SURVEY OF CURRENT BUSINESS

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U.S. DEPARTMENT OF COMMERCE DISTRICT OFFICES

the BUSINESS SITUATION

REVISED estimates show that real GNP increased at an annual rate of one-half of 1 percent, the same as the 15-day estimate (table 1). A downward revision in personal consumption expenditures was about offset by an upward revision in net exports. GNP prices as measured by the fixed-weighted price index increased 9½ percent, also the same as the 15-day estimate.

Corporate profits

Corporate profits from current production—before-tax book profits with inventory valuation and capital consumption adjustments—at an annual rate decreased $10½ billion in the first quarter, following a $11½ billion increase in the fourth quarter of 1978. The swing was largely in trade and in manufacturing.

Domestic profits of nonfinancial corporations more then accounted for the first-quarter decline. These profits, at an annual rate, declined $12 billion following an increase of $10 billion in the fourth quarter. An increase in real corporate product was not large enough to offset a decline in profits per unit of real product (chart 1). Unit profits reflected a faster increase in costs incurred by corporations than in the prices they charged. The first-quarter decline in profits was largely in trade. In manufacturing, an increase in motor vehicles partly offset declines in other durable goods industries, and a decline in food partly offset increases in other nondurable goods industries.

Before-tax book profits at an annual rate increased $2 billion in the first quarter, following a $19½ billion in-

crease in the fourth. These profits exclude the two valuation adjustments, which are designed to value inventories and fixed capital used up in production

Table 1.—Revisions in Selected Component Series of the NIPA's, First Quarter of 1979

	Seasonally adjusted at annual rates			Percent change from preceding quarter at annual rates		
	15-day estimate	45-day estimate	Revision	15-day estimate	45-day estimate	Revision
	Billions of current dollars					
GNP	2,265.6	2,264.8	-0.8	9.5	9.3	-0.2
Personal consumption expenditures	1,444.7	1,440.4	-4.3	12.1	10.8	-1.3
Nonresidential fixed investment	242.6	244.1	1.5	9.6	12.4	2.8
Residential investment	110.9	110.4	-.5	-8.4	-10.3	-1.9
Change in business inventories	18.1	16.6	-1.5			
Net exports	-10.3	-5.3	5.0			
Government purchases	459.4	458.5	-.9	4.4	3.6	-.8
Federal	164.7	164.5	-.2	5.4	5.1	-.3
State and local	294.8	294.0	-.8	3.8	2.8	-1.0
National income		1,835.4			9.3	
Compensation of employees	1,405.9	1,406.8	.9	14.3	14.5	.2
Corporate profits with inventory valuation and capital consumption adjustments		166.0			-22.5	
Other	262.6	262.7	.1	5.9	6.2	.3
Personal income	1,834.1	1,836.0	1.9	10.5	10.9	.4
	Billions of constant (1972) dollars					
GNP	1,417.3	1,416.3	-1.0	.7	.4	-.3
Personal consumption expenditures	915.7	912.4	-3.3	1.7	.3	-1.4
Nonresidential fixed investment	145.9	146.8	.9	2.6	5.4	2.8
Residential investment	58.1	57.7	-.4	-13.8	-16.2	-2.4
Change in business inventories	11.8	11.2	-.6			
Net exports	8.9	11.7	2.8			
Government purchases	277.0	276.4	-.6	-3.4	-4.2	-.8
Federal	102.1	102.0	-.1	-1.8	-2.2	-.4
State and local	174.9	174.5	-.4	-4.4	-5.3	-.9
	Index numbers, 1972=100 [1]					
GNP implicit price deflator	159.85	159.91	.06	8.7	8.8	.1
GNP fixed-weighted price index	162.6	162.6	0	9.5	9.6	.1
GNP chain price index				9.2	9.3	.1

1. Not at annual rates.

NOTE.—For the first quarter of 1979, the following revised or additional major source data became available: For *personal consumption expenditures*, revised retail sales for February and March, and sales and inventories of used cars of franchised automobile dealers for February; for *nonresidential fixed investment*, manufacturers' shipments of equipment for February (revised) and March, construction put in place for February (revised) and March, and a partial tabulation of business expenditures for plant and equipment for the quarter; for *residential investment*, construction put in place for February (revised) and March; for *change in business inventories*, book values for manufacturing and trade for February (revised) and March; for *net exports of goods*

and *services*, merchandise trade for February (revised) and March, and revised net investment income and other services receipts for the quarter; for *government purchases of goods and services*, Federal unified budget outlays for March, and State and local construction put in place for February (revised) and March; for *wages and salaries*, revised employment, average hourly earnings, and average weekly hours for February and March; for *net interest*, revised net interest received from abroad for the quarter; for *corporate profits*, domestic book profits for the quarter, and dividends from abroad and branch profits (net) for the quarter; for *GNP prices*, the Consumer Price Index for March, unit value indexes for exports and imports for March, and residential housing and nonresidential buildings prices for the quarter.

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at replacement cost, the valuation concept underlying national income and product accounting, rather that at historical cost, the valuation concept generally underlying business accounting.

If, as in the first quarter, the historical cost of inventories used up is less than their replacement cost, profits as measured by business exceed profits as measured in the national income and product

accounts by an amount that is called inventory profits. Inventory profits increased $12 billion in the first quarter, following an increase of $7½ billion in the fourth. The first-quarter increase resulted from an acceleration in prices of inventories in almost all industries.

Corporate profits taxes at an annual rate decreased $5½ billion, following an increase of $8 billion in the fourth quarter. The decrease resulted from the reduction in Federal corporate income tax rates and other changes provided by the Revenue Act of 1978. Primarily as a result of these changes, after-tax profits increased $7 billion, following an increase of $11 billion in the fourth quarter.

The Federal sector

The Federal Government deficit at an annual rate, as measured in the national income and product accounts, declined $2½ billion in the first quarter of 1979, as receipts—despite large tax reductions—increased more than expenditures. The deficit was $18½ billion, compared with $21 billion in the fourth quarter of 1978.

Receipts at an annual rate increased $7 billion in the first quarter; the increase was held down by tax reductions—about $19 billion—under provisions of the Revenue Act of 1978 and the Energy Tax Act of 1978. Personal tax and nontax receipts declined $1½ billion; tax reductions under the Revenue Act and the Energy Tax Act—$13 billion—were largely offset by rising incomes and large final settlements on 1978 liabilities. Corporate profits tax accruals declined $5½ billion, reflecting a $6 billion tax reduction under provisions of the Revenue Act. Indirect business tax and nontax accruals increased slightly; a reduction in the telephone excise tax rate was more than offset by increases in other indirect business taxes. Contributions for social insurance increased $13 billion, including $9 billion due to changes in the social security tax. In January, the taxable wage base increased from $17,700 to $22,900 ($7.5 billion of the tax increase) and the tax rate increased from 12.1 percent to 12.26 percent ($1.5 billion).

CHART 1

Nonfinancial Corporations: Profits; Real Output; and Price, Costs, and Profits Per Unit of Real Output

Billion $ (Ratio scale)

PROFITS BEFORE TAX WITH IVA AND CCAdj. (Annual rate)

Billions of 1972 $ (Ratio scale)

REAL OUTPUT (Annual rate)

Dollars (Ratio scale)

PRICE, COSTS, AND PROFITS PER UNIT OF REAL OUTPUT

Price

Labor Cost

Nonlabor Costs

Profits Before Tax With IVA and CCAdj.

Seasonally Adjusted
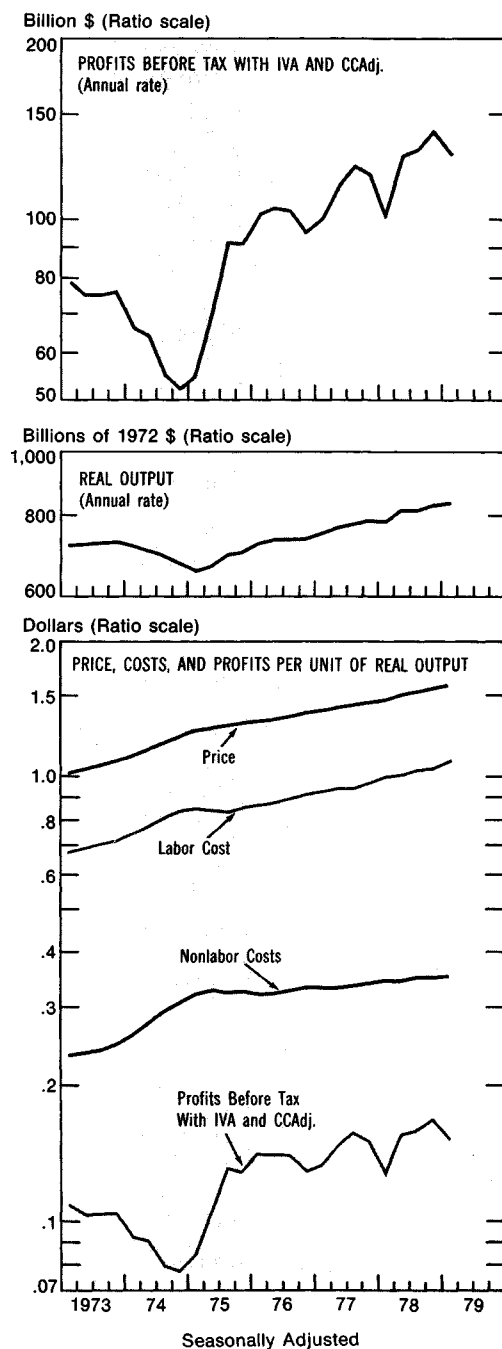
NOTE.—Real output is constant dollar gross domestic corporate product (GDCP). Price per unit is current dollar GDCP divided by constant dollar GDCP. Costs and profits per unit are respective components of current dollar GDCP divided by constant dollar GDCP.

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Expenditures at an annual rate increased $4½ billion; the increase was held down by large declines in grants-in-aid to State and local governments and in subsidies less the current surplus of government enterprises. Grants declined $3½ billion; the fourth quarter had included a one-time payment of retroactive social services claims, and local public works grants declined. The decline in subsidies less the current surplus of government enterprises—$2 billion—was traceable to government payments to farmers. Other expenditures increased $10 billion; transfer payments accounted for about one-half of the increase.

Special reconciliation tables

The reconciliations of changes in compensation per hour and average hourly earnings and of changes in the implicit price deflator for personal consumption expenditures (PCE) and the Consumer Price Index (CPI) are shown in table 2 and 3, respectively. Compensation per hour of all persons in the business economy other than farm and housing increased 10.2 percent (annual rate) in the first quarter, virtually the same as 10.1 percent for average hourly earnings of production and nonsupervisory workers in the private nonfarm economy. The contribution of supplements, resulting from increases in the social security tax rate and wage base, added 1.1 percentage points to the increase in hourly compensation, but was offset by the contributions of other reconciliation items.

The implicit price deflator for PCE increased 10.5 percent (annual rate) in the first quarter, compared with 10.2 percent for the chain price index and 11.1 percent for the CPI for All Urban Consumers. Major factors in the larger increase in the CPI were the PCE expenditure component for owner-occupied dwellings, which has no comparable CPI component, and the CPI expenditures component for home-ownership, which has no comparable PCE component.

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

	1978				1979
	I	II	III	IV r	I p
1. Compensation per hour of all persons in the business economy other than farm and housing (percent change at annual rate) [1]	11.7	8.5	9.3	8.9	10.2
2. Less: Contribution of supplements	1.8	−.2	.7	−.3	1.1
3. Plus: Contribution of employees of housing and of nonprofit institutions	.1	0	0	−.3	0
4. Less: Contribution of employees of government enterprises and self-employed and unpaid family workers	−.1	−.3	.3	.4	−.3
5. Equals: Wages and salaries per hour of employees in the private nonfarm economy (percent change at annual rate)	10.1	9.0	8.3	8.5	9.4
6. Less: Contribution of nonproduction workers in manufacturing	−.2	−.5	0	−.1	−.2
7. Less: Contribution of non-BLS data, detailed weighting, and seasonal adjustment	1.9	−.6	.5	−.8	−.5
Commodity-producing industries	.1	−1.4	−.5	−1.0	−.8
Manufacturing	−.2	−.3	−.2	−.9	−.6
Distributive industries	.6	.7	.5	−.3	.2
Service industries	1.2	.1	.5	.5	.1
8. Equals: Average hourly earnings, production and nonsupervisory workers in the private nonfarm economy (percent change at annual rate)	8.4	10.1	7.8	9.4	10.1

r Revised.   p Preliminary.
1. BLS estimates of changes in hourly compensation in the nonfarm business sector for the five quarters are 12.2, 8.3, 9.4, 8.9, and 10.2 percent.

Table 3.—Reconciliation of Changes in the Implicit Price Deflator for Personal Consumption Expenditures and the Consumer Price Index for all Urban Consumers, Seasonally Adjusted

	1978			1979
	II r	III r	IV r	I p
1. Implicit price deflator for personal consumption expenditures (percent change at annual rate)	8.7	6.4	6.5	10.5
2. Less: Contribution of shifting weights in PCE	−1.2	−.4	−.5	.2
New autos	1.7	−1.8	0	1.1
Gasoline and oil	0	.3	.3	.1
Electricity, gas, fuel oil, and coal	−1.9	−.2	−.2	.7
Furniture and household equipment	.7	.2	.5	−.6
Food purchased for off-premise consumption	−2.1	−.6	−.4	−.6
Purchased meals and beverages	.3	−.2	−.2	0
Clothing and shoes	.7	.6	.8	−.7
Housing	−.3	0	−.4	.7
Other	−.3	1.3	−.8	−.5
3. Equals: PCE chain price index (percent change at annual rate)	10.0	6.7	6.9	10.2
4. Less: Contribution of differences in weights of comparable CPI and PCE expenditure components	.2	0	−.6	−.1
Gasoline and oil	0	−.1	−.2	−.3
Electricity, gas, fuel oil, and coal	−.1	−.1	0	−.1
Furniture, appliances, floor coverings, other household furnishings	0	.1	0	.1
Food at home	.3	0	0	0
Food away from home	−.4	−.2	−.1	−.3
Apparel commodities	.2	0	0	.1
Rent	−.3	−.3	−.3	−.1
Other	.5	.7	.2	.5
5. Less: Contributions of PCE expenditures components not comparable with CPI components	−.5	.4	.3	−.8
New autos	−.1	.1	−.2	0
Net purchases of used autos	0	.1	.1	.1
Owner-occupied nonfarm and farm dwellings-space rent	−.3	.2	.3	−.8
Services furnished without payment by financial intermediaries except life insurance carriers	−.1	0	0	−.1
Current expenditures by nonprofit institutions	0	.1	.2	0
Other	0	−.1	0	−.1
6. Plus: Contribution of CPI expenditure components not comparable with PCE components [1]	.5	2.0	1.2	.6
New autos	−.1	0	−.3	0
Used autos	−.1	.2	.2	.2
Homeownership	.9	1.7	1.6	.6
Other	−.2	0	−.2	−.1
7. Less: Contribution of differences in seasonal adjustment [2]	.6	−.5	−.7	.8
8. Equals: Consumer Price Index, all items [1] (percent change at annual rate)	10.2	8.8	9.1	11.1

r Revised.   p Preliminary.
1. Data have been revised by BLS to reflect new seasonal factors incorporating data for 1978.
2. These differences arise because component price indexes that are used in the BEA measures and in the CPI are seasonally adjusted at different levels of detail.

Summaries of BEA Staff Papers

The average number of pages in the SURVEY OF CURRENT BUSINESS has tended to increase in recent years, because the scope of BEA's work has broadened and because computers have made it possible to prepare more detailed estimates, which are often of particular interest to specialists. Also, inflation has increased the costs of printing and distributing the SURVEY. Accordingly, in the future the BEA staff paper series will present more of BEA's work. These staff papers will be summarized in the SURVEY.

Updated Input-Output Table of the U.S. Economy: 1972

(Derived From the 1967 Input-Output Table)

By Paula C. Young and Philip M. Ritz

THIS paper presents the fifth in a series of summary updates of the detailed benchmark input-output table for 1967. It may be used, along with previous update tables (for 1961 and 1966) and previous benchmark tables (for 1958 and 1963), to analyze changes in the input structure of the U.S. economy. (The recently released benchmark input-output study for 1972 differs from earlier studies because it is based on the 1972 Standard Industrial Classification and incorporates a new treatment of secondary products along with other changes. Forthcoming annual input-output update tables will be based on this study.)

The updated tables are at the 85-industry order of detail. Current-dollar estimates of transactions, direct requirements per dollar of output, and total requirements per dollar of delivery to final demand, and constant (1967) dollar estimates of transactions and direct requirements are provided.

Single copies of this parper are available on request from the Bureau of Economic Analysis, Interindustry Economics Division (BE–51), U.S. Department of Commerce, Washington, D.C. 20230. Additional copies may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, Va. 22161. The price is $5.25 for paper copy and $3.00 for microfiche. Ask for BEA–SP 79–032.

Sources and Uses of Funds of Majority-Owned Foreign Affiliates of U.S. Companies, 1973–76

By Ida May Mantel

THIS paper analyzes sources and uses of funds of a sample of majority-owned foreign affiliates of U.S. companies in 1973–76. The sample accounts for a substantial portion of the data for all such affiliates.

Sources of funds consist of internal funds generated by affiliate operations, external funds loaned to or invested in affiliates by U.S. and foreign residents, and "other" sources of funds. External funds are classified as coming from the multinational company (MNC)—the U.S. parent and foreign affiliates of the U.S. parent—or from U.S. and foreign residents outside the MNC. Uses of funds consist of investment in physical, financial, and other assets. Physical asset investment consists of capital expenditures and the change in inventories. Financial asset investment consists of the change in current receivables, the change in cash and other short-term assets, and a substantial portion of "other" uses of funds. The latter consists of the change in long-term financial assets, together with changes in intangible assets and adjustment items.

The analysis centers on affiliates in non-financial industries—petroleum, manufacturing, and "other"; these affiliates accounted for almost all physical asset investment by the sample. Sources and uses of funds of affiliates in financial industries are discussed briefly.

The major findings of the paper are:

• In the 1973–76 period, sources and uses of funds exhibited unusually volatile changes, largely reflecting abrupt changes in economic activity, particularly in major industrial countries, and in prices.

• The quadrupling of petroleum prices during 1973–74 resulted in particularly large changes in the sources and uses of funds of affiliates in the petroleum industry and in certain nonpetroleum industries, such as chemicals and transportation-equipment manufacturing.

• In 1973–76, for nonfinancial affiliates, changes in external funds from sources outside the MNC were in the same direction as changes in the gap between physical asset investment and funds controlled by the MNC. The gap was unusually large in 1973–74; to fill the gap, affiliates relied primarily on short-term funds from foreign creditors other than financial institutions.

• By the end of 1976, the distribution of sources of funds of nonfinancial affiliates was similar to the average distribution in 1966–72, but the distribution of uses of funds differed significantly. In 1976, physical asset investment, particularly the capital expenditures component, was a smaller percentage, and financial asset investment a larger percentage of total uses of funds than in 1966–72.

The paper includes tables that show sources and uses of funds data for 1966–76. The data for 1966–72, initially published in the July 1975 *Survey of Current Business*, are revised. Manufacturing and "other" industry detail are published for the first time.

Single copies of this paper are available on request from the Bureau of Economic Analysis, BE–50 (RB), U.S. Department of Commerce, Washington, D.C. 20230. Additional copies may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, Va. 22161. The price is $5.25 for paper copy and $3.00 for microfiche. Ask for BEA–SP 79–033.

NATIONAL INCOME AND PRODUCT TABLES

Columns — left block: **Billions of current dollars** (Seasonally adjusted at annual rates); right block: **Billions of 1972 dollars** (Seasonally adjusted at annual rates).

Table 1.—Gross National Product in Current and Constant Dollars (1.1, 1.2)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Gross national product	1,887.2	2,107.6	1,958.1	1,992.0	2,087.5	2,136.1	2,214.8	2,264.8	1,332.7	1,385.7	1,354.5	1,354.2	1,382.6	1,391.4	1,414.7	1,416.3
Personal consumption expenditures	1,206.5	1,340.1	1,255.2	1,276.7	1,322.9	1,356.9	1,403.9	1,440.4	857.7	891.7	876.6	873.5	886.3	895.1	911.8	912.4
Durable goods	178.4	197.5	187.2	183.5	197.8	199.5	209.1	211.4	137.8	144.6	143.0	137.8	145.8	144.8	150.1	148.6
Nondurable goods	479.0	526.5	496.9	501.4	519.3	531.7	553.4	567.9	330.4	339.6	338.1	333.3	336.3	340.4	348.5	345.4
Services	549.2	616.2	571.1	591.8	605.8	625.8	641.4	661.0	389.5	407.4	395.6	402.4	404.2	410.0	413.1	418.4
Gross private domestic investment	297.8	345.6	313.5	322.7	345.4	350.1	364.0	371.1	196.3	210.6	200.3	205.7	213.1	210.4	213.4	215.7
Fixed investment	282.3	329.6	300.5	306.0	325.3	336.5	350.5	354.5	187.4	200.1	192.8	193.4	200.4	201.4	205.2	204.5
Nonresidential	190.4	222.6	200.3	205.6	220.1	227.5	237.1	244.1	129.8	140.2	132.5	133.8	140.5	141.7	144.9	146.8
Structures	63.9	77.8	67.4	68.5	76.6	80.9	85.1	85.2	40.0	44.5	41.0	41.0	44.6	45.6	46.7	45.8
Producers' durable equipment	126.5	144.8	132.8	137.1	143.5	146.6	152.0	158.9	89.8	95.8	91.5	92.9	95.9	96.1	98.2	101.0
Residential	91.9	107.0	100.2	100.3	105.3	109.0	113.4	110.4	57.7	59.8	60.3	59.5	59.9	59.7	60.3	57.7
Nonfarm structures	88.9	103.8	97.5	97.3	102.1	105.7	110.2	107.2	55.6	57.7	58.4	57.4	57.8	57.6	58.2	55.7
Farm structures	1.5	1.4	1.2	1.3	1.4	1.5	1.5	1.3	.9	.8	.7	.8	.8	.8	.8	.7
Producers' durable equipment	1.5	1.7	1.6	1.7	1.8	1.7	1.7	1.8	1.2	1.3	1.2	1.3	1.4	1.3	1.3	1.3
Change in business inventories	15.6	16.0	13.1	16.7	20.1	13.6	13.5	16.6	8.9	10.6	7.5	12.3	12.7	9.0	8.2	11.2
Nonfarm	15.0	16.7	10.4	16.9	22.1	14.6	13.4	17.8	9.4	11.0	6.5	12.5	13.9	9.6	8.1	1.8
Farm	.6	-.8	2.7	-.2	-2.0	-.9	.1	-1.2	-.5	-.5	.9	-.1	-1.2	-.6	.1	-.6
Net exports of goods and services	-11.1	-12.0	-23.2	-24.1	-5.5	-10.7	-7.6	-5.3	9.5	8.4	3.1	2.9	11.3	9.2	10.2	11.7
Exports	175.5	204.8	172.1	181.7	205.4	210.1	221.9	233.8	98.2	107.0	96.0	99.1	108.4	109.0	111.7	114.7
Imports	186.6	216.8	195.2	205.8	210.9	220.8	229.5	239.0	88.7	98.6	92.9	96.2	97.1	99.7	101.5	103.0
Government purchases of goods and services	394.0	433.9	412.5	416.7	424.7	439.8	454.5	458.5	269.2	275.0	274.5	272.1	271.9	276.7	279.4	276.4
Federal	145.1	153.8	152.2	151.5	147.2	154.0	162.5	164.5	101.6	100.3	103.6	101.2	97.1	100.4	102.5	102.0
National defense	94.3	99.5	97.1	97.9	98.6	99.6	102.1	103.9								
Nondefense	50.8	54.3	55.1	53.6	48.6	54.5	60.4	60.6								
State and local	248.9	280.2	260.3	265.2	277.6	285.8	292.0	294.0	167.6	174.7	170.9	170.8	174.8	176.3	176.9	174.5

Table 2.—Gross National Product by Major Type of Product in Current and Constant Dollars (1.3, 1.5)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Gross national product	1,887.2	2,107.6	1,958.1	1,992.0	2,087.5	2,136.1	2,214.8	2,264.8	1,332.7	1,385.7	1,354.5	1,354.2	1,382.6	1,391.4	1,414.7	1,416.3
Final sales	1,871.6	2,091.6	1,945.0	1,975.3	2,067.4	2,122.5	2,201.3	2,248.1	1,323.8	1,375.2	1,347.1	1,341.8	1,369.9	1,382.4	1,406.5	1,405.0
Change in business inventories	15.6	16.0	13.1	16.7	20.1	13.6	13.5	16.6	8.9	10.6	7.5	12.3	12.7	9.0	8.2	11.2
Goods	832.6	918.4	859.6	861.8	912.2	927.3	972.5	1,000.8	608.4	629.7	620.1	611.8	627.7	630.2	649.1	650.9
Final sales	817.0	902.4	846.5	845.1	892.1	913.7	958.9	984.2	599.6	619.1	612.7	599.4	615.0	621.2	640.9	639.7
Change in business inventories	15.6	16.0	13.1	16.7	20.1	13.6	13.5	16.6	8.9	10.6	7.5	12.3	12.7	9.0	8.2	11.2
Durable goods	341.3	376.8	347.4	351.2	375.8	380.1	400.1	426.0	253.7	265.4	255.1	254.6	266.6	264.8	275.5	284.8
Final sales	332.9	365.1	341.1	336.3	365.0	369.8	389.2	405.9	248.0	258.1	250.5	245.0	260.2	258.7	268.4	272.9
Change in business inventories	8.4	11.7	6.3	14.8	10.8	10.2	10.8	20.1	5.8	7.3	4.6	9.6	6.4	6.1	7.1	11.9
Nondurable goods	491.3	541.7	512.2	510.6	536.4	547.2	572.4	574.8	354.7	364.3	365.0	357.2	361.2	365.4	373.6	366.1
Final sales	484.1	537.4	505.4	508.7	527.1	543.9	569.7	578.2	351.6	361.1	362.1	354.5	354.8	362.5	372.5	366.8
Change in business inventories	7.2	4.3	6.8	1.9	9.3	3.4	2.7	-3.4	3.1	3.3	2.9	2.7	6.3	2.9	1.1	-.7
Services	862.8	962.5	893.6	926.4	952.0	973.7	997.7	1,025.9	602.9	627.0	609.6	620.1	625.6	629.7	632.6	638.5
Structures	191.8	226.7	204.9	203.8	223.4	235.0	244.7	238.1	121.3	129.0	124.8	122.3	129.3	131.6	133.0	126.9

Table 3.—Gross National Product by Sector in Current and Constant Dollars (1.7, 1.8)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Gross national product	1,887.2	2,107.6	1,958.1	1,992.0	2,087.5	2,136.1	2,214.8	2,264.8	1,332.7	1,385.7	1,354.5	1,354.2	1,382.6	1,391.4	1,414.7	1,416.3
Gross domestic product	1,869.9	2,088.2	1,942.2	1,973.8	2,066.5	2,117.3	2,195.1	2,243.1	1,325.3	1,377.9	1,347.9	1,346.6	1,373.9	1,383.9	1,407.0	1,408.2
Business	1,599.3	1,790.2	1,660.4	1,684.1	1,771.8	1,817.5	1,887.4	1,929.0	1,135.9	1,183.7	1,155.9	1,153.5	1,180.0	1,189.3	1,212.1	1,213.0
Nonfarm	1,544.0	1,730.5	1,601.6	1,628.9	1,714.9	1,758.5	1,819.9	1,860.0	1,094.2	1,146.0	1,112.4	1,115.4	1,145.2	1,151.8	1,171.5	1,175.8
Nonfarm less housing	1,397.8	1,566.3	1,449.0	1,471.7	1,553.2	1,592.0	1,648.1	1,684.3	980.5	1,026.6	996.4	998.1	1,026.5	1,031.7	1,050.0	1,052.9
Housing	146.2	164.3	152.7	157.1	161.7	166.5	171.7	195.7	113.6	119.4	116.0	117.4	118.6	120.1	121.5	122.9
Farm	50.5	57.8	54.0	53.0	56.4	58.6	63.2	66.9	34.4	32.5	36.1	32.5	30.5	33.2	33.8	31.9
Statistical discrepancy	4.7	1.8	4.8	2.2	.5	.4	4.3	2.1								
Residual [1]									7.3	5.2	7.4	5.5	4.3	4.3	6.8	5.3
Households and institutions	62.7	71.5	65.9	68.8	70.5	72.3	74.4	76.9	42.2	44.5	43.6	43.8	44.3	44.9	45.2	45.4
Government	208.0	226.5	215.9	221.0	224.1	227.5	233.4	237.2	147.2	149.6	148.4	149.4	149.6	149.8	149.8	149.7
Federal	66.4	71.1	69.5	69.9	70.1	70.5	74.0	74.6	48.7	48.9	48.8	48.8	48.8	49.0	48.9	48.8
State and local	141.5	155.4	146.4	151.1	154.1	157.0	159.4	162.6	98.4	100.8	99.6	100.6	100.8	100.8	100.9	100.9
Rest of the world	17.3	19.4	15.9	18.2	21.1	18.8	19.8	21.7	7.3	7.9	6.6	7.5	8.8	7.5	7.7	8.1

^{r} Revised.   Footnotes for tables 2 and 3 on following page.

HISTORICAL STATISTICS

The national income and product data for 1929–72 are in *The National Income and Products Accounts of the United States, 1929–74: Statistical Tables* (available for $4.95, SN 003–010–00052–9, from Commerce Department District Offices or the Superintendent of Documents; see addresses inside front cover). Data for 1973, 1974, and 1975–77 are in July 1976, July 1977, and July 1978 issues of the SURVEY, respectively.

Table 4.—Relation of Gross National Product, Net National Product, National Income, and Personal Income (1.9)

Seasonally adjusted at annual rates — Billions of dollars

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I r
Gross national product	1,887.2	2,107.6	1,958.1	1,992.0	2,087.5	2,136.1	2,214.8	2,264.8
Less: Capital consumption allowances with capital consumption adjustment	195.2	216.9	202.6	207.3	213.3	220.8	226.3	231.7
Capital consumption allowances without capital consumption adjustment	153.6	165.4	157.8	161.0	163.9	166.9	169.9	172.7
Less: Capital consumption adjustment	−41.6	−51.5	−44.7	−46.3	−49.4	−53.8	−56.4	−59.0
Equals: Net national product	1,692.0	1,890.7	1,755.5	1,784.7	1,874.2	1,915.3	1,988.5	2,033.1
Less: Indirect business tax and nontax liability	165.1	178.3	170.1	173.3	179.4	177.7	182.7	186.2
Business transfer payments	9.6	10.7	10.0	10.2	10.5	10.9	11.3	11.7
Statistical discrepancy	4.7	1.8	4.8	2.2	.5	.4	4.3	2.1
Plus: Subsidies less current surplus of government enterprises	2.8	3.9	6.3	4.1	4.3	2.1	5.0	2.3
Equals: National income	1,515.3	1,703.7	1,576.9	1,603.1	1,688.1	1,728.4	1,795.2	1,835.4
Less: Corporate profits with inventory valuation and capital consumption adjustments	144.2	159.5	148.2	132.6	163.4	165.2	176.6	166.0
Net interest	95.4	106.3	99.0	101.7	104.6	107.4	111.4	114.5
Contributions for social insurance	140.3	164.3	145.0	157.4	162.7	166.2	170.7	184.5
Wage accruals less disbursements	0	0	0	0	0	.2	0	−.2
Plus: Government transfer payments to persons	199.2	215.3	205.9	208.9	210.1	219.6	222.7	227.3
Personal interest income	141.2	159.0	146.0	151.4	156.3	161.7	166.6	172.4
Net interest	95.4	106.3	99.0	101.7	104.6	107.4	111.4	114.5
Interest paid by government to persons and business	43.0	49.3	44.5	46.7	48.4	50.6	51.4	54.6
Less: Interest received by government	25.8	30.3	27.3	28.5	29.7	30.9	32.3	33.6
Interest paid by consumers to business	28.6	33.8	29.8	31.5	33.0	34.6	36.0	36.9
Dividends	43.7	49.3	46.3	47.0	48.1	50.1	51.9	54.0
Business transfer payments	9.6	10.7	10.0	10.2	10.5	10.9	11.3	11.7
Equals: Personal income	1,529.0	1,708.0	1,593.0	1,628.9	1,682.4	1,731.7	1,789.0	1,836.0

Table 5.—Relation of Gross National Product, Net National Product, and National Income in Constant Dollars (1.10)

[Billions of 1972 dollars]

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I r
Gross national product	1,332.7	1,385.7	1,354.5	1,354.2	1,382.6	1,391.4	1,414.7	1,416.3
Less: Capital consumption allowances with capital consumption adjustment	128.9	131.9	130.2	130.9	131.6	132.3	133.0	133.8
Equals: Net national product	1,203.8	1,253.8	1,224.4	1,223.3	1,251.1	1,259.2	1,281.7	1,282.4
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprise	131.4	138.0	134.0	135.0	137.4	139.1	140.7	141.4
Residual [1]	7.3	5.2	7.4	5.5	4.3	4.3	6.8	5.3
Equals: National income	1,065.1	1,110.5	1,083.0	1,082.8	1,109.4	1,115.8	1,134.2	1,135.7

Table 6.—Net National Product and National Income by Sector in Current and Constant Dollars (1.11, 1.12)

Seasonally adjusted at annual rates — Billions of dollars

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I r
Net national product	1,692.0	1,890.7	1,755.5	1,784.7	1,874.2	1,915.3	1,988.5	2,033.1
Net domestic product	1,674.7	1,871.2	1,739.6	1,766.5	1,853.2	1,896.5	1,968.7	2,011.4
Business	1,404.1	1,573.3	1,457.8	1,476.8	1,558.5	1,596.7	1,661.0	1,697.3
Nonfarm	1,363.2	1,529.2	1,413.9	1,436.7	1,517.0	1,553.5	1,609.6	1,644.7
Farm	36.1	42.2	39.1	37.9	41.0	42.9	47.1	50.5
Statistical discrepancy	4.7	1.8	4.8	2.2	.5	.4	4.3	2.1
Households and institutions	62.7	71.5	65.9	68.8	70.5	72.3	74.4	76.9
Government	208.0	226.5	215.9	221.0	224.1	227.5	233.4	237.2
Rest of the world	17.3	19.4	15.9	18.2	21.1	18.8	19.8	21.7
National income	1,515.3	1,703.7	1,576.9	1,603.1	1,688.1	1,728.4	1,795.2	1,835.4
Domestic income	1,498.0	1,684.3	1,560.9	1,584.9	1,667.1	1,709.7	1,775.5	1,813.8
Business	1,227.4	1,386.3	1,279.1	1,295.2	1,372.4	1,409.9	1,467.8	1,499.7
Nonfarm	1,192.6	1,344.8	1,238.7	1,257.7	1,332.4	1,368.5	1,420.4	1,451.4
Farm	34.8	41.5	40.5	37.4	40.0	41.3	47.3	48.3
Households and institutions	62.7	71.5	65.9	68.8	70.5	72.3	74.4	76.9
Government	208.0	226.5	215.9	221.0	224.1	227.5	233.4	237.2
Rest of the world	17.3	19.4	15.9	18.2	21.1	18.8	19.8	21.7

Billions of 1972 dollars

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I r
Net national product	1,203.8	1,253.8	1,224.4	1,223.3	1,251.1	1,259.2	1,281.7	1,282.4
Net domestic product	1,196.4	1,246.0	1,217.7	1,215.8	1,242.3	1,251.7	1,274.0	1,274.3
Business	1,007.0	1,051.8	1,025.7	1,022.6	1,048.5	1,057.0	1,079.1	1,079.1
Nonfarm	974.5	1,023.3	991.5	993.8	1,022.8	1,028.8	1,047.8	1,051.2
Farm	25.2	23.2	26.9	23.3	21.3	23.9	24.5	22.6
Residual [1]	7.3	5.2	7.4	5.5	4.3	4.3	6.8	5.3
Households and institutions	42.2	44.5	43.6	43.8	44.3	44.9	45.2	45.4
Government	147.2	149.6	148.4	149.4	149.6	149.8	149.8	149.7
Rest of the world	7.3	7.9	6.6	7.5	8.8	7.5	7.7	8.1
National income	1,065.1	1,110.5	1,083.0	1,082.8	1,109.4	1,115.8	1,134.2	1,135.7
Domestic income	1,057.1	1,102.7	1,076.4	1,075.3	1,100.6	1,108.3	1,126.5	1,127.6
Business	868.3	908.5	884.3	882.1	906.8	913.6	931.6	932.4
Nonfarm	841.4	883.8	855.7	857.3	884.1	888.3	905.6	908.3
Farm	26.9	24.7	28.7	24.8	22.7	25.3	26.0	24.1
Households and institutions	42.2	44.5	43.6	43.8	44.3	44.9	45.2	45.4
Government	147.2	149.6	148.4	149.4	149.6	149.8	149.8	149.7
Rest of the world	7.3	7.9	6.6	7.5	8.8	7.5	7.7	8.1

r Revised

1. Equals GNP in constant dollars measured as the sum of final products less GNP in constant dollars measured as the sum of gross product by industry. The quarterly estimates are obtained by interpolating the annual estimates with the statistical discrepancy deflated by the implicit price deflator for gross domestic business product.

NOTE.—*Table 6:* The industry classification within the business sector is on an establishment basis and is based on the 1972 Standard Industrial Classification.

Footnotes for tables 2 and 3.

1. Equals GNP in constant dollars measured as the sum of final products less GNP in constant dollars measured as the sum of gross product by industry. The quarterly estimates are obtained by interpolating the annual estimates with the statistical discrepancy deflated by the implicit price deflator for gross domestic business product.

NOTE.—*Table 2:* "Final sales" is classified as durable or nondurable by type of product. "Change in business inventories" is classified as follows: For manufacturing, by the type of product produced by the establishment holding the inventory; for trade, by the type of product sold by the establishment holding the inventory; for construction, durable; and for other industries, nondurable.
Table 3: The industry classification within the business sector is on an establishment basis and is based on the 1972 Standard Industrial Classification.

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
			Seasonally adjusted at annual rates					
			Billions of dollars					

Table 7.—National Income by Type of Income (1.13)

	1977	1978	1977 IV	I	II	III	IV	1979 I^r
National income	1,515.3	1,703.7	1,576.9	1,603.1	1,688.1	1,728.4	1,795.2	1,835.4
Compensation of employees	1,153.4	1,301.4	1,199.7	1,241.0	1,287.8	1,317.1	1,359.8	1,406.8
Wages and salaries	983.6	1,101.0	1,021.2	1,050.8	1,090.2	1,113.4	1,149.4	1,185.2
Government and government enterprises	200.8	216.1	208.1	211.4	213.9	216.8	222.3	225.1
Other	782.9	884.8	813.1	839.3	876.3	896.6	927.1	960.1
Supplements to wages and salaries	169.8	200.5	178.4	190.2	197.6	203.6	210.4	221.5
Employer contributions for social insurance	79.4	94.5	82.4	90.2	93.6	95.7	98.6	105.6
Other labor income	90.4	105.9	96.1	100.0	104.0	107.9	111.8	115.9
Proprietors' income with inventory valuation and capital consumption adjustments	99.8	113.2	107.3	105.0	110.1	114.5	123.0	123.6
Farm	20.2	25.3	25.1	21.9	24.0	25.0	30.4	30.6
Proprietors' income with inventory valuation adjustment and without capital consumption adjustment	24.6	30.1	29.8	26.6	28.8	29.7	35.2	35.5
Capital consumption adjustment	-4.4	-4.8	-4.7	-4.7	-4.8	-4.8	-4.8	-5.0
Nonfarm	79.5	87.8	82.3	83.1	86.1	89.6	92.6	93.0
Proprietors' income without inventory valuation and capital consumption adjustments	81.4	92.0	84.8	86.7	90.1	93.5	97.8	99.5
Inventory valuation adjustment	-1.3	-2.2	-1.3	-2.1	-2.2	-1.8	-2.6	-3.3
Capital consumption adjustment	-.6	-2.0	-1.2	-1.5	-1.8	-2.1	-2.6	-3.2
Rental income of persons with capital consumption adjustment	22.5	23.4	22.7	22.8	22.2	24.3	24.4	24.7
Rental income	42.1	47.6	44.0	44.6	45.5	49.5	51.0	52.0
Capital consumption adjustment	-19.6	-24.2	-21.3	-21.8	-23.3	-25.2	-26.6	-27.3
Corporate profits with inventory valuation and capital consumption adjustments	144.2	159.5	148.2	132.6	163.4	165.2	176.6	166.0
Corporate profits with inventory valuation adjustment and without capital consumption adjustment	159.1	177.6	163.5	148.7	180.6	184.5	196.4	186.7
Profits before tax	173.9	202.0	178.3	172.1	205.5	205.4	224.9	226.9
Profits tax liability	71.8	83.9	73.9	70.0	85.0	86.2	94.4	89.1
Profits after tax	102.1	118.1	104.4	102.1	120.5	119.2	130.5	137.9
Dividends	43.7	49.3	46.3	47.0	48.1	50.1	51.9	54.0
Undistributed profits	58.4	68.8	58.1	55.1	72.4	69.2	78.6	83.9
Inventory valuation adjustment	-14.8	-24.4	-14.8	-23.5	-24.9	-20.9	-28.4	-40.2
Capital consumption adjustment	-14.9	-18.1	-15.3	-16.1	-17.2	-19.3	-19.9	-20.7
Net interest	95.4	106.3	99.0	101.7	104.6	107.4	111.4	114.5
Addenda:								
Corporate profits with inventory valuation and capital consumption adjustments	144.2	159.5	148.2	132.6	163.4	165.2	176.6	166.0
Profits tax liability	71.8	83.9	73.9	70.0	85.0	86.2	94.4	89.1
Profits after tax with inventory valuation and capital consumption adjustments	72.3	75.6	74.3	62.6	78.4	79.0	82.2	76.9
Dividends	43.7	49.3	46.3	47.0	48.1	50.1	51.9	54.0
Undistributed profits with inventory valuation and capital consumption adjustments	28.7	26.3	28.0	15.6	30.3	29.0	30.3	22.9

Table 8.—Gross Domestic Product of Corporate Business (1.15, 7.8)

	1977	1978	1977 IV	I	II	III	IV	1979 I^r
Gross domestic product of corporate business	1,160.2	1,307.0	1,206.1	1,223.4	1,298.0	1,328.7	1,377.8	1,408.1
Capital consumption allowances with capital consumption adjustment	120.9	132.5	124.6	127.4	130.5	134.7	137.4	140.3
Net domestic product	1,039.3	1,174.5	1,081.4	1,096.1	1,167.5	1,194.0	1,240.4	1,267.8
Indirect business tax and nontax liability plus business transfer payments less subsidies	117.8	129.1	121.5	124.3	129.1	129.7	133.4	136.5
Domestic income	921.5	1,045.4	960.0	971.8	1,038.3	1,064.3	1,107.0	1,131.3
Compensation of employees	776.3	884.1	808.1	837.4	875.1	896.4	927.4	963.6
Wages and salaries	652.5	737.5	678.1	698.7	730.6	747.4	773.4	801.2
Supplements to wages and salaries	123.8	146.5	130.0	138.7	144.5	149.0	154.0	162.4

Table 8.—Gross Domestic Product of Corporate Business—Con.

	1977	1978	1977 IV	I	II	III	IV	1979 I^r
Corporate profits with inventory valuation and capital consumption adjustments	134.6	149.6	140.3	123.2	151.7	156.1	167.5	155.1
Profits before tax	164.3	192.1	170.4	162.7	193.8	196.3	215.8	216.1
Profits tax liability	71.8	83.9	73.9	70.0	85.0	86.2	94.4	89.1
Profits after tax	92.5	108.3	96.5	92.7	108.8	110.1	121.4	127.0
Dividends	39.0	44.3	42.0	42.3	42.3	45.6	47.1	49.0
Undistributed profits	53.5	63.9	54.5	50.4	66.5	64.5	74.3	78.0
Inventory valuation adjustment	-14.8	-24.4	-14.8	-23.5	-24.9	-20.9	-28.4	-40.2
Capital consumption adjustment	-14.9	-18.1	-15.3	-16.1	-17.2	-19.3	-19.9	-20.7
Net interest	10.6	11.7	11.5	11.2	11.5	11.8	12.1	12.5
Gross domestic product of financial corporate business[1]	57.0	66.4	59.8	61.8	64.9	68.1	70.8	71.6
Gross domestic product of nonfinancial corporate business	1,103.2	1,240.6	1,146.3	1,161.6	1,233.0	1,260.6	1,307.0	1,336.5
Capital consumption allowances with capital consumption adjustment	115.6	126.5	119.0	121.6	124.6	128.6	131.1	133.8
Net domestic product	987.6	1,114.1	1,027.3	1,040.0	1,108.5	1,132.0	1,175.9	1,202.7
Indirect business tax and nontax liability plus business transfer payments less subsidies	107.8	117.9	110.9	113.5	118.0	118.4	121.8	124.6
Domestic income	879.8	996.2	916.4	926.5	990.5	1,013.6	1,054.2	1,078.1
Compensation of employees	732.1	834.1	762.2	789.9	826.0	845.5	875.1	909.8
Wages and salaries	616.1	696.7	640.3	659.8	690.4	705.7	730.6	757.3
Supplements to wages and salaries	116.1	137.5	121.9	130.1	135.6	139.7	144.5	152.5
Corporate profits with inventory valuation and capital consumption adjustments	113.9	124.9	118.7	100.9	127.8	130.6	140.4	128.6
Profits before tax	143.5	167.0	148.5	140.0	169.5	170.3	188.2	189.0
Profits tax liability	59.0	68.5	60.4	55.9	70.1	70.2	77.8	72.9
Profits after tax	84.5	98.5	88.0	84.2	99.4	100.1	110.4	116.0
Dividends	39.1	45.0	42.5	43.0	42.9	46.2	47.8	49.7
Undistributed profits	45.5	53.5	45.6	41.2	56.5	53.9	62.6	66.3
Inventory valuation adjustment	-14.8	-24.4	-14.8	-23.5	-24.9	-20.9	-28.4	-40.2
Capital consumption adjustment	-14.7	-17.7	-15.0	-15.7	-16.8	-18.9	-19.4	-20.1
Net interest	33.7	37.1	35.4	35.7	36.6	37.6	38.6	39.7
Billions of 1972 dollars								
Gross domestic product of nonfinancial corporate business	769.3	810.4	783.6	783.6	811.9	814.9	831.0	835.1
Capital consumption allowances with capital consumption adjustment	76.5	77.9	77.1	77.5	77.8	78.1	78.4	78.7
Net domestic product	692.8	732.4	706.5	706.2	734.1	736.8	752.6	756.4
Indirect business tax and nontax liability plus business transfer payments less subsidies	86.0	89.8	87.5	87.8	89.3	90.5	91.7	92.5
Domestic income	606.9	642.6	619.1	618.4	644.8	646.3	660.9	663.9
Dollars								
Current-dollar cost and profit per unit of constant-dollar gross domestic product[2]	1.434	1.531	1.463	1.482	1.519	1.547	1.573	1.600
Capital consumption allowances with capital consumption adjustment	.150	.156	.152	.155	.153	.158	.158	.160
Net domestic product	1.284	1.375	1.311	1.327	1.365	1.389	1.415	1.440
Indirect business tax and nontax liability plus business transfer payments less subsidies	.140	.146	.142	.145	.145	.145	.147	.149
Domestic income	1.144	1.229	1.169	1.182	1.220	1.244	1.269	1.291
Compensation of employees	.952	1.029	.973	1.008	1.017	1.038	1.053	1.089
Corporate profits with inventory valuation and capital consumption adjustments	.148	.154	.151	.129	.157	.160	.169	.154
Profits tax liability	.077	.085	.077	.071	.086	.086	.094	.087
Profits after tax with inventory and capital consumption adjustments	.071	.070	.074	.057	.071	.074	.075	.067
Net interest	.044	.046	.045	.046	.045	.046	.046	.048

r Revised.

1. Consists of the following industries: Banking; credit agencies other than banks; security, commodity brokers and services; insurance carriers; regulated investment companies; small business investment companies; and real estate investment trusts.

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

Table 9.—Auto Output in Current and Constant Dollars (1.16, 1.17)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
			Seasonally adjusted at annual rates					
			Billions of dollars					
Auto output	72.3	77.5	74.5	73.8	79.5	75.8	81.0	87.6
Final sales	70.9	76.7	72.0	71.3	80.8	77.4	77.5	85.4
Personal consumption expenditures	61.8	67.8	63.2	63.1	70.5	67.9	69.6	73.6
New autos	46.3	50.6	47.3	47.3	54.1	49.9	51.1	56.0
Net purchases of used autos	15.5	17.2	15.9	15.8	16.5	18.0	18.5	17.6
Producers' durable equipment	12.2	14.7	13.0	13.4	15.0	15.5	14.9	16.0
New autos	19.0	22.3	19.7	20.3	22.7	23.4	22.6	24.3
Net purchases of used autos	-6.8	-7.6	-6.7	-6.9	-7.8	-7.9	-7.7	-8.4
Net exports	-3.6	-6.2	-4.8	-5.8	-5.2	-6.5	-7.5	-4.7
Exports	7.0	7.5	6.9	6.9	7.9	7.8	7.4	9.0
Imports	10.7	13.7	11.8	12.7	13.1	14.3	14.9	13.7
Government purchases of goods and services	.6	.5	.6	.6	.5	.5	.5	.5
Change in business inventories ol new and used autos	1.4	.8	2.5	2.5	-1.3	-1.6	3.6	2.3
New	1.6	.9	3.4	2.7	-2.2	-1.4	4.5	1.7
Used	-.2	-.1	-.9	-.2	.9	-.2	-1.0	.6
Addenda:								
Domestic output of new autos [1]	59.4	63.9	60.2	60.5	65.3	63.6	66.7	72.3
Sales of imported new autos [2]	15.3	16.7	15.5	15.7	17.0	16.9	17.3	20.4
			Billions of 1972 dollars					
Auto output	55.2	55.3	55.4	54.1	57.0	53.5	56.5	60.0
Final sales	54.0	54.9	53.8	52.4	58.3	54.5	54.2	58.1
Personal consumption expenditures	44.4	45.3	44.7	43.4	47.8	44.6	45.3	46.9
New autos	36.0	36.5	35.8	35.0	39.3	35.6	36.2	38.7
Net purchases of used autos	8.5	8.7	9.0	8.4	8.4	9.0	9.1	8.2
Producers' durable equipment	10.6	11.5	10.6	10.8	11.8	12.0	11.6	12.1
New autos	14.8	16.1	14.9	15.1	16.5	16.7	16.0	16.8
Net purchases of used autos	-4.2	-4.6	-4.3	-4.3	-4.7	-4.7	-4.5	-4.6
Net exports	-1.5	-2.3	-2.0	-2.2	-1.7	-2.4	-3.0	-1.3
Exports	5.4	5.4	5.2	5.2	5.8	5.5	5.3	6.2
Imports	6.9	7.7	7.2	7.3	7.5	7.9	8.3	7.5
Government purchases of goods and services	.5	.4	.4	.4	.4	.4	.4	.3
Change in business inventories of new and used autos	1.2	.4	1.6	1.6	-1.3	-1.1	2.3	1.9
New	1.3	.4	2.2	1.8	-1.8	-1.0	2.8	1.6
Used	-.2	-.1	-.6	-.1	.5	-.1	-.5	.3
Addenda:								
Domestic output of new autos [1]	46.1	46.2	45.5	44.9	47.5	45.3	47.3	49.9
Sales of imported new autos [2]	11.9	12.1	11.8	11.6	12.3	12.0	12.2	14.1

r Revised

1. Consists of final sales and change in business inventories of new autos produced in the United States.
2. Consists of personal consumption expenditures, producers' durable equipment, and government purchases.
3. Consists of agriculture, forestry, and fisheries; mining; construction; and manufacturing.
4. Consists of transportation; communication; electric, gas, and sanitary services; and trade.
5. Consists of finance, insurance, and real estate; services; and rest of the world.

NOTE.—*Table 10:* The industry classification of wage and salary disbursements and proprietors' income is on an establishment basis and is based on the 1972 Standard Industrial Classification.

Table 10.—Personal Income and Its Disposition (2.1)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
			Seasonally adjusted at annual rates					
			Billions of dollars					
Personal income	1,529.0	1,708.0	1,593.0	1,628.9	1,682.4	1,731.7	1,789.0	1,836.0
Wage and salary disbursements	983.6	1,100.9	1,021.2	1,050.8	1,090.2	1,113.2	1,149.4	1,185.4
Commodity-producing industries [3]	343.7	390.2	357.1	365.9	387.0	396.4	411.3	426.8
Manufacturing	266.3	299.9	277.3	286.9	296.1	302.0	314.4	327.1
Distributive industries [4]	239.1	268.9	247.5	257.0	266.4	271.6	280.4	290.5
Service industries [5]	200.1	225.8	208.5	216.5	222.8	228.5	235.4	242.8
Government and government enterprises	200.8	216.1	208.1	211.4	213.9	216.7	222.3	225.3
Other labor income	90.4	105.9	96.1	100.0	104.0	107.9	111.8	115.9
Proprietors' income with inventory valuation and capital consumption adjustments	99.8	113.2	107.3	105.0	110.1	114.5	123.0	123.6
Farm	20.2	25.3	25.1	21.9	24.0	25.0	30.4	30.6
Nonfarm	79.5	87.8	82.3	83.1	86.1	89.6	92.6	93.0
Rental income of persons with capital consumption adjustment	22.5	23.4	22.7	22.8	22.2	24.3	24.4	24.7
Dividends	43.7	49.3	46.3	47.0	48.1	50.1	51.9	54.0
Personal interest income	141.2	159.0	146.0	151.4	156.3	161.7	166.6	172.4
Transfer payments	208.8	226.0	215.9	219.2	220.6	230.4	233.9	239.0
Old-age, survivors, disability, and health insurance benefits	105.0	117.4	110.1	112.1	113.7	121.1	122.7	124.8
Government unemployment insurance benefits	12.5	8.9	11.5	10.4	8.5	8.7	8.1	8.3
Veterans benefits	13.8	13.6	13.7	13.8	13.5	13.3	13.7	14.3
Government employees retirement benefits	28.8	32.8	30.5	31.3	32.5	33.2	34.4	34.9
Aid to families with dependent children	10.6	10.8	10.7	10.7	10.8	10.9	10.8	10.7
Other	38.1	42.5	39.4	40.9	41.6	43.3	44.2	45.9
Less: Personal contributions for social insurance	61.0	69.7	62.6	67.2	69.2	70.5	72.1	78.8
Less: Personal tax and nontax payments	226.0	256.2	233.3	237.3	249.1	263.2	275.1	272.9
Equals: Disposable personal income	1,303.0	1,451.8	1,359.6	1,391.6	1,433.3	1,468.4	1,513.9	1,563.2
Less: Personal outlays	1,236.1	1,374.9	1,285.9	1,309.2	1,357.0	1,392.5	1,440.9	1,478.3
Personal consumption expenditures	1,206.5	1,340.1	1,255.2	1,276.7	1,322.9	1,356.9	1,403.9	1,440.4
Interest paid by consumers to business	28.6	33.8	29.8	31.5	33.0	34.6	36.0	36.9
Personal transfer payments to foreigners (net)	1.0	1.0	.9	1.0	1.1	.9	.9	1.0
Equals: Personal saving	66.9	76.9	73.7	82.4	76.3	76.0	73.0	84.9
Addenda:								
Disposable personal income: Total, billions of 1972 dollars	926.3	966.1	949.6	952.1	960.3	968.7	983.2	990.2
Per capita: Current dollars	6,009	6,643	6,250	6,387	6,566	6,712	6,906	7,117
1972 dollars	4,271	4,421	4,365	4,370	4,399	4,428	4,485	4,508
Population (millions)	216.9	218.5	217.5	217.9	218.3	218.8	219.2	219.6
Personal saving as percentage of disposable personal income	5.1	5.3	5.4	5.9	5.3	5.2	4.8	5.4

Table 11.—Personal Consumption Expenditures by Major Type of Product in Current and Constant Dollars (2.3, 2.4)

| | Billions of current dollars | | | | | | | | Billions of 1972 dollars | | | | | | | |
	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Personal consumption expenditures	1,206.5	1,340.1	1,255.2	1,276.7	1,322.9	1,356.9	1,403.9	1,440.4	857.7	891.7	876.6	873.5	886.3	895.1	911.8	912.4
Durable goods	178.4	197.5	187.2	183.5	197.8	199.5	209.1	211.4	137.8	144.6	143.0	137.8	145.8	144.8	150.1	148.6
Motor vehicles and parts	81.5	89.7	84.0	84.1	92.5	89.8	92.6	96.2	60.0	61.7	60.9	59.5	64.2	60.8	62.2	63.1
Furniture and household equipment	71.3	77.7	75.3	72.1	76.5	78.9	83.2	82.5	57.6	60.4	60.3	57.4	59.8	61.0	63.3	61.8
Other	25.6	30.0	27.9	27.3	28.8	30.7	33.3	32.7	20.2	22.6	21.8	21.0	21.8	23.0	24.6	23.8
Nondurable goods	479.0	526.5	496.9	501.4	519.3	531.7	553.4	567.9	330.4	339.6	338.1	333.3	336.3	340.4	348.5	345.4
Food	245.2	269.4	252.6	257.7	267.8	272.0	279.9	289.7	165.1	165.4	167.6	165.6	164.7	164.8	166.4	165.3
Clothing and shoes	81.5	89.0	86.7	82.9	87.5	90.5	95.3	93.6	66.6	70.9	70.2	66.8	69.5	71.8	75.2	73.7
Gasoline and oil	46.5	51.2	47.5	48.3	49.1	51.5	55.8	59.6	26.6	28.1	26.9	27.1	27.5	28.4	29.4	29.5
Fuel oil and coal	13.5	14.9	13.9	15.8	15.2	14.3	14.3	16.1	5.6	5.9	5.7	6.4	6.0	5.6	5.4	5.8
Other	92.4	101.9	96.2	96.7	99.7	103.3	108.1	108.9	66.4	69.4	67.8	67.3	68.5	69.8	72.0	71.1
Services	549.2	616.2	571.1	591.8	605.8	625.8	641.4	661.0	389.5	407.4	395.6	402.4	404.2	410.0	413.1	418.4
Housing	184.6	207.3	192.0	198.1	204.1	210.1	217.0	222.4	140.3	146.6	142.4	144.2	145.8	147.4	149.2	150.9
Household operation	81.6	91.3	84.6	89.6	88.9	92.6	94.1	97.3	55.4	58.2	56.3	58.7	57.0	58.3	58.9	60.1
Electricity and gas	38.0	43.0	39.3	43.3	41.5	43.3	44.0	46.0	22.4	23.4	22.5	24.6	22.5	23.0	23.4	24.1
Other	43.6	48.3	45.3	46.3	47.4	49.3	50.1	51.3	33.0	34.8	33.8	34.1	34.5	35.2	35.5	36.0
Transportation	44.2	52.6	47.3	49.7	52.1	53.7	55.0	56.5	30.8	34.1	31.9	33.0	34.0	34.6	34.8	35.4
Other	238.8	264.9	247.3	254.4	260.6	269.3	275.4	284.8	162.9	168.5	164.9	166.5	167.4	169.8	170.3	172.1

Table 12.—Federal Government Receipts and Expenditures (3.2)

Billions of dollars — Seasonally adjusted at annual rates

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Receipts	374.5	431.4	385.5	396.2	424.7	441.7	463.1	469.9
Personal tax and nontax receipts	169.4	193.2	174.8	176.8	186.7	199.7	209.7	208.3
Income taxes	162.1	187.8	169.2	171.3	181.3	194.4	204.1	202.7
Estate and gift taxes	7.2	5.3	5.5	5.4	5.2	5.2	5.4	5.4
Nontaxes	.2	.2	.2	.2	.2	.2	.2	.2
Corporate profits tax accruals	61.3	71.6	62.9	59.6	72.6	73.6	80.6	75.3
Indirect business tax and nontax accruals	25.0	27.9	25.6	26.5	27.9	28.2	28.8	29.3
Excise taxes	17.5	18.5	17.9	17.9	18.4	18.6	18.9	19.1
Customs duties[1]	5.4	7.1	5.5	6.3	7.2	7.2	7.4	7.4
Nontaxes	2.1	2.3	2.2	2.2	2.3	2.3	2.5	2.7
Contributions for social insurance	118.7	138.7	122.2	133.3	137.6	140.1	144.0	157.1
Expenditures	422.6	461.4	444.1	448.8	448.3	464.5	483.8	488.4
Purchases of goods and services	145.1	153.8	152.2	151.5	147.2	154.0	162.5	164.5
National defense	94.3	99.5	97.1	97.9	98.6	99.6	102.1	103.9
Compensation of employees	42.9	45.7	44.9	45.0	45.0	45.3	47.5	47.7
Military	24.9	26.2	26.0	25.9	25.9	26.0	27.2	27.2
Civilian	18.0	19.5	18.9	19.1	19.2	19.3	20.3	20.6
Other	51.4	53.8	52.3	52.9	53.5	54.3	54.6	56.2
Nondefense	50.8	54.3	55.1	53.6	48.6	54.5	60.4	60.6
Compensation of employees	23.5	25.4	24.6	24.9	25.0	25.2	26.5	26.8
Other	27.3	28.8	30.5	28.7	23.6	29.2	33.9	33.8
Transfer payments	172.7	185.4	178.3	180.2	180.7	188.8	191.9	196.5
To persons	169.5	181.9	175.0	176.9	177.0	185.5	188.3	192.6
To foreigners	3.2	3.5	3.4	3.3	3.7	3.4	3.6	3.9
Grants-in-aid to State and local governments	67.4	76.9	71.1	73.9	75.9	77.5	80.3	77.0
Net interest paid	29.1	35.5	30.7	33.2	34.6	36.3	38.1	41.5
Interest paid	35.3	43.1	37.0	40.2	42.3	44.0	45.9	49.7
To persons and business	29.8	34.4	30.4	32.3	33.7	35.6	36.1	38.9
To foreigners	5.5	8.7	6.6	7.9	8.5	8.4	9.8	10.8
Less: Interest received by Government	6.2	7.6	6.3	7.0	7.7	7.7	7.8	8.1
Subsidies less current surplus of Government enterprises	8.3	9.7	11.8	10.0	10.0	8.0	11.0	8.7
Subsidies	7.5	8.9	10.3	8.8	8.4	8.2	10.3	8.4
Less: Current surplus of Government enterprises	-.9	-.8	-1.4	-1.2	-1.6	.2	-.7	-.3
Less: Wage accruals less disbursements	0	0	0	0	0	.2	0	-.2
Surplus or deficit (-), national income and product accounts	-48.1	-29.9	-58.6	-52.6	-23.6	-22.8	-20.8	-18.4
Social insurance funds	-10.1	-1.2	-11.5	-1.7	1.9	-3.5	-1.5	9.2
Other funds	-38.0	-28.7	-47.1	-50.9	-25.5	-19.3	-19.3	-27.6

Table 13.—State and Local Government Receipts and Expenditures (3.4)

Billions of dollars — Seasonally adjusted at annual rates

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Receipts	296.2	328.1	307.9	315.7	327.4	329.2	340.1	339.7
Personal tax and nontax receipts	56.6	63.0	58.5	60.5	62.5	63.5	65.3	64.5
Income taxes	30.9	34.7	32.0	33.3	34.5	34.9	36.0	34.4
Nontaxes	18.2	20.5	19.0	19.5	20.1	20.8	21.5	22.3
Other	7.4	7.8	7.5	7.7	7.8	7.8	7.8	7.8
Corporate profits tax accruals	10.5	12.3	10.9	10.4	12.4	12.5	13.8	13.8
Indirect business tax and nontax accruals	140.0	150.4	144.6	146.8	151.5	149.5	153.8	157.0
Sales taxes	63.9	71.4	66.7	67.7	70.6	72.2	75.0	76.7
Property taxes	62.3	63.6	63.5	64.3	65.8	61.6	62.7	63.6
Other	13.7	15.4	14.3	14.7	15.1	15.6	16.1	16.7
Contributions for social insurance	21.7	25.5	22.8	24.1	25.2	26.1	26.7	27.4
Federal grants-in-aid	67.4	76.9	71.1	73.9	75.9	77.5	80.3	77.0
Expenditures	266.6	299.7	278.9	284.2	297.7	305.8	311.3	312.6
Purchases of goods and services	248.9	280.2	260.3	265.2	277.6	285.8	292.0	294.0
Compensation of employees	141.5	155.4	146.4	151.1	154.1	157.0	159.4	162.6
Other	107.4	124.8	113.9	114.1	123.5	128.8	132.7	131.4
Transfer payments to persons	29.7	33.4	30.9	32.0	33.1	34.1	34.4	34.7
Net interest paid	-6.5	-7.9	-6.8	-7.1	-7.3	-8.2	-9.1	-9.8
Interest paid	13.2	14.8	14.1	14.4	14.7	15.0	15.3	15.7
Less: Interest received by government	19.6	22.8	21.0	21.5	22.0	23.1	24.5	25.5
Subsidies less current surplus of government enterprises	-5.6	-5.9	-5.5	-6.0	-5.7	-5.9	-6.0	-6.3
Subsidies	.2	.3	.3	.3	.3	.3	.3	.4
Less: Current surplus of government enterprises	5.8	6.2	5.8	6.2	6.0	6.2	6.3	6.7
Less: Wage accruals less disbursements	0	0	0	0	0	0	0	0
Surplus or deficit (-), national income and product accounts	29.6	28.3	29.0	31.5	29.8	23.4	28.8	27.1
Social insurance funds	18.0	21.2	19.1	19.9	20.5	21.6	22.9	23.7
Other funds	11.5	7.1	9.9	11.5	9.3	1.8	5.9	3.4

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1. Includes fees for licenses to import petroleum and petroleum products.

		1977	1978				1979
1977	1978	IV	I	II	III	IV	I ʳ
		Seasonally adjusted at annual rates					
		Billions of dollars					

Table 14.—Foreign Transactions in the National Income and Product Accounts (4.1)

Receipts from foreigners_	175.5	204.8	172.1	181.7	205.4	210.1	221.9	234.9
Exports of goods and services___	175.5	204.8	172.1	181.7	205.4	210.1	221.9	233.8
Merchandise_____	120.6	141.7	117.8	122.7	140.3	147.7	156.3	163.7
Other_____	54.9	63.0	54.2	59.0	65.1	62.4	65.6	70.1
Capital grants received by the United States (net)_____	0	0	0	0	0	0	0	1.1
Payments to foreigners___	175.5	204.8	172.1	181.7	205.4	210.1	221.9	234.9
Imports of goods and services__	186.6	216.8	195.2	205.8	210.9	220.8	229.5	239.0
Merchandise_____	151.6	176.3	158.5	167.5	171.5	179.9	186.2	193.1
Other_____	35.0	40.5	36.7	38.3	39.4	40.9	43.3	46.0
Transfer payments (net)_____	4.2	4.5	4.3	4.3	4.8	4.3	4.6	4.9
From persons (net)_____	1.0	1.0	.9	1.0	1.1	.9	.9	1.0
From government (net)_____	3.2	3.5	3.4	3.3	3.7	3.4	3.6	3.9
Interest paid by government to foreigners_____	5.5	8.7	6.6	7.9	8.5	8.4	9.8	10.8
Net foreign investment_____	−20.9	−25.2	−34.1	−36.3	−18.9	−23.5	−22.1	−19.8

Table 15.—Gross Saving and Investment (5.1)

Gross saving_____	272.2	318.5	274.7	284.2	326.1	326.2	337.6	349.3
Gross private saving_____	290.8	320.1	304.3	305.4	319.9	325.7	329.6	339.5
Personal saving_____	66.9	76.9	73.7	82.4	76.3	76.0	73.0	84.9
Undistributed corporate profits with inventory valuation and capital consumption adjustments.	28.7	26.3	28.0	15.6	30.3	29.0	30.3	22.9
Undistributed profits_____	58.4	68.8	58.1	55.1	72.4	69.2	78.6	83.9
Inventory valuation adjustment._____	−14.8	−24.4	−14.8	−23.5	−24.9	−20.9	−28.4	−40.2
Capital consumption adjustment_____	−14.9	−18.1	−15.3	−16.1	−17.2	−19.3	−19.9	−20.7
Corporate capital consumption allowances with capital consumption adjustment_____	120.9	132.5	124.6	127.4	130.5	134.7	137.4	140.3
Noncorporate capital consumption allowances with capital consumption adjustment_____	74.3	84.4	77.9	79.9	82.8	86.1	89.0	91.4
Wage accruals less disbursements_____	0	0	0	0	0	0	0	0
Government surplus or deficit (−), national income and product accounts_____	−18.6	−1.6	−29.6	−21.1	6.2	.6	8.0	8.7
Federal_____	−48.1	−29.9	−58.6	−52.6	−23.6	−22.8	−20.8	−18.4
State and local_____	29.6	28.3	29.0	31.5	29.8	23.4	28.8	27.1
Capital grants received by the United States (net)_____	0	0	0	0	0	0	0	1.1
Gross investment_____	276.9	320.4	279.5	286.4	326.6	326.6	342.0	351.3
Gross private domestic investment_____	297.8	345.6	313.5	322.7	345.4	350.1	364.0	371.1
Net foreign investment_____	−20.9	−25.2	−34.1	−36.3	−18.9	−23.5	−22.1	−19.8
Statistical discrepancy____	4.7	1.8	4.8	2.2	.5	.4	4.3	2.1

ʳ Revised.

1. Inventories are as of the end of the quarter. The quarter-to-quarter change in inventories calculated from current-dollar inventories shown in this table is not the current-dollar change in business inventories (CBI) components of GNP. The former is the difference between two inventory stocks, each valued at 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 annual rates.

3. Equals ratio of nonfarm inventories to final sales of business. These sales include a small amount of final sales by farms.

NOTE.— *Table 16*: Inventories are classified as durable or nondurable as follows: For manufacturing, by the type of product produced by the establishment holding the inventory; for trade, by the type of product sold by the establishment holding the inventory; for construction, durable; and for other nonfarm industries, nondurable. The industry classification is based on the 1972 Standard Industrial Classification.

Table 17: The industry classification of compensation of employees, proprietors' income, and rental income is on an establishment basis; the industry classification of corporate profits and net interest is on a company basis. The industry classification of these items is based on the 1972 Standard Industrial Classification.

		1977	1978				1979
1977	1978	IV	I	II	III	IV	I ʳ
		Seasonally adjusted at annual rates					
		Billions of dollars					

Table 16.—Inventories and Final Sales of Business in Current and Constant Dollars (5.9, 5.10)

Inventories ¹_____	_____	_____	498.6	520.7	536.5	548.5	574.5	603.3
Farm_____	_____	_____	60.3	66.3	68.0	68.1	73.8	78.3
Nonfarm_____	_____	_____	438.3	454.4	468.5	480.4	500.7	524.9
Durable goods_____	_____	_____	251.8	263.2	271.2	280.3	291.9	307.1
Nondurable goods_____	_____	_____	186.5	191.1	197.3	200.1	208.7	217.8
Manufacturing_____	_____	_____	219.2	225.9	232.0	239.0	248.3	262.3
Durable goods_____	_____	_____	140.9	146.5	150.7	156.7	162.4	172.6
Nondurable goods_____	_____	_____	78.3	79.4	81.2	82.4	85.8	89.8
Wholesale trade_____	_____	_____	85.9	90.9	94.2	96.4	101.6	107.4
Durable goods_____	_____	_____	56.1	59.6	61.9	64.3	67.5	70.5
Nondurable goods_____	_____	_____	29.8	31.4	32.3	32.1	34.1	36.9
Retail trade_____	_____	_____	89.9	94.3	97.5	99.0	103.4	105.9
Durable goods_____	_____	_____	41.1	42.9	43.9	44.3	46.4	47.9
Nondurable goods_____	_____	_____	48.8	51.3	53.6	54.8	57.0	58.0
Other_____	_____	_____	43.3	43.3	44.8	45.9	47.4	49.3
Final sales ²_____	_____	_____	1,647.3	1,667.3	1,751.7	1,803.9	1,873.9	1,912.4
Ratio of inventories to final sales_____	_____	_____	.303	.312	.306	.304	.307	.315
Nonfarm ³_____	_____	_____	.266	.273	.267	.266	.267	.274

		Billions of 1972 dollars					

Inventories ¹_____	_____	_____	307.6	310.7	313.9	316.1	318.1	321.0
Farm_____	_____	_____	40.6	40.5	40.2	40.1	40.1	40.0
Nonfarm_____	_____	_____	267.0	270.2	273.6	276.0	278.0	281.0
Durable goods_____	_____	_____	155.4	157.8	159.4	160.9	162.6	165.6
Nondurable goods_____	_____	_____	111.7	112.4	114.3	115.1	115.4	115.4
Manufacturing_____	_____	_____	128.8	129.9	131.5	132.9	133.2	135.2
Durable goods_____	_____	_____	83.9	84.9	86.1	87.2	87.6	89.7
Nondurable goods_____	_____	_____	44.9	45.0	45.4	45.7	45.6	45.5
Wholesale trade_____	_____	_____	53.7	55.7	56.6	56.8	58.2	59.4
Durable goods_____	_____	_____	36.0	37.1	37.8	38.5	39.2	39.8
Nondurable goods_____	_____	_____	17.7	18.6	18.8	18.4	18.9	19.6
Retail trade_____	_____	_____	60.6	61.1	61.7	62.2	62.6	62.1
Durable goods_____	_____	_____	27.5	27.6	27.3	27.0	27.6	27.9
Nondurable goods_____	_____	_____	33.2	33.5	34.4	35.2	35.0	34.3
Other_____	_____	_____	23.9	23.4	23.9	24.1	24.1	24.2
Final sales ²_____	_____	_____	1,148.4	1,141.1	1,167.3	1,180.3	1,203.9	1,201.9
Ratio of inventories to final sales_____	_____	_____	.268	.272	.269	.268	.264	.267
Nonfarm ³_____	_____	_____	.233	.237	.234	.234	.231	.234

Table 17.—National Income Without Capital Consumption Adjustment by Industry (6.4)

National income without capital consumption adjustment_____	1,554.8	1,752.8	1,619.3	1,647.2	1,735.2	1,779.8	1,849.1	1,891.7
Domestic income_____	1,537.5	1,733.4	1,603.4	1,629.0	1,714.1	1,761.1	1,829.3	1,870.0
Agriculture, forestry, and fisheries_____	44.6	52.3	50.6	47.9	50.7	52.2	58.3	_____
Mining and construction____	100.4	118.0	104.2	101.6	118.9	123.3	128.0	_____
Manufacturing_____	408.9	464.2	428.7	432.5	461.9	469.4	492.9	_____
Nondurable goods_____	161.7	176.7	166.6	167.6	176.0	178.3	184.9	_____
Durable goods_____	247.2	287.5	262.1	265.0	285.9	291.1	308.0	_____
Transportation_____	58.4	65.9	61.3	61.3	66.5	66.7	69.1	_____
Communication_____	35.0	40.1	36.6	38.6	39.3	41.1	41.4	_____
Electric, gas, and sanitary services_____	29.5	33.5	30.0	33.3	32.7	33.1	34.9	_____
Wholesale and retail trade___	237.0	263.7	242.9	245.7	260.0	270.5	278.6	_____
Wholesale_____	96.5	106.9	96.8	98.2	105.5	110.4	113.7	_____
Retail_____	140.5	156.8	146.1	147.5	154.5	160.1	164.9	_____
Finance, insurance, and real estate_____	177.9	202.0	185.5	189.9	196.6	207.2	214.5	_____
Services_____	213.1	240.3	222.0	231.0	236.8	243.0	250.3	_____
Government and government enterprises_____	232.7	253.4	241.5	247.2	250.7	254.6	261.3	_____
Rest of the world_____	17.3	19.4	15.9	18.2	21.1	18.8	19.8	21.7

		1977	1978				1979
1977	1978	IV	I	II	III	IV	I ʳ
		Seasonally adjusted at annual rates					
		Billions of dollars					

Table 18.—Corporate Profits by Industry (6.18)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 Iʳ
Corporate profits with inventory valuation and capital consumption adjustments	144.2	159.5	148.2	132.6	163.4	165.2	176.6	166.0
Domestic industries	134.6	149.6	140.3	123.2	151.7	156.1	167.5	155.1
Financial ¹	20.7	24.7	21.6	22.3	23.9	25.5	27.1	26.5
Nonfinancial	113.9	124.9	118.7	100.9	127.8	130.6	140.4	128.6
Rest of the world	9.6	9.8	7.9	9.4	11.7	9.1	9.1	10.8
Corporate profits with inventory valuation adjustment and without capital consumption adjustment	159.1	177.6	163.5	148.7	180.6	184.5	196.4	186.7
Domestic industries	149.5	167.7	155.6	139.2	168.9	175.4	187.4	175.9
Financial ¹	20.9	25.1	21.9	22.7	24.3	26.0	27.6	27.1
Federal Reserve banks	6.2	7.7	6.4	6.9	7.3	8.0	8.7	8.8
Other	14.6	17.4	15.5	15.7	17.0	18.0	18.8	18.4
Nonfinancial	128.6	142.6	133.7	116.6	144.6	149.4	159.8	148.7
Manufacturing	74.7	85.0	80.2	69.8	87.8	87.1	95.2	
Nondurable goods	39.6	41.8	41.1	37.0	41.7	42.5	46.0	
Food and kindred products	5.7	5.7	5.7	4.3	5.4	6.6	6.6	
Chemicals and allied products	8.2	8.6	8.2	8.1	8.3	8.2	9.8	
Petroleum and coal products	12.8	13.8	13.8	10.4	14.4	14.6	15.8	
Other	12.9	13.7	13.4	14.3	13.7	13.2	13.8	
Durable goods	35.1	43.2	39.1	32.8	46.1	44.6	49.2	
Primary metal industries	1.8	4.2	2.4	1.2	5.1	5.0	5.6	
Fabricated metal products	4.0	4.3	4.2	3.2	4.3	4.7	5.1	
Machinery, except electrical	7.1	8.3	8.5	6.4	9.2	7.4	10.1	
Electric and electronic equipment	3.9	4.9	4.4	4.3	4.8	5.8	4.8	
Motor vehicles and equipment	9.5	9.6	9.1	7.9	10.8	10.2	9.4	
Other	8.8	11.9	10.5	9.7	11.9	11.7	14.3	
Wholesale and retail trade	24.0	22.7	22.1	16.7	22.0	25.8	26.3	
Transportation, communication, and electric, gas, and sanitary services	16.1	19.5	17.1	17.3	19.3	20.7	20.8	
Other	13.8	15.4	14.3	12.8	15.4	15.8	17.5	
Rest of the world	9.6	9.8	7.9	9.4	11.7	9.1	9.1	10.8
Corporate profits before deduction of capital consumption allowances with inventory valuation adjustment	265.1	291.9	272.8	260.0	294.0	299.9	313.9	306.2
Domestic industries	255.5	282.1	265.0	250.6	282.2	290.8	304.9	295.4
Financial ¹	26.0	30.7	27.2	28.1	29.8	31.6	33.3	33.0
Federal Reserve banks	6.2	7.8	6.4	7.0	7.3	8.0	8.7	8.8
Other	19.8	23.0	20.8	21.1	22.5	23.6	24.6	24.2
Nonfinancial	229.5	251.4	237.7	222.5	252.4	259.2	271.5	262.4
Manufacturing	118.6	132.4	125.5	116.0	134.8	134.9	143.9	
Nondurable goods	60.9	65.1	63.2	59.6	64.8	66.1	70.1	
Food and kindred products	9.3	9.6	9.4	8.1	9.2	10.6	10.6	
Chemicals and allied products	13.5	14.5	13.7	13.7	14.2	14.2	16.0	
Petroleum and coal products	19.3	20.8	20.5	17.2	21.4	21.7	23.0	
Other	18.8	20.2	19.5	20.6	20.0	19.6	20.4	
Durable goods	57.7	67.3	62.4	56.4	70.0	68.8	73.8	
Primary metal industries	5.8	8.5	6.5	5.4	9.4	9.3	10.1	
Fabricated metal products	5.9	6.4	6.2	5.3	6.4	6.8	7.2	
Machinery, except electrical	11.5	13.1	12.9	11.1	14.0	12.3	15.1	
Electric and electronic equipment	7.3	8.6	8.0	7.9	8.4	9.4	8.5	
Motor vehicles and equipment	12.9	13.0	12.6	11.3	14.2	13.6	12.8	
Other	14.3	17.6	16.1	15.4	17.6	17.3	20.0	
Wholesale and retail trade	36.2	36.4	34.8	29.8	35.5	39.7	40.6	
Transportation, communication, and electric, gas, and sanitary services	42.9	48.1	44.8	45.3	47.7	49.5	50.1	
Other	31.8	34.4	32.6	31.4	34.4	35.0	36.9	
Rest of the world	9.6	9.8	7.9	9.4	11.7	9.1	9.1	10.8

		1977	1978				1979
1977	1978	IV	I	II	III	IV	I ʳ
		Seasonally adjusted					
		Index numbers, 1972=100					

Table 19.—Implicit Price Deflators for Gross National Product (7.1)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 Iʳ
Gross national product	141.61	152.09	144.56	147.10	150.98	153.52	156.56	159.91
Personal consumption expenditures	140.7	150.3	143.2	146.2	149.3	151.6	154.0	157.9
Durable goods	129.5	136.5	130.9	133.1	135.7	137.8	139.3	142.2
Nondurable goods	145.0	155.0	147.0	150.4	154.4	156.2	158.8	164.4
Services	141.0	151.2	144.4	147.1	149.9	152.6	155.2	158.0
Gross private domestic investment								
Fixed investment	150.6	164.7	155.9	158.2	162.3	167.1	170.8	173.3
Nonresidential	146.7	158.7	151.2	153.6	156.7	160.6	163.6	166.3
Structures	159.6	174.9	164.5	167.2	171.8	177.3	182.2	185.9
Producers' durable equipment	141.0	151.2	145.2	147.6	149.6	152.7	154.8	157.3
Residential	159.4	178.8	166.1	168.6	175.7	182.6	188.2	191.4
Nonfarm structures	160.0	179.8	166.9	169.5	176.7	183.7	189.3	192.6
Farm structures	159.7	179.1	167.5	168.9	176.5	182.8	188.1	191.7
Producers' durable equipment	126.2	132.2	127.5	128.8	131.8	133.3	135.2	138.2
Change in business inventories								
Net exports of goods and services								
Exports	178.7	191.3	179.2	183.3	189.4	192.8	198.7	203.9
Imports	210.3	219.7	210.2	213.8	217.2	221.5	226.1	232.1
Government purchases of goods and services	146.3	157.8	150.3	153.2	156.2	158.9	162.7	165.9
Federal	142.7	153.3	146.9	149.6	151.5	153.4	158.5	161.3
State and local	148.5	160.4	152.3	155.2	158.8	162.1	165.1	168.5

Table 20.—Fixed-Weighted Price Indexes for Gross National Product, 1972 Weights (7.2)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 Iʳ
Gross national product	143.3	154.3	146.5	149.0	152.9	155.8	158.9	162.6
Personal consumption expenditures	141.8	151.9	144.5	147.3	150.9	153.4	156.0	160.1
Durable goods	130.5	138.1	132.1	134.5	137.2	139.3	141.0	144.2
Nondurable goods	146.4	157.1	148.6	151.7	156.4	158.6	161.6	167.3
Services	141.5	151.9	145.0	147.5	150.6	153.3	156.0	158.8
Gross private domestic investment								
Fixed investment	152.3	167.2	157.6	160.1	164.9	169.7	173.7	177.0
Nonresidential	148.7	161.1	153.0	155.5	159.2	163.0	166.1	169.4
Structures	156.3	171.1	160.8	163.3	168.1	173.5	178.3	182.3
Producers' durable equipment	144.3	155.4	148.5	151.1	154.0	157.0	159.1	162.0
Residential	159.2	178.6	166.1	168.6	175.5	182.3	188.0	191.3
Change in business inventories								
Net exports of goods and services								
Exports	181.3	193.3	181.7	185.2	190.9	194.6	200.1	205.1
Imports	199.0	213.0	203.5	209.5	211.0	215.0	220.3	227.0
Government purchases of goods and services	146.8	158.0	151.0	153.4	156.4	158.9	162.9	166.2
Federal	144.9	154.7	149.6	151.4	153.1	154.5	159.9	162.9
State and local	148.1	160.2	152.0	154.9	158.6	161.9	164.9	168.4
Addenda:								
Final sales	143.3	154.2	146.4	148.9	152.8	155.7	158.8	162.5
Gross domestic product	142.8	153.8	146.0	148.5	152.5	155.3	158.5	162.1
Business	142.9	153.9	145.9	148.3	152.6	155.6	158.6	162.4
Nonfarm	142.9	153.2	145.7	147.6	151.4	154.6	157.3	160.5

ʳ Revised.

1. Consists of the following industries: Banking; credit agencies other than banks; security; commodity brokers and services; insurance carriers; regulated investment companies; small business investment companies; and real estate investment trusts.

NOTE.—*Table 18:* The industry classification is on a company basis and is based on the 1972 Standard Industrial Classification.

Table 21.—Implicit Price Deflators for Gross National Product by Major Type of Product (7.3)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
			Seasonally adjusted					
			Index numbers, 1972=100					
Gross national product	141.61	152.09	144.56	147.10	150.98	153.52	156.56	159.91
Final sales	141.4	152.1	144.4	147.2	150.9	153.5	156.5	160.0
Change in business inventories								
Goods	136.8	145.9	138.6	140.9	145.3	147.2	149.8	153.8
Final sales	136.3	145.8	138.2	141.0	145.1	147.1	149.6	153.9
Change in business inventories								
Durable goods	134.5	142.0	136.2	137.9	141.0	143.5	145.2	149.6
Final sales	134.3	141.5	136.1	137.3	140.3	143.0	145.0	148.7
Change in business inventories								
Nondurable goods	138.5	148.7	140.3	143.0	148.5	149.8	153.2	157.0
Final sales	137.7	148.8	139.6	143.5	148.5	150.0	153.0	157.7
Change in business inventories								
Services	143.1	153.5	146.6	149.4	152.2	154.6	157.7	160.7
Structures	158.1	175.7	164.1	166.7	172.7	178.6	183.9	187.7

Table 22.—Implicit Price Deflators for Gross National Product by Sector (7.5)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Gross national product	141.61	152.09	144.56	147.10	150.98	153.52	156.56	159.91
Gross domestic product	141.1	151.6	144.1	146.6	150.4	153.0	156.0	159.3
Business	140.8	151.2	143.6	146.0	150.1	152.8	155.7	159.0
Nonfarm	141.1	151.0	144.0	146.0	149.8	152.7	155.3	158.2
Nonfarm less housing	142.6	152.6	145.4	147.5	151.3	154.3	157.0	160.0
Housing	128.7	137.6	131.6	133.9	136.3	138.7	141.4	143.0
Farm	146.7	177.9	149.4	163.2	184.7	176.6	187.1	209.7
Residual								
Households and institutions	148.3	160.5	151.1	157.1	159.2	161.0	164.5	169.2
Government	141.3	151.4	145.5	147.9	149.9	151.9	155.8	158.4
Federal	136.4	145.5	142.5	143.3	143.5	144.0	151.3	152.8
State and local	143.8	154.2	146.9	150.2	152.9	155.8	158.0	161.2
Rest of the world								

Table 23.—Implicit Price Deflators for the Relation of Gross National Product, Net National Product, and National Income (7.6)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Gross national product	141.61	152.09	144.56	147.10	150.98	153.52	156.56	159.91
Less: Capital consumption allowances with capital consumption adjustment	151.5	164.4	155.6	158.4	162.2	166.9	170.2	173.1
Equals: Net national product	140.6	150.8	143.4	145.9	149.8	152.1	155.1	158.5
Less: Indirect business tax and nontax liability plus business transfer payments less subsidies plus current surplus of government enterprises	130.9	134.1	129.8	132.9	135.1	134.1	134.3	138.3
Residual								
Equals: National income	142.3	153.4	145.6	148.1	152.2	154.9	158.3	161.6

Table 24.—Implicit Price Deflators for Net National Product and National Income by Sector (7.7)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
			Seasonally adjusted					
			Index numbers, 1972=100					
Net national product	140.6	150.8	143.4	145.9	149.8	152.1	155.1	158.5
Net domestic product	140.0	150.2	142.9	145.3	149.2	151.5	154.5	157.8
Business	139.4	149.6	142.1	144.4	148.6	151.1	153.9	157.3
Nonfarm	139.9	149.4	142.6	144.6	148.3	151.0	153.6	156.5
Farm	143.3	181.7	145.4	163.0	192.6	179.2	192.4	223.9
Residual								
Households and institutions	148.3	160.5	151.1	157.1	159.2	161.0	164.5	169.2
Government	141.3	151.4	145.5	147.9	149.9	151.9	155.8	158.4
Rest of the world								
National income	142.3	153.4	145.6	148.1	152.2	154.9	158.3	161.6
Domestic income	141.6	152.7	145.0	147.4	151.5	154.3	157.6	160.9
Business	141.4	152.6	144.6	146.8	151.3	154.3	157.6	160.8
Nonfarm	141.7	152.2	144.8	146.7	150.7	154.1	156.9	159.8
Farm	129.2	168.0	141.2	150.8	176.1	163.2	182.1	200.3
Households and institutions	148.3	160.5	151.1	157.1	159.2	161.0	164.5	169.2
Government	141.3	151.4	145.5	147.9	149.9	151.9	155.8	158.4
Rest of the world								

Table 25.—Implicit Price Deflators for Auto Output (7.9)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Auto output	130.9	140.3	134.3	136.4	139.4	141.8	143.4	146.1
Final sales	131.2	139.9	133.8	135.9	138.6	142.0	142.9	146.9
Personal consumption expenditures	139.0	149.7	141.3	145.3	147.7	152.3	153.6	156.8
New autos	128.6	138.5	132.2	135.0	137.5	140.3	141.0	144.8
Net purchases of used autos								
Producers' durable equipment	114.9	127.4	123.0	124.5	126.8	129.5	128.6	131.5
New autos	128.6	138.5	132.2	134.9	137.5	140.3	140.9	144.9
Net purchases of used autos								
Net exports								
Exports	128.9	137.5	132.2	133.0	135.3	140.5	141.4	145.0
Imports	154.2	177.3	163.6	172.4	175.4	180.0	180.8	181.9
Government purchases of goods and services	126.0	139.6	134.3	135.9	137.8	142.0	143.8	148.3
Change in business inventories of new and used autos								
Addenda:								
Domestic output of new autos [1]	128.6	138.3	132.2	134.7	137.3	140.4	140.9	144.7
Sales of imported new autos [2]	128.6	138.5	132.3	135.0	137.5	140.4	141.0	144.9

Table 26.—Implicit Price Deflators for Personal Consumption Expenditures by Major Type of Product (7.11)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
Personal consumption expenditures	140.7	150.3	143.2	146.2	149.3	151.6	154.0	157.9
Durable goods	129.5	136.5	130.9	133.1	135.7	137.8	139.3	142.2
Motor vehicles and parts	135.8	145.5	137.9	141.3	144.0	147.8	148.9	152.5
Furniture and household equipment	123.8	128.7	124.7	125.7	128.0	129.5	131.4	133.6
Other	126.9	132.9	128.2	130.1	132.1	133.5	135.4	137.4
Nondurable goods	145.0	155.0	147.0	150.4	154.4	156.2	158.8	164.4
Food	148.5	162.9	150.7	155.6	162.6	165.1	168.2	175.3
Clothing and shoes	122.3	125.7	123.5	124.0	125.9	126.0	126.6	127.1
Gasoline and oil	174.4	182.1	176.8	178.2	178.4	181.7	189.7	201.8
Fuel oil and coal	239.4	253.8	244.8	247.2	252.1	254.5	262.6	279.1
Other	139.0	146.9	142.0	143.7	145.5	148.0	150.1	153.1
Services	141.0	151.2	144.4	147.1	149.9	152.6	155.2	158.0
Housing	131.5	141.4	134.8	137.3	140.0	142.6	145.5	147.4
Household operation	147.2	156.9	150.1	152.7	156.0	158.9	159.8	161.9
Electricity and gas	169.5	184.0	174.1	176.1	184.2	187.9	188.0	190.6
Other	132.1	138.7	134.1	135.8	137.6	140.0	141.2	142.7
Transportation	143.3	154.3	148.2	150.7	153.3	155.4	157.8	159.7
Other	146.6	157.2	150.0	152.8	155.7	158.6	161.7	165.5

r Revised.

1. Consists of final sales and change in business inventories of new autos produced in the United States.

2. Consists of personal consumption expenditures, producers' durable equipment, and government purchases.

NOTE.— Table 21: "Final sales" is classified as durable or nondurable by type of product. "Change in business inventories" is classified as follows: For manufacturing, by the type of product produced by the establishment holding the inventory; for trade, by the type of product sold by the establishment holding the inventory; for construction, durable; and for other industries, nondurable.

Tables 22 and 24: The industry classification within the business sector is on an establishment basis and is based on the 1972 Standard Industrial Classification.

Table 27.—Percent Change From Preceding Period in Gross National Product in Current and Constant Dollars, Implicit Price Deflator, and Price Indexes (8.9)

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
	Percent		Percent at annual rate					
Gross national product:								
Current dollars	11.0	11.7	8.9	7.1	20.6	9.6	15.6	9.3
1972 dollars	4.9	4.0	3.2	-.1	8.7	2.6	6.9	.4
Implicit price deflator	5.9	7.4	5.5	7.2	11.0	6.9	8.2	8.8
Chain price index	6.2	7.5	6.5	7.1	10.8	7.6	8.1	9.3
Fixed-weighted price index	6.3	7.6	6.8	7.0	11.0	7.6	8.4	9.6
Personal consumption expenditures:								
Current dollars	10.7	11.1	14.1	7.0	15.3	10.7	14.6	10.8
1972 dollars	4.7	4.0	9.0	-1.4	6.0	4.1	7.6	.3
Implicit price deflator	5.7	6.8	4.7	8.6	8.7	6.4	6.5	10.5
Chain price index	5.9	7.0	5.0	7.7	10.0	6.7	6 9	10.2
Fixed-weighted price index	5.9	7.1	5.0	7.9	10.2	6.7	7.1	10.8
Durable goods:								
Current dollars	13.9	10.7	24.1	-7.7	35.1	3.4	20.8	4.4
1972 dollars	9.4	5.0	19.0	-13.7	25.2	-2.8	15.6	-3.9
Implicit price deflator	4.1	5.5	4.3	7.0	8.0	6.4	4.5	8.6
Chain price index	4.3	5.6	4.4	7.2	8.2	6.3	5.0	9.1
Fixed-weighted price index	4.4	5.8	4.7	7.5	8.4	6.4	4.9	9.4
Nondurable goods:								
Current dollars	8.2	9.9	15.1	3.7	15.0	9.9	17.4	10.9
1972 dollars	3.2	2.8	11.2	-5.5	3.6	5.0	10.0	-3.6
Implicit price deflator	4.9	6.9	3.6	9.8	11.0	4.7	6.8	15.0
Chain price index	4.9	7.2	3.9	8.4	12.5	5.8	7.5	14.3
Fixed-weighted price index	5.0	7.3	3.9	8.6	12.8	5.9	7.8	14.9
Services:								
Current dollars	11.8	12.2	10.1	15.3	9.8	13.9	10.3	12.8
1972 dollars	4.4	4.6	3.9	7.0	1.9	5.9	3.1	5.2
Implicit price deflator	7.2	7.3	6.0	7.7	7.8	7.6	7.1	7.3
Chain price index	7.2	7.3	6.2	7.3	8.4	7.6	7.1	7.2
Fixed-weighted price index	7.3	7.4	6.2	7.3	8.4	7.6	7.2	7.3
Gross private domestic investment:								
Current dollars	22.6	16.0	-5.1	12.2	31.3	5.5	16.9	8.0
1972 dollars	13.2	7.3	-2.9	11.3	15.2	-5.1	5.8	4.5
Implicit price deflator	------	------	------	------	------	------	------	------
Chain price index	------	------	------	------	------	------	------	------
Fixed-weighted price index	------	------	------	------	------	------	------	------
Fixed investment:								
Current dollars	21.3	16.8	18.8	7.5	27.8	14.4	17.7	4.6
1972 dollars	12.4	6.7	7.1	1.2	15.3	2.0	7.8	-1.3
Implicit price deflator	7.9	9.4	11.0	6.2	10.8	12.2	9.2	6.1
Chain price index	7.8	9.6	10.8	6.5	11.9	12.1	9.3	7.8
Fixed-weighted price index	8.2	9.8	10.9	6.5	12.5	12.3	9.7	7.9
Nonresidential:								
Current dollars	15.7	16.9	14.8	11.1	31.2	14.3	18.0	12.4
1972 dollars	9.1	8.1	5.3	4.2	21.3	3.5	9.5	5.4
Implicit price deflator	6.0	8.2	9.0	6.7	8.2	10.4	7.8	6.6
Chain price index	6.2	8.3	8.8	6.7	9.2	10.0	7.5	8.0
Fixed-weighted price index	6.3	8.4	8.6	6.7	9.7	10.0	7.7	8.3
Structures:								
Current dollars	11.4	21.8	13.4	6.3	56.5	24.4	22.5	.5
1972 dollars	4.4	11.1	2.0	-.3	40.3	9.8	9.8	-7.4
Implicit price deflator	6.7	9.6	11.1	6.6	11.5	13.3	11.5	8.5
Chain price index	6.5	9.6	9.2	5.9	12.4	13.7	11.9	9.2
Fixed-weighted price index	6.3	9.4	8.9	6.2	12.5	13.4	11.6	9.3
Producers' durable equipment:								
Current dollars	17.9	14.5	15.6	13.6	19.8	9.1	15.5	19.4
1972 dollars	11.4	6.7	6.8	6.2	13.6	.7	9.3	11.9
Implicit price deflator	5.8	7.3	8.2	6.9	5.5	8.3	5.7	6.7
Chain price index	6.0	7.6	8.6	7.2	7.6	8.0	5.1	7.4
Fixed-weighted price index	6.3	7.7	8.4	7.1	8.0	7.9	5.3	7.6
Residential:								
Current dollars	34.8	16.4	27.3	.5	21.0	14.9	17.3	-10.3
1972 dollars	20.5	3.8	11.1	-5.2	2.7	-1.6	4.0	-16.2
Implicit price deflator	11.8	12.2	14.6	6.0	17.9	16.7	12.8	7.1
Chain price index	11.8	12.2	15.1	6.1	17.6	16.7	13.1	7.2
Fixed-weighted price index	11.8	12.2	14.9	6.2	17.5	16.4	13.1	7.3

Table 27.—Percent Change From Preceding Period in Gross National Product in Current and Constant Dollars, Implicit Price Deflator, and Price Indexes (8.9)—Con.

	1977	1978	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I^r
	Percent		Percent at annual rate					
Exports:								
Current dollars	7.5	16.7	-18.0	24.3	63.4	9.5	24.4	23.3
1972 dollars	2.4	9.0	-17.6	13.7	43.3	1.9	10.3	11.2
Implicit price deflator	5.1	7.0	-.5	9.4	14.0	7.4	12.7	10.8
Chain price index	5.0	6.8	-.2	8.5	13.7	7.4	12.1	10.0
Fixed-weighted price index	5.2	6.6	-.4	8.1	12.9	7.9	11.8	10.5
Imports:								
Current dollars	19.8	16.1	16.8	23.4	10.3	20.2	16.6	17.7
1972 dollars	10.2	11.2	22.8	15.2	3.7	11.2	7.3	6.0
Implicit price deflator	8.7	4.5	-4.9	7.1	6.4	8.2	8.7	11.0
Chain price index	7.5	6.7	2.6	12.3	3.7	7.7	9.9	12.6
Fixed-weighted price index	7.8	7.0	3.1	12.3	2.9	7.9	10.2	12.7
Government purchases of goods and services:								
Current dollars	9.6	10.1	13.7	4.1	7.9	15.0	14.1	3.6
1972 dollars	2.4	2.2	4.2	-3.5	-.2	7.2	4.0	-4.2
Implicit price deflator	7.0	7.8	9.0	7.9	8.2	7.2	9.7	8.1
Chain price index	7.0	7.5	9.5	7 3	7.5	6.9	10.0	8.6
Fixed-weighted price index	7.0	7.6	10.2	6.6	7.8	6.7	10.4	8.4
Federal:								
Current dollars	11.7	6.0	15.7	-2.0	-10.9	20.0	23.9	5.1
1972 dollars	5.2	-1.3	2.9	-8.9	-15.3	14.3	8.8	-2.2
Implicit price deflator	6.2	7.4	12.4	7.6	5.2	5.0	13.9	7.5
Chain price index	6.3	7.0	14.2	6.1	5.0	4.4	14.8	7.8
Fixed-weighted price index	6.5	6.8	14.7	4.9	4.5	3.9	14.6	7.7
State and local:								
Current dollars	8.4	12.6	12.5	7.8	19.9	12.4	9.0	2.8
1972 dollars	.8	4.2	5.1	-.1	9.6	3.4	1.3	-5.3
Implicit price deflator	7.5	8.0	7.1	8.0	9.5	8.6	7.6	8.5
Chain price index	7.4	7.8	6.9	8.0	9.0	8.3	7.5	9.0
Fixed-weighted price index	7.3	8.1	7.4	7.8	10.0	8.6	7.7	8.8
Addenda:								
Final sales:								
Current dollars	10.8	11.8	11.0	6.4	20.0	11.1	15.7	8.8
1972 dollars	4.7	3.9	4.7	-1.6	8.6	3.7	7.2	-.4
Implicit price deflator	5.8	7.6	6.0	8.0	10.5	7.1	8.0	9.3
Chain price index	6.2	7.5	6.6	7.0	10.8	7.5	8.1	9.2
Fixed-weighted price index	6.3	7.6	6.9	7.0	11.0	7.6	8.3	9.5
Gross domestic product:								
Current dollars	10.9	11.7	9.5	6.7	20.1	10.2	15.5	9.0
1972 dollars	4.8	4.0	3.5	-.4	8.3	3.0	6.9	.3
Implicit price deflator	5.8	7.4	5.8	7.1	10.9	7.0	8.1	8.7
Chain price index	6.1	7.5	6.7	7.1	10.9	7.5	8.1	9.2
Fixed-weighted price index	6.3	7.7	7.0	7.0	11.0	7.6	8.4	9.6
Business:								
Current dollars	11.3	11.9	8.6	5.8	22.5	10.7	16.3	9.1
1972 dollars	5.4	4.2	3.5	-.8	9.5	3.2	7.9	.3
Implicit price deflator	5.6	7.4	5.0	6.7	11.9	7.3	7.8	8.8
Chain price index	6.0	7.6	6.1	6.7	11.8	7.9	7.8	9.4
Fixed-weighted price index	6.2	7.7	6.3	6.7	12.1	8.0	8.0	9.9
Nonfarm:								
Current dollars	11.4	12.1	7.9	7.0	22.9	10.6	14.7	9.1
1972 dollars	5.2	4.7	3.6	1.1	11.1	2.3	7.0	1.5
Implicit price deflator	5.9	7.0	4.1	5.8	10.6	8.0	7.2	7.5
Chain price index	6.2	7.1	5.1	5.4	10.7	8.5	7.2	8.1
Fixed-weighted price index	6.4	7.2	5.3	5.3	10.8	8.7	7.3	8.2
Disposable personal income:								
Current dollars	10.0	11.4	12.9	9.8	12.5	10.2	13.0	13.7
1972 dollars	4.1	4.3	7.8	1.1	3.5	3.6	6.1	2.9

^r Revised.

NOTE.—Table 27: The implicit price deflator for GNP is a weighted average of the detailed price indexes used in the deflation of GNP. In each period, the weights are based on the composition of constant-dollar output in that period. In other words, the price index for each item is weighted by the ratio of the quantity of the item valued in 1972 prices to the total output in 1972 prices. Changes in the implicit price deflator reflect both changes in prices and changes in the composition of output. The chain price index uses as weights the composition of output in the prior period, and, therefore, reflects only the change in prices between the two periods. However, comparisons of percent changes in the chain index also reflect changes in the composition of output. The fixed-weighted price index uses as weights the composition of output in 1972. Accordingly, comparisons over any timespan reflect only changes in prices.

By ALEXANDER KORNS

Cyclical Fluctuations in the Difference Between the Payroll and Household Measures of Employment

FOREWORD

UNEXPLAINED differences in the cyclical behavior of the two principal measures of employment—the payroll and household measures—have long troubled labor market and other economists. This article concludes that these differences can be traced, first, to cyclical fluctuations in multiple jobholding and job changing and, second, to the inadequate representation in the household survey of certain groups—men, particularly black men, and workers who are poor—for which cyclical employment declines are larger than for groups that are more adequately represented.

The author's research is impressive because he has sifted and integrated a vast amount of evidence using simple statistical tools. His procedure has the further advantage of supplying the reader with information on the crucial assumptions he made when adequate data were lacking, thus enabling the reader to modify these assumptions. The author's conclusions are necessarily controversial, because research cannot compensate for the lack of firm data. Nevertheless, on occasion he states his conclusions as though they were not subject to qualification, so as not to overburden the exposition.

As noted in the acknowledgments, staff of the Bureau of Labor Statistics and the Census Bureau—the agencies that prepare the payroll and household measures—have been most helpful to the author. The agencies have been invited to comment on the article, and their comments will be published in the SURVEY if they wish. Others are invited to comment, and their comments will be considered for publication.
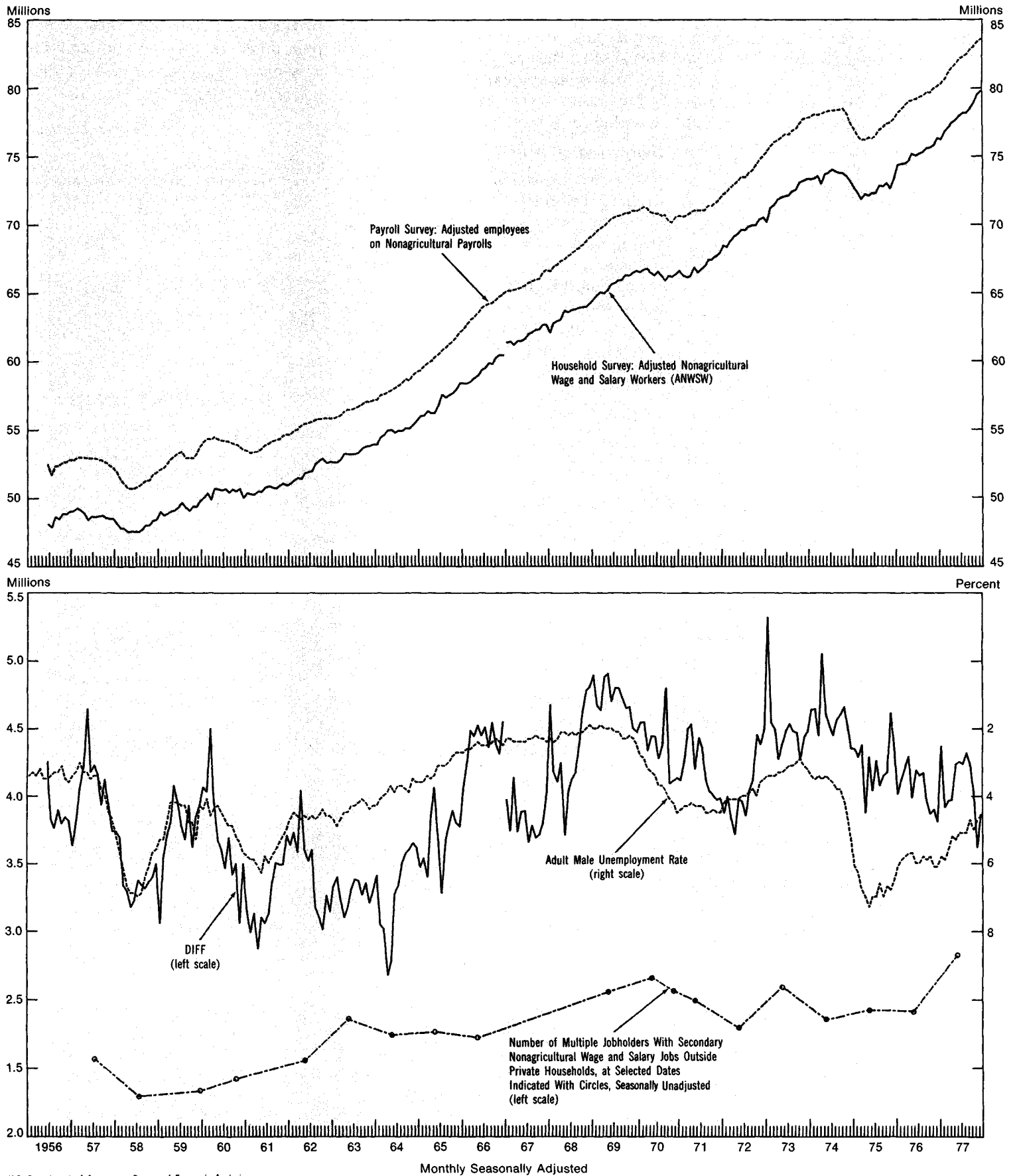
The Editor-in-Chief

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Section 1: Introduction

ECONOMISTS have long been puzzled by the differing cyclical behavior of the payroll and household measures of nonagricultural wage and salary employment.[1] The payroll measure is based on reports from a panel of employers and on employer tax returns; the household measure is based on interviews with respondents in a sample of households and on population estimates derived from the decennial census. In general, during labor market contractions the

payroll measure declines more than the household measure; during labor market recoveries and expansions, the payroll measure increases more than the household measure.

Definition of DIFF

This article describes and attempts to explain the differing cyclical behavior of the two employment measures. The two measures discussed here have been adjusted for all coverage differences for which monthly data exist. The adjusted measures are available from June 1956 forward (chart 2, upper panel); their derivation from the published measures is shown in table 1, for a single month.[2]

Almost all of the adjustments are to the household measure, to make it conform with the payroll measure. Private household workers and workers on unpaid absences are excluded, and 14–15 year-olds included, in the adjusted household employment measure.

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1. The President's Committee to Appraise Employment and Unemployment Statistics, *Measuring Employment and Unemployment*, 1962, p. 113; Stanley W. Black and R. Robert Russell, "An Alternative Estimate of Potential GNP," *Review of Economics and Statistics*, February 1969, p. 73; Edward F. Denison, *Accounting for United States Economic Growth: 1929–1969*, Brookings Institution, 1974, pp. 168–71; and Joseph R. Antos, Anthony J. Barkume, J. Wilson Mixon, and Jack E. Triplett, "Why Employment Estimates Differ: A Study of Discrepancies Between BLS Household and Payroll Estimates," Bureau of Labor Statistics Working Paper 65, October 1976.

2. The payroll survey first covered employees in Alaska and Hawaii in January 1959, whereas the household survey first covered them in January 1960. In order to make the two adjusted measures comparable, I exclude employees in Alaska and Hawaii from the adjusted payroll employment measure in 1959.

Table 1.—Derivation of Adjusted Payroll and Household Measures of Nonagricultural Wage and Salary Employment, July 1977

[Thousands]

Payroll survey:	
Employees on nonagricultural payrolls	82,323
Less: Employees on agricultural services payrolls	220
Equals: Adjusted employees on nonagricultural payrolls	82,103
Household survey:	
Nonagricultural wage and salary workers	81,987
Less: Private household workers	1,465
Workers on unpaid absences	3,892
Plus: 14–15 year-old nonagricultural wage and salary workers outside private households	1,100
Equals: Adjusted nonagricultural wage and salary workers (ANWSW)	77,730

Source: Bureau of Labor Statistics (BLS).

Table 2.—DIFF and the Adjusted Employment Measures, 1956–77

[Thousands, seasonally adjusted]

Adjusted Employees on Nonagricultural Payrolls

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
January		52,720	51,909	52,084	54,082	53,421	54,599	55,820	57,170	59,303	62,294	65,118	66,534	69,166	70,923	70,609	72,203	75,343	77,844	76,920	78,128	80,297
February		52,911	51,356	52,232	54,304	53,270	54,892	55,934	57,508	59,594	62,645	65,102	66,901	69,445	71,065	70,551	72,390	75,749	78,020	76,473	78,357	80,613
March		52,964	51,038	52,535	54,249	53,358	55,003	56,049	57,573	59,804	63,004	65,184	67,030	69,673	71,227	70,628	72,697	76,003	77,990	76,158	78,649	81,072
April		52,939	50,695	52,862	54,459	53,384	55,278	56,286	57,734	59,963	63,197	65,251	67,295	69,848	71,147	70,829	72,922	76,153	78,065	76,142	78,985	81,457
May		52,909	50,666	53,054	54,264	53,563	55,408	56,425	57,861	60,271	63,477	65,356	67,395	70,067	70,859	70,989	73,187	76,323	78,215	76,315	79,053	81,738
June	52,367	52,871	50,729	53,275	54,189	53,820	55,457	56,461	58,015	60,471	63,868	65,020	67,652	70,345	70,750	70,995	73,478	76,587	78,291	76,257	79,147	82,080
July	51,679	52,880	50,822	53,354	54,126	53,948	55,557	56,595	58,196	60,751	64,044	65,695	67,849	70,495	70,791	71,030	73,414	76,555	78,329	76,489	79,292	82,257
August	52,309	52,827	51,025	52,900	54,095	54,129	55,689	56,721	58,398	60,955	64,186	65,811	68,059	70,606	70,616	71,028	73,746	76,850	78,337	76,909	79,410	82,404
September	52,359	52,734	51,265	52,935	53,968	54,199	55,753	56,859	58,664	61,216	64,248	65,951	68,204	70,662	70,684	71,360	73,941	77,011	78,395	77,071	79,615	82,997
October	52,580	52,582	51,284	52,873	53,879	54,270	55,812	57,036	58,544	61,420	64,494	65,968	68,439	70,819	70,250	71,346	74,371	77,345	78,441	77,336	79,615	82,997
November	52,635	52,367	51,736	53,172	53,741	54,533	55,835	57,013	58,965	61,741	64,718	66,442	68,706	70,784	70,132	71,582	74,740	77,704	78,057	77,435	79,944	83,345
December	52,777	52,190	51,871	53,701	53,469	54,635	55,808	57,138	59,205	62,090	64,921	66,642	69,018	70,984	70,526	71,835	75,000	77,769	77,414	77,677	80,166	83,514

Adjusted Nonagricultural Wage and Salary Workers

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
January		49,019	48,120	48,966	49,982	50,331	51,046	52,609	53,875	55,953	58,349	61,346	62,064	64,449	66,577	66,568	68,403	70,131	73,291	72,676	74,342	76,195
February		49,227	47,787	48,714	50,325	50,277	51,252	52,594	54,414	56,001	58,357	61,409	62,772	64,790	66,461	66,228	68,328	71,208	73,339	72,288	74,404	76,778
March		49,068	47,738	48,858	49,842	50,249	51,468	52,802	54,589	56,329	58,504	61,172	62,923	65,004	66,641	66,098	68,751	71,431	73,510	71,823	74,451	77,079
April		48,869	47,494	49,029	50,664	50,472	51,386	53,201	54,921	56,177	58,732	61,453	63,029	64,938	66,714	66,184	69,085	71,798	72,955	72,180	74,653	77,395
May		48,393	47,536	49,065	50,624	50,447	51,800	53,154	54,983	56,195	58,933	61,452	63,653	65,135	66,824	69,278	71,967	73,649	72,085	75,149	77,607
June	48,061	48,622	47,521	49,320	50,561	50,770	51,896	53,185	54,766	56,785	59,320	61,626	63,568	65,557	66,214	66,454	69,563	72,063	73,770	72,276	75,006	77,919
July	47,857	48,584	47,496	49,637	50,658	50,858	51,951	53,204	54,906	57,510	59,525	61,959	63,701	65,672	66,522	66,698	69,546	72,120	73,980	72,281	75,165	78,121
August	48,596	48,682	47,677	49,251	50,386	50,772	52,488	53,311	54,905	57,297	59,852	62,074	63,783	65,859	66,234	66,933	69,802	72,411	73,818	72,805	75,286	78,131
September	48,437	48,708	47,981	49,046	50,623	50,669	52,714	53,611	55,105	57,482	59,777	62,292	63,879	65,925	65,879	67,382	69,900	72,524	73,761	72,765	75,574	78,449
October	48,844	48,522	48,007	49,355	50,481	50,884	52,884	53,760	55,046	57,646	60,274	62,283	63,912	66,270	66,224	67,408	69,925	73,036	73,700	73,011	75,604	78,884
November	48,813	48,455	48,335	49,330	50,682	51,043	52,546	53,810	55,320	57,935	60,438	62,629	63,964	66,209	66,144	67,629	70,347	73,198	73,474	72,613	75,777	79,496
December	48,998	48,488	48,413	49,784	50,019	50,914	52,658	53,884	55,628	58,355	60,412	62,649	64,187	66,439	66,356	67,827	70,486	73,317	73,122	73,385	76,292	79,724

DIFF

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
January		3,629	3,733	3,055	4,063	3,130	3,634	3,327	3,404	3,466	4,046	3,958	4,671	4,890	4,472	4,116	3,874	5,317	4,641	4,350	4,014	4,374
February		3,792	3,657	3,540	4,028	2,986	3,726	3,394	3,042	3,534	4,240	3,738	4,171	4,662	4,544	4,252	3,994	4,541	4,646	4,288	4,120	3,916
March		4,043	3,330	3,708	4,495	3,124	3,579	3,219	3,005	3,394	4,487	4,134	4,102	4,633	4,548	4,499	3,835	4,496	4,448	4,380	4,213	3,966
April		4,211	3,285	3,799	3,952	2,866	4,038	3,097	2,675	3,854	4,444	3,730	4,246	4,882	4,339	4,534	3,712	4,270	5,051	3,874	4,294	3,974
May		4,640	3,170	4,076	3,664	3,095	3,595	3,178	2,778	4,061	4,524	3,879	3,707	4,902	4,441	4,202	3,974	4,392	4,607	4,289	3,988	4,231
June	4,256	4,176	3,222	3,940	3,593	3,053	3,513	3,303	3,269	3,666	4,448	3,886	4,032	4,697	4,439	4,432	3,958	4,484	4,526	4,038	4,190	4,252
July	3,826	4,228	3,369	3,770	3,462	3,126	3,596	3,375	3,331	3,269	4,509	3,653	4,123	4,797	4,276	4,360	3,853	4,535	4,453	4,259	4,152	4,237
August	3,759	4,157	3,333	3,675	3,687	3,352	3,164	3,364	3,500	3,669	4,360	3,775	4,173	4,795	4,370	4,120	4,041	4,480	1,566	4,077	4,170	4,318
September	3,894	3,931	3,307	3,925	3,413	3,501	3,090	3,260	3,570	3,779	4,544	3,687	4,385	4,727	4,802	4,032	4,108	4,469	4,600	4,151	3,955	4,245
October	3,794	4,119	3,359	3,618	3,492	3,486	3,008	3,346	3,601	3,885	4,383	3,710	4,629	4,648	4,094	4,006	4,455	4,272	4,659	4,172	3,867	4,035
November	3,839	3,924	3,393	3,847	3,054	3,488	3,255	3,202	3,647	3,794	4,316	3,797	4,783	4,656	4,114	3,971	4,384	4,442	4,520	4,616	3,899	3,618
December	3,814	3,736	3,492	3,932	3,493	3,702	3,140	3,287	3,610	3,768	4,550	4,025	4,808	4,499	4,134	3,983	4,495	4,481	4,357	4,345	3,808	3,859

Source: BLS; seasonal adjustment by BLS and BEA. Because seasonal adjustment of DIFF and the two adjusted employment measures was performed independently, DIFF differs somewhat from the difference between the two seasonally adjusted employment measures.

CHART 2

Adjusted Employment Measures and DIFF

Millions   Millions

Payroll Survey: Adjusted employees
on Nonagricultural Payrolls

Household Survey: Adjusted Nonagricultural
Wage and Salary Workers (ANWSW)

Millions   Percent

Adult Male Unemployment Rate
(right scale)

DIFF
(left scale)

Number of Multiple Jobholders With Secondary
Nonagricultural Wage and Salary Jobs Outside
Private Households, at Selected Dates
Indicated With Circles, Seasonally Unadjusted
(left scale)

1956   57   58   59   60   61   62   63   64   65   66   67   68   69   70   71   72   73   74   75   76   77

Monthly Seasonally Adjusted

In describing the *difference in the behavior* over time of the two adjusted employment measures, it is most convenient to examine the *behavior of the difference* between the two measures. I define DIFF as the seasonally adjusted difference between the adjusted payroll and the adjusted household measures of nonagricultural wage and salary employment (chart 2, lower panel; and table 2).

Two factors account for the fact that DIFF has always been positive, averaging about 4 million in the period 1956–77. First, the payroll survey counts jobs, and therefore counts all the jobs of multiple jobholders, whereas the household survey counts workers, and therefore counts each multiple jobholder only once. Second, the household survey understates employment, because it is based on population estimates that are too low. Other, minor, factors that affect DIFF's level are

mentioned *passim* throughout this article.[3]

Cyclical behavior of DIFF

For comparison with DIFF, the adult male unemployment rate—widely regarded as an indicator of labor market conditions—is plotted on an inverted scale (chart 2, lower panel). The comparison shows that, in general, DIFF behaved cyclically throughout the period 1956–77. The cyclical behavior of DIFF reflected divergent cyclical movements in the two adjusted employment measures.

1. DIFF declined in periods when the adult male unemployment rate rose sharply—i.e., in labor market contractions—because the adjusted payroll measure declined more than did the adjusted household employment measure. When DIFF is smoothed somewhat

3. See also Gloria P. Green, "Comparing Employment Estimates from Household and Payroll Surveys," *Monthly Labor Review*, December 1969, pp. 9–20.

to eliminate short-term irregularities in the series, the declines in DIFF in the four contractions in the period 1956–77 were between 400,000 and 1 million; the two earlier declines were larger than the two most recent ones.

2. DIFF generally increased in periods when the adult male unemployment rate fell—i.e., in labor market recoveries and expansions—because the adjusted payroll employment measure increased more than did the adjusted household employment measure.[4] The smoothed DIFF increased about 600,000–700,000 in the 1958–59, 1961–62, and 1972–73 recoveries, but did not increase in the 1975–77 recovery. In the long expansion from 1962 to 1969, DIFF declined somewhat in 1962–64 and then increased the

4. In 1971 and early 1972 the labor market remained loose—as indicated by the fact that the adult male unemployment rate remained high. In this period, DIFF continued to decline, and the adjusted payroll employment measure increased less than did the adjusted household employment measure.

CHART 3

Employees on Nonagricultural Payrolls, by Industry Group
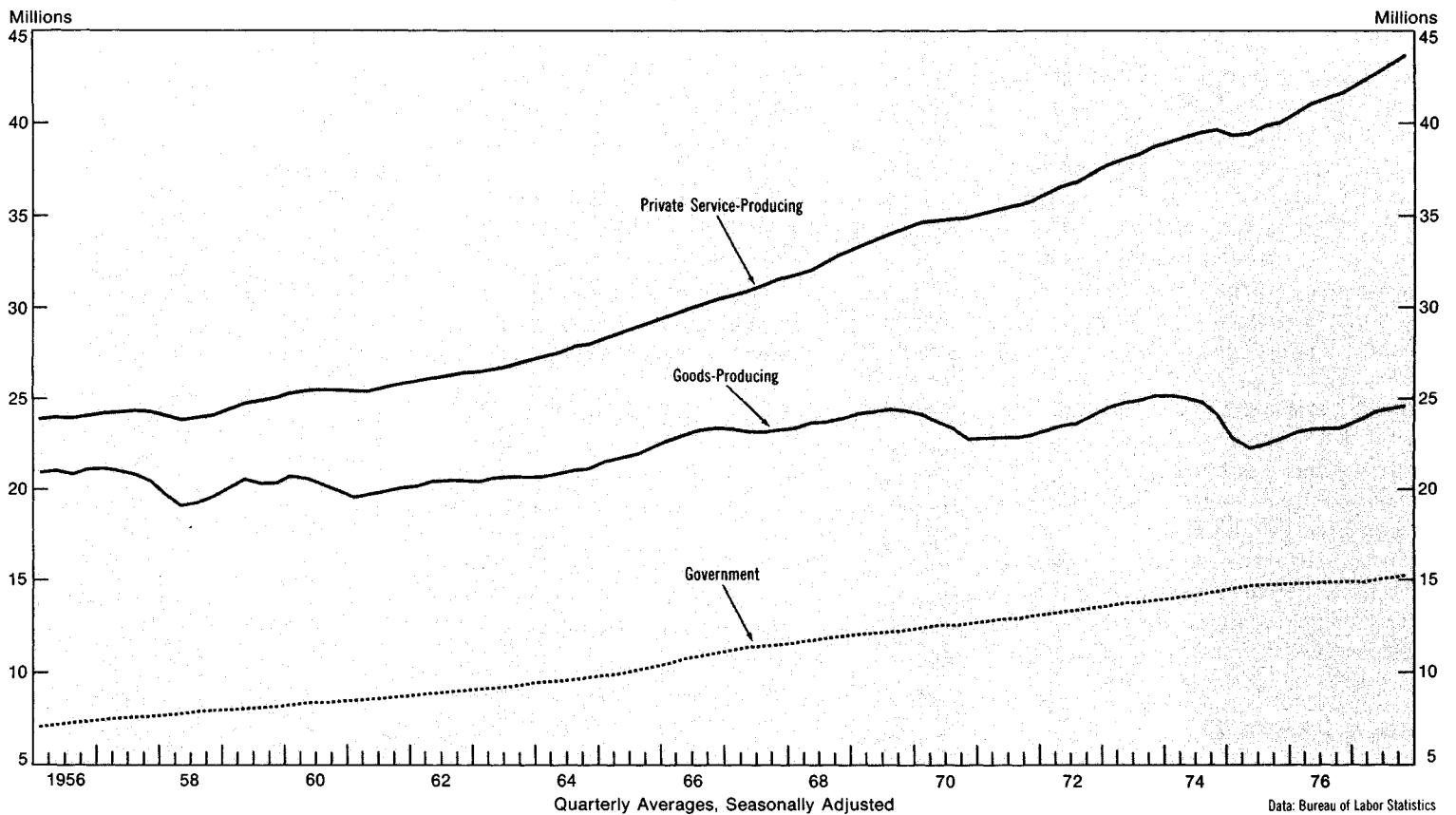
Quarterly Averages, Seasonally Adjusted

Data: Bureau of Labor Statistics

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

79-5-3

record amount of 2.2 million in 1964–69.[5]

In principle, the cyclical behavior of DIFF could be due to any of three causes, or to a combination of them.

1. Conceptual differences in the coverage of the two adjusted employment measures could be responsible.

2. Statistical error in the payroll survey might cause the adjusted payroll measure to exaggerate cyclical fluctuations—specifically, to exaggerate employment declines and those employment increases that occur in recoveries and expansions.

3. Statistical error in the household survey might cause the adjusted house-

hold measure to dampen cyclical fluctuations—specifically, to dampen employment declines and those employment increases that occur in recoveries and expansions.

Preview of findings.—This article examines each of the three possible causes. Section 2 shows that conceptual differences in the coverage of the two adjusted employment measures have contributed somewhat to the cyclical behavior of DIFF. Section 3 concludes that statistical error in the payroll survey probably did not contribute substantially. Section 4 presents another major finding of this article— that two statistical errors have substantially dampened cyclical declines in the adjusted household employment measure, and one of them has somewhat dampened cyclical increases. Section 5 summarizes my findings and broadly relates these findings, in an integrated way, to the observed cyclical behavior of DIFF.

increases in secondary jobs, both of which were small, contributed little to the cyclical declines and increases in DIFF, and that post-1962 cyclical increases in secondary jobs, which were large, contributed substantially to cyclical increases in DIFF. I will first discuss the evidence and its limitations, then present the conclusions I draw from the evidence, and, finally, show that the behavior of multiple jobholding seems reasonable in light of the industrial composition of secondary jobs.

A series for the number of workers with secondary nonagricultural wage and salary jobs outside private households ("workers with secondary jobs," for short) is available from 19 intermittent household surveys over the period 1957–77 (chart 2, lower panel). The series is an indicator of the number of secondary jobs.[7] However, it is not a very precise indicator of short-term changes in that number, because statistical error in the series has been quite large relative to the size of the fluctuations that I think may have occurred.[8] For instance, the large increase in the number of workers with secondary jobs in 1962–63, and the decline in 1963–64, during a period

5. The measure of the 1964–69 increase in DIFF is based on annual averages and is adjusted for a break in the adjusted household measure in January 1967, when the household survey reclassified about 750,000 operators of small nonfarm incorporated enterprises from self-employed to wage and salary workers. The measures of the change in the smoothed DIFF in contractions and recoveries are based on monthly trend-cycle values, as estimated by the Census Bureau's X–11 seasonal adjustment program.

Section 2: Conceptual Differences Between the Payroll and Household Employment Measures

THE major conceptual difference between the two adjusted employment measures is that the payroll survey counts jobs, whereas the household survey counts workers. Accordingly, the adjusted payroll measure is larger than the adjusted household measure, because some workers hold two or more jobs simultaneously, and because some workers change jobs under circumstances that cause both jobs to be counted by the payroll survey. In this section, I will show that this conceptual difference has contributed to, but by no means fully accounted for, the cyclical behavior of DIFF.

There are other, minor, conceptual differences between the two adjusted employment measures, but there is no evidence that they have contributed to the cyclical behavior of DIFF.[6]

Multiple jobholding

A multiple jobholder is a worker who holds two or more jobs simultaneously.

It is convenient to distinguish two groups of multiple jobholders—civilians, and members of the Armed Forces.

Civilian multiple jobholders.—Analysts of multiple jobholding distinguish two types of jobs. The "primary" job is the one at which a multiple jobholder works the largest number of hours per week. "Secondary" jobs are his or her other jobs.

The adjusted payroll employment measure counts both primary and secondary nonagricultural wage and salary jobs outside private households, whereas the adjusted household measure counts those workers whose primary job is a nonagricultural wage and salary job outside private households. Therefore, the adjusted payroll measure exceeds the adjusted household measure by the number of secondary nonagricultural wage and salary jobs outside private households ("secondary jobs," for short).

The available evidence indicates that cyclical declines and pre-1962 cyclical

7. The household survey estimate of workers with secondary jobs differs conceptually from the number of secondary jobs counted by the payroll survey for two reasons. First, some workers hold three or more nonagricultural wage and salary jobs outside private households, and the third and subsequent jobs are omitted from the number of workers with secondary jobs. In July 1958, the household survey found that 7 percent of all multiple jobholders held three or more jobs (Census Bureau, *Current Population Reports* Series P–50, No. 88, "Multiple Jobholding; July 1958," 1959.) Second, some workers with secondary jobs are absent without pay from their secondary job or jobs during the survey period; the payroll survey does not count such jobs. The July 1957 household survey indicated that about 13 percent of multiple jobholders were absent without pay from their secondary job or jobs. (Census Bureau, *Current Population Reports*, Series P–50, No. 80, "Multiple Jobholding: July 1957," 1958.)

8. The standard error was about 60–80,000 for each of the estimates in the series. Response error may have been substantial: Whether, in a sample household, the survey counted a multiple jobholder, and whether the multiple jobholder's main secondary job was correctly identified as a nonagricultural wage and salary job may have depended in some cases on which household member responded to the questions of the interviewer, and whether the interview was conducted in person or over the telephone. For discussion of response error in the household survey, see Alfred Tella, "Cyclical Behavior of Bias-Adjusted Unemployment," *Methods for Manpower Analysis No. 11*, W. E. Upjohn Institute for Employment Research, 1976; and Census Bureau, *The Current Population Survey Reinterview Program, January 1961 Through December 1966*, Technical Paper No. 19, 1968. Of course, the statistical errors discussed in section 4 of this article also affected to some extent the household survey estimate of workers with secondary jobs.

6. For discussion of these differences, see the article by Green, and footnote 20.

when the labor market was relatively stable, may reflect error in the series rather than a real change in the number of secondary jobs.

On the basis of the intermittent household series, I draw the following conclusion with regard to the cyclical behavior of the number of secondary jobs and of DIFF, in contractions and in recoveries and expansions.

1. Perhaps because of statistical error, the series does not show a consistent pattern for the four contractions; on average, however, it declined 1.5 percent, or about 40,000.[9] Declines of this magnitude in the number of secondary jobs would have contributed relatively little to cyclical declines in DIFF.

2. The series consistently increased in periods of recovery and expansion. It appears that multiple jobholding contributed relatively little to the increases in DIFF in the 1958–59 and 1961–62 recoveries, but contributed substantially to the increases in DIFF in the 1964–69 expansion and the 1972–73 recovery, and even raised DIFF substantially in the 1962–64 expansion and the 1975–77 recovery—periods when DIFF showed no increase.

The series increased only 2 percent, or about 40,000, from July 1958 to December 1959, and it increased only 6 percent, or about 120,000, from December 1960 to May 1962.[10] However, it increased 9 percent, or about 190,000, from May 1962 to May 1964; 14 percent, or about 310,000 from May 1964 to May 1969; 13 percent, or 300,000, from May 1972 to May 1973; and 17 percent, or 400,000, from May 1975 to May 1977.

The behavior of the intermittent household series seems reasonable in light of the industrial makeup of secondary jobs. Few such jobs are in goods-producing industries, where employ-

ment has declined sharply in contractions and increased sharply in recoveries (chart 3). In May 1977 the household survey found that only 14 percent of workers with secondary jobs held their main secondary job in goods-producing industries; according to the payroll survey, 29 percent of all employees on nonagricultural payrolls worked in such industries. Most secondary jobs are in private service-producing industries, where employment generally remained flat in contractions, increased somewhat in the 1958–60 and 1961–62 recoveries, and increased substantially in recoveries and expansions after 1962 (chart 3).[11]

Military multiple jobholders.—Because the household survey does not cover Armed Forces members, civilian jobs held by them in off-duty hours are not covered by the intermittent household surveys of multiple jobholding.

Armed Forces members stationed on shore in the United States probably held about 200,000 civilian jobs in August 1975.[12] Most of them were probably nonagricultural wage and salary jobs outside private households. Both the number of Armed Forces members stationed on shore in the United States and the proportion of them who held civilian jobs have a bearing on the cyclicality of DIFF.

1. The proportion of Armed Forces members stationed on shore in the United States who held civilian jobs— 13 percent in August 1975—may have fluctuated cyclically. In the absence of data, my guess is that fluctuations in this proportion are unlikely to have accounted for cyclical fluctuations of

more than 20,000 in the number of civilian jobs held by Armed Forces members, and, consequently, in DIFF.

2. The number of Armed Forces members stationed on shore in the United States has not fluctuated cyclically, except in the period 1964–72. In connection with the Vietnam war, the number increased about 230,000 from 1964 to 1969, and declined about 400,000 from 1969 to 1972. Assuming that the proportion who held civilian jobs was a constant 13 percent, the 1964–69 increase would have contributed about 30,000 to the increase in DIFF, and the 1969–72 decline would have contributed about 50,000 to the decline in DIFF.

Job changing

In analyzing the treatment of job changers in the payroll and household surveys, it is necessary to understand that the two surveys refer to different periods. The household survey counts workers who were employed at any time during the survey *week*—the calendar week that includes the 12th of the month. The payroll survey counts workers who were on the payroll at any time during the *pay period* that includes the 12th of the month.[13]

I will first show that job changing causes the adjusted payroll employment measure to exceed the adjusted household employment measure, and then discuss the cyclical behavior of this difference.

Treatment of job changers in the two surveys.—Data from several sources indicate that the length of pay periods varies by industry and occupation.[14] The pay period is 1 week for a little more than one-half the workers covered by the payroll survey. Weekly periods predominate for production workers and for other nonsupervisory workers in the private sector except office
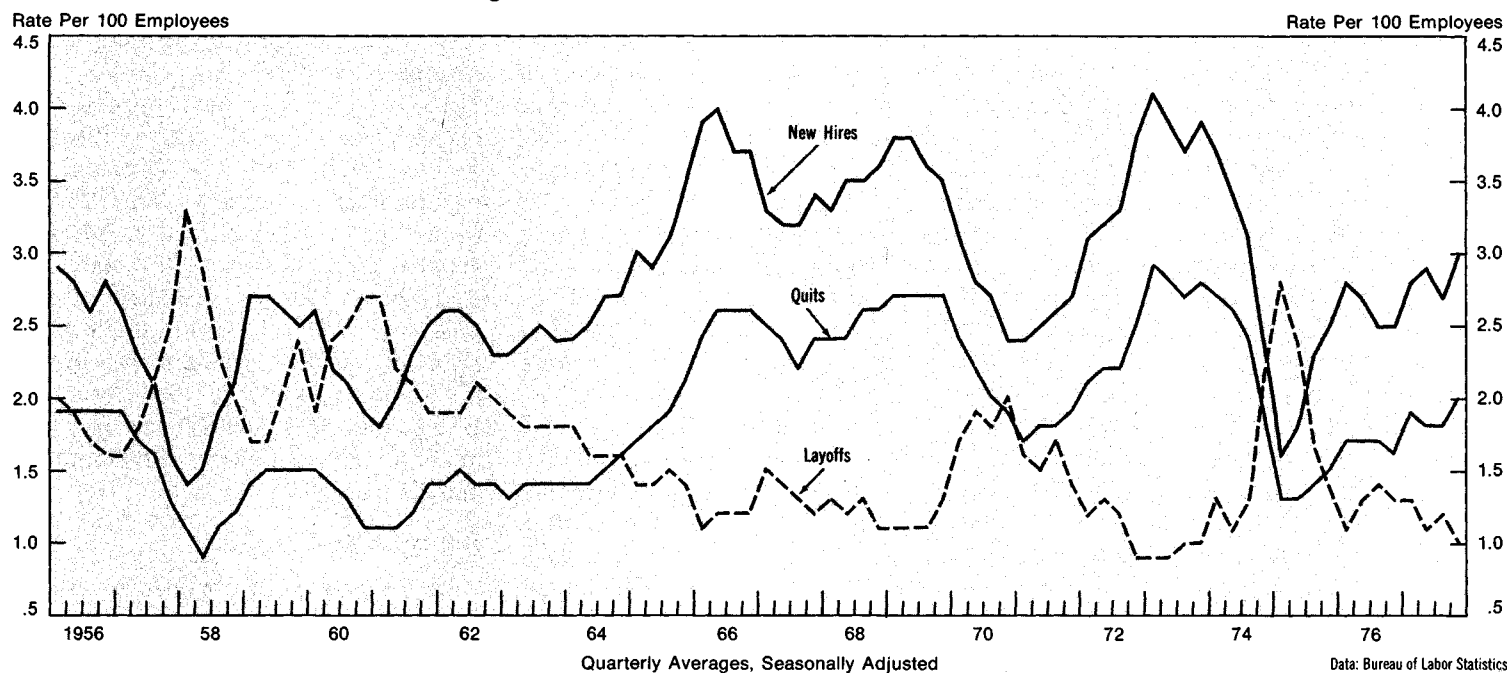
9. The series declined 13 percent, or about 270,000, from July 1957 to July 1958, increased 6 percent, or about 100,000, from December 1959 to December 1960, declined 2 percent, or about 60,000, from May 1969 to May 1971, and increased 3 percent, or about 70,000, from May 1974 to May 1975.

10. The irregular timing of the surveys before 1962 and possible seasonal variation in the number of secondary jobs may affect the observed changes in the number of workers with secondary jobs. Beginning with 1962, surveys were taken in May of every year except 1967–68, when no survey was taken. In 1970, a second survey was taken in November.

11. Service-producing industries include government, and it is not possible to state the exact percentage of workers who held their main secondary job in government, because the household survey data do not identify government workers. However, on the basis of data on workers with secondary jobs in two industries that are entirely or largely governmental— i.e., public administration and educational services—it appears that the percentage of workers with secondary jobs who held their main secondary job in government was no larger in May 1977 than the percentage of employees on non-agricultural payrolls who worked in government. Bureau of Labor Statistics, *Special Labor Force Report 211*, "Multiple Jobholders in May 1977," 1978.

12. This estimate is based on a mail survey of Air Force members taken by the Air Force in August 1975. Among respondents stationed in the United States, 17 percent of the enlisted men and 5 percent of the officers held "a second job." I assume that the same proportions of all Armed Forces members stationed on shore in the United States in August 1975 held second jobs. Majors G. C. Saul Young and Charles M. McNichols, United States Air Force, personal communication to author.

13. There is one exception: For Federal employees, the payroll survey uses the Civil Service Commission count, which includes all regular employees who were on the payroll on the last day of the month, plus a small number of intermittent employees who were on the payroll at any time during the month.

14. Bureau of Labor Statistics, *Pay Period Practices of American Industry*, 1954, and *Area Wage Surveys: Metropolitan Areas, United States and Regional Summaries, 1969–70*, Bulletin 1660–92, 1972, and data from the American Management Association and Census Bureau.

CHART 4

Labor Turnover Rates in Manufacturing

Rate Per 100 Employees   Rate Per 100 Employees

New Hires

Quits

Layoffs

1956   58   60   62   64   66   68   70   72   74   76

Quarterly Averages, Seasonally Adjusted

U.S. Department of Commerce, Bureau of Economic Analysis   Data: Bureau of Labor Statistics

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workers; they are also used for a large number of office workers. The pay period is 2 weeks, one-half a month, or 1 month, for a little less than one-half of the workers covered by the payroll survey. The first two periods predominate for office and supervisory workers in the private sector and for government workers; the last is used for a minority of supervisory workers in the private sector and for a minority of State and local government workers.

The difference in the treatment of job changers in the two employment surveys depends on the length of the pay periods at the old and the new jobs, on the day of the week on which the pay periods end, and on the dates on which the worker leaves the old job and starts the new job. I will discuss three cases. Two of the cases concern jobs with weekly pay periods; these are of particular interest, because there is evidence that workers in these jobs change jobs more frequently than do workers in jobs with longer pay periods.[15]

15. Job tenure data indicate that the percentage of workers who have held their jobs for 6 months or less is smaller for workers in State and local government and for office and supervisory workers in the private sector—for whom bi-weekly and longer pay periods predominate—than for other nonagricultural wage and salary workers. Bureau of Labor Statistics, *Special Labor Force Report 172,* "Job Tenure of Workers, January 1973," 1975.

1. Suppose the pay periods at both jobs are 1 week and that they end on a Saturday or Sunday, as do most weekly pay periods.[16] If the worker leaves the old job to begin the new job the following Monday, there is typically no difference between the two surveys: The payroll survey counts one job and the household survey counts one worker.[17] If the worker changes jobs between Monday and Saturday, say from Tuesday to Wednesday, the payroll survey counts two jobs and the household survey counts one worker. However, the intermittent household surveys of multiple jobholding identify that worker as a multiple jobholder.[18] Therefore, for

16. *Pay Period Practices.*

17. There are two minor exceptions to this rule, if the 12th of the month is a Sunday. The two exceptions occur with roughly equal frequency, and offset each other. If the worker leaves a job with a pay period that ends on Sunday the 12th, to begin a job with a pay period that ends on Saturday the 18th, the payroll survey counts two jobs and the household survey counts one worker. If the worker leaves a job with a pay period that ends on Saturday the 11th, to begin a job with a pay period that ends on Sunday the 19th, the payroll survey counts no jobs and the household survey counts one worker.

18. The number of "multiple jobholders" who left one nonagricultural wage and salary job and began another one in the survey week was estimated on one occasion, in December 1960, to be 45,000. The number of "multiple jobholders" who left *any* job and began another one in the survey week was estimated to be 80,000 in December 1960, 43,000 in May 1969, 29,000 in May 1974, 18,000 in May 1975, 35,000 in May 1976, and 58,000 in May 1977. The standard error of these

weekly pay periods that end on Saturday or Sunday, there is no discrepancy in the treatment of job changers that has not already been discussed as part of "multiple jobholding."

2. Suppose the pay periods at both jobs are 1 week, and that one or both of them end on a day other than Saturday or Sunday. Suppose further that the worker leaves the old job to begin the new job the following Monday. If the pay periods at the two jobs end on the *same* day, and if the leaving date and the following Monday both fall in the pay period that includes the 12th of the month, the payroll survey counts two jobs and the household survey counts one worker. If the pay periods at the two jobs end on *different* days, the payroll survey often counts two jobs and the household survey one worker; less frequently, the payroll survey counts no job, and the household survey one worker.

3. Suppose the pay period at one or both jobs is longer than 1 week. If the worker leaves the old job in a pay

estimates is relatively high, because they are based on few sample cases; for example, the standard error on the May 1969 estimate was almost 10,000. Also, there may have been response error. Data from unpublished BLS tabulations.

period that includes the 12th to begin the new job in a pay period that includes the 12th of the same month, the payroll survey counts two jobs. Depending on the length and juxtaposition of the pay periods at the two jobs, the payroll survey could count two jobs even if the worker is out of work a week or more between jobs. The household survey normally counts the job changer once.[19] The intermittent surveys do not identify him as a multiple jobholder unless he changes jobs during the week of the 12th.

I will refer to the group of job changers for whom the payroll survey counts two jobs, and whom the intermittent household surveys do not identify as multiple jobholders, as "excess job changers." Excess job changers is to be understood as net of all job changing cases for which the payroll survey counts no job and the household survey counts one worker, as well as cases for which the payroll survey counts no or one job and the intermittent household surveys identify the worker as a multiple jobholder.[20]

Cyclical fluctuations in excess job changing.—Excess job changing probably increases when the labor market is becoming tight and jobs are becoming

easier to find, for two reason: There is more job changing, and job changers lose less time looking for work between jobs. Conversely, excess job changing probably declines when the labor market is becoming slack and jobs are getting harder to find.

Evidence from two sources indicates that job changing fluctuates cyclically.

1. Monthly data on labor turnover rates in manufacturing show that quits and new hires rise sharply when the labor market tightens, and fall sharply when it slackens (chart 4). Presumably, these movements reflect fluctuations in job changing.

2. The Social Security Administration's Continuous Work History Sample (CWHS), a 1-percent sample of social security records, provides a measure of the number of separate jobs held by each worker during the calendar year, for 1957–75 (table 3). The jobs-per-worker is a good indicator of job changing.[21] It rose when the labor market tightened and fell when it slackened.

There are two reasons for believing that the time lost between jobs fluctuates cyclically.

1. The proportion of job changers who were laid off their old job falls when the labor market tightens and rises when it slackens; workers who are laid off are less likely than workers who quit to have lined up a new job beforehand at which they can start work immediately.[22]

2. The length of time it takes to find

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19. In unusual circumstances, the household survey does not count the job changer. Suppose the pay period at the first job is March 1–14, and at the second job, March 8–21; and suppose the calendar week including March 12 is March 8–14. If a worker leaves the first job on March 5 and starts the second job on March 15, the payroll survey counts two jobs but the household survey does not count even one worker.

20. A further factor that explains level differences between the two adjusted employment measures is that the adjusted payroll measure counts the jobs of two groups of workers who are omitted from the adjusted household measure, for reasons that are related to the use of pay periods longer than 1 week. There is no evidence that the size of these groups fluctuates cyclically.

1. When workers are absent without pay, the adjusted payroll measure counts one job and the adjusted household measure counts one worker if the worker was paid during part of the survey period. Because workers paid biweekly or monthly are less likely to be absent without pay during the entire pay period than during 1 calendar week within that period, the payroll measure includes the jobs of some absentees whom the household measure does not cover.

2. There is at all times a large two-way flow of persons into and out of nonagricultural wage and salary employment. Suppose one worker leaves a job with a 1-week pay period on Tuesday and is not employed for the remainder of the week, and another worker who was previously not employed takes the same job on Wednesday. The adjusted payroll measure counts two jobs and the adjusted household measure counts two workers. But for jobs with pay periods that exceed 1 week, the payroll survey period exceeds the household survey period, and the payroll survey therefore covers more leavers and entrants than does the household survey.

fulness of the CWHS as an indicator of cyclical fluctuations in job changing.

1. Employers often change their tax identification numbers because of transfer of ownership, merger, change of name, or change of legal form of organization, and these changes cause spurious job changes for workers in the CWHS. There is no evidence that such spurious changes fluctuate cyclically, and there is some evidence that the changes involve less than 5 percent of workers each year.

2. Tips became subject to Social Security tax in 1966. Because reports of tips are filed separately from reports of wages, the CWHS treats tips as wages from a second employer. In this way, about 2.3 million spurious "jobs" were added to the CWHS in 1966.

3. The CWHS counts jobs held both sequentially and simultaneously. However, intermittent household surveys indicate that jobs held simultaneously—i.e., multiple jobholding—have accounted for only 3–5 percent of nonagricultural wage and salary jobs outside private households in any week. Furthermore, the surveys indicate that cyclical fluctuations in multiple jobholding are not large enough to account for very much of the cyclical pattern in the CWHS series on jobs per worker.

22. A household survey of persons who began new jobs in 1972 found that 66 percent of workers who quit previous jobs had begun looking for work before they quit, and 44 percent found their new jobs before quitting the old one. By contrast, only 23 percent of workers who were laid off or otherwise lost their job had begun looking for work prior to separation. Bureau of Labor Statistics, *Jobseeking Methods Used by American Workers*, Bulletin 1886, 1975, p. 12.

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21. The CWHS counts wage and salary jobs covered by Social Security, which are largely but not entirely the same as those covered by the payroll survey. Thus, the CWHS includes some agricultural and private household jobs, and excludes all railroad jobs, most Federal Government jobs, and some State and local government and nonprofit organization jobs.

As a measure of job changing in covered employment, the CWHS series on jobs per worker has three limitations; none of these limitations, however, significantly impair the use-

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Table 3.—Number of Covered Wage and Salary Jobs Held During Year by Workers Covered by Social Security, 1957–75

| | Workers | | | Jobs | Jobs per worker |
	Total	With 1 job	With 2 or more jobs		
	Millions				
1957	62.91	44.84	18.07	95.43	1.517
1958	62.37	45.84	16.53	90.79	1.456
1959	64.48	45.73	18.75	97.64	1.514
1960	66.01	47.13	18.88	99.05	1.501
1961	66.43	47.89	18.55	98.27	1.479
1962	68.05	48.59	19.46	101.97	1.498
1963	69.49	49.70	19.80	104.16	1.499
1964	71.47	50.63	20.84	108.30	1.514
1965	74.54	51.80	22.72	115.30	1.547
1966	78.49	52.87	25.62	127.02	1.618
1967	80.55	55.07	25.48	126.58	1.571
1968	83.34	57.37	25.97	132.10	1.585
1969	86.31	57.82	28.49	137.83	1.597
1970	87.05	60.45	26.60	133.34	1.532
1971	87.13	61.88	25.25	129.78	1.489
1972	89.78	62.65	27.14	136.81	1.524
1973	93.02	63.54	29.48	145.32	1.562
1974	94.81	65.71	29.10	144.98	1.529
1975	93.98	68.54	25.44	135.31	1.440

Source: Continuous Work History Sample, 1-Percent Annual Employee-Employer File, Social Security Administration. For description of the sample, see Bureau of Economic Analysis, *Regional Work Force Characteristics and Migration Data: A Handbook on the Social Security Continuous Work History Sample and its Application*, 1976.

a new job falls when the labor market tightens and rises when it slackens.[23]

Effect on DIFF.—Data are not available for making reliable estimates of cyclical fluctuations in excess job changing. However, an illustrative calculation indicates that the fluctuations are too small to explain the cyclical behavior of DIFF. It is appropriate to make the calculation for the period 1973–75, when job changing declined more than at any other time in the period 1957–75, and to present the calculation in two steps.

First, I estimate that there were an average of about 250,000 excess job changers each month in 1973. To arrive at this figure, I first estimated (on the basis of CWHS data adjusted for spurious job changing, tip reporting, and multiple jobholding) that about 800,000 wage and salary workers left jobs each week in 1973 to start new jobs sometime before yearend. I then made somewhat arbitrary assumptions as to how many of the job changers left jobs with 1-week, 2-week, and 1-month pay periods; and as to what proportions of each group started new jobs soon enough for both jobs to be counted in the payroll survey.

Second, I estimate that excess job changing declined in 1975 to at most 68 percent, and perhaps to as little as 45 percent of its 1973 level. This estimate is based on two considerations.

1. The CWHS series on jobs per worker indicates that in 1975 about 75 percent as many workers as in 1973, or about 600,000 per week, left a job to start another job before yearend.

2. I assume that, among workers who did leave a job to start another job before yearend, the proportion who began new jobs soon enough to be counted twice in the payroll survey declined in 1975 to at most 90 percent, and perhaps to as little as 60 percent,

of the 1973 proportion of 25 percent, that is, to 22½–15 percent.

It follows that excess job changing declined at least 80,000, and, perhaps as much as 137,000, from 1973 to 1975. Although the assumptions underlying the illustrative calculation are somewhat arbitrary, it is difficult to posit plausible circumstances under which the true decline in excess job changing could have been more than twice as large or less than half as large as in the illustrative calculation.

Because the annual CWHS data show that job changing declined more in 1973–75 than at any other time in the period 1957–75, and because the quarterly labor turnover data show that the quit and new hire rates in manufacturing declined more in 1973–

75 than at any other time in the period 1956–77, I conclude that excess job changing probably declined more in 1973–75 than at any other time in the period 1956–77. (The labor turnover data also indicate that excess job changing declined less in the 1960–61 contraction than in any other contraction in the period.)

On the basis of the CWHS and the labor turnover data, I conclude that cyclical increases in excess job changing in the period 1956–77 were no larger than the 1973–75 decline in excess job changing, with the sharpest of these increases occurring in 1964–66 and in 1971–73. It appears, therefore, that excess job changing has contributed to, but by no means fully explained, the cyclical behavior of DIFF.

Section 3: Cyclical Accuracy of the Payroll Survey

IN this section, I will show that statistical error probably did not cause the payroll survey to substantially exaggerate cyclical fluctuations of nonagricultural employment during the period 1956–77. The conclusions of this section also apply to the adjusted payroll measure, which differs little from the published payroll survey measure (table 1). However, the limited data that are available are insufficient to rule out the possibility of cyclical error in the payroll survey.

The payroll survey measures the number of nonagricultural wage and salary jobs at which workers either worked, or were absent with pay, during the pay period that includes the 12th of the month. Underlying the payroll survey estimate prepared by the Bureau of Labor Statistics (BLS) are two data sources.[24]

1. The survey is benchmarked, for March of almost every year, to universe counts of employment, based on unemployment insurance (UI) tax data and other data sources for groups of workers not covered by UI.[25]

2. Estimates for inter-benchmark and post-benchmark months are based on reports from a panel of about 160,000 establishments.

In principle, one could take two approaches to the evaluation of the cyclical accuracy of the payroll series. One could discuss the methodology that underlies the payroll series and whether flaws in that methodology may have led to an exaggeration of cyclical fluctuations in nonagricultural employment. Alternatively, one could compare cyclical fluctuations in the payroll series with those in another series that is conceptually similar, and draw inferences from the comparison.

For two reasons, the latter approach is appropriate for private employment (the major topic of discussion in this section). First, the payroll survey methodology is extremely complex and little evidence is available on the accuracy of the underlying data. Second, another series that is conceptually similar to the payroll series is available; it is based on a much simpler methodology, which is easier to evaluate than is the

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23. When the length of time it takes to find a new job falls, the number of job changers who leave one job to start another one in the same calendar week may increase. Such persons are not excess job changers, because the intermittent household surveys identify them as multiple jobholders. However, the intermittent surveys indicate that few workers change jobs during the calendar week (see footnote 18), and I assume that cyclical changes in the number of such persons are too small to significantly affect the analysis presented in the text.

24. For a description of the survey methodology, see Seymour Wolfbein, *Establishment Reporting in the United States*, Background Paper No. 2, National Commission on Employment and Unemployment Statistics, 1978; and Bureau of Labor Statistics, *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910, 1976.

25. There were no benchmarks in 1958, 1960, and 1972. The payroll series used in this article is benchmarked for

March 1977. See Michael Buso and William C. Bennett, Jr., "BLS Estimates Revised to Reflect New Benchmark Levels and 1972 SIC," *Employment and Earnings*, October 1978.

metholology of the payroll series. As will be seen, the cyclical fluctuations in that series confirm those in the payroll series.

For the Federal Government also, the latter approach is appropriate, because there exists another series that is conceptually similar to the payroll series and that is believed to be cyclically accurate. For State and local government, neither approach is appropriate, for reasons that will be discussed below.

Private employment

The number of workers covered by UI is a series that is conceptually close to the payroll series for private employment. I will first describe this alternative series, then evaluate its cyclical accuracy, and, finally, compare it with the payroll series.

ES–202 employment.—Employers covered by UI must submit quarterly tax returns, known as ES–202 reports, to State employment security agencies. In the reports, employers state the number of workers who either worked, or were absent with pay, during the pay period that included the 12th of each month. The State agencies tabulate the number of workers, and BLS edits, compiles, and publishes the tabulations.

In the period under discussion, UI coverage has grown from 86 percent of the payroll measure of private non-agricultural employment in 1956 to 97 percent in 1977. From 1956 to 1971, Federal law required that private employers of four or more workers participate in the UI programs, but exempted railroads, hospitals, educational institutions, religious organizations, and other nonprofit organizations. State laws covered some workers not covered under Federal law. From January 1972 until the end of the period under discussion, Federal law covered private employers of one or more workers. Hospitals, institutions of higher education, and some other nonprofit organizations were covered, but railroads, primary and secondary schools, and religious organizations remained exempt. Again, State laws covered some workers not covered under Federal law.

Conceptually, the ES–202 series for private employment is the same as the payroll series for private employment, except for two differences. First, the ES–202 series excludes uncovered employment. Second, the ES–202 series includes some employment in agriculture, in private households, and in U.S. territories.

Cyclical accuracy of the ES–202 series.—The principal source of statistical error in the ES–202 series is the attempt by some employers to evade UI taxes either by omitting some workers from returns or by not filing returns.[26] Only very small firms can evade UI taxes with a low risk of detection, because: First, in order to evade UI taxes a firm must enjoy the collusion of workers, who might otherwise file UI claims that would expose the firm's evasion, or simply denounce the firm to tax authorities; and second, in order not to file ES–202 returns a firm must have few dealings with official agencies, so that its name rarely appears on official lists that investigators match with tax returns.

To minimize the risk of detection, most firms that evade UI taxes probably do so continuously at rates that do not fluctuate sharply, rather than episodically, or at sharply fluctuating rates, for two reasons. First, firms that omit some workers from ES–202 returns must pay these workers "off the books," and must therfore "skim" (fail to record) some of their income as well, in order that their books balance. Because the share of income that such firms can skim is limited by the need to maintain accounting proportions that would appear reasonable to an Internal Revenue Service (IRS) investigator, the share of income that they do skim probably does not fluctu-

ate sharply.[27] Second, the IRS or the State agency usually investigates when a firm stops filing ES–202 returns, unless the firm files a "final return" showing that it has gone out of business. Continuous evasion at constant rates by a fixed group of employers would not normally cause the ES–202 series to exaggerate cyclical fluctuations in covered employment.

However, there may be a cyclical pattern to tax evasion, due to efforts by some small firms to cut costs by evading taxes during recessions. First, in contractions some firms may increase off-the-books employment, temporarily accepting an increased risk of an IRS investigation. Some of the additional off-the-books workers may be persons receiving unemployment compensation, who would prefer to work off the books and not report their income to the State employment security agency. During recoveries and expansions, such workers may become reemployed elsewhere in higher paying, on-the-books, jobs, and such firms may begin reporting previously unreported workers in order to reduce the risk of an IRS investigation. Second, during contractions some firms may lay off workers, pretend to go out of business, and operate clandestinely with a core group of trusted workers. Later, during recoveries and expansions, if the tax-evading firms hire additional, less trusted, workers, or if they expand into operations that bring their names to the attention of official agencies, they may resume paying taxes. Such behavior would cause the ES–202 series to exaggerate cyclical fluctuations in covered employment. For the most recent recession, there is circumstantial evidence that no substantial increase in UI tax evasion occurred.[28] For earlier

26. Evidence of some UI tax evasion came to light in the period following the 1972 extension of UI coverage to employers of fewer than four workers, when BLS found that some small firms that were previously covered by UI laws but had not filed ES–202 returns began reporting many hundreds of thousands of workers. BLS attributes the increase to the fact that the new UI law was more nearly self-policing than the old one. A UI claim now triggers an investigation if State officials cannot find the worker's former employer in their records· before 1972 this was not the case, because the State officials could not be sure whether the employer was covered by the UI law.

UI tax evasion would, of course, have no effect on DIFF if respondents systematically lied to household survey interviewers, telling them that such workers in their households are not employed. However, it is implausible that respondents thus conceal all, or even most, workers on whom employers do not pay UI taxes.

27. Irwin Ross, "Why the Underground Economy is Booming," *Fortune*, October 9, 1978, pp. 92–98.

28. An analysis of ES–202 returns indicates that, from March 1974 to March 1975, the increase in the number of jobs concealed by tax-evading firms cannot have been very large. In goods-producing industries, which accounted for the entire employment decline, total ES–202 employment declined 10.4 percent, or 2,559,000, but establishments with fewer than 20 workers—for which one would expect the rate of tax evasion to be much higher than for larger establishments—reported an employment decline of only 4.8 percent, or 135,000. In private service-producing industries, where small firms account for a larger share of employment, total ES–202 employment increased 0.5 percent, or 193,000, but establishments with fewer than 20 workers reported an employment increase of 1.5 percent, or 166,000. (*Employment and*

years, there is no evidence on cyclical fluctuations in tax evasion. I conclude that cyclical fluctuations in tax evasion were probably small or did not occur, but I cannot rule out the possibility that they were substantial.

There are other causes of inaccuracy in the ES-202 series but none appear to affect the cyclical accuracy of the series.[29]

Comparison of payroll and ES-202 series.—When employment in agriculture (including agricultural services) and private households, and in U.S. territories, is subtracted from the published ES-202 series for private employment, the resulting adjusted ES-202 series is conceptually the same as the adjusted payroll series for private employment minus uncovered employment. Accordingly, the difference between the adjusted payroll series for private employment and the adjusted ES-202 series is conceptually the same as uncovered employment.

As previously mentioned, the ES-202 tabulations for March are the principal source for the benchmarking of the payroll survey, which is done almost every year. The issue, then, is whether reports by establishments in the payroll survey panel have somehow introduced cyclical error between benchmarks. If this had been the case, the adjusted payroll series would have fluctuated more, cyclically, than the adjusted ES-202 series—which, I concluded above is probably cyclically accurate.[30] Accordingly, the difference between the adjusted payroll series for private employment and the adjusted ES-202 series would have fluctuated cyclically—

Wages: First Quarter 1974, and *Employment and Wages: First Quarter 1975 (Based on the 1967 S.I.C.))*. The smaller decline and the larger increase in the small establishments indicates that the increase in tax evasion there cannot have been very large. Of course, the true employment decline in the small goods-producing establishments could have been less than 4.8 percent, and the true employment increase in the small service-producing establishments could have been more than 1.5 percent, but I know of no evidence or line of reasoning that would suggest that this was the case.

29. For example, a few employers apparently misunderstand the instructions in the ES-202 report, and state the number of workers who worked or were absent with pay at any time during the quarter, or include workers who were absent without pay. Error may also arise in the processing of the collected data, or in imputations that State agencies make for late reporters.

30. This analysis assumes that cyclical exaggeration between benchmarks has not been masked by countercyclical fluctuations in uncovered employment.

Table 4.—Adjusted Payroll Employment Minus Adjusted ES–202 Employment, Private Nonagricultural Establishments, 1956–77

[Thousands of employees, seasonally adjusted]

	Goods-producing industries	Service-producing industries	Total		Goods-producing industries	Service-producing industries	Total
1956: I[1]	926	6,033	6,959	1967: I	266	5,746	6,012
II	950	5,425	6,375	II	242	5,811	6,053
III	887	5,253	6,140	III	225	5,867	6,092
IV	825	5,195	6,020	IV	229	5,924	6,153
1957: I[2]	803	4,948	5,751	1968: I	208	5,921	6,129
II	818	4,956	5,774	II[5]	189	5,931	6,120
III	785	4,996	5,781	III	149	5,998	6,147
IV	788	4,919	5,707	IV	215	6,087	6,302
1958: I[3]	481	5,154	5,635	1969: I[6]	190	6,105	6,295
II	364	5,138	5,502	II	205	6,080	6,285
III	342	5,189	5,531	III	253	6,093	6,346
IV	403	5,273	5,676	IV	272	6,100	6,372
1959: I	451	5,258	5,709	1970: I	319	6,213	6,532
II	452	5,331	5,783	II	351	6,291	6,642
III	430	5,302	5,732	III	364	6,249	6,613
IV	421	5,277	5,698	IV	392	6,397	6,789
1960: I	457	5,289	5,746	1971: I[7]	428	6,050	6,478
II	430	5,327	5,757	II	473	6,055	6,528
III	417	5,321	5,738	III	504	5,942	6,446
IV	394	5,313	5,707	IV	576	5,981	6,557
1961: I	387	5,278	5,665	1972: I[8]	272	2,447	2,719
II	378	5,272	5,650	II	282	2,212	2,494
III	370	5,319	5,689	III	251	2,129	2,380
IV	343	5,348	5,691	IV	232	1,996	2,228
1962: I	355	5,332	5,687	1973: I	130	1,747	1,877
II	379	5,364	5,743	II	105	1,646	1,751
III	379	5,378	5,757	III	139	1,624	1,763
IV	362	5,389	5,751	IV	153	1,635	1,788
1963: I	371	5,393	5,764	1974: I[9]	127	1,707	1,834
II	385	5,369	5,754	II	82	1,687	1,769
III	379	5,406	5,785	III	14	1,659	1,673
IV	343	5,432	5,775	IV	30	1,755	1,785
1964: I	317	5,506	5,823	1975: I[10]	[11] −30	1,819	1,789
II	331	5,522	5,853	II	−37	1,891	1,854
III	335	5,548	5,883	III	−42	1,939	1,897
IV	336	5,564	5,900	IV	−41	1,875	1,834
1965: I	328	5,605	5,933	1976: I	−15	1,860	1,845
II	310	5,688	5,998	II	−41	1,964	1,923
III	322	5,707	6,029	III	−60	1,929	1,869
IV	328	5,664	5,992	IV	−83	1,942	1,859
1966: I[4]	298	5,593	5,891	1977: I	−70	1,960	1,890
II	255	5,613	5,868	II[12]	−61	1,845	1,784
III	235	5,625	5,860	III	−50	1,884	1,834
IV	237	5,646	5,883	IV	−164	1,842	1,678

1. Federal legislation effective January 1, 1956 extended mandatory unemployment insurance coverage to employers of four or more workers who had paid wages for 20 or more weeks. Previously, the Federal minimum had been eight workers. Some of the increase in ES-202 employment during subsequent quarters of 1956 was due to late compliance with the new law.

2. In 1957:I, New York extended coverage to employers of two workers; previously, the minimum had been three workers. As a result, about 100,000 additional workers were covered.

3. Approximately 300,000 workers in fluid-milk and ready-mixed concrete plants were shifted from trade to manufacturing in ES-202 reports in 1958:I, due to a revision of the Standard Industrial Classification (SIC). In the payroll series, BLS made the shift retroactive.

4. In 1966:I, Michigan extended coverage to employers of one worker; previously, the minimum had been four workers. As a result, about 100,000 additional workers were covered.

5. In 1968:II, Connecticut extended coverage to employers of one worker; previously, the minimum had been four workers. As a result, about 20,000 additional workers were covered.

6. In 1969:I, New Jersey extended coverage to employers of one worker; previously, the minimum had been four workers. As a result, about 100,000 additional workers were covered.

7. In 1971:I, both New York and Connecticut extended coverage to nonprofit organizations. As a result, about 400,000 additional workers were covered.

8. Federal legislation effective January 1, 1972 extended mandatory unemployment insurance coverage to employers of one or more workers who had paid wages for 20 weeks or more or paid $1,500 in wages in the current or previous quarter. This legislation also sharply curtailed the list of excepted industries. Some of the increase in ES-202 employment during subsequent quarters of 1972 was due to delayed compliance with the new law. Also, it appears that some previously nonreporting employers who were covered prior to January 1972 began reporting for the first time.

9. Although BLS published a March 1974 benchmark in October 1975, it discarded the March 1974 benchmark when it revised the payroll series for 1970–78 in connection with the March 1977 benchmark. For March 1973–February 1975, accordingly, the payroll survey probably measures the change in employment less accurately than it did before this latest revision. This fact explains part of the instability of the difference series for goods-producing industries in 1973–74. When I computed the difference on the basis of the unrevised payroll series, it fluctuated over a range of about 50,000, compared with 140,000 in the table.

10. Approximately 100,000 employees of operative builders and of various manufacturing plants were shifted from service-producing to goods-producing industries in the ES-202 series in 1975:I, due to a revision of the SIC and to recoding of the ES-202 returns. In the payroll series, BLS made the shift retroactive.

11. The negative difference for goods-producing industries in 1975–77 is due to a recurring tendency for the (seasonally unadjusted) ES-202 series to increase more than the (seasonally unadjusted) payroll series in the second and third quarters of the year. In the first quarter, which includes the benchmark month, the seasonally unadjusted difference was positive in 1975–77, but in the second and third quarters it was strongly negative. Accordingly, the seasonally adjusted difference was negative throughout the year.

12. Pending their revision to a March 1978 benchmark, the payroll series for the last three quarters of 1977 may not accurately measure employment in new firms.

Sources: Payroll data are from *Employment and Earnings*. ES–202 data for 1956–74 are from *Employment and Wages*; for 1975–77, the estimates were prepared by BEA from State reports (the 1977 estimates are preliminary).

NOTE.—Agriculture services employment is excluded from both the payroll series and the adjusted ES-202 series. Employment in Puerto Rico and the Virgin Islands, and in commercial farms and private households, is excluded from the adjusted ES-202 series. Employment in Alaska and Hawaii is excluded from the adjusted ES-202 series for 1956–58.

declining in contractions and increasing in recoveries and expansions.

In table 4, the seasonally adjusted difference between the payroll series and the adjusted ES–202 series is shown for 1956–77 for all private employment, and separately for goods-producing and service-producing industries.[31] In examining the table, it is important to bear in mind that extensions of UI coverage under Federal or State law (documented in the footnotes to table 4) have intermittently reduced the difference series; that some workers were shifted from the service-producing to the goods-producing difference series in 1958 and in 1975; and that the goods-producing difference increased in 1969–71 because BLS wedged about 200,000 previously unreported construction workers into the payroll series at the time of the 1973 benchmark revision.[32]

The table shows that there was no persistent cyclical pattern in the difference for all private industries, although it declined about 250,000 during the 1957–58 contraction, due mostly to a decline in uncovered railroad employment, and it increased a similar amount in the 1958–59 recovery, due at least in part to growth in employment in hospitals and other uncovered sectors of the services industry. Similarly, there was no persistent cyclical pattern in the difference for goods-producing industries (which contained few uncovered workers and in which cyclical employment fluctuations were sharp), or for service-producing industries (which contained many uncovered workers and in which cyclical employment fluctuations were mild).

In summary, because the ES–202 series probably did not substantially exaggerate cyclical fluctuations in covered private employment, and because there was no persistent cyclical pattern in the difference between the payroll series and the adjusted ES–202 series, I conclude that the payroll series

probably did not substantially exaggerate cyclical fluctuations in private employment during the period 1956–77.

Government employment

For Federal employment, BLS uses the monthly Civil Service Commission (CSC) series. The number of workers covered by Unemployment Compensation for Federal Employees (UCFE) is a series that is conceptually similar to the CSC series.[33]

The UCFE series has been consistently higher than the CSC series, in recent years by about 170,000, because the latter excludes Federal employees paid with nonappropriated funds.[34] The difference between the UCFE and the CSC series has fluctuated seasonally, and even the seasonally adjusted difference has fluctuated somewhat. However, because there was no cyclical pattern to the difference between the two series in the period 1957–74, and because Federal supervisors would have little motive or opportunity to file inaccurate UI reports, it appears that the CSC series has been cyclically accurate.

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33. Both the CSC and the UCFE series exclude employees of the Central Intelligence Agency and the National Security Agency.

34. Workers at canteens and other facilities on military bases, many of whom are military moonlighters and are therefore not in the adjusted household employment measure (section 2 of this article), account for a large share of Federal employees paid with nonappropriated funds.

The methodology of the payroll series for State and local government is complex, and there is no alternative series that is suitable for comparison with it. As a result of deficiencies in the underlying data, the payroll series has apparently been less accurate for State and local government than for most industries in the private sector.

According to the payroll series, State and local government employment has grown steadily in all phases of the business cycle in the period since 1959 (chart 3). Accordingly, error in the payroll series for State and local government could not have exaggerated cyclical fluctuations in total payroll employment unless true employment in State and local government increased even more than the payroll measure of State and local government employment in contractions, and increased less in recoveries and expansions. There is no evidence that this kind of error has occurred, and it is difficult to understand how it could have occurred, except in the most recent contraction—when BLS found it difficult to measure the increase in State and local government employment under the Comprehensive Employment and Training Act (CETA). In earlier contractions, there was no counterpart to CETA, and State and local governments lacked the funds to launch countercyclical employment programs on their own.

Section 4: Cyclical Accuracy of the Household Survey

In this section, I will show that two statistical errors have substantially dampened cyclical declines in the adjusted household employment measure—that is, the household measure of adjusted nonagricultural wage and salary workers (ANWSW)—and that one of the errors has somewhat dampened cyclical increases in ANWSW. The conclusions of this section also apply to the household measure of total employment.

Much of my analysis will be in terms of ANWSW ratios. The aggregate ANWSW ratio is the percentage of the civilian noninstitutional population age 14 and above (CNIP) that either worked at, or was on paid leave from, a

nonagricultural wage and salary job outside private households during the calendar week that included the 12th of the month. Similarly, for any sex-race-age group, the ANWSW ratio is the corresponding percentage of the CNIP in the group.

Underlying the "official" monthly ANWSW estimate, which is based on employment estimates prepared by the Census Bureau (table 1), are data from two independent sources.[35] (1) From the most recent decennial census, the Census Bureau extrapolates population

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31. The seasonally unadjusted differences are low in the second and third quarter. This seasonal pattern may reflect, at least in part, a tendency for the payroll survey panel to miss recreational and resort establishments that only exist, or are only active, in summer.

32. Carol Utter, "BLS Establishment Estimates Revised to March 1973 Benchmark Levels," *Employment and Earnings*, December 1974.

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35. As used in this section, the term "official" refers to household survey employment and population estimates that are either published or that are unpublished but consistent with published estimates.

for 84 separate sex-race-age groups in the CNIP to obtain current population control totals. (2) From a sample of 56,000 households, the Census Bureau ascertains ANWSW ratios for each of the 84 sex-race-age groups.[36] To estimate ANWSW, the Census Bureau multiplies the sample ANWSW ratios by the population control totals. I will discuss two statistical errors underlying this procedure.

1. Control total error: Because of undercount in the decennial census, the population control totals for the 84 sex-race-age groups are understated, by varying percentages. It is convenient to distinguish two elements in control total error. The scale element is the error in aggregate CNIP; the nonscale element is the differential percentage error for the sex-race-age groups.

2. Undercoverage: The sample from which the Census Bureau ascertains ANWSW ratios for the sex-race-age groups misses some of the persons it is designed to cover.

Although ANWSW is derived by multiplying ANWSW ratios for 84 sex-race-age groups by corresponding population control totals, it can be thought of as the product of an aggregate ANWSW ratio times an aggregate population control total. In this section, I will examine the effect of control total error and undercoverage on each term of this product, to determine the implications of these errors for the cyclical accuracy of ANWSW.

Cyclical error in the ANWSW ratio

In the first part of this section, I will examine the effect of control total error and undercoverage on cyclical declines in the ANWSW ratio in two steps. (1) Provisionally disregarding undercoverage, I will show that the nonscale element of control total error dampens cyclical declines in the ANWSW ratio. (2) After correcting for the nonscale element of control total error, I will show that undercoverage further dampens cyclical declines in the ANWSW ratio. In passing, I will briefly discuss the accuracy of cyclical increases in

the ANWSW ratio. The conclusions of this part also apply to the employment ratio, which is the ratio of total employment to CNIP.

In the second part of this section, I will show that the scale element in control total error has dampened most cyclical fluctuations in ANWSW. I will then analyze the combined effect of control total error and undercoverage on cyclical fluctuations in ANWSW and present an illustrative calculation of their effect on the ANWSW decline in one contraction. To facilitate understanding of the entire section, I present an arithmetic example in appendix A that shows the interrelation of control total error and undercoverage.[37]

Control total error and its effect.—The Census Bureau derives "official" population control totals for 84 sex-race-age groups of the CNIP age 14 and over by "aging" the most recent decennial

census and adding estimates of net immigration minus mortality.[38]

Jacob S. Siegel used birth registrations and other data to estimate independently the 1970 population and concluded that the 1970 census undercounted the population by 2.5 percent.[39] On the basis of this work, the Census Bureau has developed for internal use a series of annual population estimates corrected for census undercount. In this section, I will assume that these estimates accurately measure the population.[40] Official and "corrected" CNIP for 1975 are shown at the top of table 5. I define the "undercount group" (table 5, line 2) as the difference between the corrected and official CNIP.

The "corrected" ANWSW ratio is the ratio that the Census Bureau would obtain if it multiplied the sample ANWSW ratios by corrected popula-

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Table 5.—Household Survey Undercoverage, 1975

Line		Total	Men			Women		
			Total	White	Black and other	Total	White	Black and other
		Millions of persons						
1	Official civilian noninstitutional population (CNIP), age 14 and over	159.71	75.70	67.03	8.67	84.02	73.62	10.40
2	Plus: Undercount group	4.09	2.73	1.82	.91	1.36	.95	.41
3	Equals: Corrected CNIP	163.80	78.43	68.85	9.58	85.37	74.56	10.81
4	Less: Population covered by household survey [1]	154.13	72.24	64.58	7.66	81.89	72.09	9.80
5	Equals: Uncovered population	9.67	6.18	4.27	1.91	3.48	2.47	1.01
6	Less: Population in uncovered housing units	2.80	1.34	1.15	.19	1.46	1.26	.20
7	Equals: Residual uncovered population	6.87	4.84	3.12	1.73	2.03	1.22	.81
		Percentage						
8	Uncovered population as a percentage of corrected CNIP	5.90	7.89	6.20	19.98	4.08	3.31	9.38
9	Population in uncovered housing units as a percentage of corrected CNIP	1.71	1.71	1.67	1.96	1.71	1.68	1.89
10	Residual uncovered population as a percentage of corrected CNIP	4.19	6.18	4.53	18.02	2.37	1.63	7.49
11	Undercount group as a percentage of corrected CNIP	2.55	3.48	2.71	10.52	1.59	1.29	3.94

[1] Annual average.

Source: Census Bureau. Line 2 is consistent with Census Bureau, *Current Population Reports*, Series P-25, No. 614, "Estimates of the Population of the United States, by Age, Sex, and Race: 1970 to 1975," 1975. Line 6 is estimated by BEA.

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36. More specifically, the Census Bureau ascertains the ratios, to CNIP, of nonagricultural wage and salary employment and of each of the adjustment items that I use to compute ANWSW.

37. The implications of the two errors for the accuracy of the household survey employment and unemployment estimates (but not for changes in these estimates) were examined by Robert Yuscavage, David Hirschberg, and Fritz Scheuren in "The Impact on Personal and Family Income of Adjusting the Current Population Survey for Undercoverage," *Proceedings of the Social Statistics Section, 1977*, American Statistical Association, pp. 70-80; and by Denis F. Johnston and James R. Wetzel in "Effect of the Census Undercount on Labor Force Estimates," *Monthly Labor Review*, March 1969, pp. 3-13. Unlike the present article, the the study by Johnston and Wetzel implicitly assumed that undercoverage is quantitatively equal to control total error and that the characteristics of persons missed by the sample are precisely the same as those of persons missed by the census.

38. It should be noted that the official control totals are never revised. Accordingly, official CNIP, as the term is used in this article, is not inconsistent with revised population estimates that the Census Bureau publishes when more accurate mortality and net immigration become available, or when the next decennial census is taken.

39. Census Bureau, *Estimates of Coverage of Population by Sex, Race, and Age: Demographic Analysis*, PHC(E)-4, 1974; Census Bureau, *Current Population Reports*, Series P-23, No. 56, "Coverage of Population in the 1970 Census and Some Implications for Public Programs," 1975. In a detailed review of Siegel's estimates, Fay concluded that for whites the undercount was 800,000 larger than Siegel estimated, but that the confidence interval around his own estimate encompassed Siegel's estimate. Robert E. Fay III, *Statistical Considerations in Estimating the Current Population of the United States*, unpublished Ph.D. dissertation, University of Chicago, 1974.

40. Migration is the principal factor that the Census Bureau cannot reliably quantify. See appendix D of this article.

tion control totals, and divided the resulting ANWSW estimate by corrected CNIP.[41] I will show that, in contractions, the nonscale element in control total error causes the corrected ANWSW ratio to decline more than the official ratio. I draw this conclusion on the basis of evidence that the sex-race groups with the largest census undercount rates experience the largest cyclical declines in their ANWSW ratios.[42] Table 6 shows census undercount rates for persons of working age (18–64). Chart 5 shows employment ratios for periods of contraction and recovery; because ANWSW accounted for about 76 to 86 percent of employment during 1956–77, employment ratios can serve as indicators of the cyclical behavior of ANWSW ratios.[43]

1. Declines in the employment ratio have been much larger for men than for women, and the census undercount rate for men was 1.9 times that for women in 1960 and 2.7 times that for women in 1970.

2. Declines in the employment ratio for black and other men have been much larger than for white men, and the census undercount rate for black and other men was 5.3 times that for

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CHART 5

Employment Ratios by Sex and Race

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Data: Bureau of Labor Statistics
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41. It is technically feasible for the Census Bureau to compute and publish corrected employment data. To date, the Census Bureau has decided not to do this, for two reasons. First, the estimates of census undercount are subject to error. Second, the Census Bureau has not been able to develop a reliable method for estimating census undercount for States and localities. Consequently, the best available estimates of national population are inconsistent with the best available estimates of State and local populations. For a report on attempts to estimate undercount by States, see Census Bureau, *Current Population Reports*, Series P-23, No. 65, "Developmental Estimates of the Coverage of the Population of States in the 1970 Census: Demographic Analysis," 1977.

If the Census Bureau were to compute corrected employment data, it would have to utilize the corrected control totals that would be available at the time of the household survey, just as it now uses the official control totals that are available at the time of the survey. The Census Bureau could not revise corrected control totals—just as it cannot revise official control totals—to incorporate mortality, net immigration, and other demographic data that subsequently become available. However, the corrected control totals used in the present article to analyze statistical error in 1956-77 do incorporate such revisions.

42. In this analysis, I ignore variations in the undercount rate among age groups. For a discussion of the effect of such variations in 1974-75, see the illustrative calculation at the end of this section, and footnote 47.

The scale element in control total error has no effect on the ANWSW ratio, because it has the same effect on the numerator that it has on the denominator of that ratio.

43. Because self-employment and employment in agriculture and private households are not cyclically sensitive, it is unlikely that these non-ANWSW types of employment accounted for any of the sex-race differentials in the cyclical behavior of the employment ratio that are depicted in chart 5.
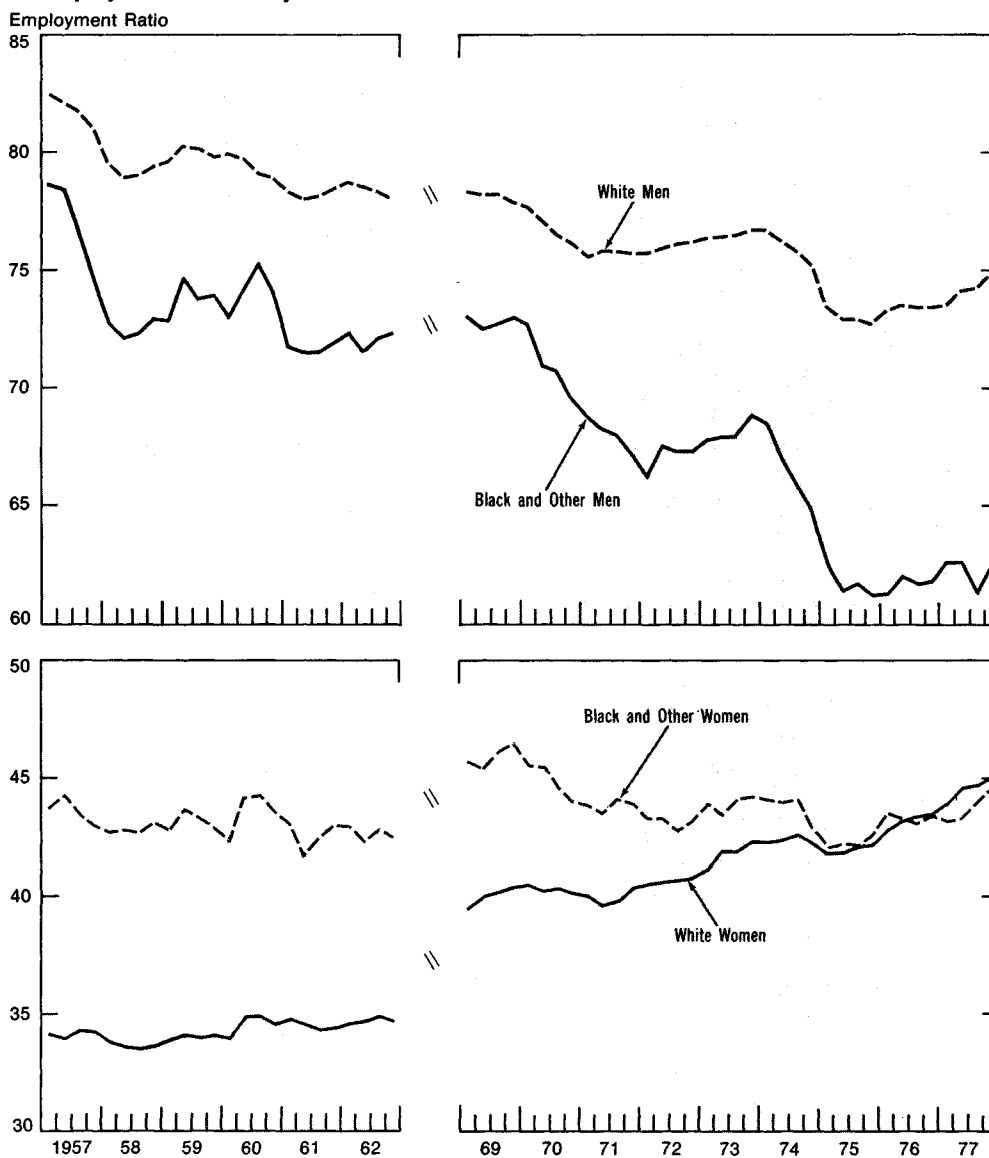
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white men in 1960 and 4.0 times that for white men in 1970.

3. Declines in the employment ratio for black and other women have been larger than for white women, and the census undercount rate for black and other women was 5.8 times that for white women in 1960 and 4.1 times that for white women in 1970. However, this factor does not contribute very much to the difference between cyclical declines in the corrected and official ANWSW ratios, because the employment ratio for black and other women has not declined much more than that for white women, and because women

account for a disproportionately small share of census undercount.

With respect to cyclical increases in the ANWSW ratio, I conclude that, after 1959, the corrected ANWSW ratio showed no larger increases than the official ratio in recoveries and expansions, because the sex-race groups with the largest census undercount rates did not experience above-average employment ratio increases during such periods. During the 1958–59 recovery, however, the corrected ANWSW ratio increased more than the official ratio, because employment ratio increases were larger for men than for women, and were

also larger for black and other men than for white men.

Undercoverage and its effect.—The household survey sample is designed to cover a certain proportion of noninstitutional housing units in the Nation.[44] At units designated for the sample, interviewers inquire about the employment activities of all household members age 14 and over, except Armed Forces members. To estimate the population actually covered by the sample, the Census Bureau multiplies the population in each sample household by the household's weight (the inverse of its probability of selection) and adds the products.[45] For example, in 1975, the survey, on average, covered 154.13 million persons (table 5). The population missed by the sample, i.e., the "uncovered population," equals corrected CNIP, 163.80 million in 1975, minus the covered population.[46] In 1975, the uncovered population averaged 9.67 million persons.

The undercoverage rate, the uncovered population as a percentage of corrected CNIP, was 5.90 percent in 1975 (line 8). The undercoverage rate varies greatly by sex, race, and age, and has always been largest for black and other men and smallest for white women (chart 6).

I define the "full-coverage" ANWSW ratio as the ratio that the Census Bureau would estimate if it could eliminate both errors under consideration in this

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44. The sample is designed, in principle, to include units enumerated in the decennial census, units overlooked in the census, and units constructed after the census. For a brief discussion of design flaws that cause the sample, in practice, to miss some of these housing units, see appendix B. For descriptions of the sample design, see Marvin M. Thompson and Gary Shapiro, "The Current Population Survey: An Overview," *Annals of Economic and Social Measurement,* April 1973; Census Bureau, *The Current Population Survey: Design and Methodology,* by Robert H. Hanson, Technical Paper No. 40, 1978; and Margaret E. Schooley, "Revisions in the Current Population Survey in January 1978," *Employment and Earnings,* February 1978.

45. Occupied housing units at which the interviewer was unable to conduct an interview ("noninterviews") are implicitly included in the covered population, because the Census Bureau redistributes their selection probabilities among respondent households (see footnote 81). The Census Bureau also adjusts the selection probabilities to compensate for differences—in regard to race, residence, and region—between areas covered by the sample and areas not covered by the sample.

46. This measure of the uncovered population is conceptually the same as that proposed by Siegel in "Completeness of Coverage of the Nonwhite Population in the 1960 Census and Current Estimates, and Some Implications," *Social Statistics and the City,* David M. Heer, Editor, Report of a Conference Held in Washington, D.C., June 22–23, 1967, Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University, 1968.

CHART 6

Household Survey Undercoverge of the Corrected Civilian Noninstitutional Population Age 14 and Over, by Sex and Race
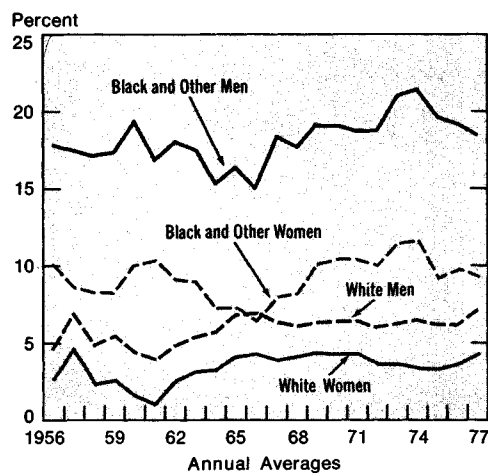
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section—i.e., if the population control totals were corrected for census undercount and if the sample fully covered the population.[47] Unlike the corrected ANWSW ratio, the full-coverage ANWSW ratio is not calculable, because data on the ANWSW ratios of uncovered persons are not available.

In appendix A, I show that the question of whether the full-coverage ANWSW ratio declines more, in contractions, than the corrected ANWSW ratio depends on whether the ANWSW ratios of uncovered persons decline more than do the ANWSW ratios of their covered counterparts of the same sex, race, and age. I will now try to establish that the ANWSW ratios of uncovered persons probably decline more than do the ANWSW ratios of their covered counterparts. I will present the argument, which is somewhat complex, in three steps.

First, the evidence presented in the appendixes clearly indicates that un-

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47. The full-coverage ANWSW ratio would be the true ANWSW ratio if the two errors under consideration were the only statistical errors in the household survey that affect the ANWSW estimate. In fact, there are other statistical errors. The effect of uncounted migration is discussed in appendix D. There is also response error; see Alfred Tella (see footnote 8). For an extensive review of other statistical errors in the household survey, see Camilla A. Brooks and Barbara A. Bailar, "An Error Profile: Employment as Measured by the Current Population Survey," *Statistical Policy Working Paper No. 3,* Office of Federal Statistical Policy and Standards, 1978.

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covered persons are poorer than their covered counterparts of the same sex, race, and age.[48] In appendix B, I show that persons who live in housing units that are not covered by the sample—and who accounted for an estimated 29 percent of uncovered persons in 1975 (table 5, line 6)—are not less poor and perhaps are poorer than their covered counterparts. In appendix C, I draw on evidence from a wide variety of sources to show that persons in the residual uncovered population (line 7), which consists mainly of persons omitted from rosters of residents given by respondents to interviewers, are considerably poorer than their covered counterparts.

Second, on the basis of what is known about the functioning of the labor market and the limited evidence available, I conclude that the ANWSW ratios of poor persons probably decline more in contractions then do those of more affluent persons of the same sex, race, and age. It is generally agreed that poor persons experience disproportionate employment losses in contractions, because they are less skilled on average than more affluent persons and therefore—for a variety of reasons—are fired first by employers. The limited evidence is as follows.

1. Analyzing longitudinal data for 2,600 families in the period 1967–72, Edward M. Gramlich found that cyclical fluctuations in the time spent unemployed were larger for poor male family heads than for more affluent ones. Gramlich's regressions showed that, when the national unemployment rate changed 1 percentage point, white and black male heads of families with average incomes at the poverty line experienced changes of 1.31 and 2.14 percentage points in weeks of unemployment, respectively, and those with average incomes at five times the poverty level experienced changes of only 0.65 and 1.31 percentage points.[49] Provided—as seems reasonable—that there is some correlation between increases in unemployment and declines

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48. The possibility that uncovered persons differ systematically from their covered counterparts, and that the household survey sample is therefore biased, was recognized by Siegel in 1967. "Completeness of Coverage," p. 28n.

49. "The Distributional Effects of Higher Unemployment," *Brookings Papers on Economic Activity,* 2:1974, p. 312.

in ANWSW ratios, Gramlich's study supports my conclusion.

2. Household survey data show that in the 1974–75 contraction the non-agricultural employment ratio declined more in metropolitan poverty areas than outside these areas for each sex-race group except black and other women (table 7). Although the interarea differences in the declines are small relative to the standard errors of these differences, the fact that the ratios did decline more in the metropolitan poverty areas than outside these areas for three of the four sex-race groups, and did not decline less for the fourth group, lends some support to my conclusion.

3. Each March since 1964, the household survey has gathered data on the educational attainment of the population. In chart 7, standardized employment ratios for 1964–77 are shown for selected educational attainment strata within eight sex-race-age groups. In those periods when the adult male unemployment rate was increasing (March 1969–March 1971 and March 1974–March 1975), the employment ratios of persons with less than 12 years of education declined more—for most sex-race-age groups—than did those of better-educated persons. The differentials were largest for men—a fact that is important for my argument, because the undercoverage rates for men have been about double those for women. Because persons with low educational attainment are more likely to be poor than persons with high educational attainment, the data support my conclusion.[50]

Third, I assume that cyclical declines in the ANWSW ratio of uncovered poor persons are not very different from those of covered poor persons of the same sex, race, and age; if this were not the case, the circumstantial evidence just cited, which relates to persons covered by the household survey and by another survey, would have no bearing on the conclusion that I am trying to establish. In opposition to my assumption, one could argue that cyclical

Table 6.—Undercount Rates for the Population Age 18–64 in the 1960 and 1970 Censuses

[Percent]

	1960	1970
Total	3.0	2.8
Men	3.9	4.1
White	2.6	3.0
Black and other	13.8	12.1
Women	2.1	1.5
White	1.4	1.1
Black and other	8.1	4.5

Source: Census Bureau, *Current Population Reports*, Series P-25, No. 519, "Estimates of the Population of the United States, by Age, Sex, and Race: April 1, 1960 to July 1, 1973," 1974.

Table 7.—Nonagricultural Employment Ratios for Persons Age 18–64, 1974: I–III and 1975: I–III

[Percent]

Sex, race, and area of residence	1974: I–III	1975: I–III	Change [1]	Addendum: 1975 population age 18–64 (millions)
White men:				
Metropolitan poverty	74.0	70.0	−4.0	2.2
Other residence	82.9	79.6	−3.3	49.7
Black and other men:				
Metropolitan poverty	69.0	61.5	−7.5	1.9
Other residence	76.5	71.0	−5.5	4.6
White women:				
Metropolitan poverty	45.0	43.5	−1.5	2.4
Other residence	48.9	48.5	−.4	52.8
Black and other women:				
Metropolitan poverty	43.8	41.4	−2.4	2.6
Other residence	53.6	51.2	−2.4	5.4

1. For persons in metropolitan poverty areas, the standard errors on the change in the nonagricultural employment ratio are in the range of 1.4–1.6 percent. For persons who reside elsewhere, the standard error is 0.2 percent for whites and 0.7–0.9 for black and other races.

Source: Unpublished BLS tabulations from the household survey.

declines in the ANWSW ratios of uncovered poor persons cannot be very large, because few uncovered poor persons ever work. I do not accept this objection, because, although some poor persons of working age never work, I know of no reason why nonworkers should be more heavily represented among poor persons omitted from rosters and among poor residents of "false vacancies"—the two groups that together account for the overwhelming majority of residual uncovered poor persons—than among covered poor persons.[51]

In sum, because uncovered persons

are poorer than their covered counterparts of the same sex, race, and age, and because poor persons probably experience larger cyclical declines in their ANWSW ratios than do more affluent persons of the same sex, race, and age, I conclude that uncovered persons probably experience larger cyclical declines in their ANWSW ratios that do their covered counterparts. Accordingly, the full-coverage ANWSW ratio probably declines more, in contractions, that does the corrected ANWSW ratio.

Although many labor market analysts believe that poor persons experience disproportionate employment gains when the labor market is relatively tight, because only then are they hired or rehired, the three pieces of evidence cited above do not either support or clearly rule out the conclusion that the ANWSW ratios of poor persons increase more in such periods than do those of more affluent persons of the same sex, race, and age.[52] Accordingly, I can neither confirm nor rule out the possibility that the full-coverage ANWSW ratio increases more than does the corrected ANWSW ratio in such periods.

Cyclical error in ANWSW

Having considered cyclical error in the ANWSW ratio, I will now discuss cyclical error in ANWSW, which can be thought of as the product of the ANWSW ratio and aggregate CNIP. I will first show that understatement of the aggregate CNIP, i.e., the scale element in control total error, has dampened most cyclical fluctuations in ANWSW, and then analyze the combined effects of control total error and undercoverage on the change in ANWSW in contractions and in recoveries and expansions.

The scale element in control total error reduces ANWSW by the product of the ANWSW ratio and the size of the undercount group. Accordingly,

50. Correlation between low educational attainment and poverty is suggested, for example, by the following: Among men age 35–44 with less than 12 years of education, 9.2 percent of whites and 22.3 percent of blacks had 1975 incomes below the poverty level. Among those with 12 or more years of education, only 4.2 percent of whites and 7.5 percent of blacks had 1975 incomes below the poverty level. Census Bureau, *Current Population Reports*, Series P-60, No. 106, "Characteristics of the Population Below Poverty Level: 1975," 1977.

51. For a discussion of the characteristics of each of the component groups of the residual uncovered population, see appendix C.

In support of my view, a small-scale study in a poor New York neighborhood in 1967 found that most of the men of working age were working at the time of the study, and there was no significant difference in the proportion of men working between those whose presence had been reported and those who had been omitted from rosters in an earlier survey. For a description of the study, see appendix C. Alan Harwood, personal communication to the author.

52. One piece of evidence suggests that the ANWSW ratios of poor persons do not increase more than do those of more affluent persons of the same sex, race, and age. Persons with less than 12 years of education—who are more likely to be poor than persons with high educational attainment—did not experience larger employment ratio increases than did better-educated persons in periods when the adult male unemployment rate was declining to a relatively low level (March 1964–March 1969 and March 1972–March 1973). However, the Gramlich study did not distinguish between periods of increasing and decreasing unemployment, and employment data by residence in metropolitan poverty areas are not available for any period under analysis in which the labor market became relatively tight, because these data from the household survey were first tabulated in 1973.

CHART 7

Standardized Employment Ratio, by Years of School Completed

MEN

Employment ratio

WHITE, AGE 18-34

WHITE, AGE 35-64

BLACK AND OTHER, AGE 18-34

BLACK AND OTHER, AGE 35-64

WOMEN

Employment ratio
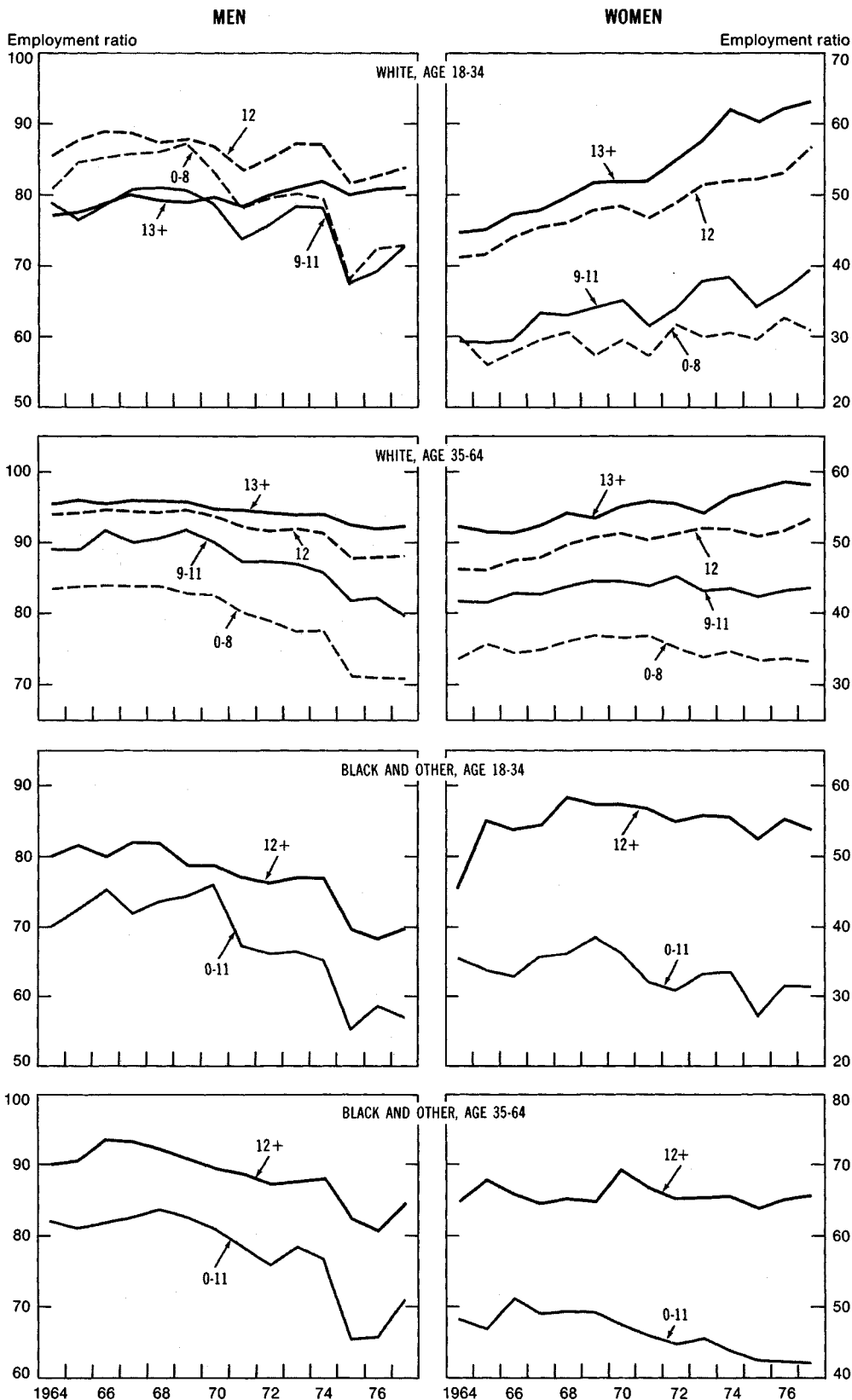
Note.—Based on unpublished BLS tabulations from the March household survey. Original data for six age groups (18-19, 20-24, 25-34, 35-44, 45-54, and 55-64) were combined. To standardize for secular shifts in the age distribution within each educational group, the average March population for the 14-year period was used as a fixed weight for each sex-race-age-education group. For whites, the standard error of the employment ratio ranges from about 0.3 to about 1.6 percent. For black and other races, it ranges from about 1.2 to about 2.0 percent.

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the scale element in control total error reduces the change in ANWSW between any two periods by the difference between the products, for the first and second periods respectively, of the ANWSW ratio and the size of the undercount group. In periods when the size of the undercount group is constant, the scale element of control total error reduces the change in ANWSW by the product of the change in the ANWSW ratio and the size of the undercount group.

For 1956–62 and 1972–77, I regard the size of the undercount group, which then averaged about 4 million, as constant, because its year-to-year variations, which did not exceed about 150,000, are not necessarily indicative of changes in the understatement of CNIP.[53] From 1962 to 1971, however, the size of the undercount group increased almost 800,000. The size of the undercount group then abruptly declined about 700,000 in January 1972, when the Census Bureau switched to the 1970 census in estimating official population control totals. These changes are so large that they can be taken as indicative of substantial changes in the understatement of CNIP.

In those periods when the size of the undercount group was constant, 1956–62 and 1972–77, the scale element in control total error dampened changes in ANWSW by the product of the change in the ANWSW ratio (chart 8) and the size of the undercount group, 4 million. In 1962–72, when the size of the undercount group was changing, the scale element in control total error sometimes dampened cyclical changes in ANWSW, but did not always do so. I will discuss this period in the course of analyzing the effect of control total error and undercoverage on ANWSW in contractions, and in recoveries and expansions.

Contractions: illustrative calculation.— Control total error and undercoverage have generally dampened cyclical de-

53. Year-to-year variations in the size of the undercount group reflect, in addition to the aging of the population and the fact that the corrected CNIP series incorporates mortality and migration data that were not available at the time the Census Bureau estimated official CNIP, minor methodological differences between the corrected and official CNIP series, and intermittent administrative decisions to revise the methodology or data used in estimating one or the other of the series.

clines in ANWSW, because undercoverage and the nonscale element in control total error have dampened cyclical declines in the ANWSW ratio, and because the scale element in control total error has generally dampened declines in ANWSW. I will present an illustrative calculation of the error in the most recent contraction; reference to appendix A will facilitate understanding of the calculation. I will then discuss briefly the error in other contractions.

Because of data limitations, it is convenient to discuss error in the cyclical decline of nonagricultural wage and salary workers excluding private household workers (NWSW), a close approximation to ANWSW. NWSW differs from ANWSW only in that it includes unpaid absentees, whose numbers have averaged about 2.1 million in recent years. I will assume that findings with regard to NWSW apply to ANWSW.

The illustrative calculation relates to the change in NWSW from the first three quarters of 1974, when the adult male unemployment rate was 3.6 percent, to the first three quarters of 1975, when it was 6.9 percent. I will deal first with the effect of control total error (and its scale and nonscale elements separately), and then with the effect of undercoverage. In calculating the effects of both errors, I use readily available NWSW ratios for 40 sex-race-age groups; the effect of distinguishing only 40, instead of 84, sex-race-age groups cannot be substantial.

1. The effect of control total error, i.e., the difference between the changes in corrected and official NWSW, can be found by multiplying the changes in NWSW ratios of covered persons by the size of the undercount group, by sex, race, and age (as shown in appendix A).[54] The changes in the official NWSW ratio for the four major sex-race groups are shown in line 2 of table 8; these changes are weighted averages of the changes in the underlying NWSW ratios for the various sex-race-age groups. In 1974–75, there were an average of 4,070 thousand persons in the undercount group (line 1), and I assume that the size of the group was constant in 1974–75.

54. The formula is based on the assumption that the size of the undercount group remains constant.

Table 8.—An Illustrative Calculation of the Difference Between the Declines in Full-Coverage and Official NWSW, from 1974:I–III to 1975:I–III

[Thousands except where noted]

Line		Total	Men White	Men Black and other	Women White	Women Black and other
	Effect of control total error :					
1	Undercount group	4,070	1,828	897	933	412
2	NWSW ratios from household survey (percent):					
	a. 1974:I–III	48.2	62.4	56.4	36.2	34.6
	b. 1975:I–III	46.6	59.8	51.9	35.8	33.8
	c. Change	−1.6	−2.6	−4.5	−.4	−.8
3	Difference between changes in corrected and official NWSW (1 x 2c, for 40 sex-race-age groups)	−105.0	[1] −53.9	[1] −48.2	[1] .2	[1] −3.1
	Effect of undercoverage:					
4	Uncovered population	10,104	4,397	1,999	2,561	1,147
5	Change in NWSW for uncovered persons:					
	a. Imputed (4 x 2c, for 40 sex-race-groups)	−267.0	[2] −139.6	[2] −110.3	[2] −4.2	[2] −12.9
	b. Assumed true (1.71 x 5a)	−456.6	(3)	(3)	(3)	(3)
	c. Difference between changes in full-coverage and corrected NWSW (5b–5a)	−189.6				
	Combined effect:					
6	Difference between changes in full-coverage and official NWSW (3+5c)	−294.6				

1. Line 3 is not equal to line 1 times line 2c because the components of the figures on line 3 are calculated separately for 10 age groups within each of the sex-race groups.

2. Line 5a is not equal to line 4 times line 2c because the components of the figures on line 5a are calculated separately for 10 age groups within each of the sex-race groups.

3. No figures are shown on line 5b for the sex-race groups, because they would be subject to a very large margin of error.

Line 1: Average for July 1, 1974 and July 1, 1975, for persons age 14 and over. Consistent with *Current Population Reports*, Series P-25, No. 614. Census Bureau.

Line 2: BLS.

Line 3: Based on data from Census Bureau and BLS.

Line 4: Average for first 9 months of 1974 and 1975, for persons age 14 and over. Consistent with *Current Population Reports*, Series P-25, No. 614. Census Bureau.

Line 5a: Based on data from Census Bureau and BLS.

Line 5b. Based on the assumption that residual uncovered persons experience NWSW ratio declines twice the size of those for covered persons of the same sex, race, and age. This calculation is subject to an especially large margin of error (see text). The text presents an alternative calculation based on the assumption that NWSW ratios for residual uncovered persons decline 1.5 times as much as those for covered persons.

NOTE.—NWSW is nonagricultural wage and salary workers age 14 and over, excluding private household workers. The NWSW ratio is the ratio of NWSW to civilian noninstitutional population age 14 and over.

Corrected NWSW declined 105 thousand more than official NWSW (line 3). Men accounted for virtually the entire difference between the corrected and the official NWSW declines, because their NWSW ratios declined substantially and those of women declined only slightly, and because men accounted for a disproportionate share (74 percent) of the undercount group in the working ages 18–64. Black and other men accounted for nearly half the entire difference, because their NWSW ratios declined most, and because they accounted for a disproportionate share (26 percent) of the undercount group in the working ages.

The difference between the corrected and the official NWSW declines equals the sum of the effects of the scale and the nonscale elements of control total error. The effect of the scale element, 65 thousand (the product of the decline in the official ratio, 1.6 percentage points, and the size of the undercount group), is the extra decline in NWSW that would have been found if the corrected NWSW ratio had declined the same amount as the official NWSW ratio. The effect of the nonscale element, 40,000 (the remainder of the 105 thousand), is the extra decline in NWSW that is due to the fact that the corrected NWSW ratio declined more than the published NWSW ratio, because sex-race-age groups that experienced above-average NWSW ratio declines accounted for disproportionately large share of the undercount group.

The effect of the nonscale element is, in turn, the sum of two parts. First, 30,000 is due to the disproportionately large shares of men, and of black and other races, in the undercount group. Second, the other 10,000 is due to the disproportionately large share of persons of working age (18–64), who experienced larger NWSW ratio declines than did younger and older persons of the same sex and race.[55]

55. The effect of shifts in age weights is estimated as follows. Suppose that, within each sex-race group of the undercount group, the age distribution was the same as in the corresponding sex-race group of the official CNIP. To compute the change in NWSW for the undercount group under this hypothetical assumption, I multiply the change in the official NWSW ratio for each sex-race group (line 2c) by the size of the corresponding undercount group (line 1), and add the products. NWSW for the undercount group would have declined only 95 thousand, instead of 105,000. Consequently, the age distribution of the undercount group accounted for 10,000 of the NWSW decline for that group. This occurred because of the interaction of two factors: First, men of working age accounted for a larger share of the male undercount group than of the official male CNIP age 14 and over; and second, the decline in the NWSW ratio was larger for men of working age than for men age 14 and over.

2. The effect of undercoverage, i.e., the difference between the changes in full-coverage and corrected NWSW, equals the true NWSW change for the uncovered population, minus the change imputed to it by multiplying the changes in NWSW ratios of covered persons by the size of the uncovered population, by sex, race, and age (as shown in appendix A).[56]

The calculation of this difference is subject to a large margin of error, because data on the true employment experience of the uncovered population are lacking. I estimate that the NWSW ratio declines for uncovered persons were 71 percent larger on average than for their covered counterparts of the same sex, race, and age. My estimate is based on two assumptions.

First, for residual uncovered persons (71 percent of uncovered persons), I assume that the NWSW ratio declines were about twice those for their covered counterparts. This is an arbitrary assumption.[57] Evidence presented above indicates that uncovered persons experience substantially larger employment ratio declines than do their covered counterparts, but does not indicate how much larger.

Second, for residents of uncovered housing units (29 percent of uncovered persons), I assume that the NWSW ratio declines were the same as those for their covered counterparts. There is no reason to believe that their NWSW ratio declines differed from those of covered persons.

In the six quarters under consideration, there were an average of 10,104 thousand uncovered persons (line 4).[58] The imputed NWSW decline for uncovered persons is 267,000 (line 5a); this is the amount that NWSW would have declined for uncovered persons if the NWSW ratios for uncovered persons declined the same amount as NWSW ratios for their covered counterparts, by sex, race, and age. According

to my assumption, true NWSW among uncovered persons declined 71 percent more than this, or 456,600 (line 5b). The difference between the two estimates, 189,600 (line 5c), is the difference between the full-coverage and corrected NWSW declines.

The difference between the full-coverage and the official NWSW declines, 294,600 (line 6), is the combined effect of control total error and undercoverage. This difference is 23 percent of the official NWSW decline for that period, 1,280,000, and 69 percent of the decline in DIFF, 425,000.[59]

As I noted earlier, it was arbitrary to assume that the NWSW ratio declines for residual uncovered persons were twice those for their covered counterparts. If, instead, I assume NWSW ratio declines for residual uncovered persons of one and one-half times those for their covered counterparts, lines 5b, 5c, and 6 of table 8 become −361,800, −94,800, and −199,800 respectively.[60] The difference of 199,800 between the full-coverage and the official NWSW declines is about 16 percent of the official NWSW decline, and 47 percent of the decline in DIFF.

When I try now to generalize the results of my illustrative calculation to other contractions, I conclude that control total error and undercoverage dampened the 1960–61 and the 1970 ANWSW declines less than they dampened the 1974–75 decline, and probably did not dampen the 1957–58 decline substantially more than they dampened the 1974–75 decline. Comparing these dampening effects with the declines in DIFF in those contractions, I further conclude that the two statistical errors have contributed to, but by no means fully accounted for, the declines in DIFF.

Reasoning within the framework of the formula that ANWSW equals the product of the ANWSW ratio and CNIP, I base my assessment of the effect of control total error and undercoverage on pre-1974 declines in ANWSW on the following arguments.

1. The nonscale element of control

total error, and undercoverage, probably did not dampen the ANWSW decline in earlier contractions substantially more than in 1974–75, for two reasons. First, as explained in the next two paragraphs, they probably did not dampen the ANWSW *ratio* decline substantially more in the earlier contractions than in 1974–75. Second, for every tenth of a percentage point that they did dampen the ANWSW ratio decline in earlier contractions, they dampened the absolute ANWSW decline less then than in 1974–75, simply because CNIP was smaller in the earlier contractions than in 1974–75.

I argue that the nonscale element of control total error probably dampened the ANWSW ratio decline in earlier contractions no more than it did in 1974–75, for two reasons. First, the employment ratio declines for men relative to women, and for black and other men relative to white men, were no larger in the earlier contractions than in 1974–75 (chart 5). Second, the control totals understated the male CNIP relative to the female CNIP no more in the earlier contractions than in 1974–75, and did not understate the black and other male CNIP relative to the white male CNIP very much more then than in 1974–75.

I suspect that undercoverage did not dampen the ANWSW ratio decline in earlier contractions substantially more than in 1974–75, for three reasons. First, the overall undercoverage rate in the earlier contractions was no larger than in 1974–75, and the undercoverage rates for the sex-race groups were not substantially different, relative to one another, from what they were in 1974–75 (chart 5). Second, the earlier contractions were either less severe or not substantially more severe than the 1974–75 contraction, as indicated by the fact that the decline in the aggregate ANWSW ratio was larger only in 1957–58, and even then was not substantially larger. Third, there is no reason to believe that the ANWSW ratio decline in the earlier contractions was concentrated more heavily among uncovered persons relative to their covered counterparts of the same sex, race, and age, than it was in 1974–75.

2. The scale element in control total error dampened the 1974–75 ANWSW decline more than the 1960–61 decline

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56. The formula is based on the assumption that the size of the uncovered population remains constant.

57. If I assume that the NSWS ratio declines for residual uncovered persons were only 1.5 times those for their covered counterparts, the estimated NWSW ratio declines for uncovered persons would have been 35.5 percent larger on average than for their covered counterparts.

58. Undercoverage varies from month to month, due to sampling error, changes in the number of uncovered housing units, and changes in interviewer and respondent behavior.

59. The NWSW decline of 1,280,000 reflects a decline of 1,190,000 in ANWSW, and a decline of 90,000 in unpaid absences of nonagricultural wage and salary workers.

60. These figures are based on the estimate in footnote 57.

and less than the 1957–58 decline, because the ANWSW ratio declined more in 1974–75 than in 1960–61 and less than in 1957–58 (chart 8), and the size of the undercount group was constant within all of these periods (at about 4 million). In 1970, when, as previously mentioned, the size of the undercount group was increasing, the scale element in control total error may not have dampened the ANWSW decline at all. The increase that occurred in the size of the undercount group while the ANWSW ratio was declining caused an overstatement of the ANWSW decline, and this overstatement may have more than offset the dampening effect of the understatement of CNIP.

Recoveries and expansions.—As I showed in the first part of this section, the nonscale element in control total error did not dampen cyclical increases in the ANWSW ratio after 1959, and there is no evidence that undercoverage dampened cyclical increases in the ANWSW ratio at any time.[61] Accordingly, the scale element in control total error is the only factor that has clearly and generally dampened cyclical increases in ANWSW. However, the limited data available are insufficient to rule out the possibility that undercoverage has also dampened cyclical increases in ANWSW. I will first discuss recoveries, then the 1962–69 expansion.

As shown below, the scale element in control total error never dampened increases in ANWSW in recoveries by more than about 100,000. The nonscale element in control total error dampened the ANWSW increase only in the 1958–59 recovery, and then only by a small amount. Comparing these dampening effects with the increases in DIFF in recoveries, I conclude that control total error has accounted for only a small share of the increase in DIFF.

In each of the recovery periods 1958–60, 1961–62, 1972–73, and 1975–77, the size of the undercount group was about 4 million and the ANWSW ratio increased. Therefore, the scale element in control total error dampened the ANWSW increases in these periods by the product of 4 million and the increase in the ANWSW ratio (chart 8).

In 1975–77, the scale element in control total error dampened the ANWSW increase by 104,000, more than in the earlier periods, because the ANWSW ratio increased 2.6 percentage points, more than in the earlier periods.[62] In 1961–62, the scale element in control total error dampened the ANWSW increase by 28,000, less than in the other periods, because the ANWSW ratio increased only 0.7 percentage point, less than in the other periods.

In 1962–69, a period of expansion in which the size of the undercount group was increasing, the scale element of control total error dampened the ANWSW increase by about 460,000. The calculation is based on the convenient formula that the change in a product equals the change in the first term times the average value of the second term, plus the change in the second term times the average value of the first term.[63] The first element in the sum, 200,000, is the product of the ANWSW ratio increase, 4.8 percentage points, and the average size of the undercount group, 4.2 million.[64] The second element in the sum, 260,000, is the product of the average ANWSW ratio during the period, 43.4 percent, and the

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62. Although the size of the undercount group increased about 240,000 from 1975 to 1977, I have treated it as constant for the reasons cited in footnote 53. If I assume that the understatement of CNIP increased in 1975–77, the scale element in control total error dampened the ANWSW increase by more than 104,000.

63. In algebraic notation: d(xy)=(x+1/2dx)dy+(y+1/2dy) dx, which can be derived from the more familiar expansion xdy+ydx+dxdy.

64. In estimating that the ANWSW ratio increased 4.8 percentage points, I adjusted for the break in the household survey in January 1967 that is described in footnote 5.

increase in the size of the undercount group, about 600,000. Similar calculations show that the scale element dampened the ANWSW increase by about 140,000 in 1962–64, when DIFF declined, and dampened it by about 320,000 in 1964–69, when DIFF increased a record amount.

The period from the first quarter of 1971 to the first quarter of 1972 is unique, in that ANWSW increased while the labor market remained loose—as indicated by the fact that the adult male unemployment rate remained high. In this period, both elements of control total error exaggerated the ANWSW increase; accordingly, they contributed to the observed decline in DIFF. First, the scale element caused ANWSW to increase about 320,000 in January 1972, because the size of the undercount group abruptly fell 700,-000.[65] Second, the nonscale element caused ANWSW to increase somewhat, because the employment ratio data indicate that the ANWSW ratio of men did not increase while that of women did, and that the ANWSW ratio of black men declined sharply while that of white men remained level (chart 5).

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65. The estimate is equal to the product of the ANWSW ratio, 45.5 percent, and 700,000. It overstates the effect of the January 1972 revision in the control totals, because it does not take account of a nonscale element in the revision. A Census Bureau study of the revision found that CNIP increased 787,000, and nonagricultural employment increased 288,000. The small increase in nonagricultural employment, relative to that in CNIP, is due to the fact that persons with low nonagricultural employment ratios—women, particularly women age 65 and over—accounted for a disproportionate share of the increase in CNIP. Gary M. Shapiro and Marvin M. Thompson, "Revisions in Current Population Survey," *Employment and Earnings*, February 1972, pp. 6–9.

Section 5: Summary and Conclusions

THE payroll employment measure shows larger cyclical changes than the household measure after the two measures are adjusted for those differences in coverage for which monthly data are available. Specifically, DIFF—the seasonally adjusted difference between the adjusted payroll and adjusted household measures of nonagricultural wage and salary employment—declined in labor market contractions during the period 1956–77 and generally increased in labor market recoveries and expansions.

In the two earlier contractions in the period, DIFF declined more than in

the two most recent ones; DIFF declined about 0.9–1.0 million in 1957–58 and 1960–61, but it declined only about 600,000 in 1969–70 and only about 400,000 in 1974–75. In recoveries, DIFF increased about 600,000–700,000 in 1958–59, 1961–62, and 1972–73, but it did not increase in 1975–77. In the 1962–69 expansion DIFF initially declined about 150,000 from 1962 to 1964 and then increased the record amount of about 2.2 million from 1964 to 1969.

In this section, I will first set out in summary form the factors that do—or that may—cause DIFF to fluctuate cyclically, and then discuss in an

CHART 8

The ANWSW Ratio

Quarterly Averages, Seasonally Adjusted
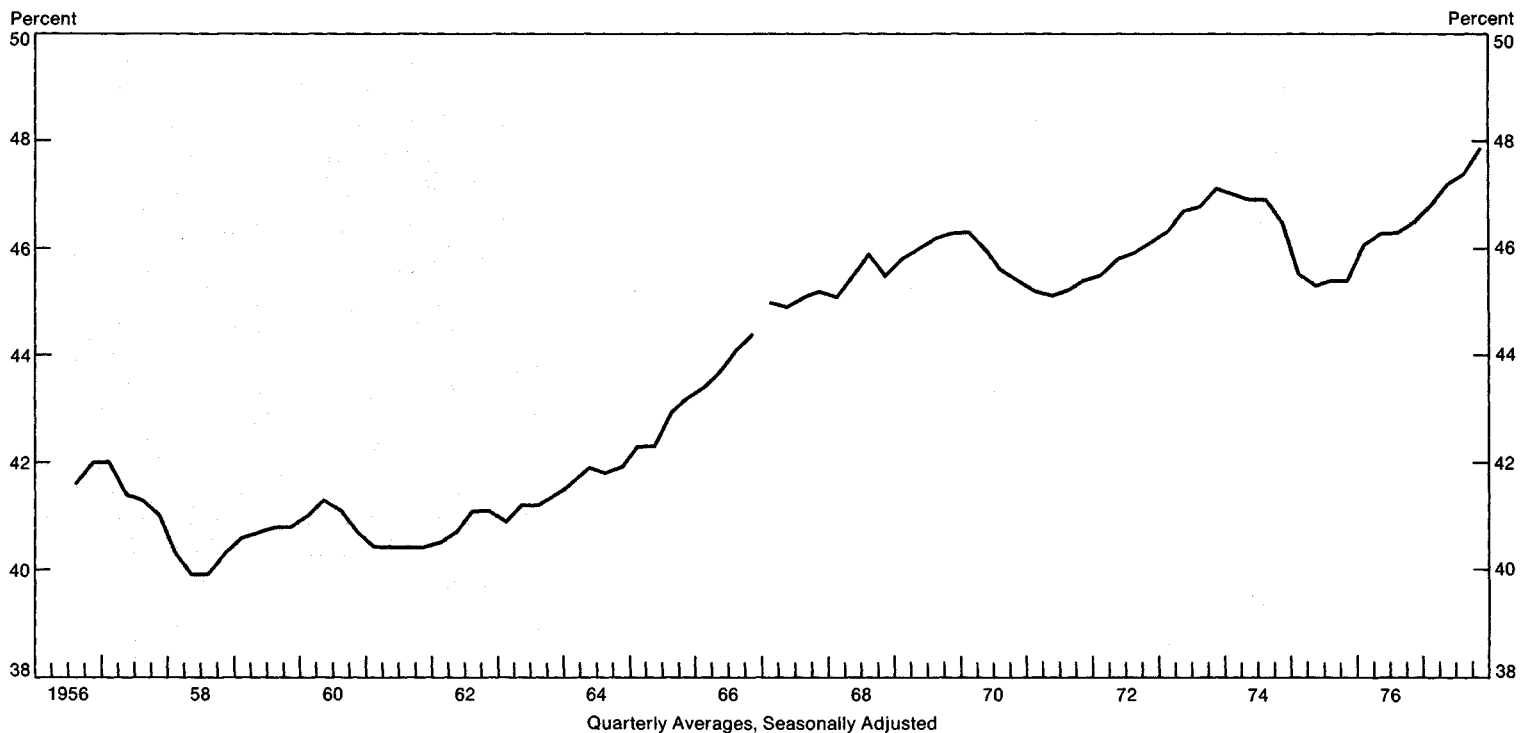
Note.-The ANWSW ratio is the ratio of adjusted nonagricultural wage and salary workers (ANWSW) to civilian noninstitutional population age 14 and over (C IP).

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

Data: Bureau of Labor Statistics

79-5-8

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integrated way some broad relationships between these factors and the observed cyclical behavior of DIFF.

Factors that affect DIFF

I have concluded that statistical error in the household survey and conceptual differences between the two adjusted employment measures contribute to the cyclical behavior of DIFF, but that statistical error in the payroll survey probably does not. I will now summarize the findings that led me to this conclusion, and then briefly discuss two kinds of factors that may affect the cyclical behavior of DIFF, but in regard to which I was unable to arrive at conclusions.

Statistical error in the household survey.—Two statistical errors substantially dampen cyclical declines in the adjusted household employment measure (adjusted nonagricultural wage and salary workers (ANWSW)), and one of the errors somewhat dampens cyclical increases in ANWSW.

1. Although ANWSW is derived by multiplying population control totals for 84 sex-race-age groups by corresponding ANWSW ratios, it can be

thought of as equaling an aggregate population control total times an aggregate ANWSW ratio. Error in the control totals dampens cyclical declines in ANWSW for two reasons. First, census undercount causes the control totals to understate the aggregate population; I call this the scale element in control total error. The scale element has dampened most cyclical fluctuations in ANWSW.[66] Second, census undercount causes the control totals to understate the population in each sex-race-age group by varying percentages; I call this the nonscale element in control total error. Because the percentage understatement is largest for those groups (i.e., men, particularly black men) that experience the largest cyclical declines in their ANWSW ratios, the nonscale element dampens cyclical declines in the aggregate ANWSW ratio.[67]

2. ANWSW ratios for the various sex-race-age groups are based on a sample of households that misses some of the persons it is designed to cover. Because uncovered persons are poorer than their

covered counterparts of the same sex, race, and age, and because poor persons probably experience larger cyclical ANWSW ratio declines than do more affluent persons of the same sex, race, and age, I concluded that uncovered persons probably experience larger cyclical ANWSW ratio declines than do their covered counterparts of the same sex, race, and age. Therefore, undercoverage probably dampens cyclical declines in the aggregate ANWSW ratio, and in ANWSW.[68]

An illustrative calculation of the understatement in the decline of a close variant of ANWSW from the first three quarters of 1974 to the first three quarters of 1975 showed that: (1) Control total error caused an understatement of 105,000, of which the scale element in control total error accounted for 65,000, and the nonscale element accounted for 40,000; and (2) undercoverage caused an understatement of 189,600. Together, the two statistical errors dampened the decline of the close variant of ANWSW by 294,600, or 69 percent of the decline in DIFF.

Because, in the absence of data on

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66. See pp. 30 and 33.
67. See p. 27.

68. See pp. 28-29.

the ANWSW ratios of uncovered persons, the estimate of the effect of undercoverage is subject to a large margin of error, I made an alternative estimate, based on a more moderate assumption about the difference between the declines in the ANWSW ratios of covered and uncovered persons. This estimate of the combined effect of the two statistical errors was 199,800, or 47 percent of the decline in DIFF.

When I tried to generalize the results of my illustrative calculation to other contractions, I concluded that the two statistical errors probably dampened the 1960–61 and the 1970 ANWSW declines less than they dampened the 1974–75 decline, and probably did not dampen the 1957–58 decline substantially more than they dampened the 1974–75 decline.

Because the nonscale element in control total error did not dampen post-1959 cyclical increases in the ANWSW ratio, and because there is no evidence that undercoverage dampened cyclical increases in the ANWSW ratio at any time, the scale element in control total error is the only factor that has clearly and generally dampened ANWSW increases in recoveries and expansions. In recoveries, the scale element never dampened the ANWSW increase by more than about 100,000. In the 1962–69 expansion, the scale element dampened the ANWSW increase by about 460,000.

Multiple jobholding and job changing.—A conceptual difference in the coverage of the two adjusted employment measures contributes to the cyclical behavior of DIFF. The payroll measure counts jobs, whereas the household measure counts workers, and this difference has two consequences for DIFF.

1. In the case of a multiple jobholder, the payroll measure counts all the worker's jobs, whereas the household measure counts one worker. The data indicate that civilian multiple jobholding declines relatively little in contractions, and may have contributed an average of only about 40,000 to cyclical declines in DIFF. The data also indicate that civilian multiple jobholding increased relatively little in recoveries before 1962, and substantially in recoveries and expansions thereafter. More specifically, civil-

ian multiple jobholding may have tended to raise DIFF by 300,000–500,000 in the periods 1962–69, 1972–73, and 1975–77.

Because the household survey does not cover Armed Forces members, civilian jobs that they hold in off-duty hours are omitted from the adjusted household employment measure. Cyclical fluctuations in the number of military multiple jobholders have probably contributed somewhat to DIFF, but the contribution cannot have been very large.

2. In the case of a job changer, the payroll measure, under certain circumstances, counts both the old and new jobs, whereas the household measure counts the job changer once. There is considerable evidence that job changing increases when the labor market tightens and declines when it slackens. An illustrative calculation suggested that the decline in job changing from 1973 to 1975 may have contributed from 80,000 to 137,000 to the decline in DIFF. There are some indications that the effect of job changing on the change in DIFF was larger in 1973–75 than in any other period in 1956–77; there are also indications that job changing contributed more to cyclical increases in DIFF after 1962 than before.

Statistical error in the payroll survey.—Any tendency for statistical error in the payroll measure to exaggerate cyclical employment fluctuations would contribute to the cyclical pattern in DIFF. The most serious cause for concern is the possibility that evasion of payroll taxes increases during contractions and decreases during recoveries and expansions. Because BLS uses unemployment insurance (UI) tax returns as the principal source for benchmarking the payroll survey, cyclical fluctuations in UI tax evasion would cause the payroll measure to exaggerate cyclical employment fluctuations. For the most recent recession, there is circumstantial evidence that no substantial increase in UI tax evasion occurred, but for earlier years, there is no evidence. I concluded that cyclical fluctuations in tax evasion were probably small, but I could not rule out the possibility that they were substantial.

Other factors.—I was unable to arrive at conclusions in regard to two kinds

of factors that affect the cyclical behavior of DIFF.

1. My findings with regard to statistical error in the household survey are based on the assumption that population control totals corrected for census undercount accurately measure the population. This assumption must be qualified, because the corrected control totals do not take account of two types of migration: net illegal immigration, and some emigration of citizens and legally resident aliens. On the basis of the evidence shown in appendix D, I concluded that differences in the coverage of these uncounted migrants in the household and payroll surveys may be an important factor in DIFF, and may have accounted for part of the increase in DIFF that began in 1964. However, because there is no evidence on the cyclical behavior of the employment of uncounted migrants, I was unable to draw conclusions about the effect of these differences in coverage on the cyclical behavior of DIFF.

2. Because multiple jobholding, job changing, control total error and undercoverage cannot account for abrupt month-to-month changes in DIFF, the existence of such changes (chart 2) is *prima facie* evidence that other conceptual differences between the two adjusted employment measures, or statistical errors in the measures, affect the behavior of DIFF. I identified about a dozen "outlier" months in which DIFF was 400,000–800,000 above or below its average level in surrounding months; these outliers are too frequent and too extreme to be attributable to sampling error in either of the adjusted employment measures. On several other occasions DIFF changed abruptly for no apparent reason. Whatever factors explain the outliers and the other abrupt changes in DIFF may also contribute to the cyclical behavior of DIFF.

Contribution of the factors to DIFF's behavior

I will now discuss, in an integrated way, some broad relationships between the observed cyclical behavior of DIFF and the factors that I have found contributed to it. I will deal separately with contractions and with recoveries and expansions, because the contribu-

tions of the various factors to the behavior of DIFF differ substantially in the two kinds of periods, and because my findings more fully explain the behavior of DIFF in contractions than in recoveries and expansions.

1. Job changing, multiple jobholding, and the two statistical errors in the household survey contributed to declines in DIFF in all four contractions. The limited evidence available indicates that they contributed most to the 1957–58 and the 1974–75 declines in DIFF, and least to the 1960–61 and the 1969–70 declines.

The assumptions underlying my illustrative calculations are somewhat arbitrary, and I have not been able to estimate the varying effect of each factor in each contraction. Together, however, the factors that I have identified do not appear to have accounted for more than 330,000–480,000 of the cyclical declines in DIFF.[69] Accordingly, these factors may have largely accounted for DIFF's decline in the two most recent contractions, but probably accounted only in part for DIFF's decline in the two earlier contractions.

2. Job changing, multiple jobholding, and the scale element in control total error tended to raise DIFF in all periods of recovery and expansion, but these factors failed in two ways to explain the behavior of DIFF in such periods. First, for reasons that are unclear, DIFF did not increase in 1962–64 and 1975–77, despite the influence of the three factors cited above. Second, the three factors came close to fully explaining the increase of DIFF in only one of the remaining periods—the 1972–73 recovery; in the other periods, the factors explained less than half of the increase in DIFF.[70]

With regard to recoveries, the limited evidence available indicates that the three factors tended to raise DIFF less in the two earlier recoveries than in the two most recent ones. In 1958–59 and 1961–62, the factors probably accounted for less than half of the increase in

69. To arrive at this estimate I added the illustrative estimate of the error in the 1974–75 ANWSW decline, the average decline in the number of civilian workers with secondary jobs in the four contractions, an allowance of 10,000 for declines in military jobholding, and the illustrative estimate of the effect on DIFF of the 1973–75 decline in job changing.

70. The period from the first quarter of 1971 to the first quarter of 1972 is unique, in that the adult male unemployment rate remained high, and the smoothed DIFF (see footnote 5) declined about 400,000. In this period, control total error caused DIFF to decline, as I showed at the end of section 4.

DIFF. In 1972–73, multiple jobholding may have contributed about 310,000 to the increase in DIFF, and the other factors may have accounted for much of the remaining increase. The failure of DIFF to increase in 1975–77 is puzzling, inasmuch as multiple jobholding may have tended to raise it about 400,000 and the other factors may have tended to raise it, very roughly, an additional 200,000.

With regard to the 1962–69 expansion, it is necessary to distinguish two subperiods: 1962–64 and 1964–69. The failure of DIFF to increase in 1962–64 is puzzling, because the scale element of control total error and multiple jobholding tended to raise DIFF.[71] In 1964–69, the three factors contributed to, but by no means fully explained, the record increase in DIFF. The scale element contributed about 320,000 to the increase in DIFF, multiple jobholding may have contributed about 300,000, and job changing may have contributed, very roughly, about 100,000. The unexplained portion of the increase in DIFF may be due in part to uncounted migration.

71. The decline of about 150,000 in DIFF in 1962–64 is entirely attributable to a sharp decline in DIFF in August 1962. The latter decline may somehow be connected with changes in the household survey sample that were introduced from August 1962 to March 1963.

Appendix A: Arithmetic Example of Statistical Error in the Household Survey

THIS example illustrates the effects of control total error and undercoverage on the household survey estimate of the decline in employment in a contraction.

Assume that population is constant and consists only of civilians age 16 and over living outside institutions, and that the Census Bureau maintains population control totals for only two sex–race–age groups—men and women. Assume, further:

1. The true population is 100 million—50 million men and 50 million women. The decennial census undercounts the true population by 10 million men and no women (table 9, line 3); this is control total error. The scale element in control total error is the understatement of aggregate CNIP by 10 million; the nonscale element is the 20 percent understatement for men and the zero understatement for women.

2. The household survey is a 1 in 1,000 sample. Accordingly, it should pick up 100,000 persons. Actually, it picks up only 85,000, and the 15,000 missed are all men (line 6); this is undercoverage.

3. There are two points of time: I—the prerecession peak, and II—the recession trough. Employment ratios for both points of time for covered persons are taken from the household survey sample (line 7). I assume that the Census Bureau, in a supplementary survey, finds and interviews the 15,000 men missed by the household survey

sample; their employment ratios are shown in line 8. The employment ratio declines more for uncovered men than for covered men.

Effect of control total error

When the sample employment ratios are multiplied by the decennial census population, the aggregate employment ratio declines 4.44 percentage points; when they are multiplied by the true population, the ratio declines 5.00 percentage points (table 10). The former product is equivalent to the official measure published by the Census Bu-

Table 9.—Data for Arithmetic Example

Line		Total	Men	Women
		Millions		
	Population:			
1	True population	100	50	50
2	Decennial census population	90	40	50
3	Undercount (1–2)	10	10	0
		Thousands		
	Sample:			
4	Expected size	100	50	50
5	Actual size	85	35	50
6	Undercoverage (4–5)	15	15	0
		Percent		
	Employment ratios:			
7	**Covered persons:**			
	a. Period I		70	50
	b. Period II		60	50
	c. Change		−10	0
8	**Uncovered persons:**			
	a. Period I		60	
	b. Period II		45	
	c. Change		−15	

reau; the latter, I call the corrected measure. The decline in the corrected employment ratio is larger than that in the official employment ratio because men are undercounted in the census and women are not, and because covered men experience an employment ratio decline and covered women do not. The difference between the two declines, 0.56 percentage points, is the dampening effect of control total error on the employment ratio decline.

In terms of employment, the declines are 4 million, and 5 million. The difference between them (1 million) is the dampening effect of control total error. This difference can be computed also by multiplying the change in the employment ratio for covered men (−10.0 percentage points) by the size of the male census undercount (10 million), and reversing the sign. More generally, the difference between the changes in corrected and official employment can be found by multiplying the changes in employment ratios of covered persons by the size of the undercount, by sex. This procedure is a shortcut that is used when illustrative calculations are made in the text with actual numbers from the household survey.

The difference equals the sum of the effects of the scale and nonscale elements of control total error. The effect of the scale element, 444,000, is the product of the undercount (10 million) and the change in the aggregate employment ratio (−4.44 percentage points). This component measures the extra decline in employment that would have been found if the undercount group had had the same sex composition as the decennial census, and, accordingly, the corrected employment ratio had been the same as the published employment ratio. The effect of the nonscale element is the remainder of the 1 million, or 556,000. This component measures the extra decline in employment that is due to the fact that the corrected employment ratio declines more than the published employment ratio, because the undercount group consists entirely of men, whose employment ratio declines more than that of women.

Effect of undercoverage

I define full-coverage employment as the product of employment ratios from a sample that fully covers the population and corrected control totals. Thus, it equals the sum of: (1) the product of employment ratios for covered persons and the covered portion of the true population (line 3a); and (2) the product of employment ratios for uncovered persons and the uncovered portion of the true population (line 3b). The full-coverage employment ratio declines 5.75 percentage points (line 3c), whereas the corrected employment ratio declines only 5.00 percentage points (line 2). The former ratio declines more, because the employment ratio for the uncovered men declines more than that for the covered men. The difference between the two declines, 0.75 percentage points, is the dampening effect of undercoverage on the decline in the corrected employment ratio.

In terms of employment, the decline in full-coverage employment is 5.75 million, 750,000 more than in corrected employment. The difference is the dampening effect of undercoverage on the decline in corrected employment. This difference can also be computed by multiplying the difference (−5.0 percentage points) between the change in the employment ratio for uncovered men (−15.0 percentage points) and that for covered men (−10.0 percent-age points) by the size of the uncovered male population (15 million), and reversing the sign. More generally, the difference between the changes in full-coverage and corrected employment equals the true employment decline for the uncovered population, minus the decline imputed to it by multiplying the changes in employment ratios of covered persons by the size of the uncovered population, by sex. This procedure is a shortcut that is used when illustrative calculations are made in the text with actual numbers from the household survey.

The example also suggest the following generalization: Whether cyclical changes in the full-coverage employment ratio exceed those in the corrected employment ratio depends on whether cyclical changes in employment ratios of uncovered persons exceed on average those in the employment ratios of covered persons of the same sex. If, in the example, the employment ratio of uncovered men had declined only 10 percentage points, the full coverage ratio would have declined the same amount as the corrected ratio. If the employment ratio of uncovered men had declined less than 10 percentage points, the full-coverage ratio would have declined less than the corrected ratio.

Appendix B: Housing Units Not Covered by the Household Survey

THE household survey misses people in two ways. First, the survey misses some housing units, and therefore misses the residents of such units. Second, the survey misses some or all of the residents of some covered housing units and persons with no usual residence. I will discuss the first type of miss in this appendix and the second type in the next appendix.

Selection of sample housing units

The sample is, and has always been, selected by a multistage procedure.[72] First, a probability sample of large geographic areas consisting of a county

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72. Thompson and Shapiro, and Technical Paper No. 40 (see footnote 44); and "Concepts and Methods Used in Labor Force Statistics Derived from the Current Population Survey," jointly published as *Bureau of Labor Statistics Report No. 463*, and Census Bureau, *Current Population Reports*, Series P-23, No. 62, October 1976.

or group of counties, and known as Primary Sampling Units (PSU's) is selected. Within each sample PSU, a probability sample of census enumeration districts (ED's) containing an average of 350 housing units is selected. Finally, since 1973, a group of four housing units has been selected randomly within each ED, by one of two methods.

Address lists.—About 75 percent of the sample housing units (mostly in urban areas) have been selected randomly from three types of address lists that represent housing units in list ED's, i.e., those ED's for which complete address lists exist. First, address lists from the decennial census contain those housing units in the sample ED that were enumerated in the census. Second, lists of building permits for

CHART 9

Household Survey Undercoverge of the Corrected Civilian Noninstitutional Population Age 14 and Over, by Sex, Race, and Age, 1975 Annual Average
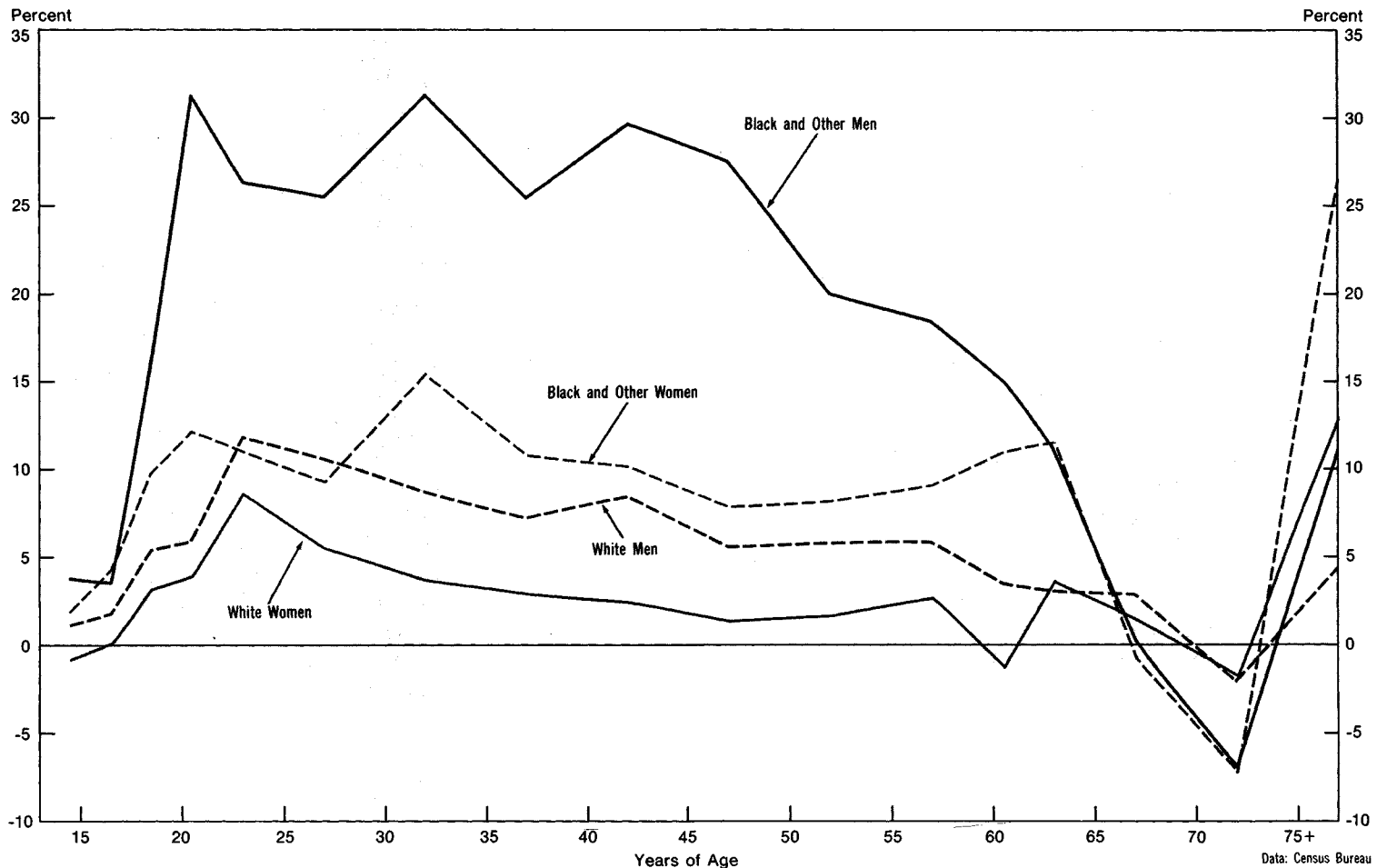
U.S. Department of Commerce, Bureau of Economic Analysis

Data: Census Bureau

79-5-9

new construction issued since January 1970 contain housing units built after the decennial census (in the sample PSU but not necessarily in the sample ED). Third, a subsample from the "census supplemental (Cen-Sup) sample" represents housing units that were overlooked in the 1970 census. Cen-Sup is based on an intensive one-time, post-censal canvass of city blocks or equivalent areas in a sample of list ED's in sample PSU's throughout the country.

Area sampling.—About 25 percent of the sample housing units (mostly in rural areas) have been selected randomly by area sampling methods in area ED's, i.e., those ED's for which complete address lists do not exist. The sample ED's are subdivided into small land areas with well-defined boundaries, and one area is selected. Interviewers prepare a complete "pre-list" of housing units in the area, from which the Census

Bureau selects sample units by following a standard set of rules.

I will first discuss the types of housing units that were missed by the sample in 1975, one of the years for which illustrative calculations are made in the text, then review the types that were missed in other years. Finally, I will discuss the average income of residents of uncovered housing units.

Uncovered housing units, 1975

The household survey missed about 1.67 million housing units in 1975—1.27 million in list ED's, and 0.40 million in area ED's.

List ED's.—The sample missed several types of housing units that were omitted from the ostensibly complete address lists.

1. The building permit lists omitted housing units for which building permits were issued before January 1970, and on which construction was not

complete when the census was taken in April 1970. The Census Bureau estimates that 598,000 units were so missed, most of which were in multiunit structures, because multiunit structures take longer to build than do single-unit structures.[73]

2. The sample omitted mobile homes put in place after the 1970 census at sites outside mobile home parks, and in mobile home parks that were established after the census. It also omitted mobile homes in parks missed by the census and at nonpark sites missed by the census. Census Bureau data indicate that 269,000 occupied mobile homes were so missed.

3. The sample omitted residential structures converted from nonresidential use, and houses moved to their present site after the 1970 census. Reliable data are lacking, but Census

73. Irene C. Montie and Dennis J. Schwanz, "Coverage Improvement in the Annual Housing Survey," *Proceedings of the Social Statistics Section, 1977,* American Statistical Association, p. 169.

Table 10.—Measures of Employment Decline in the Contraction

[Millions except where noted]

Line		Popula-tion	Employment		
			I	II	Change
1	Official employment measure (product of sample employment ratios and decennial census population):				
	Men	40	28.00	24.00	−4.00
	Women	50	25.00	25.00	0
	Total	90	53.00	49.00	−4.00
	Employment ratio (percent)		58.89	54.44	−4.44
2	Corrected employment measure (product of sample employment ratios and true population):				
	Men	50	35.00	30.00	−5.00
	Women	50	25.00	25.00	0
	Total	100	60.00	55.00	−5.00
	Employment ratio (percent)		60.00	55.00	−5.00
3	Derivation of full-coverage employment measure:				
	a. Product of sample employment ratios and covered population:				
	Men	35	24.50	21.00	−3.50
	Women	50	25.00	25.00	0
	Total	85	49.50	46.00	−3.50
	b. Product of supplemental survey employment ratios and uncovered male population	15	9.00	6.75	−2.25
	c. Full-coverage employment measure (a+b):				
	Men	50	33.50	27.75	−5.75
	Women	50	25.00	25.00	0
	Total	100	58.50	52.75	−5.75
	Employment ratio (percent)		58.50	52.75	−5.75

Bureau officials believe that roughly 200,000 units may have been so missed. The sample probably missed additional units in a variety of ways, but the Census Bureau does not know how many. I allow for 200,000, but the true number could be very different.[74]

Area ED's.—When interviewers prelist housing units in area ED's, they occasionally overlook units within the designated boundaries. They tend to overlook dwellings that are off roads, on back roads, concealed, or otherwise inconspicuous. The most recent small-scale intensive coverage checks, in October 1966 and June 1967, found that the interviewers had missed 1.6–2.1 percent of housing units in area segments.[75] In the absence of reliable data, Census Bureau estimates of uncovered housing units in area ED's range from about 200,000 upwards. I estimate that 400,000 units, about 2.0 percent of housing in area ED's, were missed in 1975.

Historical review of uncovered housing units

The types of housing units missed by the household survey have changed over time.

1. Before 1962, the Census Bureau relied mainly on area sampling methods to select the sample. Interviewer oversight in prelisting was probably the major cause of housing units being missed.

2. In 1962–71, address lists based on the 1960 census were used to select the sample in about two-thirds of ED's. The Census Bureau believes that the number of permit-lag units was much smaller in that period than it was after 1971. Some mobile homes and units in structures converted from nonresidential to residential use were missed, for the same reasons as in 1975; the number of such missed units increased steadily from 1962 to 1971. There was no Cen-Sup sample, and the Census Bureau used a different method to cover housing units missed by the 1960 census; it believes that the method missed a substantial proportion of units missed by the 1960 census.

3. In 1972–77, address lists based on the 1970 census were used for about three-quarters of ED's. The number of uncovered mobile homes and uncovered units in converted structures increased steadily from 1972 to 1977.[76]

Average income of residents of uncovered housing units

I estimate that, in 1975, 2.80 million persons age 14 and over (table 5, line 6)—a little less than one-third of the uncovered population—lived in the 1.67 million housing units missed by the household survey.[77] I assume that the ratio of men to women in the uncovered housing units was the same as in the corrected CNIP, and I estimate that black and other races accounted for 14 percent of the population in the uncovered units.[78]

The evidence on the average income of the missed persons is as follows:

1. Residents of permit-lag units may have somewhat higher incomes than covered persons of the same sex, race, and age, because they occupy new, mostly rental, housing—but the evidence on this point is inconclusive.

2. Residents of missed mobile homes have considerably lower incomes than covered persons of the same sex, race, and age.[79]

3. Little is known about the average income of residents of units converted from nonresidential to residential use, and houses moved to their present site, but there are indications that they may be poorer than covered persons of the same sex, race, and age. There is no evidence regarding the average income of residents of other uncovered housing units in address ED's.

4. Residents of uncovered housing units in area ED's are probably poorer than covered persons of the same sex, race, and age, for two reasons. First, area ED's have largely been in rural places since 1962, and residents of rural areas are poorer than residents of urban areas. Second, in prelisting, interviewers are most likely to miss out-of-the-way housing units, and these are more likely to contain poor persons than are more visible rural housing units.[80]

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74. The additional units missed by the sample include the following: Units missed by Cen-Sup, units enumerated in the census but lost in the processing of address tapes for the household survey, some new hotels and motels, and new units for which builders—in contravention of their legal obligation—did not take out permits.

75. Census Bureau, *The Current Population Survey Reinterview Program, January 1961 Through December 1966,* Technical Paper No. 19, 1968, p. 40. The 1970 census missed 4.8 percent of all housing units, and 3.1 percent of occupied housing units, in rural areas. Census Bureau, *The Coverage of Housing in the 1970 Census,* PHC(E)-5, 1973, p. 31.

76. In October 1978, the household survey began to cover permit-lag units and previously missed mobile homes in new mobile home parks and in parks missed in the 1970 census.

77. This estimate is based on data on persons per occupied unit, and on vacancy rates, for housing units with characteristics similar to those of the missed units. Census Bureau *Annual Housing Survey: 1975,* 1977, and Technical Paper No. 19, pp. 39–40.

78. The estimate is based on the percentage of blacks and other races in housing units with characteristics similar to those of the missed units. See sources cited in previous footnote, and Census Bureau, "Results Pertaining to the Coverage of Persons," Results Memorandum #1, 1950 Post-Enumeration Survey.

79. For families and unrelated individuals in 1975, the median income in mobile homes in urban areas was $8,200; the median for all housing units in the country was $11,200. *Annual Housing Survey: 1975,* Part E, "Urban and Rural Housing Characteristics," pp. 7, 50.

80. The 1950 Post-Enumeration Survey showed that, in rural areas, units missed in the 1950 census were more likely than enumerated units to lack hot and cold piped water or an installed bathtub or shower, and to be dilapidated. Census Bureau, "Analysis of the Characteristics of Erroneously Omitted Occupied Dwelling Units," Results Memorandum #27, 1950 Post-Enumeration Survey, 1954.

In sum, the evidence indicates that residents of permit-lag units are the only residents of uncovered housing units whose incomes may be higher than those of covered persons of the same sex, race, and age. For 1972–77, I conclude that the relative affluence of permit-lag residents was at least offset by the relative poverty of residents of other uncovered housing units, so that residents of uncovered housing units were, as a group, as poor as or somewhat poorer than their covered counterparts. For 1956–71, I conclude that they were probably somewhat poorer than their covered counterparts.

Appendix C: Residual Uncovered Persons

IN this appendix I will discuss "residual uncovered persons"—that is, uncovered persons in covered housing units and persons with no usual residence. I will first present evidence that this group has usually accounted for one-half or more of the uncovered population, and then show that members of this group are poorer on average than their covered counterparts of the same sex, race, and age.

Size of residual uncovered population

The residual uncovered population equals the uncovered population minus the population in uncovered housing units. The method for estimating the uncovered population was described in section 4. The size of this population in 1975 is shown in line 5 of table 5, and the 1975 rates of undercoverage by sex, race, and age are shown in chart 9.[81] The method for estimating the population in uncovered housing units was presented in Appendix B, and the estimate for 1975 is shown in line 6 of table 5. The residual uncovered population— line 5 minus line 6—is shown in line 7. There were 6.87 million persons in the residual group in 1975—71 percent of the 9.67 million persons in the uncovered population. Census Bureau data on uncovered housing units in 1973–74 and 1976–77 indicate that the residual group accounted for over 60 percent of annual average undercoverage in those years also.

For 1956–72, there are no data on uncovered housing units that would support a direct estimate of the share of undercoverage accounted for by the residual group. But the following argument suggests that the share was usually larger than, and never much smaller than, 50 percent. In uncovered housing units, men have probably always been missed at about the same rate as women; I will assume that the miss rates for the sexes have always been equal. Among residual uncovered persons in 1975, men were missed at 2.6 times the rate for women (table 5, line 10). Given the causes of residual undercoverage (discussed below), the miss rate for men must have always greatly exceeded that for women; I will assume it has always been 2.6 times as large. Because men are overrepresented in the residual uncovered population but not in missed housing units, it follows that the smaller the share of undercoverage accounted for by the residual group, the lower the ratio of the male to the female undercoverage rate. Under the above assumptions, when residual uncovered persons account for only 50 percent of undercoverage, it can be shown that the undercoverage rate for men is only 1.58 times that for women.[82] In 1956–72, the undercoverage rate for men was less than 1.58 times the rate for women in only 3 years—1969 (1.52),

1970 (1.57), and 1971 (1.56).[83] In most other years, it was more than 1.70 times the rate for women. Therefore, the share of undercoverage accounted for by the residual group was usually larger than, and never much smaller than, 50 percent.

Characteristics of residual uncovered persons

Each month the Census Bureau provides interviewers with lists of about 65,500 sample housing units. Three types of persons are missed by interviewers. (1) Interviewers classify an average of 9,500 housing units as vacant or otherwise ineligible for interview.[84] Some of the units classified as vacant are actually occupied; the residents of such "false vacancies" are missed. (2) At respondent households, interviewers ask a responsible household member to name all persons "who are living or staying here," including persons who are temporarily absent. Persons whom the respondent omits are missed by the survey. (3) Most persons with no usual residence are also missed.

I will present evidence that each type is poorer, on average than covered persons of the same sex, race, and age. I will also point out that men greatly outnumber women among two of the three types of residual uncovered persons, and, at the end of this appendix, I will present evidence that the uncovered men tend to live in metropolitan poverty areas.

Residents of false vacancies.—Estimates of the number of false vacancies are lacking. In 1974, routine reinterviews by Census Bureau supervisory personnel found that interviewers erroneously classified as vacant 0.3 percent of sample housing units.[85] The percentage of false vacancies is probably larger than 0.3, because many false vacancies are not detected in routine reinterviews.[86]

81. The following argument indicates that the uncovered population in table 5 is an underestimate. Household survey interviewers are unable to conduct interviews at an average of about 2,400 occupied housing units each month, because residents are unavailable or refuse to cooperate. The Census Bureau redistributes the selection probabilities of these "noninterview" households among respondent households, thereby assigning the characteristics of respondent households to noninterview households. There is evidence, however, that noninterview households are smaller than respondent households: A 1965 reinterview study found that unavailable households contained only 78 percent as many residents age 14 and over as respondent households; refusal households were about the same size as respondent households. (Susan Palmer, "On the Character and Influence of Nonresponse in the Current Population Survey," *Proceedings of the Social Statistics Section, 1967,* American Statistical Association, pp. 73–80).

The effect of overstatement of the size of noninterview households can be estimated for 1975 as follows. The covered population was 154.1 million (table 5, line 4). Noninterview households accounted for about 4.2 percent of that figure, or about 6.5 million persons, including 3.4 million refusals and 3.1 million unavailables. I assume that the refusal households were the same size as respondent households, but that the unavailable households were 78 percent as large as respondent households. Thus, the unavailable households in 1975 actually contained only 2.4 million persons, 0.7 million fewer than the Census Bureau estimate. Consequently, the 1975 covered population was 0.7 million smaller than estimated in table 5, and the uncovered population was 0.7 million larger. In the absence of reliable data on the size of noninterview households by sex, race, and age, it is not feasible to correct the estimate of the uncovered population.

82. The estimate of 1.58 is based on the equation $u_m - \frac{1}{2}u$ $=2.6(u_w - \frac{1}{2}u)$, where u, u_m, and u_w are: the overall undercoverage rate, and the undercoverage rates for men, and for women, respectively.

83. The apparently low share of residual uncovered persons in undercoverage in 1969–71 is consistent with the fact that the number of uncovered mobile homes and uncovered housing units in converted structures must have been larger then than at any other time in the period 1962–71 (appendix B).

84. Units whose occupants are Armed Forces members or under age 14, or who "usually reside elsewhere" are considered ineligible for interview.

85. Census Bureau, "CPS Reinterview Results from the Listing Check and the Check of Noninterview Classifications for 1974," memorandum by Irwin Schreiner, March 25, 1975.

86. For example, an intensive coverage check made in October 1966 found about three times as many false vacancies as did routine reinterviews made in the same year. Technical Paper No. 19 (see footnote 75), p. 41.

For two reasons, interviewers are more likely to report false vacancies in urban poverty areas than elsewhere. First, the dilapidated condition of many housing units in urban poverty areas, the frequent absence of nameplates or even of apartment numbers, and the difficulty at times of securing entrance to the buildings make it difficult for interviewers to ascertain whether a sample housing unit is occupied. Second, because urban povery areas frequently have, or are perceived to have, high crime rates, the interviewers may feel feel reluctant to venture into such areas in the evening or to make repeated callbacks to ascertain whether a unit is occupied.

At the request of BEA, the Census Bureau made a special tabulation of the location of 235 false vacancies detected in routine monthly reinterviews in 1973-75. The Census Bureau found that there were about three times as many false vacancies per inhabitant in metropolitan poverty areas as outside these areas.

Persons omitted from rosters.—Analysts of census undercount and ethnographic observers of poor neighborhoods have identified two broad reasons why respondents give incomplete rosters to census enumerators and survey interviewers. They are concealment and oversight, and both are associated with poverty.

1. Some respondents conceal the names of some residents, apparently fearing that information given to the Census Bureau will be used against them, even though the Census Bureau assures respondents that the information will be held confidential.

Recipients of public assistance, who are frequently poor, have (or may think they have) an incentive to conceal wage-earning or other income-receiving residents. Women receiving Aid to Families with Dependent Children (AFDC) have an incentive to conceal the natural father or adopting stepfather of their children, and may feel safer not reporting a husband or boyfriend even in cases where it would not affect AFDC eligibility. In many States, AFDC recipients also have an incentive to con-

ceal nonearning residents not eligible for AFDC, because welfare officials prorate rent and utilities among all residents in computing AFDC grants.[87] In an ethnographic study of 35 Puerto Rican households in a poor New York neighborhood, Alan Harwood found that the households had not reported 15 of 52 resident men, and 2 of 48 resident women, to a 1967 survey. Whereas the survey indicated that 67 percent of the households were female-headed, Harwood found that only 38 percent were actually female-headed. Fear of losing public assistance was the main motive for concealing male residents.[88]

Regulations against overcrowding create incentives for poor tenants of crowded apartments to conceal residents. "Enumerators tell of respondents who fear to report complete household rosters because public housing authorities or their landlords would evict them for overcrowding. They say that violations of increasingly strict housing codes result in underreporting of lodgers or tenants."[89]

Fear of police or other persons is another motive for concealment that is associated with poverty. Persons engaged in illegal activities or wanted by the police, and persons avoiding bill collectors or personal enemies are frequently poor. Illegal immigrants, who are generally poorer then citizens and legally resident aliens, have a strong incentive to hide from investigators of the U.S. Immigration and Naturalization Service.

2. Some respondents apparently overlook persons loosely attached to their household. If they are reinterviewed in more depth—by a more skilled interviewer or by one in possession of the name of a resident omitted in the first instance—they may readily admit that the omitted resident lives there. It appears that the initial oversight was unintentional, or linked to a general wish to protect privacy or a wish to keep interviews short.

The 1950 Post-Enumeration Survey found that "persons loosely attached to households, members of the extended family and nonrelatives, were more likely than the head of households, wife, or children to be missed in the census. 'Lodgers' showed a particularly high rate of net deficiency." [90]

Ethnographic evidence for blacks indicates that loose attachment to households is far more prevalent in poor neighborhoods than in more affluent neighborhoods, and that it is more characteristic for men than women.[91] Elliot Liebow, who spent a year and a half socializing with streetcorner black men in a poor neighborhood in Washington, D.C., concluded that they were less likely to be counted "in census reports" than "stable workers and family men." [92]

In general, men are much more frequently concealed and overlooked than women, for four reasons. First, the great majority of respondents are women, and respondents usually cannot omit themselves from rosters. Second, when children are present in a household, it is difficult to conceal a mother or female guardian. Third, many of the motives for concealment—such as AFDC eligibility, recipiency of wage income, and fear of police—apply exclusively or at

87. Robert I. Lerman, "The Family, Poverty, and Welfare Programs: An Introductory Essay on Problems of Analysis and Policy," Marjorie Honing, "The Impact of Welfare Payment Levels on Family Stability," and Carol B. Stack and Herbert Semmel, "The Concept of Family in the Poor Black Community," in U.S. Congress, Joint Economic Committee, Subcommittee on Fiscal Policy, *Studies in Public Welfare*, Paper No. 12, "The Family, Poverty, and Welfare Programs: Factors Influencing Family Instability," 1973. See also "Finding the Missing Men: The Sampling Problem," an appendix to *Six Years in the Lives of the Impoverished: An Examination of the WIN Thesis*, by Samuel Z. Klausner, unpublished report to the Employment and Training Administration of the U.S. Department of Labor, 1978.

88. Alan Harwood, "Participant Observation and Census Data in Urban Research," paper delivered at the annual meeting of the American Anthropological Association, November, 1970; and personal communication to the author.

89. Leon Pritzker and N.D. Rothwell, "Procedural Difficulties in Taking Past Censuses in Predominantly Negro, Puerto Rican, and Mexican Areas," in *Social Statistics and the City*, pp. 72-73, (See footnote 46).

90. *Ibid*, p. 64.

91. Stack and Semmel (See footnote 87); Stack, *All our Kin: Strategies for Survival in a Black Community*, New York, 1975; Andrew Billingsley, "Black Family Structure: Myths and Realities," in *Studies in Public Welfare*, Paper No. 12; Charles Valentine, *Culture and Poverty: Critique and Counter-Proposals*, Chicago, 1968.

92. Elliot Liebow, *Tally's Corner*, Boston, 1967, p. 20n. See also National Academy of Sciences, *America's Uncounted People*, Report of the Advisory Committee on Problems of Census Enumeration, 1972; Deborah P. Klein, "Determining the Labor Force Status of Men Missed in the Census," *Monthly Labor Review*, March 1970.

least more frequently to men. Fourth, men are more likely than women to be loosely attached to households, and therefore overlooked.

Persons with no usual residence.— Persons who sleep in cars or vans, hallways, abandoned buildings, parks, alleys, on sidewalks, or in tents located away from tent sites enumerated in the decennial census have no "usual residence" in the sense recognized by the Census Bureau, and are not covered by the household survey. Such persons probably account for a small proportion of residual uncovered persons; they are, of course, poorer on average than covered persons of the same sex, race, and age; and they are more likely to be men than women.

Evidence that residual uncovered men live in poverty neighborhoods

Men were missed at the rate of 6.18 percent, 2.6 times the 2.37 percent rate for women, among residual uncovered persons in 1975 (table 5, line 10). Inasmuch as men were missed at about the same rate as women in false vacancies, it follows that men were missed at a rate substantially more than 2.6 times that for women among persons omitted from household rosters and persons with no usual residence. In other years, too, the miss rate for men must have greatly exceeded that for women among persons omitted from household rosters and persons with no usual residence.

In the remainder of this appendix, I will present two types of evidence that indicate that the uncovered men tend to live in metropolitan poverty neighborhoods.

Driver's license study.—Although it does not compare poor and nonpoor neighboorhoods, a Census Bureau study indicates that respondents in poor black neighborhoods omitted many men from rosters they provided to enumerators for the 1970 census—and, presumably, to household survey interviewers as well. From the rolls of the District of Columbia's Department of Motor Vehicles, the Bureau took a sample of 710 men, mostly black, with addresses in poor neighborhoods and with newly issued or renewed driver's licenses.[93] In attempting to match the names and addresses with persons reported to the 1970 census, the Bureau found that 23.5

percent of the men had been missed or probably missed by the census. There were two groups of missed men.

Twelve percent were misses that were confirmed by a resident at the man's address in reinterviews. Of these, 9.0 percent were in housing units that were enumerated and classified as occupied in the census. The investigators were generally unable to obtain clear explanations of why the men had not been reported to the census. "Oversight" may have been a major reason for this type of miss.

The other 11.5 percent were misses or probable misses that residents would not confirm in reinterviews, although the men had received their licenses by mail, and the investigators were frequently able to obtain corroborative evidence from the Post Office or the IRS that the men received other mail at the address. Residents said they did not know the men, or said the men lived at other addresses that could not be confirmed in interviews at these addresses, or said the men were drifters with no permanent addresses, or gave replies that appeared evasive or confused to the investigators. Deliberate concealment on the part of respondents, and absence of any usual residence on the part of the missed men may have been major reasons for this type of miss.

Sex ratios in the household survey.— Comparisons of sex ratios, the number of men per 100 women, for metropolitan poverty and other areas of residence in the household survey indicate that men omitted from rosters tend to live in metropolitan poverty areas. Poverty areas are areas in which 20 percent or more of the population reported 1969 incomes below the poverty level.

Sex ratios in the population covered by the household survey sample for 1975 are shown in column 1 of table 11 by race, for metropolitan poverty areas, metropolitan nonpoverty areas, and nonmetropolitan areas.[94] The "corrected" sex ratios, i.e. those based on population estimates corrected for census

undercount, are shown in column 2 by race. For metropolitan areas, the data show that: (1) For whites, the sample found 2.3 fewer men per 100 women in poverty areas than in nonpoverty areas. The difference between the observed area ratio and the national corrected ratio was 1.5 times as large in the poverty areas as in the nonpoverty areas. (2) For blacks and other races, the sample found 10.0 fewer men per 100 women in poverty areas than in nonpoverty areas. The difference between the observed area ratio and the national corrected ratio was 1.9 times as large in the poverty areas as in the nonpoverty areas.

There are two possible explanations for these differences: The differences may reflect more sample undercoverage of men in poverty areas than in nonpoverty areas, due to incomplete rosters, or they may reflect lower true sex ratios in poverty areas than in nonpoverty areas.

Although data are lacking with which to settle the issue, the former explanation is more plausible. In defense of the latter, it is sometimes argued that low sex ratios in poverty areas reflect a situation in which men have left their wives and children in poverty areas and gone to live elsewhere. This view is not persuasive, for two reasons. First, it ignores the findings of ethnographers that many of the households that the household survey counts as female-headed are actually male-headed. Second, it begs the question of where the departed husbands and fathers went to live. Because ethnographers have found that the inability of men to earn steady incomes is a major cause of marital instability among poor persons, it would be surprising if the men were to resettle in the more affluent sections of metropolitan areas.[95]

Sex ratios in the 1970 census.—Analysis of black sex ratios in the 1970 census provides insight into the resi-

93. The sample originally included 1,000 men, of whom 290 were out-of-scope or noninterviews. See Census Bureau, "1970 Census: Preliminary Evaluation Results Memorandum No. 21," prepared by Ralph Novoa, October 1971. For a report on driver's license studies in connection with pretests for the 1980 census, see John Thompson, "The Nonhousehold Sources Coverage Improvement Program," paper presented at the American Statistical Association annual meetings, 1978.

94. In metropolitan areas, the Census Bureau classified poverty areas according to the proverty rate of each census tract, which included an average of about 2,500 inhabitants. In nonmetropolitan areas, the Bureau classified proverty areas according to the poverty rate a each minor civil division (MCD). MCD's are townships and cities and may contain up to 50,000 inhabitants. Consequently, the poverty area concept distinguishes sharply between small districts in metropolitan areas, but in nonmetropolitan areas it distinguishes less sharply and is not useful for purposes of the present discussion.

95. Stack, *All Our Kin*, and Liebow, *Talley's Corner.*

Table 11.—Sex Ratios for Persons Age 18–64, 1975

Race and area of residence	Sex ratios: men per 100 women		Addenda	
	Household survey sample (1)	"Corrected" (2)	Percent with 1975 income below poverty level (3)	Population 18–64 (millions) (4)
White	91.8	95.8	9.7	107.1
Metropolitan poverty	89.1		25.0	4.7
Metropolitan nonpoverty	91.4		7.0	68.2
Nonmetropolitan	93.0		12.6	34.2
Black and other	75.0	89.2	29.3	14.6
Metropolitan poverty	68.3		37.4	4.4
Metropolitan nonpoverty	78.3		17.6	7.0
Nonmetropolitan	77.8		41.6	3.1

Col. (1) Before blow-up of sample data to census-level population control totals. Annual averages based on monthly data from BLS and Census Bureau.
Col. (2) Based on population corrected for census undercount. Census Bureau.
Col. (3) Based on civilian noninstitutional population, all ages, plus Armed Forces members living off-base in the United States. Census Bureau.
Col. (4) Civilian noninstitutional population. BLS.

dence of the relatively large group of black and other men apparently missed by the household survey in metropolitan poverty nieghborhoods.

The 1970 census published detailed data on poverty neighborhoods in 50 large central cities. The neighborhoods consisted of contiguous census tracts with poverty rates of 20 percent or more, and contained populations of 20,000 persons or more. Tabulations for blacks age 22–44 in the 15 cities with the largest black populations show that the higher the poverty rate of the black residents of the neighborhood, the lower the sex ratio (table 12)[96]. The sex ratio was 78.2 in neighborhoods where the black poverty rate was 20–29.9 percent. This ratio fell to 74.6 and 69.9 in neighborhoods where the black poverty rate was 30–39.9 percent, and 40 percent and over, respectively. (In nonpoverty areas of the 15 cities, the sex ratio was 82.5).

Appendix D: Uncounted Migration

IN this appendix, I will present evidence on the amount of two types of migration that are not counted in the corrected population control totals, and discuss the effects of this uncounted migration on DIFF.[97] The two types of uncounted migration are: uncounted emigration by citizens and legally resident aliens, and net illegal immigration.

Uncounted emigration

In discussing emigration, it is convenient to distinguish foreign-born and native-born persons.

1. By comparing the foreign-born population in the 1960 and 1970 censuses, Robert Warren and Jennifer Peck concluded that 1,065,000 foreign-born persons emigrated in 1960–70. Their finding was supported by independent estimates of emigration by registered, legally-resident, aliens, who account for a large share of emigration by foreign-born persons.[98] Ongoing research at the Census Bureau confirms the Warren-Peck findings, and indicates that emigration of legally-resident aliens increased substantially after 1970. That there has been an increase in such emigration is not surprising, because the legally-resident alien population has grown steadily, increasing from about 3.0 million in 1965 to about 4.5 million in 1977.[99]

2. On the basis of partial data, it appears that about 300,000 native-born persons may have emigrated in 1960–70.[100]

In sum, about 1,365,000 persons may have emigrated in 1960–70, an average of about 136,000 per year, Census Bureau corrected population control totals allow for an average of 25,000 emigrants per year in 1960–70, and about 36,000 per year after 1970. Accordingly, there may have been about 110,000 uncounted emigrants per year in 1960–70, and there are indications that the number has increased substantially since 1970.

Net illegal immigration

By net illegal immigration I mean increases in the illegal alien population, i.e., illegal immigration minus emigration by illegal immigrants. Two types of evidence indicate that substantial net illegal immigration occurred after 1964.

1. The increase in apprehensions of illegal aliens by the Immigration and Naturalization Service (INS) from 74,000 in fiscal year 1964 to 412,000 in fiscal year 1971 and to 1,033,000 in fiscal year 1977 probably reflects a large increase in illegal immigration; it is unlikely that stricter enforcement of immigration laws has accounted for a large share of the increase in apprehensions.[101] Although many of the illegal immigrants remain in the United States only briefly, there are indications that some of them remain for extended periods.

2. Published estimates of the number of illegal aliens in the United States vary greatly, but none of the estimates for 1972–77 has been less than about 3 million, and it is generally believed that most of the growth in this population took place after 1964. By analyzing consistencies and inconsistencies between IRS tax records and earnings and benefit records of the Social Security Administration, and comparing these records with corrected population control totals, Clarise Lancaster and Fritz Scheuren tentatively concluded that there may have been about 3.9 million illegal aliens age 18–44 in the United States in April 1973.[102]

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96. Ages 22-44 are the ones for which Siegel showed that the difference between the undercount for black men and black women was largest. Census Bureau, *Estimates of coverage* (see footnote 39).

97. For a description of the migration data that the Census Bureau uses to estimate corrected population control totals, see Census Bureau, *Estimates of Coverage* p. 15.

98. "Emigration from the United States: 1960 to 1970," paper presented at the annual meetings of the Population Association of America, 1975; also Warren, "Recent Immigration and Current Data Collection," *Monthly Labor Review*, October 1977, p. 40.

99. The figures refer to aliens admitted for permanent residence, who, together with parolees, net arrivals from Puerto Rico, and net arrivals of civilian citizens, constitute immigration as measured by the Census Bureau. Because other aliens, such as foreign students and tourists, are not considered immigrants, they are not counted in the corrected population control totals, and are not at issue in this article.

100. The estimate is based on a study by Ada Finifter that showed that 338,000 native-born and foreign-born citizens emigrated to 15 foreign countries between the censuses of 1960 and 1970. Finifter's findings are summarized by Warren in "Recent Immigration and Current Data Collection," p. 41.

101. The apprehensions figures exclude "nonwillful crew violators," that is, foreign seamen who remained in the United States when their ships left port.

Table 12.—Sex Ratios for Blacks Age 22–44 in 15 Cities With the Largest Black Population, in Neighborhoods Classified by Poverty Rate, 1970 Census

Cities, ranked by black population	Poverty neighborhoods, by black poverty rate [1]						Remainder of city		City total	
	40 percent and over		30–39.9 percent		20–29.9 percent					
	Population age 22–44	Sex ratio [2]	Population age 22–44	Sex ratio [2]	Population age 22–44	Sex ratio [2]	Population age 22–44	Sex ratio [2]	Population age 22–44	Sex ratio [2]
New York	1,788	59.2	172,861	70.0	146,840	74.9	218,657	77.4	540,146	74.2
Chicago	32,082	65.8	97,596	73.2	36,047	77.1	160,759	84.4	326,484	78.2
Detroit	7,713	89.8	36,712	79.9	37,943	83.3	103,762	84.0	186,130	83.2
Philadelphia	13,919	65.3	64,472	70.3	7,550	82.9	98,657	80.7	184,598	75.8
Washington, D.C.	4,969	56.6	11,786	102.1	46,422	81.2	105,799	86.1	168,976	84.7
Los Angeles-Long Beach	9,856	73.9	38,408	78.7	43,187	83.2	70,425	90.7	161,876	84.7
Baltimore	21,712	64.0	25,370	79.9	13,828	79.3	54,423	83.6	115,333	78.2
Houston	17,940	81.3	31,845	83.4	12,918	82.1	32,769	85.9	95,472	83.7
Cleveland	18,763	70.8	11,714	77.4	9,949	71.7	40,251	77.5	80,677	75.2
Atlanta	20,741	71.9	17,344	77.3	----------	----------	37,150	85.5	75,235	79.6
New Orleans	49,796	71.5	6,454	82.7	----------	----------	11,298	81.1	67,548	74.1
St. Louis	15,318	65.1	8,191	70.9	25,472	77.4	15,515	78.2	64,496	73.7
Newark	----------	----------	19,045	69.3	28,389	72.7	16,962	78.2	64,396	73.1
Dallas	5,291	61.6	23,744	84.7	17,987	84.4	16,117	86.9	63,139	83.0
Memphis	26,873	71.1	22,236	75.5	5,865	82.8	4,648	80.2	59,622	74.5
Total, 15 cities	246,761	69.9	587,778	74.6	432,397	78.2	987,192	82.5	2,254,128	78.1

1. Poverty neighborhoods contain all census tracts with an overall poverty rate of 20 percent or more, grouped into neighborhoods with a combined population of 20,000 or more. These neighborhoods are here classified by the poverty rate of their black population.
2. Men per 100 women.

Source: Census Bureau, 1970 Census of Population, Supplementary Reports, *Low-Income Neighborhoods in Large Cities: 1970*, for each city.

Effect of uncounted migration on DIFF

I will discuss the effect of uncounted migration on the accuracy of the household and payroll employment measures, and on DIFF.

As previously mentioned, the household employment measure equals the population control totals times the corresponding employment ratios. The household survey does not measure increases in illegal alien employment, or employment declines associated with uncounted emigration, because the population control totals do not measure uncounted migration.[103]

The payroll survey measures employment declines that occur when nonagricultural wage and salary workers emigrate, and there are indications that it counts a large proportion of the nonagricultural wage and salary jobs held by illegal aliens. Because UI tax returns are the principal source for benchmarking the payroll survey, the survey covers illegal aliens to the extent

that their employers pay UI taxes on them. The following argument indicates that employers pay UI taxes on most of their illegal alien workers. Employers who evade UI taxes on illegal alien workers probably evade Social Security taxes on these workers as well, because employers fear that tax investigators will match the two types of returns. A number of small-scale surveys have found that illegal aliens interviewed in a variety of circumstances say that their employer, in most cases, deducts Social Security taxes from their wages. Also, IRS tax investigators believe that employers pay Social Security taxes on most covered illegal alien workers. No evidence has been presented to the contrary.

The findings of the surveys are as follows. (1) In a sample of 625 apprehended illegal aliens who had worked at nonagricultural jobs in the United States, 80 percent said their employer had deducted Social Security taxes from their wages.[104] (2) In a sample of 145 Mexicans who had worked at nonagricultural jobs in the United States and were later interviewed in their villages in Mexico, 78 percent said their employer had deducted Social Security taxes from their wages.[105] (3) In a sample of 185 Mexicans living illegally in

the United States and interviewed informally, most of those who worked said their employer deducted Social Security taxes from their wages.[106] (4) In a sample of 447 Mexicans who had worked illegally in the United States, were apprehended, and were interviewed by Mexicans upon their return to Mexico, 65 percent said their employer had deducted Social Security taxes from their wages.[107] (5) In a sample of 49 Haitians and Dominicans working illegally in New York City at jobs not in private households, 86 percent said their employer deducted Social Security taxes.[108] Because some of these samples included agricultural and private household workers, some of whom are not covered by the Social Security law, and because tax evasion in regard to those agricultural and private household workers who are covered is probably much higher than it is in regard to other wage and salary workers, the percentages cited may understate the percentage of illegal alien nonagricultural wage and salary workers outside

102. "Counting the Uncountable Illegals: Some Initial Statistical Speculations Employing Capture-Recapture Techniques," *Proceedings of the Social Statistics Section, 1977,* American Statistical Association, p. 533.

103. Uncounted migration may affect the employment ratios as well as the population control totals, but such changes in the employment ratios cannot cause the household survey to measure changes in the employment of uncounted migrants when the population control totals do not measure the population change associated with uncounted migration. Uncounted migration probably has only a small effect on the employment ratios, because the employment ratios of uncounted migrants probably do not differ greatly from those of citizens and legally-resident aliens. There are some indications that the household survey sample misses a large proportion of illegal aliens.

104. David S. North amd Marion F. Houstoun, *The Characteristics and Role of Aliens in the U.S. Labor Market: An Exploratory Study,* report to the U.S. Department of Labor, 1976, p. 143; and North, "Interactions Between Illegal Alien Respondents and the Social Security Tax Collection System" July 1976, p. 16.

105. Wayne A. Cornelius, *Mexican Migration to the United States: Causes, Consequences, and U.S. Responses,* Migration and Development Study Group, Center for International Studies, Massachusetts Institute of Technology, 1978, and personal communication to the author.

106. Cornelius, personal communication to the author.

107. Jorge A. Bustamante, "Undocumented Immigration from Mexico: Research Report," *International Migration Review,* Summer 1977, p. 170.

108. Charles B. Keely *et al.,* "Profiles of Undocumented Aliens in New York City: Haitians and Dominicans," Occasional Paper No. 5, the Center for Migration Studies, 1978, and personal communication to the author.

By FRANK DE LEEUW

Why Capacity Utilization Estimates Differ

Introduction

IN spite of continuing efforts to measure capacity utilization in manufacturing, at times serious uncertainty remains about its movements. The Census Bureau, the Bureau of Economic Analysis, the Federal Reserve Board, the McGraw-Hill Publications Company, and Wharton Econometric Forecasting Associates all maintain current measures. Broadly, these capacity utilization measures move up and down together; but there are important differences in amplitude and timing. Differences in amplitude are shown in table 1, which compares the five measures from yearend to yearend during two recent contractions and expansions.[1]

There is a clear and systematic difference between "production-based" and "survey-based" measures. "Production-based" refers to measures that use production statistics to measure the numerator of capacity utilization and some technique involving the assumption of smoothness to measure capacity in the denominator. "Survey-based" refers to measures for which respondents report on utilization directly. The Federal Reserve and Wharton measures, which are production-based, show a greater amplitude of swing than the McGraw-Hill, BEA, and Census measures, which are survey-based. Of the two production-based measures, Whar-

ton shows slightly more amplitude than the Federal Reserve. Of the survey-based measures, McGraw-Hill shows more amplitude than BEA. This article will touch briefly on differences within the survey-based group and within the production-based group; but its focus is on the reasons survey-based measures show less amplitude in their swings than do production-based measures.

An explanation of why a multiplicity of measures exists and what the various measures were intended to accomplish may be helpful. For many years, capacity and output were calculated by industry or trade associations for a relatively narrow group of materials industries—steel, cement, paper, petroleum refining, and other continuous-process industries with a high degree of capital intensity. Capacity was measured as the proven production capability of each plant in tons, barrels, or some other physical unit, summed over all plants in the industry and typically corrected for normal downtime. Capacity utilization measures were found highly useful in analyzing investment needs, profit swings, and other economic developments in these industries.

In the construction of these measures, not much attention was devoted to framing a precise theoretical definition of capacity. Clearly, "capacity" was a level of output that would be costly to exceed without increasing the capital stock; but whether capacity corresponded to minimum shortrun cost, maximum shortrun profit, or some other concept was not investigated. The next section of this article returns to the problem of definition.[2]

Because capacity utilization measures were useful wherever they were available, it seemed likely that broad measures for at least all manufacturing and possibly a still wider group of industries would be helpful in analyzing general business conditions. The method of measuring the physical capability of each plant, however, was not feasible for most industries. Instead, three other methods of measuring capacity or its utilization were devised—the trend-through-peaks method, the capital stock method and the survey method.

The trend-through-peaks method, which approximates capacity by linear interpolation between production peaks,

1. Yearend comparisons do not match the precise timing of expansions and contractions: but two of the five measures are calculated only for the end of each year.

2. For a thorough discussion, see Lawrence Forest, "Capacity Utilization: A Discussion of Concepts and Selected Analytical Applications", Federal Reserve Board Staff Economic Paper (forthcoming).

Table 1.—Changes in Manufacturing Capacity Utilization: Recent Contractions and Expansions

[Percentage Points]

	Federal Reserve	McGraw-Hill	BEA
December to December [1]			
1969–70	−6.8	−5	−4
1970–72	9.4	7	5
1973–74	−11.7	−11	−7
1974–76	5.5	3.5	3

	Federal Reserve	Wharton	Census
Fourth quarter to fourth quarter [1]			
1969–70	−8.5	−9.8	n.a.
1970–72	9.5	10.5	n.a.
1973–75	−10.8	−12.5	−10
1975–76	3.7	3.7	0

NOTE.—The time periods selected for comparison are dictated by data availability. Estimates from the McGraw-Hill survey are available for December; from the BEA survey, for the last month of each quarter; from the Federal Reserve, for each month; from Wharton, for the average of each quarter; and from Census, for each fourth quarter.

McGraw-Hill and Census estimates are not seasonally adjusted; the others are. This difference should have little effect on the comparisons.

Rounding follows the source: Wharton and Federal Reserve estimates are published to the nearest tenth of a percent, BEA and Census to the nearest percent, and McGraw-Hill to the nearest one-half percent.

1. The December comparisons use December 1974 as a low month, and the fourth quarter comparisons use the last quarter of 1975 as a low quarter. The reason for this difference is that manufacturing production as measured by the Federal Reserve index rose from December 1974 to December 1975 but fell from fourth quarter of 1974 to the fourth quarter of 1975.

is the simplest. It begins with the assumption that output is equal to capacity at every production peak, although ways have been devised for modifying this assumption in cases where other evidence clearly indicates significant excess capacity at a production peak. Extrapolation of capacity beyond the latest peak raises another problem, and even proponents of the method admit that it is sometimes not reliable for the period since the most recent peak—often the period of greatest interest.[3]

Another problem of this method is that it may miss the slowdowns or speedups in capacity growth due to fluctuations in investment. A utilization measure subject to this problem would tend to fall more in contractions or rise more in expansions than a measure that is not. The results shown in table 1 are evidence that the Wharton measure, which is a trend-through-peaks measure, is subject to this problem.

The capital stock method, which uses capital stock as a proxy for capacity, does take systematic account of fluctuations in investment, because capital stocks are generally measured by the perpetual-inventory method of cumulating past investment spending and subtracting retirement or depreciation. There are, however, serious statistical problems in converting investment spending into capital stocks.[4] Furthermore, the link between investment spending and additions to capacity is not precise; some capacity expansion requires little or no investment spending and much investment serves purposes other than expanding capacity.[5]

The survey method offered promise of a distinct improvement over the other methods. In utilization surveys, individual companies or establishments make the determination of their capacity utilization. They are given wide latitude in defining output and capac-

ity, especially the latter, because it is assumed that respondents are best able to measure capacity and its utilization in a way most appropriate to their situations. In the 1950's, McGraw-Hill pioneered this area. In the 1960's, BEA extended the survey method to cover a much larger sample and to provide quarterly instead of just annual estimates. Census restricted itself to an annual survey, covered establishments rather than companies, and collected information on actual operating conditions (number of shifts per day, days per week, etc.) and on operating conditions assumed in measuring capacity.[6]

Survey-based methods have yielded valuable information on capacity utilization for many industries and have been employed extensively in economic analyses. They have also been used in the construction of eclectic measures of capacity utilization such as the Federal Reserve estimates, which draw on many sources of information for measuring shortrun changes in utilization, but which employ survey-based measures as benchmarks in the long run.

Survey-based measures of utilization, however, have displayed a cyclical sluggishness that has been disappointing and puzzling. In conjunction with production statistics, survey-based utilization measures imply an implausible degree of short-run sensitivity of capacity to the rate of growth of output. For example, some of the survey-based measures suggest that capacity has declined during some contractions, although all other evidence indicates positive, although lower-than-average growth. This apparent bias in survey-based measures was noted by Perry some years ago with reference to the McGraw-Hill survey.[7] The bias appears to be even larger for other survey-based measures.

This article focuses on three possible reasons for the sluggishness of survey-based utilization measures and on what might be done to correct them. The next section deals with changes in assumed operating conditions—specifically, with the possibility that survey

respondents base their notions of capacity on fewer shifts per day and days per week when output is low than when output is high. Evidence suggests that this is not an important explanation of the behavior of survey-based measures. Assumptions about shifts per day and days per week are not the only operating assumptions firms need to make to measure capacity. They also need to decide whether to include or exclude plants, or portions of plants, that can operate only at very high unit costs or that require inputs (hydroelectric power, for example) that are not always available. This article does not cover these dimensions of operating assumptions.

The third section deals with overreporting of "no change"—the possibility that respondents to surveys tend to report no change in utilization even when there has been an actual change. Evidence suggests that overreporting of no change is substantial and may be an important source of bias in the survey-based measures.

The fourth section deals with the use of labor instead of output to measure capacity utilization, a possibility that would lead to a bias because of short-term fluctuations in labor productivity. Evidence suggests that this, too, may be an important source of bias.

The final section concludes that overreporting of no change and using labor rather than output probably account for a substantial fraction of the differences in amplitude of swing between survey-based and production-based measures of capacity utilization. The section reports on two experimental adjustments to the BEA measure, and concludes that systematic correction for bias may make survey-based measures of capacity utilization more useful.

Changes in assumptions about operating conditions

Measurement of capacity rests on a series of assumptions about operating conditions—assumptions about number of shifts per day, days per week, weeks per year, hours per shift, machine downtime, obsolete facilities, product mix, and availability of labor and materials. A frequent conjecture about why survey-based measures fluctuate less than

3. Thus, Robert Summers has written that "there is no question but that the most recent values of the Wharton Index—the ones of most interest—are somewhat suspect." See "Further Results in the Measurement of Capacity Utilization", American Statistical Association, *Proceedings of the Business and Economics Section*, 1968, p. 32.

4. See Allan H. Young and John C. Musgrave, "Estimation of Capital Stock in the United States", *Conference on Research in Income and Wealth*, October 1976 (to be published).

5. See Barry Bosworth, "Capacity Creation in Basic Materials Industries", *Brookings Papers on Economic Activity*, 1976:2, pp. 311–314.

6. The appendix to this article reproduces the Census questionnaire on capacity utilization.

7. See George L. Perry, "Capacity in Manufacturing", *Brookings Papers on Economic Activity*, 1973:3, pp. 710–712.

production-based measures is that respondents tend to change their assumptions as output changes. This section deals with the hypothesis that during periods of expanding output there is a tendency to increase the number of shifts per day or days per week that capacity is assumed to represent, and during periods of contracting output the reverse takes place. The hypothesis implies that capacity is "found" during expansions and "lost" during contractions and that utilization fluctuates less than it would if operating assumptions were held constant.

It does not necessarily follow that a capacity measure based on changing operating assumptions is useless. It may convey information about the attitudes of respondents. The level of output that maximizes shortrun profits, furthermore, probably grows during expansions and may require more shifts per day when demand is relatively high than when it is relatively low. A theoretical definition of capacity as the profit-maximizing level of output could thus imply systematic changes in operating assumptions—though not necessarily those changes assumed by respondents in any particular capacity measure. The usual theoretical definition of capacity, however, is not the level of output that maximizes profits but rather the level of output that meets a cost criterion—either the level that minimizes shortrun costs per unit of output or the level at which the cost of an additional unit of output rises above some high threshold. Under the usual definition, in contrast to a profit-maximizing definition, cyclical shifts in operating assumptions have no place.

Information collected in the Census survey of manufacturing capacity makes possible for the first time an investigation of whether assumptions about shifts per day and days per week change significantly over time. The Census survey is conducted at the end of each year, and the interval from the end of 1975 to the end of 1976 provides an excellent period for investigating the practical importance of this aspect of capacity measurement. Although this period was one of vigorous expansion in manufacturing output, the Census measure of utilization shows no change (table 1). The Census survey

Table 2.—Shifts Per Day and Days Per Week at Practical Capacity in Manufacturing Industries, Fourth Quarters of 1975 and 1976

	Shifts per day		Days per week	
	1975:IV	1976:IV	1975:IV	1976:IV
Group 1: High shifts per day:				
Textile weaving (221–222)	3.0	3.0	5.9	5.8
Pulp, paper, and paperboard (261–263)	3.0	3.0	6.9	6.9
Industrial inorganic chemicals (281)	3.0	3.0	6.9	6.9
Plastic materials, synthetics (282)	3.0	3.0	6.9	6.9
Petroleum refining (291)	3.0	3.0	7.0	7.0
Rubber tires and tubes (301)	3.1	3.0	5.9	5.8
Flat glass (321)	3.0	3.0	5.9	5.8
Cement (324)	3.0	3.0	7.0	7.0
Basic steel (331)	3.0	3.0	6.7	6.7
Primary nonferrous metals (333)	3.0	3.0	6.9	7.0
Average, group 1 [1]	3.01	3.00	6.55	6.55
Group 2: Medium shift per day:				
Textiles except weaving (223–229)	2.6	2.7	5.7	5.7
Rubber except tires (302–307)	2.7	2.7	5.9	5.8
Nonferrous foundries, rolling mills, etc. (334–339)	2.7	2.7	5.9	5.8
Paper products (264–269)	2.5	2.6	5.6	5.6
Aircraft and parts (372)	2.6	2.6	5.5	5.5
Tobacco products (21)	2.5	2.5	5.7	5.1
Chemicals except industrial and plastics (283–289)	2.4	2.4	6.0	6.0
Transportation equipment except motor vehicles and aircraft (373–379)	2.3	2.4	5.7	5.7
Iron and steel foundries (332)	2.2	2.3	6.0	6.1
Fabricated metal products (34)	2.3	2.3	5.5	5.5
Machinery, except electrical (35)	2.3	2.3	5.5	5.6
Electric and electronic equipment (36)	2.3	2.3	5.6	5.5
Motor vehicles and equipment (371)	2.2	2.3	5.3	5.4
Average, group 2 [1]	2.37	2.40	5.60	5.60
Group 3: Low shifts per day:				
Clay, pottery, and concrete products (32 excl. 321.4)	2.3	2.2	5.9	5.9
Food and kindred products (20)	2.2	2.1	5.6	5.6
Millwork and plywood (243)	2.1	2.1	5.3	5.3
Printing and publishing (27)	2.1	2.1	5.9	5.8
Instruments and related products (38)	2.1	2.1	5.5	5.4
Petroleum except refining (295–299)	2.1	2.0	5.4	5.8
Miscellaneous manufactures (39)	2.0	2.0	5.4	5.4
Lumber except millwork and plywood (24 excl. 243)	1.6	1.6	5.4	5.3
Furniture and fixtures (25)	1.6	1.6	5.3	5.2
Leather and leather products (31)	1.3	1.3	5.3	5.2
Apparel and other textile products (23)	1.2	1.2	5.2	5.2
Average, group 3 [1]	1.89	1.86	5.54	5.50
Average, all manufacturing [1]	2.27	2.27	5.67	5.66

NOTE.—Numbers in parenthesis are SIC numbers.
1. Averages for the three groups and for all manufacturing are based on employment weights.
Source: Census Survey of Plant Capacity, 1975 and 1976.

includes questions not only about utilization but also about operating conditions at practical capacity, defined as "the greatest level of output a plant can achieve within the framework of a realistic work pattern" (appendix A). Responses to the questions about conditions at practical capacity enable us to determine how much, if any, of the extreme sluggishness of reported utilization was due to respondents increasing the number of shifts per day or days per week used to define practical capacity between 1975 and 1976.

The somewhat surprising answer is that, in the aggregate, there was no shift in operating conditions at practical capacity during this period of expansion. A special tabulation of establishments reporting to Census in both years showed no change in the average number of shifts per day—2.27—and a miniscule decline in days per week—

from 5.67 to 5.66 at practical capacity (table 2). These results thus cast grave doubt on the hypothesis that chnages in assumed operating conditions at capacity have much to do with the sluggishness of survey-based measures.

It is of some interest to divide manufacturing industries into three groups, based on their reported practical capacity shifts per day in 1976.[8] The first group consists of those industries that typically operate on a continuous basis, accounting for 10 percent of manufacturing employment in 1976. It includes almost all of the industries for which physical capacity and output data have been calculated for many years. It is not surprising that these industries reported a practical capacity of three shifts per day in both years. They also reported high and unchanged

8. The division is based on a 34-industry break. Of the 20 standard two-digit manufacturing industries, 9 are further subdivided to provide more homogeneous groupings with respect to operating assumptions.

days per week—6.55 days for both surveys.

The next group consists of industries—56 percent of manufacturing employment—that reported 2.3 to 2.7 shifts per day in 1976. These industries do not operate continuously but they are close enough that capacity could be an important constraint on production when actual shifts reach practical capacity. These industries did show a slight increase—from 2.37 to 2.40—in assumed shifts per day at capacity from 1975 to 1976. Their average days per week at capacity was exactly the same—5.60 days— in both years. The increase in shifts implies that utilization for these industries would have risen by a little over 1 percentage point more than the reported figure had it been based on unchanging operating assumptions.

The experience of this middle group, however, is offset by industries (34 percent of manufacturing employment) that typically have low shifts per day. These industries showed a decline in assumed shifts per day at capacity from an average of 1.89 in 1975 to 1.86 in 1976, and a decline in days per week at capacity from 5.54 to 5.50. For these industries, utilization would have declined by 2 percentage points more than the reported figure had it been based on unchanging operating assumptions.

Overreporting of "no change"

The simplest possible explanation of the cyclical sluggishness of survey-based measures of capacity utilization is that respondents find it much easier to report no change than anything else and therefore report no change too frequently.

Evidence on the frequency of no-change responses is available from a special tabulation covering 1970–77 of individual company reports submitted to BEA for its quarterly survey of manufacturing capacity utilization. Charts 10, 11, and 12 show frequency distributions of quarter-to-quarter changes in capacity utilization among respondents in the electrical machinery, nonelectrical machinery, and paper industries. Reported frequencies were weighted by the asset size of the company. Reports tabulated for each quarter were limited to companies that reported utilization rates for that and

CHART 10

Quarterly Changes in Utilization, 1970-77, Electrical Machinery

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

79-5-10
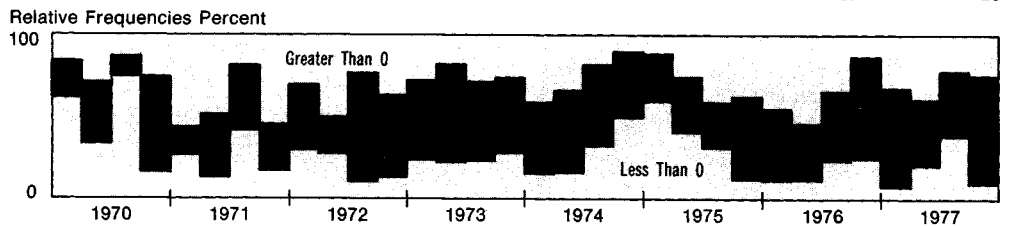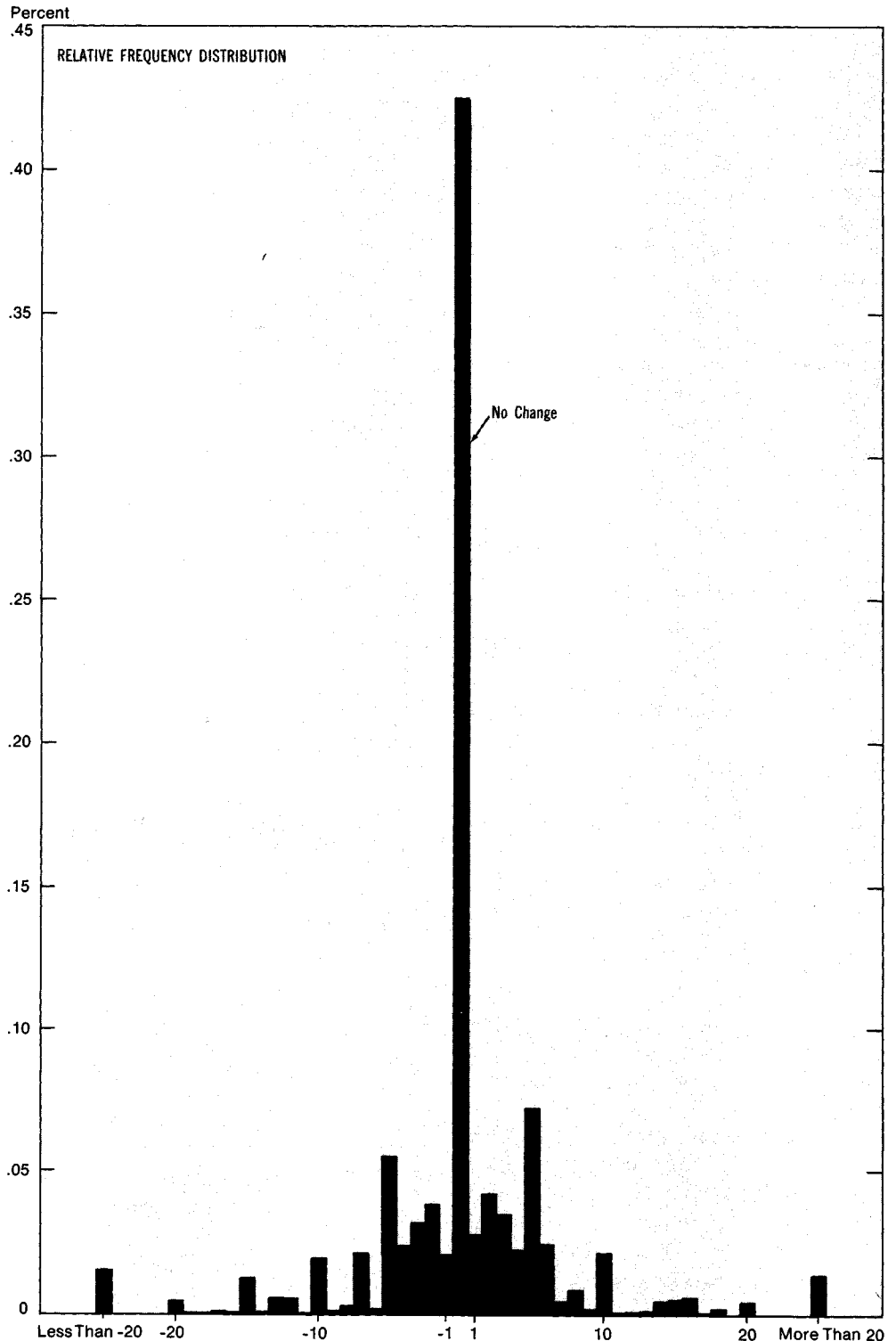
the previous quarter. On an average, 237 company reports per quarter were tabulated for electrical machinery, 310 for nonelectrical machinery, and 89 for paper.

Each bar in the top panel of the charts represents the relative frequency of some possible percentage-point value of quarter-to-quarter changes in the capactiy utilization rate. The bar at the center represents the relative frequency of no-change reports, and the bars on the left and right represent percentage point decreases and increases.

The charts show that there is an enormous frequency of no-change reports. In electrical machinery, 42 percent of all reports showed no change in the utilization rate from the previous quarter. For nonelectrical machinery, the no-change frequency was 37 percent and for paper, 27 percent. Frequencies at multiples of 5 and —5 percentage points are also high—though not nearly as high as at no change.

It seems almost certain that much of the extraordinarily high frequency of no-change reports is due to biased reporting. To be sure, there are times when upward changes in utilization rates are not possible because production is constrained by a capacity ceiling. At these times, the true frequency of no change could be quite high. However, reported high frequencies of no change are not confined to periods of high utilization. The bottom panels of charts 1-3 show quarterly frequencies of positive-change reports, no-change reports, and negative-change reports. They demonstrate that while no-change reports did not have a high frequency in each quarter, quarters of high no-change frequency occurred throughout the 1970–77 period—not just during times when aggregate utilization was high. In the electrical machinery industry, for example, at least one quarter with a no-change frequency over 40 percent occurred in seven of the eight years (1971 is the exception).

Some of the high frequency of no-change reports appears to be due to rounding to the nearest 5 percent. The peaks in the three charts at multiples of 5 and —5 provide evidence for this conclusion. The fact that peaks at multiples of 5 and —5 are much less pronounced than the peaks at no change

suggests, however, that such rounding is only a minor part of the explanation of the high no-change frequency.

A recent tabulation of employment data also suggests that the true frequency of no change is much less than

reported in the BEA survey. A tabulation of a sample of 378 electrical machinery establishments reporting to the Bureau of Labor Statistics revealed that only 10 percent reported no change in employment from June to Septem-

CHART 11

Quarterly Changes in Utilization, 1970-77, Nonelectrical Machinery

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

79-5-11

ber 1978.[9] Because employment generally shows less short-term variation than output, this tabulation suggests that the true frequency of no change in output may well have been even less than 10 percent. Although this finding relates to only one quarter and to establishments rather than companies, the difference between the 10 percent no changes in the BLS employment survey and the 1970–77 average of 42 percent no change for the same industry in the BEA capacity utilization survey is so large that it strongly suggests the presence of biased reporting in the latter.

Because the true frequency of no change is unknown, it is impossible to make a precise correction for the bias caused by no-change responses. The experimental calculations reported in the final section of this article suggest, however, that no-change responses may be an important source of the sluggishness of the BEA estimates of capacity utilization.

No-change responses and company size.—There is weak evidence that the frequency of no-change responses varies with the size of the company. Responses in the paper industry clearly show lower frequencies of no-change reports for large than for small companies. For the two machinery industries, however, there is no association in either direction between no-change frequency and size.

A tendency in manufacturing as a whole for no-change responses to be most frequent among small companies would help to explain differences between McGraw-Hill and BEA utilization estimates. McGraw-Hill estimates rely much more heavily on large firms than BEA estimates, and, as table 1 indicated, McGraw-Hill estimates show a greater amplitude of swing than BEA estimates. The suggestion by Ragan that this difference may be due to a tendency of utilization to vary more over time for large firms than for small ones could be reinterpreted to say that the difference may be due to a tendency for reported utilization, but not necessarily actual utilization, to vary more for large firms than for small ones.[10]

9. The tabulation was prepared under the supervision of John Tucker, Chief, Division of Industry Employment Statistics, Bureau of Labor Statistics.

CHART 12

Quarterly Changes in Utilization, 1970-77, Paper Industry
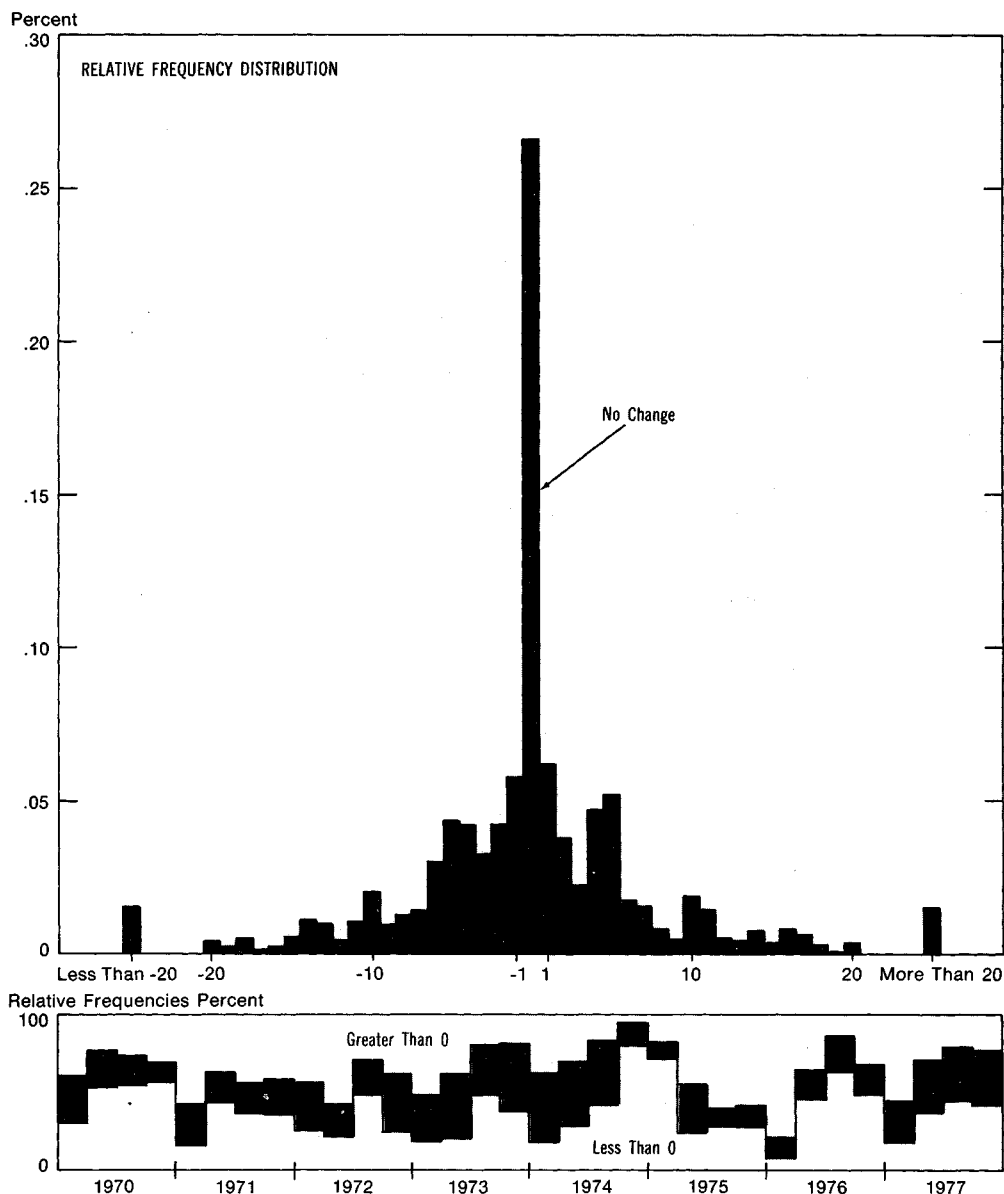
U.S. Department of Commerce, Bureau of Economic Analysis   79-5-12

Labor utilization

For establishments or companies with heterogeneous or complex products it is difficult to measure output, but relatively easy to measure employment or hours. It may therefore be tempting to respond to a survey of capacity utilization by calculating actual hours relative to some measure of "practical capacity" hours rather than attempting to calculate actual output relative to "practical capacity" output.

10. See James F. Ragan, "Measuring Capacity Utilization in Manufacturing", Federal Reserve Bank of New York, *Quarterly Review*, Winter 1976, p. 18.

Measuring capacity utilization in terms of labor, e.g., hours, rather than output could introduce bias in a number of ways. The most serious source of bias is probably cyclical variations in labor productivity. Labor input varies less in the short run than does output and as a consequence labor-based measures of capacity utilization vary less than output-based measures.

Evidence of the importance of the use of labor to calculate capacity utilization comes from the Census survey. The Census questionnaire includes a series of questions relating to labor

Table 3.—Labor Utilization and Capacity Utilization, 1975 and 1976

[Percent]

	Labor utilization [1]			Capacity utilization			Change in capacity utilization less change in labor utilization
	1975	1976	Change	1975	1976	Change	
Group 1: Industries probably relying least on labor to measure utilization...	82.9	84.3	1.4	76.2	79.1	2.9	1.5
Group 2: Industries probably relying most on labor to measure utilization...	67.4	69.0	1.6	68.1	68.8	.7	−.9
Group 3: All other industries...............	79.4	79.5	.1	77.7	77.2	−.5	−.6

NOTE.—For criteria for grouping industries, see text. Group 1: SIC codes 20, 261–3, 281–2, 29, 301, 324, 331–3. Proportion of total is 0.215 (based on 1975 employment). Group 2: SIC codes 25, 334–9, 34, 35, 36, 372, 38. Proportion of toatl is 0.388. Group 3: SIC codes 21, 22, 23, 24, 264–9, 27, 283–9, 302–9, 31, 32 excluding 321 and 324, 371, 373–9, 39. Proportion of total is 0.397.
 1. For derivation of the labor utilization measure, see text.

utilization (see question 1, lines 3–6 in the appendix), and also separate questions relating to capacity utilization however the establishment choses to define it (question 2). For establishments that answer both questions, it is possible to compare the changes over time in reported labor utilization and in reported capacity utilization. The general hypothesis to be investigated is that, in periods when labor productivity is rising cyclically, reported capacity utilizaticn will rise relative to reported labor utilization for those establishments that do not rely on labor to measure capacity utilization, but that it will not rise (or rise less) for establishments that do. Correspondingly, in periods when labor productivity is falling cyclically, reported capacity utilization will fall relative to labor utilization for establishments that do not rely on labor to measure capacity utilization, but less so for establishments that do.

The period from the end of 1975 to the end of 1976 provides an appropriate test—it was a period of strong cyclical recovery in output, and one in which labor productivity appears to have increased at an above-trend rate for manufacturing as a whole. The reported Census utilization rate for all manufacturing, however, did not increase at all.

To investigate the hypothesis, it is first necessary to separate the establishments responding to the Census questionnaire into those that relied heavily on a labor measure of capacity utilization and those that did not. There is no direct way of making this separation; but there are two ways of deriving indirect indicators that give a reason-

ably accurate separation. The first is an examination, for those establishments that answer the labor utilization questions, of the differences between the level of labor utilization and the level of capacity utilization. In those industries for which the two differ substantially— four percentage points or more in 1975 was chosen to define "substantially"— it seems reasonable to infer that labor utilization was not used as a proxy for capacity utilization. The second indicator can be obtained by reference to a Census question relating to the quantity of production measured by units (question 1, line 8 in the appendix), and is the proportion of establishments responding to this question. The proportion varied enormously by industry, from 20 percent or less in some of the machinery groups to 80 percent or more in petroleum refining and organic chemicals. A reasonable inference is that the use of labor as a measure of utilization was much more widespread among establishments that did not respond to the quantity question than among establishments that did.

Based on these two indicators, the Census tabulation was divided into three industry groups. The first group consisted of those industries for which (a) the level of labor utilization and reported capacity utilization differed by 4 percentage points or more (in either direction) 1975, and (b) more than 60 percent of the establishments responded to the quantity question. Paper, basic chemicals, petroleum, primary metals, and a few other industries were in this group. The second group, at the other extreme, consisted of those industries for which (a) the level of labor utilization and reported capacity

utilization in 1975 differed by 2 percentage points or less, and (b) less than 40 percent of establishments, responded to the quantity question. Fabricated metals, machinery, aircraft, furniture, and a few other industries were in this group. The third, or middle, group consisted of all other industries.[11] Textiles and apparel, lumber, printing, motor vehicles, and a number of others were in this group. Table 3 shows labor utilization and reported capacity utilization for the three groups of industries.

The key findings shown by the table are: For the first group, both labor utilization and reported capacity utilization increased, the latter more than the former, for a difference of 1.5 percentage points; for the second group, both increased, the former more than the latter, for a difference of −0.9 percentage points; for the third group, the former increased and the latter decreased, for an intermediate difference of −0.6 percentage points.

The results of the tabulation support the notion that establishments that rely heavily on labor to measure capacity utilization understated the rise in utilization during 1976. If it is assumed that those in Group 1 give a true picture of the increase in capacity utilization relative to labor utilization and that deviation from this group's performance is a measure of bias in the other two groups, then the aggregate downward bias in the Census utilization introduced by reliance on labor to calculate capacity utilization is −1.8 percentage points for all manufacturing.[12] This is about one half of the difference between the 1975–76 change in the Census estimate of manufacturing capacity utilization and the change in either of the production-based estimates of the Federal Reserve and Wharton.

The assumptions underlying the calculation of the downward bias are highly uncertain. The fact that the classification of industries into three groups is itself uncertain, with some

11. The group consisted of industries that met one criterion but not the other for either group 1 or group 2 (or both), and of industries that met neither criterion for either group.

12. This estimate is equal to the difference between group 2 and group 1 (last column of table 3) multiplied by the group 2 proportion of the total (−2.4 times 0.388) plus the difference between group 3 and group 1 multiplied by the group 3 proportion of the total (−2.1 times 0.397).

establishments in the first group probably relying on hours and some in the second group relying on quantity of production, would cause the aggregate estimate to understate the true bias. On the other hand, the fact that productivity varies from one industry to another for all kinds of reasons having nothing to do with the way capacity utilization is measured, means that some of the reported differences between reported capacity utilization and labor utilization could well reflect industry-specific developments, and might cause the aggregate estimate to overstate the true bias. Another complication is possible interaction between the use of labor to calculate capacity utilization and the reporting of no change. All of these factors could distort the quantitative measure of bias, although it is hard to say whether, on balance, they lead to an understatement or an overstatement.

Adjustment of the BEA measure

This section reports on two experimental adjustments to the BEA measure of capacity utilization. One adjustment deals with the bias due to the overreporting of no change; the other, with the bias due to the use of labor to measure capacity utilization. Utilization measures before and after the adjustments are compared with the Federal Reserve and Wharton measures. The comparisons suggest that the two biases together may account for most of the difference in cyclical variability between the BEA measure and production-based measures of utilization.

The first adjustment eliminates from BEA tabulations for 1970–77 those firms that report the same utilization rate in the current quarter as in the two previous quarters. From quarter to quarter the firms that fall into this category are not the same, although a small number falls into the category most of the time. In electrical machinery, the proportion of firms eliminated in a single quarter (weighted by asset size) varies from 8 to 42 percent; in nonelectrical machinery, from 8 to 58 percent; and in paper, from 5 to 33 percent.

Clearly, this adjustment reduces the the influence of no-change reports on the utilization rate; but it is hard to

CHART 13

Capacity Utilization, Electrical Machinery
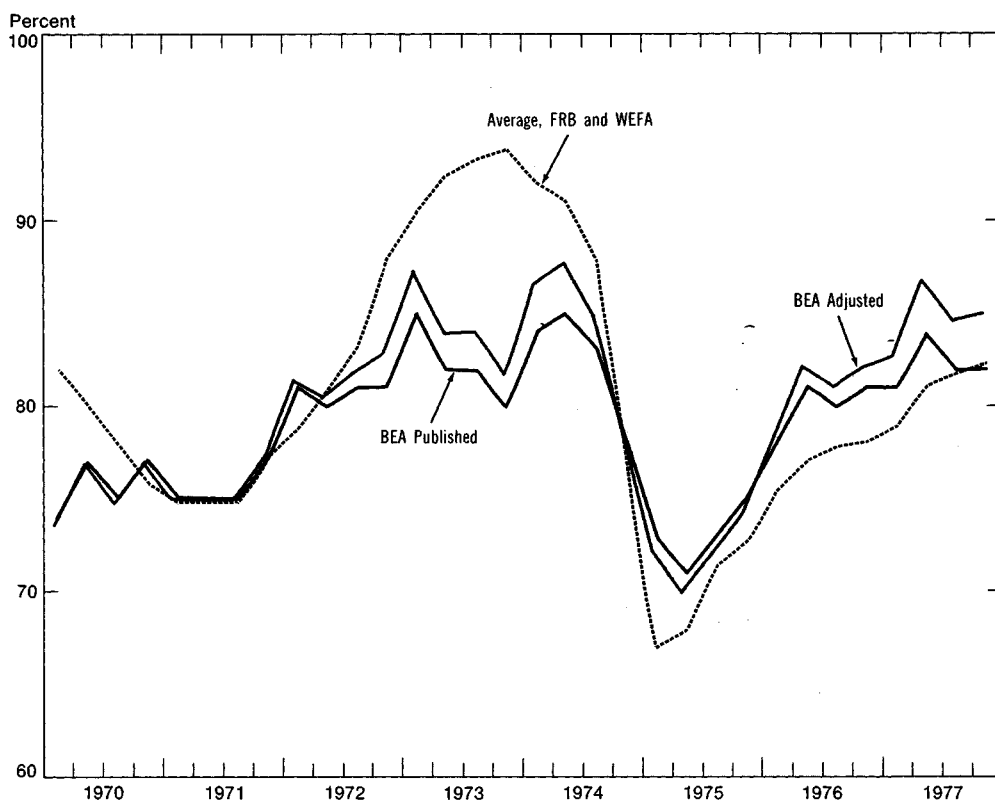
Note: BEA adjusted for overreporting of no change.
Data: BEA, FRB, and Wharton
U.S. Department of Commerce, Bureau of Economic Analysis
79-5-13

CHART 14

Capacity Utilization, Nonelectrical Machinery
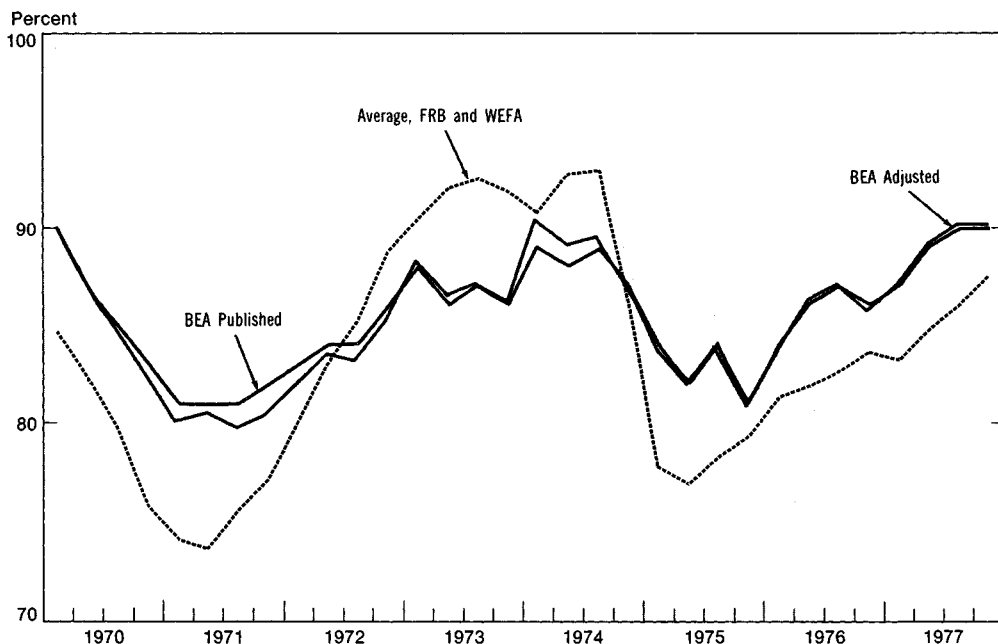
Note: BEA adjusted for overreporting of no change.
Data: BEA, FRB, and Wharton
U.S. Department of Commerce, Bureau of Economic Analysis
79-5-14

know whether it over- or under-corrects. On one hand, firms that correctly report that they have operated at the same utilization rate for three quarters in a row are excluded from the adjusted utilization rate. On the other hand, firms that incorrectly report no change from the second to the third quarter but correctly report change from the first to the second are included in the adjusted rate.

The effect of this adjustment is to increase somewhat the variability of the capacity utilization rate. Even after adjustment, however, these survey-based utilization rates are less variable than the production-based rates of the Federal Reserve and Wharton (charts 13 through 15). According to an estimate of cyclical variability based on regression analysis, in electrical machinery the published BEA measure shows only 53 percent as much cyclical variation as an average of the two production-based measures.[13] In contrast, the adjusted BEA measure shows 69 percent as much. In nonelectrical machinery the corresponding measures are 49 to 57 percent. In paper, they are 74 and 85 percent. Thus, the adjustment raises the measure of relative cyclical variability by 16, 8, and 10 percentage points in the three industries.

The second adjustment adds to the BEA utilization rate a proportion of the estimated cyclical change in output per hour. Because quarterly output per hour figures are not available in industry detail, the adjustment is made to total manufacturing. The adjusted measure was derived by (a) starting with quarterly percent changes in output per hour in manufacturing, as calculated by the Bureau of Labor Statistics, (b) subtracting from these changes 0.64 percentage points, the quarterly rate of productivity growth from 1969 through 1978, (c) smoothing the resulting estimates of cyclical change in productivity by means of a

13. The estimate of relative cyclical variability is based on regression analysis of utilization rates. A regression of BEA utilization rates on an average of the two production-based rates yields a regression coefficient that is downward biased as an estimate of relative cyclical variability because any uncorrelated irregular movements in the two variables lowers the coefficient. The reverse regression, with an average of the two production-based rates as the dependent variable and the BEA estimates as independent, yields a regression coefficient whose reciprocal is upward biased. The estimate presented in the text is a geometric mean of the two estimates.

CHART 15

Capacity Utilization, Paper
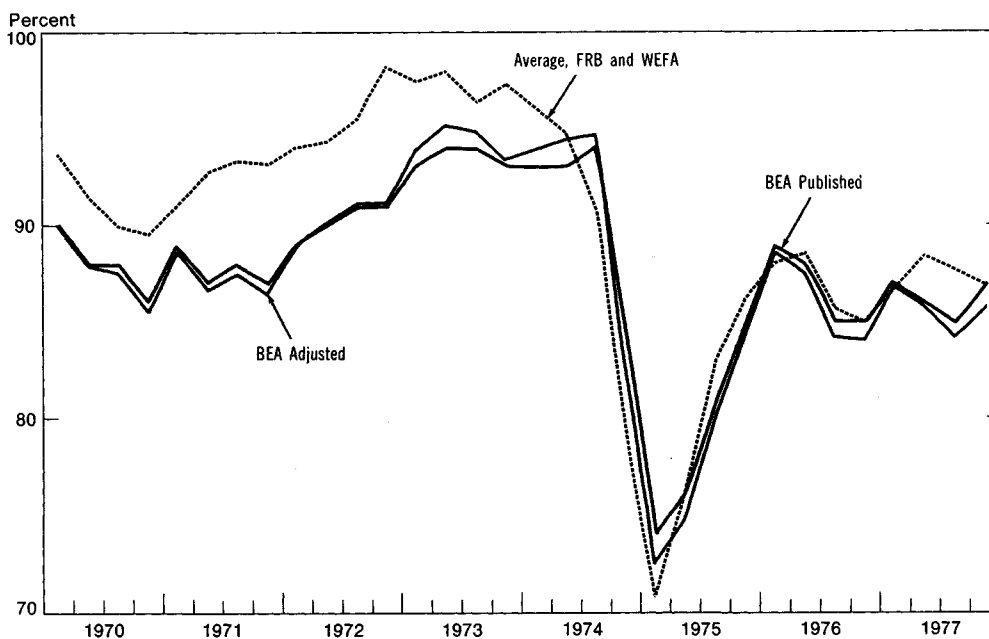
Note: BEA adjusted for overreporting of no change.   Data: BEA, FRB, and Wharton

U.S. Department of Commerce, Bureau of Economic Analysis   79-5-15

three-quarter centered moving average (to eliminate highly irregular quarterly fluctuations), and (d) adding one half of the resulting estimate to quarterly changes in the BEA utilization rate for all manufacturing. The adjusted BEA measure, together with the published BEA measure and two production-based measures are shown in chart 16.

CHART 16

Capacity Utilization, All Manufacturing
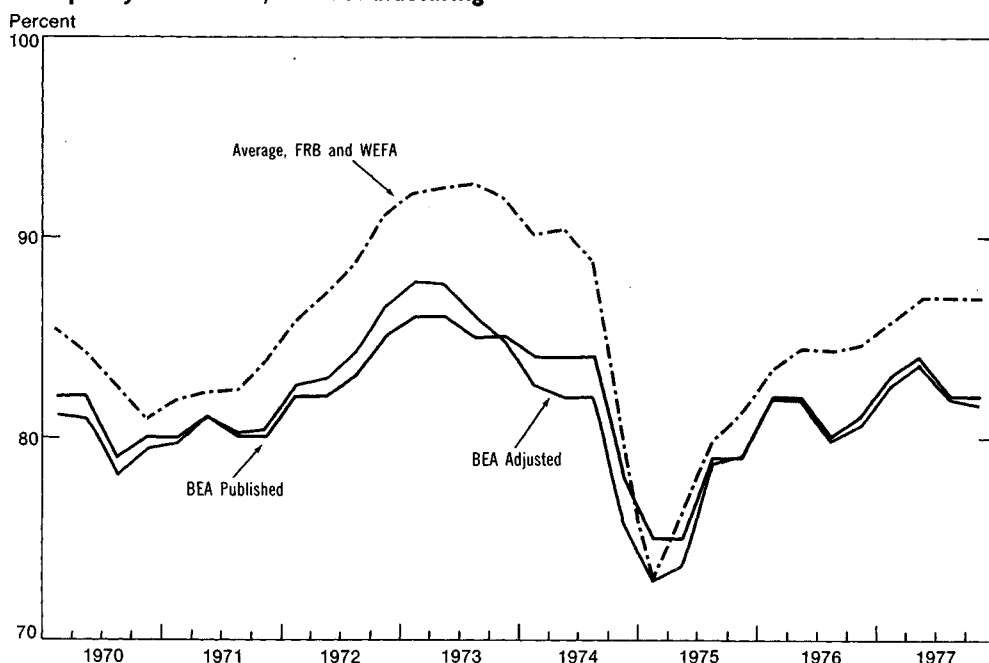
Note: BEA adjusted for use of labor to measure capacity utilization.   Data: BEA, FRB, and Wharton

U.S. Department of Commerce, Bureau of Economic Analysis   79-5-16

Once again, it is hard to know whether the adjustment over- or undercorrects for the partial omission of short-term movements in productivity due to the use of labor in the calculation of survey-based measures of utilization. The evidence shows that industries accounting for 39 percent of manufacturing employment probably relied heavily on labor to measure utilization and showed strong evidence of bias due to the neglect of productivity change, and that industries accounting for another 40 percent of manufacturing employment probably relied somewhat on labor to measure utilization and showed some evidence of bias. It is not possible to deduce from these findings whether adding one half of productivity change is too much or too little.

The result of this adjustment, like the previous one, is to increase the cyclical variation shown by the BEA measure. Before adjustment, the BEA utilization rates for all manufacturing display 58 percent as much cyclical variation as the average of the two production-based measures.[14] After adjustment, the BEA estimates show 72 percent as much variation, an increase of 14 percentage points.

Although there are arbitrary elements in both of these adjustments, it is nevertheless of interest to ask to what extent the two corrections taken together eliminate the difference in cyclical variability between the BEA and production-based measures. The adjustment for overreporting of no change raised the estimate of cyclical variability by 8 to 16 percentage points in the three industries to which it was applied. The adjustment for use of labor to measure capacity utilization raised the estimate of cyclical variability for all manufacturing by 14 percentage points. If no-change bias in the three industries is representative of manufacturing generally, and if interaction of the two sources of bias is minor, the two adjustments together increase cyclical variability by 22 to 30 percentage points. Because it would take an increase of 38 percentage points to elim-

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14. The estimate of cyclical variability is described in the preceding footnote.

Appendix

FORM MQ-C1
(11-29-77)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

SURVEY OF PLANT CAPACITY

▶ FOURTH QUARTER 1977

RETURN TO ▶
Bureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132

▶ Please READ carefully the specific instructions with each item on the reverse side before filling this report.

NOTICE — Response to this inquiry is required by law (title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

In correspondence pertaining to this report, refer to the file number above your name.

YOUR FILE COPY
(Please correct any error in name and address including ZIP code)

GENERAL INSTRUCTIONS

Fourth Quarter 1977 (October-December) — Please complete the information requested for the establishment described in the address box of this form. If your company operates more than one manufacturing location, you are requested to report only for those specifically selected for this survey.

This report will be used to compile estimates of capacity by industry and for manufacturing as a whole in order to evaluate the actual performance of manufacturing in the months ahead. The information is of great value not only to the Bureau of the Census, but also to the Federal Reserve Board, Council of Economic Advisers, and other parts of the Government responsible for tracking the performance of the economy. It is recognized that many companies do not have records readily at hand to compile a precise measure of capacity. It is also recognized that estimated capacity may vary considerably with the product mix which may be subject to substantial short run variation in many establishments. However, past surveys conducted by the Bureau of the Census and discussions with many firms indicate that most firms can overcome these obstacles and estimate the capabilities of the plants reasonably accurately in terms of man-hours or another item such as output or materials put through.

We urge you to make a reasonable effort to complete the various sections of the report form. If you feel that you cannot complete the **item 1** data for production or materials, a man-hour estimate of preferred rate and practical capacity is acceptable.

Please use the remarks section to make comments about the method you used to obtain your estimate of capacity. Such comments will enhance the usefulness of the resulting data or will reduce questions we may have about your report.

Shifts Per Day — Most shifts are assumed to be of 8 hours duration so that a 3-shift operation is usually maximum. If you are operating with a variation that leads to more than three shifts or to fractional shifts, please use the remarks to explain briefly your operations.

Days Per Week and Hours Per Day — Refer to the duration the plant is open and operating, not to the man-hours put in by your work force.

Number of Production Workers and Total Man-hours — Should be the same as reported for this establishment on your 1977 Annual Survey of Manufactures Form MA-100 (Items 2 and 4).

Preferred Level of Operations — This is ordinarily an intermediate level of operations between actual operations and practical capacity which you would prefer not to exceed because of costs or other considerations (although in some instances it may be possible to prefer a higher level of operations than practical capacity would permit). If no such level exists as far as the plant operation is concerned, please enter "same as practical capacity" in item 1, column c.

Practical Capacity — This is the greatest level of output this plant can achieve within the framework of a realistic work pattern. In estimating practical capacity, please take into account the following considerations:

1. Assume a normal product mix. If the plant is subject to considerable short run variation in product mix you may assume that the current pattern of production is normal unless it is unusually different because of a unique situation in the 4th quarter 1977.

2. In setting capacity in terms of the number of shifts and hours of plant operation assume an expansion of operations that can be reasonably attained in your industry and your locality.

3. Consider only the machinery and equipment in place and ready to operate. Do not consider facilities which have been inoperative for a long period of time and, therefore, require extensive reconditioning before they can be made operative.

4. Take into account the additional downtime for maintenance, repair, or clean-up which would be required as you move from current operations to full capacity.

5. Assume availability of labor, materials, utilities, etc., sufficient to utilize the machinery and equipment that was in place at the end of the quarter.

6. Do not consider overtime pay, added costs for materials, or other costs to be limiting factors in setting capacity.

7. Although it may be possible to expand plant output by using productive facilities outside of the plant, such as by contracting out subassembly work, do not assume the use of such outside facilities in more than the proportion that has been normal in your current level of operations.

Appendix —Continued

1. ACTUAL, PREFERRED, AND PRACTICAL LEVELS OF OPERATIONS FOR FOURTH QUARTER 1977 (OCT.–DEC.)
In reporting shifts, days, and hours of operations you may use the most typical pattern during the period.
Lines 1 through 7 – Please make every effort to report information requested in columns (b), (c), and (d).

Line No.	Item (a)	4th Quarter 1977		
		Actual operations (b)	Preferred level of operations (c)	Practical capacity (d)
1	Shifts per day *(Number)*	1011	1012	1013
2	Days per week in operation *(Number)*	1021	1022	1023
3	Hours per day in operation *(Number)*	1031	1032	1033
4	Number of production workers as of November 12	1041	1042	1043
5	Total man-hours worked during the quarter by production workers *(Thousands)*	1051	1052	1053
6	Percent of overtime hours included in line 5	1061 %	1062 %	1063 %
7	Value of production *($1,000)*	1071	1072 $	1073 $
	If possible, please report for lines 8 and 9 below. Use reasonable estimates for the item(s) most suitable for your establishments.			
8	Quantity of production – *Specify units*	1081	1082	1083
9	Quantity of materials consumed – *Specify units*	1091	1092	1093

2. OPERATING RATES DURING THE FOURTH QUARTER 1977

Line No.		Percent
1	At what percentage of practical capacity did this plant **actually** operate during the fourth quarter 1977?	2011 %
2	At what percentage of practical capacity would you have **preferred** this plant to operate during the fourth quarter 1977?	2012 %

3. REASONS FOR OPERATING AT LESS THAN 100% OF PRACTICAL CAPACITY AND LENGTH OF TIME REQUIRED TO REACH AND MAINTAIN PRACTICAL CAPACITY – If during the **4th quarter 1977** this establishment operated at less than 100% of your practical capacity, please report 3a, 3b, and 3c.

a. Principal reason your operations fell short of practical capacity. Enter the number 1 through 6 for each applicable item to indicate the ranking of the reason in importance. *Number only those reasons which pertain to your operations.*

3011 _____ Insufficient orders

3012 _____ Inadequate labor force (total or specific skills)

3013 _____ Lack of sufficient fuel or electric energy

3014 _____ Lack of materials or supplies

3015 _____ Strike or other work stoppages, etc.

3016 _____ Other (fire, flood, etc.) – *Specify* _____

b. Length of time it would require to expand actual operations to practical capacity providing there was sufficient demand for the output
Mark (X) one

3021 ☐ 1 week or less

3022 ☐ 2 weeks to a month

3023 ☐ 2–3 months

3024 ☐ 4–6 months

3025 ☐ More than 6 months – *Specify* _____

3026 ☐ Impractical to expand to practical capacity. *Specify estimated percent of practical capacity that could be reached within 6 months* . . . .   %

c. Length of time practical level of operation could be sustained (or level specified in 3026 above) . . . . 3031 ☐ Indefinitely   3032 ☐ Only _____ months *(Number)*

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inate all of the difference in cyclical variability between the BEA and production-based measures for manufacturing, the two adjustments together eliminate 58 to 79 percent of the difference in cyclical variability.

The apparent precision of these calculations should not mask the fact that the adjustments reported in this section are exploratory; they are not the only possible adjustments. Further experimentation may well uncover superior methods of adjustment. What the reported adjustments indicate is that overreporting of no change and use of labor to calculate capacity utilization can account for a substantial fraction of the difference in cyclical variability between survey-based and production-based measures of capacity utilization. Attempts to adjust for these sources of bias can therefore make survey-based measures of utilization more useful.

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private households on whom employers pay Social Security taxes.

In light of the above evidence, it seems clear that differences in the coverage of uncounted migrants in the household and payroll surveys may be an important factor affecting DIFF.[109] It is tempting to speculate that an increase in illegal alien employment after 1964 accounted in part for the record increase of 2.2 million in DIFF from 1964 to 1969, but the data on uncounted migration are too fragmentary to confirm this hypothesis, and I cannot exclude the possibility that other factors explain the increase in DIFF. Whatever other factors contributed to the increase in DIFF in 1964–69 may also contribute to the cyclical behavior of DIFF that is examined in this article.

109. Although changes in illegal alien employment probably change DIFF, DIFF is not an indicator of change in illegal alien employment, because DIFF is affected also by other factors. In an earlier article, I speculated that the failure of DIFF to increase since 1970 casts doubt on "the widespread impression that illegal alien employment has grown rapidly since 1970" ("Coverage Issues Raised by Comparisons Between CPS and Establishment Employment," *Proceedings of the Social Statistics Section, 1977,* American Statistical Association, p. 67). However, it is quite possible that offsetting factors—such as uncounted emigration, or an overall increase in UI tax evasion, or some unknown factor—have masked growth in illegal alien employment.

Manufacturing and Trade Inventories and Sales in Constant Dollars, 1978:I–1979:I

Quarterly estimates of inventories, sales, and inventory-sales ratios for manufacturing and trade, in constant dollars, for 1978:I–1979:I, are shown in tables 1–4. Estimates for 1974:IV–1977:IV appear in the August 1978 issue of the SURVEY OF CURRENT BUSINESS. The estimates are consistent with those presented in the July 1978 SURVEY.

Table 1.—Manufacturing and Trade Inventories in Constant Dollars, Seasonally Adjusted, End of Quarter

Table 2.—Manufacturing and Trade Sales in Constant Dollars, Seasonally Adjusted Quarterly Totals at Monthly Rates

[Billions of 1972 dollars]

	1978 I	1978 II	1978 III	1978 IV ʳ	1979 I	1978 I	1978 II	1978 III	1978 IV ʳ	1979 I
Manufacturing and trade	237.3	240.3	242.3	244.2	246.9	150.6	155.9	156.5	160.4	159.9
Manufacturing	129.9	131.5	132.9	133.2	135.2	72.6	74.9	75.0	76.9	78.1
Durable goods	84.9	86.1	87.2	87.6	89.7	39.6	41.0	41.2	42.8	43.7
Primary metals	13.2	13.2	13.4	13.4	12.9	5.1	5.3	5.4	5.7	5.8
Fabricated metal products	10.7	10.9	10.9	11.0	11.3	4.5	4.7	4.6	4.8	5.0
Machinery, except electrical	18.9	19.4	19.8	20.3	20.7	6.9	7.3	7.5	7.8	8.0
Electrical machinery	12.2	12.4	12.6	12.5	12.9	5.7	5.7	5.8	5.9	6.2
Motor vehicles and parts	5.7	5.6	5.9	5.3	6.0	6.6	6.9	6.7	7.2	7.3
Other transportation equipment	9.8	10.0	10.1	10.6	10.8	3.0	3.1	3.2	3.1	3.4
Other durable goods [1]	14.4	14.4	14.6	14.6	15.2	7.8	8.1	7.9	8.1	8.0
Nondurable goods	45.0	45.4	45.7	45.6	45.5	33.0	33.9	33.8	34.1	34.4
Food and kindred products	12.9	13.0	13.2	13.1	13.1	10.5	10.6	10.7	10.8	10.6
Nonfood	32.1	32.4	32.6	32.5	32.4	22.5	23.3	23.1	23.3	23.8
Paper and allied products	3.8	3.9	3.9	3.8	3.8	2.8	2.8	2.8	2.8	2.9
Chemicals and allied products	8.3	8.4	8.6	8.6	8.6	6.0	6.1	5.9	6.2	6.5
Petroleum and coal products	3.3	3.3	3.3	3.3	3.1	2.9	3.1	3.2	3.1	3.1
Rubber and plastic products	2.9	2.9	2.9	2.9	3.0	2.0	2.0	2.0	2.0	2.2
Other nondurable goods [2]	13.8	13.9	13.9	13.9	14.0	8.9	9.3	9.2	9.1	9.1
Merchant wholesalers	46.3	47.1	47.2	48.4	49.6	34.3	36.3	36.6	37.3	36.5
Durable goods	30.3	31.0	31.4	32.2	32.5	16.4	17.3	17.7	18.1	17.9
Nondurable goods	16.0	16.1	15.8	16.2	17.1	17.8	18.9	18.9	19.2	18.6
Groceries and farm products	5.7	5.7	5.4	5.4	5.5	9.5	10.0	10.0	10.2	9.6
Other nondurable goods	10.2	10.4	10.5	10.8	11.6	8.3	8.9	8.9	9.0	9.0
Retail trade	61.1	61.7	62.2	62.6	62.1	43.7	44.7	45.0	46.2	45.4
Durable goods	27.6	27.3	27.0	27.6	27.9	15.0	15.8	15.9	16.7	16.5
Automotive dealers	14.3	14.0	13.8	14.7	14.9	8.8	9.2	9.1	9.5	9.6
Other durable goods	13.4	13.3	13.3	12.9	13.0	6.2	6.5	6.8	7.2	6.9
Nondurable goods	33.5	34.4	35.2	35.0	34.3	28.7	28.9	29.0	29.5	28.9
Food stores	6.3	6.4	6.5	6.4	6.4	9.2	9.0	9.0	9.0	8.9
Other nondurable goods	27.1	28.0	28.7	28.6	27.8	19.6	20.0	20.1	20.4	20.0

Table 3.—Constant-Dollar Inventory-Sales Ratios for Manufacturing and Trade, Seasonally Adjusted

Table 4.—Fixed-Weighted Constant-Dollar Inventory-Sales Ratios for Manufacturing and Trade, Seasonally Adjusted

[Ratio, based on 1972 dollars]

	1978 I	1978 II	1978 III	1978 IV ʳ	1979 I	1978 I	1978 II	1978 III	1978 IV ʳ	1979 I
Manufacturing and trade	1.58	1.54	1.55	1.52	1.54	1.56	1.52	1.52	1.49	1.51
Manufacturing	1.79	1.76	1.77	1.73	1.73	1.79	1.76	1.76	1.72	1.71
Durable goods	2.15	2.10	2.12	2.05	2.05	2.15	2.11	2.11	2.05	2.04
Primary metals	2.58	2.50	2.46	2.32	2.23					
Fabricated metal products	2.39	2.33	2.38	2.29	2.24					
Machinery, except electrical	2.72	2.66	2.64	2.59	2.60					
Electrical machinery	2.15	2.17	2.16	2.10	2.09					
Motor vehicles and parts	.87	.82	.88	.74	.81					
Other transportation equipment	3.29	3.28	3.20	3.37	3.16					
Other durable goods [1]	1.85	1.79	1.84	1.80	1.89					
Nondurable goods	1.36	1.34	1.35	1.33	1.33	1.37	1.35	1.36	1.32	1.32
Food and kindred products	1.23	1.22	1.23	1.21	1.24					
Nonfood	1.42	1.39	1.41	1.39	1.36					
Paper and allied products	1.37	1.37	1.37	1.36	1.33					
Chemicals and allied products	1.38	1.37	1.46	1.39	1.32					
Petroleum and coal products	1.14	1.07	1.04	1.04	.99					
Rubber and plastic products	1.48	1.48	1.44	1.44	1.36					
Other nondurable goods [2]	1.55	1.50	1.51	1.52	1.53					
Merchant wholesalers	1.35	1.30	1.29	1.30	1.36	1.36	1.29	1.29	1.29	1.34
Durable goods	1.84	1.79	1.78	1.78	1.82	1.88	1.81	1.81	1.80	1.84
Nondurable goods	.89	.85	.84	.85	.92	.93	.86	.85	.86	.93
Groceries and farm products	.60	.57	.54	.53	.57					
Other nondurable goods	1.23	1.17	1.17	1.20	1.29					
Retail trade	1.40	1.38	1.38	1.36	1.37	1.35	1.32	1.31	1.28	1.30
Durable goods	1.85	1.73	1.70	1.65	1.69	1.84	1.72	1.68	1.64	1.67
Automotive dealers	1.62	1.52	1.51	1.54	1.55					
Other durable goods	2.17	2.03	1.94	1.80	1.89					
Nondurable goods	1.17	1.19	1.21	1.19	1.19	1.11	1.11	1.13	1.10	1.11
Food stores	.69	.71	.72	.71	.72					
Other nondurable goods	1.39	1.40	1.43	1.40	1.40					

ʳ Revised.

1. Includes stone, clay and glass products; instruments and related products; and other durable goods.

2. Includes tobacco manufacturers; textile mill products; apparel products; printing and publishing; and leather and leather products.

NOTE.—*Tables 1, 2, and 3:* Manufacturing inventories are classified according to the type of product produced by the establishment holding inventories; constant dollar inventories in table 16 of the national income and product tables include, in addition to the industries shown here, nonmerchant wholesalers, other nonfarm industries, and farms.

Table 4: The weighted I–S ratios shown in this table were obtained by weighting detailed industry I–S ratios with 1972 sales. Additional industrial detail was used than is shown in table 2. For manufacturing, I–S ratios for 21 industries were weighted by sales; for merchant wholesalers, 20 categories of business, and for retail trade, 8.

THE STATISTICS here update series published in the 1975 edition of Business Statistics, biennial statistical supplement to the Survey of Current Business. That volume (available from the Superintendent of Documents for $6.80) provides a description of each series, references to sources of earlier figures, and historical data as follows: For all series, monthly or quarterly, 1971 through 1974 (1964–74 for major quarterly series), annually, 1947–74; for selected series, monthly or quarterly, 1947–74 (where available). Series added or significantly revised after the 1975 Business Statistics went to press are indicated by an asterisk (*) and a dagger (†), respectively. Unless otherwise noted, revised monthly data for periods not shown herein corresponding to revised annual data are available upon request.

The sources of the data are given in the 1975 edition of Business Statistics; they appear in the main descriptive note for each series, and are also listed alphabetically on pages 187–88. Statistics originating in Government agencies are not copyrighted and may be reprinted freely. Data from private sources are provided through the courtesy of the compilers, and are subject to their copyrights.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1976	1977	1978	1976 I	II	III	IV	1977 I	II	III	IV	1978 I	II	III	IV	1979 I ʳ
	Annual total			Seasonally adjusted quarterly totals at annual rates												

GENERAL BUSINESS INDICATORS—Quarterly Series

NATIONAL INCOME AND PRODUCT†

	1976	1977	1978	1976 I	II	III	IV	1977 I	II	III	IV	1978 I	II	III	IV	1979 I
Gross national product, total† ____bil.$__	1,700.1	1,887.2	2,107.6	1,649.7	1,685.4	1,715.6	1,749.8	1,806.8	1,867.0	1,916.8	1,958.1	1,992.0	2,087.5	2,136.1	2,214.8	2,264.8
Personal consumption expenditures, total__do____	1,090.2	1,206.5	1,340.1	1,053.8	1,075.1	1,098.4	1,133.7	1,167.7	1,188.6	1,214.5	1,255.2	1,276.7	1,322.9	1,356.9	1,403.9	1,440.4
Durable goods, total ♀ ____do____	156.6	178.4	197.5	152.2	154.7	156.7	162.8	173.2	175.6	177.4	187.2	183.5	197.8	199.5	209.1	211.4
Motor vehicles and parts____do____	69.7	81.5	89.7	67.7	69.1	69.5	72.6	81.3	81.2	79.5	84.0	84.1	92.5	89.8	92.6	96.2
Furniture and household equipment___do____	63.9	71.3	77.7	61.9	63.0	64.2	66.5	68.0	69.9	72.0	75.3	72.1	76.5	78.9	83.2	82.5
Nondurable goods, total ♀ ____do____	442.6	479.0	526.5	430.3	437.4	444.5	458.3	465.9	473.6	479.7	496.9	501.4	519.3	531.7	553.4	567.9
Clothing and shoes____do____	75.7	81.5	89.0	73.8	74.2	76.1	78.5	78.5	79.3	81.4	86.7	82.9	87.5	90.5	95.3	93.6
Food____do____	225.8	245.2	269.4	219.4	223.9	227.4	232.3	237.5	244.5	246.4	252.6	257.7	267.8	272.0	279.9	289.7
Gasoline and oil____do____	42.8	46.5	51.2	41.4	41.9	43.0	45.1	46.1	46.2	46.0	47.5	48.3	49.1	51.5	55.8	59.6
Services, total ♀ ____do____	491.0	549.2	641.4	471.3	483.0	497.2	512.6	528.6	539.4	557.5	571.1	591.8	605.8	625.8	641.4	661.0
Houshold operation____do____	72.8	81.6	91.3	69.3	70.2	73.5	78.2	80.2	78.0	83.7	84.6	89.6	89.9	92.6	94.1	97.3
Housing____do____	166.4	184.6	207.3	160.2	164.7	168.2	172.3	177.3	182.1	186.9	192.0	198.1	204.1	210.1	217.0	222.4
Transportation____do____	37.9	44.2	52.6	36.0	37.0	38.7	39.8	40.8	43.5	45.0	47.3	49.7	52.1	53.7	55.0	56.5
Gross private domestic investment, total___do____	243.0	297.8	345.6	231.5	243.5	249.9	247.1	272.5	295.6	309.7	313.5	322.7	345.4	350.1	364.0	371.1
Fixed investment____do____	232.8	282.3	329.6	220.1	228.1	235.3	247.6	262.2	278.6	287.8	300.5	306.0	325.3	336.5	350.5	354.5
Nonresidential____do____	164.6	190.4	222.6	157.7	162.2	168.1	170.5	180.6	187.2	193.5	200.3	205.6	220.1	227.5	237.1	244.1
Structures____do____	57.3	63.9	77.8	56.4	57.6	57.3	57.9	59.3	63.4	65.4	67.4	68.5	76.6	80.9	85.1	85.2
Producers' durable equipment____do____	107.3	126.5	144.8	101.3	104.6	110.8	112.6	121.4	123.8	128.1	132.8	137.1	143.5	146.6	152.0	158.9
Residential____do____	68.2	91.9	107.0	62.4	65.9	67.3	77.1	81.6	91.4	94.3	100.2	100.3	105.3	109.0	113.4	110.4
Change in business inventories____do____	10.2	15.6	16.0	11.4	15.4	14.5	−.6	10.3	17.0	21.9	13.1	16.7	20.1	13.6	13.5	16.6
Nonfarm____do____	12.2	15.0	16.7	12.7	18.8	15.2	2.2	11.1	16.5	22.0	10.4	16.9	22.1	14.6	13.4	17.8
Net exports of goods and services____do____	7.4	−11.1	−12.0	10.4	9.7	6.9	2.8	−8.5	−5.9	−7.0	−23.2	−24.1	−5.5	−10.7	−7.6	−5.3
Exports____do____	163.2	175.5	204.8	154.4	160.7	168.2	169.4	170.9	178.1	180.8	172.1	181.7	205.4	210.1	221.9	233.8
Imports____do____	155.7	186.6	216.8	144.1	150.9	161.3	166.6	179.4	184.0	187.8	195.2	205.8	210.9	220.8	229.5	239.0
Govt. purchases of goods and services, total_do____	359.5	394.0	433.9	354.0	357.2	360.4	366.3	375.0	388.8	399.5	412.5	416.7	424.7	439.8	454.5	458.5
Federal____do____	129.9	145.1	153.8	127.1	127.8	129.9	134.6	138.3	142.9	146.8	152.2	151.5	147.2	154.0	162.5	164.5
National defense____do____	86.8	94.3	99.5	85.9	85.6	86.5	89.1	91.9	93.7	94.4	97.1	97.9	99.6	99.6	102.1	103.9
State and local____do____	229.6	248.9	280.2	226.9	229.4	230.5	231.7	236.7	245.9	252.7	260.3	265.2	277.6	285.8	292.0	294.0
By major type of product:†																
Final sales, total____do____	1,689.9	1,871.6	2,091.6	1,638.3	1,670.1	1,701.0	1,750.4	1,796.5	1,850.0	1,894.9	1,945.0	1,975.3	2,067.4	2,122.5	2,201.3	2,264.8
Goods, total____do____	760.3	832.6	918.4	741.9	758.0	768.1	772.9	800.2	825.8	844.7	859.6	861.8	912.2	927.3	972.5	1,000.8
Durable goods____do____	304.6	341.3	376.8	288.6	301.8	312.4	315.6	332.2	339.1	346.5	347.4	351.2	375.8	380.1	400.1	426.0
Nondurable goods____do____	455.7	491.3	541.7	453.4	456.2	455.7	457.3	468.0	486.7	498.2	512.2	510.6	536.4	547.2	572.4	574.8
Services____do____	778.0	862.8	962.5	749.7	766.9	787.1	808.1	832.3	850.0	875.3	893.6	926.4	952.0	973.7	997.7	1,025.9
Structures____do____	161.9	191.8	226.7	158.1	160.5	160.3	168.7	174.3	191.3	196.8	204.9	203.8	223.1	235.0	244.7	238.1
Change in business inventories____do____	10.2	15.6	16.0	11.4	15.4	14.5	−.6	10.3	17.0	21.9	13.1	16.7	20.1	13.6	13.5	16.6
Durable goods____do____	5.3	8.4	11.7	.1	6.5	9.3	5.2	6.1	9.1	11.9	6.3	14.8	10.8	10.2	10.8	20.1
Nondurable goods____do____	4.9	7.2	4.3	11.3	8.9	5.3	−5.8	4.2	7.9	10.0	6.8	1.9	9.3	3.4	2.7	−3.4

GNP in constant (1972) dollars†

	1976	1977	1978	1976 I	II	III	IV	1977 I	II	III	IV	1978 I	II	III	IV	1979 I
Gross national product, total† ____bil.$__	1,271.0	1,332.7	1,385.7	1,255.5	1,268.0	1,276.5	1,284.0	1,306.7	1,325.5	1,343.9	1,354.5	1,354.2	1,382.6	1,391.4	1,414.7	1,416.3
Personal consumption expenditures, total__do____	819.4	857.7	891.7	806.3	814.0	820.9	836.2	846.6	849.5	858.0	876.6	873.5	886.3	895.1	911.8	912.4
Durable goods____do____	125.9	137.8	144.6	124.8	125.2	125.3	128.5	134.9	136.2	136.9	143.0	137.8	145.8	144.8	150.1	148.6
Nondurable goods____do____	320.2	330.4	339.6	314.6	318.2	320.5	327.7	327.1	327.2	329.2	338.1	333.3	336.3	340.4	348.5	345.4
Services____do____	373.2	389.5	407.4	366.9	370.6	375.1	380.0	384.6	386.0	391.8	395.6	402.4	404.2	410.0	413.1	418.4
Gross private domestic investment, total___do____	173.4	196.3	210.6	168.5	174.7	177.1	173.4	186.1	197.1	201.7	200.3	205.7	213.1	210.4	213.4	215.7
Fixed investment____do____	166.8	187.4	200.1	161.0	164.6	167.8	173.6	180.3	187.1	189.5	192.8	193.4	200.4	201.4	205.2	204.5
Nonresidential____do____	118.9	129.8	140.2	115.5	117.8	121.0	121.4	126.8	129.1	130.8	132.5	133.8	140.5	141.7	144.9	146.8
Residential____do____	47.8	57.7	59.8	45.5	46.8	46.8	52.3	53.5	58.0	58.8	60.3	59.5	59.9	59.7	60.3	57.7
Change in business inventories____do____	6.7	8.9	10.6	7.5	10.1	9.3	−.2	5.8	10.0	12.2	7.5	12.3	12.7	9.0	8.2	11.2
Net exports of goods and services____do____	15.4	9.5	8.4	16.5	16.1	16.1	13.1	11.2	11.0	12.5	3.1	2.9	11.3	9.2	10.2	11.7
Govt. purchases of goods and services, total_do____	262.8	269.2	275.0	264.3	263.2	262.5	261.3	262.8	267.9	271.7	274.5	272.1	271.9	276.7	279.4	276.4
Federal____do____	96.6	101.6	100.3	96.2	95.9	96.8	97.5	98.7	101.3	102.9	103.6	101.2	97.1	100.4	102.5	102.0
State and local____do____	166.2	167.6	174.7	168.1	167.3	165.7	163.8	164.1	166.6	168.8	170.9	170.8	174.8	176.3	176.9	174.5

ʳ Revised. ᵖ Preliminary. †Revised series. Estimates of national income and product and personal income have been revised back to 1973 (see p. 16 ff. of the July 1977 Survey and p. 24 ff. of the July 1978 Survey); revisions prior to May 1977 for personal income appear on p. 36 of the July 1978 Survey. ♀ Includes data for items not shown separately.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1976	1977	1978	1976			1977				1978				1979	
	Annual total			II	III	IV	I	II	III	IV	I	II	III	IV	I ʳ	II

GENERAL BUSINESS INDICATORS—Quarterly Series—Continued

NATIONAL INCOME AND PRODUCT†—Con.

Quarterly Data Seasonally Adjusted

Implicit price deflators:†																
Gross national product_____Index, 1972=100__	133.76	141.61	152.09	132.92	134.39	136.28	138.27	140.86	142.63	144.56	147.10	150.98	153.52	156.56	159.91	_____
Personal consumption expenditures_____do____	133.1	140.7	150.3	132.1	133.8	135.6	137.9	139.9	141.6	143.2	146.2	149.3	151.6	154.0	157.9	_____
Durable goods_____do____	124.4	129.5	136.5	123.6	125.0	126.8	128.4	128.9	129.5	130.9	133.1	135.7	137.3	139.3	142.2	_____
Nondurable goods_____do____	138.2	145.0	155.0	137.4	138.7	139.9	142.4	144.7	145.7	147.0	150.4	154.4	156.2	158.8	164.4	_____
Services_____do____	131.6	141.0	151.2	130.3	132.5	134.9	137.4	139.7	142.3	144.4	147.1	149.9	152.6	155.2	158.0	_____
Gross private domestic investment:																
Fixed investment_____do____	139.6	150.6	164.7	138.5	140.3	142.6	145.4	148.9	151.9	155.9	158.2	162.2	167.1	170.8	173.3	_____
Nonresidential_____do____	138.4	146.7	158.7	137.7	138.9	140.5	142.5	145.0	147.9	151.2	153.6	156.7	160.6	163.7	166.3	_____
Residential_____do____	142.5	159.4	178.8	140.7	143.8	147.6	152.3	157.6	160.6	166.1	168.6	175.7	182.6	188.2	185.9	_____
Govt. purchases of goods and services____do____	136.8	146.3	157.8	135.7	137.3	140.2	142.7	145.1	147.1	150.3	153.2	156.2	158.9	162.7	165.9	_____
Federal_____do____	134.4	142.7	153.3	133.3	134.2	138.0	140.1	141.1	142.7	146.9	149.6	151.5	153.4	158.5	161.3	_____
State and local_____do____	138.1	148.5	160.4	137.1	139.1	141.5	144.3	147.6	149.7	152.3	155.2	158.8	162.1	165.1	168.5	_____

Quarterly Data Seasonally Adjusted at Annual Rates

National income, total†_____bil. $__	1,359.2	1,515.3	1,703.8	1,347.9	1,372.1	1,397.0	1,447.5	1,499.3	1,537.6	1,576.9	1,603.1	1,688.1	1,728.4	1,795.6	1,835.4	_____
Compensation of employees, total_____do__	1,036.8	1,153.4	1,301.4	1,026.0	1,046.1	1,073.3	1,107.9	1,140.5	1,165.8	1,199.7	1,241.0	1,287.8	1,317.1	1,359.8	1,406.8	_____
Wages and salaries, total_____do__	890.1	983.6	1,101.0	881.5	897.3	919.9	946.4	973.4	993.6	1,021.2	1,050.8	1,090.2	1,113.4	1,149.4	1,185.2	_____
Govt. and govt. enterprises_____do__	187.6	200.8	216.1	186.1	188.1	192.6	195.2	198.1	201.7	208.1	211.4	213.9	216.8	222.3	225.1	_____
Other_____do__	702.5	782.9	884.8	695.4	709.2	727.2	751.2	775.3	791.9	813.1	839.3	876.3	896.6	927.1	960.1	_____
Supplements to wages and salaries_____do__	146.7	169.8	200.5	144.6	148.8	153.4	161.5	167.1	172.2	178.4	190.2	197.6	203.6	210.4	221.5	_____
Proprietors' income with inventory valuation and capital consumption adjustments, total_____bil. $__	88.6	99.8	113.2	88.8	87.4	89.5	95.6	98.9	97.2	107.3	105.0	110.1	114.5	123.0	123.6	_____
Farm_____do__	18.4	20.2	25.3	19.6	16.9	16.3	19.4	20.0	16.5	25.1	21.9	24.0	25.0	30.4	30.6	_____
Nonfarm_____do__	70.2	79.5	87.8	69.3	70.5	73.2	76.1	78.9	80.8	82.3	83.1	86.1	89.6	92.6	93.0	_____
Rental income of persons with capital consumption adjustment_____bil. $__	22.5	22.5	23.4	22.4	22.4	22.8	22.5	22.4	22.4	22.7	22.8	22.2	24.3	24.4	24.7	_____
Corp. profits with inventory valuation and capital consumption adjustments, total____bil. $__	127.0	144.2	159.5	128.6	130.0	122.5	129.9	143.7	154.8	148.2	132.6	163.4	165.2	176.6	166.0	_____
Corp. profits with invent. val. adj.:																
Domestic, total_____do____	133.2	149.5	167.7	135.4	136.3	128.7	134.8	148.1	159.5	155.6	139.2	168.9	175.4	187.4	175.9	_____
Financial_____do____	17.5	20.9	25.1	17.0	18.3	19.1	19.7	19.9	21.9	21.9	22.7	24.3	26.0	27.6	27.1	_____
Nonfinancial, total ♀_____do____	115.6	128.6	142.6	118.4	118.0	109.7	115.1	128.1	137.6	133.7	116.6	144.6	149.4	159.8	148.7	_____
Manufacturing, total ♀_____do____	65.6	74.7	85.0	67.5	65.9	61.9	66.4	77.4	74.7	80.2	69.8	87.8	87.1	95.2	_____	_____
Durable goods_____do____	28.1	35.1	43.2	29.7	28.5	26.9	29.9	37.2	34.2	39.1	32.8	46.1	44.6	49.2	_____	_____
Transportation, communication, and electric, gas, and sanitary serv____bil. $__	13.7	16.1	19.5	14.3	14.9	13.3	15.4	14.5	17.5	17.1	17.3	19.3	20.7	20.8	_____	_____
Rest of the world_____do____	8.2	9.6	9.8	7.6	8.2	8.2	9.7	10.4	10.3	7.9	9.4	11.7	9.1	9.1	10.8	_____
Profits before tax, total_____do____	155.9	173.9	202.0	158.7	157.8	154.6	164.8	175.1	177.5	178.3	172.1	205.5	205.4	224.9	226.9	_____
Profits tax liability_____do____	64.3	71.8	83.9	66.3	64.7	62.4	68.3	72.3	72.8	73.9	70.0	85.0	86.2	94.4	89.1	_____
Profits after tax_____do____	91.7	102.1	118.2	92.4	93.1	92.2	96.5	102.8	104.8	104.4	102.1	120.5	119.2	130.5	137.9	_____
Dividends_____do____	37.9	43.7	49.3	37.2	38.4	41.4	41.5	42.7	44.1	46.3	47.0	48.1	50.1	51.9	54.0	_____
Undistributed profits_____do____	53.8	58.4	68.8	55.2	54.7	50.8	55.1	60.1	60.6	58.1	55.1	72.4	69.2	78.6	83.9	_____
Inventory valuation adjustment_____do____	−14.5	−14.8	−24.4	−15.7	−13.3	−17.6	−20.3	−16.6	−7.7	−14.8	−23.5	−24.9	−20.9	−28.4	−40.2	_____
Capital consumption adjustment_____do____	−14.4	−14.9	−18.1	−14.4	−14.5	−14.5	−14.6	−14.8	−15.0	−15.3	−16.1	−17.2	−19.3	−19.9	−20.7	_____
Net interest_____do____	84.3	95.4	106.3	82.0	86.2	88.9	91.7	93.7	97.3	99.0	101.7	104.6	107.4	111.4	114.5	_____

DISPOSITION OF PERSONAL INCOME†

Personal income, total_____bil. $__	1,380.9	1,529.0	1,708.0	1,363.2	1,392.8	1,430.5	1,470.7	1,508.6	1,543.7	1,593.0	1,628.9	1,682.4	1,731.7	1,789.0	1,836.0	_____
Less: Personal tax and nontax payments_____do____	196.5	226.0	256.2	192.6	200.0	209.0	222.7	223.3	224.6	233.3	237.3	249.1	263.2	275.1	272.9	_____
Equals: Disposable personal income_____do____	1,184.4	1,303.0	1,451.8	1,170.6	1,192.8	1,221.5	1,248.0	1,285.3	1,319.1	1,359.6	1,391.6	1,433.3	1,468.4	1,513.9	1,563.2	_____
Less: Personal outlays⊕_____do____	1,116.3	1,236.1	1,374.9	1,100.7	1,124.8	1,160.9	1,195.8	1,217.8	1,244.8	1,285.9	1,309.2	1,357.0	1,392.5	1,440.9	1,478.3	_____
Equals: Personal saving§_____do____	68.0	66.9	76.9	69.9	68.1	60.7	52.2	67.5	74.3	73.7	82.4	76.3	76.0	73.0	84.9	_____

NEW PLANT AND EQUIPMENT EXPENDITURES

Unadjusted quarterly or annual totals:																
All industries_____bil. $__	120.49	135.80	153.82	29.70	30.41	34.52	29.20	33.73	34.82	38.06	32.35	37.89	38.67	44.91	¹ 36.97	¹ 42.07
Manufacturing_____do____	52.48	60.16	67.62	12.66	13.48	15.38	12.52	14.84	15.60	17.19	13.67	16.76	16.89	20.30	15.97	18.91
Durable goods industries¶_____do____	23.68	27.77	31.66	5.61	6.02	7.27	5.80	6.79	7.17	8.00	6.36	7.79	7.97	9.53	7.57	9.20
Nondurable goods industries¶_____do____	28.81	32.39	35.96	7.05	7.46	8.12	6.72	8.06	8.43	9.18	7.31	8.97	8.92	10.77	8.40	9.72
Nonmanufacturing_____do____	68.01	75.64	86.19	17.04	16.93	19.14	16.68	18.88	19.21	20.87	18.68	21.13	21.78	24.61	21.00	23.16
Mining_____do____	4.00	4.50	4.78	.99	1.04	1.05	1.02	1.16	1.17	1.15	1.07	1.22	1.24	1.26	1.28	1.23
Railroad_____do____	2.52	2.80	3.32	.68	.64	.70	.59	.67	.78	.76	.71	.83	.84	.94	.80	.83
Air transportation_____do____	1.30	1.62	2.30	.42	.26	.35	.33	.43	.39	.46	.52	.60	.54	.64	.64	.68
Other transportation_____do____	3.63	2.51	2.43	1.02	.95	.94	.61	.76	.50	.63	.51	.60	.62	.71	.62	.77
Public utilities_____do____	22.28	25.80	29.48	5.50	5.52	6.46	5.55	6.37	6.61	7.28	6.15	7.14	7.43	8.78	7.12	8.00
Electric_____do____	18.80	21.59	24.79	4.74	4.54	5.34	4.78	5.34	5.41	6.06	5.27	6.01	6.11	7.40	6.16	6.78
Gas and other_____do____	3.47	4.21	4.70	.76	.98	1.12	.77	1.03	1.20	1.21	.88	1.13	1.32	1.37	.97	1.22
Communication_____do____	13.30	15.45	18.16	3.33	3.33	3.84	3.30	3.86	4.03	4.26	3.97	4.56	4.68	4.96	_____	_____
Commercial and other_____do____	20.99	22.97	25.71	5.21	5.19	5.78	5.27	5.64	5.73	6.33	5.76	6.18	6.43	7.34	² 10.53	² 11.63
Seas. adj. qtrly. totals at annual rates:																
All industries_____do____	_____	_____	_____	118.12	122.55	125.22	130.16	134.24	140.38	138.11	144.25	150.76	155.41	163.96	164.23	167.52
Manufacturing_____do____	_____	_____	_____	50.64	54.78	54.44	56.43	59.46	63.02	61.41	61.57	67.20	67.75	73.24	71.97	75.90
Durable goods industries¶_____do____	_____	_____	_____	22.54	24.59	25.50	26.30	27.26	29.23	28.19	28.72	31.40	32.25	33.99	34.18	37.09
Nondurable goods industries¶_____do____	_____	_____	_____	28.09	30.20	28.93	30.13	32.19	33.79	33.22	32.86	35.80	35.50	39.26	37.78	38.81
Nonmanufacturing_____do____	_____	_____	_____	67.48	67.76	70.78	73.74	74.78	77.36	76.70	82.68	83.56	87.66	90.71	92.26	91.62
Mining_____do____	_____	_____	_____	3.83	4.21	4.13	4.24	4.49	4.74	4.50	4.45	4.81	4.99	4.98	5.35	4.89
Railroad_____do____	_____	_____	_____	2.64	2.69	2.63	2.71	2.57	3.20	2.80	3.35	3.09	3.38	3.49	3.77	3.11
Air transportation_____do____	_____	_____	_____	1.44	1.12	1.41	1.62	1.43	1.69	1.76	2.67	2.08	2.20	2.39	3.28	2.36
Other transportation_____do____	_____	_____	_____	4.16	3.44	3.49	2.96	2.96	1.96	2.32	2.44	2.23	2.47	2.55	3.01	2.89
Public utilities_____do____	_____	_____	_____	21.85	21.67	23.46	25.35	25.29	26.23	27.92	28.46	29.62	31.73	32.30	31.91	
Electric_____do____	_____	_____	_____	18.82	18.22	19.49	21.19	21.14	21.90	22.05	23.15	23.83	24.92	26.95	27.06	26.92
Gas and other_____do____	_____	_____	_____	3.03	3.45	3.96	4.16	4.16	4.32	4.18	4.78	4.62	4.70	4.78	5.24	4.98
Communication_____do____	_____	_____	_____	12.62	13.64	14.30	14.19	15.32	16.40	15.82	17.07	18.18	18.90	18.46	_____	_____
Commercial and other_____do____	_____	_____	_____	20.94	20.99	21.36	22.67	22.73	23.14	23.27	24.76	24.71	26.09	27.12	² 44.54	² 46.46

ʳ Revised. ᵖ Preliminary. ¹ Estimates (corrected for systematic biases) for Jan.-Mar. 1979 and Apr.-June 1979 based on expected capital expenditures of business. Expected expenditures for the year 1979 appear on p. 26 of the Mar. 1979 SURVEY. ² Includes communication. † See corresponding note on p. S-1. ♀ Includes data for items not shown separately. ⊕ Personal outlays comprise personal consumption expenditures, interest paid by consumers to business, and personal transfer payments to foreigners (net). § Personal saving is excess of disposable income over personal outlays. ¶ Data for individual durable and nondurable goods industries components appear in the Mar., June, Sept., and Dec. issues of the SURVEY.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1976	1977	1978 ᵖ	1976				1977				1978 ᵖ				1979 ᵖ
	Annual total			I	II	III	IV	I	II	III	IV	I	II	III	IV	I

GENERAL BUSINESS INDICATORS—Quarterly Series—Continued

U.S. INTERNATIONAL TRANSACTIONS

Quarterly Data Are Seasonally Adjusted
(Credits +; debits −)

	1976	1977	1978ᵖ	1976 I	1976 II	1976 III	1976 IV	1977 I	1977 II	1977 III	1977 IV	1978 I	1978 II	1978 III	1978 IV	1979 I
Exports of goods and services (excl. transfers under military grants)....................mil. $..	171,274	183,205	218,024	40,375	42,449	44,160	44,291	44,775	46,507	46,700	45,226	48,355	54,175	55,595	59,900	....
Merchandise, adjusted, excl. military......do....	114,694	120,576	141,844	27,001	28,380	29,602	29,711	29,501	30,860	30,578	29,637	30,787	35,256	36,486	39,315	41,161
Transfers under U.S. military agency sales contracts....................mil. $..	5,213	7,079	7,710	1,095	1,189	1,472	1,457	1,912	1,702	1,918	1,547	1,842	2,217	1,889	1,761	....
Receipts of income on U.S. assets abroad..do....	29,244	32,100	41,514	7,027	7,369	7,428	7,420	7,796	8,088	8,220	7,997	9,392	10,013	10,322	11,787	....
Other services......................	22,124	23,451	26,957	5,252	5,511	5,658	5,703	5,566	5,857	5,984	6,045	6,334	6,689	6,898	7,037	....
Imports of goods and services................do....	−161,913	−193,789	−228,909	−37,644	−39,268	−41,933	−43,068	−46,999	−48,088	−48,405	−50,298	−54,657	−56,184	−58,031	−60,038	....
Merchandise, adjusted, excl. military.......do....	−124,047	−151,706	−175,988	−28,352	−29,963	−32,418	−33,314	−37,120	−37,635	−37,942	−39,009	−42,707	−43,125	−44,478	−45,678	−47,385
Direct defense expenditures..............do....	−4,901	−5,745	−7,179	−1,159	−1,219	−1,235	−1,288	−1,344	−1,407	−1,451	−1,542	−1,632	−1,773	−1,877	−1,897	....
Payments of income on foreign assets in the U.S....................mil. $..	−13,311	−14,593	−21,599	−3,405	−3,332	−3,293	−3,281	−3,197	−3,601	−3,610	−4,185	−4,515	−5,432	−5,444	−6,207	....
Other services...................do....	−19,655	−21,746	−24,143	−4,728	−4,754	−4,987	−5,185	−5,337	−5,445	−5,401	−5,563	−5,802	−5,854	−6,232	−6,256	....
Unilateral transfers (excl. military grants), net mil. $..	−5,022	−4,708	−5,076	−1,028	−1,040	−1,908	−1,047	−1,126	−1,243	−1,277	−1,064	−1,282	−1,317	−1,275	−1,204	....
U.S. Government grants (excl. military)...do....	−3,145	−2,776	−3,028	−546	−592	−1,440	−567	−636	−763	−787	−591	−778	−781	−779	−691	....
Other......................	−1,878	−1,932	−2,048	−482	−448	−468	−480	−490	−480	−490	−473	−504	−536	−496	−513	....
												−15,067	−6,167	−10,216	−27,298	
U.S. assets abroad, net...............do....	−50,608	−34,650	−58,748	−12,365	−11,740	−10,269	−16,235	−1,334	−12,003	−6,615	−14,700	246	329	115	182	....
U.S. official reserve, net..............do....	−2,530	−231	872	−773	−1,578	−407	228	−388	6	151	(²)	−896	−1,176	−1,498	−1,086	....
U.S. Gov't, other than official reserve, net...do....	−4,213	−3,679	−4,657	−762	−932	−1,340	−1,180	−949	−795	−1,098	−838	−14,417	−5,320	−8,833	−26,394	....
U.S. private, net................do....	−43,865	−30,740	−54,963	−10,830	−9,230	−8,522	−15,283	3	−11,214	−5,668	−13,862	−4,976	−3,981	−2,708	−3,697	....
Direct investment abroad..............do....	−11,614	−12,215	−15,361	−3,923	−2,047	−3,081	−2,563	−2,177	−3,729	−3,113	−3,197					
Foreign assets in the U.S., net............do....	36,969	50,869	63,260	7,590	7,914	8,932	12,534	2,490	14,064	14,251	20,065	18,095	406	15,489	29,270	....
Foreign official, net.................do....	18,073	37,124	33,967	3,819	4,017	3,070	7,166	5,451	7,884	8,246	15,543	15,760	−5,685	4,852	19,040	....
Other foreign, net................do....	18,897	13,746	29,293	3,771	3,897	5,862	5,367	−2,962	6,180	6,005	4,522	2,336	6,090	10,637	10,230	....
Direct investment in the U.S............do....	4,347	3,338	5,611	1,472	1,086	999	790	880	996	1,012	450	812	1,852	2,206	741	....
Allocations of special drawing rights.........do....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Statistical discrepancy...............do....	9,300	−927	11,449	3,073	1,685	1,018	3,525	2,194	763	−4,655	771	4,555	9,087	−1,562	−630	....
Memoranda:																
Balance on merchandise trade..............do....	−9,353	−31,130	−34,144	−1,351	−1,583	−2,816	−3,603	−7,619	−6,775	−7,364	−9,372	−11,920	−7,869	−7,992	−6,363	−6,224
Balance on goods and services................do....	9,361	−10,585	−10,885	2,731	3,181	2,227	1,223	−2,224	−1,581	−1,705	−5,072	−6,302	−2,009	−2,436	−138	....
Balance on goods, services, and remittances..do....	7,483	−12,516	−12,933	2,249	2,733	1,759	743	−2,714	−2,061	−2,195	−5,545	−6,806	−2,545	−2,932	−651	....
Balance on current account..............do....	4,339	−15,292	−15,961	1,703	2,141	319	176	−3,350	−2,824	−2,982	−6,136	−7,584	−3,326	−3,711	−1,342	....

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

GENERAL BUSINESS INDICATORS—Monthly Series

PERSONAL INCOME BY SOURCE†

	1977 Annual	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Seasonally adjusted, at annual rates:† Total personal income...............bil. $..	1,529.0	1,708.0	1,646.3	1,669.4	1,682.1	1,695.7	1,719.2	1,731.1	1,744.7	1,768.7	1,786.6	1,811.6	1,819.0	ʳ1,833.3	ʳ1,855.8	1,861.8
Wage and salary disbursements, total....do....	983.6	1,100.9	1,066.6	1,083.9	1,088.4	1,098.4	1,108.2	1,111.3	1,120.1	1,137.5	1,149.3	1,161.4	1,173.0	ʳ1,183.7	ʳ1,199.5	1,201.9
Commodity-producing industries, total.do....	343.7	390.2	374.3	383.9	386.2	390.9	395.4	395.7	398.2	404.5	411.7	417.7	420.2	ʳ 426.5	ʳ 433.7	431.7
Manufacturing..................do....	266.3	299.9	292.4	294.3	295.9	298.1	301.6	301.0	303.6	308.8	315.8	319.5	323.2	ʳ 327.3	ʳ 330.8	329.4
Distributive industries.............do....	239.1	268.9	261.3	264.9	266.1	268.3	269.8	271.0	274.1	277.8	279.7	283.7	287.6	ʳ 290.0	293.9	294.8
Service industries.................do....	200.1	225.8	219.0	222.2	222.0	224.3	227.2	228.0	230.3	234.2	235.4	236.5	240.4	242.0	ʳ 245.9	248.6
Govt. and govt. enterprises...........do....	200.8	216.1	212.0	213.0	213.9	214.9	215.8	216.7	217.5	221.0	222.4	223.5	224.8	225.0	225.9	226.8
Other labor income.................do....	90.4	105.9	101.3	102.7	104.0	105.4	106.7	107.9	109.1	110.4	111.8	113.1	114.5	115.9	117.3	118.6
Proprietors' income:△																
Farm......................do....	20.2	25.3	18.6	22.0	24.8	25.3	24.0	24.9	26.0	27.4	29.0	34.9	31.0	30.5	30.3	30.5
Nonfarm...................do....	79.5	87.8	84.4	85.5	86.1	86.7	88.4	90.1	90.2	92.0	92.6	93.3	92.6	ʳ 92.7	ʳ 93.6	93.9
Rental income of persons with capital consumption adjustment...............bil. $..	22.5	23.4	22.6	22.3	22.1	22.1	24.3	24.3	24.2	24.3	24.4	24.4	24.5	24.7	24.8	23.9
Dividends....................do....	43.7	49.3	47.2	47.4	48.0	49.0	49.2	50.3	50.7	51.3	51.8	52.6	53.6	54.2	54.2	54.4
Personal interest income.............do....	141.2	159.0	153.3	154.8	156.5	157.6	159.6	161.9	163.6	165.1	166.1	168.5	170.1	ʳ 172.5	ʳ 174.5	175.6
Transfer payments.................do....	208.8	226.0	220.3	219.7	221.3	220.8	229.0	230.8	231.5	232.2	233.6	235.9	237.8	ʳ 238.0	ʳ 241.2	242.6
Less: Personal contributions for social insurance....................bil. $..	61.0	69.7	68.0	68.9	69.0	69.6	70.3	70.4	70.8	71.6	72.0	72.6	78.2	78.7	ʳ 79.6	79.7
Total nonfarm income..............do....	1,494.4	1,666.9	1,612.5	1,631.9	1,641.8	1,654.7	1,679.0	1,690.3	1,702.6	1,725.1	1,741.3	1,760.3	1,771.2	ʳ1,785.7	ʳ1,808.2	1,813.8

FARM INCOME AND MARKETINGS‡

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Cash receipts from farming, including Government payments, total‡...............mil. $..	¹ 96,889	....	7,407	7,377	7,730	8,403	7,417	8,048	10,457	13,224	12,497	14,338	10,607	....	....	....
Farm marketings and CCC loans, total....do....	¹ 95,025	....	7,256	7,079	7,580	8,339	7,342	7,991	10,229	12,949	12,326	13,450	10,577	10,900	....	....
Crops......................do....	¹ 47,572	....	2,402	2,429	2,686	3,571	3,680	3,257	5,414	7,299	6,992	5,184	5,114	5,800	....	....
Livestock and products, total ♀...........do....	¹ 47,453	....	4,854	4,750	4,794	4,768	3,662	4,734	4,815	5,650	5,333	5,223	5,493	5,100	....	....
Dairy products.................do....	¹ 11,782	....	1,064	1,076	1,108	1,046	1,058	1,051	1,011	1,016	1,043	1,117	1,190	....	....	....
Meat animals..................do....	¹ 27,909	....	3,098	2,883	3,161	2,973	1,764	2,910	3,160	3,924	3,527	3,310	3,553	....	....	....
Poultry and eggs................do....	¹ 7,207	....	652	640	571	697	791	728	556	666	709	732	713	....	....	....
Indexes of cash receipts from marketings and CCC loans, unadjusted:‡																
All commodities...............1967=100..	222	....	205	199	217	235	206	254	262	360	345	292	297	305	....	....
Crops......................do....	258	....	178	156	181	232	240	282	293	468	455	338	333	379	....	....
Livestock and products.............do....	195	....	226	232	244	235	180	233	258	278	262	257	270	250	....	....
Indexes of volume of farm marketings, unadjusted:‡																
All commodities...............1967=100..	124	....	100	96	102	110	113	127	129	172	165	134	130	103	....	....
Crops......................do....	138	....	86	75	86	113	124	150	149	239	232	167	161	114	....	....
Livestock and products.............do....	113	....	111	111	113	109	104	110	114	114	124	117	110	108	95	....

ʳ Revised.   ᵖ Preliminary.   ¹ Reported annual total; revisions are not reflected in the monthly data.   ² Less than $500,000(±).   †See corresponding note on p. S-1.   △Includes inventory valuation and capital consumption adjustments.   ‡Series revised beginning 1973; revisions for periods prior to May 1976 are available from the U.S. Dept. of Agr., Economic Research Service.   ♀ Includes data for items not shown separately.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar. ᵖ	Apr.¹

GENERAL BUSINESS INDICATORS—Continued

INDUSTRIAL PRODUCTION♂

Federal Reserve Board Index of Quantity Output

Not Seasonally Adjusted

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Total index..........1967=100..	137.1	145.2	141.4	144.2	144.2	148.8	141.9	146.9	152.0	152.6	149.7	146.0	ʳ146.1	ʳ151.1	152.7	151.5
By market groupings:																
Products, total..........do....	137.1	144.3	141.0	143.2	142.1	148.2	141.7	147.0	153.3	152.4	147.9	142.6	ʳ143.7	148.9	150.1	148.9
Final products..........do....	134.9	141.4	138.6	140.7	138.9	145.1	138.2	143.4	150.6	149.5	144.5	139.4	ʳ141.3	146.2	147.3	145.3
Consumer goods..........do....	143.4	147.4	145.3	148.4	145.2	152.1	142.5	149.7	158.4	156.8	149.0	141.0	ʳ144.8	150.3	151.4	149.3
Durable consumer goods.....do....	153.1	158.9	162.4	169.7	163.7	167.6	143.9	146.7	166.1	173.7	164.2	150.0	154.9	166.5	169.8	159.7
Nondurable consumer goods....do....	139.6	142.8	138.4	140.0	137.7	146.0	142.0	150.9	155.3	150.1	142.9	137.5	ʳ140.8	143.8	144.1	145.2
Equipment..........do....	123.2	133.1	129.3	130.1	130.4	135.6	132.2	134.6	139.7	139.5	138.4	137.0	ʳ136.5	140.6	141.6	139.6
Intermediate products..........do....	145.1	155.3	150.3	152.6	153.8	159.9	154.8	160.3	163.4	163.1	160.6	154.5	ʳ152.8	159.2	160.4	162.6
Materials..........do....	136.9	146.5	142.1	146.1	147.0	149.7	142.2	146.8	149.8	152.9	152.7	151.1	ʳ149.9	154.7	156.7	155.5
By industry groupings:																
Mining and utilities..........do....	136.2	141.6	136.3	137.0	136.4	142.4	145.5	147.2	144.5	141.4	141.2	145.4	ʳ149.5	146.5	143.7	140.6
Manufacturing..........do....	137.1	145.7	142.1	145.1	145.1	149.7	141.2	146.9	153.0	154.1	151.1	146.1	ʳ145.7	152.0	154.0	152.8
Nondurable manufactures..........do....	148.1	154.8	150.5	153.3	153.5	159.3	150.3	160.3	164.2	163.7	159.4	151.7	ʳ152.1	158.4	160.3	161.5
Durable manufactures..........do....	129.5	139.3	136.3	139.5	139.2	143.0	135.1	137.7	145.3	147.5	145.2	142.1	ʳ141.3	147.5	149.7	146.8

Seasonally Adjusted

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Total index..........1967=100..	137.1	145.2	140.9	143.2	143.9	144.9	146.1	147.1	147.8	148.7	149.6	150.9	150.9	151.0	152.0	150.5
By market groupings:																
Products, total..........do....	137.1	144.3	141.6	143.0	143.1	144.0	145.0	146.2	146.5	147.0	147.7	149.1	149.4	ʳ149.9	150.6	148.9
Final products..........do....	134.9	141.4	138.9	140.5	140.5	141.1	142.2	143.3	143.7	144.1	144.5	145.6	145.9	ʳ146.3	147.3	145.3
Consumer goods..........do....	143.4	147.4	145.9	147.5	147.0	147.0	147.7	148.4	149.0	149.2	149.7	150.6	150.6	150.7	151.7	149.0
Durable consumer goods..........do....	153.1	158.9	157.5	161.8	160.2	160.6	160.9	161.5	160.3	161.6	161.8	161.9	160.9	ʳ161.3	163.9	153.4
Automotive products..........do....	174.2	178.6	175.8	184.3	180.0	179.9	182.2	182.1	178.3	185.6	189.0	185.1	ʳ181.3	179.1	186.0	161.3
Autos and utility vehicles..........do....	169.2	172.5	171.0	182.7	175.6	174.3	176.7	175.6	170.0	180.5	185.0	179.3	ʳ173.4	170.7	180.1	147.4
Autos..........do....	148.4	148.5	149.7	159.1	151.6	149.8	152.7	151.1	144.4	154.2	159.7	151.8	145.9	144.9	153.7	128.6
Auto parts and allied goods..........do....	186.8	194.0	188.5	188.2	191.5	193.9	196.1	198.0	199.8	199.1	199.0	200.1	201.8	200.7	200.8	197.0
Home goods..........do....	141.3	147.8	147.2	149.2	148.9	149.7	148.9	150.0	150.2	148.2	146.5	148.9	ʳ149.5	151.3	151.6	149.0
Appliances, air cond., and TV...do....	127.3	132.5	135.4	142.2	138.3	139.0	133.7	133.9	134.4	128.7	123.4	129.1	125.9	ʳ130.4	128.5	120.0
Carpeting and furniture..........do....	152.2	164.3	159.3	158.9	163.4	166.0	168.5	167.9	169.0	168.0	164.9	166.8	ʳ170.8	172.9	174.8	
Nondurable consumer goods..........do....	139.6	142.8	141.3	141.8	141.7	141.6	142.4	143.1	144.4	144.3	144.8	146.2	ʳ146.5	ʳ146.5	146.9	147.1
Clothing..........do....	125.2	125.5	122.4	124.9	125.4	124.8	125.1	126.6	128.9	128.3	129.0	130.1	ʳ130.1	129.5		
Consumer staples..........do....	143.6	147.6	146.4	146.6	146.2	146.3	147.3	147.8	148.8	148.8	149.2	150.6	ʳ151.0	ʳ151.2	151.7	152.1
Consumer foods and tobacco..........do....	135.5	140.1	138.7	140.8	139.9	139.0	140.2	140.8	141.2	140.4	141.0	143.0	ʳ142.1	142.6	143.7	
Nonfood staples..........do....	152.9	156.2	155.3	153.3	153.4	154.8	155.5	155.9	157.4	158.5	158.8	159.6	ʳ161.3	ʳ161.2	160.9	162.0
Equipment..........do....	123.2	133.1	129.1	130.8	131.6	133.0	134.7	136.3	136.4	137.0	137.3	138.7	ʳ139.5	140.1	141.3	140.5
Business equipment..........do....	149.2	162.0	157.4	159.3	160.2	161.8	163.8	165.4	165.8	166.9	167.2	168.7	169.7	ʳ170.5	172.0	170.8
Industrial equipment ♀..........do....	138.5	149.9	146.9	147.8	149.7	150.9	151.9	152.8	152.7	152.9	151.8	152.2	154.7	ʳ155.7	156.5	155.9
Building and mining equipment..do....	202.5	223.4	221.7	225.1	226.0	227.3	228.9	228.1	226.3	226.5	223.8	222.3	ʳ222.3	ʳ223.6	223.6	223.6
Manufacturing equipment..........do....	113.9	121.9	118.3	119.0	121.3	122.8	122.6	123.9	124.4	125.0	124.2	124.7	ʳ127.9	ʳ128.9	129.4	129.0
Commercial, transit, farm eq. ♀...do....	161.6	176.0	169.4	172.6	172.3	174.4	177.5	179.9	180.8	182.9	184.9	187.8	ʳ187.1	ʳ187.4	190.0	187.9
Commercial equipment..........do....	191.6	208.6	202.0	203.8	204.2	206.9	210.6	212.2	214.1	215.1	214.9	217.1	ʳ218.1	ʳ218.8	220.8	221.1
Transit equipment..........do....	117.8	133.8	126.1	133.7	132.2	132.3	134.9	138.5	138.6	142.6	147.5	151.0	ʳ148.2	ʳ146.2	149.4	142.6
Defense and space equipment..........do....	79.6	84.5	81.9	82.9	83.6	84.6	85.9	87.1	87.1	86.7	87.2	87.9	88.⁷	ʳ89.1	89.7	89.4
Intermediate products..........do....	145.1	155.3	151.4	152.1	152.6	154.7	155.6	156.4	157.0	158.0	159.3	161.8	ʳ162.6	ʳ163.1	162.7	162.1
Construction supplies..........do....	140.8	153.3	147.9	148.5	150.4	152.1	153.5	154.7	155.6	157.0	159.0	160.8	ʳ161.2	161.7	162.0	
Business supplies..........do....	149.5	157.3	155.0	155.6	155.0	157.0	157.6	158.2	158.4	159.2	159.9	162.7	ʳ163.3	164.1		
Materials..........do....	136.9	146.5	139.9	143.7	145.1	146.4	147.9	148.6	149.7	151.4	152.7	153.8	ʳ153.1	152.7	154.1	153.0
Durable goods materials ♀..........do....	134.5	146.9	138.6	142.7	143.9	145.4	148.7	150.4	152.1	154.0	154.9	156.8	ʳ155.4	ʳ154.6	155.4	153.2
Durable consumer parts..........do....	132.0	140.3	133.1	136.8	137.9	138.7	142.0	142.2	144.8	147.3	147.4	148.4	147.8	144.6	145.2	135.8
Equipment parts..........do....	143.1	159.1	151.3	154.8	155.8	157.4	161.7	162.9	164.6	166.0	167.6	170.5	170.5	ʳ171.6	173.0	172.4
Nondurable goods materials ♀..........do....	153.5	162.9	160.5	162.0	163.5	164.1	165.2	162.7	164.4	165.7	167.8	167.1	ʳ168.3	ʳ169.4	170.5	171.1
Textile, paper, and chemical..........do....	158.3	167.9	165.7	166.4	167.9	168.8	168.3	167.0	170.0	171.0	173.3	172.3	ʳ173.7	175.1	176.2	177.2
Energy materials..........do....	122.4	125.2	117.5	123.9	125.2	127.5	127.9	127.0	126.0	128.0	128.4	129.6	ʳ128.7	ʳ127.6	130.7	130.3
By industry groupings:																
Mining and utilities..........do....	136.2	141.6	138.2	140.9	140.9	142.5	142.6	142.5	142.1	144.1	144.5	145.0	ʳ144.2	ʳ143.6	145.0	144.9
Mining..........do....	117.8	124.2	119.3	127.2	126.7	128.0	127.1	126.0	124.1	127.6	128.1	127.6	ʳ123.6	ʳ121.8	124.1	123.8
Metal mining..........do....	105.4	121.0	127.6	122.3	120.0	121.1	117.0	117.9	115.6	122.1	125.3	123.9	ʳ123.5	ʳ124.1	126.4	
Coal..........do....	118.0	115.7	78.4	129.5	131.7	136.4	131.7	124.9	114.7	144.0	145.1	146.8	116.0	104.0	124.0	129.3
Oil and gas extraction ♀..........do....	118.0	124.7	123.3	127.3	126.3	127.1	126.8	126.2	124.9	124.5	124.9	123.8	ʳ123.2	ʳ121.7	121.7	120.7
Crude oil..........do....	92.4	96.8	94.0	99.4	95.4	97.3	97.8	97.7	97.6	97.1	98.0	98.3	98.2	95.6	96.6	
Natural gas..........do....	110.4	109.1	109.9	107.6	112.2	113.2	112.6	110.5	106.0	106.6	106.4	107.1	106.8			
Stone and earth minerals..........do....	124.9	131.1	128.2	128.9	130.1	130.7	131.3	131.6	133.8	134.0	132.9	134.2	ʳ136.7	ʳ137.0	136.8	
Utilities..........do....	156.5	161.0	159.5	156.0	157.0	158.6	159.9	160.8	162.3	162.4	162.9	164.3	ʳ166.8	ʳ167.8	168.1	168.4
Electric..........do....	175.5	182.2	178.8	175.0	177.1	180.1	182.1	183.2	184.4	184.1	185.0	186.6	189.4			
Manufacturing..........do....	137.1	145.7	141.4	143.5	144.3	145.5	146.7	147.6	148.7	149.5	150.4	151.8	ʳ151.9	ʳ152.0	152.9	151.3
Nondurable manufactures..........do....	148.1	154.8	151.4	153.2	154.0	154.9	155.0	155.6	157.1	157.4	158.5	159.2	ʳ160.4	ʳ160.4	161.2	161.2
Foods ♀..........do....	137.9	142.9	141.1	143.1	142.8	141.8	142.9	144.0	144.4	143.2	144.2	145.7	ʳ145.5	ʳ146.5	147.1	
Meat products..........do....	114.0	113.8	113.6	116.1	113.6	111.4	115.2	115.2	113.4	112.8	114.2	113.9	110.8	112.3	114.5	
Dairy products..........do....	117.4	120.4	119.7	119.8	118.9	119.4	119.8	120.6	121.5	122.5	123.2	122.7	121.8	123.3	123.2	
Beverages..........do....	167.6	180.9	172.6	181.1	177.8	175.7	185.3	186.7	185.7	184.8	184.1	186.9	ʳ184.4	ʳ194.5	187.2	
Tobacco products..........do....	114.3	119.2	115.6	121.0	120.2	122.7	120.8	118.6	120.6	119.0	121.5	122.0	ʳ120.0	118.8		
Textile mill products..........do....	137.1	140.0	138.5	138.1	138.5	140.4	141.0	139.5	142.2	142.1	143.9	144.4	ʳ143.5	ʳ141.3	143.2	
Apparel products..........do....	124.2	126.3	122.8	126.1	125.8	126.8	124.5	127.2	130.9	130.6	129.9	131.4	ʳ132.3	130.2		
Paper and products..........do....	137.4	144.5	144.9	145.7	146.6	148.0	140.5	141.9	142.3	145.8	145.3	147.8	144.9	ʳ148.0	149.1	148.9
Printing and publishing..........do....	124.7	129.9	129.1	128.6	128.2	128.7	130.3	129.5	131.0	130.5	132.1	133.0	135.8	ʳ137.1	136.8	137.0
Chemicals and products..........do....	180.7	190.7	185.2	185.5	188.1	191.1	192.3	192.2	194.2	195.9	197.6	197.9	ʳ200.8	ʳ201.4	201.3	
Basic chemicals..........do....	165.3	173.7	167.3	171.0	174.9	178.7	174.5	177.3	179.2	176.7	180.2	178.7	179.6	ʳ181.2	183.4	
Petroleum products..........do....	141.0	144.2	140.1	141.7	143.4	142.8	144.3	144.1	147.1	147.9	148.9	149.9	ʳ147.9	ʳ145.5	145.0	146.1
Rubber and plastics products..........do....	232.2	254.8	243.1	249.1	252.7	255.5	259.1	261.1	263.1	264.1	262.2	267.0	268.1	ʳ266.9	269.4	
Leather and products..........do....	75.3	74.1	72.1	76.0	75.7	75.1	74.5	74.0	74.1	73.8	74.1	74.0	ʳ75.1	ʳ73.3	73.0	

GENERAL BUSINESS INDICATORS—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar. ᵖ	Apr.ⁱ
INDUSTRIAL PRODUCTION‡—Continued																
Federal Reserve Board Index of Quantity Output—Continued																
Seasonally Adjusted—Continued																
By industry groupings—Continued																
Manufacturing—Continued																
Durable manufactures_____1967=100__	129.5	139.3	134.4	136.9	137.6	139.0	141.1	142.2	142.8	144.0	144.8	146.4	ʳ146.0	ʳ146.1	147.4	144.4
Ordnance, pvt. and govt._____do___	73.9	73.7	72.7	73.0	74.3	74.7	75.2	75.2	74.3	73.9	73.6	74.2	73.4	73.5	73.4	74.1
Lumber and products_____do___	133.4	138.9	136.5	136.9	136.5	138.7	138.1	136.9	139.2	141.2	142.5	146.0	ʳ142.0	ʳ141.1	140.0	_____
Lumber_____do___	110.6	110.8	103.7	109.9	106.0	110.6	112.8	106.4	113.6	112.1	113.3	125.4	106.1	_____	_____	_____
Furniture and fixtures_____do___	140.9	154.7	149.5	148.9	152.8	156.2	158.1	159.0	160.1	160.9	157.6	156.7	161.7	ʳ163.6	165.0	_____
Clay, glass, and stone products_____do___	146.1	159.2	154.2	156.7	157.9	159.8	158.8	159.5	160.9	162.1	166.3	167.7	168.6	ʳ166.9	165.0	_____
Primary metals_____do___	110.2	119.0	106.1	114.3	115.5	117.5	123.0	126.0	127.9	128.6	129.0	130.4	ʳ122.0	ʳ121.4	121.9	121.1
Iron and steel_____do___	103.4	113.2	96.4	109.0	110.5	114.5	119.0	120.9	123.2	123.8	124.1	124.5	ʳ112.7	ʳ112.8	114.5	_____
Basic iron and steel_____do___	97.4	104.8	88.2	97.4	104.7	109.4	110.5	114.7	115.2	115.3	114.3	111.7	101.0	101.6	106.0	_____
Steel mill products_____do___	105.3	119.4	99.8	116.9	118.1	122.9	133.6	123.1	129.0	130.4	127.6	134.4	110.5	112.7	118.4	_____
Nonferrous metals_____do___	122.4	130.0	123.9	124.7	124.8	123.2	129.5	137.5	136.6	136.4	137.6	140.8	ʳ139.0	ʳ134.8	135.6	_____
Fabricated metal products_____do___	130.9	142.6	138.1	139.5	140.4	142.3	144.0	145.8	146.3	146.0	146.9	149.0	151.0	ʳ152.2	152.3	151.0
Nonelectrical machinery_____do___	144.8	155.6	151.5	152.2	152.9	154.6	156.1	157.3	158.7	160.3	160.3	161.8	ʳ163.6	ʳ164.6	166.0	165.3
Electrical machinery_____do___	141.9	154.3	149.5	152.3	152.9	154.1	157.9	156.9	158.3	157.9	159.0	161.9	163.9	ʳ164.9	166.1	165.2
Transportation equipment_____do___	121.1	130.5	126.5	130.5	130.1	130.4	132.1	133.4	132.8	137.0	139.3	139.5	ʳ137.7	ʳ136.3	140.3	127.3
Motor vehicles and parts_____do___	159.7	168.3	165.1	171.7	168.3	167.7	169.7	171.0	168.9	176.8	180.8	179.7	ʳ174.5	171.4	177.9	153.8
Aerospace and misc. trans. eq_____do___	84.7	94.9	90.1	91.8	93.9	95.0	96.5	98.3	98.9	99.6	100.2	101.7	103.0	ʳ103.2	104.8	102.5
Instruments_____do___	159.1	171.6	168.7	170.5	169.8	170.9	172.2	175.4	174.6	175.3	176.2	179.5	180.4	ʳ181.0	182.3	182.5
BUSINESS SALES §																
Mfg. and trade sales (unadj.), total †⊕△___mil. $__	2,701,195	3,056,727	252,889	251,465	259,345	266,617	241,588	262,970	263,677	273,756	271,127	276,786	250,308	ʳ259,625	294,596	_____
Mfg. and trade sales (seas. adj.), total †⊕△__do___	²2,701,195	²3,056,727	243,979	251,323	252,259	253,459	252,755	260,068	260,535	266,946	270,134	273,776	ʳ273,444	ʳ275,352	285,885	_____
Manufacturing, total †⊕_____do___	²1,335,072	²1,503,804	121,101	124,537	123,566	124,839	123,039	127,871	127,919	130,614	132,424	135,035	ʳ135,441	ʳ136,735	143,296	_____
Durable goods industries_____do___	699,193	803,082	64,457	66,493	65,417	66,293	64,847	68,684	68,916	70,292	71,635	73,429	ʳ73,253	ʳ74,229	77,603	_____
Nondurable goods industries_____do___	635,879	700,722	56,644	58,044	58,149	58,546	58,192	59,187	59,003	60,322	60,789	61,606	ʳ62,188	ʳ62,506	65,693	_____
Retail trade, total△_____do___	²724,020	²798,818	64,075	65,146	65,522	65,964	66,224	67,303	68,085	68,971	70,158	70,918	70,855	ʳ71,122	71,852	_____
Durable goods stores_____do___	247,832	277,916	21,813	22,617	22,730	22,947	23,049	23,617	23,872	24,422	24,954	25,163	25,250	ʳ25,035	25,356	_____
Nondurable goods stores_____do___	476,188	520,902	42,262	42,529	42,792	43,017	43,175	43,686	44,213	44,549	45,204	45,755	45,605	ʳ46,087	46,496	_____
Merchant wholesalers, total△_____do___	²642,104	²754,105	58,803	61,640	63,171	62,656	63,425	64,894	64,531	67,338	67,552	67,823	67,148	ʳ67,495	70,737	_____
Durable goods establishments_____do___	285,605	349,916	27,419	28,831	28,627	28,741	29,859	30,043	29,863	30,953	31,498	31,939	31,012	ʳ31,769	33,754	_____
Nondurable goods establishments_____do___	356,498	404,189	31,384	32,809	34,544	33,915	33,566	34,851	34,668	36,385	36,054	35,884	36,136	ʳ35,726	36,983	_____
BUSINESS INVENTORIES §																
Mfg. and trade inventories, book value, end of year or month (unadj.), total †△⊕___mil. $__	336,821	377,511	352,902	356,913	358,701	359,422	359,884	361,772	365,748	374,553	381,342	377,511	ʳ383,109	ʳ389,017	396,334	_____
Mfg. and trade inventories, book value, end of year or month (seas. adj.), total †△⊕___mil. $__	337,832	379,391	349,201	354,332	357,401	360,355	363,432	367,044	369,526	372,639	376,596	379,391	ʳ383,886	ʳ387,411	392,256	_____
Manufacturing, total†⊕_____do___	179,714	197,802	183,860	185,715	187,689	189,557	191,167	192,882	194,063	195,735	196,587	197,802	ʳ200,604	ʳ101,175	102,218	_____
Durable goods industries_____do___	115,424	129,141	118,725	119,848	121,471	122,688	123,830	125,206	126,176	126,784	128,357	129,141	ʳ131,542	ʳ49,367	49,557	_____
Nondurable goods industries_____do___	64,290	68,661	65,135	65,867	66,218	66,869	67,337	67,676	67,887	67,951	68,230	68,661	ʳ69,062	ʳ51,808	52,661	_____
Retail trade, total△_____do___	90,120	100,818	92,712	94,290	94,933	95,607	96,521	97,824	98,350	99,279	100,483	100,818	ʳ101,739	ʳ83,005	84,620	_____
Durable goods stores_____do___	43,414	48,161	44,624	45,619	45,525	45,502	45,704	46,116	46,444	47,006	47,555	48,161	49,302	ʳ53,773	54,241	_____
Nondurable goods stores_____do___	46,706	52,657	48,088	48,671	49,408	50,105	50,817	51,708	51,906	52,273	52,928	52,657	52,437	ʳ29,232	30,379	_____
Merchant wholesalers, total△_____do___	67,998	80,771	72,629	74,327	74,779	75,191	75,744	76,338	77,113	78,625	79,526	80,771	81,543	ʳ83,005	84,620	_____
Durable goods establishments_____do___	44,368	52,460	46,871	47,677	48,319	48,756	49,414	49,972	50,160	50,948	51,625	52,460	52,490	ʳ53,773	54,241	_____
Nondurable goods establishments_____do___	23,630	28,311	25,758	26,650	26,460	26,435	26,330	26,366	26,953	27,677	27,901	28,311	29,053	ʳ29,232	30,379	_____
BUSINESS INVENTORY-SALES RATIOS																
Manufacturing and trade, total†⊕△_____ratio__	1.44	1.41	1.43	1.41	1.42	1.42	1.44	1.41	1.42	1.40	1.39	1.39	ʳ1.40	1.41	1.37	_____
Manufacturing, total†⊕_____do___	1.58	1.51	1.52	1.49	1.52	1.52	1.55	1.51	1.52	1.49	1.48	1.46	1.48	1.49	1.43	_____
Durable goods industries†_____do___	1.93	1.83	1.84	1.80	1.86	1.85	1.90	1.82	1.83	1.80	1.79	1.76	1.80	ʳ1.80	1.75	_____
Materials and supplies_____do___	.65	.59	.60	.58	.60	.60	.61	.59	.60	.58	.58	.56	.57	.57	.56	_____
Work in process_____do___	.78	.77	.77	.76	.78	.78	.81	.78	.77	.77	.77	.76	.77	ʳ.77	.75	_____
Finished goods_____do___	.49	.47	.48	.46	.47	.47	.48	.46	.46	.45	.45	.44	.45	.46	.44	_____
Nondurable goods industries†⊕_____do___	1.19	1.14	1.15	1.13	1.14	1.14	1.16	1.14	1.15	1.13	1.12	1.11	1.11	1.11	1.07	_____
Materials and supplies_____do___	.48	.44	.45	.44	.44	.45	.45	.44	.44	.43	.43	.43	.44	.44	.42	_____
Work in process_____do___	.19	.18	.18	.18	.18	.18	.18	.17	.18	.18	.18	.17	.18	.18	.17	_____
Finished goods_____do___	.53	.52	.52	.51	.52	.52	.53	.53	.53	.53	.51	.51	.51	.50	.47	_____
Retail trade, total△_____do___	1.40	1.44	1.45	1.45	1.45	1.45	1.46	1.45	1.44	1.44	1.43	1.42	1.44	1.42	1.42	_____
Durable goods stores_____do___	1.97	1.97	2.05	2.02	2.00	1.98	1.98	1.95	1.95	1.92	1.91	1.91	1.95	ʳ1.97	1.95	_____
Nondurable goods stores_____do___	1.11	1.15	1.14	1.14	1.15	1.16	1.18	1.18	1.17	1.17	1.17	1.15	1.15	1.12	1.13	_____
Merchant wholesalers, total△_____do___	1.21	1.19	1.24	1.21	1.18	1.20	1.19	1.18	1.19	1.17	1.18	1.19	1.21	ʳ1.23	1.20	_____
Durable goods establishments_____do___	1.73	1.67	1.71	1.65	1.69	1.70	1.65	1.66	1.68	1.65	1.64	1.64	1.69	ʳ1.69	1.61	_____
Nondurable goods establishments_____do___	.80	.78	.82	.81	.77	.78	.78	.76	.78	.76	.77	.79	.80	.82	.82	_____
MANUFACTURERS' SALES, INVENTORIES, AND ORDERS																
Manufacturers' export sales: ⊙																
Durable goods industries:																
Unadjusted, total_____mil. $__	66,765	_____	6,298	6,378	6,386	6,673	5,716	6,033	6,813	6,867	6,940	6,919	6,151	6,588	7,604	_____
Seasonally adj., total_____do___	_____	_____	5,978	6,240	6,249	6,092	6,406	6,666	6,932	6,643	6,847	6,640	7,030	6,462	7,148	_____
Shipments (not seas. adj.), total†⊕_____do___	1,335,072	1,503,804	125,225	127,014	125,144	131,727	114,380	126,166	133,527	136,055	132,130	127,662	ʳ124,876	ʳ137,251	148,373	_____
Durable goods industries, total ♀†_____do___	699,193	794,441	67,473	68,379	67,357	71,839	59,296	65,991	71,888	73,591	71,134	68,942	66,453	74,014	ʳ81,480	_____
Stone, clay, and glass products_____do___	35,274	43,888	3,449	3,706	3,809	4,039	3,581	4,081	4,039	4,176	3,855	3,389	3,147	ʳ3,386	3,937	_____
Primary metals_____do___	103,340	120,390	9,957	10,252	10,086	10,609	9,131	10,110	10,643	10,918	10,467	10,397	10,351	11,653	ʳ12,994	_____
Blast furnaces, steel mills_____do___	51,519	60,533	5,100	5,102	5,105	5,366	4,678	5,039	5,283	5,445	5,068	5,277	ʳ5,186	ʳ5,747	6,627	_____
Nonferrous and other primary met_____do___	40,877	47,455	3,864	4,057	3,844	4,123	3,540	4,083	4,279	4,321	4,290	4,103	4,139	ʳ4,763	5,128	_____

ʳ Revised.   ᵖ Preliminary.   ⁱ Estimated.   ² Based on data not seasonally adjusted.
³ Advance estimate; total mfrs. shipments for Mar. 1979 do not reflect revisions for selected components.   ‡See note marked "♂" on p. S–4.   §The term "business" here includes only manufacturing and trade; business inventories as shown on p. S–1 cover data for all types of producers, both farm and nonfarm. Unadjusted data for manufacturing are shown below on pp. S–6 and S–7; those for wholesale and retail trade on pp. S–11 and S–12.   †See

corresponding note on p. S–6.   ⊕Mfrs. shipments, inventories and new orders were revised back to 1958; revisions prior to Aug. 1977 are available from Bureau of the Census, Wash., D.C. 20233.   △See note "¶" on p. S–12 for retail trade and notes "⊙" and "‡" on p. S–11 for wholesale trade.   ♀Includes data for items not shown separately.   ⊙See corresponding note on p. S–4.

GENERAL BUSINESS INDICATORS—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

MANUFACTURERS' SALES, INVENTORIES, AND ORDERS†—Continued

Shipments (not seas. adj.)†—Continued
Durable goods industries†—Continued

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Fabricated metal products......mil. $..	85,255	96,090	7,919	8,184	8,110	8,510	7,158	8,393	8,637	8,605	8,436	8,324	7,951	ʳ8,740	10,005	....
Machinery, except electrical........do...	119,008	138,400	11,860	11,685	11,259	12,453	10,446	11,074	12,346	12,384	11,828	12,741	11,429	ʳ13,336	14,363	....
Electrical machinery.............do...	85,759	98,676	8,175	8,119	7,848	8,627	7,271	8,273	9,026	8,967	8,699	8,710	8,134	ʳ9,108	9,529	....
Transportation equipment.........do...	170,739	192,697	16,675	17,087	16,833	17,540	13,185	13,858	16,958	18,125	17,944	16,039	16,917	18,028	19,859	....
Motor vehicles and parts.........do...	117,758	132,207	11,641	11,920	11,780	12,035	8,645	9,141	11,290	12,987	12,532	10,566	11,748	ʳ12,658	13,329	....
Instruments and related products......do...	28,570	31,560	2,661	2,522	2,575	2,826	2,390	2,716	2,890	2,857	2,841	2,741	2,458	ʳ2,714	2,969	....
Nondurable goods industries, total ♀⊕.....do...	635,879	700,722	57,752	58,635	57,787	59,888	55,084	60,175	61,639	62,464	60,996	58,720	ʳ58,423	ʳ63,237	66,893	....
Food and kindred products.........do...	191,887	214,489	17,694	17,539	17,778	18,204	16,983	18,209	18,674	19,291	18,831	18,733	17,750	ʳ19,309	20,048	....
Tobacco products...............do...	9,589	10,941	876	903	835	1,003	821	968	939	1,043	1,014	941	991	ʳ882	1,027	....
Textile mill products............do...	40,821	43,951	3,691	3,912	3,743	3,818	3,100	3,744	3,901	3,990	3,783	3,491	3,519	ʳ3,637	4,037	....
Paper and allied products.........do...	52,368	57,654	4,775	4,759	4,803	5,066	4,592	5,007	4,966	5,157	5,061	4,573	4,737	ʳ5,379	5,561	....
Chemical and allied products......do...	113,891	126,483	11,010	11,434	11,841	11,161	9,605	10,241	10,961	10,701	10,432	10,422	ʳ10,782	ʳ11,670	12,989	....
Petroleum and coal products.......do...	95,656	103,167	8,019	8,207	8,273	8,721	8,679	8,926	9,118	8,781	8,952	9,335	9,052	ʳ9,598	9,900	....
Rubber and plastics products......do...	36,955	39,930	3,400	3,462	3,306	3,491	3,001	3,544	3,522	3,642	3,461	3,021	3,337	ʳ3,829	4,103	....
Shipments (seas. adj.), total†⊕........do....	....	....	121,101	124,537	123,566	124,839	123,106	127,871	127,919	130,637	132,424	135.035	135,232	ʳ136,735	143,296	....
By industry group:																
Durable goods industries, total ♀....do...	....	....	64,457	66,493	65,417	66,293	65,222	68,684	68,916	70,292	71,635	73,429	73,253	74,229	77,603	....
Stone, clay, and glass products....do...	....	....	3,396	3,657	3,710	3,710	3,644	3,791	3,725	3,884	3,852	3,943	3,667	ʳ3,682	3,877	....
Primary metals................do...	....	....	9,310	9,824	9,628	9,860	9,905	10,346	10,241	10,862	10,868	11,425	10,943	11,749	12,151	....
Blast furnaces, steel mills......do...	....	....	4,683	4,968	4,942	5,062	5,030	5,064	5,154	5,534	5,273	5,876	5,120	ʳ5,788	6,085	....
Nonferrous and other primary met...do...	....	....	3,680	3,834	3,640	3,786	3,823	4,267	4,036	4,253	4,464	4,374	4,655	ʳ4,835	4,884	....
Fabricated metal products........do...	....	....	7,848	8,013	7,880	7,899	7,539	8,241	8,200	8,152	8,639	9,049	8,755	ʳ8,893	9,928	....
Machinery, except electrical......do...	....	....	10,964	11,364	11,091	11,425	11,454	11,831	12,062	12,371	12,320	12,792	12,399	ʳ13,030	13,298	....
Electrical machinery............do...	....	....	7,979	8,119	7,929	8,167	8,071	8,495	8,509	8,526	8,519	8,778	8,922	ʳ8,970	9,304	....
Transportation equipment........do...	....	....	15,676	16,288	15,971	15,887	15,510	16,324	16,738	16,674	17,473	17,227	18,645	17,751	18,431	....
Motor vehicles and parts........do...	....	....	10,869	11,291	11,138	10,803	10,670	11,237	11,012	11,684	11,991	11,891	12,573	ʳ12,405	12,228	....
Instruments and related products...do...	....	....	2,630	2,569	2,602	2,674	2,579	2,714	2,716	2,715	2,761	2,712	2,706	ʳ2,811	2,933	....
Nondurable goods industries, total ♀⊕...do...	....	....	56,644	58,044	58,149	58,546	57,884	59,187	59,003	60,345	60,789	61,606	62,035	ʳ62,506	65,693	....
Food and kindred products.........do...	....	....	17,747	17,775	18,015	17,844	17,599	18,122	17,853	18,540	18,595	19,133	18,602	ʳ19,186	20,017	....
Tobacco products...............do...	....	....	898	928	821	960	824	921	933	1,046	988	935	1,038	ʳ926	1,053	....
Textile mill products............do...	....	....	3,486	3,976	3,697	3,606	3,639	3,706	3,657	3,752	3,684	3,649	3,869	ʳ3,646	3,810	....
Paper and allied products.........do...	....	....	4,719	4,750	4,796	4,815	4,861	4,859	4,812	5,051	5,109	4,866	4,954	ʳ5,294	5,496	....
Chemicals and allied products....do...	....	....	10,277	10,537	10,433	10,719	10,399	10,188	10,450	10,673	10,942	11,481	11,590	ʳ11,434	12,196	....
Petroleum and coal products.......do...	....	....	8,158	8,239	8,443	8,590	8,600	8,863	9,040	8,837	8,980	9,298	9,140	ʳ9,372	10,074	....
Rubber and plastics products......do...	....	....	3,226	3,314	3,235	3,283	3,258	3,515	3,426	3,483	3,552	3,317	3,653	ʳ3,778	3,895	....
By market category:†																
Home goods and apparel⊕........do...	102,713	114,584	9,190	9,611	9,395	9,532	9,291	9,809	9,820	9,998	9,964	9,756	9,890	ʳ9,807	10,247	....
Consumer staples...............do...	244,028	270,805	22,217	22,480	22,554	22,545	22,300	22,855	22,658	23,233	23,542	23,949	23,639	ʳ24,053	25,051	....
Equipment and defense prod., excl. auto.do...	177,735	204,274	16,209	16,541	16,300	16,968	16,838	17,606	18,277	17,958	18,303	18,714	18,908	ʳ18,977	20,104	....
Automotive equipment............do...	137,605	153,752	12,690	13,160	12,917	12,563	12,340	12,963	12,856	13,543	13,871	13,731	14,614	14,346	14,151	....
Construction materials and supplies......do...	109,361	130,038	10,276	10,653	10,651	10,786	10,605	11,200	11,062	11,379	11,731	12,005	11,399	ʳ11,619	12,601	....
Other materials and supplies......do...	563,630	630,351	50,519	52,092	51,749	52,445	51,732	53,438	53,246	54,526	55,103	56,880	56,713	ʳ57,933	61,142	....
Supplementary series:																
Household durables.............do...	45,015	51,490	4,296	4,369	4,133	4,361	4,155	4,447	4,353	4,437	4,437	4,469	4,404	4,494	ʳ4,672	....
Capital goods industries.........do...	205,263	238,514	18,978	19,536	19,058	19,653	19,574	20,409	21,290	20,744	21,191	21,833	22,162	21,873	ʳ23,348	....
Nondefense.................do...	173,723	204,397	16,095	16,598	16,257	16,782	16,819	17,598	18,357	17,882	18,284	18,838	19,087	18,998	ʳ20,039	....
Defense....................do...	31,540	34,117	2,883	2,938	2,801	2,871	2,755	2,811	2,933	2,762	2,907	2,995	3,075	2,875	ʳ3,309	....
Inventories, end of year or month:†																
Book value (unadjusted), total†.........do...	180,118	198,062	185,448	186,844	188,499	188,846	189,439	191,281	191,875	193,494	195,912	198,062	ʳ202,454	ʳ205,505	207,169	....
Durable goods industries, total......do...	114,862	128,448	119,969	120,963	122,540	122,891	123,160	124,430	124,903	125,583	127,236	128,448	132,131	ʳ135,133	136,820	....
Nondurable goods industries, total......do...	65,256	69,614	65,479	65,881	65,959	65,955	66,279	66,851	66,972	67,911	68,676	69,614	ʳ70,323	ʳ70,372	70,349	....
Book value (seasonally adjusted), total†....do....	179,714	197,802	183,860	185,715	187,689	189,557	191,167	192,882	194,063	194,735	196,587	197,802	ʳ200,604	ʳ203,231	205,418	....
By industry group:																
Durable goods industries, total ♀.......do...	115,424	129,141	118,725	119,848	121,471	122,688	123,830	125,206	126,176	126,784	128,357	129,141	131,542	ʳ131,783	135,430	....
Stone, clay, and glass products......do...	4,259	4,825	4,530	4,518	4,570	4,569	4,606	4,688	4,740	4,699	4,782	4,825	4,946	ʳ5,120	5,123	....
Primary metals................do...	17,779	18,035	16,828	16,940	17,060	17,209	17,335	17,546	17,678	17,751	18,118	18,035	17,838	ʳ17,765	17,597	....
Blast furnaces, steel mills......do...	9,782	9,914	8,721	8,824	8,879	8,879	9,126	9,384	9,523	9,961	9,961	9,914	9,842	ʳ9,840	9,723	....
Nonferrous and other primary met..do...	6,826	6,895	6,893	6,901	6,974	7,000	6,987	6,953	6,931	6,937	6,919	6,895	6,761	ʳ6,750	6,559	....
Fabricated metal products.........do...	14,760	16,799	15,573	15,874	15,992	16,130	16,313	16,425	16,374	16,374	16,598	16,799	17,063	ʳ17,384	17,651	....
Machinery, except electrical.......do...	26,379	31,037	27,400	27,757	28,279	28,766	29,062	29,374	29,707	30,048	30,257	31,037	31,454	ʳ31,855	32,421	....
Electrical machinery............do...	15,433	17,025	16,023	16,188	16,445	16,628	16,758	16,860	17,023	16,959	17,120	17,025	17,565	ʳ17,653	18,089	....
Transportation equipment.........do...	21,258	23,908	22,127	22,264	22,743	22,784	23,010	23,400	23,614	23,425	24,016	23,908	24,848	ʳ25,830	25,994	....
Motor vehicles and parts.........do...	7,851	7,668	8,019	7,919	8,037	8,003	7,828	8,232	8,500	7,817	8,196	7,668	8,413	ʳ8,876	8,887	....
Instruments and related products..do...	5,727	6,550	6,087	6,104	6,140	6,203	6,199	6,282	6,384	6,461	6,494	6,550	6,746	ʳ6,932	7,190	....
By stage of fabrication:†																
Materials and supplies ♀ ....do...	38,719	41,325	38,547	38,794	39,484	39,667	39,727	40,343	41,133	40,916	41,228	41,325	41,720	ʳ42,323	43,616	....
Primary metals..............do...	7,141	6,619	6,393	6,371	6,427	6,444	6,394	6,587	6,554	6,499	6,647	6,619	6,455	ʳ6,446	6,500	....
Machinery, except electrical.....do...	7,345	8,743	7,497	7,703	7,897	8,012	8,155	8,175	8,412	8,680	8,573	8,743	8,787	ʳ8,824	9,049	....
Electrical machinery..........do...	4,520	4,949	4,581	4,630	4,629	4,873	4,872	4,979	4,951	4,937	4,949	5,042	ʳ5,005	5,195		....
Transportation equipment.......do...	6,733	6,791	6,782	6,730	6,822	6,736	6,541	6,763	7,122	6,593	6,840	6,791	7,233	ʳ7,580	7,861	....
Work in process ♀ ....do...	46,864	55,484	49,491	50,330	50,966	51,684	52,763	53,296	52,375	54,210	54,815	55,484	56,483	ʳ57,409	57,924	....
Primary metals..............do...	5,760	6,363	5,690	5,801	5,814	5,999	6,025	6,155	6,257	6,305	6,363	6,396	ʳ6,311	6,296		....
Machinery, except electrical.....do...	11,803	14,333	12,457	12,487	12,723	13,048	13,102	13,374	13,556	13,567	13,919	14,333	14,540	ʳ14,669	14,944	....
Electrical machinery..........do...	6,835	7,815	7,259	7,365	7,412	7,452	7,456	7,557	7,645	7,707	7,894	7,815	8,067	ʳ8,315	8,527	....
Transportation equipment.......do...	11,655	14,156	12,266	12,674	13,018	13,126	13,698	13,722	13,506	13,924	14,079	14,156	14,382	ʳ14,648	14,574	....
Finished goods ♀ ....do...	29,843	32,332	30,687	30,724	31,021	31,337	31,340	31,567	31,668	31,658	32,314	32,332	33,339	ʳ34,051	33,890	....
Primary metals..............do...	4,878	5,053	4,745	4,768	4,893	4,951	4,943	4,934	4,969	4,995	5,166	5,053	5,015	ʳ5,008	4,801	....
Machinery, except electrical.....do...	7,231	7,961	7,446	7,567	7,659	7,706	7,805	7,825	7,739	7,801	7,765	7,961	8,127	ʳ8,362	8,428	....
Electrical machinery..........do...	4,079	4,261	4,183	4,193	4,304	4,357	4,429	4,431	4,399	4,301	4,289	4,261	4,456	ʳ4,233	4,367	....
Transportation equipment.......do...	2,870	2,961	3,079	2,860	2,903	2,922	2,771	2,915	2,986	2,908	3,097	2,961	3,293	ʳ3,602	3,559	....
Nondurable goods industries, total ♀ ...do...	64,290	68,661	65,135	65,867	66,218	66,869	67,337	67,676	67,887	67,951	68,230	68,661	ʳ69,062	ʳ69,448	69,988	....
Food and kindred products.........do...	15,575	17,099	15,968	16,168	16,436	16,643	16,525	16,674	16,895	17,104	16,956	17,099	17,290	ʳ17,739	17,985	....
Tobacco products...............do...	3,524	3,639	3,405	3,465	3,477	3,501	3,385	3,359	3,481	3,544	3,653	3,639	3,614	ʳ3,502	3,561	....
Textile mill products............do...	5,294	5,620	5,445	5,394	5,433	5,475	5,542	5,554	5,601	5,571	5,632	5,620	5,729	ʳ5,743	5,715	....
Paper and allied products.........do...	5,622	5,868	5,664	5,687	5,798	5,869	5,939	5,816	5,855	5,795	5,778	5,868	5,834	ʳ5,873	6,005	....
Chemicals and allied products.....do...	14,134	15,461	14,426	14,743	14,763	14,861	15,054	15,182	15,317	15,246	15,269	15,461	ʳ15,470	ʳ15,468	15,533	....
Petroleum and coal products.......do...	5,992	5,458	5,591	5,576	5,302	5,397	5,530	5,512	5,406	5,503	5,625	5,458	5,417	ʳ5,180	5,039	....
Rubber and plastics products......do...	4,281	4,580	4,401	4,445	4,498	4,521	4,521	4,581	4,561	4,528	4,491	4,580	4,636	ʳ4,638	4,704	....
By stage of fabrication:†																
Materials and supplies.............do...	25,102	26,538	25,730	25,742	25,825	26,314	26,145	26,024	26,108	26,171	26,381	26,538	ʳ27,059	ʳ27,319	27,757	....
Work in process..................do...	10,116	10,733	10,208	10,352	10,354	10,277	10,348	10,352	10,484	10,754	10,658	10,733	ʳ10,959	ʳ11,013	11,032	....
Finished goods..................do...	29,071	31,390	29,197	29,773	30,039	30,278	30,844	31,300	31,295	31,026	31,191	31,390	ʳ31,130	ʳ31,116	31,199	....

GENERAL BUSINESS INDICATORS—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.
MANUFACTURERS' SALES, INVENTORIES, AND ORDERS†—Continued																
Inventories, end of year or month†—Continued																
Book value (seasonally adjusted)—Continued																
By market category:†																
Home goods and apparel_____mil. $__	15,340	16,874	15,947	16,066	16,183	16,276	16,707	16,859	16,887	16,618	16,679	16,874	17,274	ʳ17,326	17,543	_____
Consumer staples_____do___	23,942	26,429	24,157	24,621	24,928	25,407	25,366	25,511	25,919	25,990	26,271	26,429	26,537	ʳ26,742	27,191	_____
Equip. and defense prod., excl. auto___do___	42,836	50,355	44,645	45,228	46,155	46,761	47,339	47,790	48,255	48,907	49,229	50,355	51,186	ʳ51,911	52,475	_____
Automotive equipment_____do___	10,108	9,983	10,256	10,129	10,297	10,265	10,106	10,510	10,751	10,066	10,474	9,983	10,738	ʳ11,231	11,344	_____
Construction materials and supplies___do___	14,935	16,963	15,853	16,059	16,091	16,293	16,299	16,372	16,503	16,731	16,828	16,963	17,290	ʳ17,897	17,983	_____
Other materials and supplies_____do___	72,553	77,198	73,002	73,612	73,035	74,555	75,350	75,840	75,748	76,423	77,106	77,198	ʳ77,579	ʳ78,124	78,882	_____
Supplementary series:																
Household durables_____do___	7,771	8,595	8,116	8,188	8,301	8,307	8,574	8,635	8,678	8,559	8,590	8,595	8,800	ʳ8,716	8,859	_____
Capital goods industries_____do___	46,677	55,326	48,772	49,518	50,512	51,399	52,112	52,620	53,007	53,839	54,390	55,326	56,419	ʳ57,244	58,121	_____
Nondefense_____do___	40,294	48,155	42,151	42,780	43,610	44,583	45,227	45,743	46,246	46,905	47,422	48,155	49,017	ʳ49,775	50,571	_____
Defense_____do___	6,383	7,171	6,621	6,738	6,863	6,816	6,885	6,877	6,761	6,932	6,968	7,171	7,402	ʳ7,469	7,550	_____
New orders, net (not seas. adj.), total †△___do___	1,354,099	1,551,160	129,668	130,899	128,665	134,171	117,023	129,873	136,129	143,141	136,618	132,396	ʳ132,794	ʳ145,510	152,137	_____
Durable goods industries, total_____do___	717,537	848,932	71,712	71,890	70,723	74,237	61,702	69,713	74,520	80,752	75,518	73,650	ʳ74,457	ʳ81,730	ʳ85,319	_____
Nondurable goods industries, total△_____do___	636,562	702,228	57,956	59,009	57,942	59,934	55,321	60,160	61,609	62,389	61,055	58,746	ʳ58,337	ʳ63,780	66,818	_____
New orders, net (seas. adj.), total †△_____do___	²1,354,099	1,551,160	125,801	128,175	128,450	127,580	123,279	130,952	131,840	137,185	137,662	140,356	142,461	ʳ144,894	147,495	_____
By industry group:																
Durable goods industries, total†_____do___	717,537	848,932	69,016	70,033	70,045	68,840	65,187	71,582	72,645	76,984	76,654	78,623	80,732	82,007	81,947	_____
Primary metals_____do___	105,968	128,002	10,228	10,308	10,754	10,428	10,095	10,876	11,233	11,722	11,092	11,806	14,991	13,042	12,812	_____
Blast furnaces, steel mills_____do___	53,394	65,307	5,376	5,331	5,845	5,451	5,511	5,184	5,764	5,917	5,527	5,709	7,583	ʳ6,932	6,562	_____
Nonferrous and other primary met___do___	41,360	49,653	3,850	3,957	3,811	3,954	3,850	4,504	4,365	4,647	4,318	4,827	5,212	ʳ4,868	4,995	_____
Fabricated metal products_____do___	85,609	98,913	7,826	8,778	8,023	7,736	7,524	8,294	8,196	8,524	8,804	9,527	9,447	ʳ9,279	10,782	_____
Machinery, except electrical_____do___	122,489	144,166	11,573	11,536	11,872	11,477	11,669	11,830	12,708	13,234	13,099	13,273	ʳ13,527	ʳ13,517	13,815	_____
Electrical machinery_____do___	88,241	103,216	8,319	8,626	8,352	8,239	7,902	8,730	8,919	8,988	8,960	9,285	ʳ9,605	ʳ10,137	9,721	_____
Transportation equipment_____do___	178,617	216,473	18,085	17,721	18,019	17,953	15,226	18,516	18,536	20,553	20,916	20,167	20,121	22,340	20,051	_____
Aircraft, missiles, and parts_____do___	42,420	60,110	4,221	4,943	4,832	5,677	3,298	5,460	5,412	5,594	6,949	5,928	5,389	ʳ7,621	6,055	_____
Nondurable goods industries, total△_____do___	636,562	702,228	56,785	58,142	58,405	58,740	58,092	59,370	59,195	60,201	61,008	61,733	ʳ61,947	ʳ62,887	65,548	_____
Industries with unfilled orders⊕_____do___	139,673	153,795	12,412	12,880	12,971	12,934	13,070	13,208	12,866	12,986	13,273	13,184	13,078	ʳ13,697	13,617	_____
Industries without unfilled orders¶△_do___	496,889	548,433	44,373	45,262	45,434	45,806	45,022	46,162	46,329	47,215	47,735	48,549	ʳ48,869	ʳ49,190	51,931	_____
By market category:†																
Home goods and apparel△_____do___	103,442	114,499	9,160	9,735	9,422	9,398	9,177	9,955	9,938	9,808	9,797	9,704	10,086	ʳ10,024	10,273	_____
Consumer staples_____do___	244,051	270,832	22,222	22,534	22,549	22,526	22,350	22,840	22,626	23,211	23,446	23,933	23,653	ʳ24,062	25,051	_____
Equip. and defense prod., excl. auto___do___	186,752	229,717	18,802	18,423	19,295	18,317	16,204	19,485	20,281	21,709	21,165	20,555	ʳ20,545	ʳ23,576	22,269	_____
Automotive equipment_____do___	138,805	155,810	12,895	13,171	13,018	12,612	12,209	13,000	13,132	13,947	14,261	14,281	14,823	ʳ14,629	13,820	_____
Construction materials and supplies_____do___	110,261	131,327	10,397	11,218	10,600	10,690	10,437	10,986	10,714	11,640	11,551	12,428	11,684	ʳ11,888	13,275	_____
Other materials and supplies_____do___	570,788	648,975	52,325	53,094	53,556	54,037	52,902	54,686	55,149	56,870	57,442	58,608	ʳ61,888	60,715	62,807	_____
Supplementary series:																
Household durables_____do___	45,733	51,408	4,262	4,513	4,150	4,263	4,039	4,563	4,456	4,295	4,320	4,446	4,593	4,615	ʳ4,649	_____
Capital goods industries_____do___	216,849	268,762	21,992	21,440	22,202	21,592	19,355	22,701	23,667	25,455	25,234	24,629	24,820	27,288	ʳ26,015	_____
Nondefense_____do___	182,413	225,770	17,507	17,409	18,124	18,155	17,074	19,344	20,149	22,219	20,575	20,790	22,058	23,270	ʳ22,593	_____
Defense_____do___	34,436	42,992	4,485	4,031	4,078	3,437	2,281	3,357	3,518	3,236	4,659	4,301	2,729	4,018	ʳ3,422	_____
Unfilled orders, end of year or month (unadjusted), total†_____mil. $__	193,029	240,483	205,248	209,132	212,654	215,098	217,738	221,444	224,149	231,261	235,753	240,483	ʳ248,407	ʳ256,668	260,427	_____
Durable goods industries, total_____do___	184,482	230,324	196,039	199,549	202,915	205,310	207,714	211,434	214,067	221,233	225,619	230,324	238,332	246,051	249,885	_____
Nondur. goods ind. with unfilled orders⊕_do___	8,547	10,159	9,209	9,583	9,739	9,788	10,024	10,010	10,082	10,128	10,134	10,159	10,075	ʳ10,617	10,542	_____
Unfilled orders, end of year or month (seasonally adjusted) total†_____mil. $__	193,659	240,483	205,500	209,133	214,010	216,754	216,922	219,999	223,921	230,464	235,704	241,025	ʳ248,266	ʳ256,429	260,626	_____
By industry group:																
Durable goods industries, total ♀_____do___	184,834	230,554	196,359	199,895	204,516	207,067	207,026	209,922	213,650	220,341	225,361	230,554	238,036	245,812	ʳ250,158	_____
Primary metals_____do___	18,513	26,216	20,866	21,349	22,476	23,043	23,232	23,760	24,753	25,612	25,834	26,216	29,465	30,758	31,419	_____
Blast furnaces, steel mills_____do___	11,852	16,662	13,689	14,052	14,955	15,344	15,464	15,583	16,193	16,576	16,829	16,662	ʳ19,269	ʳ20,413	20,890	_____
Nonferrous and other primary met___do___	5,350	7,450	5,696	5,819	5,990	6,158	6,184	6,421	6,750	7,143	6,997	7,450	8,008	ʳ8,041	8,152	_____
Fabricated metal products_____do___	23,203	26,005	24,213	24,976	25,118	24,956	24,941	24,990	24,990	25,361	25,526	26,005	26,698	ʳ27,083	27,940	_____
Machinery, except electrical_____do___	47,221	53,039	49,044	49,219	50,001	50,055	50,268	50,266	50,912	51,776	52,558	53,039	54,167	ʳ54,656	55,173	_____
Electrical machinery_____do___	25,833	30,413	27,526	28,031	28,455	28,529	28,358	28,594	29,006	29,466	29,910	30,413	ʳ31,097	ʳ32,262	32,677	_____
Transportation equipment_____do___	60,527	83,994	64,480	65,915	67,963	70,029	69,745	71,938	73,733	77,612	81,052	83,994	85,471	90,059	91,679	_____
Aircraft, missiles, and parts_____do___	41,275	59,613	43,396	44,998	46,608	48,756	48,751	50,650	51,964	54,210	57,397	59,613	60,788	ʳ64,962	66,578	_____
Nondur. goods ind. with unfilled orders⊕_do___	8,825	10,471	9,141	9,238	9,494	9,687	9,896	10,077	10,271	10,123	10,343	10,471	10,230	ʳ10,612	10,468	_____
By market category:†																
Home goods, apparel, consumer staples__do___	4,091	4,025	4,285	4,457	4,483	4,329	4,266	4,396	4,482	4,270	4,098	4,025	4,238	ʳ4,461	4,488	_____
Equip. and defense prod., incl. auto____do___	110,488	137,784	117,326	119,221	122,306	123,708	122,938	124,857	127,137	131,291	134,544	137,784	ʳ139,629	ʳ144,510	146,347	_____
Construction materials and supplies_____do___	18,765	20,043	19,852	20,417	20,366	20,269	20,102	19,888	19,539	19,800	19,621	20,043	20,327	ʳ20,597	21,272	_____
Other materials and supplies_____do___	60,315	79,173	64,037	65,038	66,855	68,448	69,616	70,858	72,763	75,103	77,441	79,173	ʳ84,072	ʳ86,856	88,519	_____
Supplementary series:																
Household durables_____do___	3,389	3,299	3,486	3,625	3,644	3,546	3,431	3,546	3,649	3,442	3,326	3,299	3,490	3,644	3,621	_____
Capital goods industries_____do___	120,899	150,853	127,402	129,310	132,453	134,393	134,172	136,464	138,841	143,550	147,596	150,853	153,513	158,926	161,592	_____
Nondefense_____do___	85,893	107,041	90,712	91,528	93,395	94,768	95,021	96,767	98,560	102,795	105,088	107,041	110,014	114,286	116,837	_____
Defense_____do___	35,006	43,812	36,690	37,782	39,058	39,625	39,151	39,697	40,281	40,755	42,508	43,812	43,499	44,640	44,755	_____
BUSINESS INCORPORATIONS⊙																
New incorporations (50 States and Dist. Col.):																
Unadjusted_____number__	432,172	477,827	43,130	38,690	41,960	43,059	39,245	42,392	38,732	41,022	37,661	39,701	44,745	37,759	_____	_____
Seasonally adjusted_____do___	_____	_____	37,602	38,498	38,320	39,796	39,403	42,605	41,827	41,945	41,568	42,461	42,777	42,048	_____	_____
INDUSTRIAL AND COMMERCIAL FAILURES⊙																
Failures, total_____number__	7,919	_____	666	594	583	519	459	675	458	511	_____	_____	_____	_____	_____	_____
Commercial service_____do___	1,041	_____	79	78	75	62	60	73	38	60	_____	_____	_____	_____	_____	_____
Construction_____do___	1,463	_____	106	107	109	99	94	131	92	80	_____	_____	_____	_____	_____	_____
Manufacturing and mining_____do___	1,122	_____	114	81	87	70	76	104	61	78	_____	_____	_____	_____	_____	_____
Retail trade_____do___	3,406	_____	288	257	246	228	181	308	215	233	_____	_____	_____	_____	_____	_____
Wholesale trade_____do___	887	_____	79	71	66	60	48	59	52	60	_____	_____	_____	_____	_____	_____
Liabilities (current), total_____thous. $__	3,095,317	_____	324,412	202,990	160,395	178,839	231,821	206,395	127,022	175,342	_____	_____	_____	_____	_____	_____
Commercial service_____do___	358,686	_____	12,319	31,388	14,872	42,981	54,753	32,569	8,732	10,714	_____	_____	_____	_____	_____	_____
Construction_____do___	420,220	_____	16,543	24,490	17,547	21,733	32,405	39,278	15,263	15,223	_____	_____	_____	_____	_____	_____
Manufacturing and mining_____do___	1,221,122	_____	230,159	78,094	77,213	55,154	59,220	81,522	46,935	45,234	_____	_____	_____	_____	_____	_____
Retail trade_____do___	482,560	_____	37,867	35,824	27,850	33,947	25,832	40,005	28,943	86,550	_____	_____	_____	_____	_____	_____
Wholesale trade_____do___	612,729	_____	27,524	33,194	22,913	25,024	59,611	13,021	27,149	17,621	_____	_____	_____	_____	_____	_____
Failure annual rate (seasonally adjusted)																
No. per 10,000 concerns__	² 28.4	_____	24.6	24.1	23.4	21.9	22.0	29.8	22.6	22.5	_____	_____	_____	_____	_____	_____

ʳ Revised. ᵖ Preliminary. ¹ Advance estimate: totals for mfrs. new and unfilled orders for Mar. 1979 do not reflect revisions for selected components. ² Based on unadjusted data. † See corresponding note on p. S-6. ♀ Includes data for items not shown separately. △See note marked "⊕" on p. S-5. ⊕Includes textile mill prod., leather and prod., paper and allied prod., and print. and pub. ind.; unfilled orders for other nondurable goods are zero.

¶ For these industries (food and kindred prod., tobacco mfs., apparel and other textile prod., petroleum and coal prod., chem. and allied prod., rubber and plastics prod.) sales are considered equal to new orders. ⊙ Compiled by Dun & Bradstreet, Inc. (failures data for 48 States and Dist. of Col.; Hawaii included beginning July 1975; Alaska, beginning Sept. 1976).

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

COMMODITY PRICES

PRICES RECEIVED AND PAID BY FARMERS†

Prices received, all farm products....1910–14=100..	457	524	ʳ 501	ʳ 521	536	543	536	526	538	544	538	555	579	602	615	609
Crops ♀......do....	432	456	ʳ 444	ʳ 468	476	485	478	457	458	452	452	461	470	485	482	477
Commercial vegetables......do....	499	512	ʳ 528	ʳ 693	576	566	509	441	455	442	457	542	638	700	ʳ 621	596
Cotton......do....	511	465	432	441	454	463	477	485	475	503	516	490	473	458	ʳ 443	433
Feed grains and hay......do....	316	320	325	337	348	342	324	307	302	302	309	319	322	330	ʳ 334	335
Food grains......do....	275	336	328	344	340	337	335	337	336	343	349	347	346	344	ʳ 344	345
Fruit......do....	370	516	459	441	511	593	595	564	634	560	483	471	482	519	ʳ 521	508
Tobacco......do....	972	1,060	1,006	1,017	1,018	1,017	1,030	1,078	1,144	1,107	1,115	1,138	1,134	1,124	1,120	1,132
Livestock and products ♀......do....	481	593	560	576	597	603	597	598	621	639	627	653	693	726	754	749
Dairy products......do....	594	647	624	618	612	612	618	642	667	691	709	722	728	728	722	709
Meat animals......do....	564	754	700	730	779	789	763	765	796	830	792	829	904	964	1,018	1,019
Poultry and eggs......do....	228	242	238	245	237	238	258	243	247	238	248	260	264	269	276	265
Prices paid:																
All commodities and services......do....	591	638	621	629	637	640	642	643	650	655	658	664	676	688	ʳ 706.2	713
Family living items......do....	573	616	598	602	608	613	620	624	628	632	638	641	644	650	657	664
Production items......do....	579	626	611	620	630	631	631	629	638	643	645	652	668	683	704	713
All commodities and services, interest, taxes, and wage rates (parity index)......1910–14=100..	687	744	728	736	744	747	749	750	757	761	764	770	796	808	ʳ 826	834
Parity ratio §......do....	66	70	69	71	72	73	72	70	71	71	71	72	73	75	ʳ 74	73

CONSUMER PRICES¶
(U.S. Department of Labor Indexes)

Not Seasonally Adjusted

ALL ITEMS, WAGE EARNERS AND CLERICAL WORKERS, REVISED (CPI-W)¶......1967=100..	181.5	195.3	189.7	191.4	193.3	195.3	196.7	197.7	199.1	200.7	201.8	202.9	204.7	207.1	209.3	211.8
ALL ITEMS, ALL URBAN CONSUMERS (CPI-U)¶......1967=100..	181.5	195.4	189.8	191.5	193.3	195.3	196.7	197.8	199.3	200.9	202.0	202.9	204.7	207.1	209.1	211.5
Special group indexes:																
All items less shelter......do....	179.1	191.3	186.3	188.1	189.9	191.8	192.7	193.5	194.5	195.8	196.7	197.8	199.5	201.6	203.7	206.0
All items less food......do....	178.4	191.2	185.9	187.4	189.0	190.6	192.0	193.3	195.1	196.7	197.8	198.6	199.8	201.8	203.8	206.3
All items less medical care......do....	180.3	194.0	188.3	190.1	191.9	193.9	195.3	196.3	197.9	199.4	200.5	201.5	203.2	205.5	207.6	210.1
Commodities......do....	174.7	187.1	181.6	183.5	185.5	187.5	188.6	189.5	190.5	191.8	192.9	194.2	195.8	198.3	200.5	203.3
Nondurables......do....	178.9	192.0	186.8	188.8	190.7	192.7	193.6	194.4	195.4	196.6	197.5	198.8	201.0	204.0	206.9	209.9
Nondurables less food......do....	166.5	174.3	170.7	171.8	172.8	173.7	174.1	175.4	177.1	178.1	179.1	180.0	180.3	182.2	185.7	189.6
Durables......do....	163.2	173.9	168.3	169.9	172.0	173.9	175.3	175.9	177.2	178.8	180.0	181.2	182.0	183.6	184.9	187.2
Commodities less food......do....	165.1	174.7	170.0	171.3	173.0	174.4	175.4	176.3	177.8	179.1	180.3	181.3	181.9	183.7	185.9	188.9
Services......do....	194.3	210.9	204.9	206.5	208.0	209.9	211.7	213.4	215.6	217.6	218.6	219.2	221.1	223.3	225.1	227.0
Services less rent......do....	201.6	219.4	213.0	214.6	216.2	218.3	220.4	222.2	224.6	226.7	227.8	228.2	230.4	232.9	235.0	237.1
Food ♀......do....	192.2	211.4	204.2	207.5	210.3	213.8	215.0	215.4	215.6	216.8	217.8	219.4	223.9	228.2	230.4	232.3
Food at home......do....	190.2	210.2	202.5	206.5	209.7	213.9	214.7	214.5	214.1	216.1	216.1	217.9	223.1	228.0	229.9	231.7
Housing......do....	186.5	¹ 202.8	¹ 196.7	¹ 198.3	¹ 199.9	¹ 202.0	¹ 203.8	¹ 205.2	¹ 207.5	¹ 209.5	¹ 210.6	¹ 211.5	¹ 213.1	¹ 215.6	¹ 217.6	¹ 219.8
Shelter ♀......do....	191.1	210.4	202.9	204.7	206.6	208.9	211.3	213.3	216.3	218.6	220.1	221.0	222.8	225.9	228.0	230.7
Rent......do....	153.5	² 164.0	² 160.5	² 161.5	² 162.7	² 163.6	² 164.2	² 165.1	² 166.4	² 167.4	² 168.5	² 169.5	² 170.3	² 171.0	² 171.3	² 172.0
Homeownership......do....	204.9	227.2	218.3	220.4	222.5	225.3	228.3	230.6	234.2	237.0	238.8	239.5	241.6	245.6	248.2	251.7
Fuel and utilities ♀......do....	202.2	³ 216.0	³ 212.6	³ 213.9	³ 215.5	³ 217.5	³ 218.0	³ 218.1	³ 218.8	³ 220.1	³ 218.5	³ 219.9	³ 221.5	³ 223.3	³ 225.9	³ 227.5
Fuel oil and coal......do....	283.4	⁴ 298.3	⁴ 297.2	⁴ 296.6	⁴ 295.6	⁴ 295.1	⁴ 294.5	⁴ 294.2	⁴ 295.7	⁴ 300.1	⁴ 306.1	⁴ 311.8	⁴ 316.4	⁴ 326.1	⁴ 339.5	⁴ 349.8
Gas (piped) and electricity......do....	213.4	232.6	226.6	229.2	232.5	236.5	237.2	236.9	237.9	240.0	234.9	236.2	239.5	241.2	244.0	245.3
Household furnishings and operation......do....	167.5	¹ 177.7	¹ 173.6	¹ 175.0	¹ 176.0	¹ 177.6	¹ 178.1	¹ 178.9	¹ 180.5	¹ 181.9	¹ 183.0	¹ 184.0	¹ 184.8	¹ 186.0	¹ 187.4	¹ 188.6
Apparel and upkeep......do....	154.2	159.6	156.5	158.4	159.8	159.9	158.0	159.6	161.9	163.3	164.1	163.2	160.7	161.4	164.3	165.4
Transportation......do....	177.2	185.5	179.9	181.1	183.2	185.5	187.2	188.1	188.7	189.7	191.4	192.6	193.9	195.6	198.1	202.9
Private......do....	176.6	185.0	179.1	180.3	182.6	185.0	186.8	187.7	188.3	189.4	191.1	192.5	193.8	195.5	198.1	203.2
New cars......do....	142.9	153.8	151.1	151.2	152.5	153.5	153.9	153.8	153.5	155.5	158.5	159.8	161.2	162.3	162.7	164.3
Used cars......do....	182.8	186.5	172.3	177.3	184.6	191.5	195.9	196.7	195.9	195.4	194.7	194.0	193.6	193.4	195.4	200.0
Public......do....	182.4	187.8	187.2	187.3	187.4	187.2	187.7	187.6	188.2	189.3	189.7	189.1	190.0	190.7	191.5	192.6
Medical care......do....	202.4	219.4	214.5	215.7	216.9	217.9	219.4	221.4	222.6	224.7	227.0	227.8	230.7	232.6	233.9	235.1

Seasonally Adjusted △⊕

All items, percent change from previous month...			0.8	0.8	0.8	0.9	0.6	0.6	0.9	0.8	0.6	0.6	0.9	1.2	1.0	1.1
Commodities......1967=100..			182.3	183.9	185.3	186.9	187.7	188.7	190.2	191.7	193.0	194.6	196.7	199.1	201.3	203.8
Commodities less food......do....			170.7	171.6	172.6	173.7	174.7	175.7	177.2	178.5	179.8	181.3	182.9	184.8	186.9	189.4
Food......do....			204.7	208.1	210.5	213.5	213.7	214.6	216.0	217.9	219.2	221.3	224.5	228.1	230.5	232.7
Food at home......do....			202.8	207.1	209.9	213.1	212.7	213.2	214.5	216.5	217.8	220.1	223.7	227.7	230.0	232.4
Fuels and utilities......do....			³ 211.8	³ 213.5	³ 215.5	³ 217.6	³ 218.2	³ 218.9	³ 219.6	³ 221.0	³ 218.9	³ 220.0	³ 220.9	³ 222.6	³ 225.1	³ 227.2
Fuel oil and coal......do....			⁴ 293.6	⁴ 295.0	⁴ 295.9	⁴ 296.8	⁴ 297.0	⁴ 297.9	⁴ 300.3	⁴ 303.2	⁴ 306.8	⁴ 310.3	⁴ 312.3	⁴ 320.3	⁴ 335.5	⁴ 348.1
Apparel and upkeep......do....			157.4	158.9	159.7	160.0	159.2	160.0	160.9	161.7	161.9	161.8	162.2	162.7	165.2	166.0
Transportation......do....			181.4	181.8	182.9	184.2	185.6	186.9	188.2	189.0	191.2	193.2	195.4	197.5	199.9	203.8
Private......do....			180.8	181.1	182.3	183.8	185.2	186.5	187.9	188.8	191.1	193.2	195.4	197.5	200.0	204.0
New cars......do....			150.5	151.2	152.7	154.2	155.5	156.2	156.9	155.3	157.0	157.3	159.1	161.0	162.1	164.3
Services......do....			205.1	206.9	208.7	210.5	212.2	213.8	215.7	217.6	218.7	219.5	220.7	223.1	225.1	227.2

PRODUCER PRICES♂
(U.S. Department of Labor Indexes)

Not Seasonally Adjusted

Spot market prices, basic commodities:																
22 Commodities......1967=100..	⁵ 209.6	⁵ 217.1	226.3	225.0	228.1	229.6	228.9	236.2	243.0	251.0	252.2	250.8	255.3	268.0	277.4	276.3
9 Foodstuffs......do....	⁵ 208.2	⁵ 239.1	236.0	237.9	243.7	240.8	234.9	241.4	248.7	253.1	248.3	249.1	250.9	260.2	261.8	251.8
13 Raw industrials......do....	⁵ 210.4	⁵ 230.6	219.8	216.5	217.8	221.1	224.7	232.6	239.1	249.4	254.8	251.8	258.3	273.5	288.5	294.5
All commodities......do....	194.2	209.3	203.7	206.5	208.0	209.6	210.7	ʳ 210.6	ʳ 212.4	ʳ 214.9	215.7	ʳ 217.5	220.7	223.9	226.4	229.7
By stage of processing:																
Crude materials for further processing......do....	214.3	240.2	230.5	239.0	241.2	245.4	245.4	240.2	ʳ 244.8	ʳ 249.2	ʳ 248.4	ʳ 252.5	260.2	270.5	276.5	279.9
Intermediate materials, supplies, etc......do....	201.7	377.5	210.7	212.5	213.9	215.1	216.0	217.3	218.7	ʳ 220.8	ʳ 222.0	ʳ 223.0	225.7	228.3	231.1	235.3
Finished goods ⊙......do....	180.6	194.6	189.1	191.5	193.1	194.5	196.0	195.6	ʳ 197.1	ʳ 199.6	ʳ 200.3	ʳ 202.5	205.3	207.4	208.8	211.2
Finished consumer goods......do....	178.9	192.6	186.8	189.7	191.4	193.0	194.6	193.6	ʳ 195.4	ʳ 197.5	ʳ 197.9	ʳ 200.5	203.6	206.1	207.6	210.0
Capital equipment......do....	184.5	199.1	194.6	195.6	196.9	198.1	199.2	200.0	ʳ 201.1	ʳ 204.4	ʳ 206.1	ʳ 207.0	209.2	210.5	211.4	213.6
By durability of product:																
Durable goods......do....	188.1	204.9	199.3	201.5	202.8	ʳ 204.1	205.3	207.3	208.0	210.7	212.1	213.0	216.1	218.6	220.6	223.4
Nondurable goods......do....	198.4	211.9	206.5	209.5	211.3	ʳ 213.2	213.9	212.1	214.7	ʳ 217.3	217.6	219.9	223.5	227.2	230.1	233.9
Total manufactures......do....	190.1	204.2	198.9	201.0	202.5	203.9	ʳ 205.0	205.7	ʳ 207.3	ʳ 209.7	210.6	212.0	214.9	217.2	219.4	222.8
Durable manufactures......do....	188.1	204.7	199.1	201.3	202.6	203.9	ʳ 205.3	207.1	ʳ 208.0	210.5	211.8	212.7	215.5	217.7	219.4	222.2
Nondurable manufactures......do....	191.8	203.0	198.1	200.0	201.7	203.2	203.9	203.4	ʳ 205.7	ʳ 208.0	208.5	210.5	213.5	215.9	218.6	222.6

COMMODITY PRICES—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.
PRODUCER PRICES ♂—Continued																
(U.S. Department of Labor Indexes)—Continued																
All commodities—Continued																
Farm prod., processed foods and feeds..1967=100..	188.8	206.7	200.0	205.5	207.6	210.4	210.3	205.3	209.4	213.2	212.3	ʳ216.2	221.0	227.0	228.8	231.2
Farm products ♀ ....do....	192.5	212.7	204.2	213.7	215.8	219.5	219.9	210.3	215.1	219.4	218.2	ʳ222.7	230.1	240.5	242.5	245.9
Fruits and vegetables, fresh and dried..do....	192.2	218.2	201.2	227.3	220.1	230.3	252.4	215.3	208.0	214.2	ʳ207.0	ʳ221.6	230.7	259.5	232.2	237.2
Grains..................................do....	165.0	182.5	178.9	198.7	189.2	188.1	183.8	178.9	176.9	182.0	189.0	184.7	184.4	189.3	192.0	198.3
Live poultry...........................do....	175.4	199.8	187.9	196.0	194.5	221.6	246.5	204.8	211.1	184.9	192.4	198.5	206.0	217.8	217.6	209.4
Livestock..............................do....	173.0	220.1	208.3	218.1	230.3	236.2	226.8	216.6	226.8	235.1	222.4	230.1	247.3	266.5	275.8	284.0
Foods and feeds, processed ♀ ....do....	186.1	202.6	196.9	200.2	202.4	204.6	204.2	201.8	205.5	209.0	208.2	ʳ211.8	215.3	218.7	220.4	222.3
Beverages and beverage materials.......do....	201.0	200.1	200.1	200.1	199.5	200.0	198.4	196.9	197.8	201.1	201.4	ʳ201.0	201.4	201.3	201.4	201.6
Cereal and bakery products............do....	173.4	190.2	186.4	188.8	188.2	190.0	191.0	192.5	191.0	193.3	196.2	ʳ196.8	196.9	199.1	200.0	203.0
Dairy products.........................do....	173.4	188.4	180.3	184.5	184.5	185.4	186.1	190.8	192.9	197.0	199.6	ʳ202.8	203.4	203.1	204.8	207.0
Fruits and vegetables, processed.......do....	187.4	202.6	195.6	196.5	197.4	198.8	200.4	203.3	205.1	210.1	216.3	218.4	218.4	219.3	219.5	220.4
Meats, poultry, and fish...............do....	182.0	217.1	204.7	211.7	220.4	226.2	224.4	215.9	224.4	228.2	220.9	ʳ229.2	240.3	248.5	250.5	252.9
Industrial commodities....................do....	195.1	209.4	204.1	206.1	207.4	208.7	210.1	211.4	212.5	214.7	216.0	ʳ217.2	219.9	222.4	225.1	228.6
Chemicals and allied products ♀ ....do....	192.8	198.8	196.1	196.9	198.6	198.9	199.8	199.5	200.3	201.6	202.3	ʳ202.3	204.9	207.0	209.5	214.7
Agric. chemicals and chem. prod.......do....	187.8	198.2	191.0	192.3	203.5	202.6	202.1	202.1	202.7	203.4	202.3	ʳ201.9	201.4	202.9	205.6	209.4
Chemicals, industrial..................do....	223.9	225.5	224.1	224.2	224.0	224.0	225.1	226.4	226.4	228.1	ʳ227.4	ʳ229.1	233.4	236.4	239.5	247.5
Drugs and pharmaceuticals.............do....	140.5	148.1	145.3	146.2	146.6	147.8	148.5	148.9	149.6	150.3	152.1	153.2	155.4	155.8	156.4	157.5
Fats and oils, inedible................do....	279.0	315.8	294.6	301.3	315.2	313.2	335.6	312.9	338.5	340.0	361.2	332.9	336.1	367.9	398.5	448.7
Prepared paint.........................do....	182.4	192.4	189.5	191.6	192.6	192.6	192.6	192.6	192.6	192.6	ʳ196.5	ʳ198.7	198.9	202.3	202.3	203.3
Fuels and related prod., and power ♀ ....do....	302.2	322.5	315.3	317.3	319.7	323.2	324.5	324.9	326.7	328.5	329.7	ʳ334.3	338.3	342.4	350.5	361.9
Coal....................................do....	389.4	430.0	407.0	426.4	432.4	434.5	437.1	441.7	442.7	443.9	ʳ442.2	ʳ443.8	444.6	444.7	445.3	447.5
Electric power.........................do....	232.9	250.7	249.8	250.6	252.6	256.9	254.8	253.6	252.5	252.7	ʳ250.3	ʳ250.7	251.6	252.2	257.4	260.8
Gas fuels..............................do....	387.8	429.1	424.8	428.6	428.8	428.8	430.6	425.3	431.4	429.2	433.9	ʳ444.6	450.4	458.6	471.3	478.1
Petroleum products, refined............do....	308.2	321.0	310.9	311.7	314.5	318.4	321.1	323.3	325.7	329.4	331.9	ʳ338.2	343.7	348.8	359.4	379.2
Furniture and household durables ♀ .....do....	151.5	160.1	157.7	158.4	159.2	159.5	161.4	161.8	162.0	162.9	163.5	ʳ164.6	165.8	166.7	167.5	167.8
Appliances, household.................do....	145.1	152.8	151.2	152.4	152.4	152.7	153.5	154.0	154.2	154.5	ʳ155.6	ʳ155.7	156.6	157.9	158.4	158.6
Furniture, household..................do....	162.2	173.4	169.3	169.9	170.7	172.3	174.6	175.6	176.1	177.9	ʳ178.8	ʳ179.3	180.9	181.2	181.5	182.6
Home electronic equipment.............do....	87.7	89.3	89.1	88.7	90.0	88.5	90.8	90.8	91.6	91.3	ʳ91.5	ʳ92.3	89.6	89.6	89.6	89.7
Hides, skins, and leather products ♀ ....do....	179.3	200.1	187.9	191.9	193.6	195.3	197.3	205.1	210.7	213.0	215.8	ʳ216.2	223.8	232.8	254.1	259.3
Footwear...............................do....	168.7	183.2	175.7	180.0	180.9	181.3	181.1	181.7	184.0	186.0	190.7	ʳ192.2	196.9	203.6	210.5	212.6
Hides and skins........................do....	286.7	360.5	296.0	320.5	321.7	346.5	360.4	400.8	435.3	427.9	417.0	401.3	452.8	505.7	647.5	642.2
Leather................................do....	201.0	238.6	215.3	217.4	217.3	217.4	224.5	251.9	269.4	269.4	278.7	279.6	292.8	309.2	371.9	393.6
Lumber and wood products...............do....	236.3	275.9	266.2	269.6	273.4	278.5	277.5	281.6	282.8	284.2	290.0	ʳ288.6	290.1	292.3	299.3	304.5
Lumber................................do....	276.5	322.1	312.5	316.7	316.5	320.8	319.1	326.7	332.2	334.5	ʳ342.0	ʳ339.1	336.6	339.9	350.1	355.1
Machinery and equipment ♀ ....do....	181.7	196.0	191.6	192.7	193.9	195.3	196.5	197.5	198.8	200.5	202.7	ʳ203.8	205.0	206.2	207.4	209.2
Agricultural machinery and equip......do....	197.9	212.8	208.1	209.0	209.7	210.8	212.2	214.1	217.8	218.6	ʳ220.6	ʳ221.9	221.8	222.7	223.6	225.1
Construction machinery and equip.....do....	213.5	232.8	225.7	228.4	230.3	231.1	232.8	234.6	237.0	240.4	ʳ242.3	ʳ243.8	245.2	247.1	247.7	250.6
Electrical machinery and equip........do....	154.1	164.9	161.8	162.7	163.4	164.6	165.4	165.8	166.4	167.5	169.6	ʳ170.5	171.1	172.4	173.7	174.6
Metalworking machinery and equip...do....	198.5	216.9	210.8	212.2	214.0	215.6	216.7	218.2	220.3	223.8	226.3	ʳ228.2	230.1	231.8	232.7	234.9
Metals and metal products ♀ ....do....	209.0	227.1	221.1	223.9	224.6	225.9	227.3	231.0	231.4	234.1	235.5	236.6	241.6	247.3	251.6	255.5
Heating equipment....................do....	165.5	174.4	171.3	172.7	173.4	173.9	174.4	176.2	176.0	176.9	ʳ177.2	ʳ179.1	180.1	181.2	183.6	183.9
Iron and steel.........................do....	230.4	253.5	247.6	252.0	252.0	252.5	253.9	258.6	258.5	259.9	261.7	ʳ263.2	272.0	274.6	279.8	279.8
Nonferrous metals.....................do....	195.4	207.7	201.1	202.9	203.2	205.4	205.9	211.1	211.4	217.1	218.2	ʳ219.0	223.2	238.8	246.0	257.9
Nonmetallic mineral products ♀ ....do....	200.5	222.8	215.9	218.4	219.3	222.0	224.7	227.2	228.2	229.1	230.0	ʳ231.1	237.7	240.3	240.5	242.9
Clay prod., structural, excl. refrac......do....	179.8	197.1	192.6	193.7	194.2	195.5	196.6	197.7	202.3	202.4	204.4	206.5	209.7	210.7	212.8	214.8
Concrete products.....................do....	191.8	214.0	206.0	207.9	209.7	211.8	214.4	217.7	221.4	222.2	222.9	224.2	235.0	236.3	237.8	239.9
Gypsum products......................do....	183.5	229.1	217.0	221.2	228.2	230.2	234.0	235.9	236.0	236.8	242.1	242.7	247.6	250.6	251.0	252.2
Pulp, paper, and allied products.........do....	186.4	195.5	189.7	191.9	193.2	193.5	195.5	195.8	199.0	202.4	203.9	ʳ205.2	206.8	208.4	211.8	214.5
Paper..................................do....	194.3	206.1	198.8	202.7	204.0	205.1	206.8	208.0	210.2	213.0	ʳ214.0	ʳ214.6	217.4	220.8	222.9	225.9
Rubber and plastics products............do....	167.6	174.7	171.4	172.8	173.8	174.5	174.9	175.7	176.7	178.1	179.4	ʳ179.7	180.7	183.1	185.5	188.2
Tires and tubes.......................do....	169.9	179.1	172.3	175.1	178.8	179.5	179.9	180.0	180.4	184.5	ʳ187.7	ʳ188.8	191.4	193.8	194.7	194.8
Textile products and apparel §..........do....	154.0	159.7	157.4	157.9	158.6	159.2	160.0	160.5	161.3	162.3	163.2	ʳ163.6	164.6	165.0	165.1	166.0
Synthetic fibers..........Dec. 1975=100..	107.3	109.7	109.9	109.2	109.5	108.9	108.9	109.1	109.1	109.1	109.4	ʳ110.6	113.3	113.7	113.8	115.4
Processed yarns and threads............do....	100.9	102.3	101.2	101.1	101.0	101.6	101.9	102.4	103.3	104.0	105.3	ʳ104.7	105.3	105.3	106.7	106.0
Gray fabrics...........................do....	104.7	118.6	112.2	113.9	117.3	117.8	119.2	120.9	124.2	126.5	126.7	125.9	125.6	123.2	123.2	124.4
Finished fabrics.......................do....	103.7	103.8	103.0	103.1	103.3	103.1	103.2	103.4	104.1	104.5	ʳ104.8	ʳ106.0	106.4	106.8	105.1	105.6
Apparel...............................1967=100..	147.3	152.4	150.2	150.7	151.0	152.1	153.0	153.5	153.3	154.1	ʳ155.3	ʳ155.5	157.1	157.5	158.1	159.3
Textile house furnishings..............do....	171.3	178.6	176.3	176.1	177.0	178.7	179.4	179.2	180.3	181.0	180.5	183.4	181.8	186.0	187.4	187.6
Transportation equipment ♀ ...Dec. 1968=100..	161.3	173.4	169.6	170.5	172.0	172.4	172.8	173.1	173.6	179.2	180.1	ʳ180.5	182.4	183.5	183.5	186.5
Motor vehicles and equip.........1967=100..	163.7	175.9	171.9	172.9	174.6	175.0	175.5	175.8	175.9	181.8	182.5	ʳ182.8	184.7	185.9	185.8	189.2
Seasonally Adjusted‡																
All commodities, percent change from previous month..........			0.8	1.1	0.7	0.8	0.4	0.3	0.8	1.3	0.7	0.6	1.4	1.3	1.2	1.2
By stage of processing:																
Crude materials for further processing..1967=100..			229.2	233.8	235.9	240.9	241.5	241.5	245.7	253.4	256.0	257.3	263.4	272.2	275.0	273.9
Intermediate materials, supplies, etc.......do....			210.9	212.0	213.3	214.4	215.4	216.8	218.2	220.7	222.4	224.0	226.6	229.0	231.3	234.7
Finished goods ☉.......................do....			189.5	191.5	192.8	194.2	195.6	196.1	197.7	199.4	200.9	202.5	205.2	207.3	209.3	211.2
Finished consumer goods...............do....			187.5	189.7	190.8	192.3	193.7	194.0	195.8	197.7	199.1	200.9	203.7	206.1	208.4	210.0
Food.................................do....			201.7	203.8	204.4	207.2	207.4	206.6	209.7	211.6	215.1	217.3	221.2	224.7	227.5	226.9
Finished goods, exc. foods.............do....			178.5	180.8	182.2	183.0	184.9	185.9	186.9	187.9	189.2	190.7	193.0	194.7	196.8	199.5
Durable.............................do....			158.8	163.0	165.3	165.6	168.5	169.8	171.0	170.5	171.2	172.1	174.1	175.4	176.4	177.9
Nondurable.........................do....			191.7	192.4	193.3	194.4	195.5	196.3	197.2	199.2	200.9	203.0	205.5	207.4	210.2	213.7
Capital equipment....................do....			194.4	195.7	197.2	198.7	200.1	201.0	202.1	203.1	204.9	206.4	208.4	210.1	211.3	213.7
By durability of product:																
Total manufactures....................do....			199.3	200.8	202.1	203.5	204.4	205.5	207.3	209.6	211.0	212.6	215.3	217.6	219.8	222.6
Durable manufactures.................do....			199.1	201.1	202.4	203.9	205.5	207.3	208.4	209.9	211.8	213.1	215.7	217.7	219.4	222.0
Nondurable manufactures.............do....			198.7	199.8	201.5	202.0	202.5	203.2	205.3	208.1	209.3	211.3	214.1	216.8	219.3	222.4
Farm products.........................do....			205.2	212.8	212.8	217.8	216.0	210.8	215.4	221.7	224.1	225.2	231.4	239.0	243.9	245.1
Processed foods and feeds..............do....			198.3	200.6	202.0	203.0	201.7	201.9	204.9	209.6	210.4	212.4	215.0	218.9	222.1	222.7
PURCHASING POWER OF THE DOLLAR																
As measured by—																
Producer prices △.....................1967=$1.00..	$0.554	$0,514	$0.529	$0.522	$0.518	$0.514	$0.510	$0.511	$0.507	$0.501	$0.499	$0.494	$0.487	$0.482	ʳ$0.479	$0.473
Consumer prices ⊕.....................do....	.551	.512	.527	.522	.517	.512	.508	.506	.502	.498	.495	.493	.489	.483	.478	.473

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.

CONSTRUCTION AND REAL ESTATE

CONSTRUCTION PUT IN PLACE ‡

New construction (unadjusted), total_____mil. $__	172,552	202,218	13,425	15,319	17,263	⸴8,799	19,175	19,924	19,842	19,818	18,971	16,847	13,963	ʳ13,263	15,374	_____
Private, total ♀_____do____	134,724	157,457	10,823	12,159	13,440	⸴4,558	14,736	15,080	15,045	15,173	14,755	13,345	11,105	ʳ10,676	12,425	_____
Residential (including farm)_____do____	80,956	93,087	6,264	7,252	8,271	8,927	9,159	9,305	9,077	8,825	8,430	7,271	6,003	ʳ5,731	6,748	_____
New housing units_____do____	65,749	75,491	5,174	5,669	6,366	7,041	7,382	7,543	7,436	7,332	7,041	5,973	4,884	ʳ4,697	5,467	_____
Nonresidential buildings, except farm and public utilities, total ♀_____mil. $__	28,695	35,697	2,463	2,672	2,825	3,171	3,207	3,359	3,437	3,559	3,479	3,354	2,811	ʳ2,793	3,307	_____
Industrial_____do____	7,712	10,760	720	750	735	966	950	1,057	1,114	1,110	1,078	1,163	933	ʳ958	1,155	_____
Commercial_____do____	14,783	18,279	1,242	1,365	1,524	1,627	1,661	1,697	1,720	1,844	1,788	1,634	1,397	1,361	1,609	_____
Public utilities: Telephone and telegraph_____do____	4,345	5,323	424	417	438	516	443	469	485	544	499	499	372	351	_____	_____
Public, total ♀_____do____	37,827	44,761	2,603	3,159	3,823	4,240	4,439	4,844	4,797	4,644	4,216	3,502	2,858	ʳ2,587	2,950	_____
Buildings (excluding military) ♀_____do____	12,751	15,236	1,055	1,173	1,353	1,386	1,468	1,482	1,465	1,406	1,349	1,205	ʳ1,173	ʳ1,024	1,136	_____
Housing and redevelopment_____do____	959	1,083	70	66	92	91	94	95	116	103	125	108	84	ʳ91	92	_____
Industrial_____do____	1,146	1,259	96	107	106	119	114	118	103	102	102	104	103	99	101	_____
Military facilities_____do____	1,517	1,460	119	120	120	113	124	128	146	115	122	123	130	114	147	_____
Highways and streets_____do____	9,372	10,350	376	548	897	1,067	1,148	1,413	1,271	1,310	1,020	711	386	ʳ326	432	_____
New construction (seasonally adjusted at annual rates), total_____bil. $__	_____	_____	185.4	195.0	201.3	206.3	209.9	208.4	209.8	212.0	215.8	218.5	208.6	ʳ205.6	211.6	_____
Private, total ♀_____do____	_____	_____	147.7	153.5	156.2	161.1	161.5	160.3	161.9	164.1	167.9	171.0	162.3	ʳ163.8	168.6	_____
Residential (including farm)_____do____	_____	_____	88.1	92.2	94.3	95.4	95.7	94.8	94.7	95.2	97.6	98.8	92.2	94.1	94.6	_____
New housing units_____do____	_____	_____	72.5	74.4	75.1	76.6	77.7	77.1	76.8	76.8	78.9	80.5	74.6	ʳ76.9	76.4	_____
Nonresidential buildings, except farm and public utilities, total ♀_____bil. $__	_____	_____	31.8	33.2	34.2	37.3	37.7	37.6	38.2	38.7	39.7	40.2	38.4	ʳ38.2	42.6	_____
Industrial_____do____	_____	_____	9.2	9.2	8.7	11.3	11.2	12.0	12.6	12.6	12.5	13.3	12.5	13.0	14.7	_____
Commercial_____do____	_____	_____	16.2	17.2	18.5	19.2	19.5	18.8	18.9	19.4	20.3	20.1	19.3	18.8	21.0	_____
Public utilities: Telephone and telegraph_____do____	_____	_____	4.9	5.3	5.0	5.6	5.5	5.1	5.6	5.9	5.5	6.1	6.0	5.3	_____	_____
Public, total ♀_____do____	_____	_____	37.7	41.5	45.1	45.2	48.4	48.2	48.0	47.9	47.9	47.6	46.3	ʳ41.8	43.0	_____
Buildings (excluding military) ♀_____do____	_____	_____	13.8	14.8	16.4	16.0	16.8	16.4	16.0	15.8	15.5	15.0	15.7	ʳ14.2	15.2	_____
Housing and redevelopment_____do____	_____	_____	.9	.9	1.2	1.0	1.0	1.1	1.2	1.1	1.4	1.3	1.2	1.3	1.3	_____
Industrial_____do____	_____	_____	1.0	1.2	1.2	1.3	1.6	1.6	1.3	1.2	1.3	1.2	1.2	1.2	1.1	_____
Military facilities_____do____	_____	_____	1.4	1.5	1.4	1.4	1.5	1.5	1.6	1.4	1.4	1.4	1.6	1 4	1.7	_____
Highways and streets_____do____	_____	_____	8.1	8.5	10.6	10.3	9.8	11.4	10.9	11.4	11.0	11.9	10.0	ʳ9.0	9.3	_____

CONSTRUCTION CONTRACTS

Construction contracts in 50 States (F. W. Dodge Division, McGraw-Hill): Valuation, total_____mil. $__	139,723	158,438	12,345	13,189	17,785	14,169	14,711	15,597	13,816	14,863	11,557	10,185	10,716	14,166	13,947	_____
Index (mo. data seas. adj.)⊕_____1972=100__	¹154	¹174	153	169	202	153	173	177	182	193	173	184	181	231	186	_____
Public ownership_____mil. $__	36,917	38,827	3,131	3,594	4,097	3,551	3,569	3,857	3,499	3,099	2,867	2,978	2,984	6,595	3,878	_____
Private ownership_____do____	102,805	119,610	9,214	9,595	13,688	10,618	11,141	11,740	10,317	11,764	8,690	7,207	7,732	7,571	10,069	_____
By type of building: Nonresidential_____do____	35,086	44,373	3,429	3,470	4,538	3,768	4,534	3,945	4,572	4,141	3,532	3,096	3,952	3,412	4,227	_____
Residential_____do____	62,017	74,531	6,139	6,854	7,652	7,722	6,710	6,910	6,317	6,821	5,921	4,781	4,468	4,632	6,870	_____
Non-building construction_____do____	42,620	39,534	2,776	2,864	5,596	2,679	3,466	4,742	2,926	3,901	2,104	2,308	2,296	6,122	2,850	_____
New construction planning (Engineering News-Record) ⊙_____do____	91,702	112,069	10,470	7,014	6,556	8,771	9,071	9,756	5,882	9,837	13,209	14,269	9,936	11,752	13,750	11,070

HOUSING STARTS AND PERMITS

New housing units started: Unadjusted: Total (private and public)_____thous__	1,989.8	2,021.5	172.3	197.5	211.1	216.1	192.3	190.9	181.1	192.1	158.6	121.4	88.4	ʳ84.7	153.3	161.4
Inside SMSA's_____do____	1,377.9	²833.2	121.6	141.8	146.2	149.7	131.2	(²)	_____	_____	_____	_____	_____	_____	_____	_____
Privately owned_____do____	1,987.1	2,020.3	172.1	197.5	211.0	216.0	192.2	190.9	180.5	192.1	158.6	119.5	88.2	ʳ84.5	ʳ152.9	161.1
One-family structures_____do____	1,450.9	1,433.3	121.4	139.9	154.9	154.3	139.3	140.0	124.6	131.1	110.4	81.4	57.5	ʳ59.3	ʳ109.8	121.1
Seasonally adjusted at annual rates: Total privately owned △_____do____	_____	_____	2,011	2,176	2,037	2,093	2,104	2,004	2,024	2,054	2,107	2,074	1,679	ʳ1,381	ʳ1,786	1,749
One-family structures △_____do____	_____	_____	1,413	1,482	1,463	1,439	1,455	1,431	1,432	1,436	1,502	1,539	1,139	ʳ953	ʳ1,266	1,279
New private housing units authorized by building permits (14,000 permit-issuing places): Monthly data are seas. adj. at annual rates: Total_____thous__	1,690	ʳ1,687	ʳ1,636	ʳ1,787	ʳ1,645	ʳ1,870	ʳ1,655	ʳ1,606	ʳ1,723	ʳ1,723	ʳ1,670	ʳ1,706	ʳ1,349	ʳ1,334	ʳ1,531	1,437
One-family structures_____do____	1,126	ʳ1,092	ʳ1,044	ʳ1,175	ʳ1,087	ʳ1,157	ʳ1,053	ʳ1,041	ʳ1,093	ʳ1,114	ʳ1,079	ʳ1,169	ʳ850	ʳ819	ʳ981	968
Manufacturers' shipments of mobile homes: Unadjusted ¶_____thous__	277.0	275.6	24.6	23.2	26.6	26.4	20.2	28.0	24.1	25.8	22.2	17.0	19.1	18.6	23.4	_____
Seasonally adjusted at annual rates ¶_____do____	_____	_____	276	260	268	270	255	267	275	286	280	303	311	272	270	_____

CONSTRUCTION COST INDEXES

Dept. of Commerce composite♂_____1972=100__	156.6	176.0	164.8	169.2	171.0	174.1	176.1	179.6	180.5	183.8	185.6	186.8	ʳ187.1	ʳ188.3	189.0	_____
American Appraisal Co., The: Average, 30 cities_____1913=100__	1,998	2,173	2,111	2,124	2,137	2,169	2,180	2,207	2,218	2,244	2,249	2,254	2,264	2,268	2,287	2,291
Atlanta_____do____	2,141	2,322	2,270	2,283	2,294	2,309	2,348	2,366	2,374	2,389	2,388	2,379	2,431	2,430	2,446	2,446
New York_____do____	2,065	2,222	2,174	2,181	2,191	2,211	2,211	2,223	2,229	2,298	2,297	2,324	2,331	2,353	2,359	2,360
San Francisco_____do____	2,063	2,263	2,195	2,220	2,216	2,230	2,295	2,312	2,321	2,338	2,336	2,332	2,337	2,372	2,427	2,428
St. Louis_____do____	1,905	2,071	2,003	2,029	2,066	2,078	2,087	2,102	2,111	2,122	2,121	2,154	2,161	2,157	2,173	2,173
Boeckh indexes: Average, 20 cities: § Apartment, hotels, office buildings__1972=100__	148.6	158.2	155.3	_____	156.7	_____	158.8	_____	160.7	_____	163.8	_____	164.9	_____	165.8	_____
Commercial and factory buildings_____do____	152.8	164.3	160.9	_____	163.0	_____	165.2	_____	167.5	_____	170.9	_____	172.2	_____	173.2	_____
Residences_____do____	148.5	161.8	157.5	_____	158.8	_____	162.0	_____	166.4	_____	170.8	_____	171.6	_____	172.0	_____

ʳ Revised. ᵖ Preliminary. ¹ Computed from cumulative valuation total. ² Data no longer available; 1978 annual total represents Jan.–July. ‡Data for new construction have been revised back to Jan. 1973 and are available from the Bureau of the Census, Washington, D.C. 20233. ⊙Data for Mar., June, Aug., Nov. 1978 and Mar. 1979 are for 5 weeks; other months 4 weeks. ♀ Includes data for items not shown separately. ♂This index has been revised to a new comparison base (1972=100); monthly data back to Jan. 1964 are available upon request. § These indexes are restated on the 1972=100 base; monthly data back to 1972 will be shown later. ⊕This index has been revised to a new comparison base (1972=100); monthly data back to Jan. 1970 are available upon request. △Monthly revisions back to Jan. 1976 will be shown later. ¶Revised unadjusted data for Jan.–Dec. 1976 and seasonally adjusted data for Jan. 1974–Dec. 1976 will be shown later.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.

CONSTRUCTION AND REAL ESTATE—Continued

CONSTRUCTION COST INDEXES—Con.

Engineering News-Record:																
Building_____1967=100__	228.6	247.7	239.5	240.0	244.6	246.2	251.0	252.3	254.5	254.8	256.3	256.7	257.5	257.6	259.0	[1] 259.3
Construction_____do____	240.0	258.4	250.7	251.2	254.4	256.3	262.6	263.3	265.4	265.4	266.4	267.0	267.4	267.9	268.7	[1] 268.8
Federal Highway Adm.—Highway construction:																
Composite (avg. for year or qtr.)_____1967=100__	216.4	264.9	219.5			258.1			296.1			302.7			277.2	

CONSTRUCTION MATERIALS

Output index:																
Composite, unadjusted ♀♂_____1947–49=100__	180.4		186.6													
Seasonally adjusted ♂_____do____			193.9													
Iron and steel products, unadjusted_____do____	147.3	158.6	161.9	158.9	176.4	180.9	153.2	173.8	159.4	173.2	158.8	152.6				
Lumber and wood products, unadjusted_do____	199.8		212.7	194.2	209.6	205.0	177.6	207.2	198.7	204.8	193.4					
Portland cement, unadjusted_____do____	208.7	225.2	188.1	226.5	268.6	297.8	261.6	301.2	266.4	289.9	226.4	173.2				

REAL ESTATE ¶

Mortgage applications for new home construction:																
FHA net applications_____thous. units__	113.3	118.8	10.4	11.0	12.0	9.7	10.9	11.1	8.6	11.6	11.1	8.0	9.4	8.3	12.7	12.2
Seasonally adjusted annual rates_____do____			112	133	113	104	132	122	101	133	148	120	145	113	143	140
Requests for VA appraisals_____do____	211.8	192.7	18.1	18.9	16.3	16.7	15.4	17.7	14.9	17.0	15.5	13.2	15.7	14.6	21.4	18.8
Seasonally adjusted annual rates_____do____			r 193	r 210	171	r 177	r 188	r 187	188	r 190	r 207	r 222	217	194	238	199
Home mortgages insured or guaranteed by—																
Fed. Hous. Adm.: Face amount_____mil. $__	8,840.84	11,139.97	963.10	714.60	868.92	805.68	886.60	1,049.48	867.76	1,916.27	905.02	565.36	1,420.67	1,422.09	1,467.69	1,045.24
Vet. Adm.: Face amount§_____do____	13,753.02	14,470.40	1,344.91	988.96	1,180.30	1,108.57	1,178.68	1,319.00	1,536.24	1,178.75	1,115.62	1,176.51	1,418.91	1,367.36	1,415.68	1,074.90
Federal Home Loan Banks, outstanding advances to member institutions, end of period_____mil. $__	20,173	32,670	21,278	22,957	23,664	25,274	26,605	27,869	29,158	30,104	30,975	32,670	32,489	31,738	31,881	33,149
New mortgage loans of all savings and loan associations, estimated total_____mil. $__	107,368	110,294	9,418	9,026	10,436	11,472	9,031	10,398	9,305	9,674	9,165	8,426	6,679	r 5,691	7,621	
By purpose of loan:																
Home construction_____do____	20,717	22,495	2,113	2,011	2,259	2,266	1,811	1,981	1,807	2,017	1,794	1,692	1,420	r 1,272	1,670	
Home purchase_____do____	66,060	68,380	5,501	5,260	6,423	7,358	5,756	6,830	6,049	6,077	5,775	5,117	3,961	r 3,322	4,566	
All other purposes_____do____	20,591	19,419	1,804	1,755	1,754	1,848	1,464	1,587	1,449	1,580	1,596	1,617	1,298	r 1,097	1,385	
Foreclosures_____number__																
Fire losses (on bldgs., contents, etc.)_____mil. $__	3,764	2 3,689	385	370	311	355	351	320	295	302	311	(2)				

DOMESTIC TRADE

ADVERTISING

McCann-Erickson national advertising index, seasonally adjusted:																
Combined index_____1967=100__	211	241	223	236	237	243	242	252	247	250	254	256	254	259	252	
Network TV_____do____	237	269	244	259	267	269	267	282	289	284	277	293	279	295	280	
Spot TV_____do____	229	263	253	260	262	274	264	254	252	284	283	273	262	268	284	
Magazines_____do____	174	209	198	200	200	211	218	226	221	206	220	223	226	224	216	
Newspapers_____do____	198	214	190	222	209	210	209	236	205	218	228	219	241	240	217	
Magazine advertising (general and natl. farm magazines):																
Cost, total_____mil. $__	1,976.8	2,374.2	193.5	212.7	231.0	189.7	162.9	146.9	215.9	259.5	263.5	207.8	153.6	188.2	213.5	
Apparel and accessories_____do____	68.6	86.1	7.6	9.2	8.7	5.1	3.5	6.0	11.8	10.8	9.5	6.4	5.4	9.0	16.9	
Automotive, incl. accessories_____do____	177.1	227.7	19.5	20.9	22.8	19.5	17.8	13.8	12.4	29.2	26.1	16.1	12.9	30.1	51.6	
Building materials_____do____	37.1	46.3	4.1	6.0	6.1	3.9	2.1	2.4	5.1	5.6	4.4	2.7	1.9	4.2	7.5	
Drugs and toiletries_____do____	201.0	219.4	17.7	19.8	22.0	19.7	13.7	13.9	19.8	23.1	21.6	19.8	13.6	32.7	55.0	
Foods, soft drinks, confectionery_____do____	150.3	186.9	18.0	15.7	14.3	14.9	14.3	13.4	16.3	18.5	24.6	16.4	9.9	27.7	43.9	
Beer, wine, liquors_____do____	133.3	193.3	13.0	12.9	16.5	17.5	18.6	11.3	13.8	20.0	22.8	29.3	10.7	22.8	39.0	
Household equip., supplies, furnishings__do____	110.0	152.2	13.2	14.7	18.1	11.3	9.5	9.8	13.9	15.7	18.1	9.0	8.1	12.9	22.3	
Industrial materials_____do____	55.0	58.4	4.8	4.8	6.9	4.5	3.3	3.9	5.5	6.3	5.8	4.8	4.0	9.0	14.8	
Soaps, cleansers, etc._____do____	33.7	37.4	4.3	3.7	3.2	2.5	2.5	2.8	3.3	2.9	4.0	3.0	2.7	5.5	9.6	
Smoking materials_____do____	194.3	204.7	16.0	17.2	18.4	18.1	18.0	16.3	16.0	19.0	18.2	16.7	15.7	35.5	55.1	
All other_____do____	813.0	965.2	75.2	87.9	94.0	72.7	59.5	53.3	99.9	108.4	108.5	83.4	69.7			
Newspaper advertising expenditures (64 cities): ⊕																
Total_____mil. $__	5,696.1	6,643.7	555.6	621.0	600.8	578.2	523.2	488.7	497.9	578.1	663.6	590.0	532.0	549.4	639.6	
Automotive_____do____	144.5	151.0	15.5	14.4	13.7	12.9	10.9	10.8	11.4	12.8	14.5	9.1	15.4	15.4	18.2	
Classified_____do____	1,522.5	1,884.5	152.8	177.5	165.5	165.8	172.9	162.7	158.0	174.0	155.0	128.6	166.0	165.1	193.2	
Financial_____do____	147.4	201.7	16.2	19.8	19.2	23.3	17.1	8.6	11.8	16.2	19.9	19.9	21.3	14.6	20.7	
General_____do____	752.3	826.6	69.6	84.4	80.7	73.9	50.9	47.4	59.8	72.9	91.2	63.7	72.9	76.0	83.4	
Retail_____do____	3,129.5	3,579.9	301.4	324.8	321.6	302.3	271.3	259.2	257.0	302.2	382.9	368.7	256.5	278.4	324.2	

WHOLESALE TRADE ⊙ ‡

Merchant wholesalers sales (unadj.), total ⊙ mil. $__	642,104	754,105	62,900	60,613	66,249	65,834	60,651	67,702	63,931	69,086	67,700	64,527	63,739	r 61,721	74,225	
Durable goods establishments_____do____	285,605	349,916	28,985	28,784	30,405	30,991	28,701	32,279	30,404	32,242	31,038	29,340	28,284	r 28,141	34,886	
Nondurable goods establishments_____do____	356,498	404,189	33,915	31,829	35,844	34,843	31,950	35,423	33,527	36,844	36,662	35,187	35,455	r 33,580	39,339	
Merchant wholesalers inventories, book value, end of year or month (unadj.), total ⊙ mil. $__	68,555	80,922	73,931	74,635	74,634	74,882	74,874	74,943	76,074	78,715	80,100	80,922	81,896	r 83,917	85,975	
Durable goods establishments_____do____	43,676	51,646	47,275	47,957	48,918	49,627	49,900	49,841	49,944	50,462	50,971	51,646	51,860	r 53,807	54,684	
Nondurable goods establishments_____do____	24,879	29,276	26,656	26,678	25,716	25,255	24,974	25,102	26,130	28,253	29,129	29,276	30,036	r 30,110	31,291	

r Revised.   p Preliminary.   [1] Index as of May 1, 1979: Building, 259.9; construction, 269.2.   2 Effective Dec. 1978, data are no longer available; annual total represents Jan.–Nov. 1978.   ♀ Includes data for items not shown separately.   § Data include guaranteed direct loans sold.

¶ Home mortgage rates (conventional 1st mortgages) are under money and interest rates on p. S–18.

⊕Source: Media Records, Inc. 64-City Newspaper Advertising Trend Chart.   ♂Monthly revisions back to Jan. 1974 will be shown later.

⊙Beginning Nov. 1977 SURVEY, data revised to reflect new sample design, benchmarking to the 1967 and 1972 Censuses, conversion of the classifications to the 1972 SIC, addition of farm assemblers and bulk petroleum establishments, and revision and updating of seasonal factors. Revisions back to Jan. 1967, as well as a summary of the changes, appear in the report, Monthly Wholesale Trade: January 1967–August 1977 (Revised) available from the Census Bureau, Washington, D.C. 20233. The revisions back to 1967 also appear on p. 34ff of the May 1978 SURVEY.   ‡Effective March 1979 SURVEY, seasonally adjusted data for wholesale trade have been revised back to Jan. 1978.

DOMESTIC TRADE—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.
RETAIL TRADE																
All retail stores: ¶																
Estimated sales (unadj.), total¶......mil. $..	724,020	798,818	64,764	63,838	67,952	69,056	66,557	69,102	66,219	68,615	71,297	84,597	61,878	ʳ60,653	ʳ71,998	¹71,495
Durable goods stores ♀......................do....	247,832	277,916	22,777	23,165	25,085	25,685	23,932	24,898	22,563	24,596	24,463	25,872	21,100	ʳ21,131	ʳ25,972	¹26,409
Building materials, hardware, garden supply, and mobile home dealers ♀_mil. $.	38,641	44,125	3,170	3,665	4,115	4,260	4,074	4,308	4,034	4,219	3,918	3,560	2,873	ʳ 2,708	ʳ 3,730	¹ 4,248
Building materials and supply stores..do....	26,509	29,991	2,114	2,382	2,653	2,897	2,841	3,079	2,861	2,985	2,699	2,263	1,925	ʳ 1,790	2,439	_____
Hardware stores....................do....	6,516	6,881	504	571	625	631	585	582	600	624	632	749	496	452	624	_____
Automotive dealers ♀..................do....	148,444	163,668	14,560	14,382	15,415	15,718	14,294	14,642	12,733	14,401	13,610	12,452	12,805	ʳ13,100	ʳ16,123	¹15,996
Motor vehicle dealers..............do....	135,777	149,664	13,462	13,234	14,250	14,464	13,090	13,835	11,512	13,118	12,322	11,169	11,703	ʳ12,084	14,877	_____
Auto and home supply stores.........do....	12,667	13,993	1,098	1,148	1,165	1,254	1,204	1,257	1,221	1,283	1,288	1,283	1,102	ʳ 1,016	1,246	_____
Furniture, home furn., and equip......do....	34,761	37,430	2,902	2,901	3,074	3,107	3,021	3,224	3,138	3,231	3,566	4,216	2,959	ʳ 2,882	ʳ 3,317	¹ 3,274
Furniture, home furnishing stores.....do....	2,295	22,719	1,758	1,825	1,935	1,943	1,853	1,999	1,897	1,973	2,197	2,290	1,833	ʳ 1,796	2,122	_____
Household appliance, radio, TV.......do....	10,801	10,991	852	804	868	892	883	930	930	943	1,034	1,359	851	ʳ 842	923	_____
Nondurable goods stores................do....	476,188	520,902	41,987	40,673	42,867	43,371	42,625	44,204	43,656	44,019	46,834	58,725	40,778	ʳ39,522	ʳ46,026	¹45,086
General merch. group stores...........do....	90,133	99,505	7,366	7,472	8,017	8,106	7,497	8,165	8,024	8,262	9,883	15,784	5,946	ʳ 5,925	ʳ 7,932	¹ 8,128
Department stores...................do....	72,333	79,732	5,894	6,010	6,431	6,522	5,965	6,520	6,468	6,610	7,908	12,635	4,747	ʳ 4,700	ʳ 6,303	¹ 6,473
Variety stores.....................do....	7,602	7,809	611	582	629	627	605	649	605	631	712	1,273	476	ʳ 483	617	_____
Food stores......................do....	158,519	174,458	14,529	13,865	14,528	14,936	15,006	14,858	14,942	14,417	14,834	16,690	14,944	ʳ14,215	ʳ16,212	¹15,084
Grocery stores...................do....	147,142	161,527	13,482	12,862	13,455	13,848	13,941	13,781	13,892	13,295	13,695	15,243	13,769	ʳ13,024	ʳ14,923	¹13,789
Gasoline service stations...........do....	58,231	60,884	4,906	4,889	5,156	5,256	5,283	5,387	5,191	5,264	5,197	5,318	5,059	ʳ 4,898	ʳ 5,435	¹ 5,499
Apparel and accessory stores...........do....	34,341	37,828	2,940	2,816	2,906	2,892	2,754	3,194	3,236	3,273	3,675	5,698	2,689	ʳ 2,416	ʳ 3,143	¹ 3,366
Men's and boys' clothing.............do....	7,052	7,353	532	536	542	563	508	554	552	609	763	1,293	561	ʳ 462	553	_____
Women's clothing, spec. stores,furriers.do....	13,106	14,660	1,143	1,088	1,122	1,104	1,095	1,249	1,310	1,320	1,396	2,144	996	ʳ 948	1,242	_____
Shoe stores.......................do....	5,852	6,593	570	528	529	518	467	571	594	578	617	823	478	ʳ 402	575	_____
Eating and drinking places..........do....	63,556	70,083	5,579	5,719	6,024	6,220	6,395	6,527	6,134	6,006	5,775	6,141	5,389	ʳ 5,339	ʳ 6,311	¹ 6,361
Drug and proprietary stores...........do....	22,918	25,337	2,070	1,940	2,060	2,069	2,016	2,109	2,041	2,106	2,164	3,040	2,139	ʳ 2,058	ʳ 2,214	¹ 2,204
Liquor stores.....................do....	12,832	13,616	1,038	1,010	1,086	1,138	1,181	1,161	1,147	1,123	1,196	1,675	1,061	ʳ 1,034	1,160	_____
Mail-order houses (dept. store mdse.)§..do....	6,705	7,073	594	538	534	497	499	588	552	776	902	722	439	ʳ 374	459	_____
Estimated sales (seas. adj.), total¶.........do....	_____	_____	64,075	65,146	65,522	65,964	66,224	67,303	68,085	68,971	70,158	70,918	70,855	ʳ71,122	ʳ71,852	¹ 72,197
Durable goods stores ♀.................do....	_____	_____	21,813	22,617	22,730	22,947	23,049	23,617	23,872	24,422	24,954	25,163	25,250	ʳ25,035	ʳ25,356	¹ 25,253
Building materials, hardware, garden supply, and mobile home dealers ♀......mil. $..	_____	_____	3,397	3,609	3,590	3,651	3,707	3,809	3,798	3,911	3,971	4,009	3,956	ʳ 3,676	ʳ 4,043	¹ 4,069
Building materials and supply stores.do..	_____	_____	2,251	2,451	2,429	2,502	2,546	2,625	2,613	2,675	2,667	2,727	2,577	ʳ 2,380	2,611	_____
Hardware stores...................do....	_____	_____	545	547	552	552	558	580	599	609	621	631	667	ʳ 608	678	_____
Automotive dealers...................do....	_____	_____	13,132	13,537	13,520	13,638	13,490	13,895	14,033	14,352	14,431	14,558	15,011	ʳ14,932	ʳ14,893	¹14,648
Motor vehicle dealers..............do....	_____	_____	12,030	12,426	12,413	12,501	12,337	12,699	12,791	13,105	13,179	13,296	13,736	ʳ13,654	ʳ13,649	_____
Auto and home supply stores........do....	_____	_____	1,102	1,111	1,107	1,137	1,153	1,196	1,242	1,247	1,252	1,262	1,275	ʳ 1,278	1,244	_____
Furniture, home furn., and equip. ♀...do....	_____	_____	2,924	3,061	3,116	3,071	3,091	3,170	3,228	3,248	3,307	3,307	3,337	ʳ 3,333	ʳ 3,358	¹ 3,414
Furniture, home furnishings stores...do....	_____	_____	1,734	1,885	1,918	1,872	1,883	1,922	1,978	1,967	2,003	2,014	2,067	ʳ 2,062	2,124	_____
Household appliance, radio, TV......do....	_____	_____	883	877	902	895	893	935	938	962	975	956	966	ʳ 996	947	_____
Nondurable goods stores................do....	_____	_____	42,262	42,529	42,792	43,017	43,175	43,686	44,213	44,549	45,204	45,755	45,605	ʳ46,087	ʳ46,496	¹ 46,944
General merch. group stores...........do....	_____	_____	7,952	8,048	8,236	8,294	8,287	8,361	8,379	8,394	8,549	8,716	8,402	ʳ 8,378	ʳ 8,680	¹ 8,599
Department stores...................do....	_____	_____	6,420	6,462	6,609	6,662	6,650	6,701	6,696	6,684	6,806	6,897	6,791	ʳ 6,734	ʳ 6,942	¹ 6,864
Variety stores.....................do....	_____	_____	622	654	659	656	660	660	660	658	663	663	685	ʳ 660	663	_____
Food stores......................do....	_____	_____	14,177	14,298	14,375	14,420	14,609	14,629	14,775	14,947	15,125	15,284	15,659	ʳ15,639	ʳ15,609	¹ 15,832
Grocery stores...................do....	_____	_____	13,153	13,273	13,335	13,393	13,574	13,577	13,687	13,835	13,960	13,984	14,358	ʳ14,357	ʳ14,335	¹ 14,530
Gasoline service stations...........do....	_____	_____	4,996	4,994	5,020	5,030	4,887	5,082	5,191	5,222	5,276	5,292	5,353	ʳ 5,566	ʳ 5,512	¹ 5,606
Apparel and accessory stores...........do....	_____	_____	2,983	3,046	3,062	3,074	3,126	3,221	3,261	3,271	3,388	3,376	3,273	ʳ 3,214	ʳ 3,428	¹ 3,390
Men's and boys' clothing.............do....	_____	_____	581	585	577	573	588	614	629	636	685	675	635	ʳ 626	633	_____
Women's clothing,spec. stores,furriers.do....	_____	_____	1,169	1,201	1,176	1,182	1,237	1,272	1,274	1,262	1,287	1,313	1,228	ʳ 1,234	1,323	_____
Shoe stores.......................do....	_____	_____	528	548	552	552	532	543	547	568	590	586	580	ʳ 533	620	_____
Eating and drinking places...........do....	_____	_____	5,787	5,794	5,672	5,770	5,867	5,923	5,996	6,018	6,003	6,184	6,041	ʳ 6,274	ʳ 6,499	¹ 6,504
Drug and proprietary stores...........do....	_____	_____	2,050	2,042	2,058	2,075	2,102	2,135	2,158	2,180	2,240	2,232	2,278	ʳ 2,257	ʳ 2,225	¹ 2,270
Liquor stores.....................do....	_____	_____	1,110	1,098	1,105	1,109	1,122	1,151	1,167	1,158	1,181	1,194	1,225	ʳ 1,235	1,212	_____
Mail-order houses (dept. store mdse.)§..do....	_____	_____	571	584	586	597	598	584	593	595	598	604	604	ʳ 482	443	_____
Estimated inventories, end of year or month: ¶																
Book value (unadjusted), total¶........mil. $..	88,148	98,527	93,523	95,434	95,508	95,694	95,571	95,548	97,799	102,344	105,330	98,527	ʳ98,759	99,435	_____
Durable goods stores ♀.................do....	43,170	47,888	45,926	46,575	46,752	46,308	45,652	43,855	44,411	46,357	47,798	47,888	49,125	49,798	_____
Building materials and supply stores..do....	7,187	7,792	7,366	7,929	8,062	8,100	8,016	7,911	7,922	7,891	7,910	7,792	ʳ 8,115	8,225	_____
Automotive dealers.................do....	21,875	25,011	23,403	23,478	23,564	23,201	22,564	20,542	20,778	22,201	23,396	25,011	ʳ25,736	26,141	_____
Furniture, home furn., and equip....do....	6,808	7,133	6,918	7,110	7,127	7,105	7,121	7,241	7,313	7,538	7,441	7,133	ʳ 7,141	7,190	_____
Nondurable goods stores ♀.............do....	44,978	50,639	47,597	48,459	48,816	49,386	49,919	51,693	53,388	55,987	57,532	50,639	ʳ49,634	49,637	_____
General merch. group stores...........do....	15,895	17,926	17,610	18,298	18,465	18,560	18,770	19,631	20,574	21,894	22,452	17,926	ʳ17,660	17,891	_____
Department stores................do....	11,932	13,638	13,307	13,899	14,063	14,137	14,086	14,686	15,459	16,602	17,113	13,638	ʳ13,376	13,456	_____
Food stores.....................do....	9,558	10,734	9,714	9,687	9,864	10,083	10,082	10,186	10,312	10,312	11,008	10,734	ʳ10,655	10,588	_____
Apparel and accessory stores........do....	7,149	7,957	7,392	7,584	7,622	7,661	7,922	8,324	8,767	9,127	9,271	7,957	ʳ 7,536	7,771	_____
Book value (seas. adj.), total¶........do....	90,120	100,818	92,712	94,290	94,933	95,607	96,521	97,824	98,350	99,279	100,483	100,818	ʳ101,739	101,000	_____
Durable goods stores ♀.................do....	43,414	48,161	44,624	45,619	45,525	45,502	45,704	46,116	46,444	47,006	47,555	48,161	49,302	49,411	_____
Building materials and supply stores..do....	7,494	8,125	7,691	8,372	7,804	7,988	8,024	7,991	7,986	7,987	8,047	8,125	ʳ 8,332	8,217	_____
Automotive dealers.................do....	21,594	24,690	22,099	22,275	22,485	22,438	22,474	22,673	22,985	23,493	23,849	24,690	ʳ25,281	25,330	_____
Furniture, home furn., and equip....do....	6,808	7,140	7,009	7,124	7,156	7,134	7,215	7,299	7,248	7,262	7,176	7,140	ʳ 7,287	7,367	_____
Nondurable goods stores ♀.............do....	46,706	52,657	48,088	48,671	49,408	50,105	50,817	51,708	51,906	52,273	52,928	52,657	ʳ52,437	51,589	_____
General merch. group stores...........do....	17,376	19,622	18,006	18,319	18,522	18,768	19,053	19,401	19,607	19,661	19,877	19,622	ʳ19,629	19,229	_____
Department stores................do....	13,026	14,905	13,579	13,844	14,035	14,323	14,447	14,642	14,836	14,850	14,933	14,905	ʳ14,895	14,531	_____
Food stores.....................do....	9,426	10,596	9,743	9,716	9,884	10,093	10,215	10,373	10,406	10,503	10,595	10,596	ʳ10,795	10,738	_____
Apparel and accessory stores........do....	7,478	8,332	7,535	7,707	7,834	7,922	8,067	8,217	8,240	8,305	8,413	8,332	ʳ 8,147	8,154	_____

ʳ Revised.   ¹ Advance estimate.   ¶Effective Mar. 1979 SURVEY, estimates have been revised to reflect a new sample design, benchmarking to the 1967 and 1972 Censuses, redefinition of sales to exclude sales taxes and finance charges, classifications based on the 1972 Standard Industrial Classification (SIC), and revision and updating of seasonal adjustment factors.

Revisions for retail sales (Jan. 1967–Dec. 1977) and for retail inventories (Jan. 1973–Dec. 1977), as well as a summary of the changes, are available from the Census Bureau, Washington, D.C. 20233.   ♀Includes data not shown separately.   §Includes sale of mail-order catalog desks within department stores of mail-order firms.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.

DOMESTIC TRADE—Continued

RETAIL TRADE‡—Continued

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Firms with 11 or more stores: Estimated sales (unadjusted), total‡......mil. $..	(¹)	270,279	21,496	20,944	22,073	22,380	21,611	22,570	22,548	22,848	25,261	33,515	ʳ19,863	19,154		
Durable goods stores......do....	(¹)	20,546	1,508	1,607	1,743	1,788	1,724	1,782	1,733	1,793	1,950	2,562	ʳ1,350	1,302		
Auto and home supply stores......do....	(¹)	3,146	262	294	266	287	267	275	272	284	287	286	ʳ228	210		
Nondurable goods stores ♀......do....	(¹)	249,733	19,988	19,337	20,330	20,592	19,887	20,788	20,815	21,055	23,311	30,953	ʳ17,852	18,513		
General merchandise group stores......do....	(¹)	88,176	6,511	6,607	7,096	7,184	6,604	7,224	7,111	7,307	8,798	14,095	ʳ5,219	5,246		
Department stores......do....	(¹)	75,308	5,565	5,686	6,082	6,176	5,649	6,176	6,111	6,232	7,455	11,884	ʳ4,438	4,492		
Variety stores......do....	(¹)	6,332	493	459	496	500	481	521	497	513	596	1,088	ʳ388	404		
Miscellaneous general stores......do....	(¹)	6,536	453	462	518	508	474	527	503	562	747	1,123	ʳ366	377		
Food stores......do....	(¹)	92,737	7,876	7,406	7,649	7,878	7,873	7,683	7,985	7,574	7,929	8,985	ʳ8,026	7,590		
Grocery stores......do....	(¹)	91,700	7,776	7,325	7,567	7,798	7,790	7,602	7,907	7,494	7,846	8,864	ʳ7,945	7,494		
Apparel and accessory stores ♀......do....	(¹)	13,091	1,032	968	1,017	1,007	931	1,162	1,166	1,149	1,284	2,004	ʳ804	742		
Women's clothing, specialty stores, furriers......mil. $..	(¹)	5,520	432	404	432	422	406	489	494	493	539	846	ʳ325	316		
Family clothing stores......do....	(¹)	3,029	226	224	241	233	222	273	254	249	294	492	179	166		
Shoe stores......do....	(¹)	3,129	279	243	247	242	212	280	296	278	298	408	211	184		
Eating places......do....	(¹)	13,758	1,122	1,130	1,203	1,198	1,236	1,238	1,171	1,212	1,184	1,211	ʳ1,054	1,033		
Drug stores and proprietary stores......do....	(¹)	11,971	974	894	950	970	936	978	940	974	1,038	1,630	ʳ1,007	964		
Estimated sales (seas. adj.), total‡ ♀......do....	(¹)		21,626	22,006	22,275	22,386	22,629	22,698	22,833	22,975	23,566	24,028	ʳ23,474	23,288		
Auto and home supply stores......do....	(¹)		252	263	252	248	255	261	281	276	276	278	ʳ276	277		
Department stores......do....	(¹)		6,049	6,107	6,277	6,302	6,291	6,315	6,320	6,327	6,443	6,526	ʳ6,309	6,358		
Variety stores......do....	(¹)		499	517	521	527	534	535	540	537	548	541	ʳ576	559		
Grocery stores......do....	(¹)		7,463	7,630	7,613	7,638	7,759	7,671	7,699	7,686	7,846	8,058	ʳ8,233	8,172		
Apparel and accessory stores......do....	(¹)		1,025	1,049	1,066	1,062	1,103	1,140	1,129	1,135	1,164	1,151	ʳ1,097	1,085		
Women's clothing, spec. stores, furriers..do....	(¹)		442	449	452	450	466	470	470	475	486	487	ʳ453	464		
Shoe stores......do....	(¹)		248	255	261	259	266	268	270	278	279	268	272	260		
Drug stores and proprietary stores......do....	(¹)		961	968	964	974	990	991	1,002	1,018	1,105	1,055	ʳ1,118	1,100		
All retail stores, accts. receivable, end of yr. or mo.: Total (unadjusted)......mil. $..	34,149	37,316	31,650	31,599	31,915	32,212	32,147	32,534	32,879	33,680	34,621	37,316	ʳ35,941	35,181		
Durable goods stores......do....	10,089	10,903	9,531	9,817	9,963	10,203	10,375	10,490	10,501	10,884	10,818	10,903	ʳ10,538	10,357		
Nondurable goods stores......do....	24,060	26,413	22,119	21,782	21,952	22,009	21,772	22,044	22,378	22,796	23,803	26,413	ʳ25,403	24,824		
Charge accounts......do....	10,659	11,599	10,011	10,029	10,171	10,399	10,319	10,513	10,589	10,973	11,138	11,599	ʳ11,017	10,931		
Installment accounts......do....	23,490	25,717	21,639	21,570	21,744	21,813	21,828	22,021	22,290	22,707	23,483	25,717	ʳ24,924	24,250		
Total (seasonally adjusted)......do....	32,018	34,843	32,275	32,030	31,950	32,362	32,807	33,101	33,262	33,906	34,423	34,843	ʳ35,294	35,496		
Durable goods stores......do....	10,019	10,823	9,919	10,010	9,880	9,933	10,195	10,312	10,204	10,608	10,761	10,823	ʳ10,893	10,991		
Nondurable goods stores......do....	21,999	24,020	22,356	22,020	22,070	22,429	22,612	22,789	23,058	23,298	23,662	24,020	ʳ24,303	24,603		
Charge accounts......do....	10,490	11,331	10,371	10,077	9,820	10,097	10,381	10,749	10,685	10,891	11,129	11,331	ʳ11,315	11,327		
Installment accounts......do....	21,528	23,512	21,904	21,953	22,130	22,265	22,426	22,352	22,577	23,015	23,294	23,512	ʳ23,979	24,169		

LABOR FORCE, EMPLOYMENT, AND EARNINGS

POPULATION OF THE UNITED STATES

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Total, incl. armed forces overseas†......mil..	²216.82	²218.50	217.94	218.09	218.22	218.36	218.50	218.67	218.86	219.03	219.19	219.34	219.48	219.62	219.74	219.93

LABOR FORCE¶

Not Seasonally Adjusted

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Labor force, total (including armed forces), persons 16 years of age and over......thous..	99,534	102,537	100,565	100,984	101,422	104,276	104,755	104,169	102,961	103,677	103,776	103,740	102,961	103,343	103,755	103,318
Civilian labor force......do....	97,401	100,420	98,443	98,866	99,309	102,178	102,639	102,047	100,838	101,555	101,659	101,632	100,867	101,249	101,665	101,236
Employed, total......do....	90,546	94,373	91,964	93,180	93,851	95,852	96,202	96,116	95,041	96,095	96,029	95,906	94,436	94,765	95,501	95,675
Agriculture......do....	3,244	3,342	2,913	3,151	3,369	3,983	3,997	3,856	3,549	3,553	3,100	2,990	2,762	2,796	2,925	3,074
Nonagricultural industries......do....	87,302	91,031	89,051	90,029	90,483	91,869	92,204	92,261	91,492	92,541	92,929	92,916	91,673	91,969	92,576	92,601
Unemployed......do....	6,855	6,047	6,479	5,685	5,457	6,326	6,438	5,931	5,797	5,460	5,629	5,725	6,431	6,484	6,165	5,561

Seasonally Adjusted¶ ⊙

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Civilian labor force......do....			99,435	99,767	100,109	100,504	100,622	100,663	100,974	101,077	101,628	101,867	102,183	102,527	102,714	102,111
Employed, total......do....			93,282	93,704	93,953	94,640	94,446	94,723	95,010	95,010	95,751	95,855	96,300	96,647	96,842	96,174
Agriculture......do....			3,334	3,274	3,243	3,424	3,377	3,351	3,406	3,374	3,275	3,387	3,232	3,311	3,343	3,186
Nonagricultural industries......do....			89,948	90,430	90,710	91,216	91,069	91,372	91,604	91,867	92,476	92,468	93,068	93,335	93,499	92,987
Unemployed......do....			6,153	6,063	6,156	5,864	6,176	5,940	5,964	5,836	5,877	6,012	5,883	5,881	5,871	5,937
Long-term, 15 weeks and over......do....	1,911	1,379	1,488	1,486	1,404	1,266	1,314	1,234	1,268	1,317	1,196	1,208	1,251	1,260	1,305	1,235
Rates (unemployed in each group as percent of total in the group): All civilian workers..........	7.0	6.0	6.2	6.1	6.1	5.8	6.1	5.9	5.9	5.8	5.8	5.9	5.8	5.7	5.7	5.8
Men, 20 years and over............	5.2	4.2	4.5	4.3	4.2	4.0	4.1	4.1	4.1	4.0	3.9	4.1	4.0	4.0	4.0	4.0
Women, 20 years and over............	7.0	6.0	5.9	6.0	6.2	6.1	6.4	5.9	5.9	5.6	5.8	5.8	5.7	5.7	5.7	5.7
Both sexes, 16-19 years............	17.7	16.3	17.0	16.7	16.5	15.1	16.3	15.7	16.3	16.2	16.2	16.5	15.7	16.1	15.5	16.5
White............	6.2	5.2	5.3	5.2	5.3	5.0	5.2	5.2	5.2	5.1	5.0	5.2	5.1	4.9	5.0	4.9
Black and other............	13.1	11.9	12.5	12.0	12.3	12.0	12.3	11.5	11.3	11.3	11.7	11.5	11.2	11.9	11.2	11.8
Married men, wife present............	3.6	2.8	3.0	2.8	2.9	2.7	2.7	2.8	2.6	2.6	2.4	2.5	2.6	2.6	2.6	2.7
Occupation: White-collar workers..........	4.3	3.5	3.5	3.6	3.7	3.6	3.7	3.5	3.5	3.3	3.2	3.5	3.3	3.4	3.4	3.3
Blue-collar workers............	8.1	6.9	7.2	6.7	6.7	6.6	6.7	6.9	6.8	6.8	6.4	6.8	6.4	6.4	6.6	6.9
Industry of last job (nonagricultural): Private wage and salary workers..........	7.0	5.9	6.1	5.9	6.0	5.7	6.0	5.8	5.8	5.6	5.6	5.8	5.7	5.6	5.5	5.7
Construction............	12.7	10.6	11.0	9.8	9.6	9.5	9.6	9.4	10.6	11.2	10.8	12.1	10.6	11.5	10.2	10.3
Manufacturing..........	6.7	5.5	5.6	5.4	5.7	5.6	5.5	5.6	5.3	5.1	5.1	5.0	5.0	4.8	5.2	5.4
Durable goods...........	6.2	4.9	5.0	4.5	5.1	4.9	5.0	5.4	4.8	4.6	4.6	4.4	4.4	4.1	4.3	4.6

ʳ Revised   ¹ See note "¶" on p. S–12; revised data for periods prior to May 1977 are not available.   ² As of July 1.
‡See note "¶" on p. S–12.   ♀ Includes data for items not shown separately.
†Revisions back to Oct. 1973 appear in "Population Estimates and Projections: Estimates of the Population of the United States and Components of Change—1930–75," P–25, No. 632 (July 1976), Bureau of the Census.

¶ Effective with the Feb. 1977 SURVEY, the labor force series reflect new seasonal factors. Data have been revised back to 1972; comparable monthly figures for 1972–75 appear in EMPLOYMENT AND EARNINGS (Feb. 1977), U.S. Department of Labor, Bureau of Labor Statistics.
⊙ Effective March 1979 SURVEY, the civilian labor force series, seasonally adjusted, reflect revisions back to Jan. 1978; comparable data for earlier periods will be shown later.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.ᵖ	Apr.ᵖ

LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

EMPLOYMENT†⊙

Employees on payrolls of nonagricultural estab.:⊙																
Total, not adjusted for seasonal variation..thous..	82,256	85,760	83,897	85,075	85,796	86,800	85,925	86,134	86,688	87,303	87,800	88,054	86,295	ʳ86,487	ʳ87,323	88,002
Private sector (excl. government)........do....	67,177	70,282	68,171	69,309	69,988	71,109	70,996	71,375	71,556	71,745	72,097	72,367	70,795	ʳ70,769	ʳ71,531	72,216

Seasonally Adjusted†

Total employees, nonagricultural payrolls†⊙do....	82,256	85,760	84,726	85,418	85,618	85,996	86,033	86,149	86,163	86,573	87,036	87,281	87,524	ʳ87,818	ʳ88,240	88,312
Private sector (excl. government).......do....	67,177	70,282	69,291	69,901	70,056	70,399	70,476	70,613	70,718	71,130	71,564	71,810	72,063	ʳ72,350	ʳ72,374	72,776
Nonmanufacturing industries...........do....	47,530	49,951	49,061	49,619	49,759	50,083	50,174	50,335	50,432	50,694	50,963	51,081	51,238	ʳ51,455	ʳ51,780	51,835
Goods-producing.......................do....	24,289	25,381	24,927	25,313	25,341	25,473	25,501	25,463	25,471	25,670	25,872	26,030	26,111	ʳ26,199	ʳ26,413	26,397
Mining..............................do....	809	837	808	867	869	879	882	887	887	893	903	904	905	ʳ919	ʳ921	922
Contract construction................do....	3,833	4,213	3,999	4,164	4,175	4,278	4,317	4,298	4,298	4,341	4,368	4,397	4,381	ʳ4,385	ʳ4,532	4,534
Manufacturing.......................do....	19,647	20,331	20,230	20,282	20,297	20,316	20,302	20,278	20,286	20,436	20,601	20,729	20,825	ʳ20,895	ʳ20,960	20,941
Durable goods.....................do....	11,573	12,159	12,041	12,076	12,093	12,109	12,138	12,146	12,166	12,305	12,410	12,491	12,562	ʳ12,647	ʳ12,697	12,682
Lumber and wood products.......do....	722	751	752	751	745	747	743	743	744	748	759	765	770	773	ʳ766	756
Furniture and fixtures...........do....	463	486	491	491	489	486	485	481	480	484	487	491	494	ʳ493	ʳ490	489
Stone, clay and glass products....do....	668	696	692	699	700	701	698	692	692	696	701	707	706	ʳ709	713	711
Primary metal industries........do....	1,179	1,206	1,189	1,192	1,197	1,197	1,199	1,205	1,214	1,220	1,235	1,240	1,241	ʳ1,251	ʳ1,254	1,255
Fabricated metal products⊕......do....	1,577	1,653	1,639	1,646	1,652	1,645	1,643	1,646	1,650	1,667	1,684	1,697	1,706	ʳ1,715	ʳ1,712	1,715
Machinery, except electrical......do....	2,179	2,337	2,289	2,309	2,311	2,332	2,345	2,351	2,358	2,391	2,404	2,425	2,447	ʳ2,465	ʳ2,481	2,496
Electric and electronic equip.△...do....	1,868	1,966	1,951	1,951	1,952	1,962	1,977	1,975	1,972	1,987	2,001	2,011	2,027	ʳ2,042	ʳ2,062	2,063
Transportation equipment⊕.......do....	1,862	1,956	1,944	1,936	1,942	1,929	1,937	1,941	1,943	1,991	2,010	2,021	2,031	ʳ2,055	ʳ2,070	2,049
Instruments and related prod.......do....	615	654	639	644	649	654	660	661	662	665	671	676	681	ʳ686	690	694
Miscellaneous manufacturing.......do....	439	454	455	457	456	456	451	451	451	456	458	458	459	458	459	454
Nondurable goods..................do....	8,074	8,172	8,189	8,206	8,204	8,207	8,164	8,132	8,120	8,131	8,191	8,238	8,263	ʳ8,248	ʳ8,263	8,259
Food and kindred products........do....	1,703	1,694	1,718	1,715	1,701	1,702	1,688	1,670	1,665	1,667	1,693	1,711	1,716	1,708	ʳ1,716	1,701
Tobacco manufactures.............do....	74	73	76	74	75	76	73	69	70	71	71	72	72	71	73	73
Textile mill products..............do....	914	911	916	911	913	908	909	903	907	907	910	910	912	911	ʳ909	901
Apparel and other textile products..do....	1,312	1,316	1,319	1,330	1,326	1,325	1,307	1,309	1,309	1,307	1,307	1,312	1,318	ʳ1,304	ʳ1,299	1,310
Paper and allied products..........do....	693	702	703	706	709	709	710	698	697	692	700	705	708	ʳ712	ʳ716	716
Printing and publishing............do....	1,338	1,181	1,171	1,174	1,180	1,186	1,187	1,188	1,178	1,185	1,198	1,203	1,209	ʳ1,214	1,219	1,220
Chemicals and allied products.....do....	1,071	1,088	1,081	1,085	1,093	1,091	1,091	1,089	1,088	1,089	1,093	1,097	1,099	ʳ1,098	ʳ1,100	1,108
Petroleum and coal products......do....	202	209	209	210	207	209	207	209	209	210	210	211	211	212	214	215
Rubber and plastics products, nec..do....	712	748	744	748	747	749	749	746	744	752	761	771	773	ʳ777	ʳ778	776
Leather and leather products......do....	253	251	252	253	253	252	243	251	253	251	248	246	245	ʳ241	ʳ239	239
Service-producing....................do....	57,968	60,380	59,799	60,105	60,277	60,523	60,532	60,686	60,692	60,903	61,164	61,251	61,413	ʳ61,619	ʳ61,827	61,915
Trans., comm., electric, gas, etc....do....	4,696	4,858	4,817	4,847	4,847	4,881	4,827	4,846	4,855	4,922	4,947	4,967	4,974	ʳ5,024	ʳ5,024	4,958
Wholesale and retail trade...........do....	18,492	19,392	19,169	19,252	19,335	19,412	19,469	19,523	19,546	19,632	19,701	19,697	19,817	ʳ19,883	ʳ19,949	19,992
Wholesale trade...................do....	4,677	4,897	4,854	4,872	4,885	4,905	4,901	4,905	4,917	4,945	4,968	4,995	5,020	ʳ5,035	5,056	5,078
Retail trade.......................do....	13,795	14,496	14,315	14,380	14,450	14,507	14,568	14,618	14,629	14,687	14,733	14,702	14,797	ʳ14,848	ʳ14,893	14,914
Finance, insurance, and real estate.....do....	4,452	4,676	4,605	4,623	4,637	4,670	4,690	4,707	4,719	4,737	4,774	4,789	4,809	ʳ4,829	ʳ4,842	4,860
Services.............................do....	15,249	15,976	15,773	15,866	15,896	15,963	15,989	16,074	16,127	16,169	16,270	16,327	16,352	ʳ16,438	ʳ16,512	16,569
Government..........................do....	15,079	15,478	15,435	15,517	15,562	15,597	15,557	15,536	15,445	15,443	15,472	15,471	15,461	ʳ15,468	ʳ15,500	15,536
Federal.............................do....	2,727	2,754	2,739	2,745	2,753	2,772	2,765	2,765	2,752	2,760	2,757	2,734	2,755	2,755	ʳ2,754	2,755
State and local.....................do....	12,352	12,723	12,696	12,772	12,809	12,825	12,792	12,771	12,693	12,683	12,715	12,737	12,706	ʳ12,713	ʳ12,746	12,781

Production or nonsupervisory workers on private nonagric. payrolls, not seas. adjusted⊙.thous...	55,040	57,536	55,716	56,761	57,358	58,289	58,120	58,437	58,637	58,771	59,063	59,323	57,746	ʳ57,693	ʳ58,386	59,095
Manufacturing......................do....	14,110	14,611	14,355	14,444	14,534	14,737	14,476	14,532	14,877	14,878	14,803	14,927	14,793	ʳ14,793	ʳ14,879	14,920

Seasonally Adjusted†

Production or nonsupervisory workers on private nonagricultural payrolls†............thous..	55,040	57,536	56,744	57,263	57,428	57,653	57,704	57,771	57,861	58,151	58,576	58,780	58,914	ʳ59,157	ʳ59,508	59,500
Goods-producing.......................do....	17,729	18,576	18,198	18,541	18,565	18,660	18,675	18,619	18,629	18,795	18,974	19,114	19,151	ʳ19,214	ʳ19,407	19,380
Mining..............................do....	615	628	509	655	659	663	667	668	671	675	683	682	687	ʳ692	690
Contract construction................do....	3,004	3,337	3,122	3,288	3,303	3,401	3,439	3,419	3,422	3,465	3,488	3,513	3,468	ʳ3,473	ʳ3,621	3,615
Manufacturing.......................do....	14,110	14,611	14,567	14,598	14,603	14,596	14,569	14,532	14,536	14,655	14,803	14,919	14,996	ʳ15,047	ʳ15,094	15,075
Durable goods.....................do....	8,291	8,727	8,661	8,676	8,685	8,683	8,694	8,693	8,706	8,816	8,909	8,985	9,034	ʳ9,100	ʳ9,136	9,115
Lumber and wood products.......do....	616	644	647	646	639	641	637	636	636	641	649	654	658	660	ʳ656	645
Furniture and fixtures...........do....	381	400	405	405	404	400	398	394	395	398	400	403	405	ʳ404	401	400
Stone, clay, and glass products......do....	533	554	552	558	557	558	554	549	548	551	556	561	560	ʳ562	ʳ565	564
Primary metal industries.........do....	920	948	933	934	939	939	942	947	953	960	976	981	981	ʳ991	ʳ992	995
Fabricated metal products⊕.........do....	1,194	1,255	1,247	1,251	1,257	1,250	1,245	1,245	1,248	1,264	1,280	1,291	1,295	ʳ1,305	ʳ1,302	1,299
Machinery, except electrical.....do....	1,425	1,537	1,507	1,517	1,516	1,533	1,547	1,544	1,550	1,576	1,581	1,603	1,615	ʳ1,630	ʳ1,640	1,653
Electric and electronic equip.△......do....	1,227	1,290	1,288	1,284	1,283	1,284	1,293	1,293	1,290	1,301	1,312	1,320	1,334	ʳ1,345	ʳ1,362	1,365
Transportation equipment⊕.......do....	1,284	1,351	1,342	1,337	1,344	1,327	1,328	1,336	1,337	1,370	1,393	1,407	1,415	ʳ1,429	ʳ1,441	1,421
Instruments and related prod.......do....	375	401	391	394	397	402	407	405	406	408	412	416	420	424	ʳ426	428
Miscellaneous manufacturing.......do....	335	347	349	350	349	349	343	344	343	347	350	349	351	350	350	345
Nondurable goods..................do....	5,819	5,884	5,906	5,922	5,918	5,913	5,875	5,839	5,830	5,839	5,894	5,934	5,962	ʳ5,947	ʳ5,958	5,960
Food and kindred products........do....	1,154	1,147	1,168	1,167	1,154	1,152	1,142	1,124	1,122	1,122	1,148	1,166	1,174	1,165	1,175	1,161
Tobacco manufactures.............do....	60	58	60	59	60	61	58	54	56	57	56	58	58	57	ʳ58	58
Textile mill products..............do....	795	793	798	794	795	792	791	785	790	790	795	793	795	793	ʳ791	783
Apparel and other textile products...do....	1,126	1,130	1,134	1,144	1,140	1,137	1,121	1,127	1,124	1,123	1,123	1,124	1,131	ʳ1,119	ʳ1,114	1,124
Paper and allied products..........do....	519	528	527	530	535	535	535	523	522	519	525	531	534	ʳ538	544	541
Printing and publishing............do....	644	666	663	664	668	668	669	667	657	663	672	676	681	685	ʳ689	690
Chemicals and allied products.......do....	615	624	620	624	628	628	628	623	624	624	627	630	632	ʳ632	ʳ631	642
Petroleum and coal products......do....	131	137	137	137	135	136	135	136	137	137	138	139	139	140	ʳ142	145
Rubber and plastics products, nec..do....	557	587	583	586	586	587	587	584	581	589	598	607	609	ʳ613	ʳ613	612
Leather and leather products......do....	217	215	216	217	217	217	209	216	217	215	212	210	209	205	ʳ204	204
Service-producing....................do....	37,311	38,961	38,546	38,722	38,863	38,993	39,035	39,152	39,232	39,356	39,602	39,666	39,763	ʳ39,943	ʳ40,101	40,120
Transportation, comm., elec., gas, etc....do....	3,993	4,088	4,067	4,094	4,086	4,109	4,051	4,066	4,064	4,129	4,150	4,155	4,168	ʳ4,186	ʳ4,203	4,147
Wholesale and retail trade...........do....	16,297	17,092	16,894	16,952	17,079	17,106	17,165	17,214	17,228	17,288	17,372	17,355	17,430	ʳ17,502	ʳ17,557	17,576
Wholesale trade...................do....	3,869	4,036	4,007	4,020	4,026	4,043	4,040	4,042	4,053	4,075	4,093	4,109	4,127	ʳ4,144	ʳ4,165	4,176
Retail trade.......................do....	12,427	13,056	12,887	12,932	13,053	13,063	13,125	13,172	13,175	13,213	13,279	13,246	13,303	ʳ13,358	ʳ13,392	13,400
Finance, insurance, and real estate........do....	3,385	3,556	3,500	3,516	3,523	3,546	3,565	3,579	3,591	3,603	3,635	3,644	3,663	ʳ3,672	ʳ3,682	3,698
Services.............................do....	13,636	14,225	14,085	14,160	14,175	14,232	14,254	14,293	14,349	14,336	14,445	14,512	14,502	ʳ14,583	ʳ14,659	14,699

ʳ Revised.   ᵖ Preliminary.   ⊙See end of note† for this page.
†Effective October 1978 SURVEY, data have been revised to conform to the 1972 Standard Industrial Classification and adjusted to March 1977 benchmark levels; consequently they are not comparable with previously published data. For a discussion of the effect of these revisions, see "BLS Establishment Estimate Revised to Reflect New Benchmark Levels

and 1972 SIC," in the October 1978 issue of Employment and Earnings, available from the U.S. Government Printing Office, Washington, D.C. 20402.
⊕Effective October 1978 SURVEY, includes data formerly shown separately under ordnance and accessories.   △Formerly shown as Electrical equipment and supplies; see note "†" this page.

LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.ᵖ	Apr.ᵖ
AVERAGE HOURS PER WEEK†																
Seasonally Adjusted†																
Avg. weekly hours per worker on private nonagric. payrolls:¶ Seasonally adjusted†......hours..			36.0	36.1	35.9	35.9	35.9	35.8	35.8	35.9	35.8	35.9	35.7	r35.7	35.9	35.4
Not seasonally adjusted......do....	36.0	35.8	35.8	35.8	35.7	36.2	36.3	36.2	36.0	35.9	35.8	36.1	35.2	35.4	r35.7	35.1
Mining......do....	43.4	43.4	43.7	44.0	43.4	43.4	43.0	43.6	43.0	43.0	43.3	43.7	43.4	r43.0	r43.5	43.0
Contract construction......do....	36.5	36.7	36.9	37.3	36.6	37.3	37.3	37.1	37.0	36.9	36.8	37.2	35.9	36.4	r37.6	35.8
Manufacturing: Not seasonally adjusted......do....	40.3	40.4	40.4	40.4	40.4	40.4	40.3	40.4	40.7	40.6	40.7	41.4	40.1	r40.2	40.6	38.9
Seasonally adjusted......do....			40.6	40.8	40.4	40.5	40.5	40.3	40.4	40.5	40.7	40.7	40.7	40.7	40.8	39.1
Overtime hours......do....	3.4	3.6	3.7	3.8	3.5	3.6	3.6	3.4	3.6	3.6	3.7	3.8	3.8	3.8	3.8	2.7
Durable goods......do....	41.0	41.1	41.3	41.4	41.0	41.2	41.2	41.0	41.1	41.2	41.4	41.5	41.5	41.5	r41.6	39.4
Overtime hours......do....	3.7	3.8	3.9	4.0	3.7	3.7	3.8	3.6	3.8	3.9	4.0	4.1	4.2	4.2	4.1	2.8
Lumber and wood products......do....	39.8	39.7	39.9	40.2	39.5	40.0	39.8	39.3	39.6	40.1	40.1	40.0	40.0	r39.5	r39.9	39.0
Furniture and fixtures......do....	39.0	39.3	40.1	40.1	39.4	39.5	39.3	39.0	38.8	39.0	39.2	39.2	39.2	38.8	r39.5	38.4
Stone, clay, and glass products......do....	41.3	41.6	41.8	42.0	41.6	41.9	41.7	41.6	41.8	41.8	41.9	42.0	41.4	r41.5	r42.2	41.2
Primary metal industries......do....	41.3	41.8	41.5	41.5	41.7	41.8	41.8	42.0	41.8	42.1	42.3	42.2	42.4	42.3	r42.0	40.6
Fabricated metal products⊕......do....	41.0	41.0	41.3	41.4	41.1	41.0	41.0	40.9	40.9	40.8	41.1	41.4	41.2	41.4	41.4	38.9
Machinery, except electrical......do....	41.5	42.0	42.3	42.3	42.1	42.3	42.2	41.8	41.9	42.0	42.2	42.5	42.2	42.6	42.6	40.3
Electric and electronic equip.△......do....	40.4	40.3	40.6	40.4	40.2	40.2	40.7	40.4	40.1	40.3	40.4	40.5	40.7	r40.9	r41.0	39.0
Transportation equipment⊕......do....	42.5	42.1	42.1	42.4	41.8	42.0	42.1	41.8	42.5	42.6	42.9	42.9	43.0	42.7	42.3	38.2
Instruments and related products......do....	40.6	40.9	41.3	41.4	40.8	40.8	40.7	41.0	40.9	40.9	40.9	40.9	41.1	41.1	41.4	40.0
Miscellaneous manufacturing ind......do....	38.8	38.8	39.0	39.1	38.8	38.8	38.8	39.0	39.0	38.8	38.8	38.8	39.1	r39.0	r39.2	37.6
Nondurable goods......do....	39.4	39.4	39.7	39.8	39.5	39.4	39.4	39.4	39.4	39.3	39.6	39.5	39.6	39.4	39.6	38.8
Overtime hours......do....	3.2	3.2	3.3	3.4	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.3	3.2	3.2	3.3	2.6
Food and kindred products......do....	40.0	39.8	40.0	40.1	39.8	39.6	39.8	39.5	39.5	39.9	40.0	40.0	40.1	39.7	40.2	39.9
Tobacco manufactures......do....	37.9	38.2	38.9	38.7	38.7	39.6	38.6	37.7	37.9	36.7	37.4	38.1	36.7	36.7	r37.6	36.9
Textile mill products......do....	40.4	40.4	40.8	40.9	40.5	40.3	40.2	40.4	40.4	40.3	40.4	40.4	40.9	40.0	r40.6	38.9
Apparel and other textile products......do....	35.6	35.6	36.0	36.3	35.9	35.8	35.8	35.6	35.7	35.2	35.6	35.6	35.3	35.6	35.5	34.4
Paper and allied products......do....	42.9	42.9	43.4	43.5	42.9	42.9	42.9	42.7	42.7	42.6	43.1	42.7	42.9	42.9	42.9	42.3
Printing and publishing......do....	37.7	37.6	38.0	37.9	37.3	37.5	37.6	37.4	37.8	37.7	37.9	37.6	37.7	r37.7	r37.8	37.3
Chemicals and allied products......do....	41.7	41.8	42.1	42.0	41.9	41.9	41.8	41.9	41.8	41.9	42.1	41.8	42.0	41.9	r42.0	41.9
Petroleum and coal products......do....	42.7	43.5	43.3	43.6	42.9	43.4	43.9	44.3	43.8	43.9	44.2	43.7	43.4	r43.4	43.1	43.3
Rubber and plastics products, nec......do....	41.0	40.9	40.7	41.3	41.1	41.1	40.9	40.9	41.0	41.0	41.1	41.2	41.5	41.5	41.4	39.9
Leather and leather products......do....	36.9	37.1	37.1	38.1	37.6	37.4	37.2	37.1	37.2	37.1	36.8	36.7	37.0	r36.3	r36.1	35.6
Trans., comm., elec., gas, etc......do....	39.9	40.0	40.4	40.0	40.2	40.1	39.6	39.9	40.1	40.1	40.0	40.0	40.2	40.0	r40.3	39.4
Wholesale and retail trade......do....	33.3	32.8	33.0	33.0	32.9	32.8	32.9	32.8	32.8	32.9	32.8	32.9	32.4	32.5	r32.8	32.8
Wholesale trade......do....	38.8	38.8	38.9	39.0	38.7	38.8	38.7	38.8	39.0	38.9	38.8	38.9	38.7	r39.0	r38.7	38.7
Retail trade......do....	31.6	31.0	31.2	31.2	31.1	31.0	31.1	30.9	30.9	31.0	30.9	31.0	30.5	30.6	r30.8	30.9
Finance, insurance, and real estate......do....	36.4	36.5	36.3	36.7	36.3	36.5	36.6	36.5	36.5	36.6	36.3	36.3	36.3	36.3	r36.3	36.4
Services......do....	33.0	32.8	33.0	33.0	32.9	32.8	32.8	32.7	32.8	32.8	32.7	32.5	32.6	r32.6	r32.7	32.7
AGGREGATE EMPLOYEE-HOURS																
Seasonally Adjusted																
Employee-hours, wage & salary workers in nonagric. establish, for 1 week in the month, seasonally adjusted at annual rate†......bil. hours..	156.31	r162.49	161.30	162.90	162.48	163.31	163.47	162.91	162.93	163.68	165.19	165.53	r165.73	r165.96	167.90	165.64
Total private sector......do....	126.67	132.02	130.93	132.21	131.79	132.60	132.56	132.29	132.61	133.51	134.22	134.89	r135.00	r135.49	137.16	136.60
Mining......do....	1.83	1.89	1.59	1.98	1.98	1.98	1.99	1.99	1.99	2.01	2.06	2.07	r2.03	r2.04	2.08	2.06
Contract construction......do....	7.28	8.03	7.62	8.10	7.94	8.36	8.39	8.29	8.26	8.32	8.33	8.51	r8.27	8.27	8.80	8.46
Manufacturing......do....	40.96	42.47	42.53	42.57	42.44	42.49	42.54	42.22	42.30	42.60	43.14	43.51	r43.76	r43.93	44.17	43.97
Transportation, comm., elec., gas......do....	9.74	r10.11	10.12	10.11	10.15	10.18	9.93	10.05	10.11	10.21	10.27	10.35	r10.37	10.45	10.52	10.27
Wholesale and retail trade......do....	32.14	r33.27	33.09	33.22	33.21	33.36	33.42	33.38	33.47	33.66	33.63	33.64	r33.60	r33.75	34.13	34.28
Finance, insurance, and real estate......do....	8.44	8.87	8.72	8.84	8.78	8.88	8.94	8.93	8.96	9.01	9.03	9.05	r9.12	r9.14	9.17	9.21
Services......do....	26.28	27.38	27.26	27.39	27.30	27.34	27.35	27.39	27.52	27.70	27.76	27.76	r27.86	r27.92	28.31	28.34
Government......do....	29.64	r30.55	30.36	30.69	30.69	30.71	30.92	30.62	30.32	30.18	30.97	30.63	r30.73	r30.47	30.73	29.03
Indexes of employee-hours (aggregate weekly):¶†																
Private nonagric. payrolls, total......1967=100..	115.4	120.2	119.1	120.4	120.0	120.6	120.6	120.4	120.8	121.6	122.4	122.9	122.6	r123.2	r124.7	122.6
Goods-producing......do....	100.2	105.1	103.6	106.0	105.1	106.0	106.1	105.4	105.5	106.5	108.0	109.1	108.7	r109.1	r111.1	106.4
Mining......do....	133.4	135.9	111.3	144.2	143.1	144.0	143.5	145.7	144.4	145.2	148.0	149.1	149.2	r149.3	r150.6	148.4
Contract construction......do....	105.8	118.2	111.5	118.8	117.1	122.8	124.2	122.8	122.6	123.8	124.3	126.5	120.6	r122.4	r131.8	125.3
Manufacturing......do....	98.0	101.8	102.0	102.5	101.6	101.7	101.6	101.0	101.2	102.1	103.7	104.6	105.2	r105.4	r106.0	101.6
Durable goods......do....	98.7	104.2	103.9	104.2	103.5	103.8	104.0	103.5	103.9	105.5	107.1	108.3	108.8	r109.6	r110.2	104.2
Nondurable goods......do....	97.1	98.2	99.2	99.9	98.9	98.7	98.1	97.2	97.2	97.2	98.8	99.1	99.9	r99.2	r99.8	97.9
Service-producing......do....	126.0	130.6	129.8	130.5	130.5	130.7	130.7	130.8	131.4	132.0	132.3	132.5	132.3	r132.9	r134.1	133.8
Transportation, comm., elec., gas......do....	105.9	108.6	109.1	108.7	109.0	109.4	106.5	107.7	108.2	109.9	110.2	110.3	111.2	r111.2	r112.4	108.5
Wholesale and retail trade......do....	123.0	126.8	125.9	126.4	126.8	126.8	127.4	127.2	127.5	128.2	127.6	128.7	127.6	r128.4	r129.7	129.9
Wholesale trade......do....	120.6	126.0	125.3	126.0	125.2	126.1	125.7	126.1	127.1	127.4	127.6	128.5	128.4	128.9	r130.6	129.9
Retail trade......do....	123.1	127.1	126.1	126.6	127.3	127.0	128.0	127.7	127.7	128.5	128.7	128.8	127.3	r128.2	r129.4	129.9
Finance, insurance, and real estate......do....	131.3	138.0	135.4	137.5	136.2	137.9	139.0	139.2	139.6	140.5	140.6	140.9	141.7	142.0	r142.4	143.4
Services......do....	138.8	144.0	143.3	144.1	143.8	143.9	144.1	144.1	145.1	145.0	145.6	145.4	145.8	r146.6	r147.8	148.2
HOURLY AND WEEKLY EARNINGS																
Average hourly earnings per worker:¶ Not seasonally adjusted:																
Private nonagric. payrolls......dollars..	5.24	5.68	5.52	5.59	5.62	5.65	5.69	5.71	5.82	5.86	5.88	5.91	5.96	r6.00	6.02	6.02
Mining......do....	6.94	7.61	6.95	7.62	7.64	7.69	7.82	7.79	7.94	7.97	8.05	8.05	8.20	r8.20	r8.23	8.28
Contract construction......do....	8.09	8.62	8.40	8.39	8.52	8.56	8.63	8.72	8.87	8.88	8.88	8.91	8.96	r9.01	r8.97	9.02
Manufacturing......do....	5.67	6.16	6.00	6.03	6.07	6.11	6.17	6.16	6.28	6.32	6.38	6.47	6.49	r6.52	r6.55	6.53
Excluding overtime......do....			5.75	5.79	5.82	5.85	5.92	5.90	5.99	6.04	6.10	6.18	6.22	6.25	r6.28	6.32
Durable goods......do....	6.06	6.57	6.40	6.44	6.47	6.52	6.57	6.57	6.71	6.76	6.81	6.92	6.91	6.95	r6.99	6.94
Excluding overtime......do....			6.12	6.16	6.19	6.23	6.29	6.28	6.39	6.44	6.49	6.59	6.61	6.64	r6.67	6.71
Lumber and wood products......do....	5.09	5.59	5.40	5.43	5.49	5.66	5.71	5.68	5.75	5.77	5.76	5.79	5.79	5.82	r5.82	5.84
Furniture and fixtures......do....	4.34	4.67	4.56	4.59	4.61	4.66	4.68	4.72	4.76	4.78	4.80	4.86	4.87	4.93	r4.95	4.94
Stone, clay, and glass products......do....	5.80	6.31	6.08	6.18	6.25	6.33	6.37	6.40	6.46	6.48	6.53	6.57	6.56	6.57	r6.62	6.72
Primary metal industries......do....	7.40	8.19	7.94	7.98	8.04	8.10	8.19	8.31	8.42	8.42	8.52	8.56	8.62	8.75	r8.74	8.82
Fabricated metal products⊕......do....	5.90	6.33	6.19	6.25	6.27	6.29	6.32	6.35	6.45	6.49	6.54	6.62	6.61	r6.65	r6.73	6.63
Machinery, except electrical......do....	6.25	6.75	6.61	6.61	6.63	6.70	6.73	6.74	6.88	6.94	7.00	7.13	7.09	r7.14	r7.17	7.08
Electric and electronic equip.△......do....	5.39	5.82	5.68	5.70	5.73	5.75	5.83	5.87	5.94	5.96	5.98	6.10	6.12	r6.14	6.18	6.14
Transportation equipment⊕......do....	7.28	7.89	7.69	7.74	7.75	7.81	7.84	7.78	8.04	8.21	8.27	8.40	8.34	r8.34	r8.42	8.28
Instruments and related prod......do....	5.29	5.70	5.60	5.62	5.65	5.65	5.70	5.73	5.76	5.79	5.83	5.95	5.98	r6.01	r6.03	5.98
Miscellaneous manufacturing ind......do....	4.36	4.69	4.60	4.63	4.64	4.66	4.70	4.70	4.74	4.77	4.80	4.86	4.93	r4.95	r4.96	5.00

r Revised.   ᵖ Preliminary.   ¶ Production and nonsupervisory workers.
† See corresponding note, p. S-14.   ⊕ See corresponding note, p. S-14.   △ See corresponding note, p. S-14.

LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p

HOURLY AND WEEKLY EARNINGS—Con.

Avg. hourly earnings per worker, private nonagric. payrolls. Not seas. adj. ¶—Continued
Manufacturing—Continued

Item	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
Nondurable goods___dollars	5.10	5.53	5.39	5.42	5.44	5.48	5.57	5.56	5.62	5.64	5.70	5.75	5.81	r5.81	5.85	5.89
Excluding overtime___do			5.19	5.21	5.24	5.26	5.35	5.33	5.38	5.41	5.47	5.52	5.59	5.60	5.63	5.70
Food and kindred products___do	5.37	5.80	5.69	5.73	5.75	5.75	5.80	5.80	5.87	5.89	5.97	6.02	6.09	6.10	r6.12	6.19
Tobacco manufactures___do	5.62	6.27	6.30	6.33	6.41	6.61	6.58	6.30	6.10	5.99	6.18	6.32	6.47	6.63	r6.77	6.91
Textile mill products___do	3.98	4.29	4.17	4.17	4.19	4.20	4.32	4.37	4.42	4.42	4.45	4.48	4.52	r4.51	4.51	4.47
Apparel and other textile products___do	3.62	3.94	3.89	3.91	3.89	3.92	3.92	3.93	3.99	4.01	4.04	4.07	4.17	4.16	r4.19	4.19
Paper and allied products___do	5.96	6.52	6.32	6.33	6.37	6.51	6.63	6.59	6.68	6.68	6.75	6.79	6.80	r6.83	6.87	6.86
Printing and publishing___do	6.11	6.47	6.37	6.37	6.38	6.42	6.47	6.51	6.58	6.58	6.64	6.68	6.69	r6.71	r6.75	6.68
Chemicals and allied products___do	6.43	7.01	6.83	6.87	6.93	6.96	7.05	7.06	7.13	7.19	7.22	7.28	7.32	r7.32	r7.34	7.47
Petroleum and coal products___do	7.82	8.60	8.50	8.53	8.52	8.52	8.58	8.59	8.67	8.67	8.75	8.86	8.99	9.08	r9.29	9.56
Rubber and plastics products, nec___do	5.17	5.50	5.32	5.36	5.43	5.47	5.51	5.54	5.58	5.66	5.69	5.75	5.80	5.82	r5.83	5.78
Leather and leather products___do	3.41	3.90	3.86	3.87	3.88	3.89	3.89	3.87	3.92	3.94	3.98	4.01	4.13	r4.15	4.16	4.18
Transportation, comm., elec., gas___do	6.99	7.54	7.34	7.45	7.45	7.47	7.53	7.63	7.71	7.72	7.72	7.82	7.83	r7.91	r7.91	7.86
Wholesale and retail trade___do	4.27	4.66	4.56	4.60	4.61	4.62	4.66	4.67	4.74	4.78	4.80	4.80	4.96	4.97	r4.97	4.99
Wholesale trade___do	5.39	5.88	5.69	5.78	5.78	5.81	5.91	5.92	6.02	6.06	6.08	6.15	6.19	r6.24	r6.24	6.30
Retail trade___do	3.85	4.19	4.11	4.14	4.15	4.16	4.19	4.19	4.25	4.28	4.30	4.31	4.47	r4.46	r4.46	4.48
Finance, insurance, and real estate___do	4.54	4.90	4.76	4.84	4.85	4.89	4.93	4.91	4.97	5.02	5.03	5.07	5.13	5.19	r5.16	5.20
Services___do	4.65	4.99	4.91	4.95	4.95	4.93	4.95	4.94	5.00	5.12	5.13	5.16	5.24	5.27	r5.27	5.31
Seasonally adjusted:†																
Private nonagricultural payrolls___do	5.24	5.68	5.54	5.61	5.62	5.66	5.71	5.73	5.77	5.82	5.87	5.91	5.96	5.99	r6.05	6.04
Mining___do	6.94	7.61	6.94	7.63	7.66	7.71	7.85	7.88	7.94	7.99	8.03	8.05	8.12	r8.18	r8.22	8.29
Contract construction___do	8.09	8.62	8.47	8.47	8.59	8.65	8.66	8.72	8.87	8.77	8.82	8.87	8.92	r9.05	r9.04	9.11
Manufacturing___do	5.67	6.16	6.01	6.05	6.08	6.12	6.18	6.20	6.28	6.32	6.38	6.43	6.45	6.52	r6.56	6.55
Transportation, comm., elec., gas___do	6.99	7.54	7.40	7.49	7.50	7.52	7.53	7.58	7.71	7.66	7.68	7.75	7.83	r7.92	r7.97	7.90
Wholesale and retail trade___do	4.27	4.66	4.55	4.60	4.60	4.63	4.67	4.70	4.74	4.77	4.81	4.83	4.93	4.93	r4.96	4.99
Finance, insurance, and real estate___do	4.54	4.90	4.75	4.84	4.84	4.89	4.95	4.92	4.97	5.03	5.06	5.05	5.09	5.13	r5.13	5.20
Services___do	4.65	4.99	4.90	4.95	4.94	4.96	5.01	5.02	5.06	5.10	5.11	5.14	5.21	5.22	r5.25	5.30

Indexes of avg. hourly earnings, seas. adj.: ¶†

Item	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
Private nonfarm economy:																
Current dollars___1967=100	196.8	212.6	208.3	210.3	211.0	212.3	214.1	214.6	216.2	218.0	219.0	220.7	222.8	r223.9	r225.3	226.6
1967 dollars△___do	108.4	108.9	109.5	109.9	109.1	108.8	109.1	108.7	108.7	108.7	108.5	108.6	r108.9	r107.8	107.3	106.8
Mining___do	214.8	238.5	222.5	237.1	237.3	239.8	244.3	244.5	247.1	249.7	249.8	249.1	251.7	r253.3	r255.0	257.4
Contract construction___do	194.3	206.8	203.0	203.5	206.0	207.6	207.9	209.2	209.9	210.6	211.4	212.5	213.4	r216.3	r216.8	218.1
Manufacturing___do	199.4	215.7	211.0	212.2	213.5	214.7	216.7	217.5	218.9	220.8	222.4	224.1	225.4	227.1	r228.8	230.9
Transportation, comm., elec., gas___do	213.2	230.1	225.6	228.4	229.2	229.6	230.4	231.2	233.3	234.0	234.7	238.3	r240.7	r241.6	r243.4	241.3
Wholesale and retail trade___do	189.5	206.5	201.5	203.5	204.0	205.2	207.6	208.3	209.9	211.6	213.0	214.6	217.8	r218.1	r219.5	220.5
Finance, insurance, and real estate___do	180.7	194.6	188.9	192.3	192.4	194.6	196.9	196.0	198.2	199.8	200.8	202.0	202.3	203.9	r204.3	206.9
Services___do	197.9	212.5	208.7	210.5	210.4	211.5	213.2	212.9	214.8	217.5	217.8	218.9	221.7	r222.2	r223.6	225.5

Hourly wages, not seasonally adjusted:

Item	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
Construction wages, 20 cities (ENR): ♂																
Common labor___$ per hr	9.46	10.08	9.82	9.83	9.87	9.96	10.26	10.27	10.31	10.33	10.34	10.37	10.37	10.40	10.40	10.40
Skilled labor___do	12.56	13.36	13.04	13.04	13.09	13.19	13.55	13.61	13.66	13.68	13.72	13.73	13.76	13.79	13.80	13.81
Farm (U.S.) wage rates, hired workers, by method of pay:																
All workers, including piece-rate___$ per hr	2.87	3.07	------	3.09	------	------	2.93	------	------	3.18	------	------	3.37	------	------	------
All workers, other than piece-rate___do	2.82	3.02	------	3.05	------	------	2.90	------	------	3.11	------	------	3.33	------	------	------
Workers receiving cash wages only___do	3.06	3.22	------	3.22	------	------	3.06	------	------	3.34	------	------	3.60	------	------	------
Workers paid per hour, cash wages only___do	2.90	3.10	------	3.08	------	------	3.00	------	------	3.20	------	------	3.34	------	------	------
Railroad wages (average, class I)___do	7.481	------	------	------	------	7.716	------	------	------	------	------	------	------	------	------	------

Avg. weekly earnings per worker, ¶private nonfarm:†

Item	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
Current dollars, **seasonally adjusted**	------	------	199.44	202.52	201.76	203.19	204.99	205.13	206.57	208.94	210.15	212.17	r213.13	r213.84	r217.80	213.82
1967 dollars, **seasonally adjusted**	------	------	104.86	105.59	104.21	104.20	104.48	103.97	103.86	104.16	104.14	104.41	r103.86	r102.96	r103.48	100.76
Spendable earnings (worker with 3 dependents):																
Current dollars, **seasonally adjusted**	------	------	177.52	179.83	179.26	180.33	181.68	181.78	182.86	184.64	185.55	187.06	r189.54	r190.10	r192.71	r190.08
1967 dollars, **seasonally adjusted**△	------	------	93.33	93.76	92.69	92.48	92.60	92.13	91.94	92.04	91.95	92.06	r92.37	r91.53	r91.81	r89.58
Current dollars, not seasonally adjusted:																
Private nonfarm, total___dollars	188.64	203.34	197.62	200.12	200.63	204.53	206.55	206.70	209.52	210.37	210.15	212.99	209.79	r212.40	r214.91	211.30
Mining___do	301.20	330.27	301.63	332.23	331.58	336.05	337.82	338.09	345.39	348.29	351.35	351.85	347.68	r350.14	r355.54	352.73
Contract construction___do	295.29	316.35	304.92	310.43	312.68	324.42	329.67	330.49	332.63	336.55	323.60	330.04	310.02	r318.15	r331.89	320.21
Manufacturing___do	228.50	248.86	242.40	243.61	245.23	249.29	248.65	248.86	255.60	256.19	260.53	267.86	260.25	r262.10	r265.93	254.02
Durable goods___do	248.46	270.03	263.04	265.33	265.27	270.58	268.71	268.71	277.79	279.19	283.30	292.72	282.62	r285.65	r289.39	272.05
Nondurable goods___do	200.94	217.88	212.37	213.55	213.79	217.56	220.02	220.18	223.68	222.78	226.46	299.43	226.59	r226.01	r229.91	225.59
Transportation, comm., elec., gas___do	278.90	301.60	294.33	296.51	297.26	301.14	301.20	301.20	307.49	309.94	309.57	313.50	310.07	r315.61	r316.40	308.11
Wholesale and retail trade___do	142.19	152.85	149.11	150.42	150.75	153.38	157.04	156.45	155.47	156.31	156.48	158.55	158.22	r159.54	r161.03	162.18
Wholesale trade___do	209.13	228.14	220.20	224.26	223.69	226.59	230.49	230.88	234.78	236.34	236.51	240.47	237.70	r238.46	r242.11	242.55
Retail trade___do	121.66	129.89	122.88	127.26	133.57	127.40	134.08	133.24	131.33	131.82	131.58	134.90	133.65	r134.25	r135.58	137.09
Finance, insurance, and real estate___do	165.26	178.85	172.79	177.14	176.06	178.49	180.93	179.71	180.91	183.73	182.59	182.95	186.73	188.92	r187.31	188.76
Services___do	153.45	163.67	161.05	162.36	161.37	162.69	164.84	164.01	165.46	167.42	167.24	168.22	169.78	r170.75	r171.28	172.58

HELP-WANTED ADVERTISING

Item	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
Seasonally adjusted index___1967=100	118	149	141	146	144	147	150	151	152	161	161	165	161	158	156	155

LABOR TURNOVER

Item	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
Manufacturing establishments:																
Unadjusted for seasonal variation:																
Accession rate, total___mo. rate per 100 employees	4.0	4.1	3.7	4.0	4.7	4.8	4.4	5.3	4.8	4.3	3.3	2.3	4.0	r3.3	3.8	------
New hires___do	2.8	3.0	2.6	2.9	3.6	3.8	3.2	4.1	3.9	3.5	2.6	1.7	2.8	r2.5	2.8	------
Separation rate, total___do	3.8	3.8	3.5	3.5	3.6	3.8	4.1	5.2	4.8	4.0	3.5	3.4	3.8	3.2	3.7	------
Quit___do	1.9	2.1	1.8	2.0	2.1	2.2	2.1	3.4	3.0	2.3	1.7	1.3	1.8	1.6	2.0	------
Layoff___do	1.2	.9	.9	.7	.7	.7	1.1	.7	.8	.9	1.0	1.3	1.1	.8	.8	------
Seasonally adjusted:																
Accession rate, total___do	------	------	3.9	4.2	4.0	3.9	3.8	3.8	4.1	4.4	4.5	4.4	4.4	r4.3	4.1	------
New hires___do	------	------	3.0	3.1	3.0	3.0	2.9	2.8	3.1	3.4	3.5	3.4	3.4	r3.4	3.2	------
Separation rate, total___do	------	------	3.8	4.0	3.9	4.0	3.9	3.7	3.7	3.9	3.9	4.1	4.0	4.0	4.1	------
Quit___do	------	------	2.0	2.2	2.1	2.1	2.0	1.9	2.0	2.3	2.2	2.2	2.3	2.3	2.3	------
Layoff___do	------	------	1.0	.9	1.0	1.0	.9	.9	.8	.9	.8	.9	.8	.8	.9	------

WORK STOPPAGES ⊙

Item	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p
Industrial disputes:																
Number of stoppages:																
Beginning in month or year___number	5,506	4,300	287	395	484	475	467	439	453	389	290	157	301	326	447	------
In effect during month___do			567	746	869	871	850	847	854	740	591	408	405	528	664	------
Workers involved in stoppages:																
Beginning in month or year___thous	2,040	1,600	90	118	130	114	177	198	448	106	63	49	101	105	169	------
In effect during month___do			199	216	240	222	305	332	551	205	135	139	177	251	280	------
Days idle during month or year___do	35,822	39,000	4,842	2,097	2,670	2,579	3,071	3,714	4,446	2,277	1,776	1,440	1,810	1,465	1,501	------

r Revised.   p Preliminary.   ¶ Production and nonsupervisory workers.   △Earnings in 1967 dollars reflect changes in purchasing power since 1967 by dividing by Consumer Price Index; effective Feb. 1977 SURVEY, data reflect new seas. factors for the CPI.   †See corresponding note on p. S-14.   ♂Wages as of May. 1, 1979: Common, $10.43 skilled, $13.90.   ⊙ Revisions for 1975 are in the July 1976 SURVEY.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978											1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

UNEMPLOYMENT INSURANCE

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Unemployment insurance programs:																
Insured unemployment, all programs, average weekly §♀ ....thous..	3,304	3,311	3,212	2,659	2,369	2,297	2,581	2,394	2,064	1,999	2,148	2,567	3,198	3,209	ᵖ2,921	....
State programs (excl. extended duration prov.):																
Initial claims ....thous..	19,488	18,002	1,442	1,211	1,229	1,349	1,680	1,372	1,059	1,288	1,526	1,882	2,386	ᵖ1,552	....	....
Insured unemployment, avg. weekly...do....	2,655	2,358	2,901	2,379	2,051	1,962	2,265	2,168	1,860	1,816	2,009	2,421	3,037	3,053	ᵖ2,750	....
Percent of covered employment: △																
Unadjusted	3.9	4.0	4.2	3.4	2.9	2.8	3.2	3.0	2.6	2.4	2.7	3.2	ᵖ3.9	ᵖ4.0	ᵖ3.6	....
Seasonally adjusted.................			3.5	3.1	3.1	3.1	3.4	3.6	3.3	3.1	3.1	3.1	ᵖ3.1	ᵖ3.1	ᵖ3.0	....
Beneficiaries, average weekly........thous..	2,178	1,944	2,615	2,140	1,724	1,653	1,680	1,811	1,552	1,456	ᵖ1,536	ᵖ1,883	2,474	ᵖ2,713	....	....
Benefits paid § ....mil. $..	ʳ8,357.2	8,226.6	1,002.0	704.6	638.9	579.0	557.8	677.4	521.0	519.7	550.7	ᵖ646.1	970.8	ᵖ917.6	....	....
Federal employees, insured unemployment, average weekly ....thous..	46	34	38	32	29	28	31	32	31	34	32	34	ᵖ37	35	33	....
Veterans' program (UCX):																
Initial claims ....do....	354	273	23	18	20	23	24	25	23	23	ᵖ22	ᵖ24	ᵖ24	....	....	....
Insured unemployment, avg. weekly...do....	ʳ81	53	59	52	47	45	49	50	48	49	48	50	54	53	52	....
Beneficiaries, average weekly..........do....	78	54	60	55	47	46	46	51	53	46	ᵖ51	ᵖ54	ᵖ59	....	....	....
Benefits paid ....mil. $..	ʳ470.7	248.3	24.5	19.7	19.2	18.2	17.8	21.5	18.3	ᵖ18.9	ᵖ20.6	ᵖ21.0	ᵖ25.1	ᵖ21.1	....	....
Railroad program:																
Applications ....thous..	104	130	7	3	2	8	16	28	8	15	10	8	13	6	....	....
Insured unemployment, avg. weekly.....do....	21	25	35	22	13	11	16	33	31	23	17	17	24	25	23	....
Benefits paid ....mil. $..	99.8	89.0	18.4	10.4	5.3	5.9	3.9	1.5	1.4	1.0	5.4	5.7	9.6	9.9	....	....

FINANCE

BANKING

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Open market paper outstanding, end of period:																
Bankers' acceptances ....mil. $..	25,450	33,700	26,181	26,256	26,714	28,289	27,579	28,319	27,952	30,579	32,145	33,700	33,749	34,337	34,617	....
Commercial and financial co. paper, total..do....	63,977	82,236	67,215	70,700	71,900	72,884	73,809	73,273	74,994	78,518	81,890	82,236	86,232	88,971	90,229	....
Financial companies ....do....	49,322	63,857	51,562	53,983	55,892	56,277	56,633	56,236	57,373	59,917	62,584	63,857	66,451	68,515	69,458	....
Dealer placed ....do....	8,926	12,350	8,972	9,693	10,201	9,830	10,258	10,511	10,966	11,219	11,842	12,350	13,408	13,929	14,278	....
Directly placed ....do....	40,396	51,507	42,590	44,290	45,691	46,447	46,375	45,725	46,407	48,698	50,742	51,507	53,043	54,586	55,180	....
Nonfinancial companies ....do....	14,655	18,379	15,653	16,717	16,008	16,607	17,176	17,037	17,621	18,601	19,306	18,379	19,781	20,456	20,771	....
Agricultural loans and discounts outstanding of agencies supervised by the Farm Credit Adm.:																
Total, end of period ....mil. $..	41,713	47,344	43,632	44,329	44,666	44,926	45,201	45,614	46,051	46,729	47,053	47,344	48,374	49,351	50,362	51,470
Farm mortgage loans:																
Federal land banks ....do....	22,139	25,596	22,927	23,185	23,526	23,866	24,152	24,467	24,760	25,070	25,355	25,596	26,020	26,355	26,896	27,387
Loans to cooperatives ....do....	5,600	6,102	6,800	6,939	6,631	6,114	5,747	5,634	5,642	6,214	6,382	6,102	6,732	7,255	7,413	7,457
Other loans and discounts ....do....	13,974	15,646	13,905	14,205	14,509	14,945	15,302	15,513	15,649	15,445	15,316	15,646	15,622	15,740	16,053	16,626
Bank debits to demand deposit accounts, except interbank and U.S. Government accounts, annual rates, seasonally adjusted:																
Total (233 SMSA's)⊙ ....bil. $..	....	(²)	....	....	....	....	....	....	....	....	....	....	....	....	....	....
New York SMSA ....do....	....	(²)	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total 232 SMSA's (except N.Y.) ....do....	....	(²)	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6 other leading SMSA's¶ ....do....	....	(²)	....	....	....	....	....	....	....	....	....	....	....	....	....	....
226 other SMSA's ....do....	....	(²)	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Federal Reserve banks, condition, end of period:																
Assets, total ♀ ....mil. $..	139,889	153,151	136,643	141,394	141,977	148,127	146,137	148,947	153,075	156,320	153,098	153,151	147,138	147,749	ʳ151,782	152,960
Reserve bank credit outstanding, total ♀..do....	116,303	123,488	113,604	116,621	116,607	124,439	123,607	126,311	129,675	129,266	129,255	123,488	119,730	121,207	ʳ124,276	124,608
Time loans ....do....	265	1,174	332	1,750	1,167	1,428	1,127	954	1,365	1,207	813	1,174	4,366	1,603	ʳ963	1,255
U.S. Government securities ....do....	102,819	110,562	101,577	103,500	102,826	110,146	108,885	111,739	115,279	115,322	113,305	110,562	101,279	103,486	110,940	108,588
Gold certificate account ....do....	11,718	11,671	11,718	11,718	11,718	11,706	11,693	11,679	11,668	11,655	11,642	11,671	11,592	11,544	11,479	11,416
Liabilities, total ♀ ....do....	139,889	153,151	136,643	141,394	141,977	148,127	146,137	148,947	153,075	156,320	153,098	153,151	147,138	147,749	ʳ151,782	152,960
Deposits, total ....do....	35,550	36,972	33,697	36,663	33,647	40,595	39,910	40,773	44,430	42,563	39,452	36,972	34,666	34,288	ʳ38,451	38,426
Member-bank reserve balances ....do....	26,870	31,152	27,900	28,321	30,135	27,920	28,461	27,705	26,830	26,260	31,919	31,152	29,931	29,723	ʳ31,714	34,125
Federal Reserve notes in circulation.......do....	93,153	103,325	91,666	92,331	94,570	95,345	95,571	96,534	96,572	98,154	100,825	103,325	99,354	99,999	100,654	101,767
All member banks of Federal Reserve System, averages of daily figures:																
Reserves held, total ....mil. $..	¹36,471	¹41,572	36,231	36,880	37,119	37,262	38,189	37,666	37,689	38,434	39,728	41,572	43,167	40,703	ʳ40,316	40,661
Required ....do....	¹36,297	¹41,447	35,925	36,816	36,867	37,125	38,049	37,404	37,614	38,222	39,423	41,447	42,865	40,494	ʳ40,059	40,549
Excess ....do....	¹174	¹125	306	64	252	137	140	262	75	212	305	125	302	209	ʳ257	112
Borrowings from Federal Reserve banks...do....	¹558	¹874	344	539	1,227	1,111	1,286	1,147	1,068	1,261	722	874	994	973	ʳ999	897
Free reserves ....do....	¹−330	¹−615	9	−432	−882	−854	−1,003	−697	−802	−828	−232	−615	−580	−650	ʳ−621	−652
Large commercial banks reporting to Federal Reserve System, Wed. nearest end of yr. or mo.:																
Deposits:⊕																
Demand, adjusted♂ ....mil. $..	120,472	113,248	112,769	112,127	113,822	113,522	116,955	114,813	113,870	118,184	114,248	113,248	101,765	98,781	97,101	101,766
Demand, total ♀ ....do....	200,280	203,092	177,269	188,146	206,908	187,760	192,013	186,539	191,858	201,237	191,695	203,092	176,356	180,383	169,110	181,180
Individuals, partnerships, and corp....do....	143,553	144,438	128,408	133,580	144,852	133,823	138,220	135,136	135,128	142,470	138,612	144,438	124,481	126,009	120,176	128,370
State and local governments ....do....	6,346	5,309	5,665	6,510	6,144	6,182	6,632	5,592	5,802	6,709	5,672	5,309	5,364	5,224	4,355	5,679
U.S. Government ....do....	3,744	981	2,702	3,714	1,325	2,909	1,444	1,031	5,970	1,303	954	981	1,411	862	763	1,450
Domestic commercial banks ....do....	29,275	34,086	24,482	26,886	35,975	27,540	28,213	27,563	28,666	31,091	29,773	34,086	29,036	31,681	26,546	28,839
Time, total ♀ ....do....	252,424	258,061	260,621	261,462	265,176	266,884	267,169	270,102	272,480	276,533	280,971	258,061	258,293	257,738	256,756	250,710
Individuals, partnerships, and corp.:																
Savings ....do....	92,461	77,865	94,013	93,202	93,405	92,883	91,857	91,590	91,633	90,783	90,044	77,865	76,480	76,023	76,831	76,564
Other time ....do....	121,400	141,940	126,550	128,296	131,672	134,330	135,919	135,919	139,485	143,895	148,290	141,940	142,539	142,430	141,430	138,139
Loans (adjusted), total ⊕♂ ....do....	324,557	347,246	325,163	332,251	339,652	341,669	345,594	348,636	353,784	366,297	366,087	347,246	341,886	343,926	345,057	355,972
Commercial and industrial ....do....	125,534	134,038	128,805	131,654	134,601	135,528	135,467	134,981	136,710	139,878	140,573	134,038	131,604	133,899	135,918	140,100
For purchasing or carrying securities.....do....	13,638	10,655	11,521	12,481	12,296	12,335	12,172	12,490	12,865	13,048	10,971	10,655	10,979	10,687	9,731	11,307
To nonbank financial institutions ....do....	23,904	24,166	22,589	22,931	23,023	22,991	23,520	23,576	24,022	24,692	24,119	24,166	23,297	22,980	22,695	23,875
Real estate loans ....do....	74,600	80,655	76,788	77,936	79,156	80,530	82,621	84,410	85,882	87,588	88,929	80,655	81,849	82,387	83,274	84,552
Other loans ....do....	111,547	119,560	107,664	108,708	117,686	113,196	114,293	113,853	114,813	120,965	125,474	119,560	124,743	115,230	113,982	117,341
Investments, total⊕ ....do....	113,934	97,953	109,907	112,417	111,295	110,263	110,097	110,888	112,020	111,176	111,498	97,953	98,848	100,582	102,134	102,759
U.S. Government securities, total ....do....	46,111	35,549	44,038	44,335	43,425	42,742	42,847	42,777	42,917	41,484	41,317	35,549	34,984	36,140	36,939	36,048
Investment account * ....do....		32,437										32,437	31,051	31,732	32,809	31,644
Other securities ....do....	67,823	62,404	65,869	68,082	67,870	67,521	67,250	68,111	69,103	69,692	70,181	62,404	63,864	64,442	65,195	66,711

ʳ Revised.   ᵖ Preliminary.   ¹ Average for Dec.   ² Data no longer available.   *New series. See note "‡" on page S–18.   ⊕See corresponding note on p. S–18.   § Insured unemployment (all programs) data include claims filed under extended duration provisions of regular State laws; amounts paid under these programs are excluded from state benefits paid data.   △Insured unemployment as % of average covered employment in a 12-month period.   ♀Includes data not shown separately.   ♂For demand deposits, the term "adjusted"

denotes demand deposits other than domestic commercial bank and U.S. Government, less cash items in process of collection; for loans, exclusive of loans to and Federal funds transactions with domestic commercial banks and include valuation reserves (individual loan items are shown gross; i.e., before deduction of valuation reserves).   ⊙Total SMSA's include some cities and counties not designated as SMSA's.   ¶Includes Boston, Philadelphia, Chicago, Detroit, San Francisco-Oakland, and Los Angeles-Long Beach.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

FINANCE—Continued

BANKING—Continued

Commercial bank credit (last Wed. of mo., except for June 30 and Dec. 31 call dates), seas adj.:†																
Total loans and investments⊙_____bil. $__	865.4	967.3	888.8	904.8	917.9	922.4	935.2	939.2	947.1	955.4	966.3	967.3				
Loans⊙_____do__	612.9	709.0	633.5	645.0	657.9	661.2	672.0	677.2	684.4	693.7	706.7	709.0				
U.S. Government securities_____do__	93.5	88.4	96.5	98.4	97.1	98.4	99.7	97.0	96.3	94.3	90.3	88.4				
Other securities_____do__	159.0	169.9	158.8	161.4	162.9	162.8	163.5	165.0	166.4	167.4	169.3	169.9				
Money and interest rates:§																
Bank rates on short-term business loans:																
In 35 centers_____percent per annum__	(³)															
New York City_____do__																
7 other northeast centers_____do__																
8 north central centers_____do__																
7 southeast centers_____do__																
8 southwest centers_____do__																
4 west coast centers_____do__																
Discount rate (N.Y.F.R. Bank), end of year or month_____percent__	6.00	9.50	6.50	6.50	6.84	7.00	7.23	7.43	7.83	8.26	9.50	9.50	9.50	9.50	9.50	9.50
Federal intermediate credit bank loans_____do__	¹ 6.93	¹ 8.01	7.64	7.76	7.86	7.94	8.05	8.18	8.27	8.38	8.50	8.70	9.16	9.48	9.69	9.89
Home mortgage rates (conventional 1st mortgages):¶																
New home purchase (U.S. avg.)_____percent__	¹ 8.80	¹ 9.30	9.03	9.07	9.14	9.23	9.34	9.45	9.50	9.60	9.63	9.76	9.92	9.94	ʳ 10.02	10.04
Existing home purchase (U.S. avg.)_____do__	¹ 8.83	¹ 9.36	9.04	9.14	9.17	9.27	9.41	9.55	9.62	9.68	9.74	9.85	10.08	10.14	10.22	10.29
Open market rates, New York City:																
Bankers' acceptances (prime, 90 days)___do__	² 5.59	² 8.11	6.79	6.92	7.32	7.75	8.02	7.98	8.54	9.32	10.53	10.55	10.29	10.01	9.94	9.90
Commercial paper (prime, 4–6 months)__do__	² 5.60	² 7.99	6.80	6.86	7.11	7.63	7.91	7.90	8.44	9.03	10.23	10.43	10.32	10.01	9.96	9.87
Finance co. paper placed directly, 3–6 mo_do__	² 5.49	² 7.78	6.73	6.74	6.98	7.41	7.66	7.65	8.18	8.78	9.82	10.06	10.10	9.85	9.73	9.64
Yield on U.S. Government securities (taxable):																
3-month bills (rate on new issue)____percent__	² 5.265	² 7.221	6.319	6.306	6.430	6.707	7.074	7.036	7.836	8.132	8.787	9.122	9.351	9.265	9.457	9.493
3–5 year issues_____do__	² 6.85	² 8.30	7.76	7.90	8.10	8.31	8.54	8.31	8.38	8.61	8.97	9.23	9.36	9.16	9.25	9.32

CONSUMER INSTALLMENT CREDIT ‡

Total extended and liquidated:																
Unadjusted:																
Extended_____mil.$__	254,071	298,574	24,611	23,985	26,898	28,244	25,266	28,313	24,859	25,290	25,946	27,478	22,608	21,797	26,615	_____
Liquidated_____do__	218,793	253,508	21,318	19,970	21,383	21,750	21,234	22,596	21,086	22,845	22,079	21,283	22,902	21,325	24,086	_____
Seasonally adjusted:																
Extended, total ♀_____do__			23,925	24,682	25,104	25,565	25,022	25,669	25,537	25,758	26,214	26,500	25,544	26,202	26,698	_____
By major holder:																
Commercial banks_____do__			11,382	12,102	12,067	12,382	12,187	12,255	12,123	12,182	12,476	12,521	12,153	12,430	12,412	_____
Finance companies_____do__			3,857	4,158	4,179	4,223	4,261	4,348	4,372	4,605	4,512	4,679	4,547	4,822	5,123	_____
Credit unions_____do__			3,282	3,257	3,484	3,445	3,271	3,379	3,360	3,401	3,530	3,526	3,241	3,238	3,250	_____
Retailers_____do__			3,438	3,337	3,408	3,552	3,477	3,725	3,718	3,518	3,571	3,612	3,565	3,460	3,611	_____
By major credit type:																
Automobile_____do__			7,043	7,434	7,592	7,595	7,652	7,744	7,542	7,501	7,787	7,833	7,545	7,756	7,797	_____
Revolving_____do__			8,398	8,523	8,563	9,062	8,700	9,028	9,006	8,846	9,176	9,424	9,417	9,357	9,714	_____
Mobile home_____do__			493	529	527	510	509	531	494	604	486	502	369	454	516	_____
Liquidated, total ♀_____do__			19,849	20,576	20,824	21,358	21,556	22,037	21,857	22,384	22,115	22,100	22,483	22,894	22,967	_____
By major holder:																
Commercial banks_____do__			9,169	9,655	9,807	9,995	10,087	10,470	10,409	10,565	10,551	10,441	10,823	10,800	10,947	_____
Finance companies_____do__			3,178	3,279	3,318	3,599	3,590	3,612	3,525	3,742	3,494	3,581	3,206	3,617	3,789	_____
Credit unions_____do__			2,517	2,587	2,635	2,648	2,758	2,766	2,721	2,757	2,751	2,753	2,881	2,836	2,722	_____
Retailers_____do__			3,228	3,279	3,273	3,318	3,333	3,383	3,390	3,403	3,385	3,416	3,655	3,681	3,468	_____
By major credit type:																
Automobile_____do__			5,409	5,622	5,715	5,953	5,941	6,140	6,010	6,126	6,032	6,053	5,865	6,191	6,311	_____
Revolving_____do__			7,566	7,840	7,919	8,107	8,100	8,291	8,384	8,500	8,511	8,555	8,984	9,040	8,972	_____
Mobile home_____do__			398	417	426	440	426	452	422	579	411	431	329	398	408	_____
Total outstanding, end of year or month ♀___do__	230,829	275,640	233,842	237,855	243,371	249,865	253,897	259,614	263,387	265,821	269,445	275,640	275,346	275,818	278,347	_____
By major holder:																
Commercial banks_____do__	112,373	136,189	115,050	117,654	120,440	124,080	126,619	129,622	131,403	132,702	133,908	136,189	136,452	136,671	137,445	_____
Finance companies_____do__	44,868	54,309	45,608	46,463	47,580	48,637	49,502	50,558	51,280	51,984	53,099	54,309	55,004	55,728	56,885	_____
Credit unions_____do__	37,605	45,939	38,724	39,236	40,481	41,936	42,355	43,499	44,325	44,635	45,305	45,939	45,526	45,661	46,301	_____
Retailers_____do__	23,490	24,876	21,639	21,570	21,744	21,813	21,828	22,093	22,302	22,464	23,006	24,876	23,962	23,246	22,929	_____
By major credit type:																
Automobile_____do__	82,911	102,468	85,757	87,747	90,359	93,361	95,289	97,687	99,062	100,159	101,565	102,468	102,890	103,780	105,426	_____
Revolving_____do__	39,274	47,051	38,034	38,426	38,967	40,001	40,553	41,629	42,420	42,579	43,523	47,051	46,516	45,586	45,240	_____
Mobile home_____do__	15,141	16,042	15,149	15,287	15,396	15,532	15,663	15,799	15,910	15,925	16,017	16,042	16,004	16,008	16,092	_____

ʳ Revised. ᵖ Preliminary. ¹ Average for year. ² Daily average. ³ Data no longer available.
⊙ Adjusted to exclude interbank loans. § For bond yields, see p. S-21. † Beginning Jan. 1959, monthly data have been revised to reflect new seasonal factors and adjustment to benchmarks for the latest call date (Dec. 31, 1975). Revisions are available from the Federal Reserve Board, Washington, D.C. 20551. ‡Beginning Jan. 1979 SURVEY, the consumer credit group has been completely restructured. Comparable data prior to Nov. 1977 are available from the Federal Reserve Board, Washington, D.C. 20551. ¶ Beginning Jan. 1973, data have been revised; revisions for Jan. 1973–April 1975 will be shown later. ♀ Includes data for items not shown separately.

NOTES FOR P.S-17:

⊕Data beginning Dec. 1978 reflect a reduction in number of banks reporting (from 317 to 171) and changes in consolidation basis as well as content of several asset and liability items. Comparable data for earlier periods will be available later.

‡ Beginning Dec. 1978, data are for all investment account securities; comparable data for earlier periods are not available.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978											1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

FINANCE—Continued

FEDERAL GOVERNMENT FINANCE

Budget receipts and outlays:

Receipts (net)_____mil. $__	¹ 357,762	¹ 401,997	24,879	42,343	34,961	47,657	29,194	35,040	42,591	28,745	33,227	37,477	38,364	32,639	_____	_____
Outlays (net)_____do____	¹ 402,725	¹ 450,836	40,004	35,724	36,670	38,602	36,426	39,572	38,935	42,691	39,134	41,392	41,095	37,739	_____	_____
Budget surplus or deficit (−)___do____	ᶜ¹−44,963	ᶜ¹−48,839	−15,125	6,618	−1,709	9,055	−7,232	−4,532	3,655	−13,946	−5,907	−3,915	−2,731	−5,100	_____	_____
Budget financing, total_____do____	¹ 44,963	¹ 48,839	15,125	−6,618	1,708	−9,055	7,232	4,532	−3,655	13,946	5,907	3,915	2,731	5,100	_____	_____
Borrowing from the public_____do____	¹ 53,516	¹ 59,106	9,656	−2,263	−555	5,401	3,195	9,039	2,821	6,484	5,236	3,533	3,312	−668	_____	_____
Reduction in cash balances_____do____	¹ −8,553	ᶜ¹−10,267	5,469	−4,355	2,263	−14,456	4,037	−4,507	−6,476	7,462	671	382	−581	5,768	_____	_____
Gross amount of debt outstanding_____do____	¹ 709,138	¹ 780,425	747,844	746,431	751,412	758,804	760,203	773,340	780,425	785,267	791,563	797,694	798,733	800,470	_____	_____
Held by the public_____do____	¹ 551,843	¹ 610,948	593,310	591,048	590,493	595,894	599,089	608,128	610,948	617,433	622,669	626,202	629,513	628,845	_____	_____

Budget receipts by source and outlays by agency:

Receipts (net), total_____mil. $__	¹ 357,762	¹ 401,997	24,879	42,343	34,961	47,657	29,194	35,040	42,591	28,745	33,227	37,477	38,364	32,639	_____	_____
Individual income taxes (net)_____do____	¹ 157,626	¹ 180,988	5,258	18,883	14,293	20,301	14,590	14,784	20,883	15,922	16,609	16,066	23,667	14,509	_____	_____
Corporation income taxes (net)_____do____	¹ 54,892	¹ 59,952	8,023	8,850	1,183	14,655	1,785	1,122	9,753	1,684	1,048	10,386	2,146	1,281	_____	_____
Social insurance taxes and contributions (net) mil. $__	¹ 108,688	¹ 123,410	8,560	11,828	16,092	9,287	9,518	15,587	8,515	7,805	11,923	7,716	9,429	13,614	_____	_____
Other_____do____	¹ 36,556	¹ 37,647	3,037	2,831	3,395	3,414	3,300	3,547	3,439	3,335	3,647	3,309	3,121	3,235	_____	_____
Outlays, total ♀_____do____	¹ 402,725	¹ 450,836	40,004	35,724	36,670	38,602	36,426	39,572	38,935	42,691	39,134	41,392	41,095	37,739	_____	_____
Agriculture Department_____do____	¹ 16,738	¹ 20,368	1,879	781	1,229	819	1,336	1,200	1,865	1,696	2,654	2,859	3,352	1,712	_____	_____
Defense Department, military_____do____	¹ 95,650	¹ 103,042	9,168	8,315	8,870	8,854	8,285	9,552	8,811	9,164	9,224	9,383	9,218	8,920	_____	_____
Health, Education, and Welfare Department mil. $__	¹ 147,455	¹ 162,856	14,387	12,756	13,826	14,142	13,122	14,417	14,402	14,103	14,512	15,017	14,416	14,584	_____	_____
Treasury Department_____do____	¹ 50,384	¹ 56,355	3,386	5,647	3,657	6,837	5,180	3,727	3,585	5,714	3,990	7,479	5,068	4,470	_____	_____
National Aeronautics and Space Adm___do____	¹ 3,944	¹ 3,980	370	316	361	320	324	320	344	300	350	333	354	365	_____	_____
Veterans Administration_____do____	¹ 18,019	¹ 18,962	2,676	556	1,751	2,432	608	1,528	1,440	1,645	1,665	2,648	754	1,620	_____	_____

Receipts and expenditures (national income and product accounts basis), qtrly. totals seas. adj. at annual rates:†

Federal Government receipts, total†_____bil. $__	374.5	431.4	396.2	_____	_____	424.7	_____	_____	441.7	_____	_____	463.1	_____	_____	469.9	_____
Personal tax and nontax receipts_____do____	169.4	193.2	176.8	_____	_____	186.7	_____	_____	199.7	_____	_____	209.7	_____	_____	ʳ 208.3	_____
Corporate profit tax accruals_____do____	61.3	71.6	59.6	_____	_____	72.6	_____	_____	73.6	_____	_____	80.6	_____	_____	75.3	_____
Indirect business tax and nontax accruals_do____	25.0	27.9	26.5	_____	_____	27.9	_____	_____	28.2	_____	_____	28.8	_____	_____	ʳ 29.3	_____
Contributions for social insurance_____do____	118.7	138.7	133.3	_____	_____	137.6	_____	_____	140.1	_____	_____	144.0	_____	_____	ʳ 157.1	_____
Federal Government expenditures, total†__do____	422.6	461.4	448.8	_____	_____	448.3	_____	_____	464.5	_____	_____	483.8	_____	_____	ʳ 488.4	_____
Purchases of goods and services_____do____	145.1	153.8	151.5	_____	_____	147.2	_____	_____	154.0	_____	_____	162.5	_____	_____	ʳ 164.5	_____
National defense_____do____	94.3	99.5	97.9	_____	_____	98.6	_____	_____	99.6	_____	_____	102.1	_____	_____	103.9	_____
Transfer payments_____do____	172.7	185.4	180.2	_____	_____	180.7	_____	_____	188.8	_____	_____	191.9	_____	_____	ʳ 196.5	_____
Grants-in-aid to State and local govts___do____	67.4	76.9	73.9	_____	_____	75.9	_____	_____	77.5	_____	_____	80.3	_____	_____	ʳ 77.0	_____
Net interest paid_____do____	29.1	35.5	33.2	_____	_____	34.6	_____	_____	36.3	_____	_____	38.1	_____	_____	ʳ 41.5	_____
Subsidies less current surplus of government enterprises_____bil. $__	8.3	9.7	10.0	_____	_____	10.0	_____	_____	8.0	_____	_____	11.0	_____	_____	ʳ 8.7	_____
Less: Wage accruals less disbursements__do____	0	.0	.0	_____	_____	.0	_____	_____	.2	_____	_____	.0	_____	_____	−.2	_____
Surplus or deficit (−)_____do____	−48.1	−29.9	−52.6	_____	_____	−23.6	_____	_____	−22.8	_____	_____	−20.8	_____	_____	−18.4	_____

LIFE INSURANCE

Institute of Life Insurance:

Assets, total, all U.S. life insurance cos____bil. $__	351.72	389.02	359.11	363.27	366.94	369.88	374.42	378.12	381.05	382.45	385.56	389.02	393.40	395.55	_____	_____
Government securities_____do____	23.56	25.94	24.03	23.88	24.27	24.20	24.38	24.71	25.18	25.66	26.01	25.94	26.40	26.61	_____	_____
Corporate securities_____do____	171.65	190.98	176.98	180.37	182.34	183.70	187.18	189.47	190.61	189.98	191.32	190.98	194.49	195.18	_____	_____
Mortgage loans, total_____do____	96.85	105.93	98.02	98.58	99.19	100.04	100.60	101.60	102.36	103.16	104.11	105.93	106.40	107.14	_____	_____
Nonfarm_____do____	88.01	95.56	88.82	89.21	89.67	90.34	90.78	91.65	92.26	92.90	93.75	95.56	96.00	96.59	_____	_____
Real estate_____do____	11.06	11.78	11.21	11.27	11.54	11.54	11.56	11.54	11.58	11.69	11.71	11.78	11.84	11.92	_____	_____
Policy loans and premium notes_____do____	27.56	30.20	28.02	28.25	28.43	28.65	28.84	29.07	29.29	29.52	29.82	30.20	30.51	30.84	_____	_____
Cash_____do____	2.13	2.14	1.57	1.48	1.54	1.48	1.42	1.45	1.42	1.42	1.46	2.14	1.44	1.22	_____	_____
Other assets_____do____	18.92	22.05	19.27	19.44	19.62	20.27	20.44	20.28	20.60	21.01	21.14	22.05	22.32	22.66	_____	_____

Life Insurance Agency Management Association:
Insurance written (new paid-for insurance):

Value, estimated total_____mil. $__	367,335	407,042	36,588	31,740	33,802	37,472	28,660	32,685	34,616	34,172	34,801	49,497	32,111	31,459	38,278	_____
Ordinary (incl. mass-marketed ord.)___do____	242,842	279,044	24,463	22,848	24,651	24,494	21,028	23,912	22,486	25,007	24,321	28,484	21,480	22,204	26,819	_____
Group_____do____	117,960	121,729	11,545	8,320	8,569	12,458	7,138	8,255	11,644	8,509	9,946	20,573	10,200	8,842	10,913	_____
Industrial_____do____	6,533	6,269	580	572	582	520	494	518	486	656	534	440	432	413	546	_____

MONETARY STATISTICS

Gold and silver:
Gold:

Monetary stock, U.S. (end of period)___mil. $__	11,719	11,671	11,718	11,718	11,718	11,706	11,693	11,679	11,668	11,655	11,642	11,671	11,592	11,544	11,479	_____
Net release from earmark§_____do____	426	525	8	41	19	47	26	22	19	5	23	62	15	16	_____	_____
Exports_____thous. $__	1,042,625	1,113,795	36,552	188,866	32,674	23,118	40,906	29,538	269,917	45,804	207,133	18,078	247,736	292,397	349,738	_____
Imports_____do____	674,026	903,023	138,032	90,620	49,529	82,745	32,994	71,754	58,454	121,231	74,477	75,253	53,828	37,323	56,015	_____
Production:¶																
South Africa_____mil. $__	² 951.6	955.4	80.6	82.8	80.2	78.5	81.1	82.8	83.6	79.8	79.4	74.3	77.3	78.1	80.6	_____
Canada_____do____	² 73.7	70.4	6.4	6.2	5.8	6.0	5.9	5.8	5.5	6.0	58.8	6.1	_____	_____	_____	_____
Silver:																
Exports_____thous. $__	84,645	119,125	7,936	13,665	5,758	6,194	6,079	12,468	21,038	12,472	8,444	5,539	8,873	15,264	11,213	_____
Imports_____do____	354,818	389,015	35,775	33,807	29,915	33,206	32,209	33,105	30,572	35,716	29,985	30,556	32,158	38,667	95,502	_____
Price at New York_____dol. per fine oz__	4.623	5.401	5.273	5.118	5.121	5.316	5.331	5.495	5.575	5.918	5.866	5.928	6.255	7.417	7.445	7.492
Production:																
United States_____thous. fine oz__	27,519	23,972	2,536	1,634	1,911	1,802	1,526	1,434	2,456	2,045	1,645	3,870	1,467	1,690	2,473	_____

ʳ Revised.   ᵖ Preliminary.   ¹ Data are for fiscal year ending Sept. 30 of respective year and include revisions not distributed to the months. Data for 1976 and earlier years are for fiscal year ending June 30 of respective year.   ² Reported annual total; revisions not distributed to the months.   ♀ Includes data for items not shown separately.

†Data have been revised back to 1946 (see table 3.2 in the Jan. 1976 and July 1978 SURVEYS for earlier data).
§Or increase in earmarked gold (−).   ¶Valued at $38 per fine ounce from Jan. 1972-Sept. 1973; at $42.22 thereafter.   ᶜ Corrected.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

FINANCE—Continued

MONETARY STATISTICS—Continued

Currency in circulation (end of period)_____bil. $__	103.8	114.6	102.4	103.1	105.4	106.3	106.6	107.6	107.7	109.3	112.1	114.6	110.7	111.3	112.0	_____

Money supply and related data (avg. of daily fig.): ⊕
Unadjusted for seasonal variation:

Total money supply_____bil. $__	327.4	r 352.8	338.2	350.9	345.5	351.8	r 356.2	r 354.1	r 358.5	r 361.0	r 362.6	r 371.3	r 365.4	r 351.9	r 353.7	367.4
Currency outside banks_____do____	84.8	93.2	89.9	91.0	91.9	92.8	93.9	94.2	94.9	95.6	r 97.3	99.1	97.4	97.6	98.6	99.9
Demand deposits_____do____	242.6	r 259.6	248.2	259.9	253.6	259.0	262.3	r 259.9	r 263.6	r 265.3	r 265.3	r 272.2	r 268.0	r 254.2	r 255.1	267.5
Time deposits adjusted¶_____do____	517.1	r 580.2	563.2	567.4	574.1	578.5	582.4	r 587.4	r 592.9	r 597.4	r 604.8	r 609.7	r 615.3	r 618.7	r 622.0	622.1
U.S. Government demand deposits¶_____do____	4.2	5.4	4.8	5.0	4.0	6.2	r 4.4	r 3.5	6.2	r 4.2	8.0	10.2	r 11.9	8.3	r 6.5	5.3

Adjusted for seasonal variation:

Total money supply_____do____			343.2	347.9	350.7	352.5	r 354.4	r 356.7	r 360.7	r 361.2	r 360.6	r 361.2	r 359.7	r 358.6	359.0	364.3
Currency outside banks_____do____			90.7	91.3	92.0	92.5	93.2	93.9	95.2	95.8	96.6	97.5	98.2	98.9	99.4	100.2
Demand deposits_____do____			252.5	256.6	258.8	260.0	r 261.2	r 262.8	r 265.5	r 265.3	r 264.0	r 263.7	r 261.5	r 259.7	r 259.5	264.1
Time deposits adjusted¶_____do____			560.8	565.9	572.2	576.8	r 582.1	r 587.4	r 593.5	r 597.7	r 608.5	r 611.2	r 615.8	r 620.2	r 619.5	620.6

Turnover of demand deposits except interbank and U.S. Govt., annual rates, seas. adjusted:

Total (233 SMSA s)⊙__ratio of debits to deposits__	(1)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
New York SMSA_____do____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Total 232 SMSA's (except N.Y.)_____do____	(1)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
6 other leading SMSA's♂_____do____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
226 other SMSA's_____do____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

PROFITS AND DIVIDENDS (QTRLY.)

Manufacturing corps. (Fed. Trade Comm.):

Net profit after taxes, all industries_____mil. $__	70,366	81,314	16,064	_____	_____	22,189	_____	_____	20,436	_____	_____	22,625	_____	_____	_____	_____
Food and kindred products_____do____	5,575	6,244	1,236	_____	_____	1,707	_____	_____	1,531	_____	_____	1,770	_____	_____	_____	_____
Textile mill products_____do____	828	1,191	225	_____	_____	343	_____	_____	311	_____	_____	312	_____	_____	_____	_____
Paper and allied products_____do____	2,367	2,648	563	_____	_____	719	_____	_____	629	_____	_____	737	_____	_____	_____	_____
Chemicals and allied products_____do____	8,060	9,135	2,020	_____	_____	2,392	_____	_____	2,251	_____	_____	2,472	_____	_____	_____	_____
Petroleum and coal products_____do____	12,179	12,795	2,549	_____	_____	3,152	_____	_____	3,423	_____	_____	3,671	_____	_____	_____	_____
Stone, clay, and glass products_____do____	1,686	2,319	246	_____	_____	655	_____	_____	759	_____	_____	659	_____	_____	_____	_____
Primary nonferrous metal_____do____	873	1,331	191	_____	_____	376	_____	_____	303	_____	_____	461	_____	_____	_____	_____
Primary iron and steel_____do____	864	2,202	161	_____	_____	791	_____	_____	642	_____	_____	608	_____	_____	_____	_____
Fabricated metal products (except ordnance, machinery, and transport. equip.)____mil. $__	3,458	3,929	720	_____	_____	1,167	_____	_____	1,030	_____	_____	1,012	_____	_____	_____	_____
Machinery (except electrical)_____do____	9,131	10,587	2,067	_____	_____	3,029	_____	_____	2,471	_____	_____	3,020	_____	_____	_____	_____
Elec. machinery, equip., and supplies____do____	5,383	6,623	1,387	_____	_____	1,710	_____	_____	1,757	_____	_____	1,769	_____	_____	_____	_____
Transportation equipment (except motor vehicles, etc.)_____mil. $__	1,989	2,397	498	_____	_____	506	_____	_____	675	_____	_____	718	_____	_____	_____	_____
Motor vehicles and equipment_____do____	6,133	6,197	1,471	_____	_____	2,014	_____	_____	1,020	_____	_____	1,692	_____	_____	_____	_____
All other manufacturing industries_____do____	11,840	13,716	2,730	_____	_____	3,628	_____	_____	3,634	_____	_____	3,724	_____	_____	_____	_____
Dividends paid (cash), all industries_____do____	26,585	28,960	6,392	_____	_____	6,957	_____	_____	7,056	_____	_____	8,555	_____	_____	_____	_____

SECURITIES ISSUED

Securities and Exchange Commission:§

Estimated gross proceeds, total△_____mil. $__	53,618	49,036	5,642	3,458	4,889	5,274	4,056	3,260	4,133	4,768	3,413	4,660	4,749	_____	_____	_____

By type of security:

Bonds and notes, corporate_____do____	37,532	34,245	3,872	2,434	3,157	3,598	3,446	2,353	2,871	2,550	2,436	3,393	3,242	_____	_____	_____
Common stock_____do____	8,034	7,932	674	239	649	819	451	625	800	1,422	577	826	763	_____	_____	_____
Preferred stock_____do____	3,393	2,629	148	235	390	586	57	157	127	47	149	424	171	_____	_____	_____

By type of issuer:

Corporate, total ♀_____mil. $__	48,958	44,806	4,694	2,908	4,196	5,003	3,954	3,135	3,798	4,019	3,162	4,643	4,176	_____	_____	_____
Manufacturing_____do____	12,225	10,308	1,229	549	878	1,471	842	721	971	495	840	1,323	907	_____	_____	_____
Extractive (mining)_____do____	2,589	2,958	187	142	100	334	370	277	168	435	53	465	392	_____	_____	_____
Public utility_____do____	13,199	12,170	1,258	618	1,885	1,244	799	875	1,338	1,619	761	664	989	_____	_____	_____
Transportation_____do____	1,641	1,726	113	252	216	209	261	87	123	67	66	221	89	_____	_____	_____
Communication_____do____	4,353	3,555	291	35	0	349	353	552	215	290	457	460	429	_____	_____	_____
Financial and real estate_____do____	11,565	10,555	1,311	931	811	1,017	1,115	375	561	707	814	978	1,158	_____	_____	_____

State and municipal issues (Bond Buyer):

Long-term_____do____	45,060	46,215	4,430	3,489	5,146	4,122	3,683	6,020	2,289	3,272	4,026	3,854	2,695	2,502	r 4,525	2,826
Short-term_____do____	21,349	21,642	1,556	4,915	985	1,870	1,598	1,760	1,937	1,273	978	2,077	1,596	1,546	r 1,354	4,386

SECURITY MARKETS

Stock Market Customer Financing

Margin credit at brokers and banks, end of month

or year, total_____mil. $__	10,866	_____	11,027	11,424	(1)											
At brokers_____do____	9,993	11,035	10,172	10,510	10,910	11,332	11,438	11,984	12,626	12,307	11,209	11,035	10,955	_____	_____	_____
At banks_____do____	873	_____	855	914	(1)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

Free credit balances at brokers:

Margin accounts_____do____	640	835	630	715	755	700	710	795	825	885	790	835	810	_____	_____	_____
Cash accounts_____do____	2,060	2,510	1,795	2,170	2,395	2,300	2,295	2,555	2,655	2,465	2,305	2,510	2,565	_____	_____	_____

r Revised. ᵖ Preliminary. ¹ Data no longer available. ⊕ Effective February 1976 SURVEY, data revised to reflect: annual review of seasonal factors; regular benchmark adjustment; effect of changes in check collection procedures (Regulation J); and adjustments to include new figures from internationally oriented banking institutions. Monthly revisions back to 1970 are in the Feb. 1976 Federal Reserve Bulletin.
¶At all commercial banks.

⊙Total SMSA's include some cities and counties not designated as SMSA's.
♂Includes Boston, Philadelphia, Chicago, Detroit, San Francisco-Oakland, and Los Angeles-Long Beach. § Data revised back to 1973; no monthly revisions for 1973-75 are available. ♀Includes data not shown separately. △Beginning Jan. 1973, data exclude noncorporate bonds and notes formerly included.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.

FINANCE—Continued

SECURITY MARKETS—Continued

Bonds

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Prices:																
Standard & Poor's Corporation:																
High grade corporate:																
Composite♂ _____dol. per $100 bond..	59.6	55.6	57.0	56.3	55.5	55.2	54.5	56.1	56.1	54.7	54.3	53.3	52.8	52.6	52.2	52.3
Domestic municipal (15 bonds)_____do....	81.3	77.9	82.0	79.8	77.2	75.7	75.2	77.0	77.6	77.4	76.6	73.8	74.6	75.1	75.4	75.6
U.S. Treasury bonds, taxable¶_____do....	56.89	51.26	52.90	52.15	51.34	50.91	49.97	51.32	51.67	50.11	49.54	48.38	47.97	47.97	47.84	47.89
Sales:																
Total, excl. U.S. Government bonds (SEC):																
All registered exchanges:																
Market value_____mil. $..	(¹)															
Face value_____do....																
New York Stock Exchange:																
Market value_____do....																
Face value_____do....																
New York Stock Exchange, exclusive of some stopped sales, face value, total_____mil. $..	4,646.35	4,554.01	378.68	408.75	451.17	410.47	348.52	459.78	393.73	392.14	334.59	320.23	329.73	235.52	275.46	279.00
Yields:																
Domestic corporate (Moody's)§_____percent..	8.43	9.07	8.80	8.88	9.02	9.13	9.22	9.08	9.04	9.20	9.40	9.49	9.65	9.63	9.76	9.81
By rating:																
Aaa_____do....	8.02	8.73	8.47	8.56	8.69	8.76	8.88	8.69	8.69	8.89	9.03	9.16	9.25	9.26	9.37	9 38
Aa_____do....	8.24	8.92	8.66	8.73	8.84	8.95	9.07	8.96	8.92	9.07	9.24	9.33	9.48	9.50	9.61	9.65
A_____do....	8.49	9.12	8.83	8.93	9.05	9.18	9.33	9.18	9.11	9.26	9.48	9.53	9.72	9.68	9.81	9.88
Baa_____do....	8.97	9.49	9.22	9.32	9.49	9.60	9.60	9.48	9.42	9.59	9.83	9.94	10.13	10.08	10.26	10.33
By group:																
Industrials_____do....	8.28	8.90	8.66	8.72	8.84	8.92	9.05	8.95	8.90	9.03	9.21	9.31	9.44	9.42	9.50	9.57
Public utilities_____do....	8.58	9.22	8.93	9.05	9.19	9.33	9.38	9.21	9.17	9.37	9.58	9.67	9.85	9.84	10.02	10.05
Railroads_____do....	8.13	8.64	8.41	8.49	8.60	8.68	8.70	8.72	8.68	8.74	9.01	9.15	9.21	9.22	9.30	9.38
Domestic municipal:																
Bond Buyer (20 bonds)_____do....	5.67	6.07	5.69	5.89	6.19	6.29	6.12	6.16	6.09	6.22	6.29	6.61	6.22	6.42	6.28	6.27
Standard & Poor's Corp. (15 bonds)_____do....	5.56	5.90	5.49	5.71	5.97	6.13	6.18	5.98	5.93	5.95	6.03	6.33	6.25	6.19	6.16	6.14
U.S. Treasury bonds, taxable ⊙_____do....	7.06	7.89	7.63	7.74	7.87	7.94	8.09	7.87	7.82	8.07	8.16	8.36	8.43	8.43	8.45	8.44

Stocks

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Dividend rates, prices, yields, and earnings, common stocks (Moody's):																
Dividends per share, annual rate, composite _____dollars..	(¹)															
Industrials_____do....																
Public utilities_____do....																
Railroads_____do....																
N.Y. banks_____do....																
Property and casualty insurance cos____do....																
Price per share, end of mo., composite_____do....	(¹)															
Industrials_____do....																
Public utilities_____do....																
Railroads_____do....																
Yields, composite_____percent..	(¹)															
Industrials_____do....																
Public utilities_____do....																
Railroads_____do....																
N.Y. banks_____do....																
Property and casualty insurance cos____do....																
Earnings per share (indust., qrtly. at ann. rate; pub. util. and R R., for 12 mo. ending each qtr.):																
Industrials_____dollars..	(¹)															
Public utilities_____do....																
Railroads_____do....																
Dividend yields, preferred stocks, 10 high-grade (Standard & Poor's Corp.)_____percent..	7.61	8.24	8.07	8.06	8.11	8.31	8.42	8.26	8.24	8.29	8.43	8.84	8.79	8.77	8.77	8.75
Prices:																
Dow-Jones averages (65 stocks)_____	301.70	282.59	265.75	276.65	288.45	288.53	287.85	306.73	305.26	294.58	261.61	274.87	283.85	280.06	286.50	294.69
Industrial (30 stocks)_____	894.62	817.17	756.24	794.66	838.56	840.26	831.71	887.93	878.64	857.69	767.73	807.94	837.39	825.18	847.84	864.96
Public utility (15 stocks)_____	110.96	104.24	105.48	105.85	104.85	105.48	105.54	108.51	106.67	103.88	93.93	99.38	102.24	103.75	103.85	103.23
Transportation (20 stocks)_____	225.16	221.80	204.50	214.50	225.96	224.33	227.06	248.96	250.25	234.64	202.30	211.12	216.85	210.41	216.44	231.81
Standard & Poor's Corporation:♂																
Combined index (500 Stocks)_____1941–43=10..	98.20	96.02	88.82	92.71	97.41	97.66	97.19	103.92	103.86	100.58	94.71	96.11	99.71	98.23	100.11	102.07
Industrial, total (400 Stocks) ♀_____do....	108.44	106.16	97.65	102.07	107.70	107.96	107.39	114.99	115.11	111.56	105.23	106.92	111.15	109.49	111.66	113.95
Capital goods (111 Stocks)_____do....	106.79	104.38	93.12	97.86	104.69	106.36	105.16	115.19	113.94	111.37	103.38	105.82	112.08	110.66	114.50	116.32
Consumer goods (189 Stocks)_____do....	85.27	84.80	78.68	82.69	86.84	87.51	86.68	92.45	91.30	88.00	81.71	82.53	84.42	81.80	82.70	84.03
Utilities (40 Stocks)_____do....	54.23	51.64	51.72	52.16	51.71	52.25	52.32	53.35	52.54	51.28	49.04	49.32	50.33	50.74	50.62	50.09
Transportation (20 Stocks)*_____1970=10..	14.06	13.81	12.70	13.30	14.01	13.88	14.00	15.41	15.46	14.62	13.17	13.10	13.46	13.08	13.48	14.18
Railroads (10 Stocks)_____1941–43=10..	49.94	45.35	43.61	44.77	46.05	44.92	43.97	47.26	48.19	47.63	43.56	43.37	44.45	44.92	46.64	49.75
Financial (40 Stocks)*_____1970=10..	11.63	11.53	10.50	11.20	11.87	11.87	11.75	12.85	12.76	12.23	11.21	11.36	11.68	11.28	11.63	11.97
New York City banks (6Stocks)_1941–43=10..	47.34	43.70	38.66	42.04	45.20	44.85	43.62	48.02	48.01	48.13	43.61	43.19	44.12	41.91	42.54	44.24
Banks outside N.Y.C. (10 Stocks)_____do....	98.23	100.99	90.36	97.09	102.28	101.70	100.76	113.19	114.25	111.80	99.93	100.78	102.32	97.54	99.28	101.93
Property-Casualty Insurance (6 Stocks)_do..	112.42	106.96	101.01	107.52	107.88	108.43	106.90	117.48	115.64	110.98	101.35	105.07	108.73	108.22	116.11	118.88

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FINANCE—Continued

SECURITY MARKETS—Continued

Stocks—Continued

Prices—Continued

New York Stock Exchange common stock indexes:

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Composite_____12/31/65=50_	53.69	53.70	49.50	51.75	54.49	54.83	54.61	58.53	58.58	56.40	52.74	53.69	55.77	55.08	56.19	57.50
Industrial_____do__	57.86	58.23	52.77	55.48	59.14	59.63	59.35	64.07	64.23	61.60	57.50	58.72	61.31	60.37	61.89	63.63
Transportation_____do__	41.08	43.50	38.95	41.19	44.21	44.19	44.74	49.45	50.19	46.70	41.80	42.49	43.69	42.27	43.22	45.92
Utility_____do__	40.92	39.22	39.26	39.69	39.47	39.41	39.28	40.20	39.82	39.44	37.88	38.09	38.79	39.21	38.94	38.63
Finance_____do__	55.25	56.65	51.44	55.04	57.96	58.31	57.97	63.28	63.22	60.42	54.95	55.68	57.59	56.09	57.65	59.50

Sales:

Total on all registered exchanges (SEC):

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Market value_____mil. $_	187,203	249,257	15,794	20,335	27,367	24,391	18,318	30,452	27,342	22,016	20,091	16,820	20,752	17,595		
Shares sold_____millions_	7,023	9,602	639	802	1,041	923	669	1,099	1,136	801	788	654	754	629		
On New York Stock Exchange: Market value_____mil. $_	157,250	210,426	13,289	17,316	23,486	20,557	15,229	26,123	22,302	18,476	17,248	14,078	17,868	14,953		
Shares sold (cleared or settled)_____millions_	5,613	7,618	510	650	848	744	534	895	790	639	637	522	615	514		
New York Stock Exchange: Exclusive of odd-lot and stopped stock sales (sales effected)_____millions_	5,274	7,205	498	696	776	671	541	865	672	682	515	493	616	476	650	621

Shares listed, N.Y. Stock Exchange, end of period:

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Market value, all listed shares_____bil. $_	796.64	822.74	760.31	820.76	829.63	818.95	864.13	890.57	883.85	792.03	811.60	822.74	858.65	828.79	877.86	882.00
Number of shares listed_____millions_	26,093	27,573	26,388	26,411	26,588	26,736	26,940	27,012	27,152	27,243	27,401	27,573	27,626	27,726	27,837	27,970

FOREIGN TRADE OF THE UNITED STATES

VALUE OF EXPORTS

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Exports (mdse.), incl. reexports, total♂_____mil. $_	121,212.3	¹143,659.9	12,079.4	12,069.7	12,494.6	12,487.3	10,944.7	11,621.8	12,714.4	13,157.4	13,672.3	13,532.9	12,561.3	12,932.5	15,586.7	
Excl. Dept. of Defense shipments_____do__	121,150.4	¹143,574.6	12,074.2	12,064.2	12,478.9	12,477.3	10,934.0	11,613.9	12,713.1	13,153.6	13,655.4	13,531.0	12,558.1	12,928.5	15,584.4	
Seasonally adjusted ⊕_____do__			11,146.5	11,630.4	11,786.0	12,268.2	11,661.5	12,293.7	13,274.2	12,901.3	13,450.6	13,282.5	13,131.8	13,506.8	14,452.0	
By geographic regions:																
Africa_____do__	5,545.6	5,885.5	529.3	582.7	510.5	567.1	544.4	435.2	486.6	510.2	427.3	504.3	425.6	506.0		
Asia_____do__	31,435.8	39,628.2	3,366.1	3,174.2	3,297.0	3,390.2	3,209.4	3,346.8	3,589.0	3,583.3	3,720.0	3,910.3	3,358.8	3,669.6		
Australia and Oceania_____do__	2,876.5	3,462.1	253.2	233.2	293.6	289.7	256.8	260.6	355.8	354.7	433.2	303.9	395.9	274.1		
Europe_____do__	37,304.2	43,614.9	3,723.9	3,846.8	2,726.0	3,690.2	3,076.2	3,467.7	3,829.2	3,786.4	4,308.4	4,154.0	4,048.3	4,222.2		
Northern North America_____do__	25,791.4	28,373.1	2,412.0	2,451.8	2,654.7	2,612.6	1,995.5	2,143.8	2,397.0	2,806.0	2,583.7	2,512.3	2,424.8	2,378.9		
Southern North America_____do__	8,676.5	11,026.5	898.4	867.7	926.4	922.7	868.9	969.9	956.6	1,033.1	1,109.6	1,051.6	1,028.0	1,041.9		
South America_____do__	9,283.5	10,989.5	896.0	840.0	970.8	932.2	927.9	901.6	1,047.4	981.2	1,023.5	1,072.6	879.9	839.8		
By leading countries:																
Africa:																
Egypt_____do__	982.4	1,134.1	111.4	129.6	75.2	118.9	110.7	80.8	86.7	86.6	80.6	115.6	76.7	130.3		
Republic of South Africa_____do__	1,054.4	1,079.6	81.5	91.5	94.5	89.5	76.1	90.7	92.2	118.0	90.6	112.3	85.9	103.5		
Asia; Australia and Oceania:																
Australia, including New Guinea_____do__	2,375.6	2,941.9	209.8	193.0	249.7	243.2	219.4	216.4	312.5	296.6	382.7	254.7	340.7	232.2		
India_____do__	778.6	947.9	75.9	75.8	65.8	128.8	84.7	70.1	86.7	49.0	63.6	84.7	61.2	110.4		
Pakistan_____do__	292.7	495.7	72.9	46.8	35.5	30.2	16.3	40.0	54.8	48.9	21.1	64.9	42.0	73.6		
Malaysia_____do__	560.7	728.4	59.7	54.8	56.6	58.4	72.6	59.4	70.9	69.5	58.0	66.4	58.0	61.3		
Indonesia_____do__	763.2	751.4	69.1	57.6	55.2	89.3	59.2	53.8	56.2	60.0	48.1	53.1	44.4	51.7		
Philippines_____do__	875.9	1,040.0	79.4	76.6	90.0	91.8	88.2	87.3	88.8	87.1	109.3	99.6	112.6	100.4		
Japan_____do__	10,528.9	12,885.1	1,015.9	969.9	1,009.3	1,046.1	1,046.7	1,092.3	1,193.5	1,248.9	1,369.1	1,280.8	1,225.2	1,365.4		
Europe:																
France_____do__	3,503.2	4,166.3	325.3	340.8	325.1	338.6	280.1	415.2	395.5	373.9	431.4	375.2	443.5	368.7		
German Democratic Republic (formerly E. Germany)_____mil. $_	36.1	170.4	5.6	2.2	18.8	21.5	.3	11.5	15.4	17.2	30.6	23.7	9.9	6.6		
Federal Republic of Germany (formerly W. Germany)_____mil. $_	5,988.8	6,956.9	625.4	544.3	493.2	518.3	472.7	542.2	802.6	668.4	694.7	685.4	626.5	606.5		
Italy_____do__	2,789.6	3,360.4	280.6	299.2	291.8	342.5	258.0	222.6	275.1	302.0	286.5	373.0	314.0	315.6		
Union of Soviet Socialist Republics_____do__	1,627.5	2,252.3	241.7	308.3	356.5	265.4	170.9	163.0	97.0	96.5	79.4	121.2	152.1	174.5		
United Kingdom_____do__	5,950.9	7,118.7	635.1	791.2	533.7	574.2	460.6	534.0	575.9	593.1	761.5	620.6	772.4	812.3		
North and South America:																
Canada_____do__	25,788.1	28,371.6	2,411.9	2,451.8	2,654.6	2,612.5	1,995.4	2,143.8	2,396.9	2,805.9	2,583.6	2,512.1	2,424.7	2,378.7		
Latin American Republics, total♀_____do__	16,371.1	20,182.7	1,631.6	1,562.6	1,729.2	1,708.2	1,662.7	1,720.5	1,843.7	1,853.9	1,952.3	1,950.5	1,753.5	1,720.2		
Argentina_____do__	731.1	841.8	53.0	60.5	70.0	55.1	73.3	67.5	76.2	83.1	79.3	121.3	147.9	84.3		
Brazil_____do__	2,489.8	2,978.3	237.8	224.1	266.0	262.4	275.7	251.8	278.6	239.1	289.2	253.8	186.6	207.9		
Chile_____do__	520.2	724.6	38.5	42.5	56.2	64.4	76.3	69.5	77.2	70.7	71.1	90.3	53.4	56.9		
Colombia_____do__	782.0	1,046.0	81.7	87.4	73.3	78.4	73.3	81.0	96.1	122.7	111.1	116.1	80.0	91.2		
Mexico_____do__	4,806.1	6,680.5	515.2	505.0	535.2	547.9	543.3	597.9	598.8	663.2	705.3	663.9	659.4	678.3		
Venezuela_____do__	3,170.5	3,726.9	336.0	301.5	357.0	338.6	289.6	292.3	375.9	316.3	327.6	320.4	281.1	265.9		
Exports of U.S. merchandise, total♂_____do__	119,005.5	141,154.2	11,835.8	11,859.6	12,250.0	12,271.7	10,780.0	11,429.3	12,505.7	12,926.4	13,433.5	13,303.9	12,352.5	12,708.7	15,300.1	
Excluding military grant-aid_____do__	118,943.7	141,068.9	11,830.5	11,854.1	12,234.3	12,261.7	10,769.4	11,421.4	12,504.4	12,922.6	13,416.5	13,302.1	12,349.4	12,704.7	15,297.8	
Agricultural products, total_____do__	23,671.0	29,406.9	2,519.4	2,508.0	2,729.3	2,639.8	2,133.8	2,391.1	2,268.0	2,665.8	2,806.7	2,738.3	2,431.9	2,356.4		
Nonagricultural products, total_____do__	94,291.8	111,747.2	9,316.4	9,351.6	9,520.7	9,631.9	8,646.2	9,038.2	10,237.7	10,260.6	10,626.8	10,565.6	9,920.6	10,352.3		
By commodity groups and principal commodities:																
Food and live animals♀_____mil. $_	14,115.7	¹18,333.2	1,465.7	1,472.8	1,684.2	1,737.1	1,540.6	1,716.2	1,645.7	1,597.9	1,513.7	1,555.2	1,313.3	1,314.3	1,581.0	
Meats and preparations (incl. poultry)_do__	796.9	957.8	75.3	78.1	77.6	74.1	64.8	90.7	93.2	94.4	95.0	88.6	78.8	77.2		
Grains and cereal preparations_____do__	8,754.8	¹11,634.0	920.1	942.7	1,168.0	1,193.0	1,008.5	1,107.2	1,049.2	937.8	885.2	945.4	766.9	788.6		
Beverages and tobacco_____do__	1,846.8	¹2,292.8	213.6	144.3	143.6	141.5	161.6	213.3	176.9	251.3	281.1	259.7	135.4	171.2	223.2	
Crude materials, inedible, exc. fuels♀_____do__	13,086.3	¹15,552.8	1,337.5	1,388.6	1,466.5	1,353.9	992.5	1,083.4	1,111.9	1,470.4	1,678.4	1,556.5	1,550.4	1,513.5	1,837.5	
Cotton, raw, excl. linters and waste_____do__	1,529.5	1,739.6	203.8	182.8	143.8	154.2	132.2	153.7	114.4	84.7	112.5	154.3	175.0	192.4		
Soybeans, exc. canned or prepared_____do__	4,393.2	5,210.4	431.5	513.3	583.4	468.2	238.6	271.9	262.6	593.2	696.7	493.7	557.3	303.5		
Metal ores, concentrates, and scrap_____do__	1,197.0	1,838.9	112.5	149.9	149.5	162.3	152.0	162.1	179.8	176.6	201.4	202.1	182.5	201.9		

ʳ Revised.   ¹ Beginning Jan. 1978, data are based on a new classification system and include nonmonetary gold; the overall total and the commodity groups (but not the items within the groups) have been revised back to Jan. 1977 to reflect these changes.   ♂ Data may not equal the sum of the geographic regions, or commodity groups and principal commodities, because of revisions to the totals not reflected in the component items.   ♀ Includes data not shown separately.   ⊕ Effective Feb. 1979 SURVEY, seasonally adjusted data have been revised to reflect sums of commodity components; comparable data prior to Dec. 1977 will be shown later.

FOREIGN TRADE OF THE UNITED STATES—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.
VALUE OF EXPORTS—Continued																
Exports of U.S. merchandise—Continued																
By commodity groups and principal commodities—Continued																
Mineral fuels, lubricants, etc. ♀ mil. $	4,183.6	¹3,878.3	165.2	284.5	363.6	424.0	321.7	335.4	348.0	422.1	465.9	417.9	350.2	292.0	435.7	467.0
Coal and related products do	2,730.4	2,122.6	24.5	134.7	235.1	289.8	180.2	181.7	176.7	256.1	317.8	236.3	202.4	154.0		
Petroleum and products do	1,275.6	1,561.3	119.4	137.6	112.9	121.1	118.9	139.1	156.8	152.7	137.3	163.3	138.2	119.7		
Oils and fats, animal and vegetable do	1,308.7	¹1,521.3	141.5	145.4	119.3	132.1	130.7	120.9	156.3	113.9	121.0	147.0	145.8	173.2	171.3	129.6
Chemicals do	10,812.3	¹12,618.3	1,031.1	971.3	1,018.7	1,063.4	1,077.2	1,149.1	1,197.9	1,085.0	1,174.4	1,137.0	1235.6	1,155.6	1,552.3	1,289.8
Manufactured goods ♀¶ do	10,857.0	¹12,430.2	1,067.6	988.6	1,100.4	1,057.2	939.4	1,024.7	1,132.5	1,120.8	1,134.3	1,186.6	1,121.5	1,135.3	1,384.1	1,228.5
Textiles do	1,958.9	2,225.4	173.4	171.1	192.9	189.7	164.2	180.9	202.5	212.6	230.9	224.0	219.0	222.6		
Iron and steel do	1,660.5	1,713.9	136.0	129.0	146.6	152.8	129.4	149.3	149.7	164.3	149.0	174.7	153.7	157.2		
Nonferrous base metals do	1,058.4	1,047.8	84.6	73.3	86.2	88.6	80.7	86.1	119.1	88.2	104.4	104.7	128.0	113.5		
Machinery and transport equipment, total mil. $	50,247.6	¹59,257.9	5,140.1	5,095.1	5,120.6	5,103.3	4,478.9	4,592.7	5,141.5	5,584.4	5,497.3	5,713.5	5,040.1	5,394.3	6,325.1	5,843.9
Machinery, total ♀ do	32,516.6	37,022.3	3,289.7	3,127.9	3,239.3	3,088.0	2,912.3	2,933.3	3,211.4	3,358.1	3,296.7	3,553.8	3,160.7	3,324.3		
Agricultural do	1,871.1	2,151.5	222.9	224.5	221.2	196.3	166.3	146.0	148.4	158.4	167.3	193.0	183.1	184.2		
Metalworking do	730.3	1,188.4	113.1	112.4	85.2	102.4	92.5	102.8	89.0	100.0	100.4	121.5	89.3	111.6		
Construction, excav. and mining do	4,405.5	681.8	66.5	59.8	62.7	56.4	51.2	47.5	49.0	50.7	52.3	66.0	79.6	74.9		
Electrical do	10,285.3	6,966.9	597.4	587.7	616.2	591.1	549.1	581.8	624.4	628.4	603.5	636.3	609.8	642.3		
Transport equipment, total do	18,520.0	22,248.0	1,854.7	1,970.3	1,892.9	1,987.1	1,574.5	1,666.4	1,930.7	2,228.3	2,200.6	2,160.3	2,879.7	2,072.0		
Motor vehicles and parts do	11,796.5	13,234.9	1,181.6	1,203.7	1,247.3	1,201.9	873.2	878.5	1,124.4	1,330.3	1,207.2	1,135.4	1,108.6	1,250.5		
Miscellaneous manufactured articles do	8,233.9	¹10,177.1	878.2	854.3	908.6	856.9	777.5	855.8	891.1	953.1	925.1	921.6	873.2	916.8	1,133.2	965.3
Commodities not classified do	4,313.6	¹5,006.8	389.9	509.1	309.0	392.4	349.2	329.9	702.5	323.9	625.3	407.2	584.0	638.6	684.5	688.1
VALUE OF IMPORTS																
General imports, total do	147,685.0	¹172,025.5	14,547.3	14,486.0	14,199.2	14,514.5	14,703.9	14,024.0	14,416.9	15,118.3	15,054.9	14,956.3	15,846.3	13,776.3	15,764.8	
Seasonally adjusted ⊕ do			14,004.1	14,491.5	14,008.5	13,970.3	14,544.7	14,132.6	14,819.7	14,851.6	14,824.7	15,031.8	16,231.1	14,806.3	15,273.3	16,035.8
By geographic regions:																
Africa do	17,120.9	16,898.3	1,409.8	1,407.2	1,310.5	1,261.2	1,355.6	1,430.7	1,465.4	1,425.0	1,637.7	1,481.6	1,738.6	1,341.2		
Asia do	49,312.0	58,300.3	4,702.6	4,924.2	4,640.3	5,013.7	5,148.7	5,153.2	5,089.6	5,092.3	4,863.0	4,872.8	5,364.6	4,559.1		
Australia and Oceania do	1,727.7	2,351.0	174.9	209.6	192.4	201.7	198.4	176.8	234.2	209.9	252.9	200.6	230.5	219.9		
Europe do	28,801.5	37,987.4	3,443.1	3,285.3	3,088.5	3,155.7	3,421.2	3,140.0	2,904.6	3,321.3	3,293.9	3,298.8	3,263.8	2,710.5		
Northern North America do	29,617.8	33,550.6	2,806.2	2,780.3	3,049.8	2,991.2	2,665.3	2,376.2	2,759.4	3,116.9	3,030.4	3,051.5	2,914.4	2,885.5		
Southern North America do	11,689.4	12,622.6	1,067.5	1,008.2	1,074.4	1,074.1	1,049.9	1,005.2	1,056.8	1,024.0	1,075.7	1,117.6	1,226.7	1,151.4		
South America do	9,389.8	10,307.5	942.4	870.6	842.5	816.3	864.2	741.1	906.6	928.0	900.9	932.4	1,106.8	908.1		
By leading countries:																
Africa:																
Egypt do	170.0	105.0	15.6	2.0	10.5	3.4	8.9	1.7	15.3	4.8	14.1	27.2	16.9	7.5		
Republic of South Africa do	1,261.1	2,258.9	186.4	141.7	189.4	146.3	148.6	169.1	228.1	208.0	349.8	210.7	197.4	161.7		
Asia; Australia and Oceania:																
Australia, including New Guinea do	1,266.2	1,728.3	128.5	152.4	139.7	143.8	139.2	137.9	166.5	155.1	190.2	142.2	178.8	170.2		
India do	776.0	979.5	110.5	90.8	88.0	78.3	81.6	91.7	83.6	85.6	75.8	56.9	91.8	76.9		
Pakistan do	56.0	83.7	6.0	7.2	7.7	7.4	9.2	6.5	6.6	10.2	7.9	6.4	9.6	11.0		
Malaysia do	1,318.2	1,519.1	141.6	121.6	120.1	154.9	119.4	149.8	143.5	120.3	125.9	138.8	184.3	126.7		
Indonesia do	3,475.1	3,606.9	312.9	338.5	225.1	358.5	346.4	314.9	291.5	305.9	277.3	335.6	293.7	222.9		
Philippines do	1,109.5	1,206.9	86.6	95.4	96.5	97.6	101.8	103.9	118.1	110.9	109.9	114.2	122.0	93.3		
Japan do	18,549.7	24,457.8	2,103.7	2,181.9	2,010.1	2,048.9	2,217.2	2,065.5	2,064.8	2,120.4	2,024.6	1,993.9	2,247.3	1,865.4		
Europe:																
France do	3,032.4	4,053.7	361.8	376.3	361.2	316.3	396.1	321.6	278.7	337.6	349.3	362.6	360.3	345.8		
German Democratic Republic (formerly E. Germany) mil. $	16.7	35.2	4.8	4.1	3.5	1.2	2.5	4.1	2.6	2.7	2.2	2.2	2.3	2.7		
Federal Republic of Germany (formerly W. Germany) mil. $	7,238.3	9,960.8	876.6	875.3	758.6	780.8	940.3	839.4	704.8	836.4	910.3	896.0	869.9	682.0		
Italy do	3,036.7	4,102.5	360.6	344.6	335.4	357.7	376.2	391.0	326.6	343.2	375.5	374.2	372.9	308.7		
Union of Soviet Socialist Republics do	452.9	540.3	98.2	57.1	13.6	46.1	21.6	54.6	23.1	110.5	37.5	31.9	25.0	19.1		
United Kingdom do	5,141.0	6,513.3	566.4	553.8	568.1	597.6	553.0	537.7	529.8	576.8	533.8	532.8	555.6	405.4		
North and South America:																
Canada do	29,598.6	33,529.4	2,802.4	2,777.6	3,047.4	2,988.4	2,664.7	2,372.8	2,757.9	3,115.5	3,028.7	3,051.1	2,914.2	2,882.8		
Latin American Republics, total ♀ do	16,450.3	18,560.1	1,592.8	1,509.3	1,546.8	1,507.8	1,538.7	1,378.2	1,571.9	1,639.0	1,643.9	1,749.1	1,887.2	1,753.5		
Argentina do	392.3	563.3	41.7	49.7	54.5	47.3	52.6	43.1	56.6	49.8	47.5	49.0	51.6	52.7		
Brazil do	2,240.5	2,831.3	216.2	231.6	256.0	215.2	265.2	176.7	207.8	283.9	264.8	287.3	339.5	220.1		
Chile do	272.7	385.3	31.1	56.0	39.5	35.7	32.1	18.9	25.7	32.7	22.8	17.0	25.0	18.7		
Colombia do	819.4	1,043.9	90.3	66.3	68.9	81.4	70.4	85.6	111.5	124.1	104.6	80.9	92.3	100.2		
Mexico do	4,694.2	6,092.8	451.0	460.9	511.8	480.5	471.5	495.4	521.6	531.2	583.0	641.1	590.0	656.8		
Venezuela do	4,084.4	3,545.1	411.0	343.7	268.4	286.2	260.6	248.3	329.6	271.4	272.5	308.2	412.0	332.4		
By commodity groups and principal commodities:																
Agricultural products, total mil. $	13,538.3	14,960.8	1,405.7	1,346.7	1,290.5	1,168.3	1,192.9	1,021.2	1,107.9	1,231.0	1,302.2	1,409.3	1,514.0	1,255.7		
Nonagricultural products, total do	133,278.4	157,064.7	13,141.6	13,139.4	12,908.7	13,346.1	13,511.0	13,002.8	13,309.1	13,887.3	13,752.7	13,547.0	14,332.3	12,520.6		
Food and live animals ♀ do	12,557.8	¹13,520.6	1,257.5	1,161.5	1,143.4	1,045.9	1,126.1	924.0	1,048.9	1,152.2	1,168.7	1,254.1	1,278.3	1,102.5	1,242.6	1,325.7
Cocoa beans do	485.5	667.0	92.2	53.3	54.8	38.8	46.8	43.5	23.0	40.4	63.7	74.5	103.0	91.6		
Coffee do	3,860.9	3,727.8	383.6	345.0	285.8	256.5	259.9	210.1	238.6	329.5	317.0	306.5	309.1	242.2		
Meats and preparations do	1,273.2	1,856.0	148.4	171.0	155.3	155.0	153.2	125.7	158.5	175.3	199.2	182.1	208.8	200.1		
Sugar do	1,079.1	723.0	43.6	14.5	59.7	69.2	110.4	59.8	97.1	65.4	59.4	59.4	64.0	41.1		
Beverages and tobacco do	1,669.4	¹2,221.4	174.7	201.5	189.2	212.7	177.4	170.2	168.2	211.5	209.6	205.9	204.8	156.2	221.9	205.3
Crude materials, inedible, exc. fuels ♀ do	8,486.2	¹9,333.6	768.5	712.4	841.4	769.8	788.0	817.4	829.3	831.2	843.2	806.9	812.7	738.0	859.3	870.1
Metal ores do	2,234.4	2,850.2	218.5	177.5	233.1	230.8	236.8	266.9	279.9	272.7	307.3	242.4	231.1	187.8		
Paper base stocks do	1,252.4	1,154.2	91.7	84.0	108.9	85.3	91.7	91.0	88.9	104.0	111.3	113.0	108.8	115.4		
Textile fibers do	225.1	247.8	21.8	23.2	19.4	21.9	28.6	23.7	17.1	17.2	21.0	14.8	22.7	16.8		
Rubber do	650.3	684.7	62.5	72.8	66.7	47.2	43.0	64.3	72.8	52.7	46.5	74.4	81.1	72.5		
Minerals fuels, lubricants, etc do	44,537.2	¹42,105.2	3,431.2	3,513.5	3,234.1	3,471.5	3,380.1	3,677.1	3,698.9	3,491.6	3,536.2	3,746.3	4,228.0	3,524.9	3,947.9	4,240.6
Petroleum and products do	41,526.1	39,108.9	3,194.2	3,246.4	2,954.0	3,235.3	3,140.7	3,448.8	3,471.8	3,260.2	3,301.6	3,465.2	3,935.2	3,248.6		
Oils and fats, animal and vegetable do	530.7	¹511.1	46.0	42.7	51.5	46.7	49.4	43.0	30.2	40.9	51.7	33.0	89.5	50.6	55.7	44.2
Chemicals do	4,970.4	¹6,427.4	604.2	611.6	583.9	547.2	546.9	514.9	537.9	541.4	512.5	535.3	532.2	440.5	655.1	648.1
Manufactured goods ♀¶ do	21,367.0	¹27,237.3	2,334.1	2,383.0	2,359.3	2,301.0	2,418.3	2,218.6	2,215.4	2,344.5	2,373.4	2,111.5	2,255.8	2,120.7	2,424.0	2,251.0
Iron and steel do	5,804.4	7,259.3	593.9	666.5	538.4	516.4	636.8	637.9	593.9	619.2	738.5	555.5	543.8	534.5		
Newsprint do	1,871.8	2,100.7	177.1	177.2	190.0	194.1	195.7	172.5	164.7	180.1	178.0	158.8	170.6	189.0		
Nonferrous metals do	3,938.4	5,121.9	465.1	480.6	509.8	494.9	433.2	356.5	344.3	422.0	384.1	383.1	424.4	403.8		
Textiles do	1,772.4	2,200.1	191.6	199.5	188.3	186.1	192.2	176.2	175.3	184.2	175.7	170.0	193.9	154.1		

ʳ Revised.　　¹ See corresponding note for p. S-22.　　♀ Includes data not shown separately.

¶ Manufactured goods—classified chiefly by material.
⊕ See corresponding note on p. S-22.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.

FOREIGN TRADE OF THE UNITED STATES—Continued

VALUE OF IMPORTS—Continued

General imports—Continued
By commodity groups and principal commodities—Continued

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Machinery and transport equipment....mil. $..	36,406.8	b47,625.6	4,050.7	4,085.5	4,020.4	4,132.9	4,108.2	3,578.5	3,832.0	4,294.6	4,238.3	4,318.7	4,515.9	3,932.6	4,438.3	
Machinery, total ♀...do..	17,663.8	24,404.0	1,979.7	2,003.1	2,011.6	2,073.3	2,217.6	2,046.5	2,077.1	2,277.2	2,162.8	2,183.3	2,206.2	1,971.0		
Metalworking...do..	433.5	946.7	75.2	73.8	80.5	69.5	86.4	91.0	82.1	76.8	80.8	93.5	105.8	82.0		
Electrical...do..	8,432.0	5,170.8	407.7	408.4	411.5	446.4	465.2	453.3	467.7	494.0	451.1	480.6	474.1	399.5		
Transport equipment...do..	17,829.9	23,221.6	2,071.0	2,082.3	2,008.8	2,059.6	1,890.6	1,532.0	1,754.9	2,017.4	2,075.5	2,135.4	2,309.8	1,961.6		
Automobiles and parts...do..	15,842.0	20,631.2	1,854.8	1,854.4	1,776.3	1,840.3	1,676.3	1,361.0	1,547.1	1,817.8	1,889.0	1,891.2	1,996.8	1,639.4		
Miscellaneous manufactured articles...do..	13,809.4	b19,062.1	1,511.1	1,439.7	1,469.0	1,651.5	1,782.5	1,756.5	1,751.9	1,827.1	1,799.9	1,560.3	1,619.7	1,426.4	1,569.2	
Commodities not classified...do..	3,335.7	b3,981.1	369.2	334.8	316.0	335.2	327.0	323.6	304.2	383.3	321.4	384.4	309.4	283.9	350.8	

Indexes

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Exports (U.S. mdse., excl. military grant-aid):																
Unit value...1967=100..	210.2	p231.5	p219.4	p223.0	p224.0	p232.2	p231.3	p234.2	p238.8	p237.3	p248.1	p250.7	p250.2	p248.8	p250.5	
Quantity...do..	183.1	p198.8	p211.1	p208.2	p213.9	p206.8	p182.3	p190.9	p205.0	v213.3	p211.7	p207.8	p193.2	p199.9	p239.1	
Value...do..	384.7	p460.3	p463.3	p464.2	p479.0	p408.1	p421.7	p447.2	p489.6	p506.1	p525.3	p520.9	p483.5	p497.4	p599.0	
General imports:																
Unit value...do..	269.9	p292.7	289.4	290.3	292.6	293.6	293.3	295.0	294.3	296.3	303.9	300.9	304.8	309.8	316.1	
Quantity...do..	200.8	p220.1	226.4	224.5	218.4	222.3	225.1	213.4	220.5	228.7	222.8	222.9	232.6	199.1	222.9	
Value...do..	541.9	p644.4	655.2	651.9	639.1	652.7	660.4	629.6	649.0	677.7	677.0	670.6	709.0	616.8	704.5	

Shipping Weight and Value

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Waterborne trade:																
Exports (incl. reexports):																
Shipping weight...thous. sh. tons..	274,413	300,037	21,712	24,142	28,057	29,487	24,969	26,001	26,260	26,536	28,372	27,428	22,948			
Value...mil. $..	65,376	77,289	6,431	6,313	6,912	6,842	5,989	6,385	6,646	6,958	7,356	7,402	6,508			
General imports:																
Shipping weight...thous. sh. tons..	612,798	592,240	47,200	47,681	47,176	47,840	50,703	53,652	56,196	49,811	51,404	49,982	53,870			
Value...mil. $..	103,037	115,484	9,680	9,838	9,400	9,657	10,143	9,880	9,780	9,850	9,759	9,685	10,928			

TRANSPORTATION AND COMMUNICATION

TRANSPORTATION
Air Carriers (Scheduled Service)

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Certificated route carriers:																
Passenger-miles (revenue)...bil..	194.75	226.78	18.45	17.58	17.96	20.51	22.48	23.70	19.03	18.81	17.75	p19.39	p19.12	p17.58		
Passenger-load factor §...percent..	56.2	61.5	60.6	59.9	62.1	67.6	68.9	71.1	60.2	58.2	57.3	p58.4	p57.4	p58.0		
Ton-miles (revenue), total¶...mil..	26,100	29,679	1,460	2,344	2,363	2,630	2,811	2,972	2,515	2,536	2,414	p2,545	p2,445	p2,275		
Operating revenues (quarterly) ♀ ⊙...mil. $..	19,925	22,887	5,115			5,708			6,308			5,756				
Passenger revenues...do..	16,274	18,812	4,226			4,660			5,230			4,697				
Cargo revenues...do..	1,719	1,985	432			492			520			541				
Mail revenues...do..	390	383	89			90			86			118				
Operating expenses (quarterly)⊙...do..	19,017	21,512	5,011			5,258			5,603			5,639				
Net income after taxes (quarterly)⊙...do..	731	1,184	63			405			629			87				
Domestic operations:																
Passenger-miles (revenue)...bil..	156.61	182.67	15.32	14.32	14.46	16.53	17.74	18.93	14.78	15.03	14.44	15.66	15.22	a p14.54	a p16.52	a p14.22
Cargo ton-miles...mil..	3,125	3,506	309	293	293	300	281	316	308	323	309	p287	p265	p253		
Mail ton-miles...do..	751	808	74	68	68	64	59	65	65	66	67	p89	p67	p62		
Operating revenues (quarterly)⊙...mil. $..	15,821	18,184	4,151			4,556			4,902			4,575				
Operating expenses (quarterly)⊙...do..	15,165	17,151	4,053			4,205			4,406			4,486				
Net income after taxes (quarterly)⊙...do..	497	858	67			311			433			47				
International operations:																
Passenger-mile (revenue)...bil..	36.61	44.11	3.12	3.25	3.50	3.98	4.73	4.78	4.25	3.78	3.31	p3.73	p3.90	p3.05		
Cargo ton-miles...mil..	2,302	2,314	199	193	177	187	197	193	211	234	226	p187	p173	p175		
Mail ton-miles...do..	397	374	33	32	30	28	27	28	29	32	37	p43	p28	p27		
Operating revenues (quarterly)⊙...mil. $..	4,104	4,703	964			1,152			1,406			1,181				
Operating expenses (quarterly)⊙...do..	3,852	4,361	958			1,053			1,197			1,153				
Net income after taxes (quarterly)⊙...do..	234	326	-5			94			195			40				

Urban Transit Systems

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Passengers carried...mil..	5,979	³7,636	r693	616	670	654	571	619	646	684	652	609	645	617	724	

Motor Carriers

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Carriers of property, large, class I, qtrly.:*																
Number of reporting carriers...	100	100	100			100			100			100				
Operating revenues, total...mil. $..	²13,853	r16,618	3,569			4,139			4,166			4,701				
Net income, after extraordinary and prior period charges and credits...mil. $..	²452	r495	46			153			154			143				
Tonnage hauled (revenue), common and contract carrier service...mil. tons..	217	236	54			61			58			64				
Freight carried—volume indexes, class I and II intercity truck tonnage (ATA):																
Common and contract carriers of property (qtrly.)♂...average same period, 1967=100..	148		152			167			160							
Common carriers of general freight, seas. adj.† 1967=100..	166.2	181.7	177.3	192.5	182.8	178.5	177.6	177.6	184.3	188.5	186.2	197.1	196.9			

Class I Railroads△

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Financial operations, qtrly. (AAR), excl. Amtrak:																
Operating revenues, total⊕ ♀...mil. $..	r19,947	21,829	r4,770			r5,740			r5,414			5,902				
Freight...do..	r18,658	20,333	4,440			5,368			5,015			5,511				
Passenger, excl. Amtrak...do..	337	356	85			89			91			91				
Operating expenses⊕...do..	r19,299	21,124	4,905			5,375			5,268			5,577				
Tax accruals and rents...do..	3,377															
Net railway operating income...do..	r433	443	r-136			r255			r73			246				
Net income (after taxes)⊕...do..	r1,359	¹260	r1-254			¹223			r¹48			r¹236				

r Revised. p Preliminary. ¹ Before extraordinary and prior period items. ² Annual total; quarterly revisions not available. ³ Beginning Jan. 1978, data are for total unlinked passenger trips; revenue passenger data no longer available. ♀Includes data not shown separately. ¶Applies to passengers, baggage, cargo, and mail carried. § Passenger-miles as a percent of available seat-miles in revenue service reflects proportion of seating capacity actually sold and utilized. ⊙Total revenues, expenses, and income for all groups of carriers also reflect nonscheduled service. *New Series. Source: ICC (no comparable data prior to 1972).

♂Indexes are comparable for the identical quarter of each year (and from year to year). △Effective 1976, defined as those with annual revenues of $50 million or more; restated 1977 data reflect changes. ⊕Natl. Railroad Pass. Corp. (Amtrak) operations (not included in AAR data above), 1975 and 1976 (mil. $): Oper. revenues, 235; 287; net loss, 353; 469 (ICC). ª Domestic trunk operations only (domestic trunks average about 90% of total domestic operations). ᵇ See note 1 for p. S-22. † Effective Mar. 1977 SURVEY, revised back to 1957 to new trading day and seas. adj. factors.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

TRANSPORTATION AND COMMUNICATION—Continued

TRANSPORTATION—Continued

Class I Railroads△—Continued

Traffic:

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Ton-miles of freight (net), total, qtrly_____bil__	ᴾ62.6	_____	192.7	_____	_____	235.8	_____	_____	210.5	_____	_____	227.1	_____	_____	203.4	ᵖ70.6
Revenue ton-miles, qtrly. (AAR)_____do___	826.2	856.2	188.5	_____	_____	203.4										
Revenue per ton-mile_____cents__	2.289					2.344										
Price index for railroad freight____1969=100__	199.1	213.1	207.7	207.8	207.9	208.2	215.2	215.7	215.8	215.8	216.3	231.1	231.7	231.7	232.3	232.7
Passengers (revenue) carried 1 mile_____mil__	10,295					4,921										

Travel

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Hotels and motor-hotels:																
Restaurant sales index____same month 1967=100__	139	157	157	155	164	169	174	163	160	167	154	155	129			
Hotels: Average room sale¶_____dollars__	34.96	38.83	38.09	39.37	39.83	39.14	36.77	38.39	38.20	42.06	39.30	38.02	44.19			
Rooms occupied_____% of total__	65	68	67	74	73	72	66	69	70	77	66	50	61			
Motor-hotels: Average room sale¶_____dollars__	24.65	28.45	27.42	27.07	28.55	28.91	29.28	29.67	29.00	28.99	29.90	29.71	29.69			
Rooms occupied_____% of total__	70	72	73	74	75	78	78	82	75	76	68	54	66			
Foreign travel:																
U.S. citizens: Arrivals⊙_____thous__	8,201	8,903	711	706	718	785	1,024	1,077	742	740	612	584	683	607	747	_____
Departures⊙_____do___	8,198	8,883	721	662	804	917	858	901	910	624	593	714	678	599	752	_____
Aliens: Arrivals⊙_____do___	6,492	7,861	567	550	603	686	925	948	741	640	581	664	672	532	671	_____
Departures⊙_____do___	5,364	6,325	420	420	496	522	545	844	698	539	517	548	555	378	488	_____
Passports issued_____do___	3,107	3,234	379	351	371	380	308	290	196	178	168	156	221	234	338	ᵖ356
National parks, visits§_____do___	69,980	62,910	2,757	3,439	4,986	8,232	12,047	11,037	6,375	5,264	2,732	1,921	1,574	1,695	2,541	3,523

COMMUNICATION

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Telephone carriers:																
Operating revenues ♀_____mil. $__	40,754	45,905	3,788	3,715	3,820	3,828	3,783	3,924	3,942	3,959	3,967	3,953	4,068	3,977	_____	_____
Station revenues_____do___	18,667	20,462	1,683	1,688	1,692	1,694	1,680	1,725	1,765	1,739	1,765	1,744	1,782	1,777	_____	_____
Tolls, message_____do___	16,313	18,630	1,570	1,469	1,574	1,560	1,526	1,636	1,573	1,634	1,588	1,607	1,692	1,562	_____	_____
Operating expenses (excluding taxes)_____do___	26,120	36,314	2,447	2,335	2,470	2,424	2,356	2,532	2,527	2,574	3,413	8,687	2,621	2,550	_____	_____
Net operating income (after taxes)_____do___	7,298	8,191	660	685	673	702	712	703	718	708	662	654	757	737	_____	_____
Phones in service, end of period_____mil__	149.9	150.4	146.1	146.4	146.9	147.2	147.5	146.6	148.9	149.5	149.6	150.4	151.0	151.4	_____	_____
Telegraph carriers:																
Domestic:																
Operating revenues_____mil. $__	554.8	ᶠ76.4	47.9	46.6	49.1	48.1	46.8	50.4	47.9	51.1	49.7	49.5	49.9	ʳ49.9	_____	_____
Operating expenses_____do___	439.6	470.0	35.9	36.6	37.5	37.5	37.0	39.1	37.9	53.9	41.0	41.8	42.8	40.0	_____	_____
Net operating revenues (before taxes)____do___	86.9	85.6	9.2	7.3	9.0	8.5	7.2	8.8	7.5	5.9	6.1	3.9	4.5	7.1	_____	_____
Overseas, total:♂																
Operating revenues_____do___	396.9	454.8	38.7	36.5	38.0	39.2	36.7	39.3	38.0	39.9	39.6	39.3	41.4	37.2	_____	_____
Operating expenses_____do___	279.4	313.5	25.3	24.4	25.0	25.4	24.8	26.0	25.3	31.7	26.8	31.5	27.2	24.7	_____	_____
Net operating revenues (before taxes)____do___	108.4	123.3	11.8	10.4	10.3	11.0	9.6	11.6	11.0	12.1	11.0	6.3	12.5	10.8	_____	_____

CHEMICALS AND ALLIED PRODUCTS

CHEMICALS

Inorganic Chemicals

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Production:																
Aluminum sulfate, commercial (17% Al₂O₃)‡ _____thous. sh. tons__	1,162	1,185	102	95	107	98	98	115	92	101	96	91	92	91	_____	_____
Chlorine gas (100% Cl₂)‡_____do___	10,664	10,805	813	890	875	884	951	925	919	950	971	986	ʳ865	899	_____	_____
Hydrochloric acid (100% HCl)‡_____do___	2,568	2,733	230	253	224	221	237	210	226	232	233	240	ʳ218	231	_____	_____
Phosphorus, elemental‡_____do___	431	440	36	38	37	39	39	33	36	39	39	38	33	37	_____	_____
Sodium carbonate (soda ash), synthetic (58% Na₂O)‡_____thous. sh. tons__	1,812	_____	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(¹¹)			
Sodium hydroxide (100% NaOH)‡_____do___	10,481	10,619	823	867	861	864	941	906	885	918	937	1,001	ʳ889	926	_____	_____
Sodium silicate, enhydrous‡_____do___	781	802	66	64	68	67	62	64	63	73	73	70	ʳ63	59	_____	_____
Sodium sulfate, anhydrous‡_____do___	1,241	1,237	104	115	114	104	97	102	97	107	103	91	ʳ88	98	_____	_____
Sodium trypolyphosphate (100% Na₅P₃O₁₀)‡ _____do___	709	735	61	63	58	59	58	63	60	66	66	65	60	59	_____	_____
Titanium dioxide (composite and pure)‡__do___	679	721	60	67	66	63	63	60	63	60	60	58	57	52	_____	_____
Sulfur, native (Frasch) and recovered:																
Production_____thous. lg. tons__	¹9,389	¹9,557	809	780	826	811	810	795	776	786	790	838	785	716	807	_____
Stocks (producers') end of period_____do___	5,469	5,261	5,389	5,352	5,368	5,437	5,519	5,498	5,472	5,386	5,245	5,260	5,127	5,009	4,783	_____

Inorganic Fertilizer Materials

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Production:																
Ammonia, synthetic anhydrous‡ _____thous. sh. tons__	17,398	16,951	1,435	1,558	1,553	1,424	1,374	1,329	1,296	1,425	1,422	1,536	ʳ1,349	1,249	1,551	_____
Ammonium nitrate, original solution‡_____do___	7,454	7,216	701	689	640	563	512	537	523	649	610	650	ʳ638	573	702	_____
Ammonium sulfate‡_____do___	³1,904	¹²1,757	160	177	168	164	172	182	153	⁸83	(⁶)	155	(⁶)	(⁶)	189	_____
Nitric acid (100% HNO₃)‡_____do___	7,877	8,058	767	736	719	625	604	627	603	733	681	725	ʳ683	647	771	_____
Nitrogen solutions (100% N)‡_____do___	2,640	¹²2,323	227	224	218	210	191	⁹176	⁹168	⁹200	⁹168	⁹169	173	⁹144	212	_____
Phosphoric acid (100% P₂O₅)‡_____do___	8,456	9,563	830	830	⁸22	768	732	803	796	853	825	893	758	780	896	_____
Sulfuric acid (100% H₂SO₄)‡_____do___	35,821	39,648	3,365	3,319	3,410	3,250	3,107	3,350	3,337	3,476	3,459	3,503	3,311	3,289	3,615	_____
Superphosphate and other phosphatic fertilizers (100% P₂O₅):																
Production_____thous. sh. tons__	6,699	7,341	673	627	639	569	573	614	619	651	599	659	ʳ599	594	679	_____
Stocks, end of period_____do___	573	500	506	400	471	494	461	395	379	359	425	500	469	435	359	_____
Potash, deliveries (K₂O)⊕_____do___	⁷6,309	6,833	687	789	692	557	417	598	487	620	549	532	554	467	715	ᵖ813
Exports, total ♀_____do___	23,108	⁴26,247	2,150	1,690	1,831	2,293	2,596	2,651	2,690	1,985	1,781	2,493	¹⁰1,975	2,008	3,864	_____
Nitrogenous materials_____do___	1,169	⁴2,622	192	73	129	148	364	406	354	290	170	176	¹⁰212	216	466	_____
Phosphate materials_____do___	16,741	⁴16,741	1,448	1,321	1,306	1,368	1,431	1,496	1,571	1,347	1,241	1,599	1,048	1,179	1,946	_____
Potash materials_____do___	1,650	⁴1,827	162	58	119	205	210	237	169	122	69	242	195	107	106	_____
Imports:																
Ammonium nitrate_____do___	361	404	54	81	53	37	22	13	14	21	23	18	18	17	31	_____
Ammonium sulfate_____do___	327	326	31	59	26	37	3	11	11	18	34	21	24	17	30	_____
Potassium chloride_____do___	8,229	8,390	851	669	812	849	735	682	619	654	648	716	643	428	779	_____
Sodium nitrate_____do___	157	142	16	13	21	5	15	0	16	15	11	0	16	18	7	_____

ʳ Revised.　　ᵖ Preliminary.　　¹ Annual total; monthly revisions are not available.　　² For month shown.　　³ Reported annual total; see note 6 for this page.　　⁴ Because of an overall revision to the export commodity classification system effective Jan. 1, 1978, data may not be strictly comparable with those for earlier periods.　　⁵ Less than 500 short tons.
⁶ Data are being withheld to avoid disclosing figures from individual companies.　　⁷ See "⊕" note, this page.　　⁸ Excludes data for byproduct (other than coke oven); withheld to avoid disclosure of figures from individual companies.　　⁹ Represents solutions containing ammonia and ammonium nitrate/urea solutions; not comparable with data prior to Aug. 1978.
¹⁰ Beginning Jan. 1979, data include chemically-treated fertilizer and sodium nitrate containing over 16.3% nitrogen by weight; not strictly comparable with data shown for earlier periods.
¹¹ Effective Jan. 1979, data are no longer reported separately.　　¹² Annual total for monthly data where available; not comparable with earlier periods.

△ See "△" note, p. S-24.　　¶ Average daily rent per occupied room, not scheduled rates.　　♀ Includes data not shown separately.　　⊕ Beginning Jan. 1977, data exclude potassium magnesium sulfate, not strictly comparable with those shown for earlier periods.
⊙ Effective 1976, data are compiled by U.S. Dept. of Transportation from INS records and refer to air travel; travel by sea is omitted (for 1973-75, average annual arrivals and departures by sea are as follows—units and order as above: 814; 784; 159; 129).
§ Effective Jan. 1976, data include visits to Voyageurs National Park (no count of visits for earlier periods is available); data for Mar.-July 1976 are restated to delete visits to Platt National Park which was reclassified as a national recreation area, and beginning Jan. 1979, data include visits to Bad Land and Theo. Roosevelt National Parks (formerly classified as recreational areas).
♂ Includes data for Western Union Int. Cable & Wireless.
‡ Monthly revisions back to 1971 are available upon request.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

CHEMICALS AND ALLIED PRODUCTS—Continued

CHEMICALS—Continued

Industrial Gases‡

Production:

Acetylene_____mil. cu. ft__	5,972	5,262	422	450	434	449	402	448	415	468	475	455	428	412	___	___
Carbon dioxide, liquid, gas, and solid _____thous. sh. tons__	2,256	2,287	189	190	200	204	205	210	205	206	180	193	ʳ167	154	___	___
Hydrogen (high and low purity)_____mil. cu. ft__	84,459	90,248	7,809	7,269	7,342	7,186	7,394	7,510	7,762	7,906	7,929	8,509	ʳ7,395	7,163	___	___
Nitrogen (high and low purity)_____do____	331,545	389,382	33,497	31,776	33,235	32,273	31,879	34,001	32,653	34,627	33,165	31,521	ʳ35,509	30,369	___	___
Oxygen (high and low purity)_____do____	392,984	428,014	34,409	33,694	37,805	36,298	36,295	37,554	36,904	38,016	37,605	37,421	ʳ34,291	31,449	___	___

Organic Chemicals♂

Production:

Acetylsalicylic acid (aspirin)_____mil. lb__	¹31.4	32.2	3.0	2.4	3.2	3.0	2.5	2.5	2.5	2.5	2.9	2.8	2.8	2.5	3.0	
Creosote oil_____mil. gal__	¹161.2	¹143.2	13.6	13.1	11.9	13.9	10.1	11.6	12.9	11.8	12.8	12.5	ʳ10.9	10.8	13.9	
Ethyl acetate (85%)_____mil. lb__	¹217.8	¹226.7	17.1	12.4	18.4	22.5	19.8	20.4	17.9	20.8	21.7	20.8	ʳ15.4	24.4	24.0	
Formaldehyde (37% HCHO)_____do____	¹6,046.5	¹6,433.2	571 3	555.1	550.4	549.1	535.8	⁵22.8	546.6	585.0	531.3	548.1	ʳ496.2	484.0	582.9	
Glycerin, refined, all grades_____do____	286.0	290.5	23.4	23.5	26.3	21.8	20.0	29.4	26.4	28.3	24.7	21.9	21.4	ʳ24.2	29.4	
Methanol, synthetic_____mil. gal__	¹971.8	¹957.8	57.7	87.3	78.0	77.3	83.3	79.8	87.9	73.2	60.9	90.0	71.0	87.0	72.2	
Phthalic anhydride_____mil. lb__	¹926.0	¹993.4	85.2	81.5	92.7	93.4	87.2	80.1	79.6	73.9	76.5	94.6	ʳ80.0	76.5	100.6	

ALCOHOL‡

Ethyl alcohol and spirits:

Production_____mil. tax gal__	498.3	506.9	50.4	42.2	31.3	48.7	42.5	45.4	50.5	40.3	38.0	40.7	42.8	41.3	___	___
Used for denaturation_____do____	405.4	ʳ420.2	37.3	32.1	37.2	37.5	25.4	36.6	30.3	40.3	38.6	37.1	36.6	35.0	___	___
Taxable withdrawals_____do____	81.0	90.2	7.5	7.3	7.2	7.5	5.9	7.7	7.4	8.2	7.4	11.6	6.7	5.8	___	___
Stocks, end of period_____do____	71.4	71.2	78.9	80.8	74.6	76.2	85.8	88.4	96.8	76.8	64.6	71.2	66.7	62.2	___	___
Denatured alcohol:																
Production_____mil. wine gal__	223.8	227.7	19.9	17.7	21.3	20.3	17.0	19.9	16.9	21.7	16.6	20.1	21.3	19.0	___	___
Consumption (withdrawals)_____do____	224.6	228.8	19.9	17.7	21.3	20.2	17.0	19.9	17.4	21.4	17.2	20.5	21.6	18.7	___	___
Stocks, end of period_____do____	2.6	2.7	2.8	2.9	2.9	3.0	3.1	3.0	2.6	2.9	2.9	2.7	2.3	2.7	___	___

PLASTICS AND RESIN MATERIALS

Production:

Phenolic resins_____mil. lb__	¹1,797.1	¹1,764.2	154.9	149.1	148.2	143.5	128.8	142.7	151.8	169.5	151.7	138.8	ʳ149.9	ʳ143.4	165.6	
Polyethylene and copolymers_____do____	¹10,100.1	¹11,083.4	916.7	905.2	915.4	900.8	937.1	960.4	962.2	967.0	937.5	961.2	896.4	922.6	1,042.4	
Polypropylene_____do____	¹2,705.8	¹2,969.1	253.0	226.8	232.3	232.2	232.0	260.5	257.3	246.8	268.2	244.3	ʳ282.2	267.5	307.7	
Polystyrene and copolymers_____do____	¹5,203.0	¹5,579.8	467.1	474.9	479.6	483.4	450.5	427.5	473.4	477.8	434.8	481.5	ʳ504.6	ʳ467.6	569.9	
Polyvinyl chloride and copolymers_____do____	¹5,267.3	¹5,653.8	477.2	481.0	501.6	480.6	458.1	469.8	459.1	500.3	479.7	493.5	470.9	473.5	531.2	

MISCELLANEOUS PRODUCTS

Explosives (industrial), shipments, quarterly _____mil. lb__	2,675.1	¹2,821.1	445.6	___	___	809.5	___	___	786.7	___	___	790.4	___	___	628.1	
Paints, varnish, and lacquer, factory shipments:																
Total shipments_____mil. $__	ʳ5,307.5	6,008.1	ʳ³500.6	517.1	589.0	586.2	518.4	589.0	536.0	516.6	470.2	404.3	___	___	___	___
Trade products_____do____	ʳ2,763.3	3,183.1	ʳ³252.8	273.2	324.5	324.7	296.1	336.9	292.7	268.4	238.6	200.5	___	___	___	___
Industrial finishes_____do____	ʳ2,544.2	2,825.0	ʳ³247.8	243.8	264.5	261.5	222.2	252.1	243.3	248.2	231.6	203.8	___	___	___	___

ELECTRIC POWER AND GAS

ELECTRIC POWER

Production (utility and industrial), total _____mil. kw.-hr__

_____mil. kw.-hr__	___	___	___	___	___	___	___	___	___	___	___	___	___	___		___
Electric utilities, total_____do____	ᵖ2,124,078	ᵖ2,203,891	173,157	159,749	175,184	187,408	202,595	205,637	185,597	175,621	176,295	191,703	209,525	186,324	___	___
By fuels_____do____	1,903,643	1,922,953	148,496	134,406	146,409	162,166	178,037	183,505	164,338	155,957	156,292	169,600	184,430	164,982	___	___
By waterpower_____do____	220,435	280,938	24,661	25,343	28,775	25,242	24,558	22,132	21,259	19,664	20,003	22,103	25,094	21,342	___	___
Industrial establishments, total_____do____	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
By fuels_____do____	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
By waterpower_____do____	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___	___
Sales to ultimate customers, total (Edison Electric Institute)_____mil. kw.-hr__	1,950,791	2,017,818	164,064	153,146	153,813	165,403	176,403	181,386	108,454	167,770	160,614	170,554	182,796	___	___	___
Commercial and industrial:																
Small light and power§_____do____	469,227	480,749	38,467	36,001	36,252	40,365	44,071	44,918	44,206	40,144	37,700	39,207	41,615	___	___	___
Large light and power§_____do____	757,168	782,141	60,150	61,706	65,057	67,449	65,894	67,819	68,998	68,723	67,247	66,025	66,261	___	___	___
Railways and railroads_____do____	4,212	4,336	377	336	316	353	335	344	342	343	370	397	403	___	___	___
Residential or domestic_____do____	652,345	679,156	59,283	49,722	46,764	51,533	60,266	62,366	60,883	52,656	49,440	57,458	68,345	___	___	___
Street and highway lighting_____do____	14,418	14,803	1,227	1,170	1,119	1,101	1,129	1,168	1,218	1,285	1,330	1,401	1,359	___	___	___
Other public authorities_____do____	46,242	49,509	3,978	3,643	3,719	4,005	4,103	4,173	4,201	4,009	3,913	5,456	4,177	___	___	___
Interdepartmental_____do____	7,179	7,125	583	568	586	597	606	598	605	609	614	610	637	___	___	___
Revenue from sales to ultimate customers (Edison Electric Institute)_____mil. $__	62,610.0	69,852.9	5,646.4	5,277.1	5,278.2	5,802.3	6,318.6	6,510.8	6,420.2	5,918.6	5,552.0	5,828.2	6,339.5	___	___	___

GAS

Total utility gas, quarterly (American Gas Association):

Customers, end of period, total_____thous__	45,725	46,269	46,172	___	___	45,580	___	___	45,355	___	___	46,269	___	___	___	___
Residential_____do____	42,108	42,623	42,445	___	___	41,984	___	___	41,816	___	___	42,623	___	___	___	___
Commercial_____do____	3,400	3,430	3,490	___	___	3,373	___	___	3,332	___	___	3,430	___	___	___	___
Industrial_____do____	²175	174	183	___	___	172	___	___	169	___	___	174	___	___	___	___
Other_____do____	²42	42	54	___	___	51	___	___	38	___	___	42	___	___	___	___
Sales to customers, total_____tril. Btu__	14,341	14,726	5,312	___	___	3,180	___	___	2,551	___	___	3,683	___	___	___	___
Residential_____do____	4,946	5,083	2,439	___	___	960	___	___	429	___	___	1,254	___	___	___	___
Commercial_____do____	2,409	2,476	1,066	___	___	492	___	___	306	___	___	612	___	___	___	___
Industrial_____do____	²6,711	6,858	1,692	___	___	1,662	___	___	1,758	___	___	1,747	___	___	___	___
Other_____do____	²274	309	115	___	___	66	___	___	59	___	___	70	___	___	___	___
Revenue from sales to customers, total____mil. $__	28,303	31,945	11,166	___	___	6,861	___	___	5,503	___	___	8,416	___	___	___	___
Residential_____do____	11,541	12,857	5,685	___	___	2,517	___	___	1,332	___	___	3,323	___	___	___	___
Commercial_____do____	4,980	5,617	2,330	___	___	1,118	___	___	713	___	___	1,456	___	___	___	___
Industrial_____do____	²11,385	13,046	3,019	___	___	3,128	___	___	3,374	___	___	3,525	___	___	___	___
Other_____do____	²397	425	132	___	___	97	___	___	85	___	___	111	___	___	___	___

ʳ Revised.   ᵖ Preliminary.   ¹ Reported annual total; revisions are not distributed to the monthly data.   ² Beginning 1976, Industrial includes electric generation, prior to 1976, electric generation was included with other.   ³ Monthly revisions back to Oct. 1976 will be shown later.   § Data are not wholly comparable on a year to year basis because of changes from one classification to another.   ♂ Data are reported on the basis of 100 percent content of the specified material unless otherwise indicated.   ‡ Monthly revisions back to 1973 are available upon request.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.

FOOD AND KINDRED PRODUCTS; TOBACCO

ALCOHOLIC BEVERAGES ♀

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Beer:																
Production_____mil. bbl__	170.51	179.09	15.86	15.63	16.56	16.88	16.74	17.61	14.62	14.01	12.71	12.87	13.83	13.57		
Taxable withdrawals_____do____	156.92	162.17	14.18	13.60	15.00	15.82	15.29	16.28	13.72	12.99	12.04	11.57	12.32	12.01		
Stocks, end of period_____do____	12.42	13.76	14.56	15.01	14.97	14.57	19.81	14.33	14.01	13.71	13.50	13.76	14.00	14.06		
Distilled spirits (total):																
Production_____mil. tax gal__	159.31	166.51	11.84	13.69	15.15	14.95	7.63	13.20	14.61	18.78	18.09	15.40	15.08	14.31		
Consumption, apparent, for beverage purposes mil. wine gal__	1 432.56	7 445.02	38.42	33.82	34.36	38.75	32.06	35.77	34.23	37.35	44.52	52.92	32.02			
Taxable withdrawals_____mil. tax gal__	221.12	r 237.69	21.12	20.15	17.44	20.61	15.63	21.30	20.18	25.42	22.42	17.61	18.26	13.69		
Stocks, end of period_____do____	706.68	662.51	690.80	686.68	685.96	683.36	678.12	672.34	669.16	665.18	663.28	662.51	661.03	661.64		
Imports_____mil. proof gal__	112.94	128.60	9.74	11.52	9.29	10.94	9.08	9.90	10.94	14.83	14.13	11.28	8.36	8.12	9.02	
Whisky:																
Production_____mil. tax gal__	80.60	79.12	5.45	6.39	7.77	6.80	3.09	6.06	7.36	8.39	9.21	7.94	8.44	8.85		
Taxable withdrawals_____do____	128.63	r 133.95	12.08	11.58	9.52	11.37	8.68	11.39	12.00	15.12	12.99	8.77	10.09	7.52		
Stocks, end of period_____do____	649.00	600.62	633.43	629.07	627.72	624.89	619.70	614.91	610.95	605.23	601.20	600.62	598.69	599.88		
Imports_____mil. proof gal__	91.15	101.89	7.63	9.04	7.12	8.70	6.99	8.08	8.46	12.14	11.55	8.83	6.36	5.07	6.91	
Rectified spirits and wines, production, total mil. proof gal__	110.52	111.42	10.00	8.68	9.36	9.79	7.46	10.25	9.77	10.49	9.60	8.06	8.34	7.12		
Whisky_____do____	41.48	39.76	3.42	2.81	3.10	3.36	3.03	3.48	3.40	4.49	3.42	2.60	2.58	2.20		
Wines and distilling materials:																
Effervescent wines:																
Production_____mil. wine gal__	22.86	23.04	1.84	1.41	1.94	1.24	1.92	2.55	2.06	2.73	2.59	1.52	1.93	1.66		
Taxable withdrawals_____do____	21.35	20.60	1.25	.98	1.71	.83	1.13	1.76	1.90	3.27	3.25	2.50	1.12	.85		
Stocks, end of period_____do____	8.56	8.25	9.84	10.19	10.67	10.22	10.97	11.58	11.43	8.51	12.56	8.25	8.19	9.95		
Imports_____do____	2.93	4.31	.29	.30	.40	.40	.28	.30	.44	.44	.64	.47	.36	.18	.34	
Still wines:																
Production_____do____	409.75	420.07	4.79	5.70	4.81	4.51	2.53	32.67	140.20	151.16	41.16	22.29	6.40	7.01		
Taxable withdrawals_____do____	310.41	318.80	31.63	25.65	25.62	26.34	23.32	25.43	26.29	29.10	31.17	27.77	26.44	23.94		
Stocks, end of period_____do____	505.49	527.07	434.92	411.29	348.02	355.00	320.44	332.30	431.50	553.44	555.80	527.07	484.25	458.12		
Imports_____do____	65.79	89.77	6.62	7.26	7.98	8.64	8.18	8.06	7.68	8.05	8.38	7.90	7.11	4.50	7.44	
Distilling materials produced at wineries___do____	276.55	244.23	2.45	1.57	1.90	3.56	1.46	32.17	97.78	67.42	16.13	9.47	6.70	4.74		

DAIRY PRODUCTS

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Butter, creamery:																
Production (factory)‡_____mil. lb__	1,085.6	999.0	97.7	98.5	96.7	84.7	73.7	64.2	64.5	71.1	66.7	77.2	97.4	86.6	89.3	
Stocks, cold storage, end of period_____do____	184.9	206.9	235.8	246.2	264.6	282.0	297.7	284.6	266.7	251.8	228.9	206.9	208.6	r 214.7	209.5	211.6
Price, wholesale, 92 score (N.Y.)_____$ per lb__	1.015	1.141	1.059	1.084	1.088	1.093	1.117	1.207	1.220	1.219	1.260	1.258	1.150	1.150	1.195	1.239
Cheese:																
Production (factory), total‡_____mil. lb__	3,357.9	3,516.5	311.8	306.2	328.7	332.9	297.0	284.6	264.9	279.4	276.3	300.1	288.9	276.0	323.0	
American, whole milk‡_____do____	2,042.4	2,093.6	182.9	190.8	208.2	209.3	183.4	167.5	149.2	159.0	153.5	171.8	173.8	166.0	185.3	
Stocks, cold storage, end of period_____do____	468.6	436.4	430.0	447.1	462.5	500.2	498.5	489.7	476.6	455.2	431.0	436.4	436.8	r 446.2	439.9	454.3
American, whole milk_____do____	404.7	357.9	364.7	379.2	393.3	423.4	423.0	416.8	397.2	379.6	357.0	357.9	361.6	r 367.8	363.0	377.4
Imports_____do____	209.4	242.2	16.7	13.6	13.8	13.0	16.4	22.7	19.3	22.0	30.7	45.6	12.8	6.5	10.8	
Price, wholesale, American, single daisies (Chicago)_____$ per lb__	1.187	1.301	1.246	1.259	1.259	1.259	1.260	1.321	1.340	1.394	1.400	1.410	1.410	1.350	1.356	1.374
Condensed and evaporated milk:																
Production, case goods‡_____mil. lb__	818.9	777.2	67.3	68.9	82.4	78.8	73.8	69.0	58.2	58.9	52.3	59.3	58.0	56.8	63.0	
Stocks, manufacturers', case goods, end of month or year_____mil. lb__	75.2	70.3	52.1	57.4	79.4	101.4	120.2	134.4	136.0	113.8	84.4	70.3	66.0	56.4	49.6	
Exports:																
Condensed (sweetened)_____do____	4.1	5 6 37.0	2.6	3.6	3.5	3.2	2.3	2.1	2.4	4.2	2.7	2.4	3.1	3.1	5.0	
Evaporated (unsweetened)_____do____	28.8	(5)														
Fluid milk:																
Production on farms‡_____do____	122,698	121,928	10,523	10,631	11,178	10,851	10,534	10,213	9,733	9,832	9,364	9,788	10,035	9,379	10,555	10,609
Utilization in mfd. dairy products‡_____do____	65,879	64,910	5,871	5,903	6,299	6,295	5,687	5,323	4,854	4,837	4,517	4,833	5,285	5,016	5,748	
Price, wholesale, U.S. average‡_____$ per 100 lb__	9.72	10.58	10.20	10.10	10.00	10.00	10.10	10.50	10.90	11.30	11.60	11.80	11.90	11.90	11.80	p 11,60
Dry milk:																
Production:																
Dry whole milk‡_____mil. lb__	69.4	72.8	7.1	7.4	8.0	6.9	5.9	5.5	5.0	4.9	5.0	5.8	7.2	5.8	8.0	
Nonfat dry milk (human food)‡_____do____	1,106.0	928.8	84.4	96.4	103.0	113.5	98.2	78.6	59.1	49.0	41.9	54.4	55.1	54.9	76.1	
Stocks, manufacturers', end of period:																
Dry whole milk_____do____	6.0	4.4	6.1	7.3	8.4	9.5	9.4	9.3	7.4	5.3	3.7	4.4	4.9	r 4.6	4.3	
Nonfat dry milk (human food)‡_____do____	60.7	40.1	49.8	79.3	87.2	95.0	94.9	73.9	63.6	52.2	36.6	40.1	37.0	r 40.8	51.2	
Exports:																
Dry whole milk_____do____	23.8	5 6 122.8	4.3	5.8	6.0	12.9	31.5	15.1	11.4	8.7	10.0	4.0	3.1	1.4	3.0	
Nonfat dry milk (human food)_____do____	38.8	(5)														
Price, manufacturers' average selling, nonfat dry milk (human food)‡_____$ per lb__	.665	.714	.680	.705	.711	.710	.713	.715	.724	.732	.747	.765	.764	.766	.772	

GRAIN AND GRAIN PRODUCTS

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Exports (barley, corn, oats, rye, wheat)___mil. bu__	2,586.1	6 3,311.2	265.3	271.3	335.8	334.4	288.3	327.6	303.8	260.8	248.7	252.1	202.4	194.7	248.3	
Barley:																
Production (crop estimate)△_____do____	3 420.2	3 447.0			2 4 172.1											
Stocks (domestic), end of period_____do____	329.2	r 388.0	238.0		2 4 104.7				468.3			r 388.0			294.7	
On farms_____do____	218.9	r 273.8	148.9		2 4 104.7				338.7			r 273.8			196.6	
Off farms_____do____	110.3	r 114.2	89.0		2 4 67.4				129.6			r 114.2			98.1	
Exports, including malt §_____do____	72.8	31.3	.3	2.3	3.3	4.4	5.2	5.0	4.3	3.2	1.0	.5	.7	.1	(8)	
Prices, wholesale (Minneapolis):																
No. 2, malting_____$ per bu__	2.45	2.30	2.29	2.38	2.49	2.35	2.12	2.14	2.26	2.18	2.48	2.32	2.23	2.29	2.43	2.52
No. 3, straight_____do____	2.64	2.29	2.27	2.38	2.44	2.34	2.10	2.11	2.29	2.27	2.44	2.37	2.28	2.28	2.44	2.50
Corn:																
Production (crop estimate, grain only)△mil. bu__	3 6,425.5	3 7,081.8			2 2,837.4											
Stocks (domestic), end of period, total_____do____	5,503.0	r 6,198.9	3,877.2		2 1,848.6				4 1,104.0			r 6,198.9			4,420.6	
On farms_____do____	3,824.3	4,517.5	2,517.0		2 988.8				4 659.3			4,517.5			3,098.2	
Off farms_____do____	1,678.7	r 1,681.5	1,360.2		2 988.8				4 444.7			r 1,681.5			1,322.3	
Exports, including meal and flour_____do____	1,596.2	1,975.2	157.0	160.9	207.3	214.3	171.3	180.3	176.4	139.5	153.9	159.1	130.1	124.6	169.6	
Price, wholesale:																
Weighted avg., selected markets, all grades $ per bu__	2.22	2.39	2.44	2.80	2.62	2.52	2.47	2.31	2.24	2.27	2.15	2.34	2.23	2.48	2.46	2.58
Oats:																
Production (crop estimate)△_____mil. bu__	3 750.9	3 601.5														
Stocks (domestic), end of period, total_____do____	565.0	r 563.7	418.7		2 4 310.6				665.7			r 563.7			393.6	
On farms_____do____	482.3	483.2	357.3		2 4 257.1				550.7			483.2			329.2	
Off farms_____do____	82.7	r 80.6	61.3		2 4 53.6				115.0			r 80.6			64.4	
Exports, including oatmeal_____do____	11.2	15.2	.6	.4	1.1	.6	1.8	5.4	.3	1.7	.6	1.4	.3	.2	.4	
Price, wholesale, No. 2, white (Minneapolis) $ per bu__	1.34	1.37	1.34	1.42	1.44	1.36	1.25	1.27	1.37	1.38	1.47	1.44	1.48	1.54	1.56	1.47

r Revised. p Preliminary. 1 Includes Hawaii, not available on a monthly basis; monthly revisions for 1976 will be shown later. 2 Stocks as of June 1. 3 Crop estimate for the year. 4 Previous year's crop; new crop not reported until Oct. for corn and June for barley and oats (beginning of new crop year). 5 Beginning Jan. 1978, data for condensed and evaporated milk are reported under the single heading "total milk and cream, condensed and evaporated"; data for dry whole milk and nonfat dry milk are under the heading "total dry milk, whole and nonfat." 6 See corresponding note for p. S-29. 7 Reported annual total, including Hawaii; monthly data are preliminary and subject to revision. 8 Less than 50 thousand bushels. § Excludes pearl barley. ♀ Scattered monthly revisions back to 1973 are available. ‡ Revised monthly data back to 1973 are available. △ Revised crop estimates for 1970-74 are available.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

FOOD AND KINDRED PRODUCTS; TOBACCO—Continued

GRAIN AND GRAIN PRODUCTS—Con.

	1977 Annual	1978 Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Rice:																
Production (crop estimate)△......mil. bags ♀..	¹ 99.2	¹ 137.8														
California mills:																
Receipts, domestic, rough..........mil. lb..	2,215	1,675	172	93	170	179	69	103	72	240	79	275	124	171	330	213
Shipments from mills, milled rice........do....	1,460	989	99	63	81	140	55	61	109	58	72	126	162	79	151	191
Stocks, rough and cleaned (cleaned basis), end of period..........mil. lb..	214	304	237	226	165	239	229	237	185	277	253	304	222	122	187	139
Southern States mills (Ark., La., Tenn., Tex.):																
Receipts, rough, from producers......mil. lb..	9,557	8,824	266	131	101	109	110	1,005	3,062	1,708	884	822	607	482	563	....
Shipments from mills, milled rice........do....	6,217	6,130	520	463	455	434	385	500	599	654	620	562	509	511	553	....
Stocks, domestic, rough and cleaned (cleaned basis), end of period..........mil. lb..	2,629	2,488	1,933	1,638	1,287	952	684	842	2,184	2,604	2,496	2,488	3,365	1,624	1,977	....
Exports..........do....	4,995	4,972	294	339	364	694	347	325	545	467	371	596	361	416	484	....
Price, wholesale, No. 2, medium grain (Southwest Louisiana)..........$ per lb..	.152	⁷ .177	.215	.205	.190	....	.185	.175	.145	.145	.145	.148	.140	.140	.140	.165
Rye:																
Production (crop estimate)△..........mil. bu..	¹ 17.3	¹ 26.2														
Stocks (domestic), end of period..........do....	9.3	ʳ 16.3	6.1	....	³⁴4.1	....	....	....	24.0	....	....	ʳ 16.3	....	....	12.6	....
Price, wholesale, No. 2 (Minneapolis)..$ per bu..	2.39	2.64	2.95	3.02	3.23	2.96	2.39	2.19	2.37	2.32	2.48	2.52	2.38	2.49	2.32	2.39
Wheat:																
Production (crop estimate), total△......mil. bu..	¹ 2,036	¹ 1,799														
Spring wheat△..........do....	¹ 499	¹ 550														⁹ 1,391
Winter wheat△..........do....	¹ 1,537	¹ 1,248														
Distribution, quarterly ♂..........do....	1,827	2,162	466	....	....	² 351	....	² 839	....	....	ʳ 506	....	....	408		
Stocks (domestic), end of period, total .....do....	1,993.8	ʳ1,631.8	1,527.7	....	³⁴1,176.7	....	....	2,137.0	....	ʳ1,631.8	....	1,224.2				
On farms..........do....	831.3	815.4	639.9	....	³⁴492.9	....	....	1,032.9	....	815.4	....	628.7				
Off farms..........do....	1,162.5	ʳ 816.4	887.8	....	³⁴683.8	....	....	1,104.2	....	ʳ 816.4	....	595.5				
Exports, total, including flour..........do....	905.8	⁶1,289.4	107.4	107.8	124.2	115.1	110.0	136.9	116.5	93.1	91.2	71.3	69.8	78.3	....	
Wheat only..........do....	863.9	1,243.5	103.3	101.8	118.8	108.8	106.1	131.9	118.3	113.0	92.3	90.0	70.4	67.1	75.5	....
Prices, wholesale:																
No. 1, dark northern spring (Minneapolis) $ per bu..	2.80	3.24	3.13	3.32	3.35	3.27	3.18	3.18	3.30	3.39	3.52	3.16	3.32	3.47	3.50	3.54
No. 2, hd. and dk. hd. winter (Kans. City) do....	2.62	3.24	3.16	3.34	3.26	3.20	3.20	3.12	3.27	3.44	3.50	3.46	3.41	3.52	3.56	3.58
Weighted avg., selected markets, all grades $ per bu..	2.88	3.33	3.27	3.37	3.40	3.34	3.22	3.31	3.34	3.51	3.55	3.40	3.30	3.55	3.59	3.54
Wheat flour:																
Production:																
Flour†..........thous. sacks (100 lb.)..	275,784	277,844	24,330	22,554	24,078	23,051	22,335	25,053	22,395	24,843	23,738	21,942	22,817	ʳ21,542	23,351	....
Offal†..........thous. sh. tons..	ʳ 4,878	ʳ 4,855	430	385	417	402	384	ʳ 438	400	436	416	ʳ 381	404	ʳ 374	399	....
Grindings of wheat†..........thous. bu..	618,125	ʳ621,276	54,821	50,478	53,601	51,544	49,749	56,062	50,506	55,348	52,934	ʳ48,893	50,886	ʳ48,163	52,200	....
Stocks held by mills, end of period thous. sacks (100 lb.)..	4,160	3,214	4,096	....	3,459	....	3,342	....	3,214	....	3,477					....
Exports..........do....	17,994	⁸19,711	1,774	2,554	2,297	2,694	1,674	2,145	1,963	1,505	357	486	382	1,165	1,163	....
Prices, wholesale:																
Spring, standard patent (Minneapolis) $ per 100 lb..	7.160	8.012	7.650	8.638	8.388	8.100	8.250	7.938	7.825	7.900	8.400	8.138	7.813	8.038	8.313	8.300
Winter, hard, 95% patent (Kans. City)..do....	6.246	7.467	6.963	8.250	7.463	7.225	7.600	7.575	7.550	7.600	7.925	7.788	7.550	7.775	8.175	8.125
LIVESTOCK																
Cattle and calves:																
Slaughter (federally inspected):																
Calves..........thous. animals..	4,696	3,620	386	304	288	271	261	304	275	287	274	267	265	212	245	....
Cattle..........do....	38,717	36,948	3,243	2,969	3,215	3,052	2,869	3,247	3,027	3,180	3,029	2,834	3,090	2,559	2,670	....
Prices, wholesale:																
Beef steers (Omaha)..........$ per 100 lb..	40.38	52.34	48.66	52.52	57.28	55.38	54.59	52.40	54.26	54.93	53.82	55.54	60.35	64.88	71.04	75.00
Steers, stocker and feeder (Kansas City)..do....	38.74	56.16	51.39	53.81	59.85	57.42	58.67	58.22	60.23	62.06	60.75	64.19	69.95	75.61	82.55	86.83
Calves, vealers (So. St. Paul)†..........do....	48.19	69.24	47.60	69.45	77.26	73.28	75.72	81.66	83.25	81.82	78.60	78.00	80.73	91.48	97.50	104.56
Hogs:																
Slaughter (federally inspected)...thous. animals..	74,018	74,139	6,795	6,213	6,298	5,778	5,402	6,227	6,203	6,576	6,737	6,101	6,393	5,693	7,113	....
Prices:																
Wholesale, average, all weights (Sioux City)⊕ $ per 100 lb..	41.12	48.67	47.77	46.22	49.25	48.19	46.94	48.83	50.34	52.58	48.68	49.73	52.11	54.93	49.66	45.29
Hog-corn price ratio (bu. of corn equal in value to 100 lb. live hog)..........	19.9	22.4	21.8	20.1	20.9	20.9	20.9	24.0	24.0	25.9	23.1	23.0	24.0	24.2	ʳ 22.3	19.8
Sheep and lambs:																
Slaughter (federally inspected)...thous. animals..	6,133	5,169	487	430	451	441	406	438	435	457	413	396	391	354	431	....
Price, wholesale, lambs, average (Omaha) $ per 100 lb..	53.38	63.28	69.38	62.75	71.00	59.50	60.00	59.25	62.50	60.00	59.50	64.00	73.75	71.25	61.25	70.50
MEATS																
Total meats (excluding lard):																
Production, total†..........mil. lb..	39,172	38,119	3,342	3,079	3,269	3,081	2,883	3,274	3,139	3,355	3,345	3,094	3,281	2,758	3,093	....
Stocks, cold storage, end of period ⊙........do....	⁵ 567	724	658	753	760	721	645	581	598	639	715	724	736	ʳ 711	763	787
Exports (meat and meat preparations)....do....	1,315	⁶ 1,338	115	108	108	99	93	119	131	124	119	111	102	95	117	....
Imports (meat and meat preparations)......do....	1,741	2,072	183	202	181	167	161	137	182	184	201	181	201	184	214	....
Beef and veal:																
Production, total†..........do....	25,780	24,610	2,134	1,960	2,118	2,009	1,896	2,147	2,019	2,151	2,083	1,941	2,110	1,735	1,816	....
Stocks, cold storage, end of period ⊙........do....	327	414	370	389	399	382	346	324	342	356	396	414	440	ʳ 413	436	423
Exports..........do....	93	⁶ 388	27	32	30	32	28	35	42	31	32	33	28	31	36	....
Imports..........do....	1,377	1,635	141	161	147	133	123	107	151	141	165	145	160	151	171	....
Price, wholesale, beef, fresh, steer carcasses, choice (600-700 lbs.) (East Coast) ¶..........$ per lb..	.662	.834	.782	.846	.922	.897	.878	.840	.854	.859	.845	.884	.974	⁸ .975	1.046	1.086
Lamb and mutton:																
Production, total†..........mil. lb..	341	300	28	25	26	25	23	25	25	27	25	24	23	22	27	....
Stocks, cold storage, end of period..........do....	10	12	8	9	10	10	12	11	11	12	12	12	11	11	12	12

ʳ Revised. ¹ Crop estimate for the year. ² See "♂" note, this page. ³ Stocks as of June 1. ⁴ Previous year's crop; new crop not reported until June (beginning of new crop year. ⁵ See "⊙" note, this page. ⁶ See corresponding note on p. S-29. ⁷ Ten-month average; Feb. and June prices not available. ⁸ See note "¶" for this page. ⁹ May 1 estimate for 1979 crop. ♀ Bags of 100 lbs. ♂ Data are quarterly except for June (covering Apr. and May) and Sept. (covering June-Sept.). ⊙ Effective April 1977 SURVEY, data beginning Feb. 1976 are restated to exclude cooler meats; comparable earlier data will be shown later. † See corresponding note, p. S-29. ⊕ Effective July 1977 SURVEY, monthly prices are restated through May 1977 to coincide with published annual averages which are for "all weights, excluding sows"; comparable monthly data prior to May 1976 will be shown later. △ Revised crop estimates for 1971-1974 are available. ‡Monthly revisions back to Jan. 1975 will be shown later. ¶ Effective Feb. 1979, prices are for Central U.S. (including East Coast); comparability is not affected.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

FOOD AND KINDRED PRODUCTS; TOBACCO—Continued

MEATS—Continued

Pork (excluding lard):

Production, total†_____mil. lb__	13,051	13,209	1,179	1,093	1,125	1,047	964	1,101	1,095	1,176	1,236	1,129	1,147	1,001	1,251	_____
Stocks, cold storage, end of period△____do____	3 186	242	216	282	281	260	220	179	178	207	245	242	225	r 220	247	279
Exports_____do____	289	6 346	26	25	31	25	23	31	32	35	36	26	23	18	23	_____
Imports_____do____	298	347	35	32	28	26	29	23	23	36	29	29	31	27	33	_____
Prices, wholesale:																
Hams, smoked composite_____$ per lb__	1 .865	.900	.822	.759	.820	.808	.803	.887	.905	1.038	1.086	1.078	.885	.880	.939	.788
Fresh loins, 8-14 lb. average (New York)___do__	.952	1.091	1.022	1.001	1.091	1.129	1.102	1.067	1.147	1.212	1.124	1.097	1.254	1.251	1.119	1.114

POULTRY AND EGGS

Poultry:

Slaughter (commercial production)_____mil. lb__	11,916	12,553	981	901	1,088	1,127	1,052	1,234	1,119	1,229	1,081	978	1,057	878	_____	_____
Stocks, cold storage (frozen), end of period, total mil. lb__	310	280	233	210	213	257	326	416	489	538	346	280	280	r 259	239	236
Turkeys_____do____	168	175	113	101	104	153	214	301	373	425	236	175	171	r 156	136	130
Price, in Georgia producing area, live broilers $ per lb__	.237	.260	r.250	r.275	r.275	r.310	r.305	r.260	r.265	.245	.245	.250	.265	.280	.290	.285

Eggs:

Production on farms‡_____mil. cases⊙__	179.5	186.2	15.8	15.4	15.9	15.2	15.4	15.4	15.2	15.9	15.8	16.5	16.3	14.6	16.3	15.8
Stocks, cold storage, end of period:																
Shell_____thous. cases⊙__	39	38	25	36	29	26	26	48	43	23	35	38	22	18	24	19
Frozen_____mil. lb__	30	25	23	23	22	27	28	29	29	28	26	25	26	24	21	22
Price, wholesale, large (delivered; Chicago) $ per doz__	.624	.603	.620	.570	.520	.493	.612	.618	.632	.608	.672	.716	.713	.677	.735	.687

MISCELLANEOUS FOOD PRODUCTS

Cocoa (cacao) beans:

Imports (incl. shells)_____thous. lg. tons__	172.1	209.7	27.9	20.5	16.5	12.4	16.1	14.7	7.3	15.9	18.6	20.2	27.3	26.7	14.6	_____
Price, wholesale, Accra (New York)____$ per lb__	10 2.144	10 2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	10 2.500	1.570

Coffee (green):

Inventories (roasters', importers', dealers'), end of period_____thous. bags♂__	1,684	2,331	2,161	_____	_____	2,202	_____	_____	2,131	_____	_____	2,331	_____	_____	2,291	_____
Roastings (green weight)_____do____	14,233	16,299	4,467	_____	_____	3,554	_____	_____	3,781	_____	_____	4,497	_____	_____	4,655	_____
Imports, total_____do____	14,808	18,133	1,707	1,557	1,345	1,249	1,316	1,124	1,337	1,901	1,689	1,651	1,747	1,353	1,631	_____
From Brazil_____do____	2,453	2,679	115	319	329	206	337	56	57	334	308	280	333	101	82	_____
Price, wholesale, Santos, No. 4 (N.Y.)__$ per lb__	_____	2 1.484	_____	_____	_____	_____	_____	1.350	1.540	1.540	1.530	1.460	1.460	1.270	1.360	1.380
Confectionery, manufacturers' sales_____mil. $__	3,059	3,111	271	207	211	193	174	314	306	312	289	291	r 258	288	279	_____

Fish:

Stocks, cold storage, end of period‡_____mil. lb__	420	422	336	319	324	342	364	408	425	427	426	422	379	r 343	292	p292

Sugar (United States):

Deliveries and supply (raw basis):§																
Production and receipts:																
Production_____thous. sh. tons__	5,054	4,575	280	130	189	135	48	35	115	658	1,046	963	710	494	_____	_____
Deliveries, total_____do____	11,242	10,892	930	864	891	1,033	905	1,122	1,020	894	853	840	842	777	_____	_____
For domestic consumption_____do____	11,207	10,841	927	861	888	1,029	901	1,109	1,014	888	849	840	835	771	_____	_____
Stocks, raw and ref., end of period_____do____	4,349	3,734	3,850	3,451	3,326	3,059	2,729	2,264	2,054	2,324	3,084	3,734	3,927	r 4,034	p3,736	_____
Exports, raw and refined_____sh. tons__	20,335	6 14,138	970	802	682	613	841	747	1,019	1,020	1,077	1,174	865	464	1,177	_____
Imports:																
Raw sugar, total_____thous. sh. tons__	5,130	7 4,177	447	67	300	330	607	335	550	400	327	348	343	214	276	_____
From the Philippines_____do____	1,136	7 822	53	28	63	56	16	54	131	114	66	134	0	0	8	_____
Refined sugar, total_____do____	656	(8)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Prices (New York):																
Raw, wholesale_____$ per lb__	.109	5.143	.114	.114	.114	.114	.114	5 .135	.144	.150	.142	.145	.138	.150	.153	.139
Refined:																
Retail (incl. N.E. New Jersey)____$ per 5 lb__	1.118	9 1.211	1.212	1.270	1.268	1.189	(9)	_____	_____	_____	_____	_____	_____	_____	_____	_____
Wholesale (excl. excise tax)_____$ per lb__	.169	.204	.193	.201	.200	.198	.191	.205	.213	.223	.214	.220	.223	.219	.220	.222
Tea, imports_____thous. lb__	4 203,012	151,751	18,648	15,450	17,523	8,286	13,141	13,788	9,390	12,502	8,877	12,332	14,797	10,568	15,584	_____

FATS, OILS, AND RELATED PRODUCTS

Baking or frying fats (incl. shortening):

Production‡_____mil. lb__	3,841.1	4,044.6	368.2	328.0	335.5	302.2	293.0	360.4	356.0	381.5	370.1	332.2	334.0	r 314.1	378.4	_____
Stocks, end of period⊕_____do____	113.0	106.7	112.1	128.4	141.1	126.1	124.2	107.2	106.9	107.9	110.0	106.7	121.3	128.5	104.4	_____

Salad or cooking oils:

Production‡_____do____	4,352.9	4,849.2	459.0	435.0	413.1	406.8	368.8	410.6	389.2	407.1	401.3	389.1	397.3	r 365.6	424.8	_____
Stocks, end of period⊕_____do____	105.4	123.0	112.7	133.8	128.1	123.7	130.8	132.9	121.6	106.8	120.4	123.0	117.1	r 109.8	110.6	_____

Margarine:

Production_____do____	2,535.0	2,519.5	243.0	186.8	183.7	194.6	166.0	200.6	207.6	222.2	220.6	250.0	233.1	214.8	241.9	_____
Stocks, end of period⊕_____do____	79.9	69.5	59.3	72.3	63.4	68.8	67.8	60.3	66.0	68.9	58.9	69.5	66.8	82.1	67.5	_____
Price, wholesale (colored; mfr. to wholesaler or large retailer; delivered)_____$ per lb__	.507	.529	.514	.552	.552	.552	.552	.525	.522	.521	.533	.528	.523	.523	.535	.551

Animal and fish fats:

Tallow, edible:																
Production (quantities rendered)_____mil. lb__	769.4	835.0	74.1	60.8	70.0	65.5	61.7	70.3	68.8	79.3	78.8	80.9	77.8	r 68.6	81.8	_____
Consumption in end products_____do____	787.9	847.8	82.8	74.8	71.4	63.7	62.0	70.6	74.8	77.3	72.1	64.7	67.5	68.6	73.0	_____
Stocks, end of period¶_____do____	42.4	55.1	40.6	38.3	38.8	45.4	45.1	46.3	41.8	44.4	45.0	55.1	63.4	57.6	46.2	_____
Tallow and grease (except wool), inedible:																
Production (quantities rendered)‡_____do____	6,106.4	5,815.9	537.4	463.3	500.1	464.9	442.5	491.8	474.1	505.9	501.8	486.7	503.6	r 432.8	483.9	_____
Consumption in end products‡_____do____	3,180.5	3,219.5	294.4	281.7	296.3	263.1	242.5	273.6	250.3	286.0	270.1	244.8	267.7	r 255.1	282.5	_____
Stocks, end of period¶‡_____do____	347.2	346.6	352.3	289.2	292.7	289.3	309.6	346.1	394.0	304.2	348.8	346.6	398.7	r 374.8	338.6	_____

r Revised.   p Preliminary.   1 Average for July-Dec.; beginning July 1977, prices represent Midwest and Los Angeles and are not comparable with those for earlier periods.   2 Average for 5 mos. (Aug.-Dec.).   3 See "△" note, this page.   4 Reflects revisions not distributed to the months.   5 Beginning Aug. 1978, prices are estimated; not strictly comparable with those for earlier periods. Annual average for 1978 represents Aug.-Dec.   6 Because of an overall revision to the export commodity classification system effective Jan. 1, 1978, data may not be strictly comparable with those for earlier periods.   7 Beginning Jan. 1978, data are for both raw and refined sugar and are not comparable with those for earlier periods.   8 Beginning Jan. 1978, data are no longer available; see note 7, this page.   9 Beginning July 1978, data no longer available. Annual average for 1978 represents Jan.-June.

10 Prices for Sept. 1977-Mar. 1979 are estimated; actual data not available. Annual averages for 1977 and 1978 reflect these estimates and are not comparable with other periods.   ⊙ Cases of 30 dozen.   ♂ Bags of 132.276 lb.   §Monthly data reflect cumulative revisions for prior periods.   ⊕Producers' and warehouse stocks.   ¶ Factory and warehouse stocks.   ‡ Monthly revisions back to 1974 are available.   △Effective April 1977 SURVEY, data beginning Feb. 1976 are restated to exclude cooler pork; comparable earlier data will be shown later.   † Revised series. Beginning May 1977 SURVEY, data represent total commercial slaughter (excluding rendered pork fat and lard), whereas the price for calves (p. S-28), represents a different market. Comparable data prior to Mar. 1976 will be shown later.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

FOOD AND KINDRED PRODUCTS; TOBACCO—Continued

FATS, OILS, AND RELATED PRODUCTS—Continued

Vegetable oils and related products:

Coconut oil:

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Production, refined_____mil. lb_	729.4	768.3	73.0	70.4	68.1	69.0	65.3	70.3	61.3	69.6	59.7	46.7	60.0	55.9	63.5	____
Consumption in end products___do_	878.7	914.2	81.5	88.9	87.6	76.1	73.6	79.0	72.4	84.0	75.4	55.4	72.7	ʳ66.3	82.9	____
Stocks, refined, end of period ¶_do_	39.9	44.4	46.0	48.2	41.2	40.7	38.7	39.0	43.0	40.6	40.3	44.4	45.0	ʳ41.3	41.8	____
Imports_____do_	994.3	1,022.5	102.9	72.4	98.3	79.9	104.5	83.7	47.0	80.4	100.7	60.1	167.2	83.7	87.7	____
Corn oil:																
Production: Crude_____do_	671.9	720.0	58.7	57.1	68.0	64.7	60.5	59.7	63.8	65.4	59.8	55.8	47.6	ʳ54.9	69.5	____
Refined_____do_	577.0	581.1	51.1	44.4	53.3	48.1	41.4	55.1	52.7	54.4	46.3	43.5	44.2	41.7	54.3	____
Consumption in end products___do_	537.6	537.9	48.7	37.5	41.2	44.9	37.7	47.3	50.9	50.8	43.7	47.3	49.1	41.6	50.6	____
Stocks, crude and ref., end of period ¶_do_	33.4	70.4	33.4	41.2	52.3	62.9	69.3	71.0	72.6	70.1	74.6	70.4	61.0	ʳ71.5	69.4	____
Cottonseed oil:																
Production: Crude_____do_	1,254.6	1,417.7	141.8	122.1	109.2	113.9	107.8	103.5	82.0	108.8	134.0	123.5	134.4	128.0	136.0	____
Refined ‡_____do_	1,188.8	1,344.8	136.6	122.5	109.9	114.1	110.0	117.5	84.7	83.7	116.0	100.4	118.8	ʳ113.1	126.7	____
Consumption in end products___do_	625.3	697.3	55.6	55.7	63.4	65.9	62.3	60.0	57.3	55.6	64.6	54.6	55.9	ʳ57.0	58.6	____
Stocks, crude and ref., end of period ¶‡_do_	142.3	127.1	188.4	193.4	165.4	139.7	114.3	102.3	84.8	101.4	123.0	127.1	152.2	ʳ152.9	136.4	____
Exports (crude and refined)_____do_	731.2	728.8	84.9	61.6	59.8	63.5	70.2	50.0	82.3	25.9	29.2	82.5	56.7	71.2	89.9	____
Price, wholesale (N.Y.)_____$ per lb_	.299	.332	.315	.315	.335	.333	.340	.355	.405	.340	.328	.330	.335	.380	.385	.395
Soybean oil:																
Production: Crude_____mil. lb_	8,836.5	10,621.4	943.3	866.9	908.2	795.1	777.9	815.8	783.3	984.3	974.8	1,050.4	989.1	ʳ902.3	981.7	____
Refined‡_____do_	7,789.5	8,713.7	816.9	752.3	746.3	662.5	649.2	725.3	679.9	782.8	747.7	765.7	753.3	ʳ681.7	764.8	____
Consumption in end products___do_	7,451.1	8,175.2	771.7	686.5	662.4	640.5	596.2	699.8	672.5	715.9	709.3	707.5	695.1	ʳ636.2	758.5	____
Stocks, crude and ref., end of period ¶‡_do_	864.0	970.6	808.3	826.9	833.8	839.3	825.6	777.5	728.6	813.4	970.6	837.1	932.2	ʳ942.8	1,001.3	____
Exports (crude and refined)_____do_	1,666.9	⁵1,944.5	252.6	218.9	176.4	147.2	165.5	108.8	193.4	96.8	154.8	175.4	219.1	249.8	199.0	____
Price, wholesale (refined; N.Y.)_____$ per lb_	.289	.309	.320	.319	.336	.315	.320	.316	.330	.329	.293	.305	.309	.325	.321	.319

TOBACCO

Leaf:

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Production (crop estimate)_____mil. lb_	¹1,912	ʳ¹2,026	____	____	____	____	____	____	____	____	____	____	____	____	____	____
Stocks, dealers' and manufacturers', end of period mil. lb_	5,070	5,071	4,811	____	____	4,451	____	____	4,728	____	____	5,071	____	____	____	____
Exports, incl. scrap and stems_____thous. lb_	²628,564	687,772	73,157	40,904	32,316	29,178	42,661	52,266	41,319	85,785	95,786	86,258	35,559	50,142	57,079	____
Imports, incl. scrap and stems_____do_	316,236	335,981	27,773	29,161	31,446	29,661	35,184	28,032	26,755	32,049	21,474	21,548	42,866	31,267	28,917	____

Manufactured:

Consumption (withdrawals):

Cigarettes (small):

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Tax-exempt_____millions_	78,133	85,135	7,362	6,973	6,981	7,971	5,925	9,141	8,002	7,634	7,522	5,456	ʳ6,842	6,778	____	____
Taxable_____do_	592,006	614,208	55,317	50,268	54,390	58,267	44,397	54,308	50,321	53,387	53,689	42,125	55,455	48,628	____	____
Cigars (large), taxable_____do_	3,776	3,621	329	282	319	345	235	298	322	346	323	271	ʳ246	243	____	____
Exports, cigarettes_____do_	66,835	74,359	6,580	5,361	6,050	6,616	5,523	7,205	7,823	6,328	6,846	6,160	4,398	5,639	7,758	____

LEATHER AND PRODUCTS

HIDES AND SKINS

Exports:

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Value, total ♀_____thous. $_	582,906	⁵694,617	58,535	61,297	55,370	55,846	47,511	58,797	54,396	60,090	58,503	91,186	61,605	77,390	98,309	____
Calf and kip skins_____thous. skins_	2,508	2,665	288	265	194	199	222	189	339	181	177	241	207	264	233	____
Cattle hides_____thous. hides_	24,488	24,792	2,270	2,375	2,122	2,078	1,725	2,176	1,779	1,922	1,754	2,676	1,635	2,056	2,405	____
Imports:																
Value, total ♀_____thous. $_	96,600	105,600	10,800	12,200	11,400	8,800	8,300	7,800	7,600	7,700	7,100	7,000	9,200	____	____	____
Sheep and lamb skins_____thous. pieces_	15,468	17,807	2,080	2,541	2,245	1,577	1,848	1,323	1,093	920	935	739	1,321	1,581	1,835	____
Goat and kid skins_____do_	1,137	1,762	143	275	128	45	190	75	117	112	175	158	352	145	191	____
Prices, wholesale, f.o.b. shipping point:																
Calfskins, packer, heavy, 9½/15 lb_____$ per lb_	³.914	1.346	1.000	1.100	1.100	1.100	1.200	1.850	1.850	1.850	1.650	1.650	1.800	2.000	2.200	2.200
Hides, steer, heavy, native, over 53 lb_____do_	.370	.472	.373	.413	.418	.458	.478	.530	.590	.573	.548	.518	.603	.653	.913	1.060

LEATHER

Production:

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Calf and whole kip_____thous. skins_	(⁶)	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
Cattle hide and side kip__thous. hides and kips_	(⁶)	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
Goat and kid_____thous. skins_	(⁶)	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
Sheep and lamb_____do_	(⁶)	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
Exports:																
Upper and lining leather_____thous. sq. ft_	²206,276	⁵208,799	16,408	16,720	18,899	21,427	14,160	19,726	16,224	17,438	17,947	17,176	13,854	16,014	18,833	____
Prices, wholesale, f.o.b. tannery:																
Sole, bends, light_____index, 1967=100_	206.1	⁴235.2	208.5	207.1	210.0	____	227.2	241.6	270.4	261.7	270.4	267.5	284.7	284.7	338.0	366.7
Upper, chrome calf, B and C grades index, 1967=100_	(⁴)	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____

LEATHER MANUFACTURES

Footwear:

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Production, total_____thous. pairs_	ʳ406,004	ʳ403,252	ʳ38,473	ʳ34,381	ʳ38,051	ʳ35,382	ʳ25,314	ʳ35,626	ʳ32,695	ʳ34,710	ʳ32,428	ʳ29,167	ʳ33,981	31,795	35,146	____
Shoes, sandals, and play shoes, except athletic thous. pairs_	ʳ315,741	ʳ314,806	ʳ30,519	ʳ26,669	ʳ29,506	ʳ27,130	ʳ20,470	ʳ27,421	ʳ24,604	ʳ25,633	ʳ24,751	ʳ23,475	ʳ27,325	25,243	28,100	____
Slippers_____do_	ʳ72,441	ʳ66,589	ʳ5,906	ʳ5,829	ʳ6,410	ʳ6,238	ʳ3,475	ʳ6,267	ʳ6,204	ʳ6,956	ʳ5,863	ʳ3,916	ʳ4,700	4,679	5,312	____
Athletic_____do_	ʳ14,667	ʳ17,648	ʳ1,671	ʳ1,494	ʳ1,783	ʳ1,666	ʳ1,070	ʳ1,539	ʳ1,507	ʳ1,696	ʳ1,476	ʳ1,488	ʳ1,595	1,484	1,349	____
Other footwear_____do_	ʳ3,155	ʳ4,209	377	ʳ389	ʳ352	ʳ348	299	399	380	425	338	288	ʳ361	389	385	____
Exports_____do_	5,411	6,179	585	495	448	514	454	605	467	546	612	679	549	526	657	____
Prices, wholesale f.o.b. factory:																
Men's and boys' oxfords, dress, elk or side upper, Goodyear welt_____index, 1967=100_	193.3	⁷211.3	206.8	211.4	211.4	211.4	211.4	213.8	218.6	221.0	____	____	____	____	____	____
Women's oxfords, elk side upper, Goodyear welt_____index, 1967=100_	171.8	⁷185.3	176.9	181.7	182.9	182.9	182.9	182.9	187.7	197.3	197.3	197.3	197.3	197.3	204.6	207.0
Women's pumps, low-medium quality___do_	144.9	⁷157.5	146.8	157.4	161.3	161.3	161.3	161.3	161.3	170.9	____	____	____	____	____	____

ʳ Revised. ¹ Crop estimate for the year. ² Annual total reflects revisions not distributed to the monthly data. ³ Average for Jan.–Sept., Nov. and Dec. ⁴ Average for Jan.–May, and July–Dec. ⁵ Because of an overall revision to the export commodity classification system effective Jan. 1, 1978, data may not be strictly comparable with those for earlier periods. ⁶ Data no longer available. ⁷ Average for Jan.–Oct. ♀ Includes data for items not shown separately. ¶ Factory and warehouse stocks. ‡ Monthly revisions back to Jan. 1977 are available.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

LUMBER AND PRODUCTS

LUMBER—ALL TYPES ♀

National Forest Products Association:																
Production, total____mil. bd. ft__	¹37,520	¹37,947	3,222	3,127	3,203	3,333	2,988	3,263	3,285	3,333	3,102	2,931	2,877	2,877	_____	_____
Hardwoods____do____	6,597	7,395	497	571	546	574	597	591	580	629	618	595	619	607	_____	_____
Softwoods____do____	30,923	30,552	2,725	2,556	2,657	2,759	2,391	2,672	2,705	2,704	2,484	2,336	2,258	2,270	_____	_____
Shipments, total____do____	¹37,755	¹38,051	3,158	3,133	3,355	3,548	3,156	3,357	3,250	3,262	3,116	2,907	2,813	2,756	_____	_____
Hardwoods____do____	6,712	7,365	511	574	583	600	574	567	577	601	600	572	604	589	_____	_____
Softwoods____do____	31,043	30,686	2,647	2,559	2,772	2,948	2,582	2,790	2,673	2,661	2,516	2,335	2,209	2,167	_____	_____
Stocks (gross), mill, end of period, total____do____	4,851	4,747	5,201	5,190	5,038	4,877	4,705	4,632	4,669	4,740	4,731	4,747	4,811	4,932	_____	_____
Hardwoods____do____	772	802	749	752	715	687	706	732	737	765	783	802	817	835	_____	_____
Softwoods____do____	4,079	3,945	4,452	4,438	4,323	4,190	3,999	3,900	3,932	3,975	3,948	3,945	3,994	4,097	_____	_____
Exports, total sawmill products____do____	1,670	1,300	110	125	212	118	93	88	94	96	96	100	97	121	129	_____
Imports, total sawmill products____do____	10,698	12,199	939	915	1,173	1,117	1,194	1,119	1,014	1,091	979	954	925	761	998	_____

SOFTWOODS

Douglas fir:																
Orders, new____mil. bd. ft__	8,712	8,920	846	757	807	833	705	634	779	742	632	718	747	648	803	_____
Orders, unfilled, end of period____do____	565	553	649	679	706	614	597	548	610	612	526	553	622	639	685	_____
Production____do____	8,796	8,912	812	745	745	816	619	672	738	790	707	689	669	674	775	_____
Shipments____do____	8,781	8,932	783	727	780	925	722	717	717	740	718	691	678	631	757	_____
Stocks (gross), mill, end of period____do____	964	944	1,143	1,161	1,126	1,017	914	886	907	957	946	944	935	978	996	_____
Exports, total sawmill products____do____	488	478	52	37	52	50	47	30	35	39	34	35	31	46	46	_____
Sawed timber____do____	129	119	17	10	16	19	4	7	11	8	7	7	8	11	13	_____
Boards, planks, scantlings, etc____do____	359	359	36	27	36	31	44	23	24	31	27	28	23	35	33	_____
Price, producer:																
Dimension, construction, dried, 2″ x 4″, R. L. $ per M bd. ft__	230.38	253.39	246.28	238.48	238.43	245.28	245.00	272.06	274.74	266.66	271.51	262.40	258.77	260.53	261.46	267.69
Southern pine:																
Orders, new____mil. bd. ft__	¹8,291	¹8,319	790	767	761	696	668	769	671	738	626	618	669	691	_____	_____
Orders, unfilled, end of period____do____	470	505	552	563	588	552	544	561	541	542	510	505	538	607	_____	_____
Production____do____	¹8,198	¹8,287	728	730	735	728	669	733	688	737	663	646	654	642	_____	_____
Shipments____do____	¹8,264	¹8,284	733	756	736	732	676	752	691	737	658	623	636	622	_____	_____
Stocks (gross), mill and concentration yards, end of period____mil. bd. ft__	1,166	1,169	1,210	1,175	1,174	1,170	1,163	1,144	1,141	1,141	1,146	1,169	1,187	1,207	_____	_____
Exports, total sawmill products____M bd. ft__	157,806	152,121	14,492	14,920	12,506	15,495	8,991	10,324	12,161	10,467	15,751	12,518	15,273	25,522	15,300	_____
Prices, producer (indexes):																
Boards, No. 2 and better, 1″ x 6″, R. L. 1967=100__	271.0	329.7	313.6	321.5	329.7	331.5	333.6	337.7	343.4	346.4	347.1	347.8	348.6	349.4	355.6	359.8
Flooring, C and better, F. G., 1″ x 4″, S. L. 1967=100__	250.2	276.9	272.4	271.2	274.4	274.4	276.6	280.6	282.1	283.8	284.3	285.4	285.4	286.5	288.6	290.4
Western pine:																
Orders, new____mil. bd. ft__	10,331	9,907	850	739	877	874	854	889	980	908	714	774	793	712	818	_____
Orders, unfilled, end of period____do____	590	469	636	596	546	526	544	506	545	545	462	469	596	612	606	_____
Production____do____	10,309	9,910	871	790	865	843	786	901	927	897	776	751	701	722	852	_____
Shipments____do____	10,295	10,028	832	779	927	894	836	927	941	908	797	767	666	696	824	_____
Stocks (gross), mill, end of period____do____	1,329	1,211	1,451	1,462	1,400	1,349	1,299	1,273	1,259	1,248	1,227	1,211	1,246	1,272	1,300	_____
Price, producer, Ponderosa, boards, No. 3, 1″ x 12″, R. L. (6′ and over)____$ per M bd. ft__	231.53	⁴237.07	264.90	267.57	240.07	251.25	232.33	236.92	254.23	267.17	_____	317.01	304.49	332.11	366.87	371.17

HARDWOOD FLOORING

Oak:																
Orders, new____mil. bd. ft__	112.8	108.6	10.8	9.5	9.3	9.3	8.5	10.5	7.9	9.8	8.3	6.3	9.4	7.3	8.4	_____
Orders, unfilled, end of period____do____	7.9	9.2	10.4	10.7	11.6	10.2	11.4	11.4	10.6	11.0	9.6	9.2	9.2	9.2	9.1	_____
Production____do____	109.8	104.7	9.9	9.0	8.8	9.1	7.2	9.9	8.7	8.9	9.4	8.0	8.3	7.8	8.3	_____
Shipments____do____	110.0	106.3	9.4	9.2	8.5	10.1	7.4	10.4	8.7	9.4	8.7	7.2	9.4	7.2	8.6	_____
Stocks (gross), mill, end of period____do____	6.2	2.7	5.4	5.2	5.4	4.0	3.7	3.1	3.2	2.7	3.4	2.7	1.6	2.1	1.9	_____

METALS AND MANUFACTURES

IRON AND STEEL

Exports:																
Steel mill products____thous. sh. tons__	2,003	2,508	191	205	255	271	174	208	174	218	194	248	193	165	217	_____
Scrap____do____	6,175	9,278	628	695	821	786	756	777	834	977	973	944	853	1,145	871	_____
Pig iron____do____	51	51	5	(³)	1	1	5	7	1	11	8	11	35	5	2	_____
Imports:																
Steel mill products____do____	19,307	21,135	1,988	2,175	1,511	1,360	1,785	1,870	1,584	1,715	2,016	1,372	1,264	1,329	1,096	_____
Scrap†____do____	625	794	71	45	127	55	77	71	70	51	67	60	46	48	68	_____
Pig iron†____do____	373	655	61	35	38	99	42	78	88	41	75	48	49	33	38	_____

Iron and Steel Scrap ¶

Production____thous. sh. tons__	¹49,523	¹51,960	4,730	4,477	4,581	4,605	4,070	4,565	4,426	4,699	4,442	4,323	ʳ4,222	ᵖ4,111	_____	_____
Receipts, net____do____	¹47,873	¹51,804	4,396	4,265	4,851	4,509	4,144	4,426	4,186	4,443	4,342	4,239	ʳ4,147	ᵖ4,014	_____	_____
Consumption____do____	¹92,090	¹99,133	8,347	8,488	8,938	8,579	7,659	8,279	8,338	8,918	8,397	8,300	ʳ8,200	ᵖ7,935	_____	_____
Stocks, end of period____do____	¹9,360	¹8,313	9,017	8,779	8,738	8,747	8,865	9,018	8,808	8,536	8,458	8,313	ʳ8,008	ᵖ7,791	_____	_____
Prices, steel scrap, No. 1 heavy melting:																
Composite (5 markets)____$ per lg. ton__	²55.99	73.84	71.90	75.42	71.46	71.38	76.00	75.40	72.81	71.67	79.05	85.95	94.48	_____	_____	_____
Pittsburgh district____do____	80.35	78.29	77.00	80.50	75.50	75.00	82.50	78.50	75.50	75.50	83.50	88.50	93.50	108.50	133.00	111.50

ʳ Revised.　　ᵖ Preliminary.　　¹ Annual data; monthly revisions are not available.
² Effective with Feb. 1977, composite reflects substitution of Los Angeles for San Francisco; effective July 1977, it reflects addition of Detroit and Houston. Avg. for 1977 is for July–Dec.
³ Less than 500 short tons.　　⁴ Average for 11 months; price not available for Nov.
♀ Totals include data for types of lumber not shown separately.　　† Effective Aug. 1976

SURVEY, scrap excludes imports of rerolling rails and pig iron excludes sponge iron imports previously included.　　¶ Effective with 1974 annual and Jan. 1975 figures, data reflect expanded sample and exclusion of direct-reduced (prereduced) iron, previously included in scrap series.

METALS AND MANUFACTURES—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.
IRON AND STEEL—Continued																
Ore																
Iron ore (operations in all U.S. districts):																
Mine production...thous. lg. tons	55,750	80,718	6,425	6,034	7,751	7,988	7,559	7,593	7,314	7,032	6,546	6,552	6,144	5,634	------	------
Shipments from mines...do	54,053	82,539	2,489	5,299	8,558	8,754	9,757	9,779	8,707	8,088	7,667	7,095	3,296	2,486	------	------
Imports...do	37,905	29,924	1,643	1,291	2,102	2,182	3,686	4,488	4,534	1,610	4,015	3,057	2,108	1,479	854	------
U.S. and foreign ores and ore agglomerates:																
Receipts at iron and steel plants...do	94,944	114,227	4,639	6,363	10,907	11,448	11,787	14,658	12,291	12,285	11,524	9,732	4,711	3,633	4,436	------
Consumption at iron and steel plants...do	108,462	116,305	9,048	9,379	10,114	10,216	9,940	10,137	9,797	10,323	9,954	10,341	9,457	8,988	10,540	------
Exports...do	2,143	3,762	2	390	393	403	143	348	520	317	733	435	183	31	20	------
Stocks, total, end of period...do	59,390	55,339	53,084	50,360	49,862	51,887	51,561	53,791	54,681	55,500	56,432	55,339	53,028	50,685	------	------
At mines...do	14,140	12,469	21,687	22,411	21,598	20,968	18,772	16,461	15,165	14,104	12,982	12,469	14,852	18,000	------	------
At furnace yards...do	42,271	39,301	29,195	26,199	26,903	28,127	29,939	34,349	36,738	38,585	40,049	39,301	34,473	29,059	22,862	------
At U.S. docks...do	2,979	3,569	2,202	1,750	1,361	2,792	2,850	2,981	2,778	2,811	3,401	3,569	3,703	3,626	3,053	------
Manganese (mn. content), general imports...do	834	842	113	49	71	55	82	42	97	62	64	63	62	50	60	------
Pig Iron and Iron Products																
Pig iron:																
Production (excluding production of ferroalloys)...thous. sh. tons	81,328	87,687	6,894	7,189	7,936	7,754	7,637	7,518	7,391	7,809	7,533	7,658	7,064	6,636	7,953	7,726
Consumption...do	82,017	88,384	7,013	7,969	7,969	7,770	7,611	7,527	7,463	7,887	7,594	7,721	7,048	r 6,678	p 8,032	------
Stocks, end of period...do	1,309	889	1,108	1,916	997	1,014	1,068	1,080	1,047	983	965	889	852	835	p 847	------
Price, basic furnace...$ per sh. ton	3 183.11	196.00	191.00	191.00	191.00	191.00	191.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00
Castings, gray and ductile iron:																
Orders, unfilled, for sale, end of period...thous. sh. tons	935	912	1,009	1,969	976	984	946	1,000	963	917	907	912	r 929	1,016	------	------
Shipments, total...do	15,318	15,294	1,327	1,301	1,423	1,406	1,148	1,330	1,279	1,444	1,312	1,136	r 1,239	1,223	------	------
For sale...do	7,496	7,840	646	663	737	734	587	711	673	729	663	561	r 600	574	------	------
Castings, malleable iron:																
Orders, unfilled, for sale, end of period...thous. sh. tons	65	66	63	64	66	63	62	64	64	65	62	66	66	68	------	------
Shipments, total...do	829	816	75	70	74	74	56	68	68	75	71	61	r 70	69	------	------
For sale...do	458	446	42	39	41	41	29	37	35	41	39	35	r 36	36	------	------
Steel, Raw and Semifinished																
Steel (raw):																
Production...thous. sh. tons	125,333	136,689	11,083	11,528	12,320	11,861	11,388	11,550	11,467	12,105	11,654	11,812	11,105	10,562	12,576	12,196
Rate of capability utilization*...percent	78.4	86.6	83.1	88.5	91.5	91.1	85.1	86.3	88.6	89.8	89.4	87.7	83.5	87.9	94.5	93.4
Steel castings:																
Orders, unfilled, for sale, end of period...thous. sh. tons	451	797	502	512	492	501	592	634	668	711	734	797	r 926	938	------	------
Shipments, total...do	1,718	1,863	158	153	168	162	124	156	159	173	161	155	r 171	169	------	------
For sale, total...do	1,488	1,627	138	133	145	140	108	134	139	153	141	136	r 153	150	------	------
Steel Mill Products																
Steel products, net shipments:																
Total (all grades)...thous. sh. tons	91,147	1 86,187	8,718	8,055	8,610	8,787	7,608	8,293	8,252	8,599	7,813	8,196	8,206	7,996	10,293	------
By product:																
Semifinished products...do	1 3,991	1 3,922	425	434	491	467	393	457	491	463	423	461	411	410	545	------
Structural shapes (heavy), steel piling...do	4,382	1 4,383	421	413	460	444	393	426	419	422	424	424	400	391	542	------
Plates...do	7,529	1 6,588	738	714	767	772	694	697	688	701	690	746	662	648	850	------
Rails and accessories...do	1,863	1,677	157	146	155	141	111	123	140	156	145	154	155	155	183	------
Bars and tool steel, total...do	15,420	1 13,807	1,438	1,423	1,509	1,524	1,272	1,463	1,465	1,531	1,370	1,430	1,401	1,440	1,851	------
Bars: Hot rolled (incl. light shapes)...do	9,362	1 7,428	854	827	884	904	661	845	877	916	796	856	805	858	1,109	------
Reinforcing...do	4,179	4,688	384	412	437	430	359	436	407	422	411	408	396	380	499	------
Cold finished...do	1,794	1 1,691	191	177	180	182	149	174	173	185	155	159	191	193	232	------
Pipe and tubing...do	7,490	1 6,547	804	737	779	737	643	698	683	699	652	619	641	601	781	------
Wire and wire products...do	2,400	2,457	235	231	228	235	175	211	204	219	199	184	199	195	245	------
Tin mill products...do	6,382	6,100	566	449	502	549	472	498	536	487	410	524	526	461	753	------
Sheets and strip (incl. electrical), total...do	41,687	1 40,706	3,933	3,509	3,719	3,918	3,455	3,720	3,630	3,921	3,499	3,653	3,812	3,695	4,543	------
Sheets: Hot rolled...do	14,558	1 14,114	1,406	1,207	1,297	1,349	1,176	1,316	1,288	1,391	1,292	1,384	1,315	1,322	1,674	------
Cold rolled...do	17,684	1 17,235	1,644	1,445	1,527	1,629	1,430	1,512	1,473	1,588	1,398	1,420	1,607	1,499	1,800	------
By market (quarterly shipments):																
Service centers and distributors⊕...do	15,346	17,377	4,179	------	------	4,709	------	------	4,159	------	------	4,320	------	------	4,761	------
Construction, incl. maintenance⊕...do	7,553	9,582	2,079	------	------	2,497	------	------	2,432	------	------	2,463	------	------	2,345	------
Contractors' products...do	4,500	3,789	939	------	------	926	------	------	934	------	------	922	------	------	1,017	------
Automotive...do	21,490	21,254	5,117	------	------	5,257	------	------	5,365	------	------	5,526	------	------	5,850	------
Rail transportation...do	3,238	3,555	820	------	------	856	------	------	864	------	------	1,015	------	------	985	------
Machinery, industrial equip., tools...do	5,566	6,040	1,477	------	------	1,577	------	------	1,497	------	------	1,486	------	------	1,579	------
Containers, packaging, ship. materials...do	6,714	6,601	1,790	------	------	1,652	------	------	1,615	------	------	1,544	------	------	1,847	------
Other⊕...do	26,740	29,738	7,179	------	------	7,977	------	------	7,287	------	------	7,330	------	------	8,112	------
Steel mill shapes and forms, inventories, end of period—total for the specified sectors...mil. sh. tons	34.1	37.2	32.6	32.5	33.7	33.6	34.9	35.1	35.0	34.9	35.6	37.2	36.4	------	------	------
Producing mills, inventory, end of period:																
Steel in process...mil. sh. tons	10.1	11.7	9.1	9.2	9.5	9.7	10.6	10.6	10.7	10.9	11.0	11.7	11.2	10.8	------	------
Finished steel...do	7.6	8.0	6.8	7.0	7.3	7.0	7.1	7.2	7.3	7.4	8.0	8.0	8.2	8.2	------	------
Service centers (warehouses), inventory, end of period...mil. sh. tons	6.6	7.1	6.7	6.6	7.1	7.1	7.1	7.1	7.0	6.6	6.9	7.1	7.0	------	------	------
Consumers (manufacturers only):																
Inventory, end of period...do	9.8	10.4	10.0	9.7	9.8	9.8	10.1	10.2	10.0	10.0	9.7	10.4	10.0	9.9	------	------
Receipts during period...do	63.5	67.5	5.9	5.7	6.2	6.1	5.0	5.8	5.4	6.1	5.3	5.7	5.4	5.4	------	------
Consumption during period...do	63.9	66.9	5.8	6.0	6.1	6.1	4.7	5.7	5.6	6.1	5.6	5.0	5.8	5.5	------	------

r Revised.   p Preliminary.   1 Annual data; monthly or quarterly revisions are not available.   2 For month shown.   3 Avg. for 11 months; Feb. price not available. *New series. Source: American Iron and Steel Institute. The production rate of capability utilization is based on tonnage capability to produce raw steel for a full order book based on the current availability of raw materials, fuels and supplies, and of the industry's coke, iron, steelmaking, rolling and finishing facilities. Data prior to 1975 are not available. ⊕Beginning Jan. 1976, data are not comparable with those for earlier periods since oil & gas supply houses and pipelines, which were formerly shown in "Service centers and distributors" and "Construction, incl. maintenance," respectively, are now included in "Other."

METALS AND MANUFACTURES—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.
NONFERROUS METALS AND PRODUCTS																
Aluminum:																
Production, primary (dom. and foreign ores) thous. sh. tons	4,539	4,804	395	387	405	395	408	410	399	416	403	418	418	379	---	---
Recovery from scrap (aluminum content) do	1,591	1,407	117	114	114	118	107	125	122	127	132	117	120	119	---	---
Imports (general): Metal and alloys, crude do	673.3	756.9	74.4	58.2	89.9	83.5	66.9	50.7	51.3	86.9	43.1	35.0	69.6	41.0	53.9	---
Plates, sheets, bars, etc do	73.8	34.2	3.1	2.4	2.4	2.1	4.8	5.2	2.2	2.4	2.8	2.5	3.1	2.4	3.2	---
Exports: Metal and alloys, crude do	97.8	126.6	6.1	4.2	7.0	9.3	8.5	11.0	15.9	17.7	23.1	14.3	32.4	15.4	14.8	---
Plates, sheets, bars, etc do	207.9	197.0	19.0	14.8	19.5	17.3	15.1	14.5	19.5	13.8	15.4	15.7	18.5	18.4	17.2	---
Price, primary ingot, 99.5% minimum $ per lb	.5134	.5308	.5300	.5300	.5300	.5300	.5300	.5300	.5300	.5300	.5300	.5390	.5500	.5500	.5534	.5800
Aluminum products: Shipments: Ingot and mill prod. (net ship.) mil. lb	r 12,808	r 13,982	r 1,276	r 1,079	r 1,222	r 1,256	r 1,113	r 1,185	r 1,174	r 1,340	r 1,179	r 1,204	1,332	1,130	---	---
Mill products, total do	r 10,419	r 11,332	r 987	r 931	r 981	r 998	r 880	r 1,007	936	r 1,009	935	928	1,003	903	---	---
Sheet and plate do	6,041	6,812	552	528	565	556	509	562	535	575	519	523	r 570	512	---	---
Castings do	2,009	1,986	184	164	172	171	126	165	165	184	174	154	r 194	183	---	---
Inventories, total (ingot, mill products, and scrap), end of period mil. lb	5,685	r 5,496	5,732	5,751	5,697	5,666	5,705	5,588	5,612	5,577	5,550	5,496	r 5,387	5,258	---	---
Copper: Production: Mine, recoverable copper thous. tons ①	1,504.0	1,490.3	133.5	129.3	133.7	128.0	97.8	125.1	123.2	130.4	127.6	113.9	[5] 106.4	105.7	---	---
Refinery, primary do	1,496.2	1,533.1	134.6	119.8	129.6	128.4	104.8	133.6	123.4	136.4	147.4	142.8	[5] 114.1	118.6	---	---
From domestic ores do	1,411.0	1,408.9	124.4	113.7	119.3	121.4	95.9	126.9	117.4	128.5	136.1	116.8	[5] 102.0	111.1	---	---
From foreign ores do	85.2	124.2	10.2	6.1	10.3	7.0	8.9	6.7	6.0	7.9	11.3	26.0	[5] 12.1	7.6	---	---
Secondary, recovered as refined do	376.0	453.0	41.0	41.0	41.0	44.0	30.0	36.0	37.0	41.0	39.0	41.2	41.2	37.6	---	---
Imports (general): Refined, unrefined, scrap (copper cont.) do	528.1	607.5	69.3	94.5	62.6	63.8	46.5	38.6	28.4	34.5	24.8	24.2	[5] 19.2	17.2	30.5	---
Refined do	394.0	463.4	58.2	77.9	47.8	53.4	39.2	28.7	17.6	27.7	12.3	6.6	[5] 11.2	7.0	15.7	---
Exports: Refined and scrap do	220.3	321.6	24.2	20.4	28.1	26.5	23.3	31.6	41.2	20.8	34.4	34.8	[5] 29.8	26.3	33.1	---
Refined do	52.7	109.3	11.9	7.3	11.4	10.1	7.2	10.2	22.2	5.3	5.3	8.8	[5] 9.8	9.4	11.6	---
Consumption, refined (by mills, etc.) do	2,202	2,417	566	---	---	635	---	---	621	---	---	595	---	---	664	---
Stocks, refined, end of period do	649	491	620	648	637	642	595	578	560	550	534	491	420	388	372	---
Fabricators' do	178	128	144	162	163	156	144	r 189	r 154	r 133	r 126	r 124	101	100	110	---
Price, electrolytic (wirebars), dom., delivered $ per lb	.6677	.6651	.6241	.6462	.6477	.6657	.6408	.6723	.6763	.7050	.7119	.7190	.7657	.8970	.9672	.9832
Copper-base mill and foundry products, shipments (quarterly total): Brass mill products mil. lb	r 2,670	2,769	654	---	---	741	---	---	666	---	---	708	---	---	---	---
Copper wire mill products (copper cont.) do	r 2,691	2,775	679	---	---	708	---	---	682	---	---	706	---	---	---	---
Brass and bronze foundry products do	r 579	566	142	---	---	148	---	---	137	---	---	139	---	---	---	---
Lead: Production: Mine, recoverable lead thous. tons ①	1 589.2	582.9	57.1	49.4	54.3	40.1	35.5	47.6	49.5	55.5	50.0	49.1	[5] 47.6	43.9	---	---
Recovered from scrap (lead cont.) do	734.4	753.1	63.7	57.8	64.3	62.1	54.1	62.6	68.5	71.2	70.1	67.6	---	---	---	---
Imports (general), ore (lead cont.), metal do	204.3	83.9	13.2	7.7	5.5	4.8	11.0	11.0	4.5	7.4	5.2	4.9	[6] 4.0	5.4	5.3	---
Consumption, total do	1,582.3	1,468.6	125.2	122.5	117.4	121.6	99.5	125.2	124.9	140.4	130.9	123.4	---	---	---	---
Stocks, end of period: Producers', ore, base bullion, and in process (lead content), ABMS thous. sh. tons	184.6	---	184.4	189.8	198.6	198.5	199.2	---	---	---	---	---	---	---	---	---
Refiners' (primary), refined and antimonial (lead content) thous. tons ①	15.4	19.4	20.0	31.4	31.4	32.1	30.1	24.2	19.6	17.5	18.2	19.4	---	---	---	---
Consumers' (lead content) ♂ do	109.3	110.8	119.4	111.9	119.7	115.9	113.8	109.6	115.6	113.4	110.5	110.8	---	---	---	---
Scrap (lead-base, purchased), all smelters (gross weight) thous. tons ①	91.3	86.6	83.7	82.8	73.8	64.4	61.1	63.8	63.7	68.7	75.4	86.6	---	---	---	---
Price, common grade, delivered $ per lb	.3070	.3365	.3300	.3300	.3100	.3100	.3100	.3217	.3406	.3661	.3800	.3800	.4076	.4363	.4575	.4800
Tin: Imports (for consumption): Ore (tin content)† metric tons	6,724	3,873	664	439	635	40	62	355	273	52	193	718	115	1,477	176	---
Metal, unwrought, unalloyed† do	48,338	46,773	5,070	4,369	3,438	5,413	3,144	3,382	3,861	3,410	4,518	2,530	4,581	4,115	4,957	---
Recovery from scrap, total (tin cont.)† do	18,503	17,855	1,505	1,485	1,555	1,630	1,215	1,410	1,265	1,855	1,475	1,380	1,545	---	---	---
As metal† do	1,668	1,865	125	135	160	155	180	155	150	175	155	155	150	---	---	---
Consumption, total† do	68,000	63,100	5,500	5,200	5,700	5,400	4,600	5,200	5,200	5,300	5,400	4,900	5,400	5,500	---	---
Primary† do	55,500	47,000	4,100	3,900	4,200	4,000	3,500	3,700	3,700	4,000	4,000	3,700	4,000	3,900	---	---
Exports, incl. reexports (metal)† do	5,462	4,693	579	617	405	384	274	508	298	269	280	375	286	332	344	---
Stocks, pig (industrial), end of period† do	8,441	5,040	6,291	7,785	8,139	7,846	7,817	7,260	5,774	5,666	5,040	4,594	4,254	---	---	---
Price, Straits quality (delivered)* $ per lb	3 5.3460	6.2958	5.5757	5.3962	5.7027	6.0092	6.0700	6.3925	6.7484	7.3918	7.4502	6.9562	6.8423	7.2008	7.4180	7.3590
Zinc: Mine prod., recoverable zinc thous. tons ①	449.6	337.6	35.3	35.2	33.1	22.7	19.9	25.6	24.6	26.6	23.6	23.9	[5] 23.0	21.5	---	---
Imports (general): Ores (zinc content) do	122.8	207.2	13.7	17.9	13.0	19.0	6.0	25.6	9.2	25.3	29.2	33.6	[5] 30.8	14.9	28.0	---
Metal (slab, blocks) do	576.7	681.1	35.1	65.1	78.8	56.1	49.9	47.4	49.2	54.0	53.4	83.8	[5] 43.7	42.1	47.0	---
Consumption (recoverable zinc content): Ores do	100.8	99.0	8.4	8.8	9.9	8.6	8.8	8.1	7.4	6.8	9.1	8.4	[5] 7.5	7.3	---	---
Scrap, all types do	238.2	237.3	28.6	28.4	16.4	15.9	15.6	15.6	15.6	16.3	16.3	15.2	r5 14.1	14.2	---	---
Slab zinc: § Production (primary smelter), from domestic and foreign ores thous. tons ①	450.1	444.8	27.0	30.1	32.0	31.3	31.7	34.5	33.5	41.3	39.0	39.1	r5 36.9	38.4	---	---
Secondary (redistilled) production do	50.6	38.7	3.4	3.4	3.7	3.2	2.7	3.1	3.9	2.9	3.4	3.5	r5 4.6	3.5	---	---
Consumption, fabricators do	1,103.1	1,127.3	96.0	93.0	99.0	99.9	84.3	100.0	96.4	105.3	95.6	87.9	[5] 88.4	89.5	---	---
Exports do	.2	.8	.1	(2)	(2)	.1	(2)	.4	(2)	.1	.1	(2)	(2)	(2)	(2)	---
Stocks, end of period: Producers', at smelter (ABMS) ☉ do	65.8	38.4	56.9	50.0	40.9	32.5	31.8	27.4	30.1	26.9	32.9	38.4	[5] 36.2	34.5	34.0	40.4
Consumers' do	86.8	94.6	83.6	86.4	82.5	88.1	93.2	92.3	86.8	89.0	85.3	94.6	r5 84.2	76.6	---	---
Price, Prime Western $ per lb	.3439	.3097	.2900	.2900	.2900	.2900	.2901	.2980	.3116	.3237	.3283	.3450	.3457	.3562	.3724	.3899

r Revised.   1 Annual data; monthly revisions are not available.   2 Less than 50 tons.   3 See "*" note for this page.   4 For month shown.   5 See "①" note, this page.   ♂ Includes secondary smelters' lead stocks in refinery shapes and in copper-base scrap.   § All data (except annual production figures) reflect GSA remelted zinc and zinc purchased for direct shipment.   ☉ Revised Dec. 31 stocks for 1970–73 (thous. sh. tons); 124.2; 48.6; 30.1, 25.9. Producers' stocks elsewhere, end of Apr. 1979, 10,315 metric tons.   * New series effective with data for Jan. 1976. Source: Metals Week. MW Composite monthly price (Straits quality, delivered) is based on average of daily prices at two markets (Penang, Malaysia—settlement, and LME 3-month—High grade), and includes fixed charges plus dealer's and consumer's 70-day financing costs; no comparable earlier prices are available.   † Effective with the Apr. 1977 SURVEY, data are expressed in metric tons (to convert U.S. long tons to metric tons, multiply by factor, 1.01605).   ① Beginning with Jan. 1979 data, units are expressed in metric tons; earlier data are shown in short tons (to convert sh. tons to metric tons, multiply by factor 0.907185).

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

METALS AND MANUFACTURES—Continued

MACHINERY AND EQUIPMENT

	1977 Annual	1978 Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Heating, combustion, atmosphere equipment, new orders (domestic), net, qtrly. ♀ ⊙_____mil. $__	¹ 240.8	286.8	67.3	_____	_____	75.0	_____	_____	65.5	_____	_____	78.9	_____	_____	_____	_____
Electric processing heating equip_____do____	¹ 68.0	71.4	14.8	_____	_____	15.3	_____	_____	16.8	_____	_____	24.4	_____	_____	_____	_____
Fuel-fired processing heating equip_____do____	¹ 92.5	118.2	28.8	_____	_____	36.5	_____	_____	23.3	_____	_____	29.6	_____	_____	_____	_____
Material handling equipment (industrial): Orders (new), index, seas. adj._____1967=100__	232.3	336.1	298.6	334.0	362.1	351.0	318.2	433.5	308.0	353.0	346.2	392.5	396.4	357.4	_____	_____
Industrial trucks (electric), shipments: Hand (motorized)_____number__	18,000	20,994	1,897	1,539	2,043	1,815	1,297	1,699	1,882	1,986	1,842	1,856	1,847	1,774	2,163	_____
Rider-type_____do____	21,409	25,119	2,441	2,173	2,241	2,128	1,609	2,190	2,214	2,275	2,191	2,131	2,472	2,326	2,605	_____
Industrial trucks and tractors (internal combustion engines), shipments_____number__	43,289	51,986	4,675	4,312	3,839	5,200	3,106	4,645	4,972	5,054	4,486	4,100	4,729	4,837	5,142	_____
Industrial supplies, machinery and equipment: New orders index, seas. adjusted____1967-69=100__	199.2	231.1	218.6	222.8	226.2	228.3	227.5	225.4	232.7	251.3	258.0	253.4	266.0	267.6	261.7	_____
Industrial suppliers distribution: Sales index, seas. adjusted_____1967=100__	207.4	236.5	224.0	233.6	233.9	242.2	238.6	243.3	253.7	250.6	253.3	247.2	255.5	256.4	263.0	269.1
Price index, not seas. adj. (tools, material handling equip., valves, fittings, abrasives, fasteners, metal products, etc.)_____1967=100__	191.4	205.3	200.6	201.5	202.3	203.7	205.6	206.9	207.8	210.1	212.5	213.8	215.7	217.0	218.5	_____
Machine tools: Metal cutting type tools: Orders, new (net), total_____mil. $__	2,202.05	3,375.45	258.90	302.20	267.40	316.95	249.30	274.65	253.00	334.05	352.90	301.15	420.75	ʳ 360.95	ᵖ 374.95	_____
Domestic_____do____	1,980.70	3,043.15	230.80	273.70	235.30	280.55	231.20	255.10	234.40	312.00	335.95	238.70	377.25	ʳ 310.35	ᵖ 342.55	_____
Shipments, total_____do____	1,650.80	2,188.50	206.00	178.70	189.45	216.05	137.75	161.70	193.60	195.05	188.85	218.50	177.30	ʳ 208.95	ᵖ 244.00	_____
Domestic_____do____	1,469.85	1,960.10	188.35	158.65	175.25	193.05	123.55	142.90	172.40	173.10	164.60	196.95	158.60	ʳ 184.70	ᵖ 217.35	_____
Order backlog, end of period_____do____	1,793.6	2,980.6	2,013.6	2,137.1	2,215.7	2,315.9	2,427.5	2,540.5	2,594.9	2,733.8	2,897.9	2,980.6	3,224.1	ʳ3,377.0	ᵖ3,507.9	_____
Metal forming type tools: Orders, new (net), total_____do____	794.85	ʳ 968.55	65.40	76.70	87.45	75.80	72.25	100.15	81.70	79.95	88.15	80.25	97.60	ʳ 86.95	ᵖ 105.40	_____
Domestic_____do____	730.70	896.85	62.60	70.80	80.20	69.60	66.95	93.95	75.35	74.55	81.45	73.75	92.85	ʳ 77.85	ᵖ 99.00	_____
Shipments, total_____do____	629.95	824.95	66.35	64.25	66.25	76.90	70.65	53.70	65.15	71.75	85.55	91.40	67.25	ʳ 72.30	ᵖ 85.05	_____
Domestic_____do____	560.35	728.50	61.40	55.45	61.20	68.95	64.40	49.00	57.55	65.45	70.85	74.40	58.60	ʳ 67.60	ᵖ 79.10	_____
Order backlog, end of period_____do____	384.1	517.7	420.9	433.4	454.6	453.5	455.1	501.5	518.0	526.3	528.9	517.7	548.0	562.7	ᵖ 583.1	_____
Tractors used in construction, shipments, qtrly: Tracklaying, total_____units__	19,968	22,058	5,820	_____	_____	5,926	_____	_____	4,752	_____	_____	5,560	³ 1,611	³ 1,788	_____	_____
mil. $__	1,136.3	1,376.9	350.1	_____	_____	361.0	_____	_____	304.3	_____	_____	361.5	³ 110.0	³ 124.1	_____	_____
Wheel (contractors' off-highway)_____units__	5,271	_____	1,537	_____	_____	1,546	_____	_____	1,464	_____	_____	_____	_____	_____	_____	_____
mil. $__	330.1	_____	107.7	_____	_____	119.1	_____	_____	105.7	_____	_____	_____	_____	_____	_____	_____
Tractor shovel loaders (integral units only), wheel and tracklaying types_____units__	42,763	49,809	11,825	_____	_____	13,076	_____	_____	12,031	_____	_____	13,103	_____	_____	_____	_____
mil. $__	1,331.8	1,712.6	394.7	_____	_____	464.9	_____	_____	400.9	_____	_____	453.5	_____	_____	_____	_____
Tractors, wheel, farm, nonfarm (ex. garden and construction types), ship., qtrly_____units__	206.4	173.106	45,912	_____	_____	47,931	_____	_____	37,911	_____	_____	41,352	³ 16,778	³ 17,054	_____	_____
mil. $__	2,752.5	2,662.7	693.5	_____	_____	706.6	_____	_____	552.8	_____	_____	709.8	ʳ³251.6	³ 283.0	_____	_____

ELECTRICAL EQUIPMENT

	1977 Annual	1978 Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Batteries (auto.-type replacement), ship____thous__	54,601	56,389	3,975	3,287	3,456	3,695	3,703	5,247	5,972	6,442	5,692	5,818	5,364	4,254	4,068	_____
Radio sets, production, total market_____thous__	52,926	48,036	²5,422	3,272	3,883	²5,585	4,328	4,313	²4,831	3,937	3,246	²3,610	3,552	2,872	²3,951	2,114
Television sets (incl. combination models), production, total market_____thous__	15,432	17,406	²1,674	1,368	1,288	²1,678	1,225	1,279	²2,044	1,538	1,345	²1,666	1,225	1,378	²1,642	1,150
Household major appliances (electrical), factory shipments (domestic and export) ♀____thous__	30,957	33,216	3,343	3,100	3,205	3,247	2,616	2,789	2,720	2,855	2,554	2,225	2,479	2,506	_____	_____
Air conditioners (room)_____do____	3,270	4,037	569	703	639	591	307	111	101	130	162	240	259	333	_____	_____
Dishwashers_____do____	3,356	3,556	345	307	330	320	211	301	288	342	342	276	300	260	_____	_____
Disposers (food waste)_____do____	2,941	3,313	291	280	277	280	255	278	287	335	293	231	271	256	_____	_____
Ranges_____do____	3,011	3,127	305	293	307	296	249	294	274	298	259	221	236	224	_____	_____
Refrigerators_____do____	5,707	5,890	569	480	536	604	548	586	528	518	431	346	375	382	_____	_____
Freezers_____do____	1,598	1,522	150	118	153	191	163	168	115	103	81	67	97	116	_____	_____
Washers_____do____	4,933	5,038	513	416	446	435	376	469	468	463	372	325	416	397	_____	_____
Dryers (incl. gas)_____do____	3,553	3,621	375	296	288	271	246	327	340	347	324	256	306	291	_____	_____
Vacuum cleaners (qtrly.)_____do____	9,392	9,136	1,747	_____	_____	3,084	_____	_____	2,162	_____	_____	2,143	_____	_____	1,188	_____

GAS EQUIPMENT (RESIDENTIAL)

	1977 Annual	1978 Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Furnaces, gravity and forced-air, shipments_thous__	1,508	1,636	133	130	118	127	126	137	ʳ 153	173	142	154	145	ᵖ 128	_____	_____
Ranges, total, sales_____do____	1,746	1,794	157	154	161	168	124	146	ʳ 165	154	148	169	139	ᵖ 150	_____	_____
Water heaters (storage), automatic, sales____do____	⁴ 3,070	⁶2,658	270	286	275	217	217	230	217	247	228	_____	_____	_____	_____	_____

PETROLEUM, COAL, AND PRODUCTS

COAL

	1977 Annual	1978 Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Anthracite: Production ‡_____thous. sh. tons__	6,175	¹ 6,445	ʳ 525	ʳ520	650	595	570	680	575	535	575	425	455	360	460	475
Exports_____do____	625	866	52	19	62	31	43	66	116	142	100	179	79	35	50	_____
Price, wholesale, chestnut, f.o.b. car at mine $ per sh. ton__	46.579	⁵ 47.135	46.579	46.579	_____	47.192	47.192	47.498	47.542	47.537	47.530	47.675	47.677	47.677	47.677	47.677
Bituminous: Production ‡_____thous. sh. tons__	ʳ1 691,344	¹ 653,800	38,765	59,530	62,220	65,565	53,640	64,395	57,775	69,860	69,245	59,630	52,085	ʳ 46,820	65,370	63,325

ʳ Revised.   ᵖ Preliminary.   ¹ Annual data; monthly or quarterly revisions not avail.   ² Data cover 5 weeks; other periods, 4 weeks.   ³ For month shown.   ⁴ Beginning July 1977, data include shipments to mobile home and travel trailer manufacturers (formerly excluded); they are not directly comparable with those for earlier periods.   ⁵ Average for Jan.-Apr. and June-Dec.   ⁶ Total for Jan.-Nov.; sales for Dec. 1978 not available at this time.

♀ Includes data not shown separately.
‡ Monthly revisions back to 1973 are available upon request.
⊙ Effective 1976, data reflect additional reporting firms.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

PETROLEUM, COAL, AND PRODUCTS—Continued

COAL—Continued

Bituminous—Continued ‡

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Industrial consumption and retail deliveries, total ♀ _____thous. sh. tons__	²620,476	²618,048	43,810	45,504	48,753	51,827	55,428	57,215	53,921	52,270	52,186	56,634	60,048	53,390		
Electric power utilities_____do__	²475,671	²480,149	33,923	34,545	37,125	40,593	44,035	45,952	42,556	39,770	39,659	43,579	47,016	41,800		
Mfg. and mining industries, total____do__	²137,776	129,976	9,237	10,418	11,132	10,758	10,942	10,820	10,839	11,723	11,676	12,129	11,857	10,879		
Coke plants (oven and beehive)_____do__	² 77,387	71,093	3,988	5,501	6,406	6,382	6,530	6,436	6,391	6,680	6,496	6,729	6,426	5,816		
Retail deliveries to other consumers_____do__	7,020	7,914	650	540	495	475	450	442	525	776	850	925	1,175	710		
Stocks, industrial and retail dealers' end of period, total_____thous. sh. tons__	152,264	141,608	83,942	96,462	110,886	121,588	119,791	122,607	125,568	143,564	142,643	141,608	131,891	125,085		
Electric power utilities_____do__	130,898	126,036	75,081	85,772	98,472	107,498	107,443	110,006	112,797	129,359	127,118	126,036	117,469	112,023		
Mfg. and mining industries, total____do__	21,146	15,212	8,747	10,555	12,239	13,780	12,058	12,246	12,407	13,848	15,145	15,212	14,057	12,744		
Oven-coke plants_____do__	12,721	8,162	3,750	5,602	7,129	8,237	6,604	6,276	6,202	7,272	8,520	8,162	7,437	6,553		
Retail dealers_____do__	220	360	114	135	175	310	290	355	364	357	380	360	365	318		
Exports_____do__	53,687	39,825	325	2,594	4,411	5,398	3,531	3,568	3,338	4,911	5,930	4,394	3,526	2,691	4,592	
Price, wholesale ‡_____Index, 1967=100__	388.6	430.0	406.5	426.4	432.4	434.5	437.2	441.9	442.9	444.1	442.9	442.8	444.8	445.0	445.5	447.8

COKE

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Production:																
Beehive ‡_____thous. sh. tons__	449	355	29	29	33	29	29	25	29	30	31	32	35	35		
Oven (byproduct) ‡_____do__	53,060	48,238	2,661	3,753	4,398	4,362	4,455	4,379	4,346	4,512	4,383	4,645	ʳ 4,413	3,980		
Petroleum coke § ‡_____do__	26,949	26,908	2,321	2,137	2,286	2,220	2,252	2,388	2,188	2,244	2,314	2,367				
Stocks, end of period:																
Oven-coke plants, total ‡_____do__	6,444	3,461	3,461	3,189	2,993	2,938	2,846	2,954	3,008	3,128	3,277	3,461	ʳ 3,479	3,427		
At furnace plants ‡_____do__	6,308	3,323	3,373	3,107	2,910	2,848	2,731	2,827	2,896	3,029	3,178	3,323	ʳ 3,322	3,257		
At merchant plants_____do__	136	139	87	81	83	90	114	127	112	99	100	139	ʳ 157	170		
Petroleum coke ‡_____do__	2,050	2,214	2,270	2,321	2,380	2,376	2,489	2,397	2,287	2,191	2,185	2,214				
Exports_____do__	1,241	889	42	56	103	74	53	46	125	68	103	78	30	90	88	

PETROLEUM AND PRODUCTS

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Crude petroleum:																
Oil wells completed_____number__	18,886	17,758	1,499	1,369	1,209	1,812	1,503	1,516	1,619	1,406	1,294	1,861	1,372	1,463	1,544	1,138
Price, wholesale_____Index, 1967=100__	274.2	300.1	293.4	294.3	295.5	298.9	301.9	302.7	305.7	307.5	310.5	312.2	316.4	322.2	324.4	325.8
Gross input to crude oil distillation units__mil. bbl__	5,468.3	5,498.0	447.9	426.3	472.2	451.2	470.3	483.2	461.9	475.9	470.6	487.6				
Refinery operating ratio_____% of capacity__	90	88	85	83	89	88	88	91	90	89	91	90				
All oils, supply, demand, and stocks:																
New supply, total ♂‡_____mil. bbl__	6,832.8	6,770.9	585.4	537.4	549.6	553.6	573.5	575.1	579.5	577.9	570.4	603.3				
Production:																
Crude petroleum ‡_____do__	3,009.3	3,175.9	237.0	261.2	272.8	264.7	271.2	272.4	263.6	273.8	261.9	268.2				
Natural-gas plant liquids_____do__	608.8	591.6	50.9	49.9	48.9	49.0	50.1	50.0	48.0	49.4	49.6	50.3				
Imports:																
Crude and unfinished oils ‡_____do__	2,425.6	2,283.7	190.3	163.5	173.1	192.1	192.8	197.0	209.1	202.1	199.0	216.3				
Refined products ‡_____do__	789.1	719.6	71.2	62.7	54.6	47.8	59.5	55.7	58.8	52.6	60.0	68.5				
Change in stocks, all oils (decrease,−)‡__do__	200.1	−34.0	−23.5	6.5	3.4	7.6	37.1	−1.1	41.9	18.3	10.4	−13.9				
Demand, total ‡_____do__	6,816.1	7,001.8	616.8	541.5	571.8	560.1	556.8	589.4	552.3	582.2	587.5	631.6				
Exports:																
Crude petroleum_____do__	18.3	57.5	1.9	2.8	3.8	5.9	4.3	5.4	7.5	8.4	6.5	7.8				
Refined products_____do__	70.3	74.3	6.5	7.4	5.9	6.1	5.9	7.1	6.8	6.1	5.7	6.3				
Domestic product demand, total ♀‡____do__	6,727.5	6,869.9	608.4	531.4	562.1	548.1	546.5	576.9	538.0	570.7	575.3	617.5				
Gasoline_____do__	2,633.5	2,721.0	226.2	217.3	241.0	238.8	236.3	245.6	223.5	232.6	226.4	232.0				
Kerosene ‡_____do__	64.0	63.4	6.0	3.2	3.8	2.7	3.0	3.4	5.2	5.3	5.3	7.1				
Distillate fuel oil ‡_____do__	1,223.3	1,245.9	126.8	92.8	94.4	85.1	77.9	86.2	79.6	95.1	107.0	128.2				
Residual fuel oil ‡_____do__	1,120.9	1,101.7	109.6	89.7	82.7	78.5	86.2	91.1	81.4	81.6	85.5	96.0				
Jet fuel‡_____do__	379.3	386.8	34.5	30.4	30.8	31.6	31.4	35.0	32.3	33.2	33.4	32.7				
Lubricants ‡_____do__	58.3	62.4	4.8	5.3	5.5	5.8	5.1	5.8	5.1	5.6	5.6	5.2				
Asphalt_____do__	156.0	170.1	7.7	10.4	15.2	20.8	21.1	24.1	19.8	21.2	13.2	7.5				
Liquefied gases ‡_____do__	518.9	515.0	44.2	34.7	36.2	33.6	34.7	33.7	40.1	45.7	47.5	56.6				
Stocks, end of period, total_____do__	1,311.9	1,277.9	1,167.7	1,174.2	1,177.6	1,185.2	1,221.2	1,221.2	1,263.1	1,281.4	1,291.8	1,277.9				
Crude petroleum_____do__	347.7	376.8	363.8	365.0	354.6	363.4	367.9	357.7	368.3	377.9	381.6	376.8				
Unfinished oils, natural gasoline, etc____do__	121.7	116.7	123.4	123.0	124.0	121.0	121.5	119.1	115.0	122.0	120.8	116.7				
Refined products_____do__	842.5	784.5	680.6	686.1	699.0	700.8	732.8	744.5	779.8	781.6	789.4	784.5				
Refined petroleum products:																
Gasoline (incl. aviation):																
Production ‡_____do__	2,581.2	2,630.5	210.1	201.2	220.1	217.8	226.6	232.7	223.4	223.6	228.7	243.9				
Exports_____do__	.7	.5	(¹)	(¹)	(¹)	(¹)	.1	(¹)	.1	.1	(¹)	(¹)				
Stocks, end of period_____do__	260.7	240.7	262.3	251.6	236.1	222.2	219.1	211.8	219.3	216.1	223.2	240.7				
Prices (excl. aviation):																
Wholesale, regular ‡_____Index, 2/73=100__	253.6	265.0	252.0	253.0	255.5	260.5	266.4	271.3	275.1	ʳ 278.1	277.3	282.8	286.9	292.5	300.2	314.0
Retail (regular grade, excl. taxes), 55 cities (mid-month)_____$ per gal__	.507	.531	.510	.512	.517	.524	.533	.542	.545	.547	.554	.564	³,⁶⁸⁴	.700	.732	.772
Aviation gasoline:																
Production_____mil. bbl__	14.2	13.9	.8	1.1	1.3	1.4	1.4	1.6	1.4	1.1	1.2	1.1				
Exports_____do__	.1	(⁴)														
Stocks, end of period_____do__	3.0	2.8	2.4	2.4	2.4	2.5	2.6	2.5	2.6	2.4	2.7	2.8				
Kerosene:																
Production ‡_____do__	62.6	55.7	5.9	4.0	4.2	3.9	3.8	4.1	3.8	4.7	4.7	5.7				
Stocks, end of period_____do__	18.1	14.3	11.9	12.9	13.6	14.8	15.9	16.7	16.1	15.8	15.5	14.3				
Price, wholesale (light distillate) ‡ Index, 1967=100__	358.5	392.6	388.4	387.9	390.7	391.4	393.1	394.4	395.8	ʳ 397.6	398.6	402.5	407.0	413.8	421.0	433.9

ʳ Revised.   ¹ Less than 50 thousand barrels.   ² Reflects revisions not available by months.   ³ Beginning Jan. 1979, price includes taxes formerly excluded.   ⁴ Effective Jan. 1978, data for exports of aviation gasoline are no longer reported separately. ♀ Includes data not shown separately. § Includes nonmarketable catalyst coke. ♂ Includes small amounts of "other hydrocarbons and hydrogen refinery input," not shown separately. ‡ Monthly revisions back to 1973 for bituminous coal, back to 1977 for coke, back to 1974 for petroleum and products and for 1977 for wholesale price indexes will be shown later.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978 ᵖ	1978										1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

PETROLEUM, COAL, AND PRODUCTS—Continued

PETROLEUM AND PRODUCTS—Continued

Refined petroleum products—Continued																
Distillate fuel oil:																
Production‡ ....mil. bbl..	1,196.3	1,149.9	93.0	88.2	99.4	93.2	96.4	101.6	95.2	101.9	100.6	103.5				
Imports‡ ....do....	91.3	62.8	5.8	3.0	3.7	4.4	4.6	4.4	4.9	5.5	6.7	7.9				
Exports ....do....	.5	1.2	(²)	.2	(²)	(²)	.1	.1	.1	.1	.1	(¹)				
Stocks, end of period ....do....	250.3	216.4	137.9	136.3	145.1	157.5	180.5	200.4	220.8	233.1	233.2	216.4				
Price, wholesale (middle distillate) ‡ ....Index, 1967=100..	384.1	398.1	394.8	393.3	393.3	393.3	393.2	393.6	394.0	r400.1	408.5	417.8	425.5	432.3	452.1	479.4
Residual fuel oil:																
Production‡ ....mil. bbl..	640.1	611.0	54.5	46.6	51.0	47.5	49.4	50.7	49.4	48.8	50.2	54.4				
Imports‡ ....do....	496.1	491.0	52.7	46.9	37.9	30.4	40.2	39.2	39.4	34.7	40.5	43.2				
Exports ....do....	2.3	4.6	.7	.2	.5	.1	.3	.8	.4	.2	.2	.6				
Stocks, end of period ....do....	90.0	90.2	62.2	66.2	72.4	71.9	75.3	73.7	81.2	83.4	88.8	90.2				
Price, wholesale ‡ ....Index, 1967=100..	522.5	r497.0	491.6	494.6	505.9	509.3	494.5	480.8	481.5	r485.4	500.9	502.2	517.9	520.5	541.9	607.6
Jet fuel:																
Production‡ ....mil. bbl..	355.0	355.2	30.1	29.5	31.4	28.8	28.8	30.1	29.7	29.1	30.5	30.8				
Stocks, end of period‡ ....do....	34.5	33.7	32.0	34.6	38.5	37.4	38.0	35.7	35.3	33.1	32.8	33.7				
Lubricants:																
Production ....do....	64.5	69.5	5.8	5.7	5.9	5.8	6.3	6.1	6.0	6.3	6.1	5.7				
Exports ....do....	9.6	9.7	.8	1.1	.7	.7	.8	.7	.9	1.0	.6	.9				
Stocks, end of period ....do....	12.1	12.2	12.4	12.0	11.9	11.3	11.9	11.6	11.8	12.1	12.3	12.2				
Asphalt:																
Production ....do....	154.1	171.7	9.8	12.2	15.9	16.4	17.7	18.9	19.1	18.6	15.4	12.3				
Stocks, end of period ....do....	18.7	20.8	26.8	28.6	29.2	25.0	21.8	16.8	16.2	13.7	16.1	20.8				
Liquefied gases (incl. ethane and ethylene).‡																
Production, total ....do....	571.6	561.0	49.5	47.1	47.7	46.0	46.4	46.3	46.1	46.8	46.8	48.0				
At gas processing plants (L.P.G.) ....do....	443.0	431.5	38.3	36.7	36.5	34.9	35.6	35.4	34.7	35.8	36.1	36.8				
At refineries (L.R.G.) ....do....	128.6	129.5	11.2	10.5	11.2	11.0	10.8	10.9	11.4	10.9	10.7	11.3				
Stocks (at plants and refineries) ....do....	136.3	132.0	112.6	121.5	129.4	138.5	147.3	155.1	156.7	152.4	144.2	132.0				

PULP, PAPER, AND PAPER PRODUCTS

PULPWOOD AND WASTE PAPER																
Pulpwood:																
Receipts ....thous. cords (128 cu. ft.)..	72,875	77,025	6,998	6,538	6,463	6,949	6,203	6,349	6,251	6,894	6,429	6,288	5,949	5,766		
Consumption ....do....	73,971	77,290	6,780	6,776	6,751	6,884	6,090	6,231	6,275	6,508	6,358	5,980	6,404	6,287		
Stocks, end of period ....do....	5,761	6,244	5,382	5,151	4,844	5,020	5,141	5,323	5,363	5,895	5,976	6,244	5,820	5,379		
Waste paper:																
Consumption ....thous. sh. tons..	12,192	13,178	1,183	1,155	1,217	1,119	988	1,136	1,020	1,144	1,071	1,004	r1,078	1,029		
Stocks, end of period ....do....	728	740	706	744	745	753	732	732	744	721	709	740	r673	616		
WOODPULP																
Production:																
Total, all grades ♀ ....thous. sh. tons..	¹49,033	¹47,075	4,149	4,101	4,100	4,109	3,672	3,848	3,878	4,051	3,954	3,628	r3,905	3,815		
Dissolving and special alpha ....do....	1,401	1,415	142	113	136	130	114	117	84	118	105	90	98	92		
Sulfate ....do....	³34,005	³35,739	3,149	3,150	3,064	3,085	2,823	2,983	2,960	3,088	3,007	2,745	r3,000	2,926		
Sulfite ....do....	2,000	1,758	166	165	173	178	129	116	127	120	131	114	r104	122		
Groundwood ....do....	4,753	4,216	352	342	387	389	304	302	362	375	370	364	r353	347		
Semichemical ....do....	³3,569	³3,948	340	330	341	325	301	329	345	351	341	316	r351	328		
Stocks, end of period:																
Total, all mills ....do....	⁴1,356	⁴760	1,090	1,074	1,069	898	1,014	1,048	993	999	788	760	r845	800		
Pulp mills ....do....	⁴684	⁴254	613	613	611	426	516	545	473	486	300	254	r410	389		
Paper and board mills ....do....	609	435	415	397	395	407	432	436	454	442	423	435	r371	347		
Nonpaper mills ....do....	62	70	62	64	63	66	66	67	66	70	65	70	r64	64		
Exports, all grades, total ....do....	¹2,640	¹2,599	233	210	227	266	230	174	269	207	204	210	165	198	213	
Dissolving and special alpha ....do....	796	757	83	46	71	80	69	54	73	60	52	47	41	58	60	
All other ....do....	¹1,844	¹1,841	150	163	156	186	161	120	196	147	152	163	124	139	150	
Imports, all grades, total ....do....	¹3,864	¹4,025	327	300	402	303	327	325	316	351	367	362	331	347	384	
Dissolving and special alpha ....do....	179	176	20	8	16	7	20	5	20	8	33	7	16	5	27	
All other ....do....	¹3,686	¹3,849	307	292	386	296	307	320	297	343	333	355	315	341	357	
PAPER AND PAPER PRODUCTS																
Paper and board:																
Production (Bu. of the Census):																
All grades, total, unadjusted ....thous. sh. tons..	61,869	62,066	5,547	5,242	5,602	5,463	4,793	5,233	4,963	5,321	5,198	4,745	r5,175	4,936		
Paper ....do....	27,491	27,729	2,553	2,379	2,533	2,444	2,075	2,201	2,134	2,332	2,287	2,144	r2,316	2,227		
Paperboard ....do....	28,727	28,723	2,494	2,368	2,559	2,541	2,278	2,513	2,374	2,543	2,440	2,172	r2,411	2,282		
Wet-machine board ....do....	128	109	10	10	10	11	6	10	9	9	9	9	9	9		
Construction paper and board ....do....	5,523	5,505	489	484	499	467	435	509	446	436	463	421	440	418		
Producer price indexes:																
Book paper, A grade ....1967=100..																
Paperboard ....do....	176.4	179.4	174.5	177.3	178.0	178.6	179.5	179.4	185.1	185.5	186.3	186.8	188.5	190.2	192.3	197.2
Building paper and board ....do....	157.0	187.4	186.6	188.7	190.8	192.3	193.1	189.8	187.0	189.5	188.7	187.6	185.2	183.6	182.6	183.4

r Revised.   ᵖ Preliminary.   [1] Reported annual total; revisions not allocated to the months.   [2] Less than 50 thousand barrels.   [3] Beginning with January 1975, data for soda (formerly combined with semichemical) is now combined with sulphate; not comparable with data for earlier periods.

[4] Data exclude small amounts of pulp because reporting would disclose the operations of individual firms.   ‡ Monthly revisions back to 1974 for imports and back to 1977 for other refined petroleum products are available upon request.   ♀ Includes data for items not shown separately.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.

PULP, PAPER, AND PAPER PRODUCTS—Continued

PAPER AND PAPER PRODUCTS—Con.

Selected types of paper (API):

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Groundwood paper, uncoated:																
Orders, new_____thous. sh. tons__	1,312	1,274	118	111	124	132	72	84	124	100	88	104	ʳ 127	ʳ 104	138	
Orders, unfilled, end of period_____do___	134	133	155	133	130	144	138	143	173	160	140	133	ʳ 174	ʳ 185	211	
Shipments_____do___	1,307	1,245	116	111	124	106	83	81	95	110	110	105	ʳ 106	ʳ 102	119	
Coated paper:																
Orders, new_____do___	4,279	4,413	419	337	385	376	333	382	342	360	365	363	ʳ 396	ʳ 346	392	
Orders, unfilled, end of period_____do___	398	391	403	391	390	397	405	408	405	367	356	391	ʳ 405	ʳ 420	412	
Shipments_____do___	4,261	4,435	402	359	394	370	326	381	353	590	379	333	ʳ 363	ʳ 353	396	
Uncoated free sheet papers:																
Orders, new_____do___	6,878	7,462	702	658	709	666	572	636	592	598	574	568	ʳ 657	ʳ 594	671	
Shipments_____do___	7,170	7,546	691	644	661	648	575	659	597	648	630	602	ʳ 646	ʳ 613	694	
Unbleached kraft packaging and industrial converting papers:																
Orders, new_____thous. sh. tons__																
Orders, unfilled, end of period_____do___																
Shipments_____do___	3,815	3,894	347	345	348	320	301	293	301	319	305	292	ʳ 321	ʳ 320	341	
Tissue paper, production_____do___	4,286	ʳ 4,218	373	364	388	369	317	338	327	360	344	ʳ 328	ʳ 376	ʳ 348	380	
Newsprint:																
Canada:																
Production_____do___	8,988	9,713	826	834	843	807	838	823	759	855	782	768	828	750		
Shipments from mills_____do___	9,005	9,792	927	798	895	853	833	813	770	868	792	834	779	725		
Stocks at mills, end of period_____do___	282	203	350	386	333	287	293	303	292	279	269	203	252	276		
United States:																
Production_____do___	3,871	3,806	352	328	336	339	258	279	319	331	322	311	318	311		
Shipments from mills_____do___	3,866	3,818	360	323	340	342	255	284	316	337	323	312	318	309		
Stocks at mills, end of period_____do___	34	22	34	38	34	30	33	28	30	25	24	22	22	24		
Consumption by publishersⱺ_____do___	6,772	7,106	600	620	631	586	560	558	566	624	657	636	555	547		
Stocks at and in transit to publishers, end of period_____thous. sh. tons__	796	728	818	818	835	876	898	868	829	840	761	728	705	713		
Imports_____do___	6,559	7,484	611	604	639	747	649	680	580	672	648	532	623	613	651	
Price, rolls, contract, f.o.b. mill, freight allowed or delivered_____Index, 1967=100__	215.4	226.2	216.7	228.2	228.2	228.2	228.2	230.5	230.5	230.5	230.5	230.5	230.5	238.9	241.7	244.7
Paperboard (American Paper Institute):																
Orders, new (weekly avg.)_____thous. sh. tons__	558	600	610	622	634	622	560	598	584	605	566	546	618	621	657	630
Orders, unfilled§_____do___	1,037	1,370	1,306	1,385	1,546	1,556	1,560	1,600	1,470	1,479	1,412	1,370	1,451	1,482	1,583	1,638
Production, total (weekly avg.)_____do___	557	582	595	598	616	611	542	587	576	597	600	531	593	612	628	619
Paper products:																
Shipping containers, corrugated and solid fiber shipments_____mil. sq. ft. surf. area__	227,198	ʳ243,898	21,555	19,970	21,759	22,116	17,583	22,311	20,548	22,654	20,407	18,675	20,923	19,537	22,884	20,572
Folding paper boxes, shipments__thous. sh. tons__	2,639.0	2,734.0	240.7	216.2	236.3	230.1	200.3	244.7	232.4	247.4	231.0	238.3	ʳ 218.1	ʳ 207.8	252.4	
mil. $__	2,105.0	ʳ2,278.1	195.9	178.2	195.0	193.1	ʳ 167.4	207.6	195.5	210.7	193.3	202.3	ʳ 187.4	ʳ 180.2	217.4	

RUBBER AND RUBBER PRODUCTS

RUBBER

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Natural rubber:																
Consumption_____thous. metric tons__	780.13		63.79	61.23	67.98	61.88	51.68	69.13	65.55	69.47	70.89	62.81				
Stocks, end of period_____do___	¹127.65		117.10	115.60	122.76	123.39	125.41	126.06	127.65	133.48	123.95	125.58				
Imports, incl. latex and guayule__thous. lg. tons__	792.41	746.23	71.77	83.44	75.96	54.36	47.79	71.02	77.07	54.90	46.05	71.51	72.84	64.22	72.80	
Price, wholesale, smoked sheets (N.Y.)__$ per lb__	.416	.496	.455	.439	.450	.490	.494	.520	.544	.543	.581	.558	.544	.570	.615	.674
Synthetic rubber:																
Production_____thous. metric tons__	2,417.53		210.31	214.92	211.17	194.36	195.95	205.67	207.37	212.33	212.10	219.09				
Consumption_____do___	2,464.09	2,436.40	ʳ206.16	ʳ197.47	ʳ212.71	ʳ194.69	ʳ170.59	ʳ213.94	ʳ211.70	ʳ220.29	ʳ212.14	209.84				
Stocks, end of period_____do___	426.83		434.49	446.93	411.41	433.09	456.46	445.08	437.67	425.32	419.91	424.07				
Exports (Bu. of Census)_____thous. lg. tons__	239.98	254.96	22.55	19.48	24.90	22.28	19.35	20.04	20.77	22.22	23.81	23.77	23.62	22.29	27.74	
Reclaimed rubber:																
Production_____thous. metric tons__	⁴78.47		9.61	10.05	9.85	9.88	9.53	10.79	5.00	10.40	10.15	9.91				
Consumption_____do___	⁴103.12		9.39	10.11	10.28	10.26	8.75	9.60	10.01	11.28	9.58	10.58				
Stocks, end of period_____do___	16.26		14.52	13.45	13.70	13.56	13.67	15.14	15.51	14.84	15.25	14.12				

TIRES AND TUBES

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Pneumatic casings, automotive:																
Production_____thous__	²231,638		18,987	18,828	19,148	18,946	15,108	19,245	19,155	20,497	18,299	18,869	20,352	19,592		
Shipments, total_____do___	²226,583		22,198	21,738	20,597	22,599	17,584	20,516	22,214	22,727	18,872	16,946	17,227	16,422		
Original equipment_____do___	²65,998		6,386	6,161	6,300	6,121	4,077	4,680	5,933	6,408	5,911	5,065	5,644	5,451		
Replacement equipment_____do___	²155,195		15,373	15,224	13,888	16,008	13,265	15,464	15,888	15,871	12,597	11,486	11,148	10,530		
Exports_____do___	²5,390		439	352	409	440	242	372	392	447	365	396	436	442		
Stocks, end of period_____do___	²47,181		51,986	50,006	49,276	46,293	44,280	44,057	41,796	40,135	40,394	43,472	47,212	51,284		
Exports (Bu. of Census)_____do___	6,023	5,328	474	406	458	483	314	462	414	520	483	541	560	437		
Inner tubes, automotive:																
Production_____do___	(³)															
Shipments_____do___	(³)															
Stocks, end of period_____do___	(³)															
Exports (Bu. of Census)_____do___	2,298	3,015	240	198	268	188	143	223	223	342	274	343	312	218		

ʳ Revised.   ¹ Beginning Jan. 1977, producers' stocks are included; comparable data for earlier periods will be shown later.   ² Beginning Jan. 1977, data cover passenger car and truck and bus tires; motorcycle tires and tires for mobile homes are excluded.   ³ Beginning Jan. 1977, data no longer available.   ⁴ Reported total; revisions not distributed to the months.

ⱺAs reported by publishers accounting for about 75 percent of total newsprint consumption. § Monthly data are averages for the 4-week period ending on Saturday nearest the end of the month; annual data are as of Dec. 31.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978											1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

STONE, CLAY, AND GLASS PRODUCTS

PORTLAND CEMENT

	1977	1978	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Shipments, finished cement.....thous. bbl..	¹418,862	¹451,739	31,452	37,239	44,904	49,782	43,755	50,340	44,617	48,468	37,851	28,952	16,628	18,713	32,420	....

CLAY CONSTRUCTION PRODUCTS

Shipments:‡

Brick, unglazed (common and face) mil. standard brick..	8,300.5	9,053.1	713.6	788.8	893.6	914.6	807.1	911.6	784.9	875.4	769.2	656.4	ʳ 501.5	378.7	....	....
Structural tile, except facing.....thous. sh. tons..	45.0	76.2	7.4	10.5	6.6	6.3	5.4	5.1	6.9	5.7	6.0	4.9	3.6	4.7	....	....
Sewer pipe and fittings, vitrified.....do....	1,106.8	941.9	70.9	82.1	95.6	101.0	94.8	106.4	91.3	94.5	72.5	50.4	ʳ 37.2	37.1	....	....
Facing tile (hollow), glazed and unglazed mil. brick equivalent..	61.8	58.3	4.6	4.9	5.8	5.7	4.9	5.6	5.4	5.6	4.6	5.0	ʳ 3.5	3.2	....	....
Floor and wall tile and accessories, glazed and unglazed.....mil. sq. ft..	266.2	297.6	27.9	25.0	27.1	26.2	21.0	27.0	24.3	27.6	25.7	23.7	25.2	23.8	....	....
Price index, brick (common), f.o.b. plant or N.Y. dock ⊕.....1967=100..	204.0	234.4	228.0	230.1	230.6	230.7	231.9	234.1	243.2	ᶜ 243.3	244.6	247.9	253.2	255.3	257.3	261.4

GLASS AND GLASS PRODUCTS

Flat glass, mfrs.' shipments.....thous. $..	739,919	820,216	202,552	....	....	210,640	....	....	202,475	....	....	204,549	....	....	....	....
Sheet (window) glass, shipments.....do....	(⁵)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Plate and other flat glass, shipments.....do....	(⁵)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Glass containers:

Production‡.....thous. gross..	303,452	326,634	28,884	28,767	29,150	28,759	26,930	29,428	26,175	30,031	25,710	21,443	ʳ 26,132	26,090	29,447	....
Shipments, domestic, total‡.....do....	304,785	315,639	27,383	26,528	33,988	27,233	24,514	29,484	27,674	27,359	25,547	22,823	ʳ 24,592	23,008	30,228	....

Narrow-neck containers:

Food.....do....	25,069	26,637	2,317	2,234	2,705	2,184	1,758	2,432	3,357	2,242	1,967	1,651	ʳ 1,987	1,995	2,640	....
Beverage.....do....	67,466	60,528	5,438	5,202	6,940	6,010	5,317	5,683	4,914	4,761	4,473	4,071	ʳ 3,703	3,356	5,303	....
Beer.....do....	92,757	106,489	8,679	8,948	10,569	9,755	9,501	10,519	9,304	9,253	8,512	8,311	ʳ 8,744	8,532	10,026	....
Liquor and wine.....do....	24,352	25,084	2,321	2,132	2,770	1,897	1,573	2,134	2,060	2,390	2,214	1,900	ʳ 1,805	1,359	2,583	....

Wide-mouth containers:

Food (incl. packer's tumblers, jelly glasses, and fruit jars)‡ ⊙.....thous. gross..	61,330	65,062	5,806	5,226	7,194	4,717	4,187	6,018	5,567	5,967	5,640	4,996	ʳ 5,681	5,141	6,635	....

Narrow-neck and Wide-mouth containers:

Medicinal and toilet.....do....	30,091	27,998	2,515	2,474	3,349	2,375	1,906	2,371	2,147	2,415	2,440	1,667	ʳ 2,357	2,306	2,677	....
Chemical, household and industrial.....do....	3,720	3,841	307	312	461	295	272	327	325	331	301	227	ʳ 315	319	364	....
Stocks, end of period‡.....do....	36,912	44,250	43,764	45,739	41,461	43,398	45,902	43,947	43,233	46,515	46,371	44,250	ʳ 45,168	48,643	45,660	....

GYPSUM AND PRODUCTS

Production:

Crude gypsum (exc. byproduct)..thous. sh. tons..	13,410	14,402	1,222	1,333	1,277	1,208	1,195	1,302	1,251	1,212	1,136	1,129	1,121	......	......	....
Calcined.....do....	12,090	13,494	1,071	1,195	1,237	1,121	1,164	1,184	1,129	1,206	1,091	1,087	1,092	......	......	....
Imports, crude gypsum.....do....	¹ 7,074	7,954	493	529	767	684	825	788	811	700	658	688	506	......	......	....

Sales of gypsum products:

Uncalcined.....do....	¹ 5,759	5,434	370	423	458	565	505	568	552	494	462	441	393	......	......	....

Calcined:

Industrial plasters.....do....	¹ 326	396	35	37	36	38	28	33	33	38	37	29	29	......	......	....

Building plasters:

Regular basecoat.....do....	136	140	11	11	10	14	9	10	9	11	9	31	9	......	......	....
All other (incl. Keene's cement).....do....	312	306	25	26	27	29	25	29	26	31	25	23	19	......	......	....
Board products, total.....mil. sq. ft..	15,369	16,412	1,399	1,364	1,399	1,388	1,351	1,502	1,326	1,479	1,317	1,440	1,375	......	......	....
Lath.....do....	165	137	15	12	13	11	12	13	10	11	8	8	10	......	......	....
Veneer base.....do....	418	458	40	36	42	40	40	43	36	43	35	36	36	......	......	....
Gypsum sheathing.....do....	289	234	22	22	22	22	21	21	17	17	17	15	14	......	......	....
Regular gypsum board.....do....	11,840	12,566	1,071	1,049	1,070	1,058	1,037	1,147	1,014	1,136	1,001	1,097	1,026	......	......	....
Type X gypsum board.....do....	2,425	2,786	232	227	232	236	221	257	228	250	237	265	260	......	......	....
Predecorated wallboard.....do....	232	231	20	18	20	20	20	21	20	22	18	18	19	......	......	....

TEXTILE PRODUCTS

FABRIC (GRAY)

Knit fabric production off knitting machines (own use, for sale, on commission), qtrly*.....mil. lb..	⁶1,688.6	1,644.5	412.1	....	....	439.7	....	....	403.5	....	....	389.2	....	....	....	....
Knitting machines active last working day*..thous..	⁶ 34.3	32.6	34.5	....	....	34.3	....	....	33.9	....	....	32.6	....	....	....	....

Woven fabric (gray goods), weaving mills:

Production, total ♀.....mil. linear yd..	10,237	10,147	³ 983	784	786	² 970	621	774	² 964	863	¹ 1,015	752	ʳ² 1,021	² 780	....	....
Cotton.....do....	4,237	3,962	³ 382	303	305	² 368	234	298	² 375	349	² 392	292	² 380	² 307	....	....
Manmade fiber.....do....	5,915	6,070	³ 588	471	471	² 589	380	468	² 579	505	² 613	452	ʳ² 630	² 483	....	....
Stocks, total, end of period ♀ ♂.....do....	986	ʳ 835	915	866	860	884	871	871	851	858	876	835	ʳ 865	889	....	....
Cotton.....do....	340	244	306	307	307	298	294	300	294	295	297	244	255	254	....	....
Manmade fiber.....do....	640	ʳ 585	602	553	547	579	570	565	551	558	574	585	ʳ 604	629	....	....
Orders, unfilled, total, end of period ♀ ¶.....do....	2,004	ʳ 3,029	2,148	2,388	2,522	2,580	2,811	2,772	2,752	2,923	2,908	3,029	ʳ 2,938	2,880	....	....
Cotton.....do....	858	1,230	806	803	797	821	1,082	1,008	1,043	1,166	1,127	1,230	1,259	1,262	....	....
Manmade fiber.....do....	1,146	ʳ 1,799	1,342	1,585	1,724	1,759	1,728	1,765	1,709	1,758	1,781	1,799	ʳ 1,679	1,618	....	....

COTTON

Cotton (excluding linters):

Production:

Ginnings△.....thous. running bales..	³ 14,018	⁴ 10,549	³ 14,018	....	....	....	144	672	1,492	4,667	6,678	9,321	....	....	⁴ 10,549	....
Crop estimate.....thous. net weight bales ⊕..	³ 14,389	⁴ʳ 10,856	³ 14,389	....	....	....									⁴ 10,856	....
Consumption.....thous. running bales..	6,393	6,079	² 620	484	483	² 575	383	459	² 569	482	² 595	435	ʳ 603	468	505	....
Stocks in the United States, total, end of period ♀ thous. running bales..	12,890	11,229	9,525	8,395	7,391	6,285	5,326	15,130	13,976	12,932	12,127	11,229	10,066	ʳ 9,019	ᵖ 7,882	....
Domestic cotton, total.....do....	12,883	11,226	9,518	8,388	7,385	6,281	5,321	15,126	13,971	12,929	12,124	11,226	10,062	ʳ 9,016	ᵖ 7,878	....
On farms and in transit.....do....	1,665	2,316	1,110	976	977	765	700	1,606	950	6,603	4,893	2,316	1,326	ʳ 1,066	ᵖ 749	....
Public storage and compresses.....do....	10,268	7,860	7,398	6,375	5,312	4,411	3,803	3,457	3,431	5,312	6,230	7,860	7,687	ʳ 6,881	ᵖ 6,033	....
Consuming establishments.....do....	950	1,050	1,010	1,037	1,096	1,105	1,118	1,063	1,030	1,014	1,001	1,050	1,049	ʳ 1,069	ᵖ 1,096	....

ʳ Revised.   ᵖ Preliminary.   ¹ Annual total; revisions not allocated to the months.   ² Data cover 5 weeks; other months, 4 weeks.   ³ Crop for the year 1977.   ⁴ Crop for the year 1978.   ⁵ Beginning 1st Qtr 1977, data no longer available.   ⁶ Beginning 1st Qtr 1977, data exclude garment lengths, trimming, and collars; not comparable with earlier data.   ⓉBales of 480 lbs.   ⊙Includes data for "dairy products."   *New series.   Source: BuCensus.   Data cover warp and weft knit yard goods and knit garment lengths, trimmings, and collars; no quarterly data prior to 1974 available.   ‡Monthly revisions back to 1975 for shipments of clay construction products and for Jan.-Mar. 1975 for

glass containers will be shown later.   ♀Includes data not shown separately.   ♂Stocks (owned by weaving mills and billed and held for others) exclude bedsheeting, toweling, and blanketing, and billed and held stocks of denims.   ¶Unfilled orders cover wool apparel (including polyester-wool) finished fabrics; production and stocks exclude figures for such finished fabrics. Orders also exclude bedsheeting, toweling, and blanketing.   △Cumulative ginnings to end of month indicated.   ⊕Monthly revisions for 1977 will be shown later.   ᶜ Corrected.

TEXTILE PRODUCTS—Continued

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977 Annual	1978 Annual	1978 Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Jan.	Feb.	Mar.	Apr.
COTTON AND MANUFACTURES—Con.																
Cotton (excluding linters)—Continued																
Exports_____thous. running bales_	4,448	⁹ 5,875	704	640	510	528	456	524	388	283	355	464	517	577	574	_____
Imports_____thous. net-weight①bales_	25	3	(10)	0	(10)	1	(10)	0	(10)	(10)	0	0	(10)	8	7	_____
Price (farm), American upland¶____cents per lb_	52.1	ʳ ᵖ 58.5	ʳ 51.1	51.7	53.7	54.8	56.5	56.6	55.9	59.6	61.1	58.1	56.0	54.2	ʳ 52.5	ᵖ 51.3
Price, Strict Low Middling, Grade 41, staple 34 (1¹⁶⁄₁₆"), average 10 markets___cents per lb_	¹ 52.7	ᵇ 50.8	55.0	54.7	57.6	57.4	57.0	59.8	ᵖ 60.0	64.1	65.6	64.4	61.5	60.6	58.7	58.0
Spindle activity (cotton system spindles):																
Active spindles, last working day, total____mil_	16.6	16.4	16.5	16.6	16.4	16.3	16.3	16.3	16.3	16.4	16.4	16.4	ʳ 16.4	16.4	16.4	_____
Consuming 100 percent cotton____do___	6.7	6.4	6.5	6.6	6.4	6.3	6.4	6.3	6.3	6.3	6.3	6.4	6.3	6.3	6.3	_____
Spindle hours operated, all fibers, total____bil_	103.6	102.4	² 10.1	8.2	8.2	² 10.0	6.5	7.9	² 9.6	8.1	² 10.0	7.3	10.1	7.9	8.3	_____
Average per working day____do___	.398	.394	.403	.413	.408	.402	.327	.395	.385	.406	.399	.367	ʳ .406	.393	.416	_____
Consuming 100 percent cotton____do___	43.4	41.5	² 4.0	3.4	3.3	² 4.1	2.7	3.2	² 3.9	3.3	² 4.0	2.9	ʳ 4.2	3.1	3.3	_____
Cotton cloth:																
Cotton broadwoven goods over 12" in width:																
Production (qtrly.)____mil. lin. yd_	4,356	3,986	1,046	_____	_____	1,010			913			1,017				
Orders, unfilled, end of period, as compared with avg. weekly production____No. weeks' prod_	³ 11.7	³ 16.1	14.4	14.0	13.7	13.9	22.7	17.7	17.2	16.6	17.0	21.1	19.4	19.1	18.9	_____
Inventories, end of period, as compared with avg. weekly production____No. weeks' prod_	³ 4.7	³ 4.9	4.8	4.9	4.8	4.8	5.9	5.2	4.7	5.7	4.3	4.6	4.1	4.0	3.6	_____
Ratio of stocks to unfilled orders (at cotton mills), end of period___	³ .40	³ .30	.33	.35	.35	.35	.26	.29	.28	.25	.25	.22	.21	.21	.19	_____
Exports, raw cotton equiv. thous. net-weight①bales_	460.1	457.9	37.1	35.2	34.5	33.0	31.4	35.9	37.9	44.8	50.1	50.4	45.6	45.4	56.7	_____
Imports, raw cotton equivalent____do___	525.2	676.2	56.7	68.7	53.9	60.6	60.8	51.3	52.1	62.2	51.1	44.1	54.0	48.8	47.5	_____
MANMADE FIBERS AND MANUFACTURES																
Fiber production, qtrly:																
Filament yarn (acetate)____mil. lb_	282.0	300.9	71.5	_____	_____	76.3			76.9			76.2				
Staple, incl. tow (rayon)____do___	527.0	534.6	129.3	_____	_____	131.7			133.8			139.8				
Noncellulosic, except textile glass:																
Yarn and monofilaments____do___	3,659.9	3,814.3	909.9	_____	_____	951.5			955.5			997.4				
Staple, incl. tow____do___	3,653.8	3,952.8	1,002.1	_____	_____	996.8			952.1			1,001.8				
Textile glass fiber____do___	786.7	928.3	225.2	_____	_____	229.1			233.7			240.3				
Fiber stocks, producers', end of period:																
Filament yarn (acetate)____do___	16.7	15.4	13.1	_____	_____	11.7			12.6			15.4				
Staple, incl. tow (rayon)____do___	49.8	28.7	48.8	_____	_____	46.1			37.4			28.7				
Noncellulosic fiber, except textile glass:																
Yarn and monofilaments____do___	⁴ 353.0	343.4	353.6	_____	_____	336.5			334.3			343.4				
Staple, incl. tow____do___	299.7	335.6	306.3	_____	_____	347.6			328.1			335.6				
Textile glass fiber____do___	67.9	97.6	84.5	_____	_____	89.4			89.3			97.6				
Manmade fiber and silk broadwoven fabrics:																
Production (qtrly.), total ♀____mil. lin. yd_	6,223.6	6,602.9	1,648.5	_____	_____	1,691.4			1,528.5			1,734.5				
Filament yarn (100%) fabrics ♀____do___	2,014.1	2,247.4	555.3	_____	_____	566.8			511.3			614.0				
Chiefly rayon and/or acetate fabrics____do___	371.5	406.4	98.6	_____	_____	104.6			99.9			103.4				
Chiefly nylon fabrics____do___	356.9	384.4	78.4	_____	_____	100.6			97.6			107.8				
Spun yarn (100%) fab., exc. blanketing ♀_do_	⁵ 3,583.2	3,703.1	931.8	_____	_____	946.2			863.1			962.0				
Rayon and/or acetate fabrics, blends____do___	286.2	331.2	84.7	_____	_____	83.3			79.1			84.1				
Polyester blends with cotton____do___	2,677.1	2,593.1	660.8	_____	_____	662.3			596.3			673.7				
Filament and spun yarn fabrics____do___	359.5	376.2	97.5	_____	_____	97.3			89.2			92.2				
Manmade fiber gray goods, owned by weaving mills:																
Ratio, stocks to unfilled orders, end of period___	⁸ .42	⁸ .22	.30	.34	.22	.21	.21	.20	.19	.17	ʳ .19	.18	.20	_____	_____	_____
Prices, manufacturer to mfr., f.o.b. mill:*																
50/50 polyester/carded cotton printcloth, gray, 48", 3.90 yds./lb., 78x54-56____$ per yd_	.405	.492	.475	.495	.515	.493	.496	.496	.516	.514	.496	.495	.491	.470	.469	.475
65% poly./35% comb. cot. broadcl.. 3.0 oz/sp yd, 45", 128x72, gray-basis, wh. permpresfin. $ per yd_	.901	⁶ .765	.729	.751	.763	.780	.778	.776	.794	.824	_____	_____	_____	_____	_____	_____
Manmade fiber knit fabric prices, f.o.b. mill:*																
65% acetate/35% nylon tricot, gray, 32 gauge, 54", 3.2 oz./linear yd____$ per yd_	.501	⁷ .458	.451	.456	.467	.472	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
100% textured polyester DK jacquard, 11 oz./linear yd., 60", yarn dyed, finished__$ per yd_	ᵃ 1.708	⁸ 1.657	1.658	1.658	1.651	1.655	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Manmade fiber manufactures:																
Exports, manmade fiber equivalent____mil. lbs_	367.08	441.70	36.83	35.57	39.06	36.63	32.06	35.38	38.12	43.68	44.41	42.88	42.86	43.91	53.20	_____
Yarn, tops, thread, cloth____do___	206.34	267.28	22.86	21.50	23.30	20.85	18.62	20.99	23.29	27.52	27.15	26.82	27.30	27.70	33.37	_____
Cloth, woven____do___	131.35	165.71	13.07	12.77	13.24	13.82	11.11	12.48	15.12	16.95	17.93	17.72	17.69	16.39	19.37	_____
Manufactured prods., apparel, furnishings.do_	160.74	174.42	13.96	14.07	15.77	15.79	13.43	14.39	14.82	16.16	17.26	16.06	15.56	16.20	19.83	_____
Imports, manmade fiber equivalent____do___	531.13	642.59	46.34	53.87	59.74	67.70	70.41	64.90	58.31	50.47	41.08	37.54	47.07	36.31	39.06	_____
Yarn, tops, thread, cloth____do___	110.11	147.55	13.29	16.11	13.74	12.36	14.13	12.29	11.79	10.24	8.68	8.06	10.02	7.23	10.92	_____
Cloth, woven____do___	67.70	87.76	7.27	7.85	8.05	7.94	8.61	8.51	7.85	6.86	6.00	4.93	6.88	4.58	6.72	_____
Manufactured prods., apparel, furnishings.do_	421.02	495.04	33.05	37.76	46.01	55.34	56.28	52.61	46.52	40.23	32.40	29.49	37.05	29.08	28.13	_____
Apparel, total____do___	365.24	425.18	27.48	31.08	40.00	48.88	49.66	47.10	40.24	34.38	27.49	24.58	31.64	24.71	22.87	_____
Knit apparel____do___	218.68	212.40	15.78	18.46	25.09	30.40	29.34	26.89	22.92	18.53	13.53	12.02	15.64	11.72	11.16	_____
WOOL AND MANUFACTURES																
Wool consumption, mill (clean basis):																
Apparel class____mil. lb_	95.5	103.3	² 10.5	8.8	9.2	² 10.3	7.0	8.4	² 9.4	8.1	8.1	7.5	ʳ 10.1	ʳ 8.2	8.8	_____
Carpet class____do___	12.5	13.0	1.2	1.1	1.0	1.5	.8	1.0	1.4	1.2	1.2	.8	1.4	1.1	.8	_____
Wool imports, clean yield____do___	53.0	50.4	4.1	4.9	4.0	3.8	4.7	5.4	3.4	4.0	4.8	4.0	4.5	3.4	4.2	_____
Duty-free (carpet class)____do___	18.8	23.4	1.4	2.2	1.5	2.0	2.3	2.5	1.9	1.8	1.5	2.0	1.9	1.3	2.2	_____
Wool prices, raw, shorn, clean basis, delivered to U.S. mills:♂																
Domestic—Graded territory, 64's, staple 2¾" and up____$ per lb_	1.83	1.90	1.78	1.81	1.84	1.92	1.92	1.92	1.95	1.97	2.02	2.02	2.02	2.02	2.06	2.20
Australian, 64's, Type 62, duty-paid____do___	2.27	2.34	2.31	2.32	2.33	2.36	2.36	2.36	2.36	2.36	2.37	2.37	2.37	2.49	2.65	2.73
Wool broadwoven goods, exc. felts:																
Production (qtrly.)____mil. lin. yd_	101.6	116.4	28.2	_____	_____	31.2			27.3			29.8				
FLOOR COVERINGS																
Carpet, rugs, carpeting (woven, tufted, other), shipments, quarterly____mil. sq. yds_	1,024.6	1,075.9	242.6	_____	_____	281.3			269.8			282.2				
APPAREL																
Women's, misses', juniors' apparel cuttings:* ⊕																
Coats____thous. units_	18,083	18,727	1,199	1,439	1,787	2,011	1,565	2,242	2,126	1,857	1,434	1,001	ʳ 1,286	1,206	_____	_____
Dresses____do___	183,702	179,078	17,113	16,653	16,161	15,675	12,430	15,664	15,493	14,730	14,883	12,501	ʳ 11,293	11,650	_____	_____
Suits (incl. pant suits, jumpsuits)____do___	36,904	27,856	3,006	2,502	2,338	2,164	1,881	2,418	2,175	1,953	2,247	1,877	ʳ 2,844	2,461	_____	_____
Blouses____thous. dozen_	23,507	27,893	2,610	2,135	2,353	2,335	1,862	2,662	2,452	2,867	2,433	1,883	ʳ 2,710	2,650	_____	_____
Skirts____do___	5,260	6,414	615	515	515	612	551	475	ʳ 532	561	604	433	ʳ 567	561	_____	_____

ʳ Revised. ᵖ Preliminary. ¹ Season average. ² For 5 weeks, other months, 4 weeks. ³ Monthly average. ⁴ Effective Sept. 1976 SURVEY, data omit production and stocks of saran and spandex yarn. ⁵ Effective 1976, production of blanketing is included in 100% spun yarn fabric (prior to 1976, in "all other group," not shown separately). ⁶ Avg. for Jan.-Oct. ⁷ Avg. for Feb.-Jun. ⁸ Avg. for Jan-Jun. ⁹ Effective Jan. 1, 1978, includes reexports formerly excluded. ¹⁰ Less than 500 bales. ¶ Based on 480-lb. bales. ᵖ price reflects sales as of the 15th; restated ʳ price reflects total quantity purchased and dollars paid for entire month (ʳ price includes discounts and premiums). ♀ Includes data not shown separately. ① Net-weight (480-lb.) bales.
♂ Effective Jan. 1976, specifications for the price formerly designated fine good French

combing and staple have been changed as shown above. Effective with the May 1976 SURVEY the foreign wool price is quoted including duty. *New series. Apparel (BuCensus)—Annual totals derived from firms accounting for 99% of total output of these items; current monthly estimates, from smaller sample. Monthly data for 1975, adjusted to annual totals, are available. Coats exclude all fur, leather, and raincoats. Suits omit garments purchased separately as coordinates. Except for the year 1974, earlier monthly data are available, except for suits. Prices (USDL, BLS)—Data not available prior to 1976. ⊕Effective Apr. 1979 SURVEY, data include 600 additional firms; comparable data back to Jan. 1977 will be shown later. ᵃ Avg. for Jan-Apr.; June-Dec. ᵇ Avg. for sales prior to Apr. 1, 1979.

Unless otherwise stated in footnotes below, data through 1974 and descriptive notes are as shown in the 1975 edition of BUSINESS STATISTICS	1977	1978	1978										1979			
	Annual	Annual	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.

TEXTILE PRODUCTS—Continued

APPAREL—Con.

Men's apparel cuttings:

Suits‡..........thous. units..	ᵃ17,311	23,050	1,612	1,488	1,543	1,550	908	1,437	1,403	1,621	1,516	ʳ1,267	1,416	1,302	....	....
Coats (separate), dress and sport‡.........do....	ᵃ15,627	16,029	1,577	1,365	1,575	1,478	900	1,501	1,698	1,345	1,283	ʳ1,023	1,347	1,274	....	....
Trousers (separate), dress and sport‡......do....	124,674	112,750	10,408	9,156	9,282	8,807	5,658	....	....	....	....	ʳ9,156	....	....	....	....
Slacks (jean cut), casual ‡.......thous. doz..	14,627	13,500	1,219	1,166	1,123	1,197	739	....	....	....	....	1,050	....	....	....	....
Shirts, dress, sport, inc. knit outerwear ‡....do....	43,445	42,807	3,737	3,502	3,634	3,853	2,684	3,777	4,018	ʳ3,720	ʳ3,421	ʳ2,510	2,979	3,105	....	....
Hosiery, shipments.............thous. doz. pairs..	248,144	267,683	21,859	21,183	22,541	24,987	22,044	24,569	23,664	24,589	24,062	20,383	20,584	22,075	23,928	....

TRANSPORTATION EQUIPMENT

AEROSPACE VEHICLES

Orders, new (net), qtrly, total.........mil. $..	38,922	49,937	10,807	....	....	11,632	....	....	ʳ10,491	....	....	17,007	....	....	....	....
U.S. Government.................do....	22,682	26,769	5,567	....	....	7,566	....	....	ʳ5,024	....	....	8,612	....	....	....	....
Prime contract...............do....	35,478	46,602	10,084	....	....	10,774	....	....	ʳ9,330	....	....	16,414	....	....	....	....
Sales (net), receipts, or billings, qtrly, total....do....	33,315	37,471	8,511	....	....	9,331	....	....	ʳ9,298	....	....	10,331	....	....	....	....
U.S. Government.................do....	20,704	21,961	5,093	....	....	5,622	....	....	ʳ5,364	....	....	5,882	....	....	....	....
Backlog of orders, end of period ♀.........do....	45,309	57,775	ʳ47,605	....	....	49,906	....	....	ʳ51,099	....	....	57,775	....	....	....	....
U.S. Government.................do....	26,119	30,937	25,843	....	....	28,537	....	....	ʳ28,207	....	....	30,937	....	....	....	....
Aircraft (complete) and parts.........do....	19,709	27,929	20,330	....	....	23,193	....	....	ʳ23,600	....	....	27,929	....	....	....	....
Engines (aircraft) and parts........do....	5,354	5,857	5,192	....	....	5,425	....	....	ʳ4,901	....	....	5,857	....	....	....	....
Missiles, space vehicle systems, engines, propulsion units, and parts.........mil. $..	6,743	7,604	6,163	....	....	6,917	....	....	ʳ7,233	....	....	7,604	....	....	....	....
Other related operations (conversions, modifications), products, services.........mil. $..	ʳ5,635	7,913	6,936	....	....	6,561	....	....	ʳ7,419	....	....	7,913	....	....	....	....

Aircraft (complete):

Shipments.................do....	4,700.9	6451.8	478.5	436.2	434.8	662.2	469.1	564.1	679.1	573.6	752.0	744.7	ʳ691.0	576.7	1,112.8	....
Airframe weight........thous. lb..	47,647	60,170	4,287	3,902	5,113	6,293	4,959	5,844	6,071	5,490	5,652	6,331	ʳ5,633	5,104	....	....
Exports, commercial.........mil. $..	2,605	⁶3,589	172	210	165	275	248	379	356	423	504	550	424	484	....	....

MOTOR VEHICLES (NEW)

Passenger cars:

Factory sales (from U.S. plants), total....thous..	9,199	9,165	909	869	919	886	589	528	738	894	842	660	727	699	867	²723
Domestic.................do....	8,511	8,494	842	806	850	821	553	492	676	828	784	604	675	644	790	....
Retail sales, total, not seasonally adj.......do....	11,185	11,311	1,078	1,043	1,159	1,137	930	958	828	1,034	909	769	784	840	1,116	ᵖ987
Domestics△.................do....	9,109	9,312	883	863	963	950	762	753	662	884	770	646	645	676	865	ᵖ764
Imports△.................do....	2,075	2,000	195	180	196	187	168	205	166	150	139	123	138	164	251	ᵖ223
Total, seas, adjusted at annual rate †......mil..	....	....	11.8	12.3	12.1	11.8	11.0	11.9	10.8	11.1	11.0	11.2	11.0	11.4	12.6	ᵖ11.1
Domestics△ †.................do....	....	....	9.8	10.2	10.0	9.7	9.1	9.9	8.9	9.2	9.0	9.4	9.0	9.1	9.8	8.6
Imports△ †.................do....	....	....	2.1	2.1	2.1	2.0	1.9	2.0	1.9	1.9	2.0	1.8	2.0	2.2	2.7	ᵖ2.6
Retail inventories, end of mo., domestics:△																
Not seasonally adjusted.........thous..	1,731	1,729	1,991	2,008	1,970	1,911	1,729	1,510	1,606	1,629	1,728	1,729	1,885	1,957	1,974	1,914
Seasonally adjusted†.................do....	1,784	1,780	1,866	1,877	1,818	1,721	1,694	1,655	1,678	1,737	1,777	1,780	1,819	1,851	1,846	1,780
Inventory-retail sales ratio, domestics△ †....	2.3	2.3	2.3	2.2	2.2	2.1	2.2	2.0	2.3	2.3	2.4	2.3	2.4	2.4	2.3	2.5
Exports (BuCensus), assembled cars......thous..	697.20	⁶695.12	62.84	70.48	69.32	70.63	45.83	36.11	61.60	66.74	58.73	52.03	49.77	64.49	73.17	....
To Canada.................do....	591.51	⁶540.90	49.56	57.21	57.92	58.20	33.75	25.95	46.61	50.06	43.19	38.36	27.62	42.92	57.07	....
Imports (BuCensus), complete units.......do....	2,791.3	⁶2,881.8	299.1	310.1	266.5	281.4	236.8	198.3	212.3	232.8	230.5	244.3	ʳ269.1	216.2	223.2	....
From Canada, total.................do....	849.2	⁶832.7	78.9	78.1	73.5	86.8	47.6	41.1	78.3	77.2	80.2	74.3	71.8	62.1	71.5	....
Registrations⊙, total new vehicles.........do....	¹10,826	10,946	³870	⁴916	⁴987	³1,053	⁴1,062	³1,061	⁴887	⁴866	⁴826	⁴949	ʳ⁷754	⁵763	⁷913	....
Imports, incl. domestically sponsored....do....	⁴1,977	1,946	³163	⁴162	⁴162	³166	⁴183	³198	⁴185	⁴149	⁴140	⁴158	⁷132	⁵150	⁷202	....

Trucks and buses:

Factory sales (from U.S. plants), total....thous..	3,440	3,706	341	319	338	355	272	281	305	366	330	290	ʳ312	298	354	²269
Domestic.................do....	3,178	3,415	311	291	309	324	254	266	281	337	305	266	288	273	326	....
Retail sales, seasonally adjusted:*																
Light-duty, up to 14,000 lbs. GVW.......do....	3,145.0	3,547.2	292.2	301.4	303.3	315.5	297.7	314.8	261.5	308.5	309.0	301.0	299.5	283.3	268	....
Medium-duty, 14,001–26,000 lbs. GVW...do....	171.5	164.5	15.1	14.5	14.2	14.3	14.1	11.3	12.6	13.5	13.8	14.9	14.5	ʳ15.3	14.7	....
Heavy-duty, 26,001 lbs. and over GVW...do....	169.1	202.3	17.9	16.4	16.7	17.3	18.0	16.8	17.2	17.3	16.8	17.9	19.5	ʳ20.7	19.7	....
Retail inventories, end of period, seasonally adjusted*.................thous..	716.1	763.9	719.7	721.1	702.9	679.9	661.0	641.0	664.7	694.2	732.2	773.9	816.1	847.0	921.7	....
Exports (BuCensus), assembled units......do....	202.55	⁶248.43	21.72	22.86	22.74	24.24	18.05	16.58	22.18	24.90	21.73	21.24	17.53	ʳ25.13	25.80	....
Imports (BuCensus), including separate chassis and bodies.................thous..	822.43	⁶1,035.68	103.13	96.87	92.12	97.00	85.88	63.80	76.23	83.21	90.77	75.85	93.20	70.09	70.43	....
Registrations⊙, new vehicles, excluding buses not produced on truck chassis.........thous..	3,509	3,963	³306	⁴320	⁴342	³357	⁴386	³396	⁴335	⁴305	⁴314	⁴361	⁷282	⁵275	317	....

Truck trailers and chassis, complete (excludes detachables), shipments.........number..	159,297	ʳ194,976	ʳ17,601	ʳ15,449	ʳ17,585	ʳ16,884	ʳ13,896	ʳ17,245	ʳ15,813	ʳ17,953	ʳ17,733	ʳ17,914	15,808	16,579	....	....
Vans.................do....	98,687	ʳ128,566	ʳ11,733	ʳ10,000	ʳ11,230	ʳ11,047	ʳ8,923	ʳ11,665	ʳ10,404	ʳ12,031	ʳ12,424	ʳ12,505	10,321	10,776	....	....
Trailer bodies (detachable), sold separately...do....	7,193	ʳ6,468	ʳ616	ʳ375	ʳ663	ʳ576	ʳ493	ʳ714	ʳ341	ʳ494	ʳ624	ʳ622	706	800	....	....
Trailer chassis (detachable), sold separately...do....	20,662	ʳ29,775	ʳ3,581	ʳ3,026	ʳ2,846	ʳ2,706	ʳ2,304	3,170	1,718	1,795	1,993	ʳ1,674	1,633	1,139	....	....

RAILROAD EQUIPMENT

Freight cars (new), for domestic use; all railroads and private car lines (excludes rebuilt cars and cars for export):

Shipments.................number..	51,729	67,440	4,874	4,702	5,843	6,893	4,753	6,697	5,942	6,465	6,733	6,827	6,048	7,030	8,296	....
Equipment manufacturers.........do....	46,664	62,400	4,489	4,351	5,644	6,113	4,351	6,198	5,533	6,174	6,461	6,524	5,667	6,619	7,787	....
New orders.................do....	¹66,750	125,307	4,346	10,258	16,907	14,815	11,599	13,556	10,561	9,010	8,802	12,727	15,236	14,506	14,801	....
Equipment manufacturers.........do....	¹59,557	124,862	4,346	10,008	16,907	14,815	11,265	13,086	8,911	9,010	8,302	11,827	14,736	14,506	14,801	....
Unfilled orders, end of period.........do....	35,910	96,255	ʳ39,574	50,943	61,802	69,298	75,461	82,733	87,200	87,605	91,773	96,255	104,818	113,049	119,312	....
Equipment manufacturers.........do....	29,490	89,944	ʳ33,891	44,861	55,919	64,195	70,426	78,197	81,423	82,119	86,059	89,944	98,388	107,030	113,802	....

Freight cars (revenue), class 1 railroads (AAR):§

Number owned, end of period.........thous..	1,267	1,225	1,247	1,247	1,245	1,242	1,239	1,239	1,232	1,231	1,228	1,225	1,222	1,219	1,219	....
Held for repairs, % of total owned..........	8.9	7.9	9.5	9.5	9.3	9.3	9.0	8.9	8.8	8.4	8.1	7.9	7.9	8.0	8.0	....
Capacity (carrying), total, end of mo...mil. tons..	96.64	93.96	94.47	94.45	94.38	94.30	94.20	94.38	94.05	94.18	94.04	93.96	93.80	93.58	93.69	....
Average per car.................tons..	75.50	76.68	75.74	75.73	75.83	75.94	76.04	76.20	76.31	76.50	76.61	76.68	76.76	76.76	76.88	....

ʳ Revised.   ᵖ Preliminary.   ¹ Annual total includes revisions not distributed by months.   ² Production, not factory sales.   ³ Excludes 2 States.   ⁴ Excludes 1 State.   ⁵ Excludes 3 States.   ⁶ Beginning 1978, data may not be strictly comparable with those for earlier years because of the revised export schedule.   ⁷ Excludes 4 States.

‡Annual figures, "Apparel 1975," MA-23A(75)-1. Survey expanded and classification changed; not comparable with data prior to 1974. See also note "⊕", p. S-39.

♀ Total includes backlog for nonrelated products and services and basic research.

†Seas. adj. data (1971–74) in the Mar. 1976 SURVEY, p. 5, do not reflect end-digit revisions to imports and total sales introduced in the Feb. 1977 SURVEY.

△Domestics include U.S.-type cars produced in the United States and Canada; imports cover foreign-type cars and captive imports, and exclude domestics produced in Canada.

⊙Courtesy of R. L. Polk & Co.; republication prohibited.

§Excludes railroad-owned private refrigerator cars and private line cars.

*New series. Source: Motor Vehicle Manufacturers Assn. of the U.S. (seas. adjustment by BEA). Reporting firms do not represent the entire industry. Motor coaches are not covered. Sales include imports of U.S. manufacturers only (all other imports are not covered). Units refer to complete vehicles and to chassis sold separately. Gross vehicle weight refers to the weight of the vehicle with full load. Seasonally adjusted monthly data back to 1971 are available.   ᵃ Excludes leisure-type; not strictly comparable with 1974.

SECTIONS

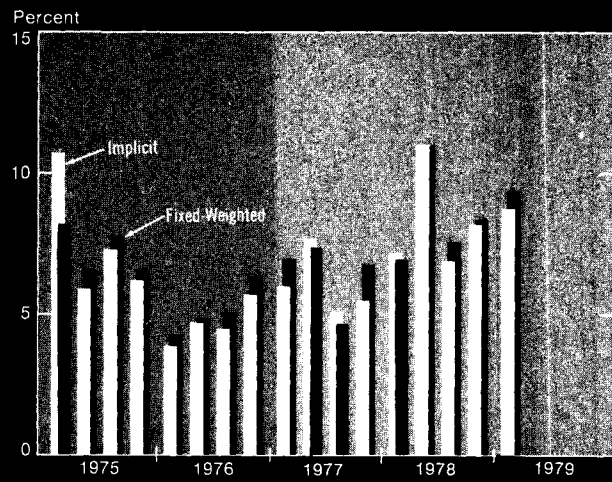## In the first quarter

- Real GNP increased $1/2$ percent
- GNP fixed-weighted price index increased $9^1{}_2$ percent
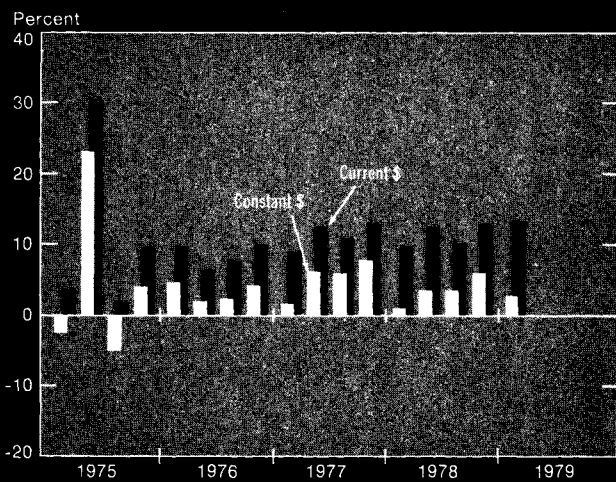- Real disposable personal income increased 3 percent
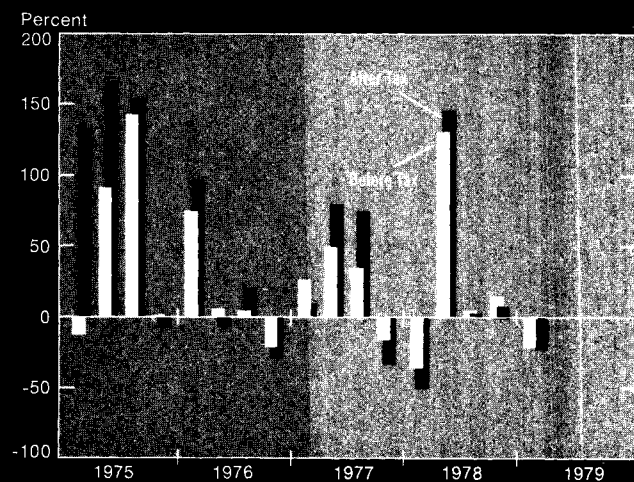
Real GNP
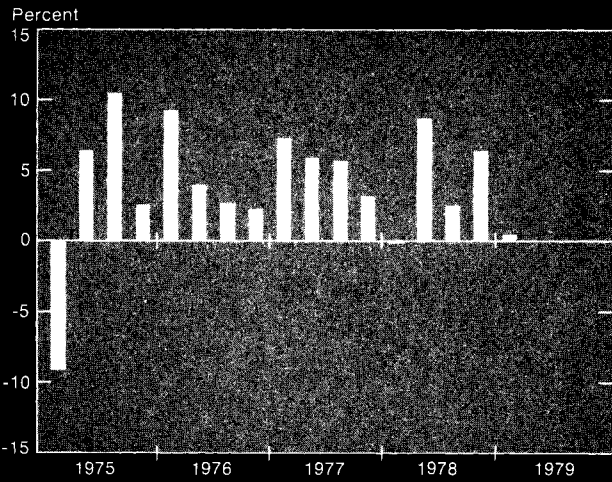
GNP Prices

Disposable Personal Income

Corporate Profits With IVA and CCAdj

Percent change from preceding quarter   seasonally adjusted at annual rates.