other	993	354	-120	19	758	336	402	68	-116		14,769

See footnotes on page 91.

Table 10.—U.S. International
[Millions]

Line	(Credits +; debits -) ¹	Australia					
		1996	1997 ^P	1997			
				I	II	III ^P	IV ^P
1	Exports of goods, services, and income	21,726	23,347	5,319	6,174	6,005	5,849
2	Goods, adjusted, excluding military ²	11,705	11,904	2,823	3,095	3,071	2,915
3	Services ³	4,792	5,365	1,122	1,293	1,470	1,480
4	Transfers under U.S. military agency sales contracts ⁴	204	378	35	46	76	221
5	Travel	1,819	1,941	392	480	608	461
6	Passenger fares	461	494	100	133	143	118
7	Other transportation	297	320	72	79	84	85
8	Royalties and license fees ⁵	575	625	141	159	161	164
9	Other private services ⁵	1,423	1,595	379	393	396	427
10	U.S. Government miscellaneous services	13	12	3	3	2	4
11	Income receipts on U.S. assets abroad	5,229	6,078	1,374	1,786	1,464	1,454
12	Direct investment receipts	2,979	3,598	777	1,169	836	816
13	Other private receipts	2,250	2,480	597	617	628	638
14	U.S. Government receipts						
15	Imports of goods, services, and income	-6,820	-8,194	-2,074	-1,658	-2,196	-2,266
16	Goods, adjusted, excluding military ²	-3,869	-4,870	-1,159	-1,169	-1,290	-1,252
17	Services ³	-2,501	-2,702	-743	-567	-645	-747
18	Direct defense expenditures	-53	-88	-21	-12	-25	-30
19	Travel	-943	-1,003	-325	-175	-197	-306
20	Passenger fares	-503	-538	-157	-114	-126	-141
21	Other transportation	-326	-241	-61	-60	-55	-65
22	Royalties and license fees ⁵	-32	-77	-8	-8	-54	-7
23	Other private services ⁵	-599	-702	-155	-187	-174	-186
24	U.S. Government miscellaneous services	-45	-54	-17	-11	-14	-12
25	Income payments on foreign assets in the United States	-450	-622	-172	78	-261	-267
26	Direct investment payments	31	-75	-65	213	-108	-115
27	Other private payments	-333	-468	-88	-115	-133	-132
28	U.S. Government payments	-148	-79	-19	-20	-20	-20
29	Unilateral transfers, net	-92	-88	-25	-22	-21	-20
30	U.S. Government grants ⁴						
31	U.S. Government pensions and other transfers	-34	-35	-9	-9	-9	-8
32	Private remittances and other transfers ⁶	-58	-53	-16	-13	-12	-12
33	U.S. assets abroad, net (increase/capital outflow (-))	-11,507	-4,782	-595	-2,026	-146	-2,015
34	U.S. official reserve assets, net ⁷						
35	Gold						
36	Special drawing rights						
37	Reserve position in the International Monetary Fund						
38	Foreign currencies						
39	U.S. Government assets, other than official reserve assets, net	15	(*)	-1	-1	2	
40	U.S. credits and other long-term assets						
41	Repayments on U.S. credits and other long-term assets ⁸						
42	U.S. foreign currency holdings and U.S. short-term assets, net	15	(*)	-1	-1	2	
43	U.S. private assets, net	-11,522	-4,782	-594	-2,025	-148	-2,015
44	Direct investment	-3,789	-1,658	-797	-632	207	-436
45	Foreign securities	-4,470	-2,727	-1,092	-197	-921	-517
46	U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	-222	150	142	-57	65	
47	U.S. claims reported by U.S. banks, not included elsewhere	-3,041	-547	1,153	-1,139	501	-1,062
48	Foreign assets in the United States, net (increase/capital inflow (+))	4,280	4,887	-921	2,560	2,788	460
49	Foreign official assets in the United States, net	(18)	(18)	(18)	(18)	(18)	(18)
50	U.S. Government securities	(18)	(18)	(18)	(18)	(18)	(18)
51	U.S. Treasury securities ⁹	(18)	(18)	(18)	(18)	(18)	(18)
52	Other ¹⁰	(18)	(18)	(18)	(18)	(18)	(18)
53	Other U.S. Government liabilities ¹¹	-53	-150	23	2	-16	-159
54	U.S. liabilities reported by U.S. banks, not included elsewhere	(18)	(18)	(18)	(18)	(18)	(18)
55	Other foreign official assets ¹²	(18)	(18)	(18)	(18)	(18)	(18)
56	Other foreign assets in the United States, net	(18)	(18)	(18)	(18)	(18)	(18)
57	Direct investment	2,129	3,412	469	213	3,277	-547
58	U.S. Treasury securities and U.S. currency flows	(18)	(18)	(18)	(18)	(18)	(18)
59	U.S. securities other than U.S. Treasury securities	-614	717	272	325	295	-175
60	U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	427	-73	128	-153	-48	
61	U.S. liabilities reported by U.S. banks, not included elsewhere	¹⁸ 2,391	¹⁸ 981	¹⁸ -1,813	¹⁸ 2,173	¹⁸ -720	¹⁸ 1,341
62	Allocations of special drawing rights						
63	Statistical discrepancy, and transfers of funds between foreign areas, net (sum of above items with sign reversed)	-7,587	-15,169	-1,703	-5,028	-6,430	-2,008
Memoranda:							
64	Balance on goods (lines 2 and 16)	7,836	7,034	1,664	1,926	1,781	1,663
65	Balance on services (lines 3 and 17)	2,291	2,662	378	726	825	733
66	Balance on goods and services (lines 64 and 65)	10,127	9,696	2,042	2,652	2,606	2,396
67	Balance on investment income (lines 11 and 25)	4,779	5,456	1,202	1,864	1,203	1,187
68	Balance on goods, services, and income (lines 1 and 15 or lines 66 and 67) ¹³	14,906	15,152	3,244	4,516	3,809	3,583
69	Unilateral transfers, net (line 29)	-92	-88	-25	-22	-21	-20
70	Balance on current account (lines 1, 15, and 29 or lines 68 and 69) ¹³	14,814	15,064	3,219	4,494	3,788	3,563

See footnotes on page 91.

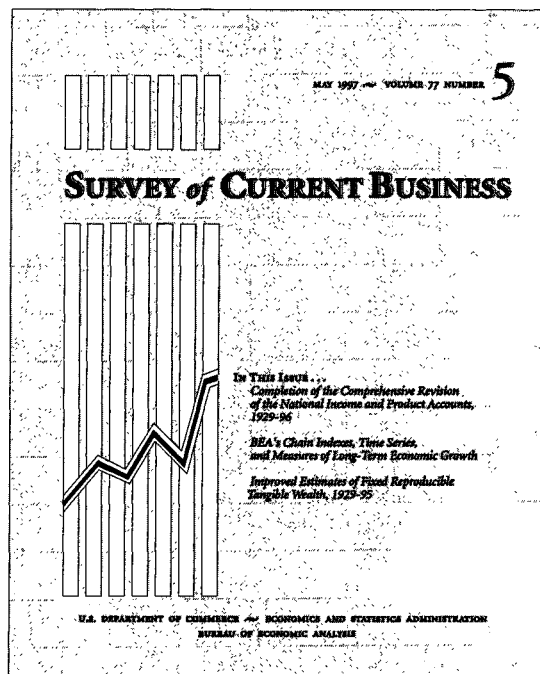
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The tables listed below present annual, quarterly, and monthly estimates, indicated as follows: [A] Annual estimates only; [Q] quarterly estimates only; [QA] quarterly and annual estimates; [MA] monthly and annual estimates.

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3. Government Receipts, Current Expenditures, and Gross Investment

Table 3.1.—Government Receipts and Current Expenditures

[Billions of dollars]

	1996	1997	Seasonally adjusted at annual rates					
			1996		1997			
			III	IV	I	II	III	IV
Receipts	2,412.7	2,589.6	2,426.7	2,479.0	2,526.6	2,566.8	2,616.7	2,648.5
Personal tax and nontax receipts	886.9	988.7	897.3	922.6	955.7	979.2	998.0	1,022.1
Corporate profits tax accruals	229.0	249.4	231.6	226.0	241.2	244.5	258.2	253.6
Indirect business tax and nontax accruals	604.8	619.4	600.9	625.3	610.2	616.2	625.4	625.8
Contributions for social insurance	692.0	732.1	696.8	705.1	719.5	726.9	735.0	746.9
Current expenditures	2,417.8	2,510.6	2,423.6	2,455.8	2,477.4	2,498.7	2,516.1	2,550.5
Consumption expenditures	1,182.4	1,226.8	1,189.8	1,197.0	1,209.7	1,221.6	1,230.8	1,244.8
Transfer payments (net)	1,058.3	1,107.3	1,058.2	1,078.0	1,091.0	1,100.8	1,108.5	1,128.9
To persons	1,042.0	1,094.1	1,046.3	1,055.1	1,080.5	1,090.0	1,098.4	1,107.3
To the rest of the world (net)	16.3	13.2	11.9	22.9	10.5	10.8	10.0	21.6
Net interest paid	165.4	165.1	164.4	168.8	164.9	164.9	165.6	165.0
Interest paid	317.7	319.2	318.1	320.7	317.9	319.1	319.7	320.0
To persons and business	246.4	228.1	244.1	241.3	233.3	227.9	225.9	225.3
To the rest of the world	71.3	91.1	74.0	79.4	84.6	91.2	93.9	94.7
Less: Interest received by government	152.3	154.1	153.7	152.0	153.0	154.1	154.1	155.0
Less: Dividends received by government	13.6	14.6	13.7	14.0	14.3	14.7	14.7	14.9
Subsidies less current surplus of government enterprises	25.4	26.1	24.9	26.0	26.1	26.0	25.8	26.7
Subsidies	33.5	34.6	33.5	33.7	34.1	34.6	34.7	34.9
Less: Current surplus of government enterprises	8.1	8.4	8.5	7.7	8.0	8.6	8.8	8.2
Less: Wage accruals less disbursements	0	0	0	0	0	0	0	0
Current surplus or deficit (-), national income and product accounts	-5.1	79.0	3.1	23.2	49.2	68.1	100.6	98.0
Social insurance funds	126.6	135.1	129.7	132.0	129.9	132.0	135.8	142.8
Other	-131.7	-56.1	-126.6	-108.8	-80.7	-63.9	-35.1	-44.8

4. Foreign Transactions

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

[Billions of dollars]

	1996	1997	Seasonally adjusted at annual rates					
			1996		1997			
			III	IV	I	II	III	IV
Receipts from the rest of the world	1,105.1	1,219.3	1,099.0	1,153.4	1,170.4	1,221.9	1,235.2	1,249.9
Exports of goods and services ...	870.9	957.1	863.7	904.6	922.2	960.3	965.8	980.0
Goods ¹	617.5	686.3	609.7	640.5	656.2	690.0	691.1	707.9
Durable	421.2	481.5	415.8	438.8	455.9	486.3	485.6	498.2
Nondurable	196.3	204.8	193.9	201.6	200.3	203.7	205.4	209.8
Services ¹	253.3	270.8	254.0	264.2	266.0	270.3	274.8	272.1
Receipts of factor income	234.3	262.2	235.4	248.8	248.2	261.6	269.4	269.8
Capital grants received by the United States (net)	0	0	0	0	0	0	0	0
Payments to the rest of the world	1,105.1	1,219.3	1,099.0	1,153.4	1,170.4	1,221.9	1,235.2	1,249.9
Imports of goods and services ...	965.7	1,058.1	977.6	993.2	1,021.0	1,049.0	1,077.1	1,085.4
Goods ¹	809.0	888.5	820.2	834.6	855.8	880.1	905.6	912.6
Durable	533.6	589.9	540.3	541.3	563.4	583.8	603.2	609.2
Nondurable	275.5	298.6	279.8	293.3	292.5	296.3	302.4	303.4
Services ¹	156.7	169.6	157.5	158.6	165.2	168.9	171.6	172.7
Payments of factor income	232.6	282.0	242.3	245.6	262.5	282.3	290.1	293.1
Transfer payments (net)	39.8	39.4	35.4	47.4	35.2	36.5	36.9	48.9
From persons (net)	15.9	17.9	15.9	16.7	17.0	17.6	18.2	18.7
From government (net)	16.3	13.2	11.9	22.9	10.5	10.8	10.0	21.6
From business	7.6	8.2	7.7	7.8	7.7	8.1	8.7	8.5
Net foreign investment	-132.9	-160.2	-156.4	-132.9	-148.4	-146.0	-168.9	-177.4

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services. Beginning with 1986, repairs and alterations of equipment were reclassified from goods to services.

Table 4.2.—Real Exports and Imports of Goods and Services and Receipts and Payments of Factor Income

[Billions of chained (1992) dollars]

	1996	1997	Seasonally adjusted at annual rates					
			1996		1997			
			III	IV	I	II	III	IV
Exports of goods and services	857.0	962.7	851.4	901.1	922.7	962.5	973.0	992.7
Goods ¹	628.4	725.0	623.0	666.2	686.2	725.8	731.8	756.3
Durable	463.3	553.2	460.8	494.0	517.0	555.8	559.8	580.0
Nondurable	169.1	180.6	166.4	177.0	176.0	179.2	181.1	186.1
Services ¹	229.9	241.7	229.4	236.8	238.9	240.8	245.0	241.8
Receipts of factor income	214.2	236.3	214.8	226.0	224.6	236.3	242.5	242.0
Imports of goods and services	971.5	1,109.2	990.2	1,006.6	1,048.9	1,099.1	1,137.1	1,151.8
Goods ¹	823.1	947.5	841.7	857.5	891.3	938.4	972.7	987.6
Durable	569.9	671.1	582.6	596.6	630.8	660.7	688.5	704.2
Nondurable	253.5	279.5	259.4	261.6	263.3	280.1	287.2	287.4
Services ¹	149.0	163.0	149.3	150.0	158.4	161.8	165.8	165.9
Payments of factor income	210.2	250.1	218.1	219.8	234.0	250.8	256.9	258.7

1. Exports and imports of certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services. Beginning with 1986, repairs and alterations of equipment are reclassified from goods to services.

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive.

Table 5.10.—Change in Business Inventories by Industry
[Billions of dollars]

	1996	1997	Seasonally adjusted at annual rates									
			1996		1997							
			III	IV	I	II	III	IV				
Change in business inventories	25.9	68.4	37.1	31.9	66.1	81.1	48.9	77.2				
Farm	2.9	6.7	5.8	3.2	3.9	6.2	8.1	8.5				
Nonfarm	23.0	61.7	31.3	28.7	62.2	74.9	40.9	68.7				
Change in book value	28.2	50.5	33.8	32.6	44.5	57.5	38.2	61.8				
Inventory valuation adjustment	-5.1	11.2	-2.4	-3.9	17.7	17.4	2.6	7.0				
Manufacturing	10.6	22.9	15.3	13.3	22.3	30.9	15.8	22.7				
Durable goods	10.2	13.2	14.4	6.8	12.9	19.1	10.3	10.6				
Nondurable goods .....	.4	9.7	.9	6.4	9.3	11.8	5.5	12.1				
Wholesale trade	3.3	21.8	-7.7	10.1	24.3	26.0	15.8	21.0				
Durable goods	2.5	12.3	4.7	-5.5	15.4	23.5	4.0	6.4				
Nondurable goods .....	.8	9.4	-12.4	15.6	8.9	2.4	11.8	14.6				
Merchant wholesalers	2.4	18.2	-8.0	11.7	18.9	18.4	15.1	20.3				
Durable goods	1.9	10.6	4.2	-3.2	12.3	18.6	4.3	7.1				
Nondurable goods .....	.5	7.6	-12.1	14.8	6.6	-2	10.9	13.3				
Nonmerchant wholesalers .....	.9	3.6	.3	-1.6	5.4	7.6	.7	.7				
Durable goods .....	.6	1.8	.6	-2.3	3.1	4.9	-3	-6				
Nondurable goods .....	.3	1.8	-.3	.8	2.3	2.7	1.0	1.3				
Retail trade	4.1	7.5	21.2	1.1	.6	8.3	3.0	18.1				
Durable goods	1.9	5.5	14.6	-3.3	1.4	2.4	1.7	16.8				
Motor vehicle dealers	-1.6	1.0	11.9	-5.3	-2.9	-4.0	-6	11.7				
Other	3.5	4.5	2.7	2.0	4.2	6.4	2.3	5.1				
Nondurable goods	2.3	1.9	6.6	4.4	-8	5.9	1.3	1.3				
Other	5.0	9.5	2.5	4.3	15.2	9.8	6.3	6.9				
Durable goods	2.3	1.9	-.5	.8	2.1	1.8	2.6	1.0				
Nondurable goods	2.6	7.7	2.9	3.4	13.0	8.0	3.7	5.9				

NOTE.—Estimates for nonfarm industries other than manufacturing and trade for 1986 and earlier periods are based on the 1972 Standard Industrial Classification (SIC). Manufacturing estimates for 1981 and earlier periods and trade estimates for 1986 and earlier periods are based on the 1972 SIC; later estimates for these industries are based on the 1987 SIC. The resulting discontinuities are small.

Table 5.11.—Real Change in Business Inventories by Industry
[Billions of chained (1992) dollars]

	1996	1997	Seasonally adjusted at annual rates									
			1996		1997							
			III	IV	I	II	III	IV				
Change in business inventories	25.0	65.7	37.9	32.9	63.7	77.6	47.5	74.0				
Farm	2.6	8.0	6.5	6.4	5.3	7.5	9.5	9.8				
Nonfarm	22.5	57.8	31.6	26.5	58.3	70.1	38.3	64.5				
Manufacturing	9.9	21.5	14.3	12.3	20.9	29.0	14.8	21.5				
Durable goods	9.7	12.6	13.8	6.6	12.3	18.2	9.9	10.2				
Nondurable goods .....	.4	8.9	.8	5.7	8.5	10.8	5.0	11.2				
Wholesale trade	4.0	20.6	-5.0	9.4	22.9	24.6	14.9	19.7				
Durable goods	2.4	11.9	4.5	-5.2	14.8	22.7	3.8	6.2				
Nondurable goods	1.6	8.6	-9.0	13.9	8.1	2.3	10.8	13.2				
Merchant wholesalers	3.2	17.1	-5.2	10.9	17.8	17.5	14.3	19.0				
Durable goods	1.8	10.2	3.9	-3.0	11.8	17.9	4.1	6.8				
Nondurable goods	1.3	6.9	-8.7	13.3	6.0	-1	9.9	11.9				
Nonmerchant wholesalers .....	.8	3.4	.3	-1.5	5.1	7.2	.6	.7				
Durable goods .....	.6	1.7	.5	-2.3	3.0	4.8	-3	-6				
Nondurable goods .....	.3	1.7	-2	.6	2.1	2.5	.9	1.3				
Retail trade	4.0	7.0	20.0	.9	.6	7.7	2.8	17.0				
Durable goods	1.7	5.0	13.3	-3.0	1.2	2.0	1.5	15.4				
Motor vehicle dealers	-1.4	.9	10.6	-4.7	-2.5	-3.7	-6	10.6				
Other	3.3	4.2	2.5	1.8	3.9	5.9	2.1	4.8				
Nondurable goods	2.3	1.9	6.5	4.1	-7	5.8	1.3	1.2				
Other	4.5	8.7	2.3	3.9	13.7	8.9	5.7	6.3				
Durable goods	2.1	1.6	-4	.7	1.8	1.5	2.3	.9				
Nondurable goods	2.4	7.1	2.8	3.2	12.0	7.5	3.4	5.5				
Residual	-4	0	-7	.5	.2	-1.0	0	.4				

NOTE.—Chained (1992) dollar series for real change in business inventories are calculated as the period-to-period change in chained-dollar end-of-period inventories. Quarterly changes in end-of-period inventories are stated at annual rates. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines.
See note to table 5.10.

Table 5.12.—Inventories and Domestic Final Sales of Business by Industry
[Billions of dollars]

	Seasonally adjusted quarterly totals					
	1996		1997			
	III	IV	I	II	III	IV
Inventories ¹	1,287.1	1,294.5	1,306.1	1,318.1	1,334.1	1,342.5
Farm	106.0	102.6	107.2	107.7	109.1	108.1
Nonfarm	1,181.2	1,191.9	1,198.9	1,210.4	1,225.0	1,234.4
Durable goods	675.6	675.2	684.4	693.2	697.0	703.6
Nondurable goods	505.5	516.7	514.5	517.2	528.0	530.8
Manufacturing	436.3	440.3	443.3	448.0	453.5	457.1
Durable goods	271.4	273.7	277.0	280.7	283.2	285.6
Nondurable goods	164.9	166.6	166.3	167.3	170.3	171.5
Wholesale trade	300.3	300.8	306.2	310.8	316.1	318.6
Durable goods	186.6	184.9	188.7	194.4	195.0	195.6
Nondurable goods	113.6	116.0	117.5	116.4	121.2	123.0
Merchant wholesalers	257.9	258.6	263.4	266.6	271.4	274.3
Durable goods	161.9	160.7	163.9	168.4	169.0	170.0
Nondurable goods	96.0	97.9	99.5	98.2	102.4	104.4
Nonmerchant wholesalers	42.4	42.3	42.8	44.2	44.7	44.3
Durable goods	24.8	24.1	24.9	26.1	25.9	25.6
Nondurable goods	17.6	18.1	17.9	18.2	18.8	18.6
Retail trade	312.5	313.0	313.3	313.2	314.7	318.1
Durable goods	168.8	167.7	168.7	167.7	168.0	171.5
Motor vehicle dealers	85.5	83.9	83.6	80.9	80.7	83.2
Other	83.3	83.9	85.1	86.7	87.3	88.3
Nondurable goods	143.6	145.3	144.6	145.6	146.7	146.6
Other	132.1	137.7	136.1	138.3	140.7	140.6
Durable goods	48.7	48.9	50.0	50.5	50.8	50.9
Nondurable goods	83.4	88.8	86.2	87.9	89.9	89.6
Final sales of domestic business ²	533.1	542.6	550.0	556.2	565.2	570.5
Final sales of goods and structures of domestic business ²	285.9	289.9	294.1	296.1	301.1	302.4
Ratio of inventories to final sales of domestic business						
Inventories to final sales	2.41	2.39	2.37	2.37	2.36	2.35
Nonfarm inventories to final sales	2.22	2.20	2.18	2.18	2.17	2.16
Nonfarm inventories to final sales of goods and structures	4.13	4.11	4.08	4.09	4.07	4.08

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 GDP. 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. Final sales of domestic business equals final sales of domestic product less gross product of households and institutions and of general government and includes a small amount of final sales by farm.

Table 5.13.—Real Inventories and Real Domestic Final Sales of Business by Industry
[Billions of chained (1992) dollars]

	Seasonally adjusted quarterly totals					
	1996		1997			
	III	IV	I	II	III	IV
Inventories ¹	1,200.7	1,208.9	1,224.8	1,244.2	1,256.1	1,274.6
Farm	100.9	102.5	103.8	105.7	108.0	110.5
Nonfarm	1,099.3	1,105.9	1,120.5	1,138.0	1,147.6	1,163.7
Durable goods	634.3	634.0	641.5	652.5	656.8	665.0
Nondurable goods	464.9	471.7	478.8	485.4	490.6	498.5
Manufacturing	406.6	409.7	414.9	422.1	425.8	431.2
Durable goods	259.3	260.9	264.0	268.6	271.0	273.6
Nondurable goods	147.5	148.9	151.1	153.8	155.0	157.8
Wholesale trade	280.1	282.4	288.1	294.3	298.0	303.0
Durable goods	179.2	177.9	181.6	187.3	188.3	189.8
Nondurable goods	101.1	104.6	106.6	107.2	109.9	113.2
Merchant wholesalers	240.1	242.8	247.3	251.7	255.2	260.0
Durable goods	155.1	154.3	157.3	161.8	162.8	164.5
Nondurable goods	85.3	88.6	90.1	90.1	92.6	95.5
Nonmerchant wholesalers	39.9	39.5	40.8	42.6	42.8	43.0
Durable goods	24.2	23.6	24.3	25.5	25.5	25.3
Nondurable goods	15.8	16.0	16.5	17.1	17.3	17.6
Retail trade	292.4	292.7	292.8	294.7	295.4	299.7
Durable goods	153.2	152.4	152.7	153.2	153.6	157.5
Motor vehicle dealers	75.7	74.5	73.9	73.0	72.8	75.5
Other	77.5	78.0	79.0	80.4	81.0	82.2
Nondurable goods	138.9	140.0	139.8	141.2	141.5	141.9
Other	120.1	121.1	124.5	126.7	128.2	129.7
Durable goods	42.3	42.5	42.9	43.3	43.9	44.1
Nondurable goods	77.7	78.4	81.4	83.3	84.2	85.6
Residual .....	.5	.7	.7	.4	.5	.5
Final sales of domestic business ²	484.7	491.1	495.1	498.5	505.0	508.4
Final sales of goods and structures of domestic business ²	268.2	271.8	274.5	275.6	280.0	281.0
Ratio of inventories to final sales of domestic business						
Inventories to final sales	2.48	2.46	2.47	2.50	2.49	2.51
Nonfarm inventories to final sales	2.27	2.25	2.26	2.28	2.27	2.29
Nonfarm inventories to final sales of goods and structures	4.10	4.07	4.08	4.13	4.10	4.14

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

2. Quarterly totals at monthly rates. Final sales of domestic business equals final sales of domestic product less gross product of households and institutions and of general government and includes a small amount of final sales by farm.

NOTE.—Chained (1992) dollar inventory series are calculated as the product of the chain-type quantity index and the average of the end-of-year fixed-weighted inventories for 1991 and 1992, divided by 100. Chained (1992) dollar final sales series are calculated as the product of the chain-type index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive. The residual line is the difference between the first line and the sum of the most detailed lines for inventories.

6. Income and Employment by Industry

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

[Billions of dollars]

	1996	1997	Seasonally adjusted at annual rates					
			1996		1997			
			III	IV	I	II	III	IV
National income without capital consumption adjustment	6,219.6	6,608.0	6,267.7	6,340.4	6,470.8	6,557.3	6,657.5	6,746.5
Domestic industries	6,217.9	6,627.8	6,274.7	6,337.3	6,485.1	6,578.0	6,678.2	6,769.7
Private industries	5,362.6	5,741.7	5,415.0	5,472.0	5,608.9	5,696.1	5,788.8	5,873.0
Agriculture, forestry, and fishing	105.6	113.1	109.0	109.6	110.8	115.5	114.1	112.0
Mining	46.9	48.4	46.9	45.0	48.2	49.2	48.0	48.1
Construction	285.2	305.6	286.9	291.4	298.2	302.2	307.4	314.5
Manufacturing	1,110.1	1,170.3	1,120.8	1,122.1	1,134.6	1,160.5	1,187.8	1,198.5
Durable goods	634.5	677.0	642.7	639.4	651.0	669.7	691.2	696.2
Nondurable goods	475.6	493.3	478.1	482.8	483.6	490.8	496.6	502.3
Transportation and public utilities	456.7	475.5	459.3	457.3	467.1	471.5	477.2	486.4
Transportation	191.0	205.7	194.6	192.3	199.6	203.0	207.6	212.7
Communications	135.0	137.6	137.0	133.1	135.5	135.2	139.0	140.8
Electric, gas, and sanitary services	130.8	132.2	127.7	131.9	132.0	133.3	130.6	132.9
Wholesale trade	349.1	383.3	350.6	364.8	372.4	379.3	388.7	392.8
Retail trade	503.7	538.4	506.8	512.3	527.7	533.0	542.6	550.2
Finance, insurance, and real estate	1,095.3	1,192.0	1,111.5	1,116.5	1,168.9	1,185.0	1,199.2	1,215.1
Services	1,410.1	1,515.0	1,423.2	1,452.9	1,481.1	1,500.1	1,523.7	1,555.2
Government	855.3	886.1	859.7	865.2	876.2	881.9	889.4	896.8
Rest of the world	1.7	-19.8	-7.0	3.1	-14.3	-20.7	-20.7	-23.3

Table 6.16C.—Corporate Profits by Industry

[Billions of dollars]

	1996	1997	Seasonally adjusted at annual rates					
			1996		1997			
			III	IV	I	II	III	IV
Corporate profits with inventory valuation and capital consumption adjustments	735.9	805.0	739.6	747.8	779.6	795.1	827.3	818.1
Domestic industries	640.0	706.5	647.8	640.3	682.2	694.4	727.5	721.8
Financial	94.2	109.5	94.6	78.5	106.8	107.7	109.3	114.3
Nonfinancial	545.8	596.9	553.3	561.7	575.4	586.7	618.2	607.5
Rest of the world	95.9	98.6	91.8	107.5	97.4	100.8	99.9	96.3
Receipts from the rest of the world	132.7	145.9	133.4	142.6	139.9	148.3	150.5	145.0
Less: Payments to the rest of the world	36.7	47.3	41.6	35.0	42.5	47.5	50.6	48.7
Corporate profits with inventory valuation adjustment	674.1	735.3	676.4	683.4	711.9	725.7	757.1	746.5
Domestic industries	578.2	636.7	584.6	575.8	614.5	624.9	657.2	650.2
Financial	103.5	119.5	104.0	88.1	116.5	117.5	119.4	124.5
Federal Reserve banks	22.0	23.5	22.0	22.3	22.8	23.2	23.7	24.2
Other	81.5	96.0	82.0	65.8	93.7	94.3	95.7	100.3
Nonfinancial	474.7	517.2	480.7	487.8	498.0	507.4	537.8	525.7
Manufacturing	205.5	224.7	210.5	209.7	208.2	221.0	240.4	229.0
Durable goods	99.0	114.5	102.9	99.7	101.3	111.8	128.1	116.6
Primary metal industries	5.6	6.0	7.0	5.1	3.9	5.6	7.6	7.0
Fabricated metal products	17.1	18.9	18.0	18.1	17.4	18.4	20.8	18.8
Industrial machinery and equipment	25.8	28.8	25.6	24.6	24.0	27.8	32.5	30.8
Electronic and other electric equipment	23.9	33.8	25.2	29.6	31.4	33.3	36.7	33.7
Motor vehicles and equipment	-3.2	-1.9	-1.5	-8.3	-1.3	-3.5	4	-3.3
Other	29.8	28.9	28.6	30.6	25.9	30.2	30.0	29.7
Nondurable goods	106.5	110.2	107.7	109.9	106.9	109.2	112.3	112.4
Food and kindred products	28.5	29.9	28.8	34.2	28.0	28.2	29.1	34.4
Chemicals and allied products	31.2	29.3	31.5	28.9	28.8	29.9	30.0	28.6
Petroleum and coal products	10.0	12.2	10.0	11.9	12.4	10.3	12.4	13.9
Other	36.8	38.7	37.3	34.9	37.7	40.8	40.9	35.6
Transportation and public utilities	91.7	90.7	91.2	90.5	91.5	89.6	90.0	91.5
Transportation	11.7	16.1	13.0	11.4	14.9	16.4	16.9	16.3
Communications	36.0	32.8	37.6	34.8	33.8	30.8	33.4	33.4
Electric, gas, and sanitary services	44.0	41.7	40.6	44.3	42.8	42.4	39.8	41.8
Wholesale trade	38.3	51.1	37.7	47.4	49.0	49.5	54.1	51.7
Retail trade	48.9	55.8	50.6	48.3	55.1	54.9	57.9	55.2
Other	90.3	95.0	90.6	91.9	94.2	92.4	95.3	98.2
Rest of the world	95.9	98.6	91.8	107.5	97.4	100.8	99.9	96.3

NOTE.—Estimates in this table are based on the 1987 Standard Industrial Classification.

Table 8.2.—Contributions to Percent Change in Real Gross Domestic Product

	1996	1997	Seasonally adjusted at annual rates					
			1996		1997			
			III	IV	I	II	III	IV
Percent change at annual rate:								
Gross domestic product	2.8	3.8	1.0	4.3	4.9	3.3	3.1	3.7
Percentage points at annual rates:								
Personal consumption expenditures	1.8	2.2	.4	2.2	3.6	.6	3.8	1.7
Durable goods .....	.4	.4	-.2	.3	1.1	-.5	1.4	.2
Nondurable goods .....	.3	.4	.1	.4	.9	-.4	.8	-.2
Services	1.1	1.4	.4	1.5	1.5	1.5	1.5	1.8
Gross private domestic investment ...	1.1	1.6	2.3	.2	2.4	2.5	.4	1.7
Fixed investment	1.1	1.1	1.4	.4	.6	1.7	2.0	.3
Nonresidential .....	.9	1.0	1.6	.6	.4	1.4	1.9	-.1
Structures .....	.1	.1	.3	.4	-.1	-.1	.2	-.1
Producers' durable equipment .....	.8	.9	1.3	.2	.5	1.6	1.7	0
Residential .....	.2	.1	-.2	-.2	.1	.3	.1	.4
Change in business inventories	0	.6	.8	-.2	1.8	.8	-.6	1.4
Net exports of goods and services ...	-.2	-.3	-1.4	1.8	-1.0	-.4	-1.3	.3
Exports .....	.9	1.3	.2	2.7	1.1	2.0	.5	1.0
Goods .....	.7	1.2	.2	2.2	1.0	1.9	.3	1.1
Services .....	.2	.2	0	.4	.1	.1	.2	-.2
Imports	-1.1	-1.7	-1.6	-.8	-2.1	-2.5	-1.7	-.7
Goods	-1.0	-1.5	-1.6	-.8	-1.7	-2.3	-1.6	-.7
Services	-.1	-.2	0	0	-.5	-.2	-.1	0
Government consumption expenditures and gross investment .....	.1	.2	-.2	0	-.1	.6	.2	.1
Federal	-.1	-.1	-.3	-.4	-.4	.4	-.1	-.1
National defense	-.1	-.1	-.2	-.3	-.6	.3	.1	0
Nondefense	0	0	-.1	0	.2	.1	-.1	-.2
State and local	-.2	-.3	.1	.4	.3	.1	.3	.2

Table 8.3.—Selected Per Capita Product and Income Series in Current and Chained Dollars

[Dollars]

	1996	1997	Seasonally adjusted at annual rates					
			1996		1997			
			III	IV	I	II	III	IV
Current dollars:								
Gross domestic product	28,752	30,161	28,869	29,243	29,715	30,030	30,295	30,602
Gross national product	28,759	30,088	28,843	29,254	29,662	29,952	30,218	30,515
Personal income	24,457	25,660	24,604	24,835	25,268	25,525	25,756	26,087
Disposable personal income	21,117	21,969	21,229	21,373	21,689	21,865	22,034	22,285
Personal consumption expenditures	19,608	20,478	19,660	19,919	20,247	20,303	20,612	20,747
Durable goods	2,389	2,461	2,386	2,395	2,466	2,409	2,488	2,480
Nondurable goods	5,779	5,943	5,786	5,854	5,945	5,901	5,969	5,955
Services	11,441	12,074	11,488	11,669	11,836	11,993	12,154	12,312
Chained (1992) dollars:								
Gross domestic product	26,088	26,835	26,116	26,333	26,599	26,760	26,901	27,078
Gross national product	26,101	26,781	26,102	26,354	26,562	26,704	26,844	27,013
Disposable personal income	19,116	19,493	19,161	19,152	19,331	19,439	19,518	19,681
Personal consumption expenditures	17,750	18,170	17,745	17,848	18,046	18,051	18,258	18,323
Durable goods	2,301	2,410	2,301	2,316	2,389	2,351	2,447	2,452
Nondurable goods	5,393	5,445	5,393	5,408	5,460	5,420	5,465	5,434
Services	10,057	10,318	10,052	10,125	10,202	10,278	10,352	10,438
Population (mid-period, thousands)	265,579	267,889	265,887	266,491	266,987	267,545	268,171	268,854

Table B.7.—Compensation and Wage and Salary Accruals by Industry
[Millions of dollars]

Table with columns for Industry, Compensation (1994, 1995, 1996), and Wage and salary accruals (1994, 1995, 1996). Rows include Total, Domestic industries, Private industries, Agriculture, forestry, and fishing, Mining, Manufacturing, Transportation and public utilities, Wholesale trade, Retail trade, Finance, insurance, and real estate, Services, Government, and Rest of the world.

1. Consists of museums, botanical, zoological gardens; engineering and management services; and services, not elsewhere classified.
2. Includes Coast Guard.
3. Beginning with 1993, includes estimates of foreign professional workers and undocumented Mexican migratory workers employed temporarily in the United States.

NOTE.—Estimates in this table are based on the 1987 Standard Industrial Classification (SIC). Compensation equals wage and salary accruals plus supplements to wages and salaries. "Supplements" are listed in table B.15 of the August 1997 SURVEY OF CURRENT BUSINESS.

Table B.10.—Farm Sector Output, Gross Product, and National Income

	Billions of dollars			Billions of chained (1992) dollars		
	1994	1995	1996	1994	1995	1996
Farm output	202.9	197.9	219.9	199.4	192.0	193.1
Cash receipts from farm marketings	180.9	193.9	204.2	178.2	188.5	179.0
Crops	92.8	106.9	111.4	88.4	96.9	88.9
Livestock	88.1	87.0	92.9	89.9	91.3	90.5
Farm housing	5.8	5.9	6.1	5.2	5.2	5.1
Farm products consumed on farms .....	.5	.5	.4	.5	.5	.4
Other farm income	4.9	5.6	6.3	4.8	5.2	5.3
Change in farm inventories	10.8	-7.9	2.9	11.7	-9.2	2.6
Crops	9.7	-8.2	4.1	9.2	-7.7	3.0
Livestock	1.1	.2	-1.3	1.2	.3	-1.5
Less: Intermediate goods and services purchased	119.4	124.4	130.6	114.7	117.6	117.3
Intermediate goods and services, other than rent	105.3	110.0	113.7	100.7	103.4	101.2
Rent paid to nonoperator landlords	14.1	14.3	16.8	14.0	14.2	16.2
Equals: Gross farm product	83.5	73.5	89.4	85.0	74.2	75.5
Less: Consumption of fixed capital	23.7	24.7	25.6	22.4	22.8	23.2
Equals: Net farm product	59.8	48.8	63.8	62.9	51.3	52.2
Less: Indirect business tax and nontax liability	4.8	5.1	5.1	.....	.....	.....
Plus: Subsidies to operators	6.6	6.1	6.1	.....	.....	.....
Equals: Farm national income	61.5	49.7	64.9	.....	.....	.....
Compensation of employees	14.6	15.7	16.5	.....	.....	.....
Wage and salary accruals	12.3	13.3	14.2	.....	.....	.....
Supplements to wages and salaries	2.2	2.4	2.3	.....	.....	.....
Proprietors' income and corporate profits with IVA and CCAadj	37.8	24.7	38.6	.....	.....	.....
Proprietors' income	36.9	23.4	37.2	.....	.....	.....
Corporate profits .....	.9	1.2	1.4	.....	.....	.....
Net interest	9.1	9.4	9.8	.....	.....	.....

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive.
 CCAadj Capital consumption adjustment
 IVA Inventory valuation adjustment

Table B.11.—Housing Sector Output, Gross Product, and National Income

	Billions of dollars			Billions of chained (1992) dollars		
	1994	1995	1996	1994	1995	1996
Housing output ¹	686.7	722.7	758.1	649.9	663.4	675.2
Nonfarm housing	680.9	716.8	752.0	644.8	658.3	670.2
Owner-occupied	507.0	532.2	558.3	479.6	487.2	495.3
Tenant-occupied	174.0	184.6	193.6	165.2	171.1	174.9
Farm housing	5.8	5.9	6.1	5.2	5.2	5.1
Less: Intermediate goods and services consumed	87.6	88.5	94.1	83.1	82.1	85.3
Equals: Gross housing product	599.1	634.2	664.0	566.8	581.3	589.9
Nonfarm housing	594.4	629.2	658.8	562.7	577.0	585.7
Owner-occupied	439.5	462.8	484.0	415.6	423.1	428.3
Tenant-occupied	155.0	166.4	174.9	147.1	153.9	157.5
Farm housing	4.7	5.0	5.1	4.2	4.3	4.2
Less: Consumption of fixed capital	120.5	114.8	118.2	112.2	103.6	104.6
Capital consumption allowances	60.9	59.6	62.8	.....	.....	.....
Less: CCAadj	-59.6	-55.1	-55.4	.....	.....	.....
Equals: Net housing product	478.6	519.4	545.8	454.5	477.8	485.5
Less: Indirect business tax and nontax liability plus business transfer payments ..	112.9	116.2	119.5	.....	.....	.....
Plus: Subsidies less current surplus of government enterprises	20.6	20.8	22.6	.....	.....	.....
Equals: Housing national income	386.4	424.0	448.9	.....	.....	.....
Compensation of employees	7.7	8.1	8.5	.....	.....	.....
Proprietors' income with IVA and CCAadj ..	17.6	25.2	27.1	.....	.....	.....
Rental income of persons with CCAadj	96.7	104.3	115.8	.....	.....	.....
Corporate profits with IVA and CCAadj	4.2	5.1	5.6	.....	.....	.....
Net interest	260.2	281.3	292.0	.....	.....	.....

1. Equals personal consumption expenditures for housing less expenditures for other housing as shown in table B.4.

NOTE.—Chained (1992) dollar series are calculated as the product of the chain-type quantity index and the 1992 current-dollar value of the corresponding series, divided by 100. Because the formula for the chain-type quantity indexes uses weights of more than one period, the corresponding chained-dollar estimates are usually not additive.
 CCAadj Capital consumption adjustment
 IVA Inventory valuation adjustment

Table C.1.—Historical Measures of Real Gross Domestic Product, Real Gross National Product, and Real Gross Domestic Purchases—Continued
 [Quarterly estimates are seasonally adjusted at annual rates]

Year and quarter	Billions of chained (1992) dollars			Percent change from preceding period		Chain-type price indexes		Implicit price deflators		Percent change from preceding period			
	Gross domestic product	Final sales of domestic product	Gross national product	Gross domestic product	Final sales of domestic product	Gross domestic product	Gross domestic purchases	Gross domestic product	Gross national product	Chain-type price index		Implicit price deflators	
										Gross domestic product	Gross domestic purchases	Gross domestic product	Gross national product
1989: I	6,011.0	5,970.0	6,023.1	4.0	2.2	88.44	88.47	88.45	88.48	4.5	4.8	4.7	4.7
II	6,055.6	6,010.9	6,065.5	3.0	2.8	89.40	89.52	89.39	89.42	4.4	4.8	4.3	4.3
III	6,088.0	6,063.1	6,101.8	2.2	3.5	90.13	90.14	90.13	90.16	3.3	2.8	3.3	3.3
IV	6,093.5	6,070.8	6,112.3	.4	.5	90.91	90.98	90.88	90.91	3.5	3.8	3.4	3.4
1990: I	6,152.6	6,144.6	6,172.8	3.9	5.0	92.01	92.17	92.00	92.04	4.9	5.4	5.0	5.1
II	6,171.6	6,127.5	6,188.0	1.2	-1.1	93.20	93.14	93.18	93.21	5.2	4.2	5.2	5.2
III	6,142.1	6,126.6	6,155.7	-1.9	-1	94.19	94.32	94.14	94.17	4.3	5.2	4.2	4.2
IV	6,079.0	6,108.1	6,111.3	-4.0	-1.2	95.14	95.68	95.11	95.13	4.1	5.9	4.2	4.2
1991: I	6,047.5	6,065.4	6,074.3	-2.1	-2.8	96.26	96.42	96.27	96.29	4.8	3.1	5.0	4.9
II	6,074.7	6,095.9	6,086.4	1.8	2.0	97.02	96.95	97.00	97.01	3.2	2.2	3.1	3.1
III	6,090.1	6,085.4	6,099.2	1.0	-7	97.70	97.58	97.70	97.71	2.8	2.6	2.9	2.9
IV	6,105.3	6,083.8	6,119.5	1.0	-1	98.30	98.27	98.31	98.32	2.5	2.9	2.5	2.5
1992: I	6,175.7	6,175.8	6,192.0	4.7	6.2	99.14	99.04	99.13	99.13	3.4	3.2	3.4	3.4
II	6,214.2	6,203.8	6,225.2	2.5	1.8	99.81	99.76	99.79	99.79	2.8	2.9	2.7	2.7
III	6,260.7	6,249.5	6,270.3	3.0	3.0	100.17	100.28	100.17	100.17	1.4	2.1	1.5	1.5
IV	6,327.1	6,320.7	6,334.6	4.3	4.6	100.88	100.92	100.88	100.88	2.8	2.6	2.9	2.9
1993: I	6,327.9	6,297.3	6,351.3	.1	-1.5	101.85	101.71	101.84	101.84	3.9	3.2	3.9	3.8
II	6,359.9	6,344.9	6,375.9	2.0	3.1	102.38	102.28	102.35	102.34	2.1	2.3	2.0	2.0
III	6,393.5	6,379.3	6,415.3	2.1	2.2	102.83	102.64	102.83	102.83	1.8	1.4	1.9	1.9
IV	6,476.9	6,453.8	6,489.7	5.3	4.8	103.52	103.28	103.51	103.50	2.7	2.5	2.7	2.6
1994: I	6,524.5	6,473.0	6,540.5	3.0	1.2	104.16	103.80	104.13	104.14	2.5	2.0	2.4	2.5
II	6,600.3	6,526.7	6,609.3	4.7	3.4	104.74	104.46	104.71	104.71	2.2	2.6	2.2	2.2
III	6,629.5	6,580.4	6,635.6	1.8	3.3	105.39	105.24	105.39	105.38	2.5	3.0	2.6	2.6
IV	6,688.6	6,624.8	6,691.2	3.6	2.7	106.07	105.88	106.09	106.06	2.6	2.5	2.7	2.6
1995: I	6,703.7	6,654.3	6,711.3	.9	1.8	106.93	106.66	106.94	106.91	3.3	3.0	3.3	3.2
II	6,708.8	6,685.3	6,721.0	.3	1.9	107.49	107.33	107.46	107.43	2.1	2.5	2.0	2.0
III	6,759.2	6,739.3	6,758.3	3.0	3.3	108.03	107.79	108.02	107.99	2.0	1.7	2.1	2.1
IV	6,796.5	6,771.9	6,804.2	2.2	2.0	108.60	108.29	108.61	108.59	2.1	1.9	2.2	2.2
1996: I	6,828.4	6,815.0	6,834.7	1.8	2.6	109.35	109.01	109.39	109.37	2.8	2.7	2.9	2.9
II	6,926.0	6,902.3	6,930.1	6.0	5.2	109.86	109.50	109.84	109.82	1.9	1.8	1.7	1.6
III	6,943.8	6,905.0	6,940.2	1.0	.2	110.59	110.15	110.54	110.50	2.7	2.4	2.6	2.5
IV	7,017.4	6,981.7	7,023.1	4.3	4.5	111.10	110.79	111.05	111.01	1.9	2.4	1.9	1.8
1997: I	7,101.6	7,034.1	7,091.8	4.9	3.0	111.78	111.32	111.71	111.67	2.4	1.9	2.4	2.4
II	7,159.6	7,077.7	7,144.4	3.3	2.5	112.27	111.55	112.22	112.17	1.8	.8	1.8	1.8
III	7,214.0	7,160.3	7,198.8	3.1	4.7	112.67	111.90	112.62	112.57	1.4	1.3	1.4	1.4
IV	7,280.0	7,201.1	7,262.6	3.7	2.3	113.07	112.28	113.01	112.96	1.4	1.4	1.4	1.4

Table C.2.—Real Gross Domestic Product
[Average annual percent change, based on chained (1992) dollar estimates]

Table with columns for Terminal year and Initial year (1971-1996) showing annual percent change in GDP.

Table C.3.—Chain-Type Price Index for Gross Domestic Product
[Average annual percent change]

Table with columns for Terminal year and Initial year (1971-1996) showing annual percent change in the price index.

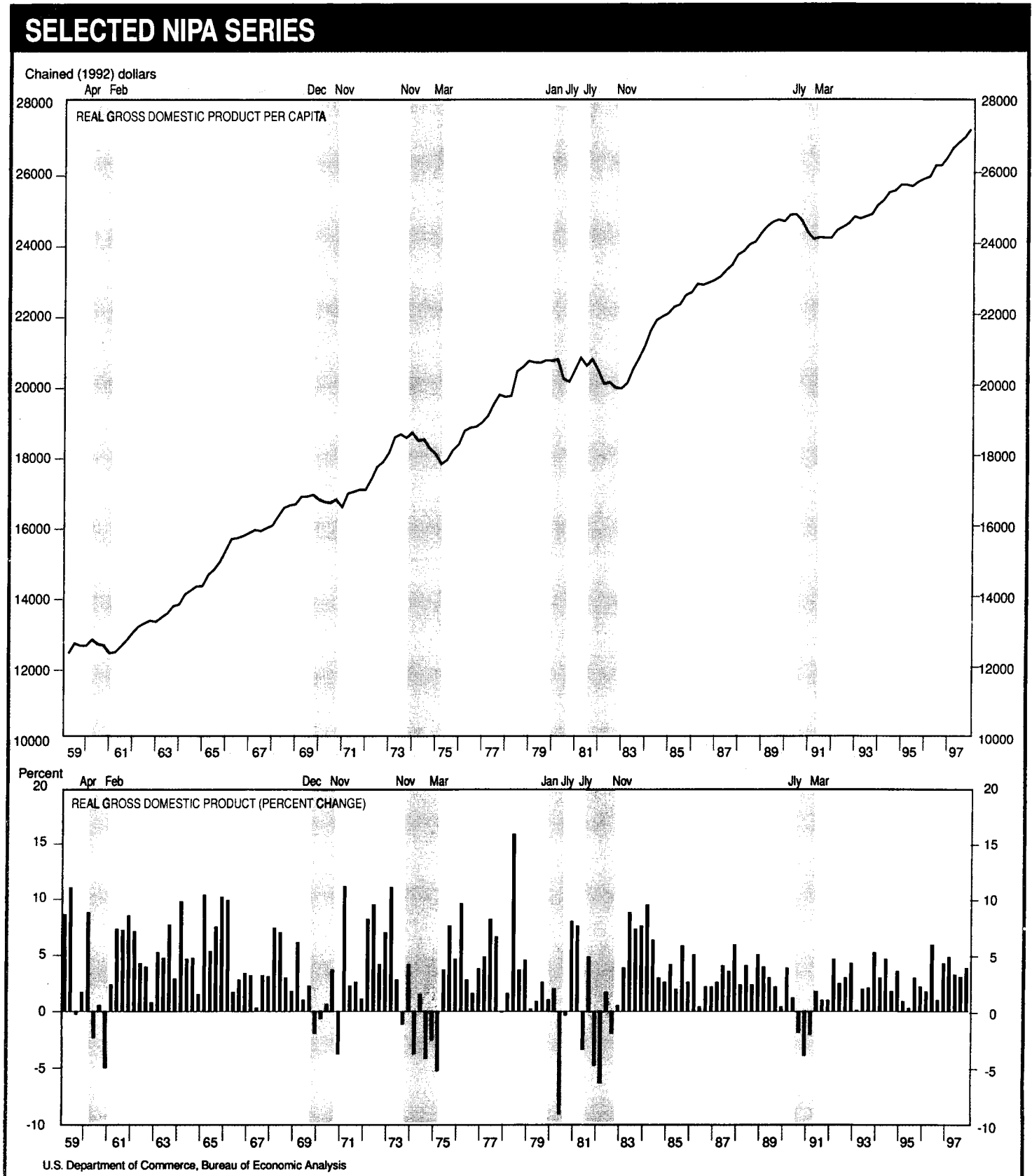
Table C.4.—Real Gross Domestic Purchases
[Average annual percent change, based on chained (1992) dollar estimates]

Table with columns for Terminal year and Initial year (1971-1996) showing annual percent change in real gross domestic purchases.

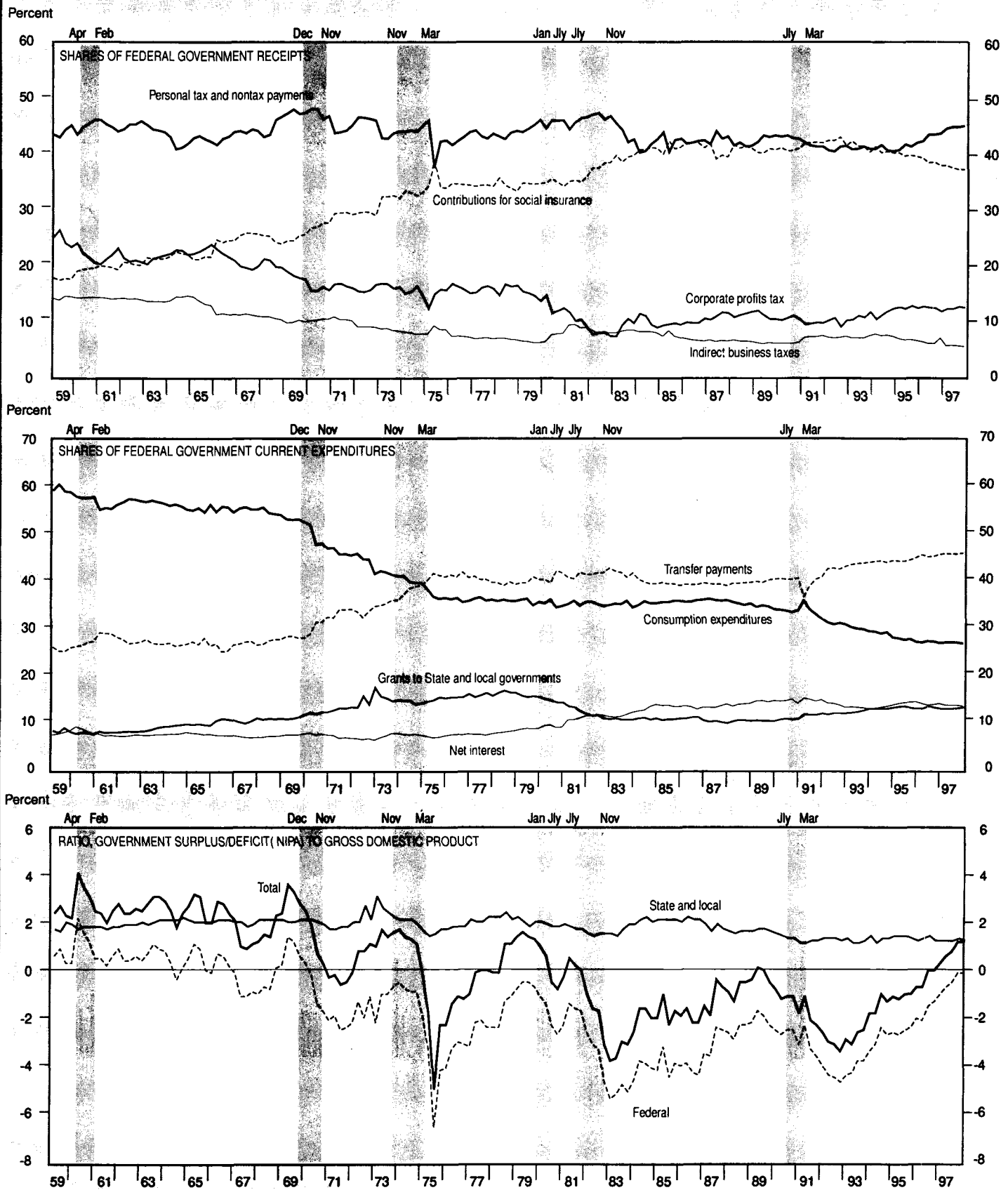
NOTE.—In these triangles, the growth rate from one year to any other year can be found at the intersection of the column for the earlier year and the row for the later year; thus, growth rates from one year to the next are shown on the main diagonal. For example, from 1985 to 1995, real gross domestic product grew at an average annual rate of 2.4 percent; from 1984 to 1985, it grew 3.6 percent.

E. Charts

Percent changes shown in this section are based on quarter-to-quarter changes and are expressed at seasonally adjusted annual rates; likewise, levels of series are expressed at seasonally adjusted annual rates as appropriate.

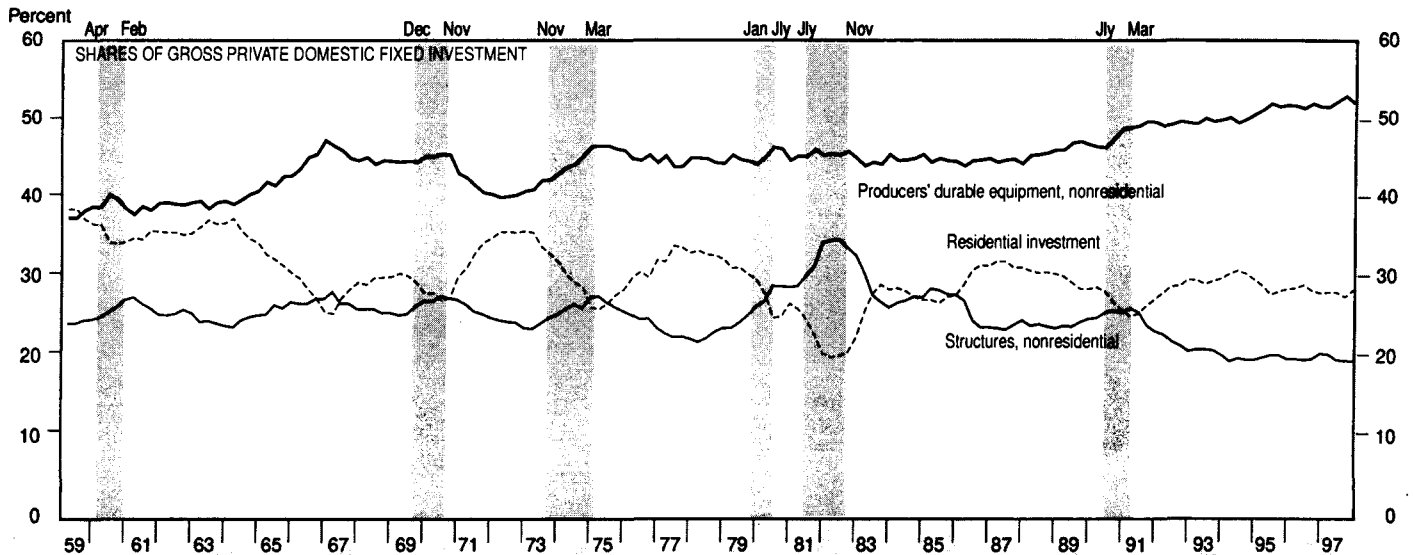
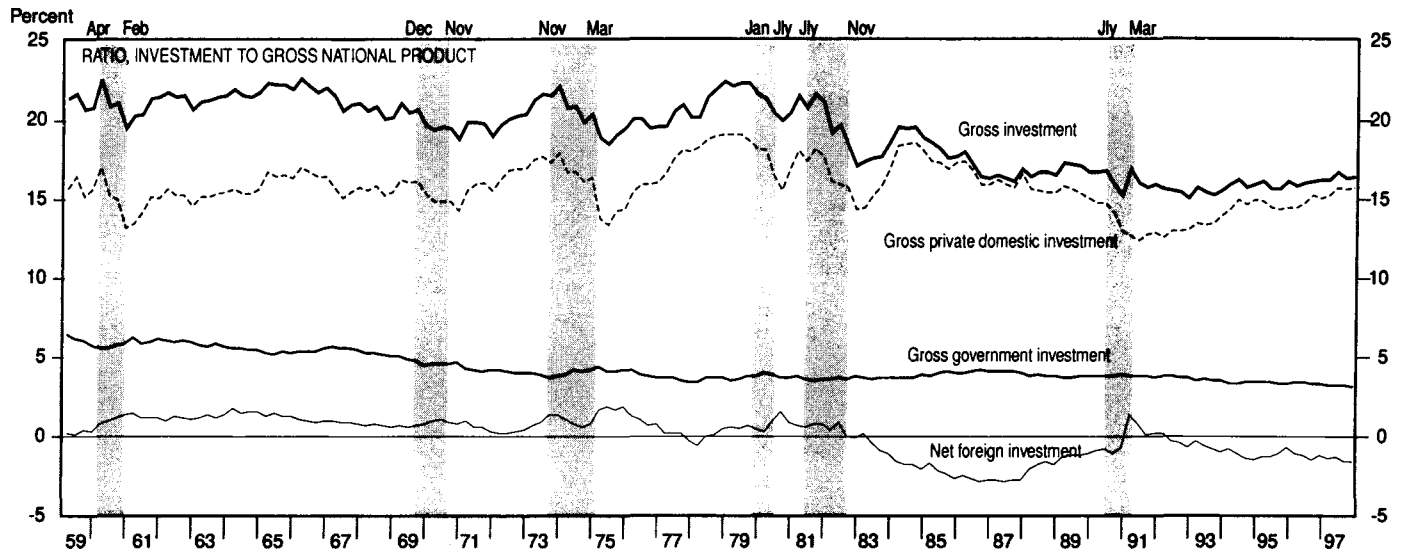
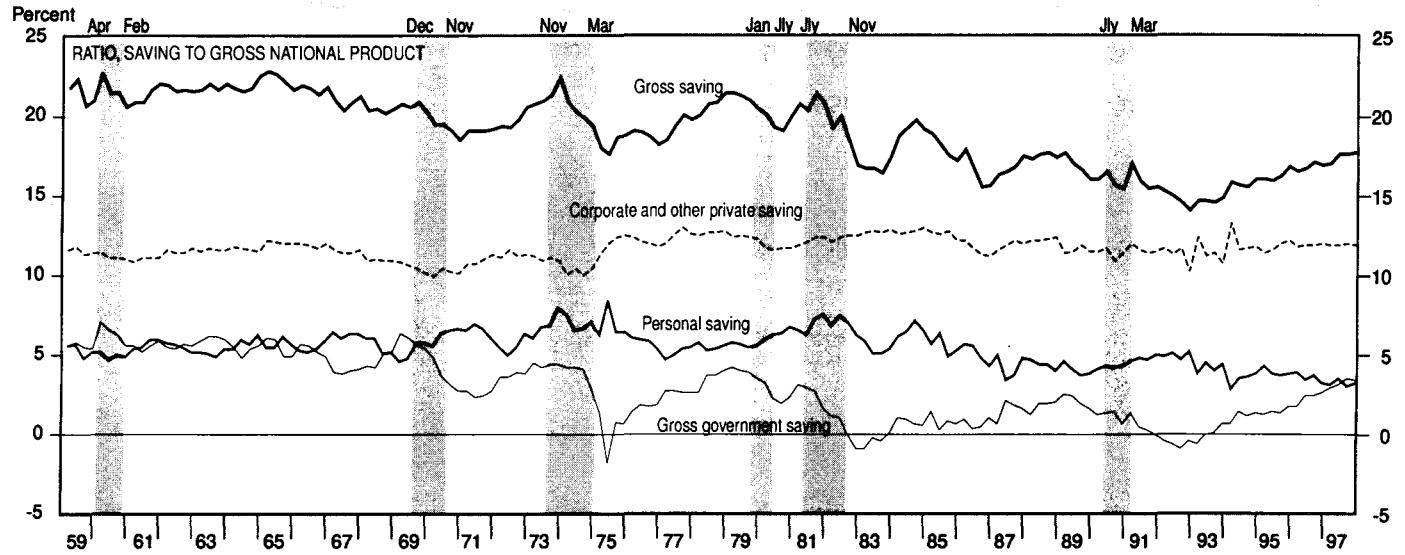


SELECTED NIPA SERIES



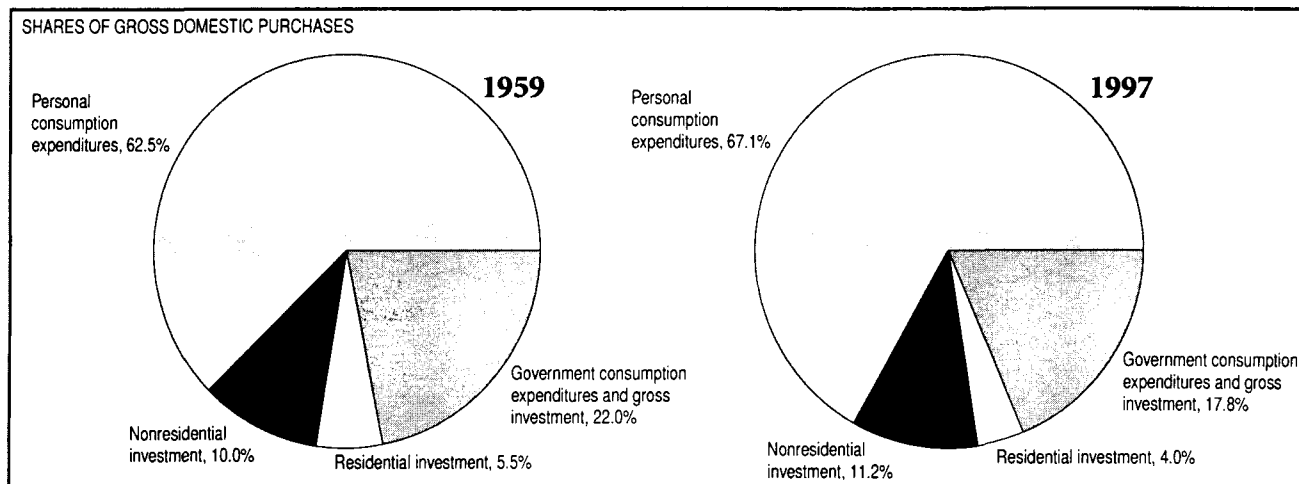
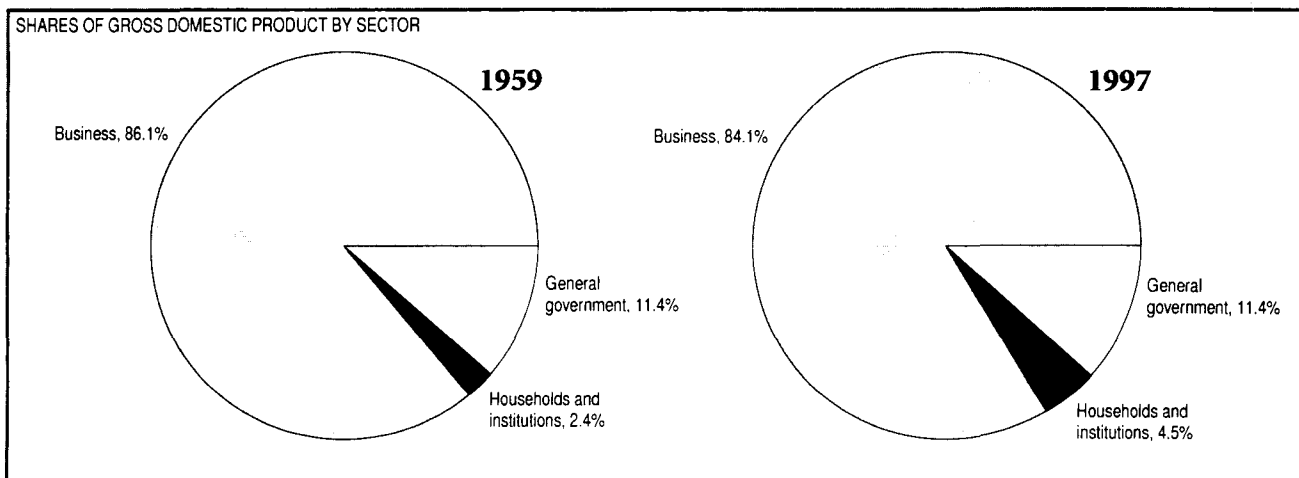
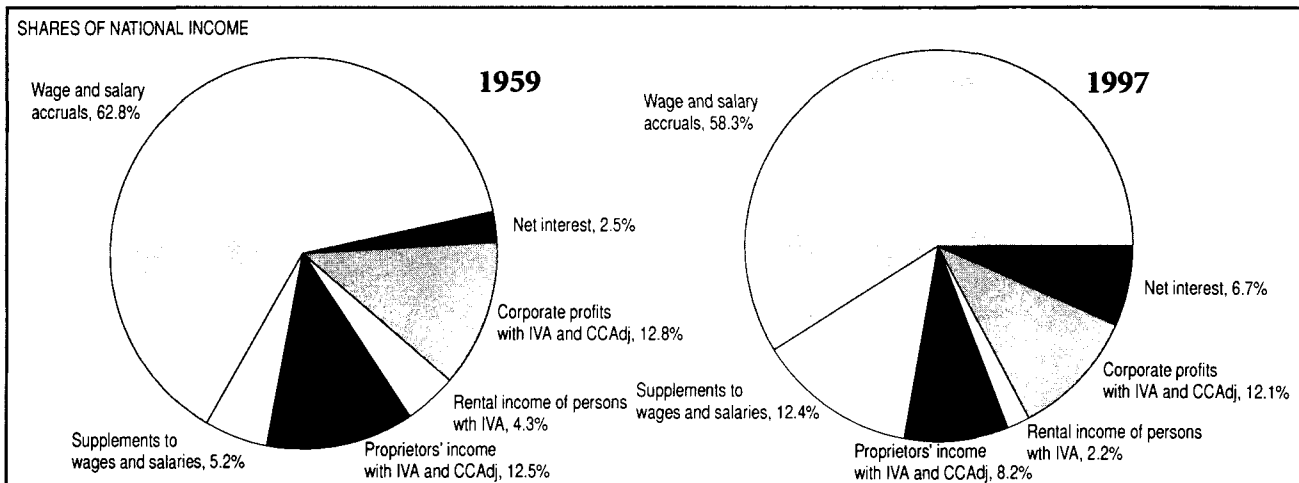
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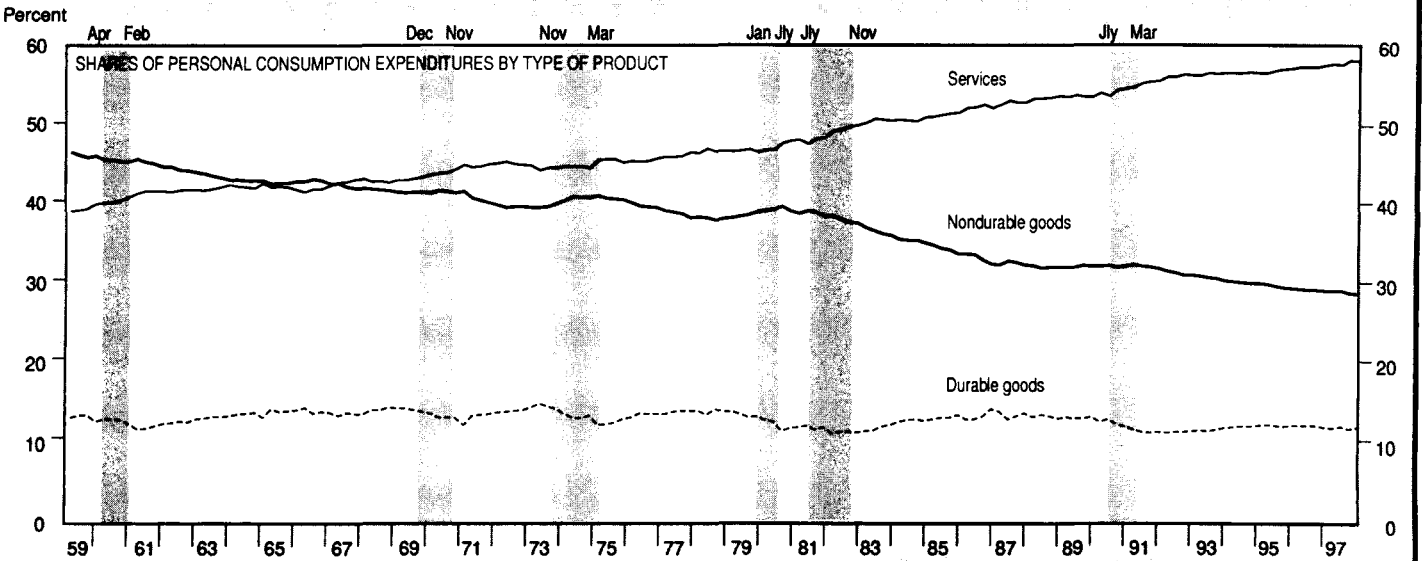
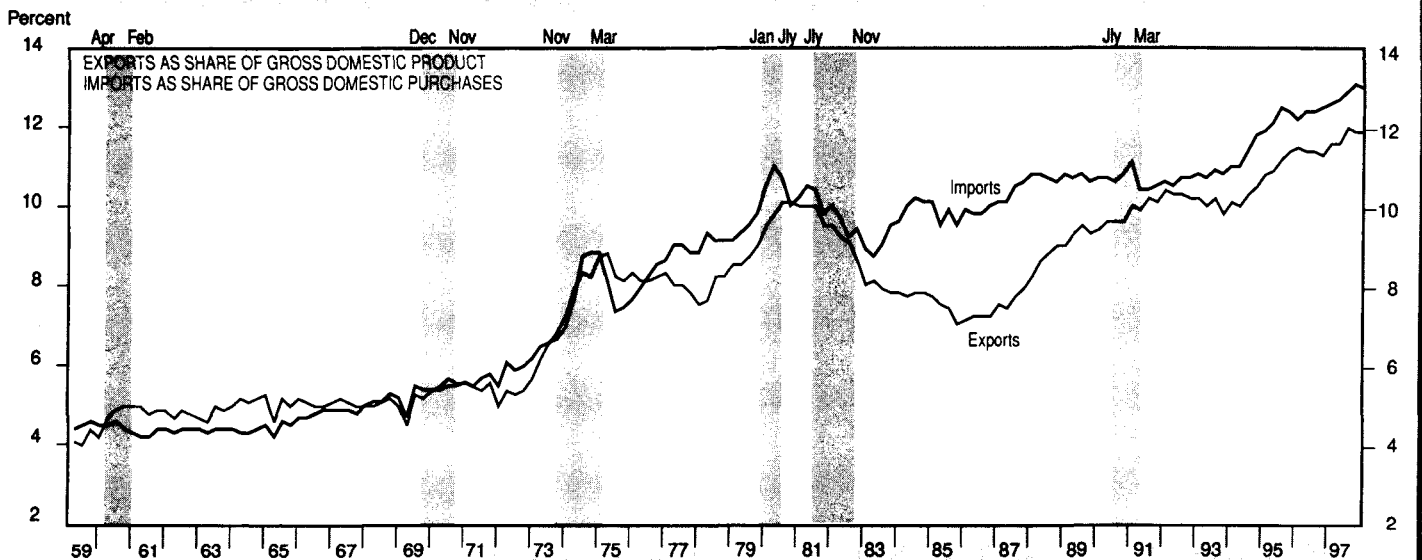
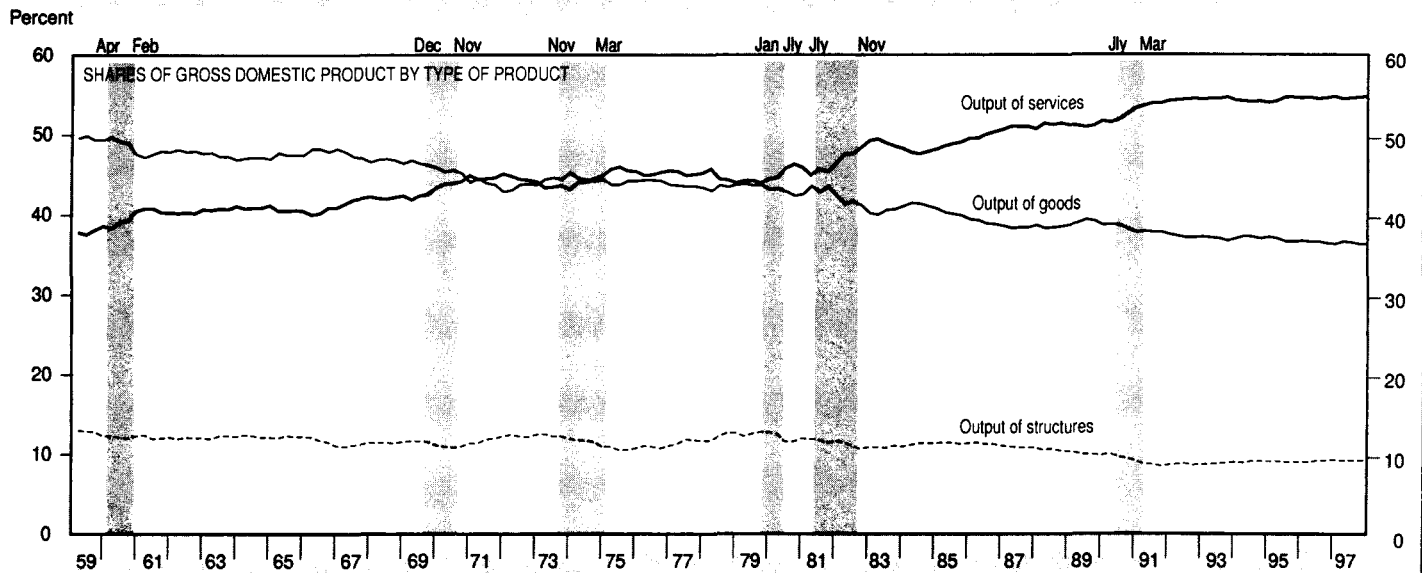
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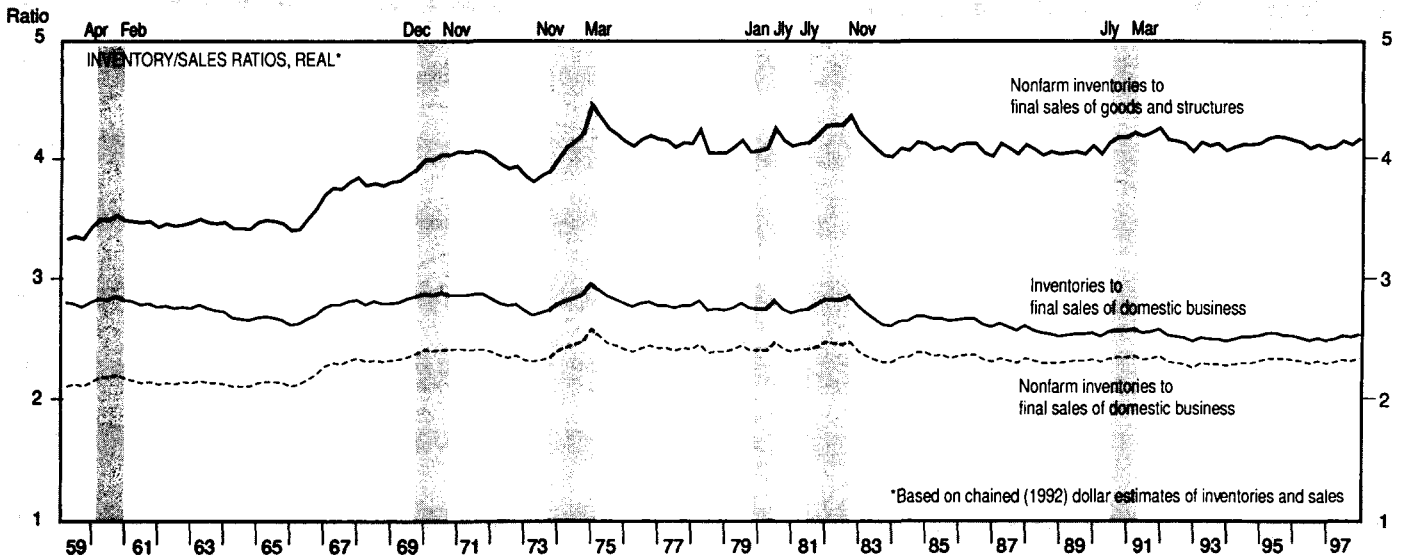
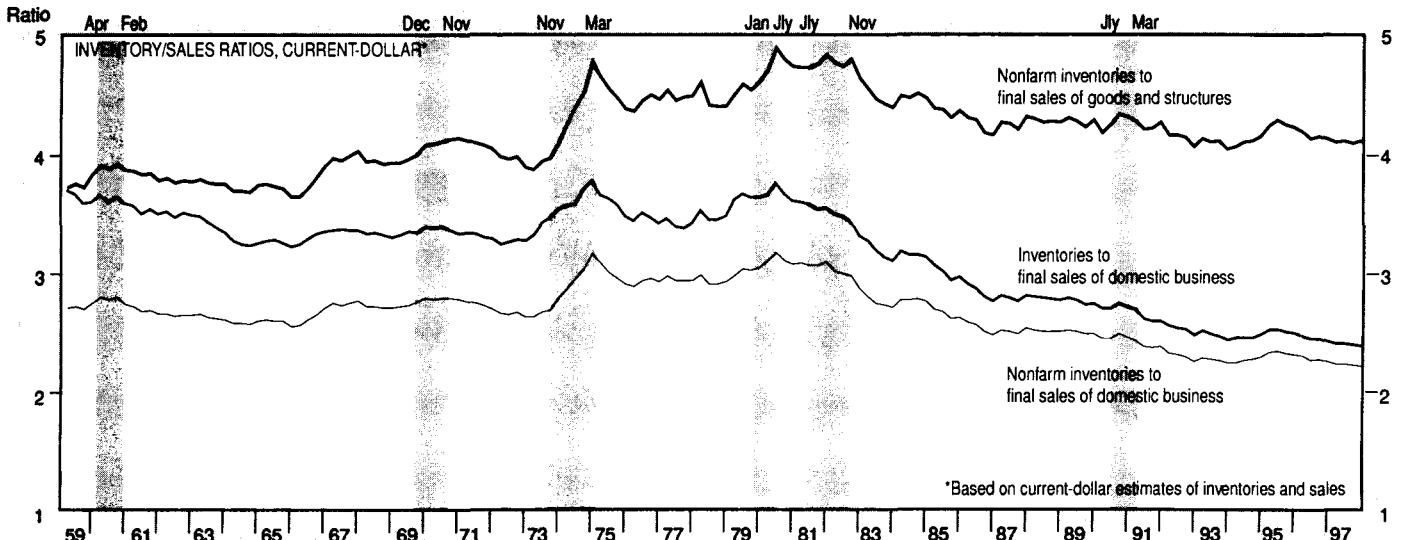
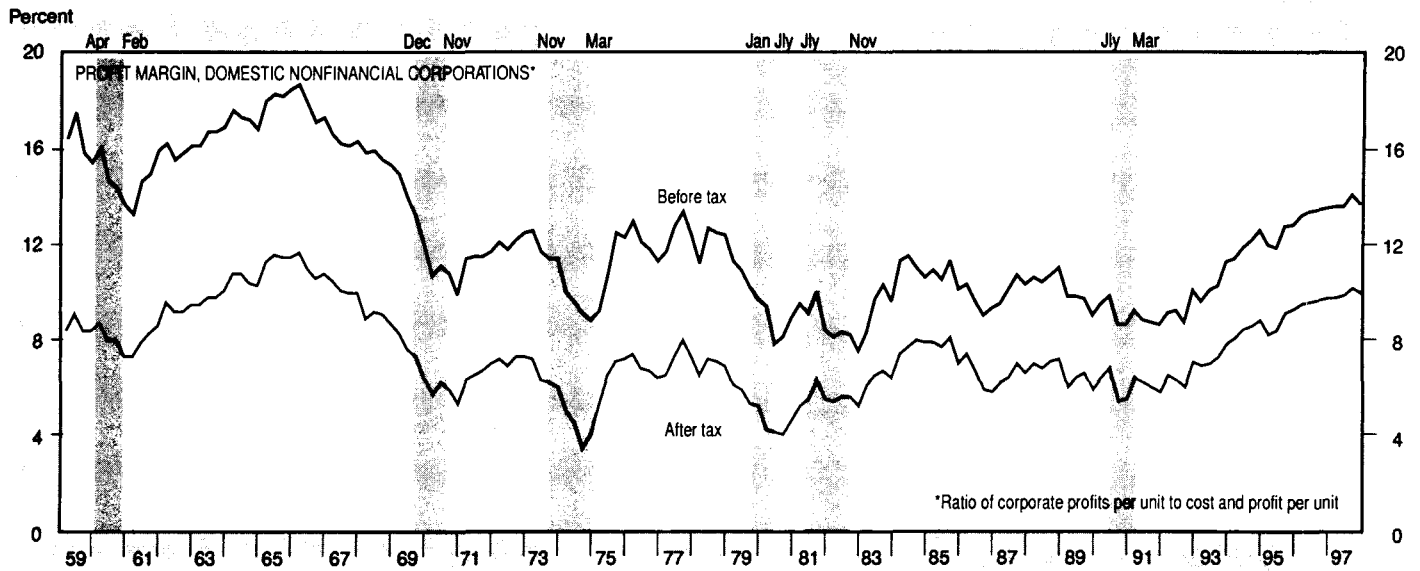
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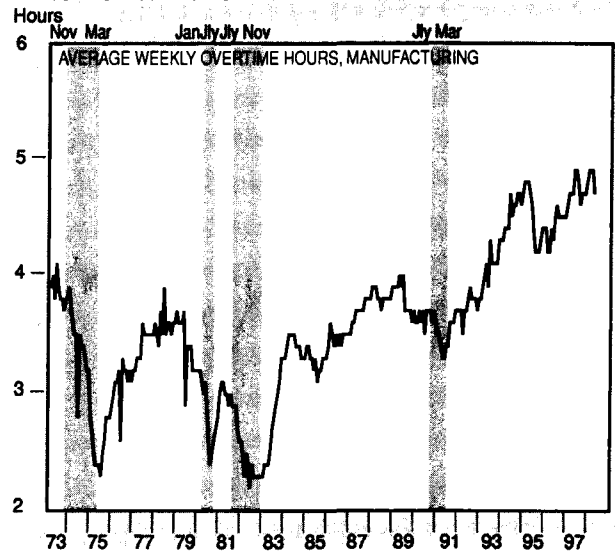
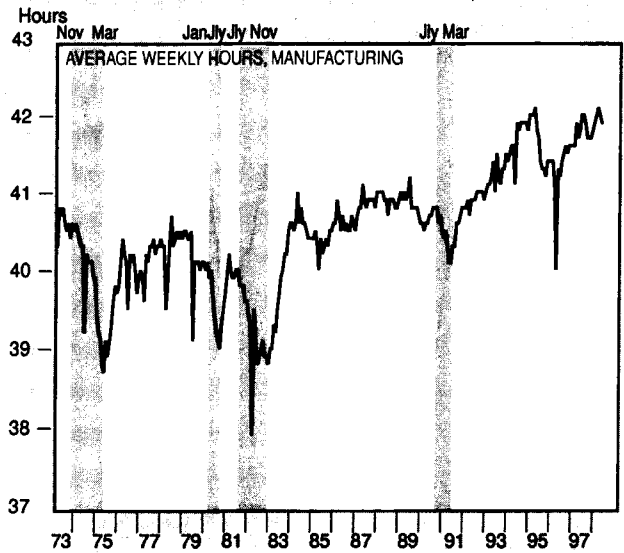
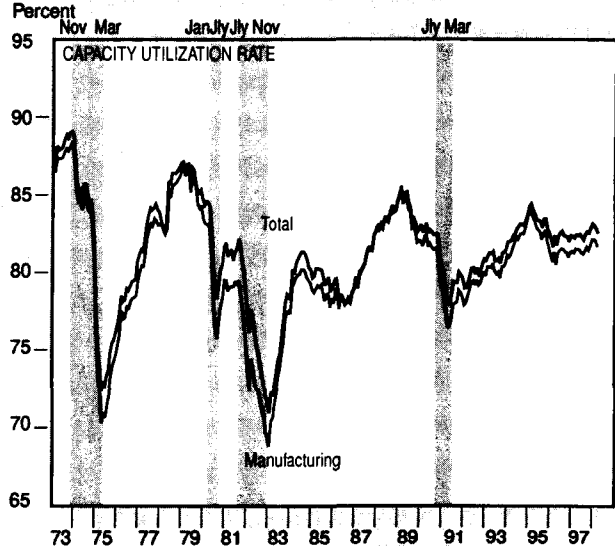
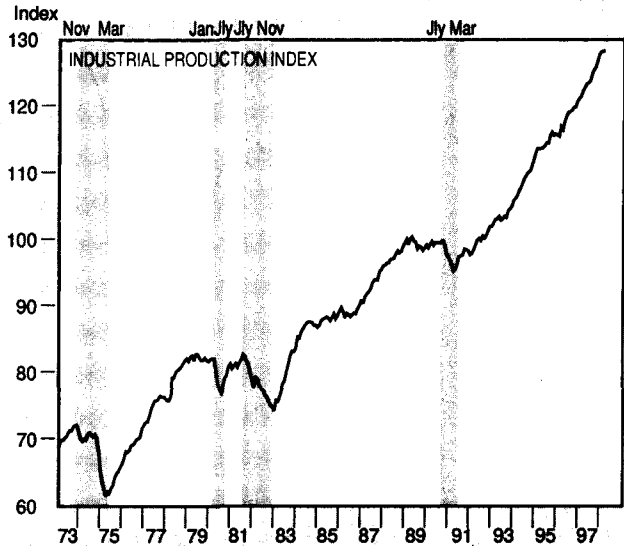
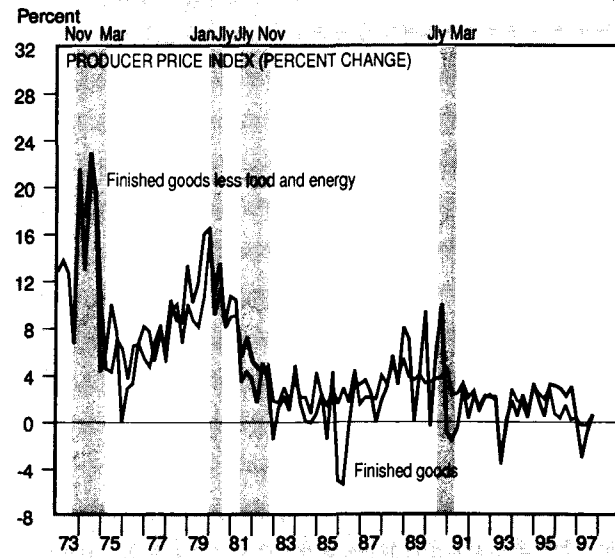
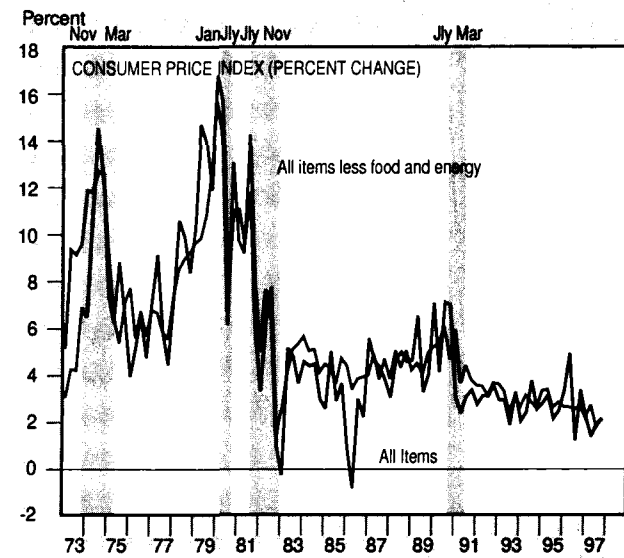
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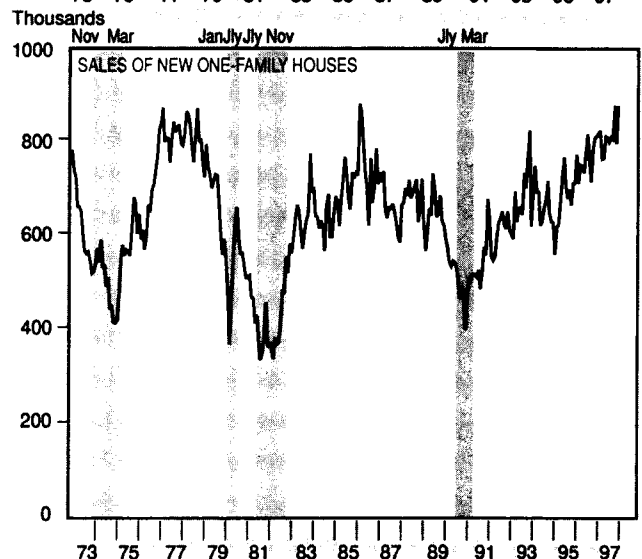
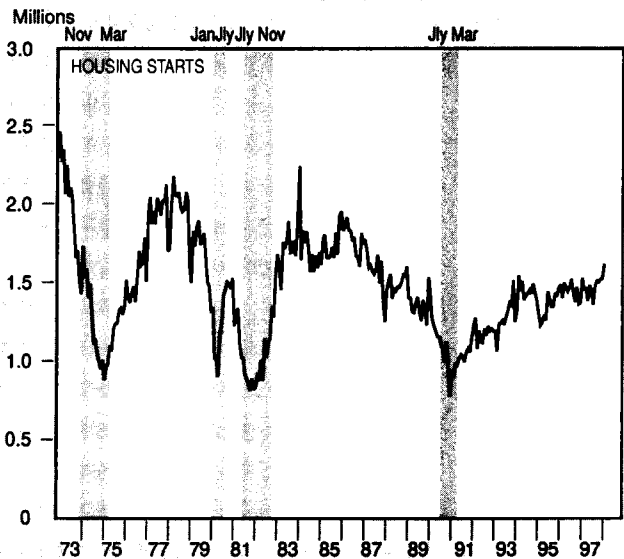
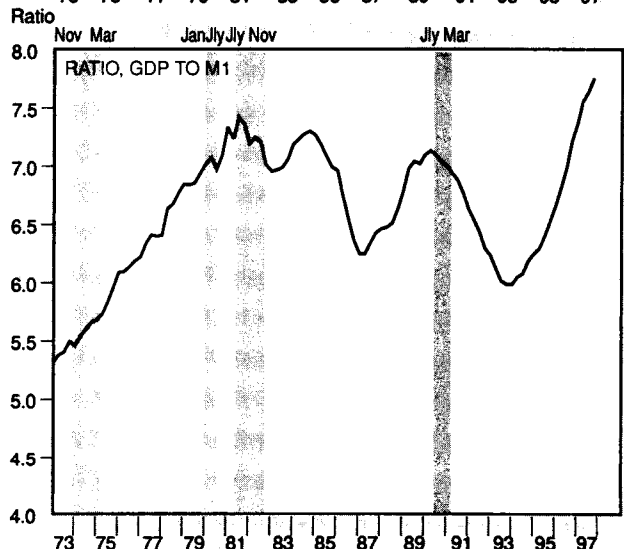
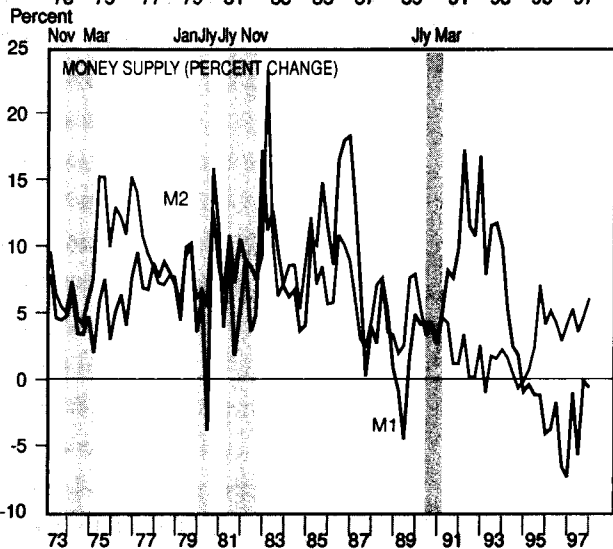
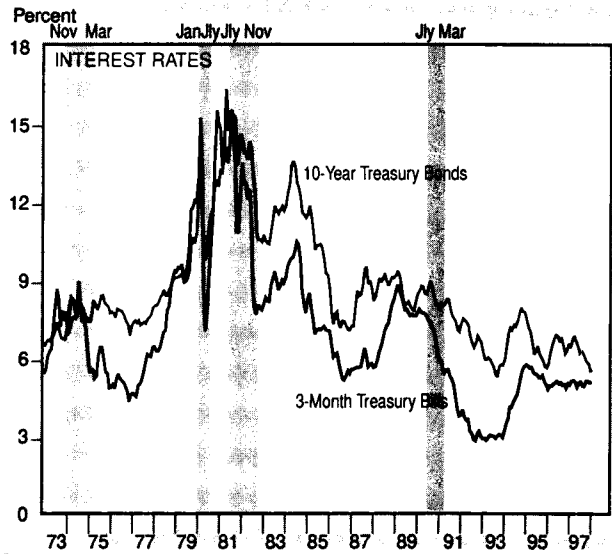
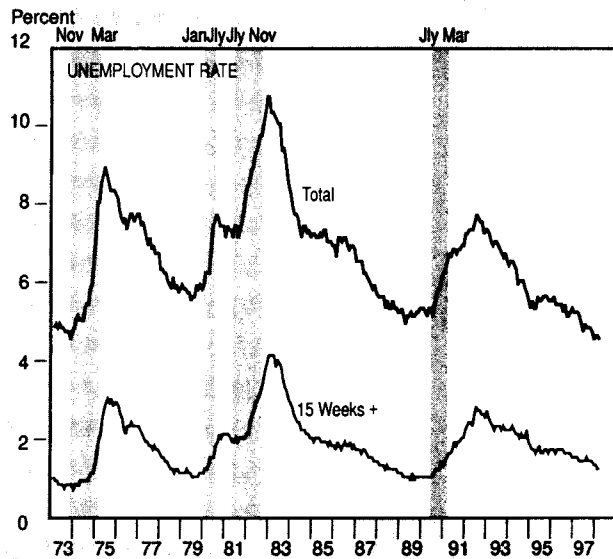
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OTHER INDICATORS OF THE DOMESTIC ECONOMY



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OTHER INDICATORS OF THE DOMESTIC ECONOMY



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G. Investment Tables

Table G.1.—International Investment Position of the United States at Yearend, 1995 and 1996
[Millions of dollars]

Table with columns: Line, Type of investment, Position 1995 r, Position 1996 p, and sub-sections for Changes in position in 1996 (decrease (-)), including Capital flows, Price changes, Exchange rate changes, and Other changes. Rows include Net international investment position, U.S. assets abroad, and Foreign assets in the United States.

P Preliminary.
r Revised.
1. Represents gains or losses on foreign-currency-denominated assets due to their revaluation at current exchange rates.
2. Includes changes in coverage, statistical discrepancies, and other adjustments to the value of assets.
3. Reflects changes in the value of the official gold stock due to fluctuations in the market price of gold.
4. Also includes paid-in capital subscriptions to international financial institutions and outstanding

amounts of miscellaneous claims that have been settled through international agreements to be payable to the U.S. Government over periods in excess of 1 year. Excludes World War I debts that are not being serviced.

5. Includes indebtedness that the borrower may contractually, or at its option, repay with its currency, with a third country's currency, or by delivery of materials or transfer of services.

6. Primarily U.S. Government liabilities associated with military sales contracts and other transactions arranged with or through foreign official agencies.

NOTE.—The data in this table are from table 1 in "International Investment Position of the United States in 1996" in the July 1997 issue of the SURVEY OF CURRENT BUSINESS.

Table G.2.—U.S. Direct Investment Abroad: Selected Items, by Country and by Industry of Foreign Affiliate, 1994–96

[Millions of dollars]

	Direct investment position on a historical-cost basis			Capital outflows (inflows (-))			Income		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
All countries, all industries	640,320	717,554	796,494	68,272	85,115	85,560	68,597	87,448	95,067
By country									
Canada	78,018	85,441	91,587	6,760	8,435	6,875	5,873	8,812	8,642
Europe	320,135	360,994	399,632	28,785	45,292	45,274	30,468	41,320	46,183
<i>Of which:</i>									
France	28,204	32,950	34,000	2,586	5,726	5,221	1,296	2,728	3,322
Germany	38,467	44,226	44,259	2,217	4,373	955	3,107	4,783	4,286
Netherlands	29,558	39,344	44,667	6,331	8,420	7,140	5,081	6,890	7,991
United Kingdom	121,321	122,767	142,560	7,177	4,515	18,310	8,082	11,384	13,862
Latin America and Other Western Hemisphere	115,093	128,252	144,209	19,010	14,753	14,299	16,299	15,221	17,404
<i>Of which:</i>									
Brazil	18,400	23,706	26,166	3,517	4,899	3,064	4,756	3,515	3,879
Mexico	16,169	15,980	18,747	3,674	2,955	2,747	2,497	1,369	2,931
Africa	5,606	6,383	7,568	332	873	1,221	1,395	1,861	1,963
Middle East	6,741	7,669	8,743	242	905	1,044	964	1,393	1,458
Asia and Pacific	111,373	125,834	140,402	13,121	15,241	14,752	13,474	18,542	18,937
<i>Of which:</i>									
Australia	20,217	25,003	28,769	32	6,450	3,789	2,392	3,402	2,979
Japan	36,524	38,406	39,593	2,384	1,079	1,817	2,379	4,117	3,950
International	3,355	2,981	4,352	22	-384	2,096	124	300	480
By industry									
Petroleum	67,104	70,229	75,479	1,690	2,437	6,144	7,177	9,730	11,960
Manufacturing	211,431	250,253	272,564	23,953	42,531	28,530	26,699	35,065	34,975
Food and kindred products	29,588	32,439	36,179	3,764	2,871	3,280	4,690	4,728	4,684
Chemicals and allied products	49,128	62,151	69,430	4,992	18,477	7,835	6,839	8,877	10,001
Primary and fabricated metals	10,017	12,032	13,603	819	1,935	5,009	896	1,365	1,004
Industrial machinery and equipment	26,781	33,716	35,020	2,010	5,286	2,016	2,177	4,373	4,579
Electronic and other electric equipment	19,925	25,242	29,519	2,867	4,995	4,513	3,234	4,494	4,374
Transportation equipment	29,420	33,972	33,543	5,993	4,636	714	3,539	3,952	3,429
Other manufacturing	46,572	50,701	55,270	3,508	4,330	5,163	5,324	7,277	6,903
Wholesale trade	62,608	67,222	72,462	6,325	8,511	7,048	7,753	9,191	9,272
Banking	26,693	28,123	32,504	1,786	714	1,329	3,785	2,889	3,767
Finance (except banking), insurance, and real estate	213,175	228,744	257,213	22,982	12,109	28,985	18,302	23,757	27,797
Services	26,734	32,769	36,673	5,613	7,702	3,644	2,796	3,815	3,997
Other industries	32,575	40,213	49,600	5,924	11,113	9,880	2,085	3,002	3,299

NOTE.—In this table, unlike in the international transactions accounts, income and capital outflows are shown without a current-cost adjustment, and income is shown net of withholding taxes. In addition, unlike in the international investment position, the direct investment position is valued at historical cost.

The data in this table are from tables 17 and 18 in "U.S. Direct Investment Abroad: Detail for Historical-Cost Position and Related Capital and Income Flows, 1996" in the September 1997 SURVEY OF CURRENT BUSINESS.

Table G.3.—Selected Financial and Operating Data for Nonbank Foreign Affiliates of U.S. Companies, by Country and by Industry of Affiliate, 1995

	Number of affiliates	Millions of dollars			Number of employees (thousands)
		Total assets	Sales	Net income	
All countries, all industries	21,318	2,815,141	2,140,438	124,675	7,377.0
By country					
Canada	2,023	246,242	231,081	8,313	918.1
Europe	10,435	1,567,904	1,176,126	63,083	3,014.5
<i>Of which:</i>					
France	1,226	135,906	124,457	4,303	413.9
Germany	1,358	219,538	234,169	6,467	596.3
Italy	757	59,468	68,550	2,315	198.7
Netherlands	999	139,078	112,182	11,492	138.8
Switzerland	505	132,464	60,128	7,203	50.6
United Kingdom	2,393	641,348	363,372	14,338	928.8
Latin America and Other Western Hemisphere	3,256	316,495	191,340	23,419	1,485.2
<i>Of which:</i>					
Brazil	400	48,477	44,536	5,073	299.9
Mexico	823	59,115	61,122	4,732	743.6
Africa	502	22,604	20,587	1,845	126.5
Middle East	338	30,231	21,703	2,899	73.4
Asia and Pacific	4,665	614,555	492,181	24,464	1,747.6
<i>Of which:</i>					
Australia	855	81,055	63,056	2,944	258.7
Japan	1,006	280,164	211,821	4,979	414.9
International	99	17,110	7,421	653	11.8
By industry					
Petroleum	1,520	272,087	428,030	13,981	230.9
Manufacturing	8,023	779,339	984,868	53,795	4,376.6
Food and kindred products	764	99,571	113,166	7,064	554.4
Chemicals and allied products	1,942	180,964	189,096	15,695	591.9
Primary and fabricated metals	722	35,266	36,862	1,227	195.7
Industrial machinery and equipment	1,033	112,921	159,205	7,611	529.4
Electronic and other electric equipment	855	71,483	95,395	6,443	846.0
Transportation equipment	469	124,721	218,333	4,406	697.6
Other manufacturing	2,238	154,413	172,811	11,348	961.5
Wholesale trade	4,878	206,015	367,515	15,124	538.3
Finance (except banking), insurance, and real estate	2,742	1,229,643	108,441	30,507	191.0
Services	2,671	114,995	100,035	4,050	779.8
Other industries	1,484	213,062	151,548	7,219	1,260.4

NOTE.—The data in this table are from "U.S. Multinational Companies: Operations in 1995" in the October 1997 SURVEY OF CURRENT BUSINESS.

Table G.4.—Foreign Direct Investment in the United States: Selected Items, by Country of Foreign Parent and by Industry of Affiliate, 1994–96

[Millions of dollars]

	Direct investment position on a historical-cost basis			Capital inflows (outflows (-))			Income		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
All countries, all industries	496,539	560,850	630,045	46,995	69,414	78,828	21,286	32,029	33,759
By country									
Canada	41,959	48,258	53,845	4,960	7,080	5,670	2,996	3,911	3,285
Europe	303,649	357,193	410,425	28,002	55,300	59,809	16,059	22,975	25,806
<i>Of which:</i>									
France	33,603	38,480	49,307	3,881	4,500	10,928	-63	1,722	2,654
Germany	40,345	49,269	62,242	7,144	10,229	16,283	2,256	1,908	2,097
Netherlands	67,210	65,806	73,803	-3,174	-1,789	8,225	4,120	5,212	6,294
United Kingdom	104,867	126,177	142,607	8,076		18,929	7,232	11,006	9,220
Latin America and Other Western Hemisphere	26,070	25,240	24,627	4,767	-1,121	131	1,391	1,349	1,557
<i>Of which:</i>									
Brazil	629	751	591	-8	97	-99	88	91	34
Mexico	2,412	1,980	1,078	1,248	-470	-447	2	81	-8
Africa	1,230	1,164	717	44	-66	-440	-19	54	-113
Middle East	6,674	6,008	6,177	161	-298	555	54	209	141
Asia and Pacific	116,956	122,986	134,255	9,061	8,519	13,104	805	3,531	3,084
<i>Of which:</i>									
Australia	8,080	7,833	9,747	1,101	504	2,129	-268	112	-31
Japan	102,999	107,933	118,116	6,238	6,591	11,930	985	3,405	3,106
By industry									
Petroleum	32,290	33,888	42,343	1,665	3,152	8,113	1,902	2,970	4,190
Manufacturing	189,459	213,026	234,323	19,673	27,849	29,112	10,788	15,886	17,262
Food and kindred products	21,411	26,898	28,089	-1,375	5,596	2,439	2,134	1,709	1,780
Chemicals and allied products	66,028	71,367	74,810	10,820	11,306	6,880	4,643	6,202	6,247
Primary and fabricated metals	14,320	14,085	18,727	1,982	312	5,280	-216	1,273	1,060
Machinery	35,196	37,638	37,093	3,826	3,986	-35	1,165	2,316	1,739
Other manufacturing	52,504	63,037	75,604	4,419	6,648	14,548	3,063	4,386	6,436
Wholesale trade	63,792	66,393	77,937	5,785	6,453	9,799	2,611	3,863	3,548
Retail trade	11,857	12,743	15,008	1,532	1,207	2,140	399	544	496
Depository institutions	27,139	34,076	31,903	3,800	6,566	562	2,837	4,725	2,626
Finance, except depository institutions	41,000	62,369	70,185	3,652	16,681	7,775	831	697	714
Insurance	38,833	50,975	59,566	2,759	4,114	7,739	2,237	1,913	3,048
Real estate	31,613	29,704	30,118	259	-880	388	-680	-623	62
Services	37,045	32,887	38,945	2,303	1,946	8,618	-345	212	396
Other industries	23,511	24,788	29,716	5,570	2,326	4,583	705	1,841	1,418

NOTE.—In this table, unlike in the international transactions accounts, income and capital inflows are shown without a current-cost adjustment, and income is shown net of withholding taxes. In addition, unlike in the international investment position, the direct investment position is valued at historical cost.

The data in this table are from tables 16 and 17 in "Foreign Direct Investment in the United States: Detail for Historical-Cost Position and Related Capital and Income Flows, 1996" in the September 1997 SURVEY OF CURRENT BUSINESS.

Table G.5.—Selected Financial and Operating Data of Nonbank U.S. Affiliates of Foreign Companies, by Country of Ultimate Beneficial Owner and by Industry of Affiliate, 1995

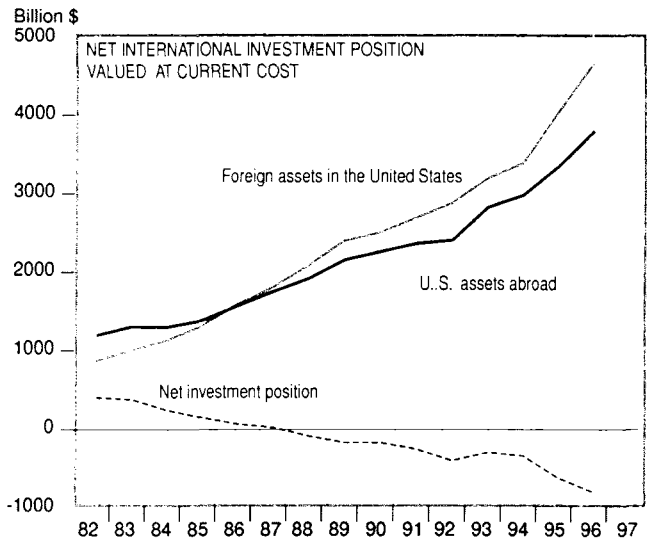
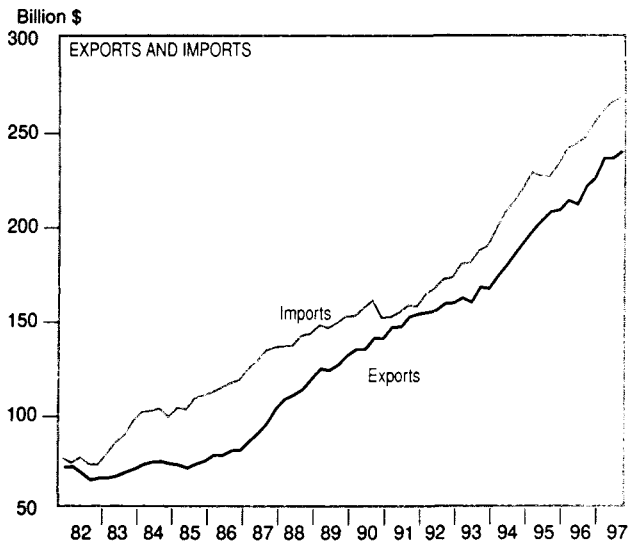
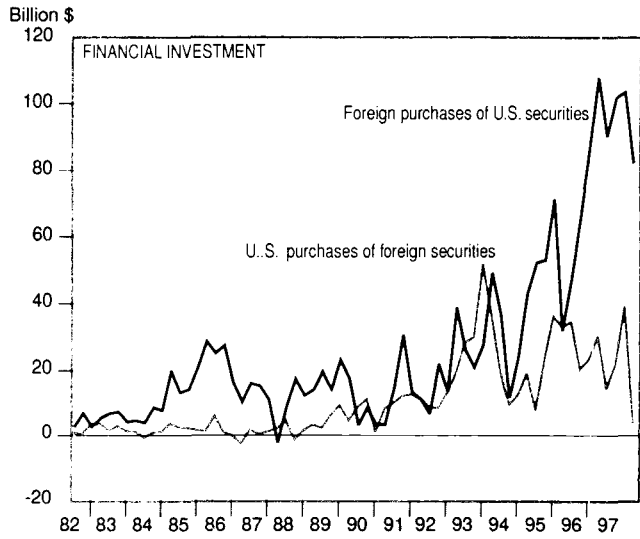
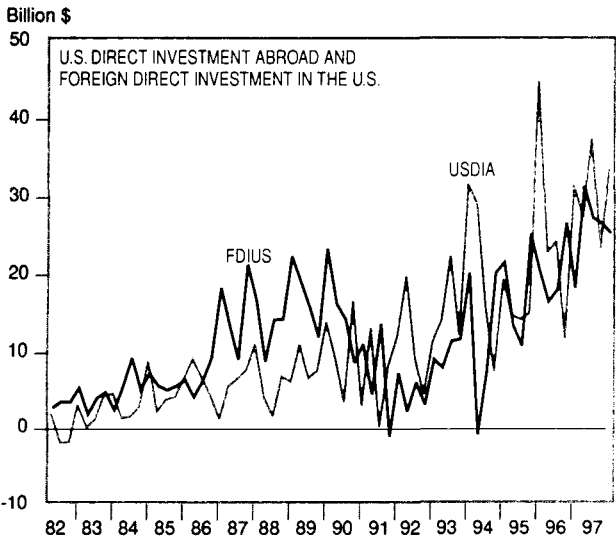
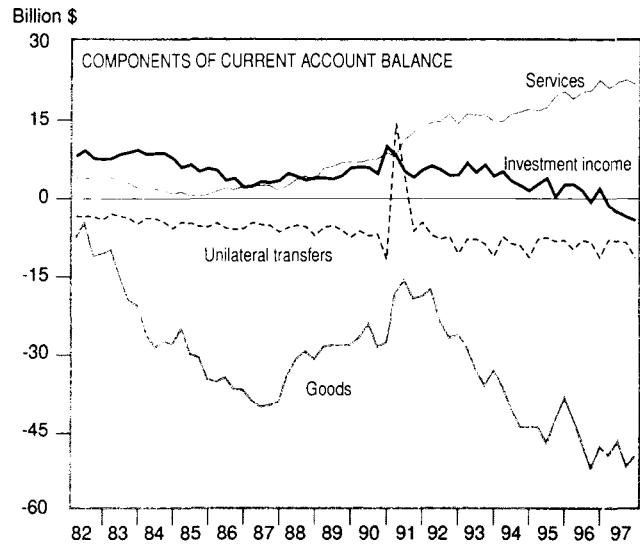
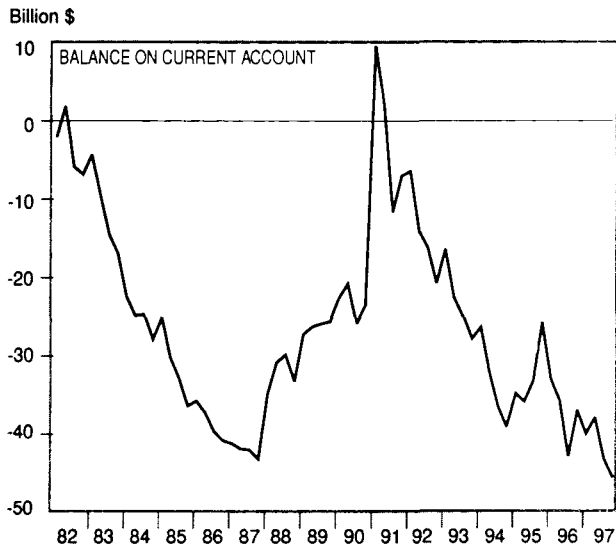
	Number of affiliates	Millions of dollars				Thousands of employees	Millions of dollars	
		Total assets	Sales	Net income	Gross product		U.S. exports of goods shipped by affiliates	U.S. imports of goods shipped to affiliates
All countries, all industries	12,497	2,383,612	1,561,879	15,608	326,955	4,928.3	136,702	254,895
By country								
Canada	1,285	267,378	141,292	2,446	36,532	703.7	5,402	13,565
Europe	5,363	1,327,437	832,286	14,273	202,361	2,991.0	59,344	86,349
<i>Of which:</i>								
France	668	232,662	111,966	1,053	24,178	348.2	14,882	11,255
Germany	1,291	210,408	161,099	1,331	37,182	580.6	12,308	27,753
Netherlands	394	154,877	98,084	2,790	28,013	334.2	5,357	8,730
Switzerland	603	229,335	92,343	-137	18,624	308.3	6,398	7,847
United Kingdom	1,205	381,241	264,355	8,101	71,049	986.5	11,728	14,367
Latin America and Other Western Hemisphere	1,078	53,830	52,067	917	13,345	166.6	6,193	10,126
<i>Of which:</i>								
Brazil	75	8,661	3,903	89	213	4.3	866	1,310
Mexico	265	9,593	8,540	-20	1,798	35.6	661	2,182
Africa	68	(^D)	10,495	345	2,393	20.8	551	723
Middle East	414	25,516	18,121	-198	4,861	46.6	641	4,628
Asia and Pacific	4,212	598,404	489,928	-5,027	62,558	954.6	63,933	138,425
<i>Of which:</i>								
Australia	172	37,003	22,209	-577	4,211	73.6	877	1,110
Japan	3,241	519,577	418,656	-3,621	52,000	758.2	55,519	119,942
United States	77	(^D)	17,690	2,851	4,904	44.9	638	1,079
By industry								
Petroleum	240	104,358	131,889	2,419	30,525	105.7	9,956	19,522
Manufacturing	2,896	587,049	562,151	9,824	156,991	2,276.8	55,561	81,790
Food and kindred products	252	57,195	50,879	632	12,229	228.6	2,790	3,238
Chemicals and allied products	331	191,614	131,892	3,903	39,768	407.1	13,778	13,582
Primary and fabricated metals	396	55,979	70,086	1,547	17,804	246.9	3,988	8,018
Machinery	739	96,130	123,167	176	32,163	541.6	18,861	29,219
Other manufacturing	1,178	186,132	186,128	3,566	55,028	852.6	16,144	27,734
Wholesale trade	2,228	222,616	466,192	174	39,135	455.5	65,500	148,735
Retail trade	353	47,982	93,624	759	23,951	759.1	1,793	3,742
Finance, except depository institutions	874	568,216	45,074	1,392	2,910	45.3	18	25
Insurance	167	514,601	88,149	3,570	8,557	148.2	0	0
Real estate	3,494	96,852	14,184	-2,283	5,574	24.9	9	1
Services	1,250	110,674	59,264	-1,975	23,753	633.0	492	690
Other industries	995	131,264	101,352	1,729	35,561	479.9	3,372	389

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

NOTE.—The data in this table are from tables A1 and A2 in *Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies, Preliminary 1995 Estimates*.

I. Charts

THE U.S. IN THE INTERNATIONAL ECONOMY



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

K. Local Area Table

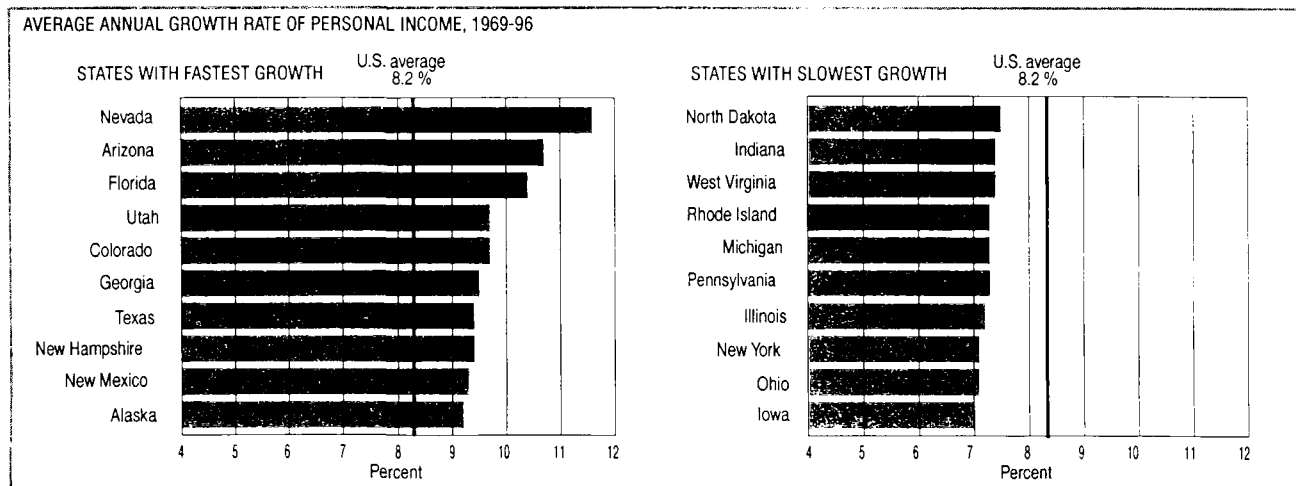
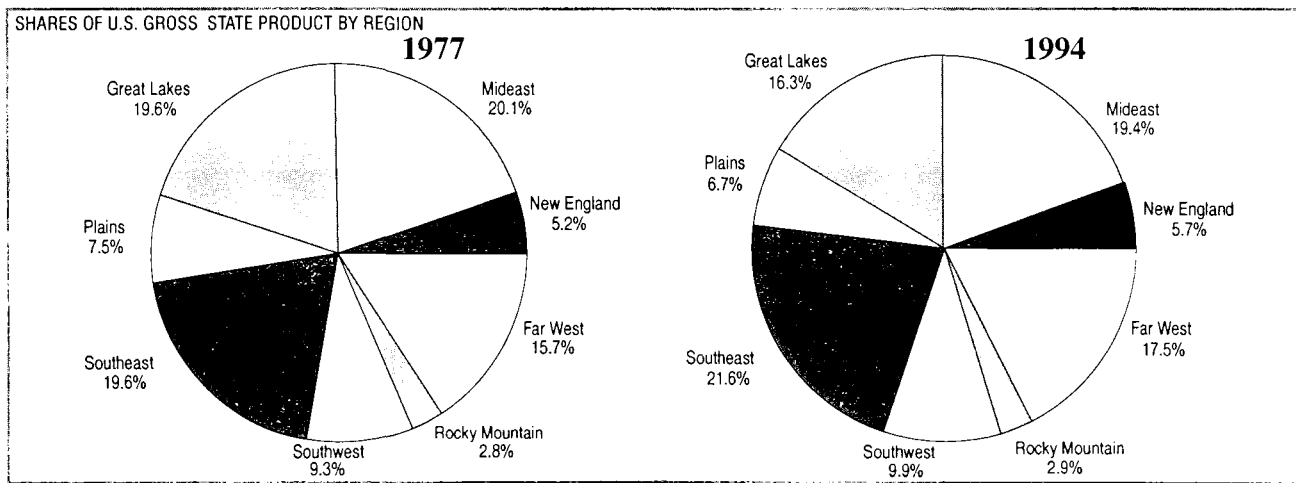
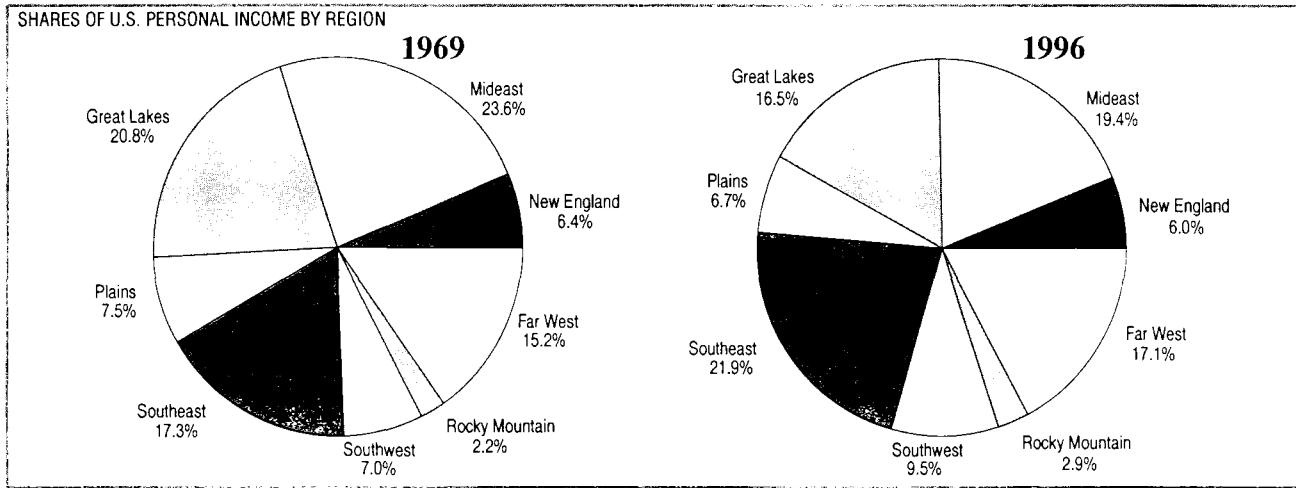
Table K.1.—Personal Income and Per Capita Personal Income by Metropolitan Area, 1993–95

Table with columns for Area name, Personal income (Millions of dollars, Percent change), Per capita personal income (Dollars, Rank in U.S.), and Area name, Personal income (Millions of dollars, Percent change), Per capita personal income (Dollars, Rank in U.S.). Rows include United States, Metropolitan portion, Nonmetropolitan portion, Consolidated Metropolitan Statistical Areas, and Metropolitan Statistical Areas.

See footnotes at the end of the table.

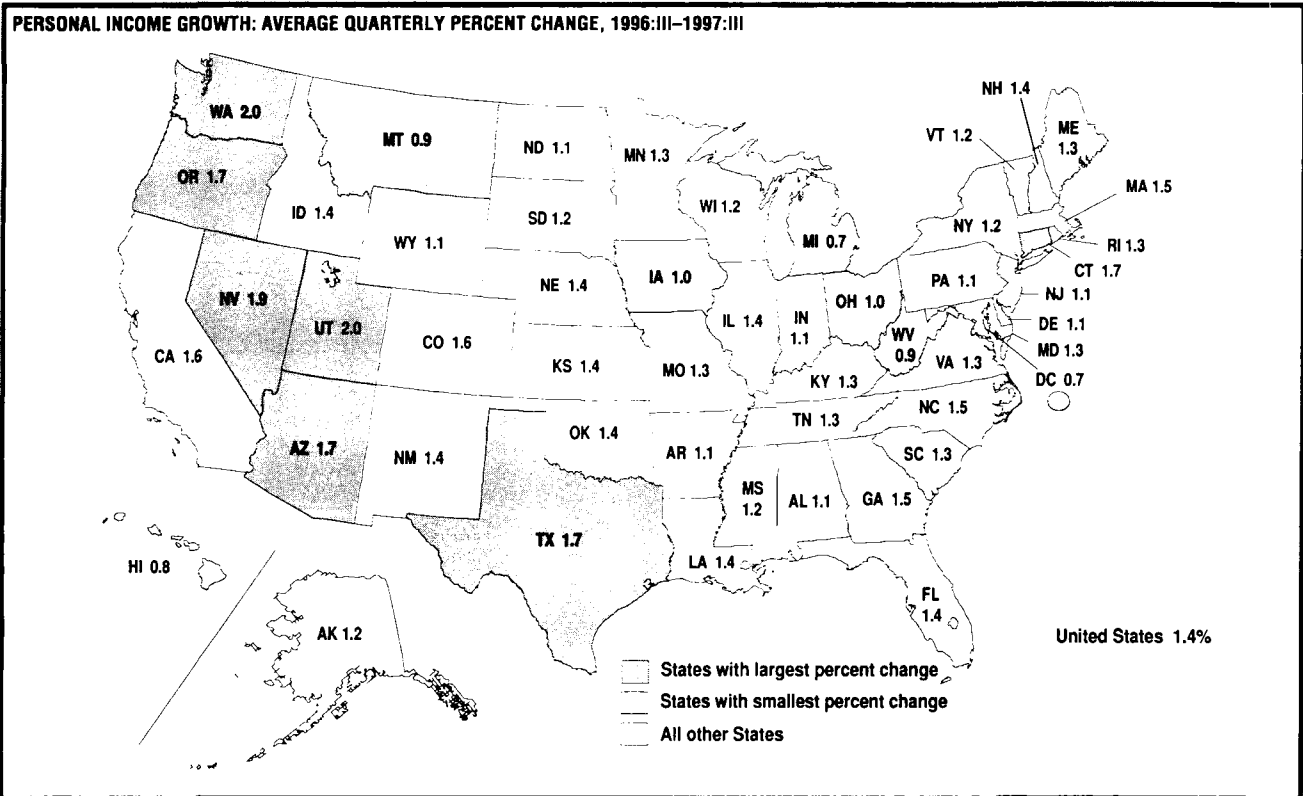
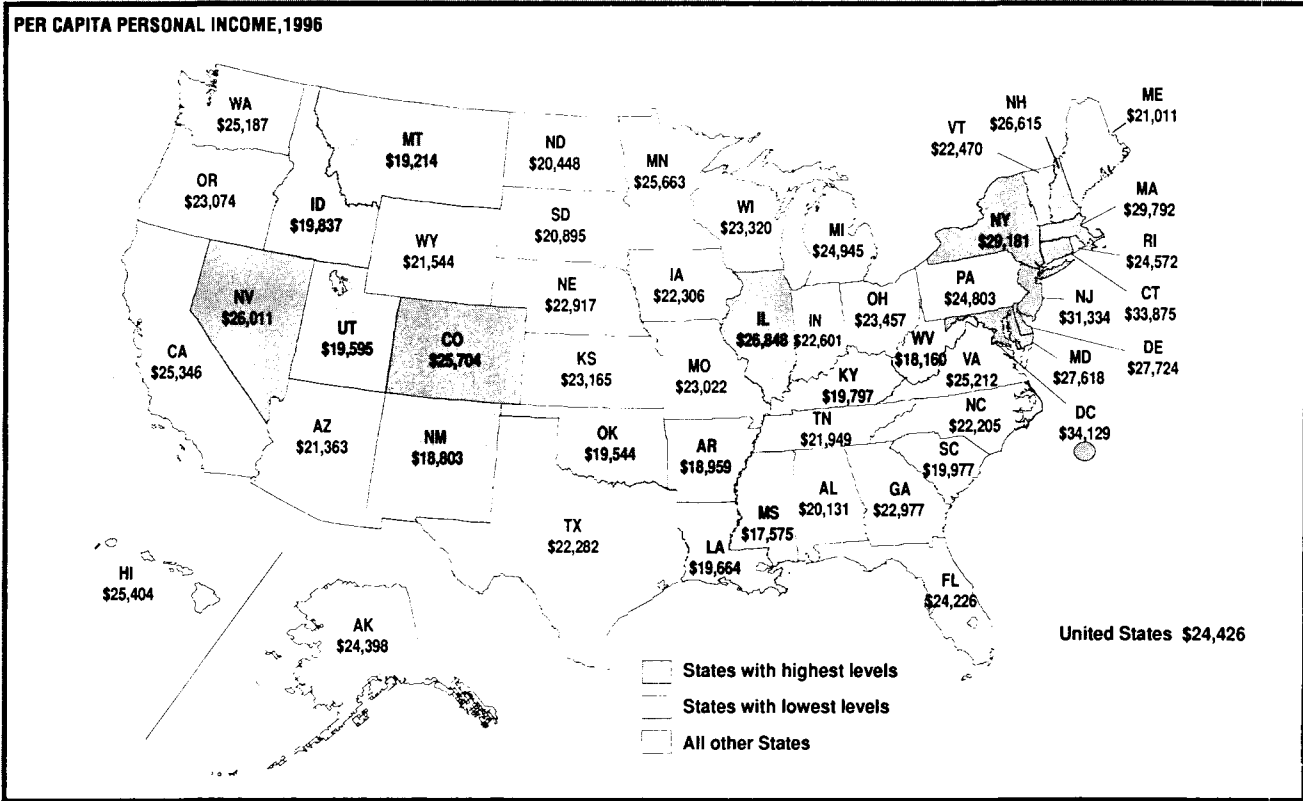
L. Charts

SELECTED REGIONAL ESTIMATES



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

SELECTED REGIONAL ESTIMATES



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

Appendix A

Additional Information About BEA's NIPA Estimates

Statistical Conventions

Changes in current-dollar GDP measure changes in the market value of goods and services produced in the economy in a particular period. For many purposes, it is necessary to decompose these changes into quantity and price components. To compute the quantity indexes, changes in the quantities of individual goods and services are weighted by their prices. (Quantity changes for GDP are often referred to as changes in "real GDP.") For the price indexes, changes in the prices for individual goods and services are weighted by quantities produced. (In practice, the current-dollar value and price indexes for most GDP components are determined largely using data from Federal Government surveys, and the real values of these components are calculated by deflation at the most detailed level for which all the required data are available.)

Except for the most recent period, the annual and quarterly changes in real GDP and prices are "chain-type" measures that are both based on the "Fisher Ideal" formula that incorporates weights from two adjacent years. For example, the 1992-93 percent change in real GDP uses prices for 1992 and 1993 as weights, and the 1992-93 percent change in price uses quantities for 1992 and 1993 as weights. Because the quantity and price index numbers calculated in this way are symmetric, the product of the index of real GDP and the index of prices equals the index of current-dollar GDP.

In the most recent period, a variant of the formula is used because only 1 year's information is available for computing the index number weights. Accordingly, BEA uses the prices and quantities from the two adjacent quarters as weights to calculate Fisher chain-type measures for those estimates. For example, the 1996:II-1996:III percent change in real GDP uses prices for 1996:II and 1996:III as weights, and the 1996:II-1996:III percent change in the GDP price index uses quantities for 1996:II and 1996:III as weights.

BEA also presents another measure, known as the "implicit price deflator," in the NIPA tables. The implicit price deflator is calculated as the ratio of current-dollar value to the corresponding chained-dollar value multiplied by 100.

In addition, BEA prepares measures of real GDP and its components in a dollar-denominated form, designated "chained (1992) dollar estimates." These estimates are computed by multiplying the 1992 current-dollar value of GDP, or of a GDP component, by the corresponding quantity index number. For example, if a current-dollar GDP component equaled \$100 in

1992 and if real output for this component increased by 10 percent in 1993, then the "chained (1992) dollar" value of this component in 1993 would be \$110 ($\100×1.10). Note that percentage changes in the chained (1992) dollar estimates and the percentage changes calculated from the quantity indexes are identical, except for small differences due to rounding.

Because of the formula used for calculating real GDP, the chained (1992) dollar estimates for detailed GDP components *do not add* to the chained-dollar value of GDP or to any intermediate aggregates. A "residual" line is shown as the difference between GDP and the sum of the most detailed components shown in each table. The residual generally is small close to the base period but tends to become larger as one moves further from it. The table of contributions of the major components to the change in real GDP (NIPA table 8.2) provides a better basis for determining the composition of GDP growth than the chained-dollar estimates.

For quarters and months, the estimates are presented at annual rates, which show the value that would be registered if the rate of activity measured for a quarter or a month were maintained for a full year. Annual rates are used so that time periods of different lengths—for example, quarters and years—may be compared easily. These annual rates are determined simply by multiplying the estimated rate of activity by 4 (for quarterly data) or 12 (for monthly data).

Percent changes in the estimates are also expressed at annual rates. Calculating these changes requires a variant of the compound interest formula:

$$r = \left[\left(\frac{X_t}{X_o} \right)^{m/n} - 1 \right] \times 100,$$

where r is the percent change at an annual rate;
 X_t is the level of activity in the later period;
 X_o is the level of activity in the earlier period;
 m is the yearly periodicity of the data (for example, 1 for annual data, 4 for quarterly, or 12 for monthly); and
 n is the number of periods between the earlier and later periods (that is, $t - o$).

Quarterly and monthly NIPA estimates are seasonally adjusted, if necessary. Seasonal adjustment removes from the time series the average impact of variations that normally occur at about the same time and in about the same magnitude each year—for example, weather, holidays, and tax payment dates. After seasonal adjustment, cyclical and other short-term changes in the economy stand out more clearly.

Reconciliation Tables

Table 1.—Reconciliation of Changes in BEA-Derived Compensation Per Hour with BLS Average Hourly Earnings
 [Percent change from preceding period]

	1995	1996	1997	Seasonally adjusted at annual rates				
				1996		1997		
				IV	I	II	III	IV
BEA-derived compensation per hour of all persons in the nonfarm business sector (less housing)	2.5	3.8	3.8	3.4	4.3	3.2	3.8	5.2
Less: Contribution of supplements to wages and salaries per hour	-6	-6	-4	-7	-6	-1	-1	-6
Plus: Contribution of wages and salaries per hour of persons in housing and in nonprofit institutions	0	-1	-1	0	-4	-3	-2	-4
Less: Contribution of wages and salaries per hour of persons in government enterprises, unpaid family workers, and self-employed	-2	-1	-1	-1	-2	-3	-3	-1
Equals: BEA-derived wages and salaries per hour of all employees in the private nonfarm sector	2.8	4.3	4.1	4.0	4.6	3.3	3.5	5.6
Less: Contribution of wages and salaries per hour of nonproduction workers in manufacturing	-1	-2	-2	-8	-1	-3	-1	-1
Less: Other differences ¹	-1	1.2	-5	-9	-6	-5	-2	-4
Equals: BLS average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls	2.9	3.3	3.8	3.9	4.2	3.0	3.8	5.1
Addendum: BLS estimates of compensation per hour in the nonfarm business sector ²	2.5	3.8	3.8	3.4	4.3	3.2	3.8	5.2

1. Includes BEA use of non-BLS data and differences in detailed weighting. Annual estimates also include differences in BEA and BLS benchmark procedures; quarterly estimates also include differences in seasonal adjustment procedures.

2. These estimates differ from the BEA-derived estimates (first line) because the BLS estimates include compensation and hours of tenant-occupied housing.

Table 2.—Relation of Net Exports of Goods and Services and Net Receipts of Factor Income in the National Income and Product Accounts (NIPA's) to Balance on Goods, Services, and Income in the Balance of Payments Accounts (BPA's)

[Billions of dollars]

	Line	1996	1997	Seasonally adjusted at annual rates					
				1996		1997			
				III	IV	I	II	III	IV
Exports of goods, services, and income, BPA's	1	1,055.2	1,167.6	1,047.9	1,098.2	1,117.3	1,174.7	1,182.1	1,196.4
Less: Gold, BPA's	2	6.9	5.7	5.2	3.7	6.7	9.3	3.4	3.4
Statistical differences ¹	3	0	4.0	0	0	-2	4.8	5.4	6.2
Other items	4	1.1	.7	1.5	1.1	.8	.7	.6	.8
Plus: Adjustment for grossing of parent/affiliate interest payments	5	8.7	9.1	8.4	8.9	8.6	8.4	9.5	9.8
Adjustment for U.S. territories and Puerto Rico	6	34.0	36.2	33.6	34.9	35.4	36.5	36.0	37.0
Services furnished without payment by financial intermediaries except life insurance carriers and private noninsured pension plans	7	15.3	16.9	15.9	16.3	16.5	17.0	17.1	17.1
Equals: Exports of goods and services and receipts of factor income, NIPA's	8	1,105.1	1,219.3	1,099.0	1,153.4	1,170.4	1,221.9	1,235.2	1,249.9
Imports of goods, services, and income, BPA's	9	1,163.4	1,295.5	1,183.5	1,198.0	1,242.6	1,290.4	1,318.3	1,330.8
Less: Gold, BPA's	10	7.7	6.6	6.2	3.4	8.7	11.0	3.0	3.8
Statistical differences ¹	11	0	-2.4	0	0	-4.0	-4.2	-1.0	-4
Other items	12	0	0	0	0	0	0	0	0
Plus: Gold, NIPA's	13	-3.8	-3.7	-4.0	-4.2	-3.6	-3.9	-3.6	-3.7
Adjustment for grossing of parent/affiliate interest payments	14	8.7	9.1	8.4	8.9	8.6	8.4	9.5	9.8
Adjustment for U.S. territories and Puerto Rico	15	22.4	26.5	22.4	22.4	24.1	26.1	27.9	27.9
Imputed interest paid to rest of world	16	15.3	16.9	15.9	16.3	16.5	17.0	17.1	17.1
Equals: Imports of goods and services and payments of factor income, NIPA's	17	1,198.3	1,340.1	1,219.9	1,238.8	1,283.5	1,331.3	1,367.2	1,378.4
Balance on goods, services, and income, BPA's (1-9)	18	-108.2	-127.9	-135.6	-99.8	-125.3	-115.7	-136.2	-134.4
Less: Gold (2-10+13)	19	-4.6	-4.6	-5.0	-3.9	-5.6	-5.6	-3.2	-4.1
Statistical differences (3-11) ¹	20	0	6.4	0	0	3.8	9.0	6.4	6.6
Other items (4-12)	21	1.1	.7	1.5	1.1	.8	.7	.6	.8
Plus: Adjustment for U.S. territories and Puerto Rico (6-15)	22	11.6	9.7	11.2	11.5	11.3	10.4	8.1	9.1
Equals: Net exports of goods and services and net receipts of factor income, NIPA's (8-17)	23	-93.2	-120.8	-120.9	-85.4	-113.1	-109.4	-132.0	-128.5

1. Consists of statistical revisions in the NIPA's that have not yet been incorporated into the BPA's (1997:IV) and statistical revisions in the BPA's that have not yet been incorporated into the NIPA's (1997:1-1997:IV).

Appendix B

Suggested Reading

Mid-Decade Strategic Plan

BEA has published the following articles in the SURVEY OF CURRENT BUSINESS on the development and implementation of its strategic plan for improving the accuracy, reliability, and relevance of the national, regional, and international accounts.

“Mid-Decade Strategic Review of BEA’s Economic Accounts: Maintaining and Improving Their Performance” (February 1995)*

“Mid-Decade Strategic Review of BEA’s Economic Accounts: An Update” (April 1995)*

“BEA’s Mid-Decade Strategic Plan: A Progress Report” (June 1996)*

Mid-Decade Strategic Review of BEA’s Economic Accounts: Background Papers (1995) presents seven background papers that evaluate the state of the U.S. economic accounts and that identify the problems and the prospects for improving the accounts.

Methodology

BEA has published a wealth of information about the methodology used to prepare its national, regional, and international estimates.

National

National income and product accounts (NIPA’s)

NIPA Methodology Papers: This series documents the conceptual framework of the NIPA’s and the methodology used to prepare the estimates.

An Introduction to National Economic Accounting (NIPA Methodology Paper No. 1, 1985)* [Also appeared in the March 1985 issue of the SURVEY]

Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends (NIPA Methodology Paper No. 2, 1985)*

Foreign Transactions (NIPA Methodology Paper No. 3, 1987) [Revised version forthcoming]

GNP: An Overview of Source Data and Estimating Methods (NIPA Methodology Paper No. 4, 1987) [Largely superseded by “A Guide to the NIPA’s” (March 1998 SURVEY)*]

Government Transactions (NIPA Methodology Paper No. 5, 1988)*

Personal Consumption Expenditures (NIPA Methodology Paper No. 6, 1990)*

The methodologies described in these papers are subject to periodic improvements that are typically introduced as part of the annual and comprehensive revisions of the NIPA’s; these improvements are described in the SURVEY articles that cover these revisions.

“Annual Revision of the U.S. National Income and Product Accounts”: This series of SURVEY articles, the latest of which was published in the August 1997 issue,* describes the annual NIPA revisions and the improvements in methodology.

The most recent comprehensive revision of the NIPA’s is described in the following series of SURVEY articles.

“Preview of the Comprehensive Revision of the National Income and Product Accounts: BEA’s New Featured Measures of Output and Prices” (July 1995)*

“Preview of the Comprehensive Revision of the National Income and Product Accounts: Recognition of Government Investment and Incorporation of a New Methodology for Calculating Depreciation” (September 1995)*

“Preview of the Comprehensive Revision of the National Income and Product Accounts: New and Redesign Tables” (October 1995)*

“Improved Estimates of the National Income and Product Accounts for 1959–95: Results of the Comprehensive Revision” (January/February 1996)*

“Completion of the Comprehensive Revision of the National Income and Product Accounts, 1929–96” (May 1997)*

“A Guide to the NIPA’s” (March 1998 SURVEY)* provides the definitions of the major NIPA aggregates and components; discusses the measures of real output and prices; explains how production is classified and how the NIPA’s are presented; describes the statistical conventions that are used; and lists the principal source

Availability

For the availability of some of these publications, see the inside back cover of this issue. See also the *User’s Guide to BEA Information*: To request a copy, write to the Public Information Office, BE-53, Bureau of Economic Analysis, U.S. Department of Commerce, Washington DC 20230, call 202-606-9900, or visit BEA’s Internet site at <<http://www.bea.doc.gov>>.

* Items with an asterisk can be found on BEA’s Internet site at <<http://www.bea.doc.gov>>.

data and methods used to prepare the estimates of gross domestic product (GDP).

Information on the sources and methods used to prepare the national estimates of personal income, which provide the basis for the State estimates of personal income, can be found in *State Personal Income, 1929–93* (1995).*

“Gross Domestic Product as a Measure of U.S. Production” (August 1991 SURVEY)* briefly explains the difference between GDP and gross national product.

The conceptual basis for the chain-type measures of real output and prices used in the NIPA’s is described in the following SURVEY articles.

“Alternative Measures of Change in Real Output and Prices” (April 1992)*

“Economic Theory and BEA’s Alternative Quantity and Price Indexes” (April 1992)*

“Alternative Measures of Change in Real Output and Prices, Quarterly Estimates for 1959–92” (March 1993)*

“Preview of the Comprehensive Revision of the National Income and Product Accounts: BEA’s New Featured Measures of Output and Prices” (July 1995)*

“BEA’s Chain Indexes, Time Series, and Measures of Long-Term Economic Growth” (May 1997)*

“Reliability and Accuracy of the Quarterly Estimates of GDP” (October 1993 SURVEY)* evaluates GDP estimates by examining the record of revisions in the quarterly estimates.

Wealth and related estimates

“Improved Estimates of Fixed Reproducible Tangible Wealth, 1929–95” (May 1997 SURVEY)* describes the most recent comprehensive revision of the estimates of fixed reproducible tangible wealth.

Gross product by industry

“Improved Estimates of Gross Product by Industry, 1959–94” (August 1996 SURVEY)* describes the most recent comprehensive revision of the estimates of gross product by industry.

“Gross Product by Industry, 1947–96” (November 1997 SURVEY)* presents the most recent revision to the estimates of gross product by industry and briefly describes changes in methodology.

Input-output accounts

“Benchmark Input-Output Accounts for the U.S. Economy, 1992” (November 1997 SURVEY)* describes the preparation of the 1992 input-output accounts and the concepts and methods underlying the U.S. input-output accounts.

International

Balance of payments accounts (BPA’s)

The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures (1990)* describes the methodologies used in preparing the estimates in the BPA’s and of the international investment position of the United States. These methodologies are subject to periodic improvements that are typically introduced as part of the annual revisions of the BPA’s.

“U.S. International Transactions, Revised Estimates”: This series of SURVEY articles, the latest of which was published in the July 1997 issue,* describes the annual BPA revisions and the improvements in methodology.

Direct investment

The coverage, concepts, definitions, and classifications used in the benchmark surveys of U.S. direct investment abroad and of foreign direct investment in the United States are presented in the publications of the final results of the following benchmark surveys.

U.S. Direct Investment Abroad: 1989 Benchmark Survey, Final Results (1992)*

Foreign Direct Investment in the United States: 1992 Benchmark Survey, Final Results (1995)*

The types of data on direct investment that are collected and published by BEA and the clarifications of the differences between the data sets are presented in the following SURVEY articles.

“A Guide to BEA Statistics on U.S. Multinational Companies” (March 1995)*

“A Guide to BEA Statistics on Foreign Direct Investment in the United States” (February 1990)*


Regional

Personal income

State Personal Income, 1929–93 (1995)* includes a description of the methodology used to prepare the estimates of State personal income. [Also available on the CD-ROM “State Personal Income, 1958–96”]

Local Area Personal Income, 1969–92 (1994)* includes a description of the methodology used to prepare the estimates of local area personal income. [Also available on the CD-ROM “Regional Economic Information System, 1969–95”]

Gross state product

“Comprehensive Revision of Gross State Product by Industry, 1977–94” (June 1997 SURVEY)* summarizes the sources and methods for BEA’s estimates of gross state product. 

BEA INFORMATION

The economic information prepared by the Bureau of Economic Analysis (BEA) is available in news releases, in publications, on computer diskettes, on CD-ROM's, and on the Internet. For a description of these products in the free *User's Guide to BEA Information*, write to the Public Information Office, BE-53, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 606-9900. The *User's Guide* and other information are also available on BEA's home page at <http://www.bea.doc.gov>.

In addition, the following publications are available from the Superintendent of Documents of the Government Printing Office (GPO). To order, write to Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, call (202) 512-1800 or fax (202) 512-2250. Pay by check to the Superintendent of Documents or charge to a GPO deposit account, to VISA, or to MasterCard.

Benchmark Input-Output Accounts of the United States, 1987. (1994) Presents summary and detailed make and use tables for industries and commodities; tables showing commodity- and industry-output-requirements per dollar of commodity demanded; and tables showing the input-output (I-O) commodity composition of personal consumption expenditures and producers' durable equipment expenditures in the national income and product accounts. Presents concepts and methods used in the 1987 benchmark accounts; concordance between I-O and 1987 Standard Industrial Classification codes; description of the components of the measures of output, intermediate inputs, and value added; and mathematical derivation of total requirements tables. (468 pages) \$29.00, stock no. 003-010-00251-4.

Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II), Third Edition. (1997) This handbook describes the five types of RIMS II multipliers that are available for nearly 500 industries and for any county or for any group of counties. It details the information that the users need in order to effectively use the RIMS II multipliers to analyze the economic and industrial impact of public and private projects and programs on State and local areas. The handbook also includes case studies that illustrate the uses of the RIMS II multipliers and a description of the methodology that the Bureau of Economic Analysis uses to estimate the multipliers. (63 pages) \$6.00, stock no. 003-010-00264-6.

Foreign Direct Investment in the United States: 1992 Benchmark Survey, Final Results. (1995) Presents detailed data on the financial structure and operations of U.S. affiliates of foreign direct investors, on the foreign direct investment position in the United States, and on the balance-of-payments transactions between U.S. affiliates and their foreign parent companies in 1992. Includes data for items, such as employment covered by collective bargaining agreements and merchandise trade by product and country of destination and origin, that are only collected in benchmark surveys. Benchmark surveys are conducted every 5 years and are BEA's most comprehensive surveys in terms of both the number of companies covered and the amount of information gathered. The data are classified by industry of affiliate and by country of ultimate beneficial owner, and selected data are classified by State. Provides information

about the coverage, the concepts and definitions, and the classifications used in the survey. (312 pages) \$20.00, stock no. 003-010-00259-0.

Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies. (1997) Two publications: One presents the revised estimates for 1994, and the other, the preliminary estimates for 1995 from BEA's annual surveys of the financial structure and operations of nonbank U.S. affiliates of foreign direct investors. The estimates are presented by industry of the U.S. affiliate and by country of the ultimate beneficial owner (UBO) and for selected estimates, by industry of UBO and by State. **Preliminary 1995 Estimates** (108 pages) \$8.50, stock no. 003-010-00268-9; **Revised 1994 Estimates** (108 pages) \$8.50, stock no. 003-010-00267-1.

Foreign Direct Investment in the United States: Establishment Data for 1992. (1997) This publication, which presents the results of a project by BEA and the Bureau of the Census, provides the most recently available data on the number, employment, payroll, and shipments or sales of foreign-owned U.S. establishments in more than 800 industries at the Standard Industrial Classification four-digit level and by State and by country of owner. Presents additional information—such as data on value added, employee benefits, hourly wage rates of production workers, and expenditures for plant and equipment—for manufacturing establishments. (364 pages) \$28.00, stock no. 003-010-00265-4.

U.S. Direct Investment Abroad: 1994 Benchmark Survey, Preliminary Results. (1997) Presents preliminary results from the latest benchmark survey of the worldwide operations of U.S. multinational companies. Contains detailed 1994 data on the operations of U.S. parent companies and their foreign affiliates in 103 tables organized by country and by industry. (140 pages) \$14.00, stock no. 003-010-00263-8.

U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and Their Foreign Affiliates, Preliminary 1995 Estimates. (1997) Provides preliminary results for 1995 from BEA's annual survey of the worldwide operations of U.S. multinational companies. Contains information on the financial structure and operations of U.S. parent companies and their foreign affiliates. Data are classified by country and industry of affiliate and by industry of U.S. parent. (116 pages) \$9.00, stock no. 003-010-00270-1.

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