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SURVEY OF CURRENT BUSINESS



SURVEY OF CURRENT BUSINESS

CONTENTS

1

Selected National Income and Product Accounts Tables	7
Reconciliation and Other Special Tables	12
National Defense Purchases: Detailed Quarterly Estimates,	
1977-82	13
Stock of Plant and Equipment for Air and Water	
Pollution Abatement in the United States, 1960-81	18
The High-Employment Budget and Potential Output	
A Critique	26
A Response	33
Integrated Economic Accounts: Reply	36
Errata: May 1982 Survey of Current Business	50

THE BUSINESS SITUATION

CURRENT BUSINESS STATISTICS

General S1
Industry S19
Footnotes S33
Subject Index (Inside Back Cover)



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the BUSINESS SITUATION

KEVISED (45-day) estimates show that real GNP was unchanged in the third quarter of 1982, compared with the 1-percent annual rate increase shown by the preliminary (15-day) estimates (table 1). The downward revision in real GNP was more than accounted for by a large-\$5 billiondownward revision in net exports.1 The revision reflected a \$3 billion downward revision in merchandise exports in combination with a \$1½ billion upward revision in merchandise imports. In prior quarters in 1982 and 1981, revisions in exports and imports happened to be partially offsetting. The downward revision in merchandise exports reflected revisions to the August trade data and an overestimate of September exports. The unexpectedly low level of exports reflected the persistence of weak economic activity world-wide, particularly acute economic and financial problems of some major trading partners, and the continued strength of the dollar in exchange markets. The upward revision in merchandise imports largely reflected an underestimate of September imports; these estimates have been affected by increased volatility in the underlying monthly source

Revisions in the other major components of GNP were small: upward for nonresidential fixed investment (in producers' durable equipment) and change in business inventories (down for manufacturing and up for trade), and downward for personal consumption expenditures (down for goods and up for services). The increase in prices as measured by the GNP fixed-weighted price index was revised down from 6 to 5½ percent.

The revisions in the real GNP estimates do not alter the picture of lackluster economic performance described in the October "Business Situation." Business inventories accumulated in the third quarter after liquidation in the second, but that positive contribution to the change in GNP was offset by a decline in final sales. Personal consumption expenditures and residential investment increased only slightly. Nonresidential fixed in-

vestment dropped substantially: Producers' durable equipment fell for the fourth consecutive quarter, and structures declined for the first time. Net exports registered a huge decline—exports dropped sharply as both goods and services declined, and imports were up as goods, both petroleum and nonpetroleum, increased. Government purchases increased substantially due to increases in defense purchases and purchases of the Commodity Credit Corporation.

Table 1.—Revisions in Selected Component Series of the NIPA's, Third Quarter of 1982

	Seasonally	y adjusted a	at annual rates	precedin	change from g quarter at
	15-day estimate	45-day estimate	Revision	15-day estimate	45-day estimate
	Billio	ons of curre	nt dollars		
GNP	3,091.4	3,080.7	-10.7	6.2	4.7
Personal consumption expenditures Nonresidential fixed investment. Residential investment Change in business inventories Net exports.	341.6 97.4 5 13.2	1,987.5 341.2 97.2 2.9 2.7 649.2	$ \begin{array}{r} -2.0 \\ 4 \\ 2 \\ 3.4 \\ -10.5 \\ -1.0 \end{array} $	8.8 -11.5 7.9	-11.9 7.0
National income		2,457.6			5.5
Compensation of employees	1,867.8	1,868.2	.4	3.7	3.8 29.2
Other Personal income	425.7 2,597.8	423.4 2,596.0	-2.3 -1.8	6.8 7.3	4.5 7.0
	Billions	of constant	(1972) dollars		~
GNP	1,481.2	1,478.4	-2.8	.8	0
Personal consumption expenditures Nonresidential fixed investment. Residential investment. Change in business inventories	161.0 40.5 .7	957.7 162.0 40.7 2.3	7 1.0 .2 1.6	$-12.9 \\ 4.2$	-1.1 -10.8 6.3
Net exports Government purchases		25.7 290.0	-5.0	6.8	6.8
	Index	numbers,	1972=100		
GNP implicit price deflator GNP fixed-weighted price index GNP chain price index	216.1	208.38 215.9	33 2	5.4 6.1 6.1	4.7 5.6 5.8

^{1.} Not at annual rates.

^{1.} Quarterly estimates of the national income and product accounts are expressed at seasonally adjusted annual rates, and quarterly changes in them are differences between these rates.

Note.—For the third quarter of 1982, the following revised or additional major source data became available: For personal consumption expenditures, revised retail sales for August and September, and sales and inventories of used cars of franchised automobile dealers for August; for nonresidential fixed investment, manufacturers' shipments of equipment for August (revised) and September, construction put in place for August (revised) and September, and a partial tabulation of business expenditures for plant and equipment for the quarter; for residential investment, construction put in place for August (revised) and September; for change in business inventories, book values for manufacturing and trade for August (revised) and September; for net exports of goods and services, merchandise trade for August (revised) and September; for net exports of unified budget outlays for September, and State and local construction put in place for August (revised) and September; for wages and salaries, revised employment, average hourly earnings, and average weekly hours for August and September; for corporate profits, domestic book profits for the quarter; for GNP prices, the Consumer and Producer Price Indexes for September, unit value indexes for exports and imports for September, and residential housing prices for the quarter.

Corporate profits

Corporate profits from current production—profits with inventory valuation and capital consumption adjustments—increased \$10½ billion to \$166 billion in the third quarter, following a decrease of \$1½ billion in the second. The increase followed three consecutive quarters of decrease. An increase in the domestic profits of nonfinancial corporations accounted for most of the increase; domestic profits of financial corporations increased and profits from the rest of the world decreased.

Domestic profits of nonfinancial corporations increased \$9 billion to \$124 billion in the third quarter, following a decrease of \$5½ billion in the second. The increase resulted from both an increase in real product of nonfinancial corporations and a more rapid increase in unit prices than in unit costs. The relatively low growth in unit costs reflected the third consecutive quarter of decline in the growth rate of unit labor costs.

The third-quarter increase in the domestic profits of nonfinancial corporations was largely due to an increase in the profits of manufacturing corporations. The increase in manufacturing profits was, in turn, largely due to a sharp increase in the profits of petroleum manufacturing corporations. Refineries' margins increased wholesale prices for petroleum products increased sharply while their costs for crude oil increased only slightly. Increases and decreases in the profits of other manufacturing industries largely offset each other. The pattern generally mirrored the pattern of increases and decreases in contant-dollar sales in the industries, but in several industries price developments were significant as well. manufacturers' profits creased, despite a decrease in their constant-dollar sales. Their increased margins were probably related to the fact that prices for processed foods increased very slightly while costs as measured by prices for farm products decreased sharply. Conversely, chemicals manufacturers' profits fell despite an increase in constant-dollar sales, reflecting a fall in producer prices for chemicals. Smaller losses

were registered by primary metals manufacturers, reflecting increases in prices of many nonferrous metals within the third quarter.

Profits of nonfinancial nonmanufacturing corporations also increased in the third quarter, although within the total several industries' profits continued to reflect depressed economic conditions. Profits of mining corporations decreased again, reflecting production cutbacks. Airlines' losses continued as a sharp decrease in revenue-passenger miles offset a substantial increase in fares and continuing attempts to reduce labor costs. Auto dealers' profits decreased; they were adversely affected by the cost of carrying large inventories of unsold cars.

Profits of domestic financial corporations increased \$2½ billion in both the second and third quarters, reaching \$25 billion. In the third quarter, commerical banks' profits increased and losses registered by mutual savings banks and by savings and loan associations decreased. The reduced losses reflected the impact of decreasing interest rates, which lowered the costs of attracting deposits. Mutual savings banks and savings and loan associations have registered seven consecutive quarters of losses.

Profits from the rest of the world decreased \$1½ billion to \$17 billion in the third quarter, following an increase of \$1½ billion. The decrease was due to nonpetroleum foreign operations of U.S. corporations and reflected depressed economic conditions in most other industrial nations.

Other measures of profits.—Profits before tax increased \$8 billion to \$180 billion in the third quarter, after having been unchanged in the second. These profits exclude the inventory valuation adjustment (IVA) and capital consumption adjustment (CCAdj).² Inventory profits—the IVA with sign reversed—increased \$½ billion to \$10 billion in the third quarter, following an increase of \$5 billion. Profits attributable to underdepreciation—the CCAdj with sign reversed—decreased

\$3 billion in both the second and third quarters, reaching \$4 billion. Somewhat more than \$2 billion of each decrease in the CCAdj was due to provisions of the Economic Recovery Tax Act of 1981, which have progressively reduced profits attributable to underdepreciation. The decreases were also consistent with rates of inflation in prices for fixed nonresidential investment that were lower than those experienced over the service lives of the assets: Such lower rates of inflation lead to less negative values for the portion of the CCAdj that values fixed capital used up in production at replacement costs rather than at historical costs.

Disposition of profits.—Corporate profits taxes, which are levied on profits including inventory profits and profits attributable to underdepreciation, increased \$5½ billion to \$61 billion in the second quarter, following a decrease of \$1½ billion. The increase resulted from both higher profits and an increase in the share going to Federal taxes. Only a small portion of the increase in profits taxes resulted from provisions of the Tax Equity and Fiscal Responsibility Act of 1982. The increased share reflected reduced importance of tax credits relative to pretax profits.

Dividends continued their uptrend in the third quarter, increasing \$1 billion to \$70½ billion, following an increase of \$½ billion in the second quarter. Undistributed profits increased \$1½ billion to \$48½ billion in the third quarter, following an increase of \$1 billion.

The government sector

The fiscal position of the government sector in the national income and product accounts (NIPA's) deteriorated significantly in the third quarter, as the combined deficit of the Federal Government and the State and local governments increased \$33 billion. Compared with a year earlier, the combined deficit increased substantially, from \$24½ billion to \$120½ billion. Virtually all of this deterioration occurred at the Federal level, where the deficit increased \$95 billion.

^{2.} The IVA and CCAdj are defined in National Income and Product Accounts of the United States, 1929-1976: Statistical Tables, U.S. Department of Commerce, Bureau of Economic Analysis (Washington, D.C.: U.S. GPO, 1981).

The Federal sector.—The Federal government deficit increased \$33½ billion in the third quarter, to \$153 billion, reflecting a decline in receipts and an increase in expenditures.

Receipts declined \$3% billion, compared with a \$7 billion increase in the second quarter. In the third quarter, a decline in personal tax and nontax receipts more than offset increases in all other categories of receipts. The decline in personal taxes-\$10 billion-was the result of the second round of cuts in withholding rates provided for by the Economic Recovery Tax Act of 1981 (ERTA). The July 1 cut in withholding rates reduced withheld income taxes \$25 billion; this reduction was partly offset by a \$7½ billion increase due to higher incomes. Declarations and net settlements also increased-\$8 billion-reflecting the absence of temporary tax reductions that occurred in the first half of the year. (See page 2 of the September Survey of Current Busi-NESS for details on the temporary reductions.) Corporate profits tax accruals increased \$4 billion, reflecting some recovery in corporate profits. Contributions for social insurance increased \$1½ billion, including about \$½ billion for an increase in the monthly premium for supplementary medical insurance to \$12.20 from \$11.00. Indirect business tax and nontax accruals increased \$1 billion. including about \$½ billion each for the windfall profit tax and for the increased airport and airway taxes provided for by the Tax Equity and Fiscal Responsibility Act of 1982.

Expenditures increased \$30 billion, compared with \$8 billion in the second quarter. Transfer payments to persons were up \$14% billion. Of that amount, \$12 billion was for various cost-of-living adjustments, including a 7.4 percent increase in social security benefits that accounted for \$11 billion. Unemployment benefits creased \$2 billion, the net result of a small decline in extended benefits and a large increase in regular benefits. Purchases of goods and services increased \$12 billion, following a decline of \$5½ billion in the second quarter. National defense purchases continued to increase, but not as strongly as in the second quarter. However, in contrast to the second quarter, when the increase was concentrated in military hardware (aircraft and missiles), the third-quarter increase was mainly in services other than compensation, such as for depot maintenance and for research and development. The accompanying Special Note discusses national defense purchases in more detail and an article later in this issue presents new detailed quarterly estimates.

Nondefense purchases rebounded strongly in the third quarter, increasing \$6 billion following a decline of \$15½ billion in the second. The thirdquarter increase, as well as the large second-to-third-quarter swing, concentrated in agricultural chases by the Commodity Credit Corporation (CCC). The CCC rebound was mainly in transactions relating to corn, wheat, and cotton. In the third quarter, acquisitions were \$11 billion and dispositions were \$5½ billion, for net purchases of \$5½ billion. In the second quarter, dispositions slightly outpaced acquisitions, and net purchases were about -\$1 billion. All other nondefense purchases also rebounded: Although purchases of crude petroleum for the strategic petroleum reserve continued to decline, others increased slightly following a large decline in the second quarter.

Net interest paid increased \$6 billion, and subsidies less the current surplus of government enterprises increased \$½ billion. The latter increase was the net result of a \$1 billion decline in payments to farmers, a \$1 billion increase in the Postal Service deficit, and a \$½ billion increase in the CCC deficit. The increase in the Postal Service deficit was due to the second of three annual lump-sum payments to employees under a contract signed last year. Grants-in-aid to State and local governments declined \$3 billion, mainly for public assistance, food and nutrition, and education.

On a high-employment budget basis, the Federal fiscal position moved from deficit of \$6 billion in the second quarter to a deficit of \$27 billion in the third (table 3 on page 11). The high-employment deficit as a percentage of potential GNP increased from 0.2 percent in the second quarter to 0.8 percent in the third—a

move toward a more expansionary fiscal position. As percentages of potential GNP, high-employment receipts continued to decline and high-employment expenditures increased from the second quarter to the third.

For fiscal year 1982, on the basis of seasonally adjusted quarterly data, the Federal Government recorded a deficit of \$123½ billion, up from \$51 billion in fiscal year 1981. Receipts amounted to \$616½ billion, up only \$1 billion. Expenditures amounted to \$739½ billion, up \$73½ billion. The small increase in receipts reflects the impact of the recession and tax reductions provided for by ERTA. The tax reductions lowered receipts \$3½ billion in fiscal year 1981 and \$37½ billion in fiscal year 1982.

The State and local sector.—The State and local government surplus increased \$½ billion, as receipts increased more than expenditures. The increase in the surplus was more than accounted for by a continued increase in the surplus of the social insurance funds; the "all other" deficit increased after declining in the second quarter.

Receipts increased \$6% billion, compared with \$10 billion in the second quarter. The \$3 billion dollar decline in Federal grants-in-aid mentioned earlier explains the smaller thirdquarter increase. Indirect business tax and nontax accruals increased \$4 billion and personal tax and nontax receipts increased \$3½ billion. The third-quarter change in personal taxes was boosted by tax increases, mainly in Ohio and New York City. Ohio imposed a temporary 6-month increase of 50 percent in withholdings to collect for a tax increase that was passed in midyear, retroactive to January. Corporate profits tax accruals and contributions for social insurance each increased about \$1 billion.

Expenditures increased \$6 billion, slightly more than in the second quarter. Purchases of goods and services accounted for all the increase; all other expenditures, on balance, were unchanged. Within purchases, compensation increased \$1 billion less than in the second quarter, reflecting a decline in employment, and construction purchases increased about \$1 billion following a slight decline in the second quarter.

Special Note.—National Defense Purchases

IN recent quarters, spending for national defense, in contrast to other types of government spending, has been on an uptrend as a result of the administration's policy of 8.7 percent average annual growth in real defense outlays over fiscal years 1981-84. This uptrend has heightened interest in the several series that can be used to track defense spending. One such series is the national defense purchases series, a subcomponent of Federal Government purchases of goods and services in the national and product accounts income (NIPA's). This series consists of the compensation of military and civilian employees, purchases of goods and services from business and abroad, and net purchases of used goods. Another NIPA series is defense expenditures, which consists of, in addition to purchases, small amounts for grantsin-aid to State and local governments and for subsidies less the current surplus of government enterprises. The expenditures series is broken down into the functional subcategories of military activities, civil defense, foreign military assistance, and other expenditures (see annual NIPA table 3.16). A more comprehensive series is outlays—the unified budget series in terms of which the administration's policy is expressed. It consists of, in addition to expenditures, military retirement pay, loans, and net interest paid. A further distinction between purchases and outlays is that outlays are on a checks-issued basis, and purchases are on a delivery basis. (For a reconciliation of outlays and purchases, see table 10, page 23, of the March 1982 Survey of Current Busi-

The national defense purchases series will be the focus of this Special Note. Within the NIPA's, national defense purchases are a subcomponent of GNP and, as just noted, a subcomponent of expenditures in presentations of government receipts and expenditures. These purchases, which

are made largely by the Department of Defense (DOD), are shown in the usual four-fold NIPA major-type-ofproduct categories: durable goods (those with a normal life expectancy of 1 year or more), largely consisting of military equipment, such as aircraft and ships; nondurable goods, largely bulk petroleum products and ammunition: services, largely compensation of employees; and structures, largely military facilities. Substantial detail by type of purchase-for current dollars, constant dollars, and associated implicit price deflators—is shown annually beginning with 1972 in NIPA tables 3.9, 3.10, and 7.15. Quarterly estimates, at a summary level of detail, are in NIPA tables 3.7B, 3.8B, and 7.14B. Quarterly estimates for 1977-82, at an intermediate level of detail, are introduced later in this issue of the Survey, along with percent changes in a new fixedweighted price index.

Sources and methods.—A basic source of information for currentdollar estimates is the Monthly Treasury Statement of Receipts and Outlays of the United States Government (MTS). As shown in the reconciliation table mentioned earlier, purchases are derived from defense outlays in the MTS by subtracting outlays for transfer payments to retired military personnel, grants-in-aid, net interest paid, and other outlays, such as for loans. A timing adjustment is also made to adjust outlays from a checksissued basis to a delivery basis. The timing adjustment is derived from DOD reported deliveries of major weapons systems. This procedure provides a control total for national defense purchases. Detail for purchases by type of good or service is obtained from a variety of DOD reports.

Constant-dollar estimates are prepared by the standard NIPA procedure for final goods and services: At the finest possible level of product detail, divide current-dollar estimates by appropriate price indexes, and sum the results to the published level of detail. For defense purchases, implementation of this procedure is especially difficult because much of defense spending is for unique products that change radically and are otherwise difficult to price. Further, until recent years, information was not available on product breakdowns or on prices paid by Government, which may move very differently from prices paid by the private sector.

A project to remedy the inadequacy of product and price information was started in the mid-1970's by BEA in cooperation with DOD. It involved the development of price series at a very detailed level, along with parallel development of product detail, using data largely from DOD records. The technique used to obtain the price series was specification pricing: Pricedetermining characteristics of an item are defined, and these are then held constant for successive pricings of the item. For example, in the case of combat boots, the type and quality of sole and upper material—rather than size and color-are price-determining characteristics. For each period, the price of an item with these characteristics is divided by its price in the base year; the result is the price index needed to divide into currentdollar purchases. For many reasons, it may not be possible to price successively an item with the given specifications, and in this case the price is adjusted for the cost of a change in specification. The price adjustment for the specification change is obtained by assuming that the production cost associated with the change is the appropriate measure. In the example of combat boots, if a change in the sole material from leather to rubber lengthens the life of the boot, the difference in the cost of the leather and rubber sole is taken as the price of the specification change. Price series for a sample of products in each of about 100 categories were prepared in this way. The categories

	Table A.—National	Defense	Purchases of	f Goods	and S	Services
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	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982*
					Billior	ns of 1972 d	ollars				
National defense purchases	73.1	68.3	66.9	66.4	64.9	65.4	65.7	67.4	70.1	73.5	78.9
Compensation	35.7 37.5	33.8 34.6	33.3 33.6	32.9 33.5	32.3 32.6	32.0 33.4	32.2 33.5	32.0 35.4	32.2 37.9	32.8 40.7	33.3 45.6
				Pe	rcent chang	ge from pre	ceding peri	iod			
National defense purchases (Billions of 1972 dollars)		-6.6	-2.0	8	-2.3	.8	.5	2.6	4.0	4.9	7.3
Compensation		-5.3 -7.7	$-1.5 \\ -2.9$	$-1.3 \\3$	-1.8 -2.7	$^{9}_{2.5}$.6 .3	6 5.7	.6 7.1	1.9 7.4	1.5 12.0
National defense purchases (Index, 1972=100)											
Implicit price deflator Fixed-weighted price index		6.6 6.9	8.0 10.0	8.5 8.8	6.0 6.0	7.1 7.3	7.6 7.5	8.7 9.7	12.9 14.5	11.5 11.8	8.4 8.6

^{*} Projection.

ranged from aircraft to depot maintenance services to compensation of employees. (For the latter, the price-determining characteristics were education and training.)¹

As a result of this project, estimates of constant-dollar defense purchases and implicit price deflators—the result of dividing a current-dollar estimate by a constant-dollar estimate—were first introduced into the NIPA's in 1980 for the period beginning in 1972. Further, the current-dollar estimates, by type, were improved, because of the work on product detail.

Real purchases and prices, 1972defense purchases, 82.—National measured in 1972 dollars, declined from \$73 billion in 1972 to \$65 billion in 1976 (table A). Following this period of continued winding down of U.S. operations in Vietnam, they increased moderately in 1977-78 before they began to accelerate in 1979. They are estimated to be \$79 billion in 1982. In 1972, compensation was roughly one-half of total defense purchases, and in 1982 it was only 42 percent: Although compensation had declined less than the "all other" component in the early part of the decade, it increased much less later. In 1982, it was still below its level of a decade earlier, largely because the size of the armed forces was down about 300,000. "All other" purchases declined at annual rates that averaged 3½ percent from 1972 to 1976. Thereafter, with one exception, each

year's increase was larger than in the preceding year; the 1982 increase was about 12 percent.

The acceleration in 1979 was a reflection of a policy to strengthen NATO forces in Europe, to strengthen strategic forces, and to increase the overall combat readiness of U.S. forces. Further acceleration in mid-1982 was a reflection of the administration's policy to increase defense spending substantially over the next few years. This acceleration was not due to the introduction of new major weapons systems, but to a higher rate of spending for all defense activities, particularly for weapons systems currently in production, such as the F-16 and F-18 fighter aircraft. All types of purchases other than compensation contributed to the acceleration. In durables, although purchases of aircraft slowed, purchases of missiles and ships were stepped up. In nondurables, the acceleration was widespread, and in services, it was concentrated in research and development and in maintenance.

Throughout the 1979-82 period, the pattern of quarterly changes often appeared erratic. However, the pattern can be traced largely to the changes in the deliveries of aircraft, missiles, and vehicles, and in the purchases of services other than compensation. Deliveries may change abruptly for several reasons: (1) the introduction of a new weapons system, as in mid-1980 when initial deliveries of the F-18 were small and larger deliveries of the A-7-which the F-18 replacedstopped; (2) changes in the number of aircraft or missiles to be delivered, as when scheduled deliveries of the F-14 were reduced because of budget constraints; (3) diversion of deliveries to foreign buyers, as when F-15's were diverted to Israel; and (4) production problems or bottlenecks. Fluctuations in the purchases of services other than compensation were mainly due to discretionary purchases at military installations. Large increases in these purchases early in 1980 were the result of large existing backlogs in the maintenance and repair of facilities and equipment; purchases declined as these backlogs were reduced.

Two measures of price change for national defense purchases are also shown in table A-the implicit price deflator and the fixed-weighted price index. The implicit price deflator reflects shifts in weights as well as price changes (except when the comparison of change is from the base period), whereas the fixed-weighted price index does not reflect weight shifts, but only price change. Throughout most of the 1972-82 period, annual increases in defense prices (as reflected in the fixedweighted price index) did not differ much from those in total GNP prices. In 1980 and 1981, however, defense price increases were much higher-in the range of 11½-14½ percent, compared to 9½-10 percent for GNP. Defense prices increased more mainly because of large increases in the prices of bulk petroleum products in those years. A large-14.3 percentmilitary pay raise also contributed to the 1981 increase (pay raises are reflected as price increases). Like most other price increases, defense price increases show a substantial deceleration in 1982, to about 8½ percent.

Throughout most of the period, the differences between changes in the fixed-weighted price index and in the implicit price deflator were small—no

^{1.} A detailed description of the work done appears in *Price Change of Defense Purchases of the United States*, U.S. Department of Commerce, Bureau of Economic Analysis (Washington, D.C.: U.S. GPO, 1979).

more than 0.3 percentage points. There were three exceptions, and in each year the increase in the fixed-weighted price index was larger: in 1974, by 2.0 points, in 1979, by 1.0 point, and in 1980, by 1.6 points. The major reason for these large differences was the price and weight of bulk petroleum products. In 1974, the prices of petroleum products accelerated sharply following the 1973 OPEC oil embargo. Because the weight of bulk petroleum was higher in the fixed-weighted price index than in the implicit price deflator, the fixed-

weighted price index registered a larger increase. In 1979-80, prices for bulk petroleum products were continuing to increase substantially more than other defense prices on average. Because, by this time, the weight for bulk petroleum products was twice as large in the fixed-weighted index as in the implicit price deflator, it again recorded larger increases.

On a quarterly basis, significant price increases occur in the fourth quarters, when Federal pay raises are effective. Other than these large increases, price changes appear erratic. The sharp movements are partly due to inherent characteristics of prices for defense purchases. For example, when a transaction does not occur in a given quarter, the price is held unchanged at the last observed price until there is a new transaction; the new transaction's price may be significantly higher or lower. Also, the contracting procedures of DOD can cause sharp changes. Many goods and services are purchased under fixed-price contracts, which are for 1 year; their effective dates tend to be clustered at certain times of the year.

Selected National Income and Product Accounts Tables

New estimates in this issue: Third quarter 1982, revised.

The abbreviations used in the tables are: CCAdj Capital consumption adjustment

IVA Inventory valuation adjustment

NIPA's National income and product accounts

PreliminaryRevised

The NIPA estimates for 1929-76 are in *The National Income and Product Accounts of the United States, 1929-76: Statistical Tables* (Stock No. 003-010-00101-1, price \$10.00). Estimates for 1977-81 and corrections for earlier years are in the July 1982 Survey. These publications are available from the Superintendent of Documents and Commerce Department District Offices; see addresses inside front cover.

Table 1.1-1.2.—Gross National Product in Current and Constant Dollars

				Billions	of dollars						Bil	lions of 1	1972 dolla	ars		
				Seasonal	ly adjust	ed at anr	ual rates	3				Seasonal	ly adjust	ed at ann	ual rates	3
	1980	1981		1981			1982		1980	1981		1981			1982	
			II	III	IV	I	11	III '			II	Ш	IV	I	11	III r
Gross national product	2,633.1	2,937.7	2,901.8	2,980.9	3,003.2	2,995.5	3,045.2	3,080.7	1,474.0	1,502.6	1,502.2	1,510.4	1,490.1	1,470.7	1,478.4	1,478.4
Personal consumption expenditures	1,667.2	1,843.2	1,819.4	1,868.8	1,884.5	1,919.4	1,947.8	1,987.5	930.5	947.6	944.6	951.4	943.4	949.1	955.0	957.7
Durable goods Nondurable goods. Services	214.3 670.4 782.5	234.6 734.5 874.1	230.4 729.6 859.4	241.2 741.3 886.3	229.6 746.5 908.3	237.9 749.1 932.4	240.7 755.0 952.1	240.1 767.9 979.5	137.1 355.8 437.6	140.0 362.4 445.2	138.6 361.7 444.3	142.2 363.0 446.2	134.1 363.1 446.2	137.5 362.2 449.5	138.3 364.5 452.2	136.5 365.8 455.4
Gross private domestic investment	402.3	471.5	475.5	486.0	468.9	414.8	431.5	441.3	208.4	225.8	229.5	233.4	218.9	195.4	202.3	205.0
Fixed investment. Nonresidential. Structures. Producers' durable equipment. Residential. Nonfarm structures. Farm structures. Producers' durable equipment. Change in business inventories. Nonfarm. Farm.	412.4 309.2 110.5 198.6 103.2 98.3 1.9 3.0 -10.0 -5.7 -4.3	451.1 346.1 129.7 216.4 104.9 99.7 2.1 3.2 20.5 15.0 5.5	450.9 341.3 127.0 214.3 109.5 104.7 1.6 3.2 24.6 19.3 5.3	454.2 353.0 132.7 220.2 101.2 95.6 2.4 3.2 31.8 24.6 7.2	455.7 360.2 139.6 220.6 95.5 89.4 2.9 3.2 13.2 6.0 7.2	450.4 357.0 141.4 215.6 93.4 87.9 2.4 3.1 -35.6 -36.0	447.7 352.2 143.6 208.6 95.5 89.6 2.8 3.2 -16.2 -15.0 -1.2	438.4 341.2 139.1 202.1 97.2 91.3 2.7 3.2 2.9 2.9	213.3 166.1 48.5 117.6 47.2 44.3 .8 2.0 -5.0 -2.9 -2.1	216.9 172.0 51.6 120.4 44.9 42.1 .9 2.0 9.0 6.8 2.1	217.4 170.1 51.0 119.1 47.3 44.6 .7 2.0 12.1 10.2 1.9	216.9 173.9 52.5 121.4 42.9 39.9 1.0 2.0 16.5 13.6 3.0	214.1 174.2 53.3 120.9 39.9 36.7 1.2 2.0 4.8 1.6 3.2	210.8 172.0 53.5 118.5 38.9 36.0 1.0 1.9 -15.4 -15.6	206.7 166.7 53.7 113.0 40.1 37.0 1.1 1.9 -4.4 -3.8 -0.6	202.6 162.0 52.1 109.9 40.7 37.7 1.1 1.9 2.3 2.3 .0
Net exports of goods and services	25.2	26.1	23.7	25.9	23.5	31.3	34.9	2.7	50.6	42.0	44.2	39.2	36.5	36.9	35.7	25.7
Exports	339.2 314.0	367.3 341.3	368.9 345.1	367.2 341.3	367.9 344.4	359.9 328.6	365.8 330.9	347.0 344.2	159.2 108.6	158.5 116.4	159.7 115.5	157.8 118.7	156.9 120.4	151.7 114.7	154.4 118.7	146.6 120.9
Government purchases of goods and services	538.4	596.9	583.2	600.2	626.3	630.1	630.9	649.2	284.6	287.1	283.9	286.4	291.3	289.2	285.3	290.0
Federal	197.2 131.4 65.8 341.2	228.9 153.7 75.2 368.0	218.2 150.5 67.7 365.0	230.0 154.4 75.7 370.1	250.5 166.9 83.6 375.7	249.7 166.2 83.5 380.4	244.3 176.2 68.2 386.6	256.4 182.2 74.3 392.7	106.5 70.1 36.4 178.1	110.4 73.5 36.8 176.7	107.0 72.9 34.1 176.9	110.7 74.3 36.5 175.7	116.0 76.1 39.9 175.3	114.4 74.5 39.8 174.9	110.3 78.2 32.1 175.0	115.1 80.5 34.6 174.9

Table 1.3-1.4.—Gross National Product by Major Type of Product in Current and Constant Dollars

Gross national product	2,633.1	2,937.7	2,901.8	2,980.9	3,003.2	2,995.5	3,045,2	3,080.7	1,474.0	1,502.6	1,502.2	1,510.4	1,490.1	1,470.7	1,478.4	1,478.4
Final sales	2,643.1 -10.0	2,917.3 20.5	2,877.2 24.6	2,949.1 31.8	2,989.9 13.2	$3,031.1 \\ -35.6$	3,061.4 -16.2	3,077.8 2.9	1,479.0 -5.0	1,493.7 9.0	1,490.1 12.1	1,493.9 16.5	1,485.3 4.8	1,486.1 -15.4	1,482.7 -4.4	1,476.0 2.3
Goods	1,141.9	1,289.2	1,276.1	1,317.0	1,298.4	1,269.4	1,283.1	1,285.8	667.9	689.5	689.8	697.2	678.0	661.8	663.2	660.5
Final salesChange in business inventories	1,151.9 10.0	1,268.7 20.5	1,251.4 24.6	1,285.1 31.8	1,285.2 13.2	1,305.0 -35.6	1,299.3 -16.2	1,282.9 2.9	672.9 ~5.0	680.5 9.0	677.7 12.1	680.7 16.5	673.2 4.8	677.2 15.4	667.5 4.4	658.2 2.3
Durable goods Final sales. Change in business inventories. Nondurable goods. Final sales. Change in business inventories	482.5 5.2	528.1 519.4 8.7 761.1 749.4 11.7	538.2 519.7 18.5 737.8 731.7 6.1	547.3 527.5 19.8 769.7 757.6 12.0	504.9 510.5 -5.6 793.6 774.7 18.9	482.4 513.2 -30.9 787.0 791.8 -4.8	505.9 512.6 -6.6 777.2 786.7 -9.6	512.4 502.9 9.5 773.4 780.0 -6.6	288.3 290.8 -2.6 379.7 382.1 -2.4	293.1 289.3 3.8 396.3 391.2 5.1	299.6 290.5 9.1 390.3 387.2 3.0	298.8 290.2 8.6 398.4 390.5 7.9	275.1 277.6 -2.5 402.9 395.6 7.3	265.0 278.7 -13.7 396.8 398.5 -1.7	272.3 274.9 -2.6 390.9 392.6 -1.7	271.7 267.2 4.4 388.9 391.0 -2.1
Services Structures	1,225.5 265.7	1,364.3 284.2	1,340.2 285.6	1,382.1 281.9	1,421.5 283.3	1,444.4 281.7	1,476.7 285.3	1,511.1 283.8	687.1 118.9	695.6 117.6	693.2 119.2	697.5 115.7	698.6 113.4	697.0 111.9	702.2 113.0	705.2 112.7
Addenda: Gross domestic purchases '	2,607.9 2,617.9	2,911.7 2,891.2	2,878.1 2,853.5		2,979.7 2,966.5	2,964.2 2,999.8	3,010.3 3,026.5		1,423.4 1,428.4	1,460.6 1,451.6		1,471.2 1,454.7	1,453.6 1,448.8	1,433.8 1,449.2		1,452.6 1,450.3

^{1.} Gross domestic purchases equals GNP less exports plus imports; final sales to domestic purchasers equals final sales less exports plus imports.

Table 1.5-1.6.—Gross National Product by Sector in Current and Constant Dollars

													,			
Gross national product	2,633.1	2,937.7	2,901.8	2,980.9	3,003.2	2,995.5	3,045.2	3,080.7	1,474.0	1,502.6	1,502.2	1,510.4	1,490.1	1,479.7	1,478.4	1,478.4
	2,587.0	2,888.5	2,855.2						1,447.9			1,485.0	1,463.3	1,448.0		1,455.3
	2,228.8	2,492.4	2,463.9	2,533.9	2,538.6	2,530.6	2,570.1	2,601.3	1,246.7	1,274.3 1,236.8	1,274.8	1,282.4	1,260.2	1,244.4	1,250.5 1,212.2	1,252.2 1,215.7
Nonfarm	2,159.5	2,418.5 2,188.9	2,394.6 2.167.8	2,454.7	2,467.4 2,229.9	2,465.1 2,222.8	2,494.4	2,532.0 2,279.8	1,210.3 1,080.7	1,236.8	1,240.9 1,109.6	1,241.9 1,110.6	1.089.9	1,210.0	1.079.5	1.082.6
Nonfarm less housing	208.5	229.6	226.8	231.7	237.4	242.3	246.5	252.3	129.6	131.4	131.3	131.3	131.6	132.0	132.6	133.1
Farm	65.4	75.8	73.9	80.1	78.4	72.9	74.8	76.1	34.2	38.4	36.3	40.9	42.3	38.1	38.0	39.7
Statistical discrepancy	3.9	-1.9	~4.6	8	-7.2	-7.5	.8	6.8	2.2	9	-2.4	4	-3.6	-3.7	.4	-3.3
Households and institutions	85.4	96.4	95.2	97.1	100.3	103.3	105.3	107.9	45.8	46.9	46.7	46.7	47.4	47.8	47.9	48.0
Private households		7.0	7.0	7.1	7.1	7.1	7.1	100.0	3.4 42.4	3.3 43.6	3.3 43.4	3.3 43.5	3.2 44.1	3.1 44.7	3.1 44.8	3.1
Nonprofit institutions	78.8 272.8	89.4 299.7	88.2 296.2	90.1 300.1	93.3 310.9	96.2 315.8	98.2 320.3	100.8 323.8	155.4	156.0	156.2	155.9	155.8	155.7	155.7	155.2
Government Federal	82.9	92.3	90.5	91.0	97.9	98.6	98.9	99.1	49.5	49.7	49.7	49.8	49.8	49.8	49.8	49.8
State and local	189.9	207.4	205.6	209.2	213.0	217.1	221.4	224.7	105.9	106.3	106.5	106.1	106.0	106.0	105.9	105.4
Rest of the world	46.1	49.2	46.6	49.7	53.3	45.8	49.5	47.7	26.1	25.4	24.4	25.4	26.7	22.7	24.2	23.1
Addendum:		l '		1		}	ĺ							1	1	
Gross domestic business product less housing	2,012.0	2,253.5		}		}			1,115.4	1,141.4						•••••

Table 1.13.—Gross Domestic Product of Corporate Business in Current Dollars and Gross Domestic Product of Nonfinancial Corporate Business in Current and Constant Dollars

				Billions (of dollars							1	Billions o	of dollars			
				Seasonall	y adjuste	ed at anr	ual rate	s				8	easonall	y adjuste	d at ann	ual rates	3
	1980	1981		1981			1982			1980	1981		1981			1982	
			II	Ш	IV	I	II	III '				11	III	IV	I	II	III '
Gross domestic prod- uct of corporate business	1,635.5	1,837.1	1,818.6	1,867.8	1,873.1	1,863.1	1,882.7	1.911.0	Net domestic product Indirect business tax and nontax liability plus	1,365.7	1,536.5	1,522.4	1,564.5	1,562.0	1,548.8	1,559.0	1,577.5
Capital consumption allow- ances with CCAdj	181.2	206.2	202.9	209.7	216.0	218.9	223.4	227.8	business transfer pay- ments less subsidies Domestic income	148.6 1,217.1	178.3 1,358.2	179.0 1,343.4	179.9 1,384.5	181.3 1,380.8	176.3 1,372.4	181.2 1,377.8	184.2 1,393.3
Net domestic product	1,454.2	1,630.9	1,615.7	1,658.1	1,657.1	1,644.2	1,659.3	1,683.3	Compensation of em- ployees Wages and salaries	1,041.7 874.8	1,150.1 962.9	1,140.0 954.7	1,167.0 977.7		1,181.6 985.3	1,190.4 991.4	1,195.8 994.9
business transfer pay- ments less subsidies	155.8	186.1	186.9	187.8	189.1	184.0	189.1	192.2	Supplements to wages and salaries Corporate profits with	166.9	187.1	185.4	189.3	191.9	196.4	198.9	200.9
Domestic income Compensation of em- ployees	1,298.5 1,107.3	1,444.8 1,224.5	1,428.8 1,213.5	1,470.3 1,242.5	1,468.0 1,251.5	1,460.2	1,470.3 1,270.7	1,491.1 1,278.6	IVA and CCAdj Profits before tax	123.0 183.0	145.6 186.6	142.1 181.8	151.8 191.5	138.2 170.5	120.3 134.8	114.8 131.3	124.1 138.4
Wages and salaries Supplements to wages and salaries	929.2 178.0	1,024.8	1,015.7	1,040.5	1,046.6 204.9	1,049.7 209.8	1,057.8 212.9	1,063.3 215.3	Profits tax liability Profits after tax Dividends	64.8 118.2 42.4	63.3 123.3 52.9	61.4 120.4 51.2	65.5 126.0 54.4	54.8 115.7 56.7	38.9 95.8 58.0	37.1 94.2 59.7	42.0 96.4 60.9
Corporate profits with IVA and CCAdj	151.3	167.8	164.3	172.2	158.3	140.2	137.2	149.2	Undistributed profitsIVA	75.8	70.3 24.6	69.2 -22.8	71.6 -23.0	58.9	37.8 -4.4	34.5 -9.4	35.5 ~9.9
Profits before tax Profits tax liability Profits after tax	212.1 84.7 127.5	209.3 81.2 128.1	204.6 79.2 125.4	212.3 82.4 129.8	190.9 71.6 119.3	154.7 56.7 98.1	153.5 55.3 98.2	163.1 60.8 102.3	CCAdj Net interest	-43.0 -17.0 52.4	-16.3 62.5	-16.9 61.2	-25.0 -16.7 65.7		-4.4 -10.0 70.5	-7.1 72.6	-9.5 -4.4 73.5
Dividends Undistributed	39.7	50.8	48.9	52.7	54.6	56.0	58.0	59.3				Bil	lions of	1972 doll	ars		
profits IVA CCAdj Net interest	87.8 -43.0 -17.8 39.9	77.3 -24.6 -16.8 52.5	76.4 -22.8 -17.5 51.0	77.1 -23.0 -17.1 55.6	64.7 -17.1 -15.5 58.3	$\begin{array}{r} 42.0 \\ -4.4 \\ -10.1 \\ 60.5 \end{array}$	40.2 -9.4 -6.9 62.4	43.0 - 9.9 - 4.0 63.3	Gross domestic prod- uct of nonfinancial corporate business	860.3	881.3	884.2	887.5	870.4	858.8	857.9	859.3
Gross domestic product of financial corporate business	97.8	104.8	103.6	104.2	106.0	106.6	111.7	117.3	Capital consumption allow- ances with CCAdj	90.1	94.3	93.8	94.9	96.0	97.0	98.1	99.1
Gross domestic	""	10.00	100.0		1000	100.0		111.0	Net domestic product Indirect business tax and nontax liability plus	770.2	787.0	790.4	792.6	774.5	761.8	759.8	760.1
financial corpo- rate business Capital consumption allow-	1,537.7	1,732.3	1,715.0			1,756.6		1,793.7	business transfer pay- ments less subsidies Domestic income	93.0 677.2	94.7 692.2	94.4 696.0	95.2 697.4	94.7 679.8	94.6 667.2	95.0 664.8	94.6 665.6
ances with CCAdj	172.0	195.8	192.6	199.1	205.1	207.8	212.1	216.2						0.5.0	L	0.0-2.0	000.0

Table 1.11.—National Income by Type of Income

				_				
National income	2,117.1	2,352.5	2,324.4	2,387.3	2,404.5	2,396.9	2,425.2	2,457.6
Compensation of employ-								
ees	1.598.6	1.767.6	1.750.0	1,789.1	1,813.4	1.830.8	1.850.7	1.868.2
Wages and salaries	1,356.1	1.494.0	1,479.4	1,512.6	1,531.1	1,541.5	1,556.6	1.569.9
Government and gov-	1,000.1	1,434.0	1,413.4	1,512.0	1,001.1	1,041.0	1,000.0	1,000.6
	260.1	909 1	279.8	9040	900.9	9069	300.0	303.5
ernment enterprises		283.1		284.0	292.3	296.3		
Other	1,095.9	1,210.9	1,199.6	1,228.6	1,238.8	1,245.2	1,256.6	1,266.3
Supplements to wages								
and salaries	242.5	273.6	270.6	276.5	282.3	289.3	294.1	298.3
Employer contribu-	}					ļ		
tions for social in-	i .			i			i i	
surance	115.3	133.2	132.1	134.3	136.5	140.2	141.7	142.8
Other labor income	127.2	140.4	138.4	142.2	145.8	149.1	152.5	155.
Other labor income	121.2	140.4	100.4	144.2	145.0	140.1	102.0	100.0
Proprietors' income with	1							
IVA and CCAdj	116.3	124.7	123.8	127.5	124.1	116.4	117.3	118.
Farm	19.4	24.0	22.5	27.1	24.6	17.8	17.4	16.
Proprietors' income								
with IVA	26.4	31.8	30.3	35.1	32.8	26.0	25.5	24.
CCAdj		-7.9	-7.8	-8.0	-8.2	-8.2	-8.1	-8.
Nonfarm		100.7	101.2	100.4	99.5	98.6	99.9	101.
Proprietors' income		100.3	100.9	99.3	97.7	93.8	94.5	94.
IVA		-1.6	-1.4	-1.2	-1.2	0	-1.0	~
CCAdj	.1	2.1	1.8	2.3	3.0	4.7	6.4	7.9
Rental income of persons	1							
with CCAdj	32.9	33.9	34.0	33.6	33.6	33.9	34.2	34.6
Rental income of per-	1							
	65.3	69.4	68.9	CO 5	70.5	710	70.7	20.0
sons				69.5	70.5	71.0		70.
CCAdj	32.4	-35.5	-34.9	35.9	-36.9	-37.1	~36.4	-36.3
Corporate profits with IVA								
and CCAdj	181.6	190.6	185.1	193.1	183.9	157.1	155.4	165.
Corporate profits with	10110	100.0	100.1	100.1	100.0	101	100.4	100.
IVA	199.4	207.5	202.6	210.3	199.4	167.2	162.2	170.
Profits before tax	242.4	232.1	225.4	233.3	216.5	171.6	171.7	179.
Profits tax liability	84.7	81.2	79.2	82.4	71.6	56.7	55.3	60.
Profits after tax		150.9	146.2	150.8	144.9	115.0	116.3	119.
Dividends	58.1	65.1	64.0	66.8	68.1	68.8	69.3	70.
Undistributed	1							
profits	99.7	85.8	82.2	84.0	76.9	46.1	47.0	48.
IVA		-24.6	-22.8	-23.0	-17.1	-4.4	-9.4	-9.
CCAdi		-16.8	-17.5	-17.1	-15.5	-10.1	-6.9	-4.
•								
Net interest	187.7	235.7	231.6	244.0	249.5	258.7	267.5	270.
Addenda:	1							
			l			l		
	{					1	1	
Corporate profits after								
Corporate profits after tax with IVA and	27.0							
Corporate profits after tax with IVA and CCAdj	97.0	109.5	105.9	110.7	112.3	100.4	100.0	105.
Corporate profits after tax with IVA and CCAdj	97.0 58.1	109.5 65.1	105.9 64.0	110.7 66.8	112.3 68.1	100.4 68.8	100.0 69.3	
Corporate profits after tax with IVA and CCAdjDividends	58.1							105. 70.
Corporate profits after tax with IVA and CCAdj Dividends								

Table 1.7.—Relation of Gross National Product, Net National Product, National Income, and Personal Income

				Billions o	of dollars	1		
			8	Seasonall	y adjuste	ed at ann	ual rate	s
	1980	1981		1981			1982	
			II	Ш	IV	I	п	III r
Gross national product	2,633.1	2,937.7	2,901.8	2,980.9	3,003.2	2,995.5	3,045.2	3,080.7
Less:								
Capital consumption al- lowances with CCAdj Capital consumption al-	293.2	330.1	325.0	335.2	344.8	348.7	353.9	359.9
lowances Less: CCAdj	232.0 61.2	267.5 62.6	262.2 -62.8	271.9 -63.2	282.6 -62.2	293.4 55.3	304.4 -49.6	314.6 -45.3
Equals: Net national prod-	2,339.9	2,607.6	2,576.8	2,645.8	2,658.4	2,646.7	2,691.2	2,720.8
Less:			1					
Indirect business tax and nontax liability Business transfer pay-	213.0	251.3	252.0	253.3	255.3	250.2	256.7	261.6
ments Statistical discrepancy	11.4 3.9	12.4 1.9	12.2 4.6	12.5 8	12.8 -7.2	13.1 -7.5	13.5 .8	13.8 -6.8
Plus: Subsidies less current surplus of government enterprises	5.5	6.6	7.2	6.5	7.0	6.0	4.9	5.3
Equals: National income	2,117.1	2,352.5	2,324.4	2,387.3	2,404.5	2,396.9	2,425.2	2,457.6
Less:								
Corporate profits with IVA and CCAdj Net interest	181.6 187.7	190.6 235.7	185.1 231.6	193.1 244.0	183.9 249.5	157.1 258.7	155.4 267.5	165.9 270.6
Contributions for social insurance	204.0	238.1	236.2	240.3	243.5	250.8	253.0	255.2
bursementsPlus:	0	0	0	.2	1	2	0	0
Government transfer pay- ments to persons Personal interest income	285.8 263.4	323.9 329.0	314.8 320.6	332.3	337.9	341.4	351.7	366.9
Personal dividend income Business transfer pay-	55.9	62.5	61.5	339.6 64.1	351.0 65.2	359.7 65.8	372.0 66.1	382.2 67.2
ments	11.4	12.4	12.2	12.5	12.8	13.1	13.5	13.8
Equals: Personal income	2,160.4	2,415.8	2,380.6	2,458.2	2,494.6	2,510.5	2,552.7	2,596.0

Table 2.1.—Personal Income and Its Disposition

	Γ			Billions (of dollars			
					y adjuste		usal rata	
	1980	1981		1981	y aujusie	at am	1982	
			II	III	IV	ī	II	III r
Personal income	2,160.4	2,415.8	2,380.6	2,458.2	2,494.6	2,510.5	2,552.7	2,596.0
Wage and salary disburse-	1,356.1	1,493.9	1,479.4	1,512.3	1,531.2	1,541.6	1,556.6	1,569.9
ments Commodity-producing	1,550.1	1,430.5	1,413.4	1,312.3	1,001.2	1,541.0	1,000.0	1,005.5
industries	468.0	510.8	507.2	519.3 392.9	517.7	514.3	513.6	510.1
Manufacturing Distributive industries	354.4 330.5	386.4 361.4	386.9 358.7	366.5	388.7 368.3	385.1 371.4	385.6 375.4	383.7 378.5
Service industries	297.4	338.6	333.7	342.8	352.8	359.5	367.6	377.7
Government and govern- ment enterprises	260.2	283.1	279.8	283.8	292.4	296.5	300.0	303.5
Other labor income	127.2	140.4	138.4	142.2	145.8	149.1	152.5	155.5
Proprietors' income with IVA and CCAdj	116.3	124.7	123.8	127.5	124.1	116.4	117.3	118.3
Farm	19.4	24.0	22.5	27.1	24.6	17.8	17.4	16.6
Nonfarm	96.9	100.7	101.2	100.4	99.5	98.6	99.9	101.7
Rental income of persons with CCAdj	32.9	33.9	34.0	33.6	33.6	33.9	34.2	34.6
Personal dividend income	55.9	62.5	61.5	64.1	65.2	65.8	66.1	67.2
Personal interest income	263.4	329.0	320.6	339.6	351.0	359.7	372.0	382.2
Transfer paymentsOld-age, survivors, dis-	297.2	336.3	327.0	344.8	350.7	354.6	365.2	380.7
ability, and health in- surance benefits	154.2	182.0	173.7	190.6	192.8	194.7	197.5	209.2
Government unemploy- ment insurance bene-	201.	10410	11011	20010	102.0	101	10110	200.2
fits Veterans benefits	16.1 15.0	15.4 16.1	15.1 15.9	14.1 16.0	16.7 16.4	18.7 16.3	$\frac{23.5}{16.1}$	$25.4 \\ 16.3$
Government employees retirement benefits	43.0	49.2	49.1	49.6	50.8	51.5	54.4	54.9
Other transfer payments Aid to families with de-	69.0	73.6	73.2	74.4	74.0	73.3	73.8	75.0
pendent children	12.4	13.4	13.4	13.5	13.4	13.2	13.2	12.9
Other	56.6	60.3	59.8	61.0	60.6	60.1	60.6	62.1
Less: Personal contribu- tions for social insurance.	88.7	104.9	104.1	106.1	107.0	110.6	111.4	112.4
Less: Personal tax and nontax payments	336.3	386.7	384.2	398.1	393.2	393.4	401.2	394.3
Equals: Disposable personal income	1,824.1	2,029.1	1,996.5	2,060.0	2,101.4	2,117.1	2,151.5	2,201.7
Less: Personal outlays	1,717.9	1,898.9	1,874.5	1,925.7	1,942.7	1,977.9	2,007.2	2,047.3
Personal consumption ex- penditures	1,667.2	1,843.2	1,819.4	1,868.8	1,884.5	1,919.4	1,947.8	1,987.5
Interest paid by consum- ers to business	49.9	55.1	54.4	56.2	57.5	57.8	58.4	59.0
Personal transfer pay- ments to foreigners	.8	.6	.8	.7	.7	.8	.9	۰
(net) Equals: Personal saving	106.2	130.2	122.0	134.4	158.6	139.1	.9 144.3	.8 1 54.4
Addenda:	100.0	100.2	132.0	10111	150.0	100.1	11110	104.1
Disposable personal income: Total, billions of 1972								
dollarsPer capita:	1,018.0	1,043.1	1,036.6	1,048.8	1,051.9	1,046.9	1,054.8	1,060.9
Current dollars 1972 dollars Population (millions)	8,012 4,472 227.7	8,827 4,538 229.9	8,698 4,516 229.5	8,951 4,557 230.1	9,107 4,559 230.8	9,155 4,527 231.2	9,285 4,552 231.7	9,477 4,566 232.3
				200.1	250.0	201.2	-01.7	202.0
Personal saving as per- centage of disposable personal income	5.8	6.4	6.1	6.5	7.5	6.6	6.7	7.0

Table 7.7.—Current-Dollar Cost and Profit Per Unit of Constant-Dollar Gross Domestic Product of Nonfinancial Corporate Business

				Dol	lars			
				Sea	sonally	y adjus	sted	
	1980	1981		1981			1982	
			II	III	IV	I	II	III r
Current-dollar cost and profit per unit of constant-dollar gross domestic product 1	1.787	1.966	1.940	1.987	2.030	2.045	2.064	2.088
Capital consumption allowances with CCAdj Net domestic product	.200 1.587	.222 1.743	.218 1.722				.247 1.817	.252 1.836
Domestic income		1.541	.202 1.519 1.289		.208 1.586 1.349		.211 1.606 1.388	
IVA and CCAdj Profits tax liability. Profits after tax with IVA and CCAdj Net interest	.075	.165 .072 .093 .071		.171 .074 .097 .074	.159 .063 .096 .078	.045	.043	.144 .049 .095 .086

Table 2.2-2.3.—Personal Consumption Expenditures by Major Type of Product in Current and Constant Dollars

				Billions (of dollars			
			8	Seasonall	y adjuste	ed at anr	ual rate	s
	1980	1981		1981			1982	
			n	Ш	IV	I	П	шт
Personal consump- tion expenditures	1,667.2	1,843.2	1,819.4	1,868.8	1,884.5	1,919.4	1,947.8	1,987.5
Durable goods	214.3	234.6	230.4	241.2	229.6	237.9	240.7	240.1
Motor vehicles and parts Furniture and household	89.7 86.3	98.6 93.4	94.2 93.3	104.0 93.8	93.9 93.3	103.2 91.0	103.3 93.2	104.2 92.7
equipment Other	38.3	42.6	42.9	43.4	42.4	43.7	44.2	43.2
Nondurable goods	670.4	734.5	729.6	741.3	746.5	749.1	755.0	767.9
Food	343.7 104.7 87.0	375.3 114.6 96.8	372.1 114.0 96.7	378.0 115.9 97.7	382.3 116.0 97.5	387.9 117.5 95.3	395.0 118.4 91.3	401.2 119.2 94.1
Other nondurable goods Fuel oil and coal	135.0 19.0	147.9 19.7	146.9 19.9	149.7 19.9	150.7 19.2	148.4 17.3	150.4 17.3	153.4 18.3
Other	116.0	128.2	127.0	129.8	131.5	131.1	133.1	135.1
Services	782.5	874.1	859.4	886.3	908.3	932.4	952.1	979,5
Housing Household operation Electricity and gas	266.0 111.7 56.6	295.3 128.9 66.8	291.3 125.2 64.6	298.7 132.8 69.4	307.0 136.9 71.2	314.5 141.4 75.1	320.4 140.7 72.6	328.2 145.2 76.0
Other Transportation Other	55.1 62.9 341.9	62.1 65.4 384.4	60.7 64.3 378.5	63.5 65.5 389.3	65.7 65.7 398.7	66.3 66.9 409.6	68.1 69.5 421.5	69.2 70.3 435.7
			Bil	lions of 1	972 dolla	ars		
Personal consump- tion expenditures	930.5	947.6	944.6	951.4	943.4	949.1	955.0	957.7
Durable goods	137.1	140.0	138.6	142.2	134.1	137.5	138.3	136.5
Motor vehicles and parts Furniture and household	53.8	54.2	52.2	56.1	50.0	54.9	54.4	53.9
equipment Other	60.1 23.2	61.6 24.3	61.8 24.6	61.4 24.7	60.4 23.7	58.5 24.1	59.4 24.4	$\frac{58.9}{23.7}$
Nondurable goods	355.8	362.4	361.7	363.0	363.1	362.2	364.5	365.8
Food Clothing and shoes	180.2 78.0 25.7 72.0 4.0 68.0	181.4 82.7 25.7 72.6 3.5 69.1	181.3 82.6 25.4 72.5 3.4 69.0	180.9 83.1 26.2 72.9 3.5 69.4	182.0 83.0 25.8 72.3 3.3 69.0	181.7 83.8 26.2 70.4 3.0 67.4	183.0 84.0 27.2 70.2 3.2 67.1	184.9 84.1 26.5 70.3 3.2 67.1
Services	437.6	445.2	444.3	446.2	446.2	449.5	452.2	455.4
Housing Household operation Electricity and gas Other Transportation Other	159.6 61.5 23.8 37.8 34.1 182.4	162.6 63.5 24.6 38.8 32.4 186.8	162.4 63.0 24.4 38.6 32.3 186.7	162.9 64.1 25.0 39.1 32.1 187.2	163.5 64.4 25.2 39.2 31.7 186.6	164.5 64.5 25.6 38.9 31.9 188.5	165.2 63.4 24.1 39.3 32.5 191.0	165.7 64.0 24.7 39.3 32.8 193.0
Outet	102.4	100.0	100.1	101.2	100.0	100.0	191.0	135.0

Table 5.1.—Gross Saving and Investment

			В	illions o	of dollar	s		
			Sea	sonally	adjuste	ed at an	nual ra	tes
	1980	1981		1981			1982	
			II	Ш	IV	I	. п	Ш′
Gross saving	406.2	477.5	482.4	490.0	476.3	428.8	441.5	428.2
Gross private saving Personal saving Undistributed corporate profits	438.3 106.2	504.7 130.2	488.9 122.0	513.4 134.4	547.7 158.6	519.4 139.1	529.0 144.3	548.8 154.4
with IVA and CCAdj	$99.7 \\ -43.0$	44.4 85.8 -24.6 -16.8	42.0 82.2 -22.8 -17.5	43.9 84.0 -23.0 -17.1	44.3 76.9 -17.1 -15.5	46.1 -4.4	30.7 47.0 -9.4 -6.9	34.6 48.5 -9.9 -4.0
Capital consumption allowances with CCAdj: Corporate Noncorporate Wage accruals less disburse- ments	181.2 112.0 0	206.2 123.9	202.9 122.1 0	209.7 125.5 0	216.0 128.7 0	218.9 129.8 0	223.4 130.5 0	227.8 132.1 0
Government surplus or deficit (-), NIPA's FederalState and local		-28.2 -60.0 31.7	-7.6 -40.5 32.9	-24.5 -58.0 33.5		90.7 1184 27.7		- 1206 - 1531 32.5
Capital grants received by the United States (net)	1.2	1.1	1.1	1.1	1.1	0	0	0
Gross investment	410.2	475.6	477.8	489.1	469.0	421.3	442.3	421.4
Gross private domestic investment Net foreign investment	402.3 7.8	471.5 4.1	475.5 2.3	486.0 3.1	468.9 .1	414.8 6.5	431.5 10.8	441.3 19.9
Statistical discrepancy	3.9	-1.9	4.6	8	-7.2	-7.5	.8	-6.8

Table 3.2.—Federal Government Receipts and Expenditures

	_		1	Billions o	f dollars			
			S	easonall	y adjuste	d at ann	ual rates	3
	1980	1981		1981			1982	
			П	Ш	IV	I	II	Ш′
Receipts	540.7	628.2	627.0	640.2	625.7	609.9	617.0	613.4
Personal tax and nontax			20-0			200.0	005.0	20 7 4
receipts	257.5	298.1	297.0	307.9	300.9	299.9	305.8	295.6 288.1
Income taxes	250.7	290.8	289.8	300.6	293.2	291.1	297.5 8.0	7.2
Estate and gift taxes	6.6	7.0	6.9	7.1	7.5	8.5 .3	3	.3
Nontaxes	.2	.3	٠٥,	٠٠.	رد.	ю.	.0	
Corporate profits tax accru-	70.3	67.3	65.6	68.4	59.1	46.5	45.2	49.4
Indirect business tax and	10.5	01.0	00.0	00.4	55.1	40.0	40.2	45.4
nontax accruals	38.9	58.5	61.5	57.8	57.2	48.7	49.8	50.8
Excise taxes	26.8	44.1	47.7	43.1	41.9	33.6	34.6	35.5
Customs duties	7.2	8.6	8.3	9.0	9.3	8.7	8.6	8.5
Nontaxes	4.9	5.8	5.5	5.8	6.1	6.3	6.6	6.8
Contributions for social								
insurance	174.1	204.3	202.8	206.1	208.4	214.9	216.2	217.5
Expenditures	602.1	688.2	667.5	698.2	727.4	728.3	736.6	766.5
Purchases of goods and		ı						
services	197.2	228.9	218.2	230.0	250.5	249.7	244.3	256.4
National defense	131.4	153.7	150.5	154.4	166.9	166.2	176.2	182.2
_ Nondefense	65.8	75.2	67.7	75.7	83.6	83.5	68.2	74.3
Transfer payments	251.4	286.6	276.7	295.1	300.7	303.2	312.8	327.0
To persons	246.2	280.9	271.9	289.0	294.0	297.2	307.0	321.6
To foreigners	5.2	5.7	4.8	6.1	6.6	6.0	5.8	5.4
Grants in aid to State and	00.7	00.0	00.0	00.0	00.0	00.0	05.0	00.0
local governments	88.7	87.7	90.6	86.3	83.6	83.0	85.0	82.0
Net interest paid	53.1 67.2	71.9	68.3	74.0	79.0	79.6	82.8	88.9
Interest paid	01.2	91.4	87.4	94.3	99.5	101.8	105.1	111.9
To persons and busi-	54.7	74.6	70.4	77.2	82.4	83.9	87.6	95.5
ness To foreigners	12.5	16.7	17.0	17.1	17.1	17.9	17.4	16.4
Less: Interest received	14.1	19.5	19.1	20.3	20.6	22.1	22.3	23.0
Subsidies less current sur-								
plus of government		1						}
enterprises	11.7	13.1	13.7	13.0	13.6	12.7	11.6	12.1
Subsidies	10.4	12.2	11.6	12.0	13.8	13.7	12.6	11.8
Less: Current surplus of		10.0	*****	14.0	10.0	10	10.0	11.0
government enterprises	-1.3	9	-2.0	-1.0	.3	1.1	1.0	4
Less: Wage accruals less					}			
disbursements	0	0	0	.2	1	2	0	0
Surplus or deficit		00.0	40-	, ro a		110:		
(–), NIPA's	61.4	-60.0	-40.5	- 58.0	-101.7	-118.4	-119.6	- 153.1
Social insurance funds	-12.4	11.0	-3.9	-16.6	-19.3	-16.4	-24.1	-36.6
Other	-49.0	-49.0	-36.6	-41.4	-82.4	-102.0	-95.5	-116.6

Table 3.3.—State and Local Government Receipts and Expenditures

Receipts	385.9	416.8	415.2	420.3	421.5	424.2	434.3	440.6
Personal tax and nontax								
receipts	78.8	88.6	87.2	90.3	92.3	93.6	95.4	98.7
Income taxes	42.8	48.3	47.5	49.3	50.1	50.2	50.8	52.9
Nontaxes	28.1	32.0	31.4	32.6	33.7	34.8	35.9	37.0
Other	7.9	8.3	8.3	8.4	8.5	8.6	8.7	8.8
Corporate profits tax accru-								
als	14.4	13.9	13.6	14.0	12.5	10.1	10.2	11.4
Indirect business tax and			1		{			
nontax accruals	174.1	192.8	190.4	195.5	198.0	201.5	206.9	210.8
Sales taxes	82.8	90.4	89.2	91.8	91.8	92.6	95.0	95.9
Property taxes	68.4	75.1	74.3	76.0	77.8	79.8	81.8	84.7
Other	22.9	27.2	27.0	27.8	28.4	29.2	30.0	30.3
Contributions for social in-								
surance	29.9	33.8	33.4	34.2	35.1	36.0	36.9	37.7
Federal grants-in-aid	88.7	87.7	90.6	86.3	83.6	83.0	85.0	82.0
Expenditures	357.8	385.0	382.2	386.9	392.4	396.5	402.2	408.1
Purchases of goods and					}			
services	341.2	368.0	365.0	370.1	375.7	380.4	386.6	392.7
Compensation of employ-					1		i	
ees	189.9	207.4	205.6	209.2	213.0	217.1	221.4	224.7
Other	151.3	160.6	159.4	161.0	162.7	163.2	165.2	168.1
Transfer payments to per-		1						
sons	39.6	43.0	42.8	43.3	43.9	44.3	44.7	45.3
Net interest paid	14.8	-16.9	-16.7	17.4	-17.8	-18.5	-19.2	-19.8
Interest paid	20.3	23.7	23.2	24.2	25.3	26.4	27.4	28.5
Less: Interest received	35.0	40.6	39.8	41.5	43.1	44.9	46.7	48.3
Less: Dividends received	2.1	2.6	2.5	2.7	2.8	3.0	3.2	3.3
Subsidies less current sur-	1				{			
plus of government		1	1	}	1	i		
enterprises	-6.2	-6.5	-6.4	-6.5	-6.6	~6.6	-6.7	-6.8
Subsidies	.4	.4	.4	.4	.4	.4	.4	.5
Less: Current surplus of							}	1
government enterprises	6.5	6.9	6.8	6.9	7.0	7.1	7.2	7.3
T W			1				}	
Less: Wage accruals less disbursements	0	0	0	0	0	0	0	0
disbursements	ľ	, ,	0				"	1
Surplus or deficit	ŀ	{		1	i			
(-), NIPA's	28.2	31.7	32.9	33.5	29.1	27.7	32.1	32.5
Social insurance funds	27.3	31.8	31.3	32.3	33.3	34.5	35.7	36.9
Other		1	1.7	1.2	-4.2	-6.8	-3.6	-4.3
	l		l	}	1	1	1	1.0

Table 7.1.—Implicit Price Deflators for Gross National Product

			Index	numbe	rs, 1972	= 100			
				Se	asonall	y adjust	ed		
	1980	1981		1981			1982		
			II	III	IV	I	H	III '	
Gross national product	178.64	195.51	193.17	197.36	201.55	203.68	205.98	208.38	
Personal consumption									
expenditures	179.2	194.5	192.6	196.4	199.8	202.2	204.0	207.5	
Durable goods	156.3	167.5	166.2	169.7	171.3	173.0	174.0	176.0	
Nondurable goods		202.7	201.7	204.2	205.6	206.8	207.1	210.0	
Services	178.8	196.3	193.4	198.6	203.6	207.4	210.6	215.1	
Gross private domestic									
Fixed investment	193.3	208.0	207.4	209.4	212.9	213.6	216.6	216.4	
Nonresidential	186.1	201.3	200.7	203.0	206.8	207.6	211.3	210.7	
Structures		251.5	249.1	252.7	261.9	264.5	267.6	267.1	
Producers' durable equipment		179.8	179.9	181.4	182.5	181.9	184.6	184.0	
Residential	218.5	233.6	231.7	235.8	239.2	240.5	238.6	238.9	
Nonfarm structures	221.7	237.1	234.9	239.4	243.3	244.3	242.1	242.3	
Farm structures		236.9	233.4	237.9	242.7	243.8	242.0	242.3	
Producers' durable equipment		159.4	158.3	161.3	162.8	165.7	168.1	169.5	
Change in business inventories									
Net exports of goods and services									
Exports	213.1	231.8	230.9	232.6	234.5	237.3	236.8	236.7	
Imports		293.1	298.7	287.7	286.1	286.4	278.8	284.8	
inpo comment	200.0	200.1	200.1		200.1	200.1		201.0	
Government purchases of	t	1	l			1	1	1	
goods and services	189.2	207.9	205.5	209.5	215.0	217.8	221.1	223.8	
Federal	185.2	207.4	204.0	207.8	216.0	218.3	221.6	222.9	
National defense	187.4	209.0	206.4	207.9	219.5	223.0	225.2	226.4	
Nondefense		204.2	198.9	207.4	209.4	209.6	212.6	214.6	
State and local		208.2	206.3	210.7	214.3	217.5	220.9	224.5	
	L						L		

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

			Index	numbe	ers, 1972	2 = 100		
				Se	easonall	y adjus	ted	
	1980	1981		1981	,		1982	
			II	III	IV	I	II	III '
Gross national product	184.4	202.0	199.9	204.2	208.4	210.8	213.0	215.9
Personal consumption	1040	202.1	200.2	202.0	207.5	200.0		217.0
expenditures	160 4	172.9	171.5	203.9 175.1	177.4	209.9 179.0	211.6 181.0	215.2 182.6
Nondurable goods	195.8	212.8	212.1	214.0	215.9	217.2	216.4	219.7
Services	183.0	202.1	199.2	204.5	209.9	213.8	217.6	222.2
Gross private domestic investment								
Fixed investment	204.1	220.9	219.0	223.2	226.8	229.2	230.4	232.0
Nonresidential	196.0	213.5	211.7	215.6	219.3	222.0	225.0	227.4
Structures	219.3	237.3	235.0	239.4	243.0	245.7	248.6	250.0
Producers' durable equipment	182.6	199.8	198.3	201.9	205.6	208.4	211.5	214.5
Residential Change in business inventories	219.5	235.0	233.0	237.5	241.2	242.7	240.7	240.7
Change in business inventories		}			·····		ļ	
Net exports of goods and services								
Exports	218.6	239.3	238.4	241.1	242.5	245.6	246.3	245.2
Imports	303.7	319.0	323.4	316.3	314.0	319.1	313.6	313.6
Government purchases of	ľ	1	1			ł	1	ì
goods and services	193.8	212.2	210.3	213.6	219.3	222.4	224.5	227.1
Federal National defense	192.7	214.7 219.7	212.2 217.4	214.5 219.6	223.9 230.1	227.1 233.4	228.4 234.6	229.9 236.1
Nondefense		201.7	198.8	201.6	207.9	211.0	212.6	214.2
State and local	194.6	210.6	209.0	212.9	216.1	219.2	221.9	225.1
Addenda:	1	ĺ	{	1		ļ		
Gross domestic purchases 1	189.8	207.2	205.3	209.0	213.0	215.6	217.3	220.3
Final sales		202.0	199.8	204.2	208.4	210.9	213.0	215.9
Final sales to domestic purchas-								
ers¹	189.8	207.2	205.4	209.0	213.0	215.6	217.4	220.4
Personal consumption expendi-	l		}	1	1			
tures, food	193.0	208.8	207.3	210.6	211.7	215.3	217.3	218.4
Personal consumption expendi-	١,,,	250.0	0000					
Other personal consumption ex-	316.1	359.6	360.6	360.4	366.1	361.9	348.9	363.9
penditures	170.3	185.5	183.4	187.6	191.6	194.3	197.3	200.5
Gross domestic product	184.4	202.1	199.9	204.2	208.5	210.9	213.0	216.0
Business	185.6	203.4	201.2	205.7	209.4	211.8	213.8	216.0
Nonfarm	185.3	203.3		}	ļ]	
	L		<u> </u>	1		L		

Table 7.1 and 7.2:

1. Gross domestic purchases equals GNP less exports plus imports; final sales to domestic purchasers equals final sales less exports plus imports.

Table 8.1.—Percent Change From Preceding Period in Gross National Product in Current and Constant Dollars, Implicit Price Deflator, and Price Indexes

	Perc	ent		Perc	ent at	annual	rates		<u> </u>	Perc	ent		Perc	ent at a	annual	rates	—
				Se	asonal	ly adjus	ted						Se	asonall	y adjus	ted	
	1980	1981		1981			1982			1980	1981		1981			1982	
			11	Ш	IV -	I	И	III r				п	Ш	IV	I	11	III r
Gross national product: Current dollars	8.9 4 9.3 9.0 9.9	11.6 1.9 9.4 9.4 9.6	5.3 -1.5 6.8 8.2 8.4	11.4 2.2 9.0 9.2 8.9	3.0 -5.3 8.8 8.4 8.5	-1.0 -5.1 4.3 5.0 4.8	6.8 2.1 4.6 4.6 4.1	4.7 .0 4.7 5.8 5.6	Government purchases of goods and services: Current dollars	13.5 2.3 11.0 10.9 11.9	10.9 .9 9.9 9.5 9.5	3.6 -4.1 8.0 8.9 8.5	12.2 3.6 8.2 7.2 6.5	18.6 7.0 10.8 11.3 11.1	2.4 -2.9 5.5 6.3 5.8	.6 -5.3 6.2 5.1 4.0	12.1 6.8 5.0 5.3 4.6
Personal consumption expenditures: Current dollars	10.6 .3 10.3 10.7 11.2	10.6 1.8 8.6 9.1 9.3	4.4 -2.7 7.3 7.4 7.7	11.3 2.9 8.2 8.0 7.6	3.4 -3.3 7.0 7.2 7.1	7.6 2.5 5.0 5.2 4.8	6.1 2.5 3.5 3.6 3.2	8.4 1.1 7.2 6.7 6.9	Federal: Current dollars 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index		16.1 3.7 12.0	2.2 -3.2 5.6 7.3 8.0	23.5 14.8 7.6 4.8 4.6	40.7 20.4 16.8 18.3 18.6	$ \begin{array}{r} -1.4 \\ -5.5 \\ 4.4 \\ 6.4 \\ 5.9 \end{array} $	-8.3 -13.5 6.1 3.3 2.3	21.4 18.6 2.4 3.2 2.7
Durable goods: Current dollars	.4 -6.9 7.8 8.4 8.5	9.4 2.2 7.1 7.5 7.8	- 10.5 - 17.2 8.1 8.5 9.7	20.2 10.7 8.5 7.9 8.6	-17.9 -20.9 3.8 5.6 5.3	15.1 10.4 4.2 3.8 3.7	4.9 2.5 2.3 3.7 4.5	1.0 5.3 4.6 3.1 3.6	National defense: Current dollars	4.0 12.9 12.1	4.9 11.5 11.5	22.1 11.5 9.6 9.6 11.3	10.8 7.6 3.0 5.4 4.2	36.7 10.1 24.2 20.5 20.6	-1.8 -7.9 6.5 7.5 5.8	26.4 21.4 4.1 3.3 2.0	14.3 12.0 2.1 3.3 2.5
Nondurable goods: Current dollars 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index	11.7 .8 10.9 11.8 12.4	9.6 1.8 7.6 8.4 8.7	5.1 .1 4.9 5.5 5.5	6.5 1.5 5.0 4.3 3.7	2.9 0 2.8 3.5 3.6	1.4 -1.0 2.4 2.9 2.4	3.2 2.6 .6 4 -1.4	7.0 1.4 5.5 5.9 6.2	Nondefense: Current dollars	16.5 4.6 11.3 10.7 11.5	14.3 1.3 12.8 8.8 10.3	-29.3 -27.4 -2.7 2.9 6	55.7 31.6 18.3 3.5 5.7	49.0 43.6 3.8 14.0 13.1	4 9 .5 4.3 6.2	-55.7 -58.1 5.8 3.3 3.1	41.1 36.0 3.8 3.0 3.1
Services: Current dollars	12.8 2.4 10.2 10.5 10.8	1.7 9.8 10.1	8.3 .1 8.2 8.8 9.3	13.2 1.7 11.2 11.3 11.2	10.3 0 10.3 10.7 11.0	11.0 3.0 7.8 7.6 7.6	8.7 2.4 6.2 6.9 7.3	12.0 2.9 8.8 8.3 8.6	State and local: Current dollars 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index	11.5 1.1 10.3 10.5 10.8	7.9 8 8.7 8.8 8.2	4.4 -4.6 9.4 9.8 8.9	5.7 -2.7 8.7 8.7 7.8	6.2 8 7.0 7.0 6.2	5.0 -1.1 6.2 6.2 5.7	6.7 .4 6.3 6.2 5.2	6.5 2 6.7 6.6 5.9
Gross private domestic investment: Current dollars. 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index		L			-13.3 -22.6	-38.8 -36.5	17.2 15.0	9.3 5.3	Addenda: Gross domestic purchases: Current dollars. 1972 dollars Implicit price deflator. Chain price index Fixed-weighted price index	-1.3 9.9 10.6	11.6 2.6 8.8 9.0 9.1	6.4 4 6.9 7.8 7.9	11.1 3.7 7.2 7.7 7.4	3.4 -4.7 8.5 7.9 7.8	-2.1 -5.3 3.5 5.4 4.9	6.4 2.5 3.8 4.0 3.2	9.3 2.8 6.3 5.9 5.7
Fixed investment: Current dollars 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index	9.9	8.2	6.8 -3.4 10.5 8.0 7.7	3.0 -1.0 4.0 7.5 7.8	1.3 -5.0 6.7 7.1 6.7	$ \begin{array}{r} -4.6 \\ -6.0 \\ 1.5 \\ 4.9 \\ 4.2 \end{array} $	-2.4 -7.6 5.6 3.7 2.2	-8.1 -7.7 4 3.0 2.8	Final sales: Current dollars		10.4 1.0 9.3 9.4 9.6	3.5 -4.0 7.8 8.3 8.4	10.4 1.0 9.3 9.3 8.9	1	5.6 .2 5.4 5.0 4.8	1.1 9 5.0 4.5 4.1	22
Nonresidential: Current dollars 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index Structures:	-2.2 9.0 10.1 10.6	3.5 8.1 8.6 8.9	14.5 1.1 13.3 8.9 9.0	14.3 9.3 4.6 7.3 7.7	8.4 .6 7.8 7.3 7.0	-3.5 -5.0 1.5 5.5 5.1	-5.3 -11.8 7.4 5.6 5.6	-1.2 3.8 4.3	Final sales to domestic purchasers: Current dollars	9.5 5 10.0 10.6 11.2	10.4 1.6 8.7 9.0 9.2	4.6 -3.1 7.9 7.8 7.9	10.1 2.5 7.5 7.8 7.4	6.1 -1.6 7.8 8.0 7.9	4.6 .1 4.5 5.4 4.9	3.6 6 4.2 3.9 3.2	6.6 .9 5.6 5.9 5.7
Current dollars 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index Producers' durable equipment: Current dollars	-1.1 13.8 12.0 11.9	6.3 10.4 9.1 8.2	27.3 12.4 13.2 8.0 7.0	19.1 12.6 5.8 8.6 7.8	22.3 5.9 15.5 8.6 6.1	5.3 1.3 4.0 5.2 4.4	6.4 1.6 4.7 5.5 4.8	-12.0 -11.4 6 2.6 2.3	Gross domestic product: Current dollars	4 9.3 9.0	11.7 2.0 9.4 9.4 9.6	5.4 -1.3 6.8 8.2 8.4	11.1 2.0 9.0 9.2 8.9	2.6 -5.7 8.8 8.4 8.5	0 -4.1 4.3 5.0 4.8	6.4 1.7 4.6 4.6 4.1	5.1 .3 4.7 5.8 5.6
1972 dollars	3.5 -2.7 6.4 9.2 9.8	6.4 8.3 9.4	-3.3 11.4 9.4 10.4	11.6 7.8 3.4 6.6 7.5		-7.6 -1.3 5.7 5.5	-17.4 6.0 5.7 6.1	-10.5 -1.4 4.7 5.7	Business: Current dollars 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index	8.6 7 9.4 9.0 10.1	11.8 2.2 9.4 9.4 9.6	5.1 -1.5 6.7 8.4 8.6	11.9 2.4 9.3 9.6 9.3	-6.7 8.0 7.6 7.4	-1.3 -4.9 3.8 4.7 4.4	6.4 2.0 4.3 4.3 3.8	5.0 .5 4.4 5.6 5.5
Current dollars 1972 dollars Implicit price deflator Chain price index Fixed-weighted price index	-13.0 -20.2 9.0 9.3 9.3	-4.8 6.9 7.1	13.4 17.4 4.8 5.4 5.4	-27.0 -31.9 7.2 8.1 8.1	-20.8 -25.3 6.0 6.3 6.3	-8.4 -10.2 2.0 2.7 2.6	9.4 12.9 -3.1 -3.1 -3.4	7.0 6.3 .7 .2 .1	Nonfarm: Current dollars	9.0 -1.0 10.0 9.5 10.6	12.0 2.2 9.6 9.6 9.7	6.4 6 7.1	10.4 .3 10.1	2.1 -6.4 9.1	4 -3.7 3.5	4.8 .7 4.1	6.2 1.2 4.9
Exports: Current dollars	20.6 8.9 10.7 10.6 10.9	4	3.9 1.0 2.9 4.8 5.2	-1.8 -4.7 3.0 4.7 4.7	.8 -2.4 3.2 2.8 2.4	-8.4 -12.7 4.9 5.1 5.1	6.7 7.5 8 1.2 1.2	-19.0 -18.8 3 -1.3 -1.8	Disposable personal income: Current dollars	10.5		1	1	8.3 1.2	3.0 1.9	6.7	9.7 2.3
Imports: Current dollars	17.1 4 17.5 25.3 24.2	8.7 7.2 1.3 6.1 5.0	13.8 16.8 -2.6 .8 1.0	-4.3 11.3 -14.0 -7.1 -8.4	$\begin{array}{c} 3.7 \\ 6.0 \\ -2.2 \\ -1.8 \\ -3.0 \end{array}$	-17.1 -17.5 .5 8.4 6.7	2.8 14.5 -10.2 -4.3 -6.7	17.1 7.5 8.9 -1.1									

Note.—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 (1972=100) 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 time span reflect only changes in prices.

Reconciliation and Other Special Tables

Table 1.—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

		1982	
	ľ	IIr	III
Compensation per hour of all persons in the business economy other than farm and housing (percent change at annual rate)!	7.8	6.7	6.4
2. Less: Contribution of supplements	1.3	.1	.2
3. Plus: Contribution of housing and nonprofit institutions	0	1	.3
Less: Contribution of employees of government enterprises and self-employed and unpaid family workers	0	.2	.5
5. Equals: Wages and salaries per hour of employees in the private nonfarm economy (percent change at annual rate)	6.5	6.4	5.9
6. Less: Contribution of nonproduction workers in manufacturing	.6	.1	2
7. Less: Contribution of non-BLS data, detailed weighting, and seasonal adjustment	.8	.6	1.5
Equals: Average hourly earnings, production and nonsupervisory workers in the private nonfarm economy (percent change at annual rate)	5.1	5.8	4.6

P Preliminary.

Table 2.—Reconciliation of Changes in the Implicit Price Deflator for Personal Consumption Expenditures and the Consumer Price Index for All Urban Consumers, Seasonally Adjusted

	198	32
	II r	IIIº
Implicit price deflator for personal consumption expenditures (percent change at annual rate)	3.5	7.2
2. Less: Contribution of shifting weights in PCE	$ \begin{array}{c}1 \\1 \\ .6 \\9 \\ .2 \\ 0 \end{array} $.4 2 8 4 2
Food purchased for off-premise consumption Purchased meals and beverages Clothing and shoes Housing Other	.1 1 2 .3	0 0 0 .8
3. Equals: PCE chain price index (percent change at annual rate)	3.6	6.
4. Less: Contribution of differences in weights of comparable CPI and PCE expenditure components	1.2 .9 1 0 .1 1 0 2 .6	: : 0 : 0 0
5. Less: Contribution of PCE expenditure components not comparable with CPI components. New autos Net purchases of used autos Owner-occupied nonfarm and farm dwellng—space rent Services furnished without payment by financial intermediaries except life insurance carriers Current expenditures by nonprofit institutions Other	.6 0 .1 .4 1 .3 1	0 0
6. Plus: Contribution of CPI expenditure components not comparable with PCE components	2.7 0 0 2.5 .2	
7. Less: Contribution of differences in seasonal adjustment '	1	
8. Equals: Consumer Price Index For All Urban Consumers (CPI-U), all items (percent change at annual rate)	4.6	7.
Addendum: Consumer Price Index For All Urban Consumers (CPI-U-X1), all items (percent change at annual rate) 2	3.0	8.

Table 3.—High-Employment Federal Receipts and Expenditures

(Billions of dollars; quarters at seasonally adjusted annual rates)

			Receipts				I	Expenditure	s			Surp	Surplus or deficit (-)				
			Change f	rom precedi	ng period			Change from preceding period					Change f	rom precedi	ng period		
Year and quarter	Level	Percent- age of potential GNP	Total	Due to automatic inflation effects	Due to discre- tionary policy and other factors	Level	Percent- age of potential GNP	Total	Due to automatic inflation effects	Due to discre- tionary policy and other factors	Level	Percent- age of potential GNP	Total	Due to automatic inflation effects	Due to discre- tionary policy and other factors		
1980 1981	576.8 678.5	20.8 21.8	71.9 101.7	58.7 65.2	13.2 36.5	594.0 674.0	21.5 21.6	87.1 80.0	29.7 35.9	57.4 44.1	17.1 4.5	-0.6 .1	-15.2 21.6	29.0 29.3	-44.2 -7.6		
1980: I II III IV	543.0 559.8 586.1 618.4	20.6 20.6 20.9 21.3	18.4 16.8 26.3 32.3	17.2 17.2 16.3 18.1	1.2 3 10.0 14.2	561.4 580.1 605.3 629.0	21.3 21.3 21.6 21.7	25.0 18.7 25.2 23.7	4.0 3.3 19.1 11.6	21.0 15.3 6.1 12.1	-18.4 -20.3 -19.3 -10.6	7 7 7 4	-6.5 -1.9 1.0 8.7	13.2 13.8 - 2.8 6.5	-19.8 -15.6 3.8 2.2		
1981: I II III IV	657.9 674.6 690.3 691.1	22.0 22.0 21.9 21.3	39.5 16.7 15.7 .8	20.0 9.9 15.4 16.3	19.5 6.8 .3 -15.5	647.5 652.6 684.4 711.4	21.6 21.3 21.7 21.9	18.5 5.1 31.8 27.0	4.4 .8 19.2 8.7	14.1 4.2 12.6 18.3	10.4 22.0 5.9 -20.3	.3 .7 .2 6	21.0 11.6 -16.1 -26.2	15.6 9.0 -3.8 7.6	5.4 2.6 -12.3 -33.8		
1982: I II III	692.8 704.0 708.1	21.0 20.9 20.6	1.7 11.2 4.1	5.0 5.6 7.6	-3.3 5.6 -3.5	708.4 710.1 735.4	21.4 21.1 21.4	$ \begin{array}{r} -3.0 \\ 1.7 \\ 25.3 \end{array} $	-1.0 3.0 12.8	-2.0 -1.2 12.4	-15.6 -6.2 -27.3	5 2 8	4.7 9.4 -21.1	6.0 2.6 -5.3	-1.3 6.9 -15.9		

⁷Revised. ⁹Preliminary. 1. BLS estimates of changes in hourly compensation in the nonfarm business sector for the three quarters are 7.7, 6.1 and 6.6 percent.

^{*}Revised. *Preliminary.

1. 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.

2. The CPI-U-X1 is the BLS experimental index in which a rental equivalence method is substituted for the present method in measuring the cost of owner-occupied housing. The PCE measures of price change also use a rental equivalence method.

National Defense Purchases: Detailed Quarterly Estimates, 1977-82

THIS article presents for the first time quarterly estimates of national defense purchases of goods and services at a level of detail between what is now available annually and what is now available quarterly. The new estimates are of current- and constantdollar purchases and of implicit price deflators for 1977-82. (Annual estimates now available are in National Income and Product Accounts (NIPA) tables 3.9, 3.10, and 7.15; quarterly estimates are in NIPA tables 3.7B, 3.8B, and 7.14B.) In addition, percent changes for a new fixed-weighted price index are introduced at the same level of detail; this index will be described below. Previously, the only fixed-weighted price index for national defense purchases had been the one for total purchases shown in NIPA table 7.2.

Tables 1 and 2 below present annual estimates at the same level of detail as the new quarterly estimates; tables 3-6 present the new quarterly estimates. Hereafter, current quarterly estimates will appear regularly in the Survey of Current Business in

the "Reconciliation and Other Special Tables."

The new fixed-weighted price index for national defense purchases differs in two ways from the one shown in NIPA table 7.2. First, the new index incorporates significantly more product detail. Second, the new index is based on 1977 weights, rather than on 1972 weights. The two differences are interrelated: Because sufficient detail was lacking prior to 1977, that year was used as the base year. Only percent changes at annual rates are shown for the new index.

The data base for the new index is the same as that used in preparing current- and constant-dollar estimates of national defense purchases. (See the Special Note in this issue of the Survey.) Two standard conventions—the treatment of missing observations and the introduction of new products—should be highlighted because of their particular relevance in working with defense goods and services.

Quarterly observations are sometimes missing at the detailed product level because Department of Defense purchases of many items are sporadic. This problem is dealt with by carrying forward the price from the quarter preceding the missing observation to the next quarter for which an observation is available. This convention assumes that the price of an item is unchanged until a transaction for that item recurs. If an item is not to be purchased again, and it is not replaced, it is linked out of the series.

Products that are purchased for the first time in a period subsequent to the base year require special treatment. In this index, as in many others, new products are introduced when they become a significant part of the current-period "market basket" and their prices stabilize. To do this, a linking procedure is used to generate a base-period price for the new product. The weight given to a new product (e.g., JP-8, a new type of jet fuel) is taken from other products within a related group of products (jet fuel in the case of JP-8); the total weight for the group of products is not changed. A modification of this procedure is made for major weapons systems, for

Table 1.-National Defense Purchases of Goods and Services

		Billions of dollars					Billion	s of 1972	dollars		Implicit price deflator, 1972=100				
	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
National defense purchases	92.8	100.3	111.8	131.4	153.7	65.4	65.7	67.4	70.1	73.5	141.9	152.7	166.0	187.4	209.0
Durables Aircraft Missiles Ships Vehicles Other durables	22.3 6.9 2.2 3.3 1.0 8.9	24.1 7.2 2.6 3.5 1.4 9.5	29.0 9.1 3.2 3.7 1.7 11.2	33.6 11.0 3.7 4.3 1.9 12.8	40.1 12.7 4.6 4.9 1.7 16.0	16.5 5.3 1.9 2.0 .7 6.6	16.2 4.8 2.0 2.0 .9 6.6	17.7 5.5 2.0 2.0 1.0 7.2	18.3 5.8 2.1 2.0 1.0 7.4	19.7 6.1 2.2 2.2 .8 8.4	135.4 130.3 115.4 167.4 148.3 134.3	148.2 149.6 127.2 177.2 157.6 143.9	164.3 167.0 155.7 190.7 172.0 156.3	183.5 187.7 177.6 209.2 193.9 173.3	203.5 209.5 206.1 223.5 231.7 190.6
Nondurables Bulk petroleum Other nondurables	5.0 2.9 2.1	5.5 3.2 2.3	6.6 4.0 2.6	10.7 7.6 3.1	12.6 9.0 3.6	2.2 .9 1.3	2.2 0.9 1.4	2.2 .8 1.4	2.4 .9 1.6	2.6 .9 1.7	$\begin{array}{c} 225.6 \\ 339.3 \\ 153.7 \end{array}$	243.4 364.1 166.2	298.1 502.4 183.4	437.2 857.8 199.2	486.9 983.5 217.5
Services		68.3 46.1 22.1 1.3 2.1 .7 18.1	73.8 48.7 25.1 1.3 2.2 .7 20.9	84.1 53.2 30.8 1.6 2.6 .7 26.0	98.0 60.8 37.2 2.1 2.9 .9 31.4	45.1 32.0 13.2 .9 1.3 .6 10.4	45.6 32.2 13.4 .9 1.3 .6 10.7	46.1 32.0 14.2 .8 1.2 .6 11.6	47.9 32.2 15.7 .8 1.2 .6 13.1	49.9 32.8 17.1 .9 1.2 .6 14.4	139.9 134.0 154.2 141.2 157.0 115.9 157.0	149.5 143.1 165.0 146.5 162.9 119.5 169.2	159.9 152.2 177.1 153.4 186.1 120.4 180.7	175.7 165.3 197.0 191.1 223.7 122.9 198.3	196.5 185.3 217.9 236.4 236.4 149.5 217.9
Structures	2.4	2.5	2.5	3.0	3.0	1.6	1.6	1.4	1.5	1.4	150.5	160.9	183.5	203.8	221.5
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	50.0 47.1	54.2 51.0	63.2 59.2	78.1 70.5	92.9 84.0	33.4 32.6	33.5 32.6	35.4 34.6	37.9 37.0	40.7 39.8	149.5 144.5	161.9 156.5	178.5 171.1	206.3 190.7	228.1 210.9

which prices do not stabilize until well into the production run. To wait for a price to stabilize would mean omitting a new weapons system for many quarters. Thus, major weapons systems are introduced into the index immediately.

For total national defense purchases, changes in the index shown in NIPA table 7.2 and in the new fixed-weighted index, in general, differ only slightly. As is usually the case, the index based on a more current period shows smaller increases than the index with an earlier base.

Table 2.—Percent Change From Preceding Period

	Impli	cit price de	flator, 197	2=100	Fixed-w	eighted pri	ce index, 19	977 = 100
	1978	1979	1980	1981	1978	1979	1980	1981
National defense purchases	7.6	8.7	12.9	11.5	7.4	8.6	12.7	11.5
Durables Aircraft Missiles Ships Vehicles Other durables	9.5 14.8 10.3 5.8 6.2 7.1	10.8 11.6 22.3 7.6 9.2 8.7	11.7 12.4 14.1 9.7 12.7 10.9	10.9 11.6 16.1 6.8 19.5 10.0	9.0 11.5 8.8 5.8 16.5 7.4	9.7 11.6 10.0 9.3 5.8 8.8	11.4 13.7 9.1 11.0 6.8 10.8	10.1 9.9 15.2 7.1 11.5 9.8
Nondurables Bulk petroleum Other nondurables	7.9 7.3 8.1	22.5 38.0 10.4	46.6 70.7 8.6	11.4 14.7 9.2	7.4 6.5 8.7	24.8 36.1 9.4	49.5 73.1 9.3	13.7 15.4 9.2
Services	6.9 6.8 7.0 3.8 3.8 3.2 7.7	6.9 6.4 7.3 4.7 14.2 .7 6.8	9.9 8.6 11.2 24.5 20.2 2.1 9.7	11.8 12.1 10.6 23.7 5.7 21.7 9.9	6.8 6.7 7.1 3.6 3.4 4.1 8.0	6.8 6.3 7.9 4.2 15.0 .2 7.6	9.7 8.6 12.1 25.6 19.0 2.9 10.5	12.0 12.2 11.5 22.5 7.2 14.2 11.1
Structures	6.9	14.0	11.1	8.7	5.8	11.0	12.8	6.5
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	8.3 8.3	10.2 9.3	15.5 11.5	10.6 10.6	7.9 8.0	10.5 9.0	16.0 11.7	11.0 10.5

Table 3.—National Defense Purchases of Goods and Services by Type

[Billions of dollars; seasonally adjusted at annual rates]

	(Dillion	s or donars	, seasonany	aujusteu t	ainidai i							
		19	77			19	78			19	79	
	I	П	III	IV	I	II	III	IV	I	II	III	IV
National defense purchases	90.6	92.7	93.5	94.5	95.3	99.7	101.7	104.4	106.6	109.0	112.7	119.0
Durables Aircraft Missiles Ships Vehicles Other durables	22.2 6.9 2.3 3.3 .9 8.8	23.1 7.1 2.3 3.5 1.1 9.1	22.3 6.9 2.3 3.3 1.1 8.7	21.6 6.5 2.0 3.1 .9 9.1	22.3 5.8 2.2 3.2 1.2 9.8	24.0 7.1 2.7 3.8 1.2 9.2	24.4 7.0 2.7 3.3 1.5 9.9	25.6 8.7 2.7 3.5 1.6 9.1	26.6 8.3 2.5 3.8 1.5 10.6	28.0 8.3 3.0 4.0 1.4 11.4	29.4 9.0 3.4 3.6 2.2 11.2	32.0 11.0 3.7 3.7 2.0 11.7
Nondurables	2.5	4.8 2.7 2.1	5.6 3.5 2.1	4.9 2.9 2.0	4.6 2.5 2.1	5.6 3.3 2.3	$\begin{array}{c} 6.5 \\ 3.9 \\ 2.6 \end{array}$	5.2 3.1 2.1	5.8 3.4 2.4	5.7 3.1 2.6	6.9 4.1 2.7	8.1 5.4 2.7
Services Compensation Services less compensation Travel Transportation Communications Other services	42.1 19.2 1.2 1.9	62.0 42.2 19.9 1.3 2.0 .6 16.0	63.2 42.3 21.0 1.3 2.0 .7 16.9	65.9 44.8 21.1 1.4 2.1 .6	66.4 45.1 21.3 1.3 1.8 .6	67.3 45.5 21.8 1.3 2.0 .6 17.9	68.1 45.9 22.2 1.3 2.2 .7 18.0	71.1 47.8 23.3 1.2 2.3 .7 19.1	72.0 47.8 24.2 1.2 2.2 .7 20.0	73.0 47.9 25.1 1.2 2.3 .7 20.9	73.7 48.1 25.6 1.4 2.3 .7 21.2	76.4 50.9 25.5 1.3 2.0 .7 21.5
Structures	2.5	2.7	2.4	2.1	2.0	2.8	2.7	2.5	2.2	2.3	2.8	2.5
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	48.5 46.1	50.5 47.8	51.2 47.7	49.7 46.8	50.2 47.7	54.2 50.9	55.7 51.9	56.6 53.5	58.8 55.4	61.1 58.0	64.7 60.5	68.1 62.7
		19	80			19	81			19	82	
	I	II	III	IV	I	II	III	IV	I	II	III	
National defense purchases	126.8	130.0	130.5	138.1	143.1	150.5	154.4	166.9	166.2	176.2	182.2	
Durables Aircraft Missiles Ships Vehicles Other durables	33.7 11.4 3.5 4.3 1.8 12.7	33.3 10.5 3.5 4.3 2.2 12.7	32.6 10.3 3.9 4.4 1.8 12.2	34.6 11.6 3.8 4.1 1.7 13.3	36.1 11.8 4.1 3.9 1.5 14.9	40.0 11.8 4.8 5.4 1.8 16.2	41.6 12.6 5.0 5.4 1.9 16.7	42.7 14.8 4.7 5.2 1.7 16.3	43.1 14.2 5.2 5.2 2.1 16.4	48.9 15.4 6.5 5.9 2.6 18.4	49.3 15.5 6.1 5.8 2.7 19.2	
Nondurables Bulk petroleum Other nondurables	10.0 7.2 2.8	10.5 7.4 3.1	10.8 7.5 3.3	11.5 8.2 3.3	12.1 8.4 3.6	13.2 9.5 3.7	11.9 8.3 3.5	13.2 9.5 3.7	13.6 9.3 4.3	13.4 9.1 4.3	13.1 9.1 4.0	
Services Compensation Services less compensation Travel Transportation Communications Other services.	51.3 29.0 1.4	83.4 51.6 31.8 1.5 2.5 .7 27.1	83.4 52.2 31.2 1.6 2.7 .7 26.1	89.2 57.8 31.4 1.8 2.8 .7 26.1	92.2 58.5 33.7 1.8 2.8 .8 28.4	94.4 59.2 35.1 2.1 2.6 .8 29.6	98.0 59.8 38.1 2.1 3.1 .9 32.0	107.6 65.6 42.0 2.3 3.0 1.0 35.6	106.0 66.3 39.8 2.4 3.2 1.0 33.1	110.7 66.5 44.1 2.5 3.1 1.2 37.4	115.8 66.8 49.0 2.4 3.1 1.3 42.3	
Structures	2.8	2.8	3.7	2.8	2.7	2.9	2.9	3.4	3.5	3.3	3.9	
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	75.5 68.2	78.4 70.9	78.3 70.9	80.3 72.1	84.6 76.2	91.2 81.7	94.5 86.2	101.3 91.8	99.9 90.6	109.6 100.5	115.4 106.3	

Table 4.—National Defense Purchases of Goods and Services by Type in Constant Dollars

[Billions of 1972 dollars; seasonally adjusted at annual rates]

		19	77			19	78			19	79	
	I	II	III	IV	I	II	III	IV	I	II	III	IV
National defense purchases	65.5	65.9	65.8	64.5	64.1	66.0	66.4	66.2	66.4	67.1	67.7	68.2
Durables Aircraft Missiles Ships Vehicles Other durables	16.9 5.5 2.1 2.0 .6 6.7	17.0 5.5 2.1 2.1 .8 6.7	16.4 5.2 2.0 2.0 .7 6.5	15.6 4.9 1.7 1.8 .6 6.6	15.5 4.0 1.9 1.9 .8 7.0	16.4 4.9 2.2 2.1 .8 6.5	16.4 4.6 2.1 1.9 .9 6.8	16.6 5.6 1.9 1.9 1.0 6.2	16.8 5.2 1.8 2.0 .9 6.9	17.4 5.1 2.0 2.1 .8 7.4	17.7 5.2 2.2 1.9 1.3 7.1	18.8 6.4 2.1 1.9 1.1 7.2
Nondurables Bulk petroleum Other nondurables	.8	2.2 .8 1.4	$\begin{array}{c} 2.4 \\ 1.0 \\ 1.3 \end{array}$	2.1 .8 1.3	2.0 .7 1.3	2.3 .9 1.4	2.6 1.1 1.6	2.1 .8 1.3	2.2 .9 1.4	2.2 .7 1.4	2.3 .8 1.5	2.2 .8 1.4
Services Compensation Services less compensation Travel Transportation Communications Other services		44.9 31.9 12.9 .9 1.3 .5	45.5 32.0 13.5 .9 1.3 .6 10.7	45.4 32.0 13.4 1.0 1.3 .5	45.3 32.1 13.2 .9 1.1 .5 10.6	45.6 32.2 13.3 .9 1.2 .5	45.7 32.3 13.4 .9 1.4 .6 10.6	46.0 32.2 13.8 .8 1.4 .6	46.2 32.0 14.1 .8 1.3 .6 11.5	46.3 31.9 14.4 .8 1.3 .6	46.3 32.0 14.3 .9 1.2 .6	45.9 31.9 13.9 .8 1.0 .6 11.6
Structures	1.7	1.8	1.5	1.4	1.3	1.8	1.7	1.5	1.3	1.3	1.5	1.3
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	33.5 32.8	34.0 33.2	33.8 32.8	32.5 31.7	32.0 31.3	33.8 32.9	34.1 33.0	$\frac{34.0}{33.2}$	34.4 33.5	35.2 34.5	35.7 35.0	36.2 35.4
	<u> </u>	19	80			19	81			19	82	
	I	II	Ш	IV	I	II	III	IV	I	II	III	
National defense purchases	70.3	70.4	70.0	69.6	71.0	72.9	74.3	76,1	74.5	78.2	80.5	
Durables Aircraft Missiles Ships Vehicles Other durables	1.0	18.1 5.5 2.0 2.0 1.1 7.4	17.7 5.5 2.1 2.1 .9 7.0	18.2 6.0 2.0 2.0 .8 7.4	18.6 6.0 2.1 1.8 .7 8.0	19.9 5.7 2.4 2.4 .8 8.6	20.2 6.0 2.4 2.4 .8 8.6	20.1 6.7 2.1 2.3 .7 8.3	19.9 6.1 2.5 2.2 .9 8.3	21.7 6.3 2.7 2.5 1.0 9.2	21.6 6.1 2.6 2.4 1.0 9.5	
Nondurables	2.4 .9 1.4	2.4 .9 1.6	2.5 .8 1.7	2.5 .9 1.6	2.6 .9 1.7	2.7 .9 1.7	2.4 .8 1.6	$\begin{array}{c} 2.6 \\ 1.0 \\ 1.7 \end{array}$	2.8 1.0 1.9	2.8 1.0 1.9	2.7 1.0 1.7	
Services Compensation Services less compensation Travel Transportation Communications Other services	15.4 .8	48.5 32.1 16.4 .8 1.1 .6 13.8	48.0 32.3 15.6 .9 1.2 .6 13.0	47.5 32.3 15.2 .7 1.2 .6 12.6	48.5 32.5 16.0 .8 1.2 .6 13.4	49.0 32.7 16.3 .9 1.1 .6 13.7	50.3 33.0 17.3 .9 1.3 .6 14.5	51.8 33.1 18.8 1.0 1.3 .6 16.0	50.3 33.2 17.1 1.0 1.3 .6 14.2	52.3 33.3 19.1 1.0 1.3 .7 16.1	54.5 33.3 21.1 1.0 1.3 .7 18.1	
Structures	1.4	1.4	1.8	1.4	1.3	1.3	1.3	1.5	1.5	1.4	1.7	
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	38.3 37.4	38.3 37.4	37.6 36.8	37.3 36.4	38.5 37.6	40.2 39.2	41.3 40.5	43.0 42.0	41.3 40.4	44.9 44.0	47.1 46.1	

SURVEY OF CURRENT BUSINESS

Table 5.—Percent Change From Preceding Period in Implicit Price Deflators [1972 \approx 100]

[Seasonally adjusted at annual rates]

		197	7			19	78			19	79	
	I	II	III	IV	I	II	111	IV	I	II	Ш	IV
National defense purchases	7.6	6.5	4.3	12.8	6.1	6.5	5.7	12.7	7.0	4.8	10.5	20.9
Durables Aircraft Missiles Ships Vehicles Other durables	17.1 32.7 4.6 22.9 -24.6 12.8	12.8 9.1 .7 15.8 12.7 16.0	$ \begin{array}{c} 2.0 \\ 11.0 \\ 4.3 \\ -2.2 \\ 10.5 \\ -4.3 \end{array} $	5.9 5.5 14.6 2.2 5.0 6.1	16.1 38.9 -7.9 5.9 9.6 13.7	7.9 2.4 27.5 10.4 6.1 4.9	6.9 13.1 10.1 -1.7 7.8 7.1	15.6 7.0 52.4 27.5 9.1 7.4	11.4 13.2 9.0 6.5 8.9 13.0	8.2 12.7 20.5 5 11.4 6.1	11.7 24.8 7.9 .1 13.9 7.4	$ \begin{array}{r} 10.8 \\ -1.8 \\ 51.1 \\ 16.2 \\9 \\ 11.3 \end{array} $
Nondurables Bulk petroleum Other nondurables	13.4 38.9 16.0	22.5 17.7 11.4	$\begin{array}{c} 35.4 \\ 17.0 \\ 6.1 \end{array}$	$-8.6 \\ 8.4 \\ 1.0$	-3.5 2.9 15.4	25.5 6.1 9.6	3.8 5.0 .1	6.5 4.6 14.8	18.1 23.8 17.7	1.9 44.5 .9	80.9 134.0 13.3	103.9 138.8 13.8
Services Compensation Services less compensation Travel Transportation Communications Other services	6.2 1.8 19.7 1.4 .2 32.6 23.8	3.3 .7 8.4 3.3 5.6 6.0 8.9	1.8 .2 3.4 8 8.3 5.0 3.2	19.1 25.8 6.7 10.0 1.3 7.8 6.7	4.2 1.8 10.3 4.6 4.8 -1.4 11.8	3.4 2.0 6.2 1.9 2.1 .5 7.1	3.4 2.5 5.4 3.1 .8 4.6 6.6	15.7 19.2 7.1 .5 7.6 6.9 6.6	3.9 2.3 6.1 7.3 27.7 -3.4 3.9	3.8 1.3 7.9 1.3 10.8 1.0 8.0	4.4 1.4 10.8 6.8 18.7 -5.0 11.5	20.0 26.2 9.8 20.2 38.1 2.9 7.3
Structures	7.2	3.7	7.9	1.4	8.5	5.8	8.9	15.3	13.8	18.1	16.6	10.6
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	12.9 15.0	11.3 10.4	8.0 3.9	3.5 6.2	10.6 12.9	9.5 6.8	8.3 6.2	7.4 11.6	10.7 9.5	7.0 8.0	17.5 11.6	$\frac{16.7}{9.6}$
		19	80			19	81			19	82	
	I	II	III	IV	I	II	Ш	IV	I	П	III	
National defense purchases Durables Aircraft Missiles Ships Vehicles Other durables	14.2 17.3 8.9 19.2 15.5	9.8 18.1 32.0 16.4 6.9 35.3 10.0	4.3 2.2 -9.0 17.3 6.5 -2.8 6.4	28.0 12.0 14.1 22.7 .3 25.5 11.8	6.8 8.8 8.4 5.8 8.6 31.6 11.9	9.6 15.4 22.6 26.4 11.8 3.1 7.3	3.0 9.2 6.5 2.8 3.1 26.0 13.1	24.2 14.3 17.8 36.8 10.1 26.9 5.6	6.5 7.5 26.5 -17.8 2.0 -5.0 4.3	4.1 17.6 21.5 64.6 7.0 28.8 5.7	2.1 4.8 15.8 -9.5 6.8 13.5 2.8	
Nondurables Bulk petroleum Other nondurables	104.8	2.3 38.0 1.2	4.1 19.0 13.6	27.6 4.1 13.2	2 9.8 9.8	35.2 50.7 1.9	-5.6 -4.3 15.4	12.2 11.1 7.6	$ \begin{array}{r} -17.4 \\ -9.3 \\ 12.9 \end{array} $	$ \begin{array}{r} -6.0 \\ -11.7 \\ -3.2 \end{array} $	$-11.3 \\ -10.9 \\ 12.4$	
Services Compensation Services less compensation Travel Transportation Communications. Other services	2.5 9.7 30.3 14.6 1.9	7.0 1.1 14.9 14.1 27.9 9.7 14.1	3.9 1.4 11.1 12.5 8.2 1 11.4	35.8 50.3 15.1 198.4 1 9 10.8	6.0 3.4 8.9 -10.1 7.7 10.6 10.4	4.4 1.7 8.6 2.4 10.3 59.1 7.4	5.2 1.4 9.0 7.4 -10.4 66.7 9.0	28.6 43.0 5.8 6 14.8 22.2 5.1	6.6 2.2 17.7 -2.4 2.3 2.3 21.5	1.3 .8 -1.8 4.3 -4.6 5.7 -2.0	2.2 .8 .6 -2.9 2.6 -11.4 1.3	
Structures	17.4	6.5	1.9	7.0	12.4	11.2	8.7	6.1	7.0	7.2	.7	
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	20.5 12.6	16.2 16.3	7.3 6.8	14.9 12.3	8.4 9.2	13.8 11.2	3.3 9.6	12.1 10.5	10.9 11.8	3.6 7.4	1.5 3.3	

SURVEY OF CURRENT BUSINESS

Table 6.—Percent Change From Preceding Period in Fixed-weighted Price Indexes [1977=100]

[Seasonally adjusted at annual rates]

		19	77			19	78			19	79	
	1	11	III	IV	I	II	111	IV	I	II	Ш	IV
National defense purchases		5.3	2.0	15.4	7.2	4.0	4.8	13.9	5.3	7.4	9.2	21.7
Durables Aircraft Missiles Ships Vehicles Other durables		12.2 5.8 14.3 12.1 11.8 17.0	0 7.5 -3.2 .6 5.2 -5.3	6.7 8.3 8.5 3.3 .8 7.1	17.4 25.2 12.9 3.3 62.4 13.7	6.9 6.8 5.4 10.2 5.6 6.4	6.2 8.7 4.1 2.7 5.9 6.1	10.7 3.9 35.4 22.4 -1.0 8.1	7.5 3.5 -10.1 10.8 9.7 14.4	13.5 26.7 30.0 4.3 4.0 4.8	11.0 26.4 1.8 -2.9 8.3 7.2	11.4 7.5 8.9 21.0 11.6 11.9
Nondurables. Bulk petroleum. Other nondurables.		8.6 10.1 6.5	7.7 9.6 5.1	11.3 14.4 7.1	8.8 5.5 13.7	2.1 -1.8 7.9	6.0 4.7 7.9	7.8 8.0 7.6	15.4 18.2 11.7	27.4 42.9 8.1	76.2 138.0 8.0	82.4 129.4 16.4
Services Compensation Services less compensation Travel Transportation Communications Other services		2.7 7.2 2.2 6.3 7.2 7.7	2.0 .2 5.9 .9 8.8 3.2 6.1	19.5 25.8 7.3 9.2 .4 8.3 8.0	3.7 1.6 8.3 5.2 -1.0 1.2 10.0	3.1 1.8 5.8 .3 4.1 .6 6.7	3.9 2.5 7.0 3.3 4.0 11.4 7.5	15.7 19.2 8.7 -1.5 13.8 -1.8 9.3	3.6 2.2 6.5 8.2 20.8 -1.8 5.2	3.5 1.3 8.3 .9 14.1 -1.8 8.6	3.8 1.4 9.0 4.1 14.5 -3.0 9.2	21.1 26.3 10.9 23.2 33.4 4.9 7.7
Structures		3.2	6.6	1.5	6.1	5.4	11.2	9.2	8.5	14.9	13.9	14.2
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum		9.4 9.3	3.4 3.1	7.1 6.7	12.2 12.7	5.9 6.4	6.7 6.9	9.5 9.6	7.9 7.3	12.8 11.1	16.0 10.2	18.2 11.5
	1980					19	81			19	82	
	I	II	III	IV	I	II	III	IV	I	II	III	
National defense purchases	10.8	11.0	5.6	26.8	6.5	9.5	5.6	20.4	5.7	4.6	2.9	
Durables Aircraft Missiles Ships Vehicles Other durables	7.7 -4.8	16.6 25.0 32.2 7.0 8.8 11.0	4.9 7.7 4.2 5.2 - 27.8 7.2	7.4 3.3 12.9 6.0 4.7 10.4	9.2 5.6 15.5 9.4 7.6 10.8	17.6 23.1 45.5 6.8 38.7 8.6	9.2 3.4 -1.1 5.3 62.6 13.3	5.9 14.1 12.5 9.6 10.6 5.5	12.5 17.4 27.6 8.8 4.1 7.2	15.0 36.4 10.6 6.8 .3 4.1	5.4 11.1 11.1 5.1 17.9 1.9	
Nondurables Bulk petroleum Other nondurables	7.4 114.8 7.5	30.7 41.5 5.9	17.1 20.2 9.2	4.8 2.8 10.4	13.0 13.4 11.7	37.2 49.7 6.9	$-3.0 \\ 9.5$	$^{-9.2}_{-14.0}$ $^{5.9}$	-7.9 -12.8 6.6	-3.5 -6.7 5.3	-2.2 -5.2 5.6	
Services. Compensation Services less compensation Travel. Transportation. Communications. Other services.	2.5 9.3 33.3 18.6 3.6	6.9 1.1 19.7 12.9 23.0 11.1 20.1	4.3 1.5 10.0 10.1 11.2 -4.5 10.3	39.0 50.7 18.3 197.8 1.4 2.3 11.8	5.0 3.4 8.3 -10.5 9.6 10.8 10.1	3.7 1.6 7.9 2.3 8.5 50.3 7.2	5.0 1.4 12.7 10.4 1.3 13.4 14.8	31.5 43.7 9.9 1.8 8.1 13.5 11.1	5.0 2.2 11.2 -2.5 4.5 .5 13.7	2.0 .8 4.7 2.8 -1.5 2.4 5.7	2.2 .8 5.0 -3.6 2.5 1.9 6.2	
Structures	18.6	6.9	8.1	9.4	2.6	7.1	7.4	6.0	7.4	1.2	15.1	
Addenda: Total purchases less compensation Total purchases less compensation and bulk petroleum	18.0 10.9	19.2 16.9	8.7 7.4	11.1 12.2	9.1 8.6	16.0 12.3	8.9 10.6	5.0 7.6	8.7 11.4	7.7 9.4	4.6 5.7	

Stock of Plant and Equipment for Air and Water Pollution Abatement in the United States, 1960-81

THIS article introduces annual estimates of the stock of nonfarm business plant and equipment (P&E) for air and water pollution abatement (PA) in the United States for 1960-81 (chart 1). This stock consists of fixed reproducible tangible capital (except motor vehicle emission abatement devices) owned by nonresidential nonfarm business and employed in the abatement of air and water pollutant emissions.1 Both gross and net stock estimates are presented, valued at constant cost and at current cost. The PA P&E stock estimates are useful in interpreting economic performance measures-output, productivity, and price change as conventionally measured and aggregate economic wellbeing as variously defined-and in modeling economic behavior utilizing these measures. Analyses of these kinds often involve separating the PA P&E stock from that of conventional capital.

Constant-cost stock estimates value identical assets at the same price (in this article, the 1972 price) regardless

1. Although stock estimates for air PA P&E and for water PA P&E are not shown separately in this article, the definition of PA P&E is the same as that used

in Gary L. Rutledge and Betsy D. O'Connor, "Plant

and Equipment Expenditures by Business for Pollu-

tion Abatement, 1981 and Planned 1982," Survey of

CURRENT BUSINESS, 62 (June 1982): 17-21 and 72.

Plant and equipment for solid waste collection and

disposal by means acceptable to Federal, State, and local authorities are excluded from the estimates in

the present article due to deficiencies in source data.

of emissions of pollutants that is brought about by human activity directed to that purpose. Pollutants

are defined as substances and other emissions (e.g., noise) that degrade the quality of common-property

media (e.g., the atmosphere).

Pollution abatement is the reduction or elimination

of their actual prices in their year of acquisition (i.e., historical prices). These constant-cost estimates are referred to as "real" estimates in this article. Current-cost stock estimates value assets at prices that would have been paid for them if they had been produced in the year to which the stock estimates refer.2

Annual estimates of the stock of PA P&E are derived from PA P&E expenditures using the perpetual inventory method. The PA P&E expenditures estimates for 1960-81 are shown in this article.3 They are of interest in their own right, and, as well, facilitate the interpretation of the stock estimates.

Highlights of the article are:

- The real gross stock of nonfarm business air and water PA P&E at yearend 1981 was \$56.6 billion, 2.8 percent of the real gross stock of all fixed nonresidential nonfarm business capital.
- The real gross stock of nonfarm business air and water PA P&E increased at an average annual rate of 13 percent during 1960-81, compared with an average annual increase of only 4 percent for the real gross stock

of fixed nonresidential nonfarm business capital excluding PA P&E.

 Real spending for air and water P&E-which determines the growth of the gross stock of PA P&E-grew at an average annual rate of 11 percent during 1960-81, compared with 4 percent for P&E spending excluding PA.

The first section of this article focuses on real estimates of nonfarm business air and water PA P&E (referred to as PA P&E unless otherwise noted). Growth rates of PA P&E stocks and expenditures for 1960-81 are examined. A subsection on industry trends relates growth rates of stocks to those for expenditures for PA P&E and for P&E excluding PA. The second section briefly discusses current-cost stock estimates. The methodology used in estimating stocks is summarized in the final section and detailed in the technical notes. Major elements of the context in which the rapid growth in the gross stock of PA P&E occurred are summarized in the box accompanying the article (p. 22).

Note.—The stock series presented in this article represent several years' research. Frederick J. Dreiling conducted the early phases. Gerald Silverstein provided advice during the later phases. Richard J. Martucci did the computer programming, and Tracy K. Leigh and Saundria W. Carter provided statistical assist-

2. For example, the 1981 stock at current cost values assets at 1981 prices and the 1980 stock values assets

Fixed reproducible tangible capital consists of equip-

Real Stock

The real gross stock of PA P&E at yearend 1981 was \$56.6 billion, twothirds, or \$37.8 billion, in manufacturing industries and one-third, or \$18.8 billion, in nonmanufacturing (table 1). The total was 2.8 percent of the real gross stock of all fixed nonresidential non-farm business capital (hereinafter referred to as business capital).4 In

ment and structures owned by business, government and government enterprises, and households and institutions. For further information, see U.S. Department of Commerce, Bureau of Economic Analysis (BEA), Fixed Reproducible Tangible Wealth in the United States, 1925-79, pp. T-1 through T-40. The present article discusses the PA portion of fixed reproducible tangible capital owned by nonfarm nonresidential business

at 1980 prices.

^{3.} Expenditures estimates for PA P&E for 1973-81 are from the BEA survey on new P&E expenditures. See Rutledge and O'Connor, "Plant and Equipment," p. 18. The estimates for years prior to 1973 were developed from a variety of data sources, discussed later. The scarcity of sources prior to 1967 adversely affects the quality of the estimates.

^{4.} The denominator of the percentage given is a tentative estimate; published estimates of the real gross stock of business capital are for 1925-79 only. See BEA, Fixed Reproducible Tangible Wealth, pp. T-1 through T-40 and 1,4, 55, and 58. The real gross stock of business capital is derived from investment series that are part of the national income and product accounts. For a summary of differences in definition be-

CHART 1

1981, the real gross stock of PA P&E was 14 times its size in 1960.

The difference between the gross and net stock is accumulated depreciation, i.e., the portion of the gross stock's value lost through physical deterioration and obsolescence.⁵ The real net stock of PA P&E at yearend 1981 was \$38.1 billion, \$24.0 billion in manufacturing and \$14.0 billion in nonmanufacturing (table 2). The total was 3.3 percent of the real net stock of all business capital. In 1981, the value of the real net stock of PA P&E was 10 times its size in 1960.

The real gross stock of PA P&E increased at an average annual rate of 13 percent during 1960-81 (table 3). It increased at an 18-percent annual rate during 1970-75, when the stimulus of Federal legislation was strongest (see accompanying box). In contrast, the real gross stock of business capital excluding PA P&E increased at an average annual rate of 4 percent during 1960-81 and at the same rate during 1970-75 (table 4). The net stock of PA P&E increased at an average annual rate of 11 percent during 1960-81, and at 19 percent during 1970-75. Growth rates for the net stock of business capital excluding PA P&E were 4 percent and 3 percent, respectively, for these periods.

Relatively large growth rates in stocks of PA P&E are traceable to trends in PA P&E spending. Real spending for PA P&E grew at an average annual rate of 11 percent during 1960-81 and 15 percent during 1970-75 (tables 5 and 6). Real spending for P&E excluding PA grew at a rate of 4 percent and less than 1 percent, respectively.

Industry trends

The real gross stock of PA P&E in manufacturing grew at an average annual rate of 12 percent during 1960-81. Within manufacturing, the stock in durables grew more rapidly

Gross and Net Stocks of Pollution Abatement Plant and Equipment

Billions of 1972 \$ (Ratio scale)

60

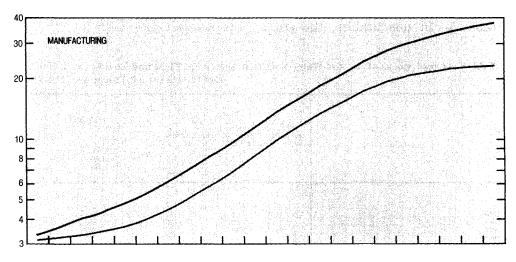
50

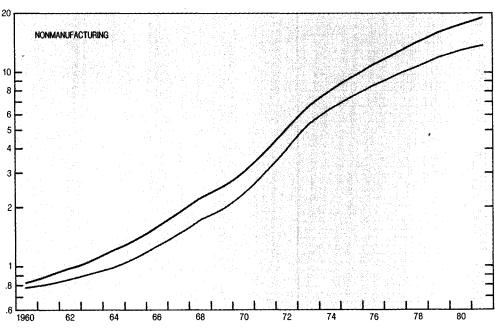
TOTAL OF ALL INDUSTRIES

40

20

Net Stock





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

82-11-1

tween new P&E expenditures and national income and product account estimates of investment, see George R. Green and Marie P. Hertzberg, "Revised Estimates of New Plant and Equipment Expenditures in the United States, 1947-77," SURVEY 60 (October 1980): 24-59. No adjustments for differences in definition were made to PA P&E stocks in comparing them with stocks of business capital.

^{5.} Depreciation, as estimated when deriving the net stock, also includes value lost due to some accidental damage but excludes large-scale (i.e., disaster) damage.

than in nondurables. The stock in nonmanufacturing grew at an average annual rate of 16 percent.

Differences in growth rates discussed in this section substantially altered the distribution of the gross stock of PA P&E in 1981 compared with 1960. For example, manufacturing's share of the all-industry stock fell from four-fifths in 1960 to two-thirds in 1981.

Subperiods 1960-70 and 1970-81.— The real gross stock of PA P&E in manufacturing grew at an average annual rate of 13 percent during 1960-70 and at a similar rate during 1970-81. Within manufacturing, the stock in durables grew rapidly—an 18-percent average annual rate—during the early period, but more slowly during the later period. Rapid growth in the early period reflects rapid growth in PA P&E spending (table 6). In nondurables, the stock

grew at a rate of 11 percent during both subperiods.

The stock in nonmanufacturing grew at average annual rates of 14 percent during the early period and 18 percent during the later period. Rapid growth during the later period can be traced to rapid growth in PA P&E spending by electric utilities.

Other selected subperiods.—Comparison of growth rates of real gross stocks of PA P&E in other selected periods—1960-67, 1967-70, 1970-75, and 1975-81—indicates that the highest rates occurred for most industries in the late 1960's and early 1970's. All industries except motor vehicles and "nondurables not shown sepa-

rately" had higher growth rates during 1967-70 than during 1960-67; high growth rates for the stocks for most industries continued during 1970-75.

Growth rates of industry spending for PA P&E are themselves influenced by growth rates of P&E spending (excluding PA), because PA and other capital are complementary goods. Moderate growth rates of P&E spending by most industries boosted growth rates in PA P&E spending during 1960-67 relative to other periods; low and negative rates of P&E spending dampened rates of PA P&E spending during 1967-70 and during 1970-75. Despite widespread boosts from P&E spending, PA P&E spending fell during 1975-81.

Table 1.—Gross Stocks of Air and Water Pollution Abatement Plant and Equipment in Nonfarm Business, by Major Industry Group, Current-Cost and Constant-Cost Valuation, 1960-81

								Manufa	cturing				
	4.33				Dura	ables				Nondu	rables		
	All nonfarm indus- tries	Manu- facturing	Nonmanufac- turing	Total	Blast furnaces	Motor vehicles	Dura- bles not shown sepa- rately	Total	Chemi- cals	Petro- leum	Paper	Food includ- ing bever- ages	Nondur- ables not shown sepa- rately
						Billions of	current dol	llars					
1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1978 1979 1979 1979	3.02 3.28 3.28 3.59 4.37 5.00 5.89 7.07 8.61 10.62 13.42 17.01 21.37 28.25 36.97 46.29 55.62 65.91 78.27 93.03 110.32 110.32	2.44 2.66 2.89 3.16 3.52 4.01 4.71 5.63 6.82 8.43 10.61 13.28 50.72 26.45 33.02 39.32 46.00 58.76 62.74 73.77 85.78	0.58 .63 .69 .76 .85 .99 1.18 1.44 1.78 2.19 2.81 3.74 5.12 7.53 10.53 10.53 16.30 19.91 24.51 30.656 42.64	0.62 .69 .76 .86 1.01 1.21 1.51 2.46 3.22 4.25 5.36 6.57 8.66 11.23 13.89 16.37 19.06 22.21 26.07 30.88 35.84	0.15 18 20 20 23 27 32 39 49 62 79 1.02 1.24 1.50 0.1.83 2.27 2.86 3.49 4.20 4.97 6.02 7.22 8.41	0.21 23 26 29 33 39 46 52 57 66 77 90 1.04 1.28 1.53 1.72 1.88 2.10 2.44 2.89 3.54 4.20	0.26 .27 .31 .34 .40 .50 .66 .90 .1.27 1.76 3.22 4.03 5.56 7.43 9.31 11.00 12.76 14.80 17.15 20.12 23.23	1.82 1.97 2.13 2.30 2.51 2.80 3.73 4.37 5.21 6.36 7.91 9.68 12.06 15.22 19.13 22.96 26.94 31.55 36.47 42.89 49.93	0.64 .69 .75 .81 .88 .98 1.11 1.29 1.73 2.02 2.40 2.92 3.55 4.41 5.46 6.64 7.88 9.14 10.39 11.39 11.39 11.39	0.85 .92 1.00 1.07 1.16 1.27 1.44 1.66 1.94 2.30 2.74 3.47 4.07 4.93 6.08 7.70 9.15 10.68 12.62 14.91 17.86 21.22	0.19 20 22 24 26 30 35 42 51 64 83 1.05 1.38 1.80 2.37 3.02 3.66 4.28 4.88 5.64 6.46 6.46 6.732	0.13 .14 .15 .16 .18 .19 .22 .24 .42 .27 .35 .47 .63 .83 .114 .1.50 .1.88 .2.27 .2.66 .3.60 .3.83 .3.93 .3	0.02 02 02 03 03 05 08 112 15 19 30 36 48 48 48 64 86 1.07 1.25 1.45 1.72 2.00 2.34 2.71
`						Billions	of 1972 dolla	ars					
1960	4.18 4.56 4.97 5.43 6.02 6.75 7.73 9.00 10.48 12.20 14.47 17.38 20.77 24.88 28.94 42.16 46.11 49.91 53.56 56.60	3.36 3.67 4.00 4.36 4.82 5.39 6.16 7.15 8.29 9.69 9.11.46 13.57 15.78 18.33 20.95 24.25 27.22 29.80 32.05 34.09 36.14 37.79	.82 .90 .97 1.07 1.20 1.36 1.58 1.85 2.19 2.51 3.01 3.81 4.99 6.56 7.99 9.32 10.81 12.36 14.06 15.81 17.41 18.81	.84 .94 1.04 1.18 1.37 1.62 2.40 2.97 3.68 4.58 5.48 6.39 7.65 8.84 10.13 11.26 12.29 13.20 14.12 15.05 15.68	21 25 28 31 31 37 47 47 51 63 63 75 91 1.11 1.27 1.46 1.61 1.92 2.09 2.41 2.72 2.96 3.53 3.69	28 32 35 40 40 46 53 60 65 69 76 83 92 1.01 1.13 1.21 1.26 1.30 1.36 1.45 1.45 1.45 1.73 1.85	35 .38 .42 .47 .54 .66 .86 .1.13 .1.53 .2.02 2.64 3.29 4.91 5.84 6.78 7.55 8.79 9.28 9.79 10.15	2.52 2.73 2.95 3.18 3.45 3.77 4.19 4.75 5.32 6.01 16.89 8.09 9.39 10.68 12.11 14.12 15.96 17.51 18.85 19.97 21.09 22.11	.88 .96 1.03 1.12 1.21 1.32 1.46 1.64 1.82 2.00 2.19 2.46 2.83 3.14 3.52 4.05 4.63 5.13 5.47 5.66 6.06	1.18 1.28 1.38 1.48 1.60 1.72 1.89 2.11 2.37 2.64 4.296 3.55 3.95 4.36 4.83 5.67 6.35 5.67 6.35 5.93 7.53 8.11 8.76 9.37	.26 .28 .30 .33 .36 .41 .46 .53 .74 .90 .1.07 1.34 1.60 1.89 2.23 2.54 2.78 2.91 3.07 3.12 3.24	.17 .19 .21 .21 .22 .24 .26 .28 .30 .33 .40 .51 .64 .80 .1.01 .1.19 .1.39 .1.58 .1.73 .1.91 .2.03 .2.14	022 033 044 055 07 10 118 222 322 322 37 47 57 86 86 94 1,020 1,15 1,19

^{6.} Subperiods were selected with critical years in the development and implementation of U.S. pollution abatement policy (1967, 1970, and 1975) as end points. Also, 1967 is the first year for which a variety of source data on PA P&E expenditures are available, so that the quality of estimates for years prior to 1967 differs from that for later years.

^{7.} Spending for PA normally accompanies that for production facilities and fluctuates with P&E spending; however, the two types of spending are not perfect complements and the mix of the two types purchased varies over time with changes in PA programs.

Table 2.—Net Stocks of Air and Water Pollution Abatement Plant and Equipment in Nonfarm Business, by Major Industry Group, Current-Cost and Constant-Cost Valuation, 1960-81

	T		anu Constai			<u> </u>		Manufa	cturing				
					Dura	ıbles				Nondu	rables		
	All nonfarm indus- tries	Manu- facturing	Nonmanufac- turing	Total	Blast furnaces	Motor vehicles	Dura- bles not shown sepa- rately	Total	Chemi- cals	Petro- leum	Paper	Food includ- ing bever- ages	Nondur- ables not shown sepa- rately
						Billions of	current dol	lars					
1960	2.86 2.96 3.07 3.21 3.45 3.83 4.42 5.28 6.40 7.89 10.09 12.89 16.31 21.69 28.27 35.13 41.67 48.64 65.72 76.20 86.18	2.31 2.38 2.46 2.56 2.74 3.02 3.47 4.13 4.99 6.18 7.88 9.92 12.16 15.48 19.63 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35 24.35	0.56 .58 .61 .65 .71 .81 .95 1.14 1.71 2.20 2.97 4.15 6.21 8.65 10.78 13.11 15.82 19.23 23.50 27.88 31.80	0.59 .62 .66 .71 .81 .95 .1.18 1.48 1.91 2.51 3.34 4.19 5.09 6.69 8.57 10.44 12.03 13.65 15.42 17.58 20.25 22.64	0.15 .16 .17 .19 .22 .255 .30 .38 .47 .60 .78 .93 .1.12 1.34 1.63 2.06 2.51 2.98 3.45 4.12 4.42 4.83 5.42 4.42	0.20 21 23 25 28 36 39 42 47 54 63 71 11 117 1.30 1.49 1.79 2.23 2.64	0.24 .25 .26 .28 .31 .38 .51 1.02 1.43 2.02 2.63 3.26 4.48 5.92 7.28 8.35 9.37 10.47 11.67 13.19 14.59	1.72 1.76 1.80 1.85 1.93 2.07 2.29 2.65 3.08 3.67 4.54 5.73 7.07 8.79 11.06 13.91 16.53 19.09 21.78 24.64 28.07 31.74	0.60 61 62 .63 .65 .70 .89 1.03 1.20 1.41 1.70 2.07 2.07 3.85 4.69 5.50 6.22 6.84 7.59 8.45	0.81 .83 .85 .90 .95 1.03 1.18 1.35 1.90 2.46 2.28 3.46 4.27 5.47 6.44 7.41 8.59 9.96 11.73 13.64	0.18 .18 .18 .19 .20 .23 .26 .31 .38 .48 .63 .79 .1.09 .1.39 .1.81 .2.28 .2.71 .3.03 .3.35 .3.74 .4.12	0.12 .12 .13 .14 .15 .16 .17 .19 .25 .35 .37 .47 .64 .90 .117 .146 .200 .236 .267 .303 .303 .303 .303 .303 .303 .303 .30	0.02 .02 .02 .03 .04 .07 .10 .13 .17 .25 .30 .40 .53 .70 .85 .97 1.10 1.26 1.42 1.60
		L				Billions	of 1972 dolla	ars	L	L			<u></u>
1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1971 1972 1973 1974 1975 1976 1977 1978 1978 1978 1978	3.97 4.12 4.28 4.47 4.77 5.19 5.82 6.74 7.82 9.08 10.89 13.18 15.85 19.10 22.13 25.48 28.50 31.05 33.23 35.22 37.00 38.07	3.19 3.30 3.41 3.55 3.76 4.08 4.56 6.08 7.12 8.52 10.15 11.81 13.70 15.56 17.91 19.80 21.24 22.19 22.97 23.72 24.03	.79 .82 .87 .93 1.00 1.11 1.27 1.48 1.74 1.96 2.36 3.03 4.04 5.40 6.56 7.57 8.70 9.82 11.03 12.26 13.28	.80 .85 .90 .98 1.10 1.28 1.53 1.87 2.31 2.88 3.60 4.28 4.95 5.91 6.76 2.82 8.81 9.17 9.53 9.88 9.93	.20 .22 .24 .30 .34 .39 .48 .57 .70 .85 .96 .109 .1.18 .1.29 .1.51 .1.74 .1.93 .2.06 .2.24 .2.38	27 29 31 34 38 43 47 50 51 54 64 69 77 81 81 81 89 97 1.09	.33 .34 .35 .38 .42 .51 .67 .89 1.23 1.64 2.17 2.69 3.17 3.96 4.66 5.30 5.74 6.04 6.22 6.43 6.39	2.39 2.45 2.57 2.66 2.80 3.02 3.39 3.77 4.25 4.93 5.87 6.86 7.78 8.81 10.28 11.51 12.42 13.02 13.44 13.84 14.10	.83 .85 .86 .87 .90 .95 .102 .1.139 .1.53 .1.74 .2.01 .2.22 .2.48 .2.86 .3.27 .3.59 .3.73 .3.74 .3.75 .3.77	1.12 1.15 1.18 1.21 1.24 1.36 1.50 1.65 2.05 2.05 2.81 3.06 4.03 4.47 4.82 5.13 5.77 6.04	25 25 26 27 28 31 34 46 55 69 81 1.03 1.23 1.44 1.68 2.00 2.01 2.04 1.99	.17 .17 .18 .19 .20 .21 .22 .23 .29 .38 .48 .62 .62 .79 .93 .1.08 .1.21 .1.30 .1.41 .1.46 .1.52	.02 .03 .03 .04 .06 .09 .13 .16 .19 .28 .31 .39 .47 .56 .63 .67 .71 .75 .77 .79

Table 3.—Growth Rates for Gross and Net Stocks of Pollution Abatement Plant and Equipment, Selected Periods [Average annual percent change]

	 							Manufa	cturing	-			
					Dura	ables		Manuia	cturing	Nondu	ırables	·	
	All nonfarm indus- tries	Manu- facturing	Nonmanufac- turing	Total	Blast furnaces	Motor vehicles	Dura- bles not shown sepa- rately	Total	Chemi- cals	Petro- leum	Paper	Food includ- ing bever- ages	Nondur- ables not shown sepa- rately
	1	Gross stocks (Valued in current dollars)											
1960-1981 1960-1970 1960-1967 1967-1970 1970-1981 1970-1981	19.6 16.1 12.9 23.8 22.8 28.1 18.5	18.5 15.8 12.7 23.5 20.9 25.5 17.2	22.7 17.1 13.9 25.1 28.1 36.4 21.5	21.3 21.2 17.4 30.6 21.4 26.7 17.1	21.0 20.9 18.1 27.5 21.1 22.8 19.7	15.4 13.9 13.8 14.1 16.7 17.5	23.9 25.3 19.5 40.0 22.7 30.5 16.4	17.1 13.3 10.8 19.5 20.6 24.6 17.3	15.7 12.2 10.6 16.2 18.9 22.0 16.4	16.5 12.4 10.0 18.1 20.4 22.9 18.4	19.1 16.1 12.2 25.9 21.8 29.4 15.9	19.3 14.2 9.7 25.5 24.1 31.9 18.0	27.8 34.1 33.4 35.7 22.3 29.3 16.8
		(Valued in 1972 dollars)										L	
1960-1981 1960-1970 1960-1967 1967-1970 1970-1981 1970-1981 1970-1975	13.2 13.2 11.6 17.1 13.2 18.3 9.1	12.2 13.0 11.4 17.0 11.5 16.2 7.7	16.1 13.9 12.4 17.5 18.1 25.4 12.4	14.9 18.4 16.1 24.0 11.8 17.2 7.6	14.6 18.0 16.8 20.9 11.6 13.6 9.9	9.3 11.2 12.5 8.3 7.6 8.8 6.6	17.4 22.5 18.3 32.9 13.0 20.7 7.0	10.9 10.6 9.5 13.2 11.2 15.5 7.8	9.6 9.5 9.3 10.1 9.7 13.1 7.0	10.4 9.6 8.7 11.9 11.0 13.9 8.7	12.7 13.2 10.8 19.1 12.3 19.8 6.4	13.0 11.4 8.3 18.8 14.4 22.2 8.4	20.9 30.7 31.6 28.5 12.7 19.7 7.2
					Net s	tocks (Valu	ed in curre	nt dollars)					
1960-1981. 1960-1970. 1960-1967. 1967-1970. 1970-1981. 1970-1981.	17.6 13.4 9.1 24.1 21.5 28.3 16.1	16.2 13.1 8.7 24.0 19.2 25.3 14.3	21.3 14.8 10.9 24.4 27.5 37.4 19.8	19.0 18.9 14.1 31.2 19.0 25.6 13.8	18.8 18.2 14.6 27.2 19.2 21.3 17.5	13.1 10.4 10.1 10.9 15.6 15.6	21.5 23.6 16.5 41.8 19.7 29.2 12.3	14.9 10.2 6.4 19.7 19.3 25.1 14.7	13.4 9.0 5.8 16.6 17.7 22.2 14.0	14.4 8.9 5.5 17.3 19.6 23.6 16.5	16.6 13.6 8.3 26.9 19.4 29.3 11.8	17.3 11.4 5.4 26.6 23.0 33.0 15.3	25.5 32.6 31.8 34.6 19.3 27.4 13.0
		(Valued in 1972 dollars)											
1960-1981	7.8 17.3	10.1 10.3 7.4 17.5 9.9 16.0 5.0	14.7 11.6 9.5 16.9 17.6 26.2 10.9	12.7 16.2 12.9 24.4 9.7 16.2 4.5	12.5 15.4 13.3 20.6 9.8 12.2 7.9	7.1 7.8 8.9 5.2 6.6 7.1 6.1	15.2 20.8 15.4 34.6 10.3 19.5 3.2	8.8 7.5 5.2 13.3 10.0 15.9 5.4	7.5 6.3 4.6 10.3 8.5 13.3 4.7	8.3 6.2 4.3 11.0 10.3 14.4 7.0	10.4 10.7 6.9 20.0 10.1 19.7 2.8	11.1 8.6 4.1 19.8 13.5 23.3 5.9	18.8 29.3 30.1 27.3 10.0 17.9 3.7

Stock Valued at Current Cost

The gross stock of PA P&E valued at current cost at yearend 1981 was \$128.4 billion, \$85.8 billion in manufacturing and \$42.6 billion in nonmanufacturing. The total was 2.8 percent of the gross stock of all business capital.

During 1960-81, the current-cost gross stock of PA P&E grew at an average annual rate of 20 percent. The gross stock of other business capital grew at one-half that rate. Although price changes for PA P&E and for other business capital were similar during this period, only one-third of the growth rate in the stock of PA P&E was due to price change, whereas most of the growth rate in the stock of other business capital was due to price change.

The current-cost net stock of PA P&E at yearend 1981 was \$86.2 billion, \$54.4 billion in manufacturing and \$31.8 billion in nonmanufacturing. The total was 3.3 percent of the net stock of all business capital.

During 1960-81 the current-cost net stock grew at an average annual rate of 18 percent, compared with 10 percent for the net stock of other business capital. The effect of price change on growth rates of net stocks was similar to that for gross stocks.

Summary Methodology

Gross stocks of PA P&E by industry were estimated using the perpetual inventory method. In the method, past investment is cumulated and discards are deducted in accordance with the lifetimes of capital goods. Net stocks are calculated by subtracting accumulated depreciation from gross stocks to reflect the decrease in the usefulness of existing capital.

The perpetual inventory method requires three data elements:

- (1) Current-dollar capital spending over an extended period, or, in the absence of an extended series, the initial capital stock;
 - (2) Price indexes; and

(3) Lifetimes of assets, or, in the absence of detail on lifetimes, average lifetimes and typical retirement patterns.

Estimates of PA P&E spending are available for 1973-81 from BEA's survey on new P&E expenditures. Initial stocks by industry in 1959 of PA P&E were developed from several sources; the most important was a survey by the National Association of Manufacturers (NAM). The linking of the 1959 information to that for 1973 was done in two steps. Spending in 1973 was extrapolated back to 1967 using similar spending estimates from trade associations and the McGraw-Hill Publications Company. Second. PA P&E spending for 1960-66 was estimated by multiplying total P&E spending each year by the 1959 stock ratio of PA P&E to total P&E.8

Price indexes were developed using components of the Bureau of Labor

Growth in the Stock of Plant and Equipment for Pollution Abatement: The Context

With the extensions of the series on plant and equipment for pollution abatement presented in this article, the stock and expenditure series begin in 1959. That year roughly dates the beginning of the period in which pollution abatement spending became a significant enough issue to warrant the collection of national data related to it. The context in which the rapid growth in the stock, as described in the article, occurred is complex, but a 20-year period provides perspective that helps delineate the major elements. Among these elements are:

—The political process by which decisions about pollution abatement were made was put in motion by an economic problem: how to provide increased collective consumption of clean air and water not voluntarily forthcoming or directly purchasable.

—The increased demand for clean air and water first took the form of controversy over the importance of reducing pollution between U.S. business, on the one hand, and citizens and their governments at all levels, on the other. The prevalence and intensity of controversy increased dramatically in the 1960's.

—The increased demand for clean air and water is traceable to several interrelated factors. Among them are: (1) the widespread perception that the magnitude of the pollution problem was growing rapidly; (2) heightened public awareness of pollution, stemming from well-publicized environmental disruptions such as oil spills, severe smog, and releases of dangerous chemicals, and from increasing scientific knowledge of, and capability for measuring, health hazards; and (3) rising real income (i.e., disposable personal income per capita), which affected political and economic priorities. Specifically, rising real income boosted demand for clean air and water as well as private goods that were most income elastic.

—High growth rates of real PA P&E spending, especially after 1965, indicate that many businesses responded relatively quickly to concern about pollution by undertaking or enlarging pollution abatement programs. Underlying this response was the growing acceptance of their necessary role as primary providers of clean air and water. In part, this response was stimulated by the growing political power of environmental groups and spreading support for environmental causes.

—The political process in which business, government, and the public engaged to resolve the economic problem led to the formulation and evolution of policies at all levels of government. The Federal role in pollution abatement policy formation grew throughout the 1960's. It became dominant with the passage of the Clean Air Act Amendments of 1970 and the Water Pollution Control Act Amendments of 1972. These amendments constituted the largest increase in legislated requirements for pollution abatement during the 1960-81 period.

^{8.} This stock ratio was assumed to equal the ratio of PA P&E spending to total P&E spending for 1960-66. The ratio of spending probably remained constant until the mid-1960's.

Statistics Producer Price Index, the Chemical Engineering Plant Cost Index, the Environmental Protection Agency (EPA) Large City Advanced Wastewater Treatment Plant Cost Index, and the Handy-Whitman Index of Public Utility Construction Costs. Indexes were calculated separately for

Table 4.—Growth Rates for Gross and Net Stocks of Fixed Nonresidential Nonfarm Business Capital (Excluding Pollution Abatement Plant and Equipment), Selected Periods

[Average annual percent change]

	Gross	stock	Net	stock
	Valued in current dollars	Valued in 1972 dollars	Valued in current dollars	Valued in 1972 dollars
1960-81	9.8	3.9	9.9	4.0
1960–1970 1960–1967 1967–1970 1970–1981 1970–1975 1975–1981	7.2 5.7 10.8 12.3 12.4 12.2	4.1 3.9 4.6 3.7 3.8 3.5	7.9 6.5 11.2 11.8 12.0 11.6	4.8 4.7 4.9 3.2 3.5 3.0

air and for water PA P&E spending, for manufacturing, electric utilities, and nonmanufacturing (excluding electric utilities).

Estimates of lifetimes by industries for air and for water PA facilities were obtained by consulting with industry specialists and trade groups. The retirement pattern assumed was the modified Winfrey S-3 retirement pattern used in BEA's estimates of business capital.⁹

Technical Notes

These technical notes describe the sources and procedures used in estimating gross and net stocks of PA P&E and are organized according to the three data elements required by the perpetual inventory method.

1. Stock in 1959 and spending during 1960-81

The earliest data useful in estimating the PA P&E stock are for manufacturing only and are from a survey by NAM (Water In Industry, New York: National Association of Manufacturers, 1965). Sample data from this survey of the gross stock (valued at current cost in 1959) of waste water treatment facilities were increased to a total (i.e., universe) level using ratios of sample to universe data for a reference variable (e.g., water treated prior to discharge or plant production capacity). Data for construction of industry sample-touniverse ratios are either from NAM (Water In Industry) or the Census Bureau (United States Census of Manufactures, 1958, vol. I., Summary Statistics, pt. 11, Industrial Water Use).

For manufacturing, the air PA P&E stocks by industry in 1959 were estimated as the water PA P&E stocks in 1959 multiplied by air-to-water ratios

Table 5.—Expenditures for Air and Water Pollution Abatement New Plant and Equipment in Nonfarm Business, by Major Industry Group, in Current and Constant Dollars, 1960-81

								Manufa	cturing				
	4.11				Dura	ables				Nondu	rables		
Year	All nonfarm indus- tries	Manu- facturing	Nonmanufac- turing	Total	Blast furnaces	Motor vehicles	Dura- bles not shown sepa- rately	Total	Chemi- cals	Petro- leum	Paper	Food includ- ing bever- ages	Nondur- ables not shown sepa- rately
						Billions of	current do	lars					
1960 1961 1962 1963 1964 1965 1966 1966 1968 1969 1970 1971 1971 1972 1973 1974 1975 1976 1977 1977 1978	0.28 .27 .29 .33 .43 .55 .76 1.04 1.25 2.22 2.95 3.60 4.61 5.30 6.58 6.78 6.78 6.78 1.83 5.55 8.67 8.83 8.83 8.83 8.83 8.83 8.83 8.84 8.84	0.24 .22 .23 .26 .344 .60 .82 .98 1.75 .2.17 .241 .2.92 .8.49 4.69 4.12 4.40 4.77	0.05 .06 .06 .07 .09 .12 .16 .21 .27 .27 .47 .73 .1.19 1.69 1.81 1.89 2.24 2.48 2.28 3.31 3.38 3.32	0.09 07 08 8 10 14 18 26 62 2 83 89 95 1.39 1.53 1.81 1.71 1.69 1.62 1.87 2.11	0.04 03 022 03 04 05 06 09 10 114 18 16 20 19 24 43 49 56 61 60 61	0.03 022 033 .044 .055 .05 .044 .03 .066 .066 .100 .111 .088	0.02 .02 .03 .04 .04 .06 .09 .15 .22 .33 .42 .58 .63 .66 .1.07 1.18 1.30 1.14 1.06 1.00	0.15 .15 .16 .17 .20 .25 .33 .48 .52 .66 .92 .1.28 .1.28 .1.28 .1.28 .2.28 .2.28 .2.28 .2.28 .2.28 .2.30 .2.00 .2.00 .2.00 .2.00 .2.00 .2.00 .2.00 .2.00 .2.00 .2.	0.05 .05 .05 .06 .07 .10 .11 .16 .18 .20 .23 .33 .42 .41 .53 .78 .92 .87 .69 .64	0.07 07 07 07 08 09 13 19 22 25 34 60 49 50 69 1.21 1.03 1.11 1.25 1.52 1.52	0.02 01 02 02 02 02 03 04 06 08 11 11 16 17 28 30 37 48 48 48 49 26 26 26 27 27 27 27 27 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	0.01 .011 .011 .011 .012 .022 .022 .032 .046 .046 .107 .137 .233 .233 .247 .288 .255 .255 .277	0 0 0 0 0 0 0 0 1 0 1 0 3 3 0 4 4 0 9 0 9 0 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
			<u> </u>	L	L	Billions	of 1972 doll	ars	L	<u> </u>	L		I
1960 1961 1962 1963 1964 1965 1966 1966 1968 1969 1970 1971 1972 1973 1974 1975 1976 1976 1977 1978 1978	39 38 41 46 60 76 1.01 1.35 1.57 1.83 2.47 4.35 4.89 4.79 4.52 4.32 4.32 4.32 4.32 4.32 4.32 4.32 4.3	33 31 32 32 32 36 47 59 79 1.06 1.23 1.51 1.95 2.27 2.41 2.77 2.89 3.53 3.25 2.93 2.57 2.58 2.59 2.59 2.59 2.59 2.59 2.59 2.59 2.59	.06 .07 .08 .10 .13 .16 .22 .28 .34 .32 .52 .81 1.19 1.60 1.45 1.36 1.54 1.59 1.74	.12 .10 .10 .13 .19 .25 .35 .45 .45 .58 .73 .92 .93 .95 .1.32 .1.26 .1.35 .1.21 .1.31 .1.01	05 03 03 04 06 06 07 12 13 16 20 17 20 32 35 33 33 33 32 8	03 03 03 04 06 07 07 05 04 07 10 10 13 09 06 06 09 11 15 15	.03 .03 .04 .05 .08 .12 .20 .28 .41 .50 .65 .66 .66 .1.01 .97 .97 .81 .71 .62 .56 .59	.21 .22 .22 .23 .28 .34 .44 .62 .65 .78 .102 .1.34 .1.45 .1.63 .2.18 .2.04 .1.80 .1.56 .1.44 .1.44 .1.48	.08 .08 .08 .08 .10 .13 .15 .21 .23 .24 .26 .34 .42 .23 .38 .44 .60 .66 .59 .43 .33 .33	.09 .10 .10 .10 .11 .13 .18 .25 .27 .30 .38 .63 .49 .47 .76 .70 .76 .70 .79 .75	02 02 02 03 03 03 05 06 08 08 13 18 18 28 28 31 34 27 16 17 11 13	01 02 02 02 02 02 02 02 02 02 03 03 07 11 13 17 7 21 21 20 17 19	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

^{9.} BEA, Fixed Reproducible Tangible Wealth, p. T-

of PA P&E cumulative spending (or, in a few cases, stocks). Data for these ratios are for selected years prior to 1973, and were obtained from several manufacturing companies, trade associations, and McGraw-Hill.

For nonmanufacturing, stocks by industry of PA P&E in 1959 were estimated as manufacturing stocks in 1959 multiplied by nonmanufacturing-to-manufacturing ratios of cumulative PA P&E spending for 1967-69. The results were allocated to air and water PA, respectively, using air-to-water ratios of cumulative PA P&E spending for 1970-71.

The stocks (for manufacturing and nonmanufacturing industries) in 1959 derived as indicated above were valued, like the NAM sample data, at current cost in 1959 (referred to by NAM as replacement cost). This valuation basis allows 1959 stocks to be treated in calculations of later stocks like initial investments in PA P&E. BEA's calculations linked information for 1959 to that for 1973 in two steps: spending for 1960-66, and spending for 1967-72. Data on PA P&E spend-

ing for 1960-66 are unavailable for most industries, and spending was estimated as total P&E spending each year multiplied by the 1959 stock ratio of PA P&E to total P&E. Numerators for the stock ratios, by industry, are 1959 PA P&E stock estimates; denominators are Internal Revenue Service data on gross book value of depreciable assets of corporations as of December 31, 1959. When the assumption of a constant relationship between PA P&E spending and total P&E spending for 1960-66 was not supportable, the ratio of spending was estimated to increase.

For the steel, paper, and petroleum industries, fragmentary data are available prior to 1967. For the steel industry, data on cumulative spending for 1951-65 for air and for water PA P&E are available from the American Iron and Steel Institute (Steel Institute); beginning in 1966, annual spending data are available from this source. To obtain annual spending before 1966, cumulative spending for air and for water PA, respectively, were divided by cumula-

tive total P&E spending for 1951-65; the resulting ratios (air and water) were multiplied by total P&E spending in each year. For paper, additional data on the stocks of water PA P&E in 1963 and 1965 are available from the National Council of the Paper Industry for Air and Stream Improvement (Paper Council). For petroleum, PA P&E spending for 1966 is available from the American Petroleum Institute (Petroleum Institute).

PA P&E spending estimates for 1967-72 are extrapolations back to 1967 from 1973. The extrapolations were based on PA P&E spending reported by the Ford Motor Company, General Motors Corporation, the Steel Institute, the Paper Council, the Petroleum Institute, and McGraw-Hill; data from these sources begin in 1967 and overlap with BEA data for 1973 forward. For most industries, the ratio of cumulative spending for 1973-80 from BEA data to that from the overlapping data source was multiplied by annual spending before 1973 (on the assumption that definitional and sampling differences between

Table 6.—Growth Rates for Expenditures for Pollution Abatement New Plant and Equipment (PA P&E) and New Plant and Equipment (Excluding PA P&E), Selected Periods

[Average annual percent change]

Manufacturing Durables Nondurables All Nonnonfarm indus-tries Manu-Dura-bles not shown Nondurmanu-facturing Food includ-Blast furnaces Chemi-Petronot Total Total Paper ing bevershown sepa-rately sepa-rately Pollution abatement plant and equipment (Valued in current dollars) 1960-1981 1960-1970..... 1960-1967.. 1967-1970.. 1970-1981.... 20.5 40.1 40.4 39.5 5.0 17.3 22.9 49.7 58.7 30.8 2.7 17.3 22.9 20.4 28.7 12.4 24.3 3.3 15.4 22.1 19.5 28.4 9.6 21.8 12.7 9.6 6.5 17.0 15.6 13.2 15.6 17.1 12.4 11.0 27.4 16.3 17.4 16.0 20.9 15.2 28.9 14.2 25.0 20.9 35.1 5.2 25.0 16.6 25.0 6.1 83.4 9.4 21.9 15.6 25.6 22.4 33.5 7.2 12.5 16.6 13.3 24.7 8.9 22.4 26.2 24.6 29.9 19.1 32.1 9.3 15.3 19.7 17.7 24.5 11.4 25.8 16.8 18.5 1.5 5.5 24.7 $10.3 \\ -3.2$ (Valued in 1972 dollars) 16.6 46.5 57.1 24.6 -5.2 1.8 -10.7 11.3 20.2 19.3 22.4 3.7 14.7 -4.6 16.1 23.1 23.4 22.5 9.8 23.1 21.4 27.2 6.8 14.3 12.4 18.8 7.0 7.3 5.6 11.5 9.4 17.2 16.6 18.5 2.8 16.3 -7.2 8.3 22.3 19.6 28.8 -3.0 15.4 -16.0 10.6 22.3 5.0 74.6 1.0 13.0 -8.1 14.5 37.5 39.5 33.0 7.5 13.2 16.0 7.0 2.5 1960-1981 9.6 19.6 18.4 22.4 1.2 12.6 -7.5 10.4 15.0 14.9 15.1 6.3 19.1 -3.3 1960-1981 1960-1970.... 1960-1967.. 1967-1970.. 1970-1981.... 1970-1975.. 1975-1981.. .4 9.4 -6.4 10.0 Plant and equipment excluding pollution abatement plant and equipment (Valued in current dollars) 10.0 8.8 11.4 2.8 11.0 3.5 1.1 4.8 -7.1 5.8 12.4 10.7 7.5 9.6 2.6 13.7 8.9 7.8 6.8 10.2 9.8 8.2 11.3 9.5 7.5 9.9 2.0 11.4 1960-1981 9.3 7.9 7.9 7.9 10.6 7.9 12.9 10.1 8.1 10.0 3.9 12.0 7.3 15.9 10.9 10.3 13.1 4.2 11.4 5.1 16.9 10.3 7.5 8.4 5.3 12.9 9.6 15.8 10.9 5.5 7.4 1.2 16.1 11.7 19.9 10.8 7.7 9.6 3.3 13.6 9.6 17.1 8.8 9.2 6.2 16.5 8.6 3.1 13.3 9.4 9.0 10.1 6.4 9.7 3.8 14.9 1960-1981..... 1960-1970..... 1960-1967.. 1967-1970... 1970-1981..... 1970-1975.. 20.0 (Valued in 1972 dollars) 1960-1981 1960-1970 3.8 5.3 5.4 5.1 2.3 5.0 6.4 9.9 -1.5 3.7 -1.5 8.3 3.8 6.8 4.8 11.5 1.1 -3.9 4.1 5.5 6.5 3.1 2.9 4.8 5.7 8.5 - .6 4.0 4.4 3.1 6.1 -3.5 5.5 1.4 9.1 5.5 5.2 8.1 -1.4 5.9 2.1 9.2 4.3 6.3 8.3 1.9 2.5 -3.1 5.9 7.9 11.6 -.1 4.2 -1.6 9.2 4.6 5.0 6.9 .6 4.2 1.3 6.8 -11.4 -2.2 4.6 -7.5

Note.—Growth rates of PA P&E expenditures are calculated from estimates in table 5.

sources are stable over time). The calculations can be viewed as either extrapolations or as adjustments of data from overlapping sources to a consistent basis. For the chemicals industry, extrapolation was based on a linear relationship indicated by a simple regression of BEA data on McGraw-Hill data.

2. Price indexes

The manufacturing air PA P&E price index is a weighted average of the fans and blowers component of the Producer Price Index (fans and blowers are an integral part of many types of air pollution abatement facilities) and the Chemical Engineering Plant Cost Index. The Chemical Engineering index is itself a weighted average of components of the Producer Price Index. Weights (before adjustments) are based on profiles of spending to construct chemicals plants. Adjustments were made by BEA for differences between chemicals plants and air pollution abatement facilities.

The manufacturing water PA P&E price index is a weighted average of the Chemical Engineering index and the EPA Large City Advanced Waste Water Treatment Plant Cost Index or, prior to the 1973, the EPA Sewerage Treatment Plant Cost Index. For water PA P&E, adjustments to the Chemical Engineering index were made by BEA for differences between chemicals plants and water pollution abatement facilities.

For electric utilities, the air PA P&E price index is a weighted average of the Chemical Engineering index and the Handy-Whitman index. The latter is an index for public utility construction costs and contains component indexes for buildings, equipment, and materials of electric utilities. Components applicable to air

Table 7.—Average Lifetimes for Air Pollution Abatement Plant and Equipment

	Years 1
Manufacturing	
Blast furnaces Nonferrous. Motor vehicles Machinery Other durables ² Chemicals. Paper. Petroleum Food Other nondurables ²	15.0 14.0 20.0 20.0 20.0 10.8 12.0 14.0 16.8
Nonmanufacturing	
Communication, commercial, other ³	15.0 30.0 15.0

The estimates are averages for types of equipment such as baghouses, electrostatic precipitators, and wet scrubbers. Lifetimes also vary by region, plant, and process.
 These are residual categories.
 "Other" consists of construction; social services and membership organizations; and forestry, fisheries, and agricultural

pollution abatement were selected. For example, the coal and ash handling equipment component was selected for fly ash removal from electrostatic precipitators. The water PA P&E price index is a weighted average of components of the same two major indexes (as for air) and components of the Producer Price Index. Components applicable to water pollution abatement were selected. For example, the Handy-Whitman index component for reinforced concrete buildings was selected for concrete cooling tower construction costs.

The nonmanufacturing nonelectric utilities air and water indexes are weighted averages of the air and water PA indexes described above. Price changes for the PA P&E purchased were assumed to equal, on average, price changes for similar purchases by other industries.

Use of price indexes.—Constant-cost gross stocks by industry were obtained by dividing current-dollar spending by price indexes, cumulating the resulting real spending, and subtracting discards. (Discards were estimated using an assumed retirement pattern, indicated below.) To obtain net stocks, depreciation was also subtracted. Current-cost stocks were obtained by multiplying constant-cost stocks by yearend price indexes.

3. Service lives and retirement pattern

Straight-line depreciation, i.e., depreciation at a constant rate over the life of an asset, is used in calculating net stocks. Rates of depreciation are derived from assumed average lifetimes.

The air PA P&E lifetimes, shown in table 7, are from discussions with staff of the Industrial Gas Cleaning Institute and the Environmental Elements Corporation (subsidiary of the Koppers Corporation). The lifetimes are average physical lifetimes for types of equipment such as baghouses, electrostatic precipitators, and wet scrubbers. These lifetimes and the revised equipment lifetimes used by the EPA to provide estimates of annualized capital cost for the Cost of Clean Air and Water Report to Congress, 1979 are of similar length.

For water PA P&E, a lifetime estimate of 30 years has been assumed for all industries. This estimate is from discussions with staff of the Koppers Corporation, the Water Pollution Control Federation, the Potomac Electric Power Company, and other industry sources. The 30-year estimate is appropriate for many mixes of equipment and structural components found in waste water treatment systems.

Data are not available on discards of PA P&E. Discards were assumed to occur symmetrically about the average lifetime, according to the modified Winfrey S-3 nonresidential retirement pattern.

Editor's note

In 1980, BEA, in cooperation with the Council of Economic Advisers, the Office of Management and Budget, and several other Federal agencies, prepared new estimates for 1955–80 of the high-employment budget for the Federal Government. These estimates, along with an analysis of the results and a description of the improved methodology, were published in the November 1980 Survey of Current Business. With that publication, BEA assumed responsibility for the maintenance and improvement of the current and historical high-employment budget estimates. Subsequently, an article in the April 1982 issue of the Survey presented revised estimates. The revisions were primarily due to the most recent comprehensive revision of the national income and product accounts, but also

incorporated statistical updating and some small improvements in methodology. In addition, the April article introduced estimates of changes in the high-employment budget due to the automatic response of Federal receipts and expenditures to inflation. The inability to separate the inflation-induced changes in the high-employment budget from other changes had been a major limitation of the previously published estimates as a measure of discretionary fiscal policy.

In what follows, William Fellner, of the American Enterprise Institute, presents a critique of the high-employment budget and of potential output—an integral part of the methodology of the high-employment budget—that takes off from the two Survey articles. Frank de Leeuw and Thomas M. Holloway, of BEA, respond.

The High-Employment Budget and Potential Output

A Critique

I. Introduction and Summary

THIS note is motivated in part by dissent from basic premises underlying many writings on the high-employment budget, including Frank de Leeuw and Thomas M. Holloway's article in the April 1982 issue of the Survey of Current Business. The de Leeuw-Holloway article is a sequel to that published in the November 1980 issue and written by the same authors and by Darwin G. Johnson, David S. McClain, and Charles A. Waite. Some of the reasons for my dissent from the approach used by these authors as well as by earlier contributors were explained in the 1978 volume of the American Enterprise Institute's Contemporary Economic Problems series, and the present note develops that critique further.1

By WILLIAM FELLNER

However, the motivations of this note are not entirely critical. There exists an area of overlap between the approach with the premises of which I disagree and approaches that have been gaining ground over the past years and that will, I hope, continue to gain ground. The existence of this overlap needs to be stressed all the more because the recent contributions of the authors named above have advanced their approach in such a way that various improvements they have made will prove valuable to researchers regardless of their macroeconomic orientation. I will, therefore, first comment on what I regard as the merits of their contributions.

Given the effective tax rates on the incomes of various types and sizes accruing in a country, and given the fiscal commitment of its government, fiscal receipts and expenditures—hence deficits or surpluses—are significantly influenced by the level of economic activity. It is clearly useful to try to obtain good estimates of this effect. Such information is indeed needed, if for no other reason, because it is impossible to estimate the consequences of discretionary changes

in tax or expenditure provisions without forming an opinion of how budgetary outcomes were influenced in the past and may be influenced in the future by changes in the activity level.

In their contribution of April 1982, de Leeuw and Holloway have rightly stressed that the determinants of the budgetary outcome other than the level of economic activity-hence the determinants of the budgetary outcome at any given level of activityinclude not only the legal-institutional provisions on which the tax intake and the expenditures depend at any given price level, but also the rates of price change. Quite aside from changes in relative income shares usually brought about by inflation, the inflationary bracket creep and underdepreciation—which, for reason, have received much attention recently-tend to raise fiscal revenues

Note.—The author is Resident Scholar at the American Enterprise Institute and Sterling Professor of Economics, Emeritus, Yale University. The views expressed are those of the author and should not be ascribed to the Institute or to the U.S. Department of Commerce.

^{1.} See in that volume my "Structural Problems Behind Our Measured Unemployment Rates," particularly the section on "The Conventional Concept of Potential Output and the Problem of Rigidities," pp. 84-95.

in relation to expenditures. It is a merit of the de Leeuw-Holloway contribution that it suggests a method for quantifying the effect of inflation on the budget deficits and surpluses of successive periods. The de Leeuw-Hollway method makes it possible to divide changes in the fiscal receipts and expenditures of successive quarters into two components for levels of output described as "high-employment levels" or "potential levels." These two components are (a) the change that is brought about by changes in effective tax rates and/or in fiscal commitments at an unchanging inflation rate, given the assumed high-employment (potential) level of output, and (b) the change that is brought about by the observed changes in the inflation rate.

An admitted imperfection of the de Leeuw-Holloway method is that the inflation effect on the budget is estimated using the observed inflation rate, and this rate is not the same as the one that would develop at other activity levels, such as the level that the authors assume to be the level of potential output. But this imperfection I consider inevitable, as apparently do the authors, because there exists no reasonably sound method for estimating the inflation rate corresponding to alternative levels of economic activity.

In the foregoing paragraphs I placed the emphasis on what I regard as a common ground. I will now turn to two points of disagreement with the usual presentations, including that of de Leeuw and Holloway.

The first point relates to the significance attributed to the potential output, in terms of which the highemployment budget is defined. This is the output of which it is assumed that it would have become the actual output if the demand for goods and services had been kept sufficiently high, but not so high as to generate inflationary instability.

I will argue that the concept of an output path so described is unhelpful and is apt to become a source of confusion. In the real world, the size of an economy's output potential depends on a large number of variables, including supply-side variables, which are not specified in the models used to obtain the output path for which the high-employment budget is de-

fined. Behavior on the supply side is strongly influenced by the demandpolicy posture, and hence it is not a given to those in charge of these policies. Researchers employing the concept of a potential output to be brought about by demand policies can merely give the superficial appearance of deriving that concept from the characteristics of the real world. It is impossible to get around this difficulty by directing attention mostly period-to-period changes in the high-employment budget, rather than to its level in any one period, because the potential levels of output, and hence the levels of the high-employment budget, are not well-defined magnitudes for any period. Thus, the same arbitrariness that attaches to levels also attaches to changes.

As I see it, providing useful quantitative information to policymakers about budgetary outcomes requires, in addition to estimates of the actual outcome, estimates of how, given all statutory measures and the institutional setting in general, the budgetary outcomes vary within ranges of activity levels and of inflation rates considered to be of interest. The subjective judgment of the expert would then be limited to deciding the width of the range in which the users of the estimates are apt to be interested; even in this decision he would receive some guidance from political decisionmakers and others using the estimates. Within such a reasonably defined range, it would presumably be necessary to select discrete levels of activity and of inflation, although the possibility exists that relations would be found that indicate how the budgetary outcome changes when a move is made from one level to another within the range.

The view I am expressing is consistent with the conviction that orienting demand policies directly to specific "real" results—such as a politically acceptable high-employment path or real GNP—is not a useful policy objective. Under a demand policy known to set itself such "real" objectives, it becomes necessary to accommodate inflationary cost-setting practices developing from the expectation that the authorities will not abandon their "real" objectives even if the price level should rise. Thus, the cost trend will soon start steepening, but the ac-

commodation of this steepening must occasionally be interrupted in order to prevent its getting out of hand at an early stage, and the environment so created is one of significant uncertainty and of low efficiency. Over any reasonable time horizon, a much better output performance is apt to develop under a policy that conditions price expectations, and thus wage and other cost trends, to a consistent average rate of nominal demand creation over cycles as a whole and that thus achieves a reasonable degree of general price stability. Even such a policy is based on the belief that, once market expectations have become geared to a given rate of nominal demand creation over the cycle, there will correspond to that path of nominal GNP a path of real GNP that leaves room merely for a price trend that can reasonably be regarded as noninflationary. practically belief implies that even policymakers oriented to nominal demand expect the trend in real output to fall in a range of moderate width. Yet there exists an essential difference between a policy so described and one based on the assumption that the characteristics of a specified potential output path are known and that it is possible to estimate the demand that will call that path into being.

A policy oriented to nominal demand creation over the cycle as a whole can serve notice to the market participants that the size of the real output for the marketing of which demand will be made available depends on the cost trends and that, hence, the marketable output depends on the behavior of the market participants. Conveyance of this message is an essential property of such a policy. In contrast, while a policy oriented to a real output objective such as potential output is assumed to be compatible with the avoidance of inflationary instability, the assumed compatibility rests on guesswork that is apt to prove wrong once market participants have figured out that the decisionmakers are guided by those objectives. This statement assumes a political environment in which wage and price controls are recognized to be inefficient means of reconciling policy obiectives.

The second point of disagreement concerns the reasons why budgetary

outcomes are significant. I will suggest that any statement about these deficits reasons—particularly why and surpluses at alternative activity levels deserve attention-would have to be based on analysis of greater complexity than that implied in most of the recent presentations. These presentations, including de Leeuw and Holloway's, overemphasize macroeconomic expansionary or restraining effects as reasons why deficits and surpluses matter, and the analysis then loses sight of the effect on the consumption-investment mix.

II. Failure of the Potential Path To Represent a "Normalized" Version of Reality

ALL estimates of the path of potential output-the path for which the high-employment budget is definedmust be based on personal judgment of a distinctly subjective kind, and the judgment is no less subjective if reached by the reconciliation of the views of cooperating researchers or decisionmakers. Usually two types of such judgment are made in tracing the path of the potential output, which, it is claimed, would be the actual path if the final demand for goods and services were continuously held at the level inducing a movement along that path.

One of these judgments relates to the period (quarter or year) in which conditions are such that the researcher is led to set potential output equal to actual output. The other relates to the rate of increase of potential output over a span beginning or ending with a period of the assumed equality. The rate of increase of potential output is conceived of as determined by the growth of the quantity of inputs and of their productivity in circumstances in which the inputs and their productivity grow at their potential rate.² Given that the path of

potential output is assumed to be the actual path if demand is kept growing at the appropriate rate, the potential increase in the quantity and the productivity of the inputs are also regarded as those that would materialize if demand were kept as high as possible without destabilizing the economy through price pressures. But the difficulty is that this is an exceedingly hazy conception, one behind which there are vague implications rather than elements of a consistent analytical system.

The potential paths—those inputs, productivity, and output-that are consistent with the foregoing description depend on a substantial number of determinants of supply behavior in input markets and in markets for final goods and services. These determinants include (1) the preference functions of individuals on the supply side of the markets, (2) the tax structure, (3) the system of transfer payments, (4) the network of regulations, (5) the degree and types of competition in all markets, and, equally important, (6) the public's perception of the basic posture of the authorities in matters of demand-policy. No one in our profession claims to have a reasonably dependable quantitative estimate of the significance of each of these determinants, and these may not even make up a complete list. Yet estimates of potential output are used by the official agencies of the United States and other Western countries as well as by the staffs of important international organizations, and these estimates tacitly imply the effect on supply behavior of the determinants I have listed.

The last of these determinants, market participants' perception of the authorities' demand-policy posture, is because the important question whether a demand policy succeeds in inflationary avoiding instability. which along the path of the potential output is supposed to be avoided, depends significantly on the interpretation placed by the markets on the authorities' demand-policy posture. A high-employment path, initially assumed to avoid inflationary instability, will usually turn out to result in such instability once the authorities are known to be committed to promoting that path.

As a result of the difficulties I stressed, the researcher employing the concept of potential output and its budgetary corollary is driven to rely on makeshifts. Given the available information on trends in the various demographic classes, he seeks to "correct" the observed output for the distorting effect of "abnormalities" caused by insufficiencies and excesses of demand. Because of the inevitable vagueness of the judgments involved in this procedure, the resulting "potential" threatens to become a pure figment of the imagination, and hence attempts are made to link the path of potential output, at least in some respects, to objectively ascertainable properties of reality. This need for a link typically expresses itself in the suggestion that the path of potential output is a cycle-neutral path, that is, a path capable of being constructed by removing the cyclical disturbances from the actual path.3 But this, too, is a much less well-defined concept than the words would suggest. The data listed in table 1 can hardly be said to suggest any convincing link between the de Leeuw-Holloway series of potential output and a cycle-neutral or "normalized" version of reality.

For the entire period covered by the table—a period including four business cycles—the growth of the potential GNP does indeed equal that of the actual GNP.4 But this is the only respect in which the potential path is anchored successfully to a conception of "normalized" reality-and this is not very much. Even for the period as a whole, the average unemployment rate along the potential path was 1 percentage point lower than the actual rate. Moreover, for three of the four business cycles in the table, there are substantial differences not only between the unemployment rate along the potential path and the actual unemployment rate, but also between the growth rates of potential real GNP and of actual real GNP.

^{2.} Researchers frequently focus on increases in labor hours and in output per labor hour, on specific assumptions concerning other inputs and concerning technological progress.

^{3. &}quot;Cycle neutrality" is explicitly claimed for the concept of the "potential" in the analysis developed by the International Monetary Fund. See the reference in footnote 12. De Leeuw and Holloway call the potential GNP "the trend level of output from which cyclical deviations are measured in calculating the high-employment budget."

^{4.} Rounded to the first decimal, both growth rates are 7.7 percent. For the entire period covered by de Leeuw and Holloway (1955-81), the two rates also round to the same number (7.3 percent).

Table 1.—Measures of the Actual and the Potential Path, 1957-79

[Percent]

		nual compound		Average une		
Business cycle 1	Current	dollars	1972 d	ollars	Along	
	Actual GNP	Potential GNP	Actual GNP	Potential GNP	potential path	Actual
1957-60 1960-69 1969-73 1973-79	(1) 4.4 6.9 8.5 10.0	(2) 5.3 6.2 8.5 10.5	(3) 2.5 4.3 3.6 2.8	(4) 3.4 3.6 3.6 3.3	(5) 4.0 4.3 4.8 5.1	5.5 4.9 5.0 6.7
1957-79	7.7	7.7	3.5	3.5	4.5	5.5

Note.—The de Leeuw-Holloway series cover 1955-81. During these years actual GNP is assumed to equal potential GNP in the second quarter of 1966 and in the fourth quarter of 1969. (The first of these quarters falls outside the span covered by this table because it covers only year-of-peak to year-of-peak periods.) The actual unemployment rate is assumed to equal the unemployment rate along the potential path in the year 1955. (As it turned out, the actual rate was equal to the rate along the potential path also in the first quarter of 1956, the first quarter of 1957, and the second quarter of 1973.)

Thus, in no usual sense of the term is it convincing to speak of the "cycle neutrality" of the potential GNP. The construction of the potential series, and hence of the corresponding highemployment budget, involves a substantial degree of arbitrariness.

It is possible to go even a step further in this criticism by pointing out that, if by common-sense criteria the concept of the potential touches on characteristics of the real world in some respects, then it is very unlikely to do so in many others. These inconsistencies occur because the concept of potential lacks an analytical structure that would anchor it to the real world in a systematic fashion. To illustrate: By criteria that are largely intuitive but reasonably convincing, it does "make sense" to assume, as de Leeuw and Holloway do, that in the second quarter of 1956 the real GNP was at its potential level (see note to table 1). Yet it makes very little sense to say that in 1973-79, a significantly inflationary period, the path of potential real GNP was rising at an annual rate of 3.3 percent while that of actual real GNP was rising at a rate of 2.8 percent, or that in the same period the potential path would have been associated with a 5.1-percent average unemployment rate in contrast to an actual rate of 6.7 percent. At the end of that period, in the cyclical peak year 1979, the potential output is said to have been 1.4 percent higher than the actual output, and the corresponding unemployment rate is said to have been 0.7 percentage point lower than the actual rate,

although from 1978 to 1979 the GNP deflator rose 8.5 percent and the Consumer Price Index no less than 11.3 percent. It is very difficult to relate to reality a "potential" that exhibits this behavior, or even to attach any essential meaning whatever to such a "potential.'

III. Survival of a Concept Despite Its Deficiencies

THERE are several signs of awareness of these difficulties-perhaps even of the legitimacy of the objections I am expressing—on the part of experts estimating and employing the concept of potential output and of the high-employment budget.

De Leeuw and Holloway call the reader's attention to the fact that "there is a wide range of plausible estimates of the potential GNP." They illustrate this very convincingly by providing specific figures in the text (not in their tables) for what the potential output and high-employment budget would have been if for 1975-81 they had assumed that the unemployment rate associated with the potential output was 6.0 percent instead of the 5.1 percent underlying their series. The reader learns that the difference would have been large.

Similarly noteworthy are the discussions of ambiguities contained in the Council of Economic Advisers' explanations of various revisions of the estimated path of potential GNP. The latest revision accompanied by a somewhat detailed discussion of the reasons for it appeared in the January 1979 Report of the Council (pp. 72-76), and it is impossible to go through that discussion without becoming conscious of the amount of personal judgment involved in the procedure by which the revised figures were obtained.

The question arises why, in spite of these acknowledged difficulties and in spite of frequent ex post facto revisions of official estimates of the potential output, that concept and its budgetary and other corollaries have so far survived. I think the answer is that all these concepts fit in rather well with a particular view of macroeconomics my dissent from which was expressed on earlier occasions and was repeated in the introductory section of the present paper. This was for some time the dominant view-a view that had become frozen into the orthodoxy of several decades; I think this view is about to lose its dominance, although it is still held by many economists.

As I have argued, the concept of the potential output and its corollaries fit into a macroeconomic view that takes for granted a supply-side trend compatible with reasonable price stability, although such stability is exceedingly unlikely to develop under a policy focused on the achievement of a specified high-employment output path. I consider it fortunate that there is much more appreciation of this criticism than there was a few years ago, and also more understand-

^{1.} Years shown are years of cyclical peak.
2. Rates of increase are from each year of cyclical peak to next.
3. Last year of each cycle is excluded from average to avoid double counting of peak years.
4. Includes 4 years, 1966–1969, during which the actual unemployment rate fell short of the unemployment rate along the potential path. During these 4 years actual GNP exceeded potential GNP,

ing of the undesirability of wage and price controls as a means of circumventing the basic difficulty. Yet for the time being these issues remain hotly debated, and scrapping the apparatus employed on one side of the debate—i.e., the apparatus of potential output and its corollaries—would not meet (or not yet meet?) with general approval among economists.

IV. The Expansionary and Contractionary Effects and the Effect on the Consumption-Investment Mix

IN addition to being critical of the concept of potential output and of the high-employment budget, I want to express the conviction that, aside from a few exceptions, the usual presentation of these concepts directs attention far too exclusively to expansionary and contractionary effects as the relevant criteria for appraising the significance of deficits and surpluses. I shall suggest at the end of this note that several decades ago the originators of the high-employment budget concept seem to have had different criteria.

The opening statement of the de Leeuw-Holloway article reads: "The high-employment budget provides a summary measure of the effects of a Federal fiscal program on aggregate demand. It is a better measure for this purpose than the actual budget because it excludes the changes in receipts and expenditures that are automatic responses to fluctuations in economic activity." The suggestion here clearly is that, on implied "other things equal" assumptions, to which I will return, a move to a high-employment deficit or toward a higher such deficit tends to raise aggregate demand in an economy conceived of as initially placed on the path of the potential output, while a move toward a high-employment surplus or toward a higher such surplus, tends to have the contrary effect, and that the emphasis belongs on these consequences of the high-employment budget.

On the same implied "other things equal" assumptions, an actual deficit, such as develops even in the event of a balanced high-employment budget when output falls short of the potential, also has a demand-raising effect: and an actual surplus, such as develops even in the event of a high-employment balance when output exceeds the potential, also has a demand-moderating effect. But these built-in (automatic) stabilizing effects of the difference between the actual and the high-employment budget merely reflect existing deviations from the potential output level.

This overemphasis on expansionary and contractionary budgetary effects detracts attention from the restrictive nature of the implied "other things equal" assumption, and it detracts attention also from the effect of deficits on the consumption-investment mix.

The "other things equal" assumption implied in the analysis placing all the emphasis on expansionary and contractionary budgetary effects relates to monetary policy. The assumption involves regarding the money supply as given, because in normal circumstances expansionary or contractionary effects of deficits or surpluses can be offset by reduced or stepped-up money creation. The circumstances in which this is not the case are those of the Keynesian "liquidity trap" (absolute liquidity preference).5 These circumstances may arise in some phases of depressions, but they command little interest in the analysis of typical relations in a present-day economy.

Moreover, even on the implied assumption of a given money supply, the demand-raising (or reducing) effects of budgetary deficits (or surpluses), on which the usual presentations place all the emphasis, can result only from reduced (or increased) money holdings per unit of expenditure, that is, from increased (or reduced) velocity. Thus, focusing on the demand-raising (or reducing) effects of the budget involves concentrating on what in terms of the equation of exchange are money-velocity effects.

Such effects are likely to develop from deficit-financed government expenditures to the extent that the public regards the government securities by which deficits are financed as money substitutes, that is, as assets which money is obtainable promptly at very little cost when needed. But there is reason to be critical of a procedure that stresses these velocity effects assuming that they are not offset by adjustments of money creation, and that does not even mention the strong presumption that, given the level of activity, deficits reduce and surpluses increase private investment. In the United States, although not in all Western countries, private investment includes practically all investment of enterprises.

The proposition that deficits are financed by saving that would otherwise be available for financing private investment, and the analogous proposition for surpluses, are subject to qualifications that should not be overlooked; I will briefly consider them in the next section. But the burden of proof remains on those who might attribute decisive importance to these qualifications and therefore might suggest disregarding the effect of deficits and surpluses on the consumption-investment mix. This effect has been receiving increasing attention, and I think rightly so.

To simplify the analysis of budgetary effects on the consumption-investment mix, it is advisable to assume that the overall macroeconomic expansionary or contractionary effects of the budget are offset by monetary policy. By thus setting a given level of aggregate output, it is possible to avoid dealing with two problems at the same time and to concentrate on the consumption-investment mix at that output level. The proposition that, for a given output level, deficits reduce private investment in relation to consumption (and surpluses increase investment) has strong foundations in general observations and common-sense reasoning.

The proposition rests on the view that members of the public consider themselves savers to the extent that they refrain from consumption in order to buy government securities. Hence, to the extent that they behave in this way, the public is "saving" in a form that takes the place of forms

^{5.} These are circumstances in which the demand for money is infinitely elastic to interest rates, and all increases (or decreases) in the money supply result merely in increased (or deceased) money holdings per unit of expenditure rather than in increased (or decreased) expenditures.

that would make the saving available to private investors. Indeed, it may be asserted firmly that the public does put part of its conventionally defined saving-that is, income after taxes minus consumption—into government securities. 6 Qualifications of the conclusion that deficits diminish the saving available for private investment imply, therefore, that if the saving as conventionally defined is partly used up for financing deficits, then the public will save more than it would otherwise save in order to achieve the objectives for which it is saving.

V. Qualifications of the Investment-Reducing Effect of Deficits

IF the qualifications to be considered in this section were completely disregarded, government deficits would have to be viewed as displacing private investment by the full amount of the deficits. However, it would be wrong to disregard these qualifications, the more relevant of which emphasize the fact that the purchase of the government securities representing the deficit may occur jointly with a downward revaluation of components of the purchaser's net worth in terms of goods and services (his "real" net worth). This downward revaluation may, in turn, induce the buyers

of government securities to save more in the conventional sense (current income minus consumption) to make up for the loss. If there is more saving, there is an offset to the investment-reducing effect of deficits.

To be specific, one reason given by some economists for qualifying the proposition concerning the saving-absorbing (investment-reducing) effect of deficits is that deficits increase the future flow of tax liabilities, and that, therefore, a public fully aware of this should not regard government securities as sources of a future flow of benefits. Hence, a well-informed public should not, on balance, interpret its acquisitions of government securities as true saving in the sense relevant to its behavior, that is, as relevant to the objectives it is pursuing by its saving decisions. This is essentially David Ricardo's alence theorem" as formulated, for example, in chapter XVII of his Principles. According to this theorem, the appropriate insights on the part of the public would prevent the emergence of a difference between the effects of tax-financed and deficit-financed public expenditures: In the event of deficit-financing, the present value of the future flow of the resulting tax liabilities merely takes the place of what the present tax liabilities would be in the event of tax-financing.8 But Ricardo, who called attention very clearly to the logical foundations of this theorem, did not believe that the public really behaved in this fashion. He believed—rightly, I think—that given the public's actual behavior, deficits do channel saving away from investment.

As I see it, the "equivalence theorem" disregards at least two aspects of the problem of deficit-financing. One of these is that the future flow of

tax liabilities, which the theorem stresses, will become largely a burden of future generations, and, in the appraisal of the present savers, the interests of those generations are not truly equivalent to their own. The other is that, within limits, the servicing of the public debt can be undertaken by issuing additional government securities, rather than by taxation. The point here is that, if in a growing economy the servicing of the public debt by issuing additional government securities does not exceed specifiable limits, interest on the debt will not show a rising trend in relation to income, and a sustainable path may develop. So much for the equivalence theorem and its limitations.

The proposition concerning the investment-reducing effects of deficits has recently been said to be subject to limitations for a different reason. Although unrelated to the equivalence theorem, and suggesting a less sweeping qualification, this argument also builds on the assumption that a public placing part of its conventionally defined saving in government securities does not regard the entire amount so "saved" as saving in the sense relevant to its own behavior. Assume that in an inflationary era the public is promised and receives, say, 15 percent interest on government securities purchased out of its income. Even if the public considers 10 percentage points of the 15 an inflation premium, in the conventional sense it still will have saved the equivalent of the entire amount of the security purchase. According to this argument, however, the public will behave as if it were a true saver only to the equivalent of 90 percent of the security purchase; the remaining 10 percent is needed to avoid a loss in real terms. Consequently, while the conventional definition of savingincome after taxes minus consumption-includes in the public's saving the entire nominal value of these securities, the public will be found to save more in the conventional sense than it would have if there had not been a 10-percent inflation premium. In the sense of the conventional saving concept, the public will save the 10 percent in question additionally. Hence, to the extent of the inflation premium included in the nominal interest on government securities,

^{6.} To be precise, in addition to consumption, the interest paid by consumers to business and transfer payments to foreigners are also to be deducted from income after taxes to arrive at personal saving. Moreover, if one wished to include corporate saving, one would have to add to personal saving the difference between corporate profits after taxes (with the inventory valuation and capital consumption adjustments) and dividend payments. I will explain in this footnote why, for the present specific purpose, it is preferable not to add corporate saving defined in this way to personal saving.

The reason is that much of the discussion in the next section will be concerned with qualifications of the proposition that deficits fully divert saving from private investment, and an analysis of this problem needs to focus on the difference between saving in the conventional sense and changes in net worth, including "real" revaluations. A discussion of the effect of revaluations on saving in the conventional sense calls for valuing and revaluing corporate assets on the basis of the judgment of stockholders, rather than by reference to any of the valuation methods that are implied in the corporate saving concept. This conclusion speaks for interpreting changes in net worth as resulting from personal saving plus asset revaluations, including stock-market revaluations.

^{7.} See footnote 6 for the conventional definition of

saving.

8. Even if the public had the insights here assumed, this theorem would not imply that private investment, which in the United states includes almost all investment of enterprises, suffers no reduction. Tax-financed government expenditures, unless they are of specific types that are complementary with private investment, also reduce private investment to some extent. This is because they reduce disposable income at any given level of GNP, and this normally reduces not only consumption, but to some extent also the saving of the public. But this is, of course, a far cry from suppression of investment by the full amount of tax-financed government expenditures.

the deficit will, according to this argument, not cut into the saving available.

However, as Phillip Cagan has stressed, this qualifying argument should at any rate draw a distinction between allowances for anticipated inflation rates expressing themselves in the nominal interest rates and unexpected losses in the real value of assets suffered by security holders subsequently.9 It is convincing to suggest that income recipients firmly expecting to suffer a loss on the real value of a security that they are acquiring will compensate for this by saving more from the outset in the conventional sense of the term, in order to achieve their true saving objective. Yet, even if they do behave in this fashion when they expect the loss, they are very likely to give themselves quite a bit of time for gradually (and perhaps only partially) making up by additional saving any unexpected real loss of which they may become aware at some subsequent stage in the later course of events.

We have now considered the two analytically significant qualifications to which the proposition concerning the investment-reducing effect of deficits is subject. A third qualification often referred to is sufficiently different from the two qualifications just discussed to justify, in the present context, its relegation to a footnote. 10

As to the first of the analytically significant qualifications of the investment-reducing effect, I gave reasons for believing that Ricardo's judgment was sound when he suggested that, in the mind of the public, the acquisition of new government securities does not

typically become associated with the need to deduct from the private wealth the discounted value of an additional flow of future tax liabilities. And as to the other qualification—the qualification based on the assumption that saving in the conventional sense will rise if inflation reduces the real value of the government securities that finance the deficit—this does not suggest that, on balance, deficits do not cut into the saving available for private investment; it merely suggests that the extent to which deficits cut into such saving is reduced by the public's awareness of a loss in the real value of government securities due to inflation. Furthermore, I agree with Cagan that the magnitude of any such effect depends on how much of the inflationary decline in real value is expected, that is, has become incorporated in the nominal rates of interest.

The real problem so posed is part of the more general problem of the effect of the real revaluation of assets-not just of government debton saving as conventionally defined. Most economists would rightly be reluctant to base strong assertions about this effect on the quantitative information now available. My own very tentative reading of the data suggests the likelihood that downward real revaluations of assets have exerted a moderate positive effect on saving ratios (and that upward real revaluations have exerted the opposite effect), and this reading would leave a modest amount of room for one of the qualifications of the investment-reducing effect of deficits. But any suggestion about the size of the revaluation effects on saving ratios must indeed be described as tentative. These suggestions must remain tentative even in cases in which the real revaluations do not simply reflect changes in the real rate of interest, that is, in cases in which downward revaluations do clearly express a loss and upward revaluations a gain to the saver owning the assets. Even in these cases, serious difficulties stand in the way of quantitative appraisals of the effects of the revaluations on saving behavior partly because, in the long run, cumulative real revaluations of all household assets jointly considered are small—and are probably also expected to remain small—as compared with cumulative incomes and partly because there is a very large discrepancy between the saving ratios derived from the national income and product accounts and those derived from the flows of funds. This discrepancy is disturbing because it remains large even after allowance for the differences in the concepts underlying the two series.

It follows that some questions had better be left open at this stage, in part because more help is needed from the statistical agencies. But it also follows from the foregoing analysis that these open questions relate not to whether at given levels of activity deficits divert saving from investment, but merely to the possibility that the extent of this diversion is reduced by the behavior described in the discussion of qualifications. It is safe to conclude that the main thrust of a reasonable argument lies in the proposition that deficits divert saving from investment, not in the qualifications that the net-worth effect of an expected flow of future tax payments and the inflationary reduction of real asset values induce an increase in saving. This is the reason why, in addition to being critical of the concept of potential output and of the corresponding concept of the high-employment budget, I do not favor placing almost exclusive emphasis on expansionary and contractionary effects of the budget. Instead, I favor calling attention to the relation of deficits and of surpluses to the saving available for investment. The conceptual and statistical difficulties involved in doing this satisfactorily must not be underrated, but promising new beginnings have been made in this direction in various quarters. 11

In fact, as concerns the recognition of the bearing that deficits and sur-

^{9.} Phillip Cagan, "The Real Federal Deficit and Financial Markets," AEI Economist, November 1981.

^{10.} This qualification expresses itself in the proposition that deficits in any one country need not channel away from investment the saving of the same country, because the interest-raising effect of the deficits may generate a capital inflow from abroad. This is true but is of doubtful significance in the present context. If capital is sufficiently mobile, the absorption of domestic saving by deficits may not greatly reduce the accumulation of physical capital in the domestic economy, but there will be an accumulation of foreign claims against the domestic economy. Secondary advantages may nevertheless develop to the domestic economy from such capital formation even if the resulting capital involves foreign ownership. These secondary advantages to the domestic economy are apt to result from complementarity effects of other inputs (particularly of labor) with capital.

^{11.} See the International Monetary Fund, World Economic Outlook, Occasional Paper No. 9 (Washington, D.C.: International Monetary Fund, 1982), pp. 105-07, and tables 55-57. See also the observations in the Annual Report of the Council of Economic Advisers, in Economic Report of the President (Washington, D.C.: U.S. GPO, 1982), p. 95 ff.

pluses have on the consumption-investment mix at given levels of economic activity, it is less appropriate to speak of new beginnings than of a return to the viewpoint of those who pioneered the concept of the high-employment or "full-employment"

budget. In their November 1980 article, de Leeuw et al. rightly assign this pioneering role to the Committee for Economic Development (CED), and they do so by reference to Herbert Stein's account and analysis of the CED's deliberations in the years immediately following World War II. ¹² From Stein's analysis, it appears that the CED's view of the problem recognized the possibility of achieving any

level of economic activity, including a high-employment or "full-employment" level, with different receipt-expenditure relations, depending on the monetary policy. From the same analysis it also appears that, when proposing emphatically a fiscal policy resulting in a surplus at what it considered a feasible "full-employment" level, the CED was motivated largely by the desire to promote investment.

A Response

FELLNER'S central points, we believe, are his criticism of using potential GNP as a policy target and his criticism of overemphasizing the shortrun expansionary and contractionary effects of fiscal policy. We agree with much of what Fellner has to say about these central points.

However, we will argue that these points have more to do with how the high-employment budget is usedand, even more, with how potential GNP is used-than with how the high-employment budget is constructed. Furthermore, the uses that Fellner criticizes are much less in evidence today than they were a decade or more ago. One possible implication of his criticisms is that potential GNP should be revised or replaced by an alternative trend. As far as we can see, there are no implications for the rest of the high-employment budget methodology-the gross-up method, the elasticity estimates, the treatment of automatically indexed expenditure programs, and all the other steps that constituted the subject matter of our two articles.1

We begin with some observations on the various uses of potential GNP and of the high-employment budget. Next, we comment on Fellner's points

By FRANK de LEEUW and THOMAS M. HOLLOWAY

about potential GNP. We then comment on his points about the overemphasis on the expansionary-contractionary effects of the Federal budget. Finally, we draw some conclusions about the measurement of the Federal Government impact on the economy.

Uses of potential GNP and of the highemployment budget

Potential GNP has been used in two principal ways: as a target for policy and as a trend from which cyclical movements in GNP are measured. The policy-target use was important in early discussions of the highemployment budget by the Committee for Economic Development (CED) and in Economic Reports of the President.2 The 1962 Economic Report, for example, defined potential GNP as the level of real GNP corresponding to a 4-percent unemployment rate, and stated that "an unemployment rate of about 4 percent is a reasonable and prudent full employment target for stabilization policy."3

Recent discussions of potential GNP have emphasized its use as a trend

rather than as a policy target. The 1978 Economic Report of the President, for example, stated that "the use of high-employment GNP as the level of activity underlying this hypothetical budget [i.e., the high-employment budget] is a convenient but arbitrary convention. The purpose is to adjust the budget for cyclical changes in the economy, and this could as well be accomplished using any other trend path of GNP." 4 Denison has defined potential GNP as output corresponding to a 4-percent unemployment rate and certain other conditions, and emphatically stated that "potential output each year would not represent a target for demand management policy." 5 Our articles on the high-employment budget also used potential GNP as a trend rather than as a policy target.6

Parallel to this shift in the use of potential GNP has been a shift in the

^{12.} Herbert Stein, *The Fiscal Revolution in America* (Chicago and London: University of Chicago Press, 1969), especially pp. 220 ff.

^{1.} The articles did not discuss potential GNP in any detail, noting that the Council of Economic Advisers, rather than BEA, provides the estimates of potential CNP.

^{2.} Taxes and the Budget: A Program for Prosperity in a Free Economy (New York: Committee for Economic Development, 1947), pp. 31-32. Fiscal and Monetary Policies for Steady Economic Growth (New York: Committee for Economic Development, 1969), pp. 60-61.

^{3.} Economic Report of the President (Washington, D.C.: U.S. GPO, 1962), p. 46.

^{4.} Economic Report of the President (Washington, D.C.: U.S. GPO, 1978), p. 54.

^{5.} Edward F. Denison, "Changes in the Concept and Measurement of Potential Output in the United States of America," in Joachim Frohn and Reiner Stäglin, eds., Empirische Wirtschaftsforschung: Konzeptionen, Verfahren und Ergebnisse (Berlin: Duncker & Humblot, 1980), p. 23. Italics are Denison's.

^{6.} Frank de Leeuw, Thomas M. Holloway, Darwin G. Johnson, David S. McClain, and Charles A. Waite, "The High-Employment Budget: New Estimates, 1955-80," SURVEY OF CURRENT BUSINESS 60 (November 1980): 16, 18. Frank de Leeuw and Thomas M. Holloway, "The High-Employment Budget: Revised Estimates and Automatic Inflation Effects," SURVEY 62 (April 1982): 21.

use of the high-employment budget. Early CED discussions emphasized the use of the full-employment budget, as it was then called, in setting targets for fiscal policy. The CED "stabilizing budget policy" called for a small surplus in the full-employment budget. The Economic Reports of the President have only occasionally used the high-employment budget in this way. The 1973 Economic Report was the last one in which the level of the high-employment budget was used for setting targets; it stated that a balanced high-employment budget "is the best single guide to a budget policy that neither pushes the economy above its desired growth rate nor holds the economy below it." 8

More recent discussions of the highemployment budget have used it merely as a cyclically adjusted indicator of changes in fiscal policy, without any implication that a given surplus or deficit is too low or too high. The 1974 Economic Report stated that, despite serious limitations in the measurement of potential output, "the fullemployment surplus calculation based on the traditional concept of the potential GNP that is consistent with 4 percent unemployment is useful in the long run for evaluating changes in fiscal policy." 9 Later Economic Reports continued to use the high-employment budget as an indicator of changes in fiscal policy. Our articles also clearly emphasize this use.

Potential GNP

Fellner's central criticism of potential GNP is that its use as a policy target is unwise. Defining potential GNP as "the output of which it is assumed that it would have become the actual output if the demand for goods and services had been kept sufficiently high, but not so high as to generate inflationary instability," he states that it is difficult to measure, and

clearly believes that recent estimates have been too high. 10 Even if the estimates of potential GNP are correct, furthermore, Fellner argues that trying to move the economy along the potential GNP path would be inflationary because policymakers would be tempted "to accommodate inflationary cost-setting practices developing from the expectation that the authorities will not abandon their 'real' objectives even if the price level should rise." We agree with Fellner that a policy of closing the gap between actual and potential GNP (as he defines it) through demand management is often hazardous-a position that an increasing number of economists have come to take in the last few years.

However, we do not feel that much follows from all this for the measurement of the high-employment budget. If potential GNP and the high-employment budget are used merely as indicators—as has been the case in recent years—then we see no harm in the present method of measurement, even when potential GNP exceeds the path of GNP consistent with no inflationary instability. As long as no inferences are drawn about the desirable level of the high-employment surplus or deficit, the high-employment budget remains a useful indicator.

The only implication of Fellner's criticism for measurement of the high-employment budget, as far as we can see, is that when the high-employment budget is used merely as an indicator of fiscal policy, then there is no special argument for basing it on potential GNP rather than on some other measure of trend. Recognizing that potential GNP is difficult to define and measure, our initial article compared the high-employment budget based on potential GNP with alternative cyclically adjusted budget based on a 5-year moving average of GNP (and a 5-year moving Possibly the attractive name "potential GNP," associated with the attractive condition "high employment," might tempt policymakers to pursue unwise policies. We doubt that this temptation is an important factor; if it is, it advances the case for using some other measure of—or at least some other name for—the trend level of GNP.

Expansionary-contractionary effects of fiscal policy

Another central point in Fellner's critique is that discussions of fiscal policy have overemphasized its expansionary-contractionary effects and underemphasized its investment-substitution, or crowding-out, effects. Fellner considers some objections to the proposition that crowding-out is important but decides that these objections have only limited validity. We agree with much of what he has to say as it applies to the long run.

If discussions of fiscal policy have overemphasized expansionary-contractionary effects and underemphasized crowding-out effects, however, the remedy is simple; it is to discuss crowding-out more and/or expansionary-contractionary effects less. Our first article referred briefly to the expansionary-contractionary effects of fiscal policy and not at all to the crowding-out effects. We concede that this emphasis was probably one-sided; but we do not see that anything follows about the gross-up method, the estimation of elasticities, or any of the other technical steps in constructing the high-employment budget.

average of the unemployment rate). ¹¹ Apart from selecting a trend, the method of constructing a cyclically adjusted budget was exactly the same in the two cases. The article included a chart comparing the two budgets, and noted that quarter-to-quarter movements in the two were similar, but that there were differences over longer spans, such as the degree to which fiscal policy shifted toward a deficit from the 1950's to the 1960's.

^{7.} Taxes and the Budget, pp. 22-27.

^{8.} Economic Report of the President (Washington, D.C.: U.S. GPO, 1973), p. 74.

^{9.} Economic Report of the President (Washington, D.C.: U.S. GPO, 1974), p. 79.

^{10.} We note that Fellner's definition of potential GNP is not the usual one. For a review of alternative definitions and a criticism of the one Fellner chooses, see Denison, "Changes in the Concept and Measurement of Potential Output," pp. 21-23.

^{11.} de Leeuw, et al., "High-Employment Budget: New Estimates," pp. 30-31.

Conclusions

Fellner has raised some important issues about certain of the uses of potential GNP and the high-employment budget. We agree with some of his central criticisms of these uses; but we do not feel that these criticisms have important implications for the construction of the high-employment budget. At most, they may strengthen the case for moving away from a potential GNP series to some

other method of representing the trend component of GNP.

Any summary indicator of the effects of the Federal Government on the economy has its limitations, and the high-employment budget is no exception. Some of the limitations were discussed in the first of our articles. ¹² Other limitations stem from the fact

that the high-employment budget is restricted to Federal receipts and expenditures, and does not reflect the impacts of Federal credit programs or of changes in the real value of Federal debt and assets. In spite of these limitations, we think that at present the high-employment budget is a useful tool of analysis for economists of many viewpoints, and not—in Fellner's words—"the apparatus employed on one side of the debate" about economic policies.

^{12.} de Leeuw et. al., "High-Employment Budget: New Estimates," pp. 21-22.

Integrated Economic Accounts: Reply

In what follows, Richard and Nancy D. Ruggles, of Yale University, continue the discussion of prospects and problems of integrated economic accounts. The May issue of the Survey of Current Business presented the set of integrated economic accounts they prepared and their discussion of them; comments by producers and users of economic accounts, inside and outside of BEA; and background information.

Introduction

IN the May 1982 issue of the Survey OF CURRENT BUSINESS, a set of national income and product accounts and balance sheets was presented by the authors under the title "Integrated Economic Accounts for the United States, 1947-80." These experimental accounts were followed by eight comments by reviewers who had had substantial experience in the construction and/or use of the national accounts.1 This article responds to the issues raised by the reviewers, clarifies or amends some of the arguments advanced in the original presentation, and in general continues the dialogue on this topic.

The discussion is divided into three sections. The first section is concerned with the issue of integration of economic accounts: the role of the national accounts, the implications of integration for the sectoring of the accounts, and how microdata can be related to the macroaccounts. The second section deals with more de-

I. Integration of the Economic Accounts

A. The role of the national accounts in integration

1. The nature of integration.— Carson and Jaszi indicated in their comments that, although integration has long been recognized as a desirable objective, the presentation of the integrated economic accounts (IEA's) did not clearly specify what it meant by the term, either with respect to coverage or with respect to the kinds of linkages an integrated system's parts must exhibit. The point is very relevant-integration may be as respected as motherhood, but it is much more difficult to define. In one sense, the present national income and product accounts (NIPA's) and their supplementary tables constitute an integrated system of core accounts and related data. As Denison observed, the great strength of the NIPA's lies in their use of a few simple formal accounts that are supplemented by many supporting tables tied to these accounts. The supporting tables disaggregate the summary accounts in various ways and provide details of their composition.

In another sense, however, there is a broader role for the national accounts that suggests that they, because of their comprehensive nature, can and should provide a coordinating and integrating framework for all economic statistics. In this broader sense, the economic statistics of the United States cannot be considered to be well integrated, and the NIPA's do not play a large part. Integration in this broader sense would require using common definitions and classification systems consistent with the national accounts for related data from different sources, and establishing the major economic constructs of the national accounts as control totals to which various parts of the statistical system must be related. The United Nations System of National Accounts (SNA) envisages such a role for the national accounts in the integration of all economic statistics, and many other countries do use their national accounts to serve this purpose. But the NIPA's do not function this way in the U.S. statistical system. Rather, BEA considers its task to be primarily one of drawing upon a large number of fragmentary, diverse, and uncoordinated sources obtained from different government agencies, in order to piece together a set of core national accounts and supporting tables. Feedback, in terms of influence upon the basic data, is limited and in many instances nonexistent.

In both of these senses, integration is a matter of degree. There is, of course, no one point at which a statistical system becomes "integrated." Integration in the first sense can be increased by extending the comprehensiveness of the core system of accounts. In the second sense, it can be increased by utilizing the national accounts more fully as the framework for the wider statistical system. The IEA's attempted to move in both of these directions, by (1) expanding the NIPA core accounts to include financial transactions and stocks, and (2)

tailed questions relating to the definition and use of the transactor approach, the treatment of specific transactions, and the form of presentation of the accounts. A concluding section summarizes the views of the reviewers with respect to the proposed modifications and extensions and evaluates the role of the national accounts in the future development of the U.S. statistical system.

^{1.} The reviewers were Hans J. Adler and Preetom S. Sunga, Statistics Canada; Carol S. Carson and George Jaszi, BEA; Edward F. Denison, formerly at BEA; John A. Gorman, BEA; Martin L. Marimont, formerly at BEA; Stephen P. Taylor, Board of Governors of the Federal Reserve System; Helen Stone Tice, BEA; and James Tobin, Yale University.

redesigning the accounts to serve more adequately as a coordinating framework for economic and social data at different levels of aggregation.

Enlarging the national accounts.—With respect to the first of these directions, that of expanding the scope of the NIPA core accounts. the reviewers did not disagree with the objective. It was noted by Tobin that the very essence of an accounting system-for a household, an enterprise, or a Nation-is a consistent joint evaluation of stocks and flows; national accounting system should show how changes in balance sheets from one date to another arise from incomes, outgoes, and reevaluations in the intervening period. The United Nations SNA calls for such an arrangement, as was pointed out by Adler and Sunga, but no country (including Canada) has ever previously published a full set of such integrated accounts. As Taylor observed, the flow of funds (FOF) accounts of the Federal Reserve Board are at an aggregate level both statistically and conceptually integrated with the NIPA's of BEA as a logical deconsolidation of the NIPA gross saving and investment account. However, most users do consider that NIPA and the FOF accounts are separate and distinct, rather than integral parts of the same system. This perception is reinforced by the differences in sectoring and classifications used in the two systems. The IEA presentation combined the two sets of data into a common framework with a single system of sectoring, and provided the capital accounts and balance sheets for the government sector as well as for the sectors covered by the FOF accounts.

3. National accounts as a statistical framework.—With respect to the second objective, that of redesigning the national accounts so that they can serve as a framework for a system of economic and social data at different levels of aggregation, a number of reviewers expressed substantial dissent. The dissent took two forms: Some felt that the objective was mistaken, and others that it was impractical of achievement.

Both Marimont and Denision felt that this objective imposed features that were irrelevant or harmful to the analytic usefulness of the ac-

counts. Marimont did not specify what these features are. Denison felt that the GNP account in the IEA's is not appropriate for the measurement of production, because it employs gross rather than net concepts. Although it is true that the IEA's are centered around the concept of GNP rather than that of national income. this feature of the system is based on the belief that GNP is analytically a more useful concept for many purposes than national income; it is, of course, unrelated to the use of the national accounts as a framework for microdata. The rationale underlying the design of the IEA's was that the analysis of macroaccounts requires an understanding of microeconomic behavior, and as a consequence it is important to use the same concepts at both the macrodata and microdata levels. It would have been equally possible to build both the national income and product account and the enterprise sector accounts around net concepts, which in turn could be related to microaccounts also constructed on a net basis.

Carson and Jaszi did not so much question the objective as express skepticism about the possibility of achieving it. They doubted, for instance, that it would be possible-or could seriously be proposed-to develop the accounts in such a way that they would embrace the broad spectrum of data included in the Census Bureau's Social Indicators. Whether such data could in practice be integrated into the IEA framework depends upon whether microdata sets exist that contain the basic information and can be adjusted to fit (both conceptually and statistically) the major economic constructs of the IEA's. It is our belief that such microdata sets do exist, and that they can be integrated with the macroaccounts. It seems worth examining this question more closely.

Appendix A to Social Indicators III describes in some detail the 27 major sources of data that were used in compiling this volume.² Aproximately 14 of the sources relate to households or individuals and contain microdata that could in principle be fitted into the household sector of the national

accounts. These include, for example, the Census of Population and Housing, the Current Population Survey, the Health Interview Survey, the National Crime Survey, Statistics of Income, the Survey of Income and Education, Social Security Benefit Data, and the National Travel Survey. Indeed, many of these sources have already provided microdata for 'exact matched" or "statistically matched" files used in conjunction with the existing national accounts. Another seven of the sources of data listed were reports containing microdata from governmental units (e.g., Annual Surveys of State and Local Governments) and surveys of health and educational institutions: it should be possible to relate all of these to the government sector and its subsectors in the national accounts. In some instances the device of satellite accounts suggested by Adler and Sunga might prove to be useful for breaking out the more detailed information (e.g., data relating to the health subsector or to institutions of higher learning). As might be expected in a volume on social indicators, relatively few (four only) of the listed sources referred to enterprises, but these, including the Current Business Survey. the Consumer Price Index, and the Producer Price Index, could all usefully be developed as microdata sets integrated with the national accounts. In the case of both the consumer and producer price data this would require using classification systems for the price data that are consistent with the classifications used in the national accounts—something that. somewhat incredibly, is not now done.

Of all the sources of data for Social Indicators listed in Appendix A, only one-the Uniform Crime Reporting Program—appears to be inappropriate for integration with the national accounts. The reporting units in this case are law enforcement agencies in various localities, and the data reported are various types of crime committed. There are a few more sources of this type among the less important sources not listed in Appendix A, which reported automobile accidents, deaths by fire, and atmospheric pollution; the microdata in these sources also consist of reports by specific localities. These location-specific types

^{2.} U.S. Department of Commerce, Bureau of the Census (Washington, D.C.: U.S. GPO, 1980).

of information suggest the desirability of including locational attributes in the microdata for households, enterprises, and governments. Localities could then be treated as reporting units providing data on crime, accidents, and environmental conditions occurring within them. Such linkages to the national accounts would be extremely useful for examining the costs and benefits of programs carried out by different levels of government or for evaluating the welfare of individuals living in a given area.

4. National accounts as a measure of welfare.-Adler and Sunga asked why the rationale for both the established and new treatments of national accounts were not viewed with some welfare consideration in mind. We would argue that the IEA's were specifically designed to take several important aspects of welfare measurement into account. The literature on welfare economics has made it clear that the presently existing macroeconomic constructs of the national accounts, which are primarily composed of transactions data, cannot provide an adequate basis for the measurement of welfare. In the first place, welfare is not merely a function of the total amount of income and wealth in a Nation; it is obviously related to the distribution of that income and wealth. In the second place, the boundary established by transactions omits many elements that are directly relevant to welfare, such as nonmarket activities, environmental conditions, and other factors affecting the quality of life. The IEA's attempted to be responsive to both of these dimensions of welfare measurement in their effort (1) to establish linkages between the aggregates of the macroaccounts and the economic and social microdata for households and individuals, in order to permit the analysis of distributions of income and wealth, and (2) to separate market transactions data from nonmarket information, in order to allow for the expansion of nonmarket imputations without impairing the usefulness of the accounts for analyzing the behavior of the market economy.

5. The establishment-firm dichotomy.—Adler and Sunga and also Carson and Jaszi expressed disap-

pointment that the problems of integrating imput-output into the accounts were not considered. In particular, they were concerned with the lack of comparability between the establishment-based industry classifications used for input-output analysis and the firm-based industry classifications used for saving, financial transactions, and balance sheets.

Both the NIPA's and the United Nations SNA view input-output as a deconsolidation of the production account for the Nation, and IEA's adopt this same approach. Although there are problems of execution, these problems were felt to be too technical, too detailed, and too well recognized to merit specific consideration in the discussion of the IEA's.

We would argue, furthermore, that the specific establishment-firm problem raised by the reviewers is not properly a question of integration in the sense that this term has been used in the discussion to this point. It does not arise from lack of statistical coordination, but from the inherent situation. A single firm may own establishments in different industries, and it, therefore, is not possible to choose a single industry classification for the firm that is the same as the industry classification of its establishments. The fact of the matter is that it is really inappropriate to classify a firm's activity in a single industry if it is actually engaged in several industries. The firm can be, and in the NIPA's is, classified into the industry accounting for the largest share of its output, but this cannot be expected to lead to the same distribution as a classification of establishments. Indeed, the "establishment-firm dichotomy" as it was raised by Carson and Jaszi has a direct parallel in the "individual-household dichotomy" in the household sector. As is true in the case of the firm, the household may cover a number of subunits (individuals) who have diverse characteristics (e.g., age, sex, education, occupation). Although it is possible to classify the household subunits into groups based on these characteristics, it is not possible to classify households in these terms. Nevertheless, such classifications of households are often made. For instance, all households whose head owns a business may be classified as entrepreneurial even if other household members are wage earners. The concern for establishment-firm classification problems and the neglect of individual-household classification problems are, of course, direct reflections of the production focus of the NIPA's.

As Adler and Sunga suggest, the establishment-firm classification problem can only be resolved by utilizing information at a more disaggregated level, where data are available for (1) production and capital formation at the level of the individual establishments owned by the firm and (2) financial transactions and balance sheets at the level of the firm itself. Such microdata sets can, in fact, be constructed, and we are at the present time developing, in conjunction with the Bureau of the Census, a longitudinal file for manufacturing establishments and firms at the microunit level for the period 1972-80. One of the immediate questions for which this microdata set is being used is the one raised by Carson and Jaszi-i.e., analysis of how the activities of the individual establishments contribute to savings of firms and how in turn these savings are related to capital formation at the establishment level. This sort of question obviously cannot be answered satisfactorily by the highly aggregated data in the macroaccounts, and requires the use of microdata. But in order to use the microdata on firms and their establishments to explain the behavior of aggregates in the macroaccounts, the same concepts of saving and capital formation must be used at the microdata and macrodata levels, and the microdata, when combined, must aggregate to the same constructs in the macroaccounts.

B. Sectoring of the economy and integration

1. NIPA sectoring and IEA modifications.—The NIPA sectoring of the economy grew out of the measurement of income originating in the different parts of the economy. The sector accounts in the original 1947 version of the NIPA's were drawn up to show the derivation of national income originating in (1) business, (2) households and nonprofit institutions, (3) government, and (4) the rest of the

world. Nonprofit institutions were grouped with households not only because on a conceptual level they were, like households, considered to be final consumers of goods and services, but also because on a statistical level final consumption was estimated by the commodity flow method, which resulted in a total that could not be broken down between households and nonprofit institutions.

The 5-account system introduced in 1958 dropped the account for the business sector, and reorganized the other sector accounts to display all of their income and outlays, rather than focusing on the derivation of the national income originating in each sector. Nevertheless, the present NIPA's retain the 1947 sector definitions. They continue to provide information on gross product, net product, and income originating in the business sector (BEA tables 1.5, 1.6, 1.9, 1.10, and 1.12), even though they do not include an explicit business sector account. In the industrial breakdowns of product, income, and employment (BEA tables 6.1-6.26), the concept of 'private domestic industries" is also introduced; this is broader than the concept of "business sector" in that it includes nonprofit institutions and domestic service workers but it is narrower in that it excludes government enterprises. Neither of these NIPA concepts is fully satisfactory, and the differences between them can result in confusion. On the one hand, the BEA business sector does not in fact represent production units motivated by profit, because it includes government enterprises and the imputed services of owner-occupied housing. On the other hand, the exclusion of government enterprises from the BEA industrial breakdowns of product, income, and employment (despite the fact that these units are included in the BEA business sector) results in underreporting of those industries where government enterprises are important, and the industrial composition of government enterprises remains a mystery. With respect to the household sector, the inclusion of nonprofit institutions reduces the usefulness of the household sector account for those concerned with analyzing household income, consumer expenditure, and saving. It is especially difficult to relate the household account to more disaggregated data, such as the size of distribution of income and the socio-economic composition of the household sector.

For these reasons, the IEA's made the following modifications in the NIPA sectoring:

IEA Concepts

NIPA Concepts

Enterprise Sector

- = Business Sector
 - + Nonprofit institutions
 - + Domestic service workers
 - Owner-occupied housing

or alternatively— Enterprise Sector

- = Private Domestic Industries
 - + Government enterprises
 - Owner-occupied housing

and— Housing Sector

- = Households and Institutions
 - Nonprofit institutions
 - Domestic service workers
 - + Owner-occupied housing

These sectoring modifications met with considerable opposition from the reviewers. Only Tobin unqualifiedly stated that moving nonprofit institutions out of the household sector was an improvement. Taylor approved, in general, of the modification of the household sector account, but questioned whether charities and foundations should not be treated as financial rather than nonfinancial enterprises. Adler and Sunga agreed that removing nonprofit institutions would improve the household sector, but feared that placing them in the enterprise sector would blur the character of the enterprise sector as being composed of production units motivated primarily by profit. Tice agreed that the changes in sectoring improve the homogeneity of the household sector, but felt that this is at great expense to the usefulness of the enterprise sector. Carson and Jaszi indicated that putting nonprofit institutions in the enterprise sector would increase the heterogeneity of that sector and would have a high cost in terms of the number of additional items required to implement the move. Denison felt that nonproft institutions are consuming units akin to both households and governments, and, furthermore, that combining them with the producing units in the business sector whose output is normally sold to other sectors, and can therefore be independently measured, would be unsatisactory for the measurement of productivity.

The majority of the objections to the IEA sectoring modifications centered on their impact on the enterprise sector. The sections below discuss first this general question, and then take up some of the specific points.

2. Heterogeneity of the enterprise sector.—Although one can understand the almost universal desire to define the enterprise sector as a homogeneous grouping of production units motivated primarily by profit, the reviewers' comments seem somewhat incongruous in the context of present BEA practices. In view of the concern for the business sector expressed by many of the reviewers, one would have expected to find that it played an important role in NIPA's. As already noted, however, the NIPA's do not contain an account for the business sector and restrict its role to the presentation of a few summary aggregates. Even there, the NIPA business sector, despite protestations of Denison and of Adler and Sunga, is not restricted to producers selling to other sectors or profit-making producers because it includes both government enterprises and the imputed rental value of owner-occupied housing. In all the tables that present breakdowns by industry, BEA abandons the concept of the business sector and uses instead the concept of private domestic industries, which does include both nonprofit institutions and domestic service workers. Thus, neither of the concepts that are now used in the NIPA's meets the criterion "purity" set forth by the reviewers. Furthermore, both NIPA categories are already very heterogeneous, covering a wide variety of nonfinancial and financial enterprises organized as cooperatives, mutuals, public authorities, or public corporations. Such organizations may operate primarily for the mutual benefit of the groups they represent by providing goods and services at lower cost, rather than by maximizing profit. To limit the enterprise sector to a homogeneous group of private profit-motivated organizations would reduce its coverage well below that of either of the present NIPA concepts, and the problem of the treatment of the excluded enterprises would remain.

3. Nonprofit institutions.—Although Carson and Jaszi are quite correct in indicating that additional entries are needed to move nonprofit institutions from the household to the enterprise sector, the information provided by these entries would be useful and is long overdue. It is not merely clutter in the accounts. More information needs to be provided about the operation of the nonprofit subsector of the economy, especially if, with the reduction of the government sector, it is expected to take on expanded functions. Even by BEA's own measure, the gross product originating in nonprofit institutions is equal to or larger than that of the farm subsector, and for the farm subsector, BEA goes to the length of publishing a complete table on farm output, gross product, and income.

The view put forth by Denison that nonprofit institutions are consuming units like households seems to be inappropriate for many nonproft organizations, such as Blue Cross and Blue Shield, major private universities, and nonprofit private hospitals. These organizations receive their funds from a variety of sources including the sale of their services. In their manner of operation, they are much closer to other private organizations in the same industry than to individual households. Perhaps, Taylor suggests, some of the nonprofit organizations such as foundations might more appropriately be classified as financial rather than nonfinancial enterprises, but they are clearly enterprises and not households.

4. Owner-occupied housing.—The transfer of owner-occupied housing from the business sector to the household sector caused relatively little comment. Both Taylor and Tice approve of the treatment of owner-occupied housing as a household activity rather than an activity of the busi-

ness sector—a treatment that, as they point out, is incorporated in the FOF accounts. Taylor commends it as being more in accord with institutional realities. Adler and Sunga were somewhat concerned that the transfer would blur the traditional concept of the household as a consumption unit. This is indeed true, and intentional; the IEA's explicitly recognize that nonmarket production does take place in the household sector.

Carson and Jaszi question whether this change in classification results in saving and investment patterns for the household and enterprise sectors that are more meaningful than those in the NIPA's. From a theoretical point of view, we would argue that the explicit IEA treatment is more informative, because it records the household's costs of homeowning (repair and upkeep, property taxes, and mortgage interest) as household outlays, where they can be analyzed in the context of household behavior. In addition, the IEA treatment is consistent with a balance sheet for the household sector that shows the value of the house as an asset and the mortgage as a liability; to exclude these items from the household balance sheet—as the present BEA treatment requires—is surely unrealistic.

Denison opposes treating owner-occupied housing differently from tenant-occupied housing; he is primarily concerned with the situation where dwelling units are sometimes occupied by their owners and sometimes rented, with the consequence that each time an owner-occupied house is rented it would, strictly speaking, have to be shifted to the enterprise sector. We agree with Denison that frequent shifting would be undesirable, and in such cases of temporary or seasonal rental we would suggest that the house be retained as a household asset. This treatment would mean that only those housing units whose rental is undertaken primarily as a business activity would be recorded in the enterprise sector.

5. Domestic service workers.—The treatment of domestic service workers in the NIPA's is both a triviality and an anomaly. Domestic service, measured by the compensation of domestic service workers, is in the NIPA's the

only production taking place in the household. This figure does not, however, reflect all the purchases of domestic services by households. If house cleaners, gardners, carpenters, trash removers, or babysitters are hired on a fee-for-service basis, these transactions are treated as purchases of goods and services, and those involved in providing the services are considered to be self-employed; it is only when their compensation is considered to be "wages" that they are treated as household employees. The proposal in the IEA's was to treat all such providers of domestic services to households as self-employed. Although Denison considers this to be unnecessary and artificial, it seems to us to represent a tidying up of messy detail that has long been overdue. There would be no significant change in the household account; the compensation paid to domestic service workers would still be recorded as a purchase of domestic services by households. In the enterprise account, domestic service workers would be included together with other self-employed persons providing household services.

6. The need for subsectoring.—The logical conclusion to be drawn from the discussion of sectoring is that, in view of the heterogeneous nature of productive activity, subsectoring of the enterprise sector is needed. Such subsectoring was carried out in the fuller version of the IEA's, although space limitations precluded printing data for the subsectors in the Survey article, and these data are available on computer tape from BEA. The subsectors of the enterprise sector presented are as follows:

Enterprise sector

Nonfinancial enterprises
Corporate nonfarm
Noncorporate nonfarm
Farm
Government enterprises
Nonprofit institutions
Financial enterprises
Monetary authority
Commercial banking
Other banking
Pension and insurance funds
Government financial agencies
Other financial institutions

C. Microdata and their integration with the accounts

In the IEA presentation, considerable emphasis was placed on the desirability of using the national accounts not only as a conceptual framework for economic data in general, but specifically as a statistical framework for microdata sets related to the sectors and subsectors of the accounts. Only a few of the reviewers commented on this feature of the IEA's. Those who did, raised questions concerning the difficulties of developing appropriate microdata sets, and expressed considerable skepticism as to its practicality. At the same time, one comment noted that this is a "growth industry," and another concluded that this is intuitively the way to go, in spite of its difficulties.

1. Microdata for the household sector.—Denison states that the IEA's not only fail to meet the objective of providing a framework for household microdata, but the objective itself is a chimera. This view is based on two arguments. First, there will be differences among microdata sets in the definition of the reporting unit households, families, dwelling units, individuals, taxpayers, etc.—so that there is no general concept they can follow. At best the household account can be consistent with only one microdata set, and for all others a bridge table would be needed; therefore, why not use a bridge table for all sets? Second, Denison points out that bridge tables will also be needed because aggregates of microdata treat on a combined or gross basis items that are netted or consolidated in the national accounts.

We would argue that this view reflects a fundamental misunderstanding of our objective. Just as the aggregate national accounts do not conform to any specific raw tabulation, there is no expectation that the microdata sets underlying them should conform to any specific single survey or other source. Rather, the principle is that the macroaccounts should be viewed conceptually as the aggregation (inconsolidation or netting cluding where appropriate) of a theoretical set of microaccounts. Given appropriate data sources, the national accountant or others should be able to construct, by appropriate adjustment of the

available micordata from many different sources, microdata sets approximating the theory that would underlie each sector of the national accounts. A relatively modest household microdata set that is integrated with (i.e., consolidates to) the household sector of the national accounts could yield useful disaggregations of the major items of income and expenditure, and provide related social and demographic information. The fact that there exists a variety of other unadjusted microdata sets is aside from the issue, just as is the existence of unadjusted aggregate data.

In terms of reporting unit, the important issue is that the microdata set that is to underlie the household sector have the same coverage as the household sector of the national accounts. Some of the reporting units mentioned by Denison, such as taxpayers, would clearly be inappropriate as the basis for constructing a microdata set to represent the household sector, because they cover only part of the population included in the household sector of the national accounts. A comprehensive microdata set for the household sector containing data relating to all individuals in the population, in which the attributes of the individuals are specified, permit the extraction of data on the basis of any reporting unit for which information exists (e.g., taxpayers, wage earners, school children), and users would be able to analyze the relation of various reporting units to each other. As previously noted, the problem here is directly analogous to the establishment-firm relation for enterprises. One of the functions of the microdata set is to clarify the relations among all of the attributes of the microunits involved.

Carson and Jaszi and also Denison raised questions about institutional populations such as soldiers and residents of prisons and sanitariums. These people do not really cause any conceptual problems; to the extent that such groups receive income and purchase goods and services, their income is included in household income and their purchases are included in household expenditures. They should, therefore, be included as identifiable units in the household microdata. The goods and services provided to them free of charge should,

of course, be recorded as part of the expenditures of the governments or nonprofit institutions providing them.

Bridge tables are useful and appropriate in many circumstances. Thus, for example, BEA Table 3.18B, showing the relation of Federal Government receipts and expenditures in the NIPA's to the Unified Budget, establishes important linkages between these two kinds of information. Where there are different uses of data calling for different tabulations, such bridge tables showing the relation between the aggregate tabulations are often useful. But this is quite different from using bridge tables to adjust raw tabulations of microdata at the aggregate level. As is noted below in connection with establishment microdata for the Census of Manufactures. adjustments made to tabulations of microdata at the aggregate level are not as satisfactory as incorporating such adjustments into the microdata itself. The reason for this is that different aggregations of the microdata will add up to the correct control totals only if the adjustments are made at the microdata level; if the adjustments are not carried back to the microunits they will have to be done over again whenever a new tabulation is made.

With respect to Denison's second point, bridge tables would in general not be required in those instances where the aggregated data are shown on a consolidated or net basis and the microdata provide gross data. The present government sector in the NIPA's is on a consolidated basis, whereas the subsector accounts for the Federal Government and for State and local governments show the transfers between these levels of government on a combined basis, and no bridge table is provided or required. It is easy to move from a more to a less gross basis as data are aggregated. What is not possible is to go the other way: if flows are shown combined or gross at the aggregate level, it is necessary that they also be available on this basis at the microdata level.

2. The enterprise sector and statistical consistency.—Adler and Sunga cite the difficulties even in a fully integrated statistical agency like Statistics Canada of linking microdata originating from differently defined units of collection (i.e., establishments

and firms), and suggest that the resource costs are more than can be faced with equanimity. They note that even such seemingly simple steps as ensuring that establishments or firms in sets of data orginating from different surveys are always classified in the same industry and location are often frustrating and always time-and resource-consuming.

These problems, however, are not problems that are restricted to the development of microdata sets. Although the problems become glaringly obvious in the microdata context, they are equally important, and equally present, in the context of the aggregate accounts. Thus, for instance, if one source is used to make estimates of output by industry and another source is used for employment and hours, inconsistency in the industrial classification of establishments or firms will result in errors in the measurement of productivity by industry. It is not true, as the observations of Adler and Sunga might imply, that merely because the errors

caused by inconsistent classification of industry and location in different sources are not obvious in macrodata, such errors can be swept under the rug. Nor can it be assumed that they will somehow average out. What is required for coordinating different sources of data is, of course, a complete industrial register that lists all firms, their establishments, and the location and industrial classification of each establishment. Most countries have come to recognize that such a register is a prerequisite not only for providing adequate sample frames. but also for coordinating statistics from different sources. The U.S. Census Bureau has begun to develop such a register, but confidentiality restrictions have so far prevented its use by other statistical agencies. The development of proper statistical procedures may be frustrating and even costly, but the confusion that results from the lack of coordination is even more frustrating and far more costly to users as well as producers of statis-

3. The availability of microdata.— Consistent with their skepticism concerning the possible integration of the data in Social Indicators with the national accounts, Carson and Jaszi do not believe that the quantity of usable microdata is as large as we suggested, and, given the substantive difficulties and costliness, they are less optimistic about the prospects for integrating microdata and macrodata. While conceding that the possibility may exist for households, they state that if the prospects and problems of the use of microdata for the enterprise and government sectors had been examined more thoroughly (e.g., the previously noted establishment-firm dichotomy and also differences in business accounting practices), the provision of a framework for microdata might have been given a smaller weight in the redesign.

With respect to the general question of the quantity of usable microdata available, it is, of course, true that all national accounting estimates

Computer Tape for IEA Tables

The complete set of IEA tables are available on computer tape. To order, send a check, payable to the Bureau of Economic Analysis/U.S. Department of Commerce, for \$150.00 to the Budget Office, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, D.C. 20230. Request "Integrated Economic Accounts for the United States" (BEA CBA 82-001). Specify whether you want internal labels and whether the tape should be 800 or 1600 bpi.

1.2	Relation of National Income,
	Net National Product, and
	Gross National Product
1.3	Gross National Product (1972
	Dollars)
1.10	Enterprise Gross Product Ac-
	count
1.40	Household Current Income and
	Outlay Account
1.50	General Government Receipts
	and Current Outlay Account
1.60	Rest of the World Current Ac-
	count
2.1	Capital Accounts for the Nation
2.2	Stock of Reproducible Goods in
	Constant Prices (1972 Dollars)
2.3	National and Sector Capital Ac-
	counts in Constant Purchas-
	ing Power (1972 Dollars)
2.10	Enterprise Capital Accounts
2.40	Household Capital Accounts
2.50	Government Capital Accounts

Rest of the World Capital Ac-

counts

National and sector accounts, 1947-80

Gross National Product

Subsecto	or accounts
Gross	product accounts
1.20	Nonfinancial Enterprise (1959-77)
1.21	Corporate Nonfarm (1959-77)
1.22	Noncorporate Nonfarm (1959-77)
1.23	Farm (1959-77)
1.24	Government Enterprise (1959-77)
1.25	Nonprofit Institutions (1959–77)
1.30	Financial Enterprise (1959-75)
1.31	Monetary Authority (1959-75)
1.32	Commercial Banking (1959-75)
1.33	Other Banking (1959-75)
1.34	Pension and Insurance Funds (1959-75)
1.35	Government Financial Agencies (1959-75)
1.36	Other Financial Institutions (1959-75)
Recei	pts and current outlay accounts
1.51	Federal Government (1947-80)
1.52	State and Local Governments (1947-80)

1.53	State Governments (1959-75)
1.54	Local Governments (1959-75)
Capital	accounts
2.20	Nonfinancial Enterprise (1959-77)
2.21	Corporate Nonfarm (1959-77)
2.22	Noncorporate Nonfarm (1959-77)
2.23	Farm (1959-77)
2.24	Government Enterprise (1959-77)
2.25	Nonprofit Institutions (1959-77)
2.30	Financial Enterprise (1959-75)
2.31	Monetary Authority (1959-75)
2.32	Commercial Banking (1959-75)
2.33	Other Banking (1959-75)
2.34	Pension and Insurance Funds (1959-75)
2.35	Government Financial Agencies (1959-75)
2.36	Other Financial Enterprises (1959-75)
2.51	Federal Government (1947–80)
2.52	State and Local Governments (1947-80)
2.53	State Governments (1959-75)
2.54	Local Governments (1959–75)

2.60

1.1

are in large degree based on tabulations of microdata, and these basic sources are prime candidates for the construction of microdata sets that are integrated with the national accounts. In some cases, these may be administrative data provided by the Internal Revenue Service, the Social Security Administration, or other regulatory or statistical agencies. The raw tabulations are not usually incorporated directly into the national accounts estimates, because adjustments for conceptual differences, underreporting, or incomplete coverage are generally needed. It is, of course, necessary that the same adjustments also be introduced into the microdata if they are to be coordinated with the accounts, but the experience of the statistical collection agencies has indicated that such procedures are both feasible and highly useful for the data collection process itself. Thus, in connection with the Census of Manufactures, it is now customary to introduce into the records of the individual establishments the necessary edit corrections, imputations for missing data, and other adjustments so that the final computer tabulation will be exactly consistent with what is published.3

With respect to the specific question of microdata for establishments, because of the relatively small number of large enterprises and establishments that account for most of the production taking place in the United States, it is both feasible and desirable to build comprehensive microdata sets by using exact matching. As already noted in the discussion of the establishment-firm classification problem, a longitudinal microdata file for firms and establishments has been developed for the manufacturing sector for the period 1972-80. This file utilized exact matching and contains data for approximately half a million manufacturing establishments for the census years 1972 and 1977, and about 80,000 establishments for the other years covered by the Annual Survey of Manufactures.4 A micro-

3. Preston J. Waite, "Imputation Methodology, Eco-

mation: Recent Progress

data base being developed by the Small Business Administration covers all firms and establishments in the economy (including nonprofit organizations and family businesses). A number of publicly available sources, such as the Dun and Bradstreet Market Identifier File (credit listings) and the Market Data Retrieval File (yellow pages listings), have been merged and matched to produce a Master Establishment List of approximately 8 million establishments. Further research has been done to develop an Establishment and Enterprise Microdata File (about 4.7 million establishments), which provides information on the relation between enterprises and establishments.5 The file is being validated by making comparisons, within the proper confidentiality safeguards, with government administrative files relating to corporate and noncorporate tax returns and employer social security and unemployment insurance files. Finally, more detailed financial data (income accounts and balance sheets) are being merged into the file on an exact match basis for all those businesses for which such data are available (about 800,000 cases). All publicly traded companies (approximately 10,000) are, of course, included. The objective of this research is the development of a totally integrated and weighted sample of 200,000 to 300,000 enterprises that will provide employment, sales, and financial data on a longitudinal basis.

With respect to the government sector, the feasibility of the development of microdata has also been demonstrated. John Quigley and James Trask at Yale University, with National Service Foundation support (and BEA assistance), undertook to develop microdata sets for government units that were fully integrated with the government sector of the NIPA's. The basic source for the microdata set was the data tape from the Census of Governments for 1972, which provided individual accounts for 75,000 budgetary units; these units included not only Federal, State, and local governments, but also other public bodies such as public authori-

ties, regional agencies, and school and water districts. The microaccounts covered the sources of revenue by type and the outlays by function, and also provided capital accounts for (1) the Federal Government, by States and the District of Columbia (51); (2) State governments (5); (3) county aggregates of local governments (3,118); (4) standard metropolitan statistical areas (100 largest); (5) separate accounts for central cities, suburban rings, and regional governments (for largest 100 standard metropolitan statistical areas).6 This project established the feasibility in terms of cost and validity of using the Census of Governments data to develop a microdata set of government units that is integrated with the national accounts.

With respect to household microdata, the view of Carson and Jaszi that the development is substantively difficult and costly stems, no doubt, from BEA's experiences in the development of the estimates of the size distribution of personal income using both exact and statistically matched microdata. This experience underscored the need for a household sector in the national accounts that is conceptually compatible with microunit information. Much of the difficulty BEA encountered arose, first, because it was necessary to develop, within the personal income concept, another concept of family income, which could be distributed by size. Second, it should be borne in mind that the microdata effort in which BEA engaged was pioneering research, and much was learned in the process; certainly those who were directly involved in that research have a much more positive view of the level of success achieved and the future potentiality of integrating household microdata and the national accounts. Finally, the question of cost should be kept in perspective. In absolute terms, the microdata work in BEA was quite modest, and relative to the total of all BEA activities it was almost imperceptible.

15, 1982.

nomic Censuses and Surveys," prepared for the Census Advisory Committee Meeting, October 8, 1982.

4. Richard and Nancy D. Ruggles, "The Development and Use of Longitudinal Establishment Data," report on workshop held in Reston, Va., January 14
5. The State of Small Business: A Report of the President, March 1982, Appendix B, The Small Business Data Base and Other Sources of Business Infor-

^{6.} John Quigley, "The Spatial Distribution of Public Sector Activity: A Preliminary Report," Proceedings of the 1976 General Conference of the Society of Government Economists (Washington, D.C.: Society of Government Economists, 1977). John Quigley (with Gail Trask and James Trask), "Income and Product Accounts for the Local Public Sector," Institution for Social and Policy Studies, Working Paper 795, Yale University, 1977.

II. The Recording of Transactions

A. The transactor approach

THE IEA's view the national accounts as being composed of sets of sector accounts, which in turn represent aggregations or consolidations of sets of microaccounts for individual transactors. At the sector level of aggregation, the transactors are classified into enterprises, households, government, and the rest of the world. The accounts for both the individual transactors and for the sectors of the economy relate to productive activity, current income and outlays, capital transactions, revaluations of balance sheet items, and balance sheets. This is the basic framework used for the recording of transactions in the IEA's.

This view of the accounting system is strongly opposed by Marimont, who argues that the national accounting structure should be designed in accordance with what is needed for a comprehensive understanding of how the economy operates. After the total system is designed, Marimont suggests, the national accountant can then develop methods for adapting the data for individual transactors. Marimont does not, however, suggest how a system developed in the way he suggests would differ from one conceptually based on individual transactor accounts, nor does he indicate what criteria he would use. The history of the development of the BEA accounts suggests that he may have had in mind constructing the system around the derivation of a few aggregates such as national income, and saving and investment. This was the original basis of the 1947 NIPA's, and still plays a large role. The transactor approach of the IEA's subscribes to Marimont's principle that the accounting system should be designed in terms of what is needed for a comprehensive understanding of how the economy operates, but it suggests that this can best be accomplished by providing organized and systematic information on the transactions and balance sheets of different groups of transactors. As Tobin points out, the existing NIPA's do not in fact provide a satisfactory conceptual framework for the tracking and consistent evaluation of stocks and flows needed for understanding economic behavior.

In implementing the transactor approach, the IEA's made a sharp distinction between actual market transactions and imputations for nonmarket activity. Many of the reviewers raised questions about the definition of imputations, as well as about the usefulness of this separation. In the discussion of financial intermediaries, Annex 1 of the IEA presentation leaned heavily upon how the transactors themselves viewed the transactions. Carson and Jaszi, Denison, and Marimont all questioned this "transactor approach." Denison pointed out that different transactors may view the same or similar transactions quite differently, and Carson and Jaszi and also Marimont commented that the IEA's did not consistently embody this principle.

In view of the questions that have been raised about the definitions and principles that underlie the transactor approach, a reexamination of the treatment of specific imputations and transactions is in order. It was certainly not our intention, in introducing the transactor approach, to record the same or similar transactions differently based on how individual transactors view them.

B. Imputations

Carson and Jaszi, Denison, and Marimont raised many objections to the IEA treatment of imputations. Carson and Jaszi felt that there are conceptual problems in determining what should be considered to be an imputation. Denison objected to assigning the market transactions aggregate a central role because he felt that there is no simple and noncontroversial concept of money income and expenditure. Marimont found the treatment of imputations troublesome and indicated that there is a need to define more precisely what kinds of transactions are to be classified as imputations. Finally, all of these reviewers agreed that the separation of nonmarket imputations resulted in more complex accounts, which were less convenient and informative than the NIPA presentation.

In the IEA's, nonmarket imputations relate to activity that is not measured by actual market transactions; a clear example of a nonmarket imputation is the services of owner-occupied housing, which BEA values at its equivalent space rental value. This IEA definition of nonmarket imputation contrasts with the more comprehensive BEA definition of imputation, which includes, in addition, some activities (e.g., financial services) that are measured in terms of the (market) costs of providing them.

Carson and Jaszi suggest that the separation of market transactions and nonmarket imputations in the IEA's was primarily motivated by the belief that, compared to actual market transactions, the estimates for nonmarket imputations were relatively speculative. This is a very considerable oversimplification of our position. We recognize (1) that there are actual transactions in the accounts that are speculative because reliable data are not available for estimating them, but we would not favor classifying these transactions as nonmarket imputations. We also recognize (2) the controversial nature of the treatment of certain actual transactions, such as the cost of financial services, but again this is no reason to group such transactions with nonmarket activity. We agree (3) that the concepts of economic depreciation and household capital consumption are conceptually somewhat shaky, quite apart from the question of the availability of data; in this case we feel that these are nonmarket imputations for which there is no transactions counterpart, and they should be embodied in the accounts in a way that does not impinge upon market transactions measurements. We do not feel, however, (4) that food and fuel produced and consumed on farms should be classed as market and included in farm market production and consumption expenditures by households, merely because it is considered to be a "hard" estimate. Finally, we would argue (5) that the separation of nonmarket imputations is not particularly complex and that it is analytically useful.

1. The accounts as a framework for market transactions.—The primary function of the national income and product accounts has been to provide a framework for displaying the interactions of different sectors of the economy with one another in terms of the market transactions in which they engage. For analyzing the behavior of prices, output, and employment, it is this network of market transactions that is the prime focus of attention. There are, of course, a great

many transactions for which it is difficult to obtain sound statistical data. In such instances, the national accountant attempts to make the best estimate possible, recognizing that omission of a legitimate entry in a full set of market transactions would result in a greater error than including an inaccurate estimate. Thus, BEA does include estimates of such items as tips paid to waiters and waitresses, and the payments made to babysitters. It was not the intention of the IEA's, and we agree that it would be quite inappropriate, to classify transactions as market or nonmarket on the basis of reliability.

2. Market imputations in the accounts.—Market imputations are defined in the IEA's as activities that are valued in terms of their costs of production rather than in terms of the market value of their sale. Examples of market imputations are the measurement of the value of (1) financial services provided by banks, (2) the change in inventories, and (3) final consumption expenditures of the government.

With respect to the treatment of financial services, the problem is more one of where to draw the boundary between intermediate and final product than of market versus nonmarket activity. The decisions may be controversial, but the measurements involved are all market-determined. In the United Nations SNA, all financial services are treated as an intermediate product, whereas BEA treats part of them as final product. Financial services are not the only example of this sort of problem. As was suggested in the discussion of the IEA's, there are other kinds of expenditures that BEA currently treats as intermediate that might be considered final expenditures; these include research and development, radio and television, and other consumption provided by enterprises. Conversely, as Tobin suggests, some of the current expenditure of government might be considered to be intermediate rather than final. Such shifts in the production boundary may well occur within the framework of a system of accounts drawn up in terms of market transactions, without involving any nonmarket imputation.

Denison does not consider inventory change to be based on market transactions, and he states that including it in income results in abandoning the market transactions concept. From the point of view of the IEA's, however, inventory change is based on market transactions, because it is the difference between costs of production and sales, both measured by market transactions. Even the inventory valuation adjustment is merely a correction in the application of accounting methods—presumably there are accounting records, and there are market transactions on which the correction is based.

Carson and Jaszi and also Denison took the position that government consumption expenditures should not be considered an imputation, but rather should be viewed as final purchases. This seems very reasonable, and IEA's do not preclude such a treatment because government expenditures are considered to be market transactions. The United Nations SNA does set up a production account for government, in which its purchases from business and the compensation of government employees are considered to be inputs that in turn are used to produce government outputs. United Nations SNA thus treats the purchases from business as intermediate goods, and government final consumption is treated as an imputed purchase by the government of the output it has itself produced. While technically correct, this United Nations SNA approach is awkward and for most government final consumption unnecessary, and the alternative BEA explanation is simpler. The BEA interpretation is not, however, in conflict with IEA.

Economic depreciation.—The IEA's do not consider that economic depreciation is a market transaction, and recognizes this by building the national income and product account and the sector current accounts around gross market transactions. Thus, gross saving in each sector account is the balancing item, representing the difference between total current market receipts and total current market outlays. As a balancing item, it is independent of the estimate for economic depreciation. This does not mean, as Marimont suggests, that capital consumption is treated as a market transaction in the household account; rather, in this context, capital consumption and net saving are essentially memorandum items attached to total gross saving in each account, showing its possible division into these two components.

4. Food and fuel produced and consumed on farms.—Carson and Jaszi indicate that the estimate of food and fuel produced and consumed on farms is not so speculative that it requires a different kind of statistical estimate. The IEA's classed it as a nonmarket imputation for two reasons. First, it is production and consumption that does not go through the market, and it is not at all clear either conceptually or statistically just what is or should be included under this rubric. For example, should kitchen gardens and poultry raised by farmers be included? If not, on what grounds should they be excluded if other food and fuel is included? If they are included, why should not the kitchen gardens and poultry raised by nonfarmers also be covered? (The latter figure really would be speculative!) Should the processing of the food, i.e., the slaughtering and curing of meat and canning of fruits and vegetables, also be included? If farm wives' canning activity is covered, should that of other housewives not also be included? Second, it is not clear what value should be placed on such home-consumed production—the opportunity cost that could be obtained by selling the product, the input costs, the price the farmer would have to pay for the product if he bought it, and the value which the farmer would himself assign to the output as a consumption good all are possibilities. Although farm income in kind is less than 1 percent of farm gross output (under \$1 billion in 1980) and its estimation may seem to be a trivial matter, these questions of valuation are precisely the same as those that arise in connection with the valuation of owneroccupied housing, and that estimate is not trivial in size.

5. The separation of nonmarket imputations.—It is true that separating market transactions and nonmarket activity increases the complexity of the accounts and makes them more difficult for those who are accustomed to the NIPA's. But this increase in complexity can easily be exaggerated, and it is the market transactions accounts that represent the core of the system; these accounts record all transactions between different transactors. The imputations for nonmar-

ket activity are estimates of the production and consumption activity that is internal to a sector and does not go through the market. The NIPA's can neglect the distinction between market and nonmarket activity because they postulate a single correct specification of the production boundary-one that includes exactly the correct amount of nonmarket activity. Many proposals are now being made, however, to extend the conventional production boundary to include such things as the services of government and consumer durables and the nonmarket activity of the household. If consideration is given to any of these, it will become increasingly important to preserve intact the core set of transactions relating to market activity. It is, perhaps, better to build in the possibility of some flexibility, rather than to be forced to cling to an outmoded definition of the production boundary beyond its useful life.

C. Benefits in kind

Certain benefits in kind provided by business are treated in the NIPA's as income received by the beneficiaries, and correspondingly, as expenditures by them. Thus, some of the financial services provided by banking institutions are considered to be income in kind received by households and government and also expenditures by them for these services. Similarly, fringe benefits in kind that employers provide to their employees are included both in other labor income and in expenditures and personal saving of households. In the IEA system, however, benefits in kind are treated as final expenditures of the provider of the benefit, and no attributions of income and expenditure are made to the accounts of those who theoretically benefit. Both financial services provided by banking institutions and the fringe benefits in kind provided by private employers are treated in the IEA's as enterprise final consumption expenditures.

Part of the rationale for this treatment is that the recipients might not recognize these benefits in kind as income. In light of the comments of the reviewers, this rationale requires reexamination. Carson and Jaszi argue that the significance of many fringe benefits in collective bargaining is prima facie evidence that employees not only recognize them, but

also attach considerable importance to them. It is apparent, however, that workers may recognize and attach value to many other improvements in working conditions, such as safety, working environment, and hours, and yet BEA does not treat these amenities as part of personal income. Nor does BEA treat benefits in kind provided by government, such as education, public health, and community services, as part of personal income and personal consumption expenditures, although again individuals receiving them may recognize them as benefits. In view of this murkiness, there is much to be said for considering all benefits in kind to be final expenditure of those making the expenditures, irrespective of whether individuals recognize or attach importance to their receipt. The analyst can then make further attributions to the groups he considers to be the beneficiaries, if he wishes. The United Nations SNA, for instance, includes a supplementary concept called "total consumption of the population," in which all of these attributions are made. But this is provided in addition to, not instead of, household consumption expenditure.

D. Pensions and insurance

In the IEA's, the assets of pension funds and life insurance companies are attributed to their prospective beneficiaries only to the extent that they have a cash surrender or loan value. Otherwise, households are not credited with "wealth" representing the capital value of future pension benefits. Although Taylor and Tobin find this general treatment useful and satisfactory, Dension and Gorman take issue with it.

1. Revised estimates.—Since the publication of the "Integrated Economic Accounts," Gorman has correctly pointed out that, in transferring fringe benefits in kind from household to enterprise consumption, the IEA's should have deducted from household consumption expenditures only the cost of services provided by pension and insurance funds. What the IEA's did deduct was not only these services but also the net addition to pension and insurance reserves. These corrections affect enterprise consumption, household consumption, and household gross and net saving. The published and the revised estimates are given in table 1.7 These revisions do not affect the balance sheet estimates for either enterprises or households, because the balance sheets were based on FOF data. They do, of course, affect the residual discrepancy between net saving as derived from the balance sheet and as derived from the current account, which was given as part of the addenda to the household balance sheet.

2. Pensions and life insurance.— Denison considers that all private pension and life insurance reserves (as well as the saving of nonprofit institutions) belong in the household sector, because they are all of value to households as prospective beneficiaries. Even term policies or unvested pension plans with no cash surrender value, he feels, may be currently valuable to the holder because they may make it possible to obtain further insurance without examination or at lower cost. The IEA view, in contrast, is that households do not in fact own or control the noncashable portion of private pension and insurance reserves, and therefore this part of the reserves should be excluded from their balance sheets. Although the households may be beneficiaries of pensions or insurance in the future, the IEA's do not record this as household income until such time as it is actually received. As for the view that term insurance and unvested pension plans may be currently valuable to the owner from the point of view of buying insurance, so is being a veteran, young, or female, and these factors are not reflected in the accounts.

Gorman opposes the proposed change on the grounds (1) that life insurance carrier saving, and therefore corporate profits, would be increased by the excess of the increase in aggregate reserves over the increase in cash surrender values; and (2) that he

^{7.} BEA does not prepare estimates of pension fund operating expenses, because they are not needed for the NIPA's. Preparation of reliable estimates at the present time is not possible because (1) insured pension fund operating expenses are buried in the data for life insurance carriers, and (2) there is evidence of a massive shortfall in the existing Securities and Exchange Commission data on noninsured pension plans. Under these circumstances, the estimates of pension fund operating expenses for the IEA's were based on a simple-minded extrapolation of the 1977 ratio of pension fund operating expenses to employer contributions; data for the ratio are from an Internal Revenue Service tabulation of Form 5500 published in the Statistics of Income Bulletin, Volume 1, No. 4 (Spring 1982)

Table 1.—Revised Estimates Resulting From Correcting Pension and Insurance Data
[Billions of dollars]

	Enterprise c		Household c		Household g	gross saving	Household	net saving
	Published	Revised	Published	Revised	Published	Revised	Published	Revised
1969	39.8	34.9	386.3	391.2	129.5	124.6	58.2	53.
1970		40.9	418.0	423.1	143.2	138.1	65.1	60.0
1971		46.2	443.6	449.4	164.1	158.3	79.3	73.
1972		52.6	477.5	484.6	173.1	166.0	80.3	73.2
1973		58.2	521.4	512.6	212.5	203.7	111.6	102.8
1974		69.0	576.2	586.4	218.2	208.0	104.3	94.1
1975	92.6	80.1	628.5	641.0	240.8	228.3	111.9	99.4
1976	101.1	86.2	688.4	703.3	251.6	236.7	109.0	94.1
1977	120.8	103.7	749.2	766.3	271.2	254.1	112.6	95.5
1978		120.2	829.4	848.4	298.1	279.1	120.1	101.3
1979		135.3	935.3	954.9	319.4	299.8	118.6	99.0
1980	174.8	154.1	1,052.7	1,073.4	324.5	303.8	97.9	77.2

is not aware of any aggregate data on cash surrender value. With respect to the first point, there is no necessity for increasing corporate profits by the excess in aggregate reserves; if indeed the excess aggregate reserves are actuarially or legally required, they represent a legitimate ear-marked reserve that would not be available for distribution as profits to the stockholders, although they would still constitute part of gross saving. With respect to the second point, although there may be no readily available aggregate data on cash surrender value, insurance companies do provide their policyholders with this information, and this can be used to develop the necessary aggregate estimates.

Denison questioned the transfer of government pension reserves from the government to the enterprise sector. These reserves largely pertain to State and local government employees, and the transfer reflected the fact that the employee pension funds of State and local governments are generally held by government financial enterprises. It is debatable whether these pension funds should be classified with other pension funds or with other government financial institutions, but they should clearly be a part of the enterprise sector rather than of government. The IEA's did not intend to mediatize the Federal retirement Government's system through the pension and insurance sector, and Taylor's point in this case is well taken.

Taylor raised a question about the possibility of estimating unfunded liabilities of retirement systems, i.e., the difference between the present value of future payments due from re-

tirement systems and the capital value of the assets of the systems. He recognized the asymmetrical nature of such estimates; they have important implications for employer groups supporting such systems but may have little meaning for workers covered by the plans because they are illiquid and are fairly abstract concepts. For this reason, he suggested including such estimates as peripheral or memorandum information without incorporating them fully into the accounts. Furthermore, he felt that Social Security plays a role for individuals parallel to that of retirement systems, and its capitalized liabilities might be included in the memo table even though Social Security wealth is not capitalized in the household account. At first glance, such an approach seems both reasonable and attractive, but the highly speculative nature of the estimates becomes evident when one recognizes the extent to which assumed future changes in the price level and the interest rate dominate the results. In the case of Social Security liabilities, it would also be necessary to forecast the ages at which people will retire in the future, the effect of other related government programs and private pension plans, and probable changes in entitlements. Furthermore, it would not be appropriate to capitalize Social Security liabilities without at the same time capitalizing the future stream of Social Security revenues, and this would involve forecasting Social Security tax rates, wage rates, and employment. One needs only to refer to past estimates relating to the future of the Social Security System to see that such estimates are different in kind from the reporting of past events with which the accounts are concerned.

3. Fire and casualty insurance.— IEA Annex 1 considered the treatment of fire and casualty insurance in the accounts. The IEA's agree with the NIPA's that the value added of fire and casualty insurance companies is correctly measured by net premiums (gross premiums minus claims paid). Annex 1 raises the question, however, as to whether this is also the correct measure for computing value added of a firm purchasing fire and casualty insurance, or whether this cost should be measured by the gross premium. Gorman emphasizes that all accidental damage to fixed capital, whether insured or not, is included in the BEA accounts in capital consumption allowances. This means, in fact, that what are capital losses to individual firms are written off at the aggregate level as capital consumption. If there were no insurance at all in the economy, this practice would be equivalent to including in each firm's capital consumption allowance a charge equivalent to self-insurance against accidental damage, which for the economy as a whole would equal the accidental damage actually occurring. In an economy where all firms were fully insured, BEA's allowance for accidental damage plus net premiums paid would be equal to gross premiums paid. The net premiums paid by firms to insurance companies would then appropriately represent the cost of the services of the insurance industry for spreading these risks. The question that remains, however, is whether the BEA treatment, which was designed for consolidated aggregate income and product accounts, is also appropriate for the IEA system, which is based upon production accounts and balance sheets drawn up at the firm and establishment levels. From this point of view, it would seem more suitable that the actual gross premiums paid by a firm be treated like any other item of current cost, and that the losses due to accidental damage and the reimbursement for such losses paid by insurance companies be treated as adjustments to the balance sheets rather than to the production account.

4. Health insurance.—With respect to health insurance, Gorman indi-

cates that the BEA procedure is based on the principle that medical consumption should be shown in the personal income and outlay account when the consuming individual decides which doctor or hospital shall provide the service. For this reason, BEA includes medical expenditures financed by the government under the Medicare program in the personal income and outlay account. The IEA's, in contrast, take the position that when the government sets the standards, circumstances, or conditions under which expenditures are to be made and requires accounting for reimbursement, the reimbursements should be considered to be government expenditures and treated as the provision of benefits in kind. In the IEA's, transfer payments from government to households are restricted to cash payments that do not require evidence of expenditure for reimbursement. On this basis, the medical expenditures financed under Medicare program were considered to be government expenditures. In the case of medical care paid for by an insurance policy purchased by a household, only the premium is considered in the IEA's to be a household expenditure. Similarly, the premium paid by employers for health insurance for their employees is treated as a benefit in kind included in enterprise consumption expenditures. Gorman suggested that this would lead to double counting of final consumption, but it does not. The sum paid to the medical provider by the insurance company would be an intermediate product.

E. Interest

Although the IEA's retained the BEA net interest approach, in Annex 1 on financial intermediaries we raised a question as to whether that approach is really appropriate for the measurement of output and in the treatment of interest payments by households and government. We suggested that consideration be given, instead, to treatment of interest as the purchase and/or sale of a service, similar to BEA's treatment of rent. Adler and Sunga indicate that they would not be averse to seeing the logic of such a treatment followed to its conclusion.

Denison does have some misgivings about the BEA treatment of consumer interest, but he does not believe that its inclusion in personal consumption expenditures and output would help; in particular he raised a question about deflation, wondering how in a constant-dollar series the inclusion of consumer interest would resolve the trouble introduced by prices that are raised to cover implicit credit costs. As Denison implies, the implicit credit costs are already included in the price indexes. The price a consumer pays for a product covers a variety of conditions of sale, including credit arrangements, delivery, and refund policy. Under these conditions it does seem appropriate also to take explicit interest costs into account.

Gorman notes that the treatment of interest as a cost of production would have the consequence that the measure of a firm's output would be a function of the distribution between borrowed funds and equity capital. A firm that borrowed part of its capital would, other things being equal, have a lower value added than a firm that operated entirely on equity funds. Gorman does not believe that such a measure of value added would be interesting. Yet the question of borrowing versus the use of equity capital is directly analogous to that of producers who rent the buildings and equipment they use instead of owning them; those who rent will have a relatively smaller value added than those who own their buildings and equipment. The distinction, in both cases, seems entirely proper.

Gorman also, like Denison, has difficulty with the concept of deflation of interest as a service. If interest were treated as a cost, a rise in the interest rate would, ceteris paribus, reduce current-dollar value added, but the constant-dollar value added would be unchanged. Consequently, the implicit price deflator of value added would fall. Gorman says that he does not understand what such a decline in the implicit deflator would mean. This is, however, not really an anomaly. When interest is treated as a cost of production, a change in its price would have the same effect on deflation as a change in the price of any other element of cost. For example, if the price of raw materials rose, other

things being equal, value added would decline but constant-dollar value added would remain the same, leading to a decline in the implicit deflator of value added. This outcome is the result of using double deflation methods and is to be expected.

Perhaps for most users the most questionable aspect of treating interest as a payment for a service relates to government interest. Government deficits that require borrowing-and therefore the payment of interestmay result from a decline in revenues due to recession, and may have no observable counterpart in the physical output of goods and services. In such a situation, however, payments of interest may be more in the nature of a government expenditure not dissimilar to a public works program, designed to stimulate the economy. When government borrowing is an element of fiscal policy, such as borrowing funds from producers and consumers in wartime in order to reduce the volume of their expenditures in the economy, it can be argued that those lending the money are indeed performing a service by refraining from spending some of the income they have received. If governments borrow for the purpose of capital formation, they are operating in the same manner as business firms, and those providing the necessary funds to permit the capital formation can be viewed as contributing a service for which interest represents a legitimate payment.

F. Gross capital formation and saving

The IEA's expanded the NIPA concept of gross capital formation by including government purchases of structures and durable goods, personal consumption expenditures for durable goods, and the nondurable goods that are added to household and government inventories. Surprisingly, the inclusion of government capital formation elicited relatively little comment. Tice pointed out that the United Nations SNA recognizes government capital formation, and that it might be useful for the NIPA's to do so. Tobin went further and stated that crediting governments for the value of their physical assets is an accounting reform long overdue in this country.

The IEA treatment of household purchases of durable goods as capital formation is in accord with the FOF treatment, and is generally approved of by Taylor and Tice. Marimont, in commenting that the IEA's did not consistently embody the transactor approach, remarked that the IEA treatment of household durables leads to household saving that few households are likely to recognize and that even fewer lending institutions would give much weight to in evaluating the credit worthiness of a householder applying for a loan. But the purchase of durable goods such as an automobile or house furnishings is often recognized as a capital expenditure by householders. The saving for such a purchase may occur in advance as the householder accumulates the required funds, or the purchase may be financed by a loan. When there is a loan, the lending institution does indeed recognize that it is for a capital expenditure, and it is shown in the household accounts as saving when it is paid off. As has been pointed out above, however, the recording of transactions in the accounts should not depend solely on how individuals view the transactions, but rather on what is appropriate for the analytical usefulness of the accounts. The primary reason for treating household durable goods as capital assets on the balance sheets of households and depreciating them over the period of their economic life is that they last for more than one accounting period.

Whether an estimate of net imputed income should be included for consumer durables, as it is for owner-occupied housing, is a somewhat more debatable issue. Denison questions such an imputation on the ground, among other reasons, that it differs from the treatment of government durables. There is much to be said for this position—but this same argument also applies to the net imputed income estimate for owner-occupied housing. Elimination of both of these imputations would make the treatment of owner-occupied housing and consumer durables consistent with the imputation used for government structures and equipment in the accounts.

With respect to saving, Denison feels that the IEA expanded net

saving is much less interesting for the analysis of economic growth and fluctuations than NIPA net saving. The IEA's net saving shows what each sector contributes toward financing all capital formation, whereas NIPA net saving shows what each sector contributes toward financing private business sector investment (including owner-occupied housing). Which of these is the more interesting figure is a function of one's model of economic behavior. It may be noted, however, that much of the difference between IEA and NIPA sector net saving does not arise from the expansion of the gross capital formation concept but from the IEA modifications of NIPA sectoring, the largest contributing factors being owner-occupied housing, nonprofit institutions, and pension and insurance reserves. Without these changes, NIPA household and government sector net saving could be derived from IEA net sector saving for these sectors by simply subtracting their respective net capital formation.

G. The form of the accounts

In her comments, Tice points out that, by and large, what the IEA's have done is move existing pieces into a new configuration, and she therefore considers it legitimate to ask whether all this rearrangement makes us any better off: Are the IEA's more precisely estimated and more illuminating than the existing NIPA's and FOF accounts? By definition, of course, the IEA's are exactly as precisely estimated as the NIPA's and FOF accounts, because they are merely a reorganization of the data provided by the two systems. This has some drawbacks. As Tice noted, reliance on the FOF accounts resulted in two major deficiencies in the IEA's: (1) the omission of revaluations for fixed claim assets, and (2) the placing of all changes in land value in the revaluation accounts.

Those with the most extensive comments on the form of presentation were Tice and Tobin. Denison's comment was limited to the point that a gross saving and investment account such as BEA provides is very useful and its absence from the IEA's makes it much more difficult to obtain an overview. All the information that would be shown in such an account is

already included in each sector's capital transaction account, but nevertheless, we agree with Dension that a combined gross saving and investment account would be useful and should be presented.

1. IEA's and the FOF accounts.— Tice finds the IEA presentation difficult, unclear, and confusing for the user of the FOF accounts, for three reasons. First, she feels that it is unfortunate that the IEA current accounts stress gross saving and investment while the capital accounts for the Nation use net concepts; as a result, she considers it difficult to relate the current and capital accounts conceptually or empirically. At the same time, she considers that too much information is provided in the sector capital accounts, where net concepts of capital stock are derived from gross investment flows. Second, she cites the lack of enterprise sector discrepancies between net saving as measured in the current and capital accounts as a severe limitation of the IEA system. Finally, she feels that, in terms of presentation, the IEA's are not as convenient for the analysis of financial markets as the FOF system because, in that system, time series are typically given for each of the component accounts separately—capital transactions, revaluations, and balance sheets. Her conclusion is that clearly the specialist user of the FOF system probably will not find the IEA's to his liking and not really appropriate for his purposes, but for the NIPA user the IEA's are a useful introduction to this financial information. But even here she finds problems, considering that the asset detail that is retained may be overwhelming for the NIPA user at the same time it is insufficient for the FOF specialist.

On the gross/net question, the IEA income and product accounts—like those in the NIPA's—are centered around gross capital formation and gross product, but the IEA balance sheets are based on current market values, which, of course, reflect net values. The only way to use the same concepts in both forms of accounts would be to adopt net capital formation and net product as the basis for the current accounts. While some might feel that this would be desirable, a majority of users, as indicated by the practices of most countries,

have shown a preference for gross concepts in the current accounts. This does not, of course, preclude relating the current and capital accounts, because full details are given in the sector capital accounts on gross capital formation and capital consumption.

With respect to Tice's desire to have the discrepancies of net saving in the enterprise sector shown as an addendum item, this is simply done and the more recent versions of the IEA's do incorporate this item. As Tobin observed, the unexplained discrepancies are disturbingly large and a concerted effort is needed to diagnose and remedy these inconsistencies.

With respect to the form of the IEA's, it is true that their design is not based on the FOF system, and FOF specialists may ask the reason for this. Although the FOF system presents detailed data on financial transactions, it contains only very rudimentary information on other aspects of the national accounts, and it could not very well serve as the basis for a comprehensive framework. It was considered more appropriate for the IEA's to extend the NIPA's along the lines suggested by the United Nations SNA to comprehend capital transactions, revaluations, and balance sheets.

Tice observes that the IEA method of consolidating net worth for the enterprise and household sectors is different from the FOF consolidation. The IEA's subtract the equity owned by households (including the market value of corporate stock held by households) from enterprise net worth, whereas the FOF presentation leaves enterprise net worth intact and reduces household net worth correspondingly. Tice points out that the FOF treatment suggests a more important role in wealth owning for enterprises and may lead to useful insights about the control and likely use of this wealth. Tobin, however, notes that the IEA consolidation results in a consistent way of handling deviations of "q" from 1. Such a measure is, of course, not available in the FOF treatment, and it is not readily apparent what theoretical meaning or analytic use can be attributed to the FOF measure of household net worth reduced by enterprise net worth. Furthermore, because the unconsolidated enterprise net worth is also explicitly given in the IEA sector accounts, it can be used when this concept is analytically appropriate.

Taylor objected to the sharp division in the IEA's between the current and capital accounts. He felt that this tends to obscure profoundly the definitional connections between these two accounting forms in ways that are not helpful to the inexpert user and that can easily lead to error. The same sharp division is, however, also found in the Summary of Flow of Funds Accounts table presented in the May 1982 Survey. Indeed, the capital transactions account of the IEA's contains essentially the same transaction flows as are shown in that table. Even in the more detailed sector statements of saving and investment published by the Federal Reserve Board only summary totals are provided for current income and outlays.

The sharp division between current and capital transactions could be avoided by listing all transactions together in terms of sources and uses of funds—as the FOF accounts once did. The sources and uses approach is quite appropriate where the focus of interest lies in the analysis of a limit-

Source

Errata: May 1982 Survey of Current Business

Page	Correction
6	Account 1: The line numbers 36-45 should be moved up so that 36 appears as the line number for "Residential," not "Exports," and 45
	appears as the line number for "State and local."
7	Account 1, line 1: The numbers in parentheses should
	read $(1-31)$, not $(1-39)$.
25	Table 8, line 68: The figure
	328.1 should appear in the "Enterprise" column, not in
	the "Government" column.
26-29	Annex 2. Reconciliation Ta-
	bles. Table A shows correc-
	tions for the "Source"
72	column of these tables. Column 2: Insert "and con-
10	stant" before "dollars.",
	which is the first word in
	the column.
	viio voimiliii,

	Billions	of dollars	
Line number	BEA	IEA's	Published

T4	***********	Dillions	of dollars	300	irce
Item	Line number	BEA	IEA's	Published	Correct
Reconciliation Table 1:			}		
B. Other structures	14B	*93.5	93.5		BEA5.2L10+BEA5.2L16 BEA8.8L99
Owner-occupied houses	18		94.7		BEA8.8L99
Net exports of goods and services (BEA).	following 24	6		BEA1.1L18 - LINES(26A-27A)	BEA1.1L18 = LINES(26A-27A)
Exports (BEA)	following 24	219.8		BEA1.1L19-LINE 26A	
Less: Imports (BEA) Rental income			17.5		BEA1.1L20 = LINE 27A BEA2.1L12 BEA8.8L79
Reconciliation Table 2:		}			
A. Payments	14A	91.4	91.4	BEA2.1L16-BEA3.12L5	BEA2.1L16-BEA3.11L5
Reconciliation Table 3:					
Enterprises	13	64.3	64.3	BEA3.6L2-BEA3.13(5+26)+ IEA1.1L3D.	BEA3.6L2 – BEA3.13L(5+16) +IEA1.1L3D
Government Less: Wage accruals less disbursements.	15 Z		27.9	BEA3.13L(5+6)—IEA1.1L3D BEA3.1L25	
		i	}		

Table A.

^{*} A corrected estimate, published as 95.2.

ed number of transactions over a period of time. The distinction between current and capital is really quite arbitrary, and for different purposes different classifications may be desired. However, this approach becomes more awkward as increased detail is given, and it does not solve the problem of relating capital transactions to the revaluation and balance sheet items. The FOF presentation avoids these problems by limiting the income and expenditure flows to a few summary measures, and providing completely separate revaluation and balance sheet information.

Adler and Sunga made a similar point in suggesting that, as is done in Canada, the capital finance account might directly follow each sector's income and outlay account. This is appropriate in Canada, however, primarily because Canada does not have either revaluation accounts or balance sheets, and so does not need to find a place for them.

2. A matrix presentation.—Tobin suggests that the IEA's could be displayed somewhat more informatively if a matrix presentation were used. For balance sheets, there would be a matrix for each date with a row for each asset and debt category and a column for each sector. Each cell (ij) would display the net position (positive, negative, or zero) of the sector (i) in the asset (j). When information permits, the gross positions, positive and negative, could be shown in the cell with the net holding equaling their difference. The same matrix format can, of course, record the changes in sector holdings of assets from one date to another. Within each cell there would be, as in the IEA tables, two entries, one for the sector's net purchases or sales of the assets at the prices of the period, and one for revaluation of assets previously acquired. For any sector, the sum of all these entries is the change in the net worth, similarly split between the value of net acquisitions (which is the net saving of the sector) and revaluation of existing holdings. Finally, a second flow matrix can be constructed that will also lead to the same estimates of sectoral net saving. In this matrix, the columns are the same, but the rows represent transactions other than the purchase or sale of assets. The row categories are types of transactions like taxes, transfers, income payments, consumption outlays, and labor compensation. If the list is exhaustive, their net sums will be the saving figures. Tobin indicates that the format he is advocating is like that used in the European System of Accounts of the European Economic Community (its Table T2) except that he would like to consolidate the rows for assets and liabilities of the same type.

Such a matrix approach does have the advantage that it provides an overview of the structure of the economy at a given point of time and of its changes from one date to another. As Tobin observes, it can be carried out at different levels of aggregation. At more detailed levels of aggregation where many sectors and subsectors are shown and assets, financial instruments, and current transactions are classified in some detail, the matrixes would become quite large, however. Like large input-output tables, they would then be difficult to present or use in table form.

3. The need for alternative forms.—
The matrix approach to the presentation of data is diametrically opposite to the time series approach recommended by Tice for financial analysis, and, like the IEA system, it maintains the sharp difference between current and capital transactions to which Taylor has raised objections. It is thus apparent that different uses may call for different forms of presentations.

Whatever the form of presentation, the summary accounts should have the function of providing an overview of the economy and defining the framework of the economic accounting system, much in the same way BEA's 5-account system provides an overview of production, distribution, and use of the Nation's output and a formal accounting framework for more detailed supporting tables. As the system of economic accounts is extended, however, the task of interrelating all of its component elements becomes more complex. It may, therefore, be useful to display a number of alternative (but, of course, consistent) presentations at a fairly summary level, including time series, matrixes, and related accounts, so that users can choose the forms that suit them

best. The FOF presentation has adopted this sort of approach in providing accounts not only for transactors, but also for specific transactions.

For the more detailed data, it is apparent that for the research analyst this is best made available in machine readable form so that it can be processed and analyzed by computer. The IEA tables published in the May 1982 Survey represented only the tip of the iceberg—data were presented only for the period 1969-80, and only for the four major sectors of the economy. Data for these sectors are available for the full period 1947-80, and data for 14 subsectors are available for the period 1958-75, all on computer tape obtainable, as noted earlier, from BEA. (See the box on page 42 for information about the computer tape.)

Summary and Conclusions

A. IEA objectives and the reviewers' responses

1. The modifications and extensions proposed by the IEA's.—The IEA's proposed both to modify the existing NIPA's and to extend their scope. The modifications were based on the principle that the aggregate accounts for the Nation and the sector accounts should be viewed conceptually as combinations and consolidations of the accounts of individual transactors. This principle led to three specific types of modification. First, the NIPA sectoring of the economy was altered, removing nonprofit institutions from the household sector and setting up an enterprise sector. Second, some modifications were introduced in the treatment of specific flows in the NIPA's, including such items as owner-occupied housing, government and consumer durables, and pensions. Finally, market transactions and imputations for nonmarket activity were separated so that additional imputations could be introduced without impairing the usefulness of the system for the analysis of the market econo-

Two types of extension of the NIPA's were envisioned. First, the IEA's introduced accounts for stocks—balance sheets—and integrated them with the flow accounts

within its modified framework of aggregate national accounts and sector accounts. This entailed construction of the revaluation accounts needed to show how balances at the end of a period are derived from those at the beginning of the period. Second, the IEA's proposed extending the national accounting framework to embrace microdata as well as macrodata. It is our view that it is now feasible, statistically as well as conceptually, to construct composite microdata sets for households, enterprises, and governmental units that would consolidate to the sector accounts of the Nation. Such microdata sets can accommodate a wide variety of economic, social, demographic, and locational information relating to individual microunits.

2. The BEA response.—The IEA proposals for modification and extension of the national accounts encountered substantial opposition from those who had been intimately involved in the original design or more recent implementation of the NIPA's. The proposed sectoring changes were rejected, on the grounds that the objective of establishing sectors compatible with the accounts of individual transactors is a chimera, and that the removal of nonprofit institutions from the household sector would complicate the accounts and increase the heterogeneity of the enterprise sector. The IEA modifications in the recording of transactions were opposed on the grounds that the principles on which these changes were made were neither consistent nor valid. Specifically, strong support was voiced for retaining the BEA treatment of owner-occupied housing, consumer durables, and pensions. One comment did, however, recognize that the question of consumer and government capital formation has long been a controversial topic and that the proposed IEA treatment seemed sensible. The proposed separation into market transactions and nonmarket imputations was rejected both because it was considered to increase the complexity of the accounts and because the imputations contained in the NIPA's were not considered to be more speculative or different in kind from market transactions.

The extension of the NIPA's to embrace balance sheets was discussed by

only one BEA staff member. A detailed examination of the IEA capital accounts was provided, and the question was posed as to whether the IEA's were more illuminating than the existing accounts. The general conclusion was that the IEA presentation was clearly not as convenient for the analysis of financial markets as FOF accounts, and the specialist user of that system would not find it to his liking. For the NIPA user, however, the IEA's were considered to be a useful introduction to this financial information. The proposed IEA extension involving the development of microdata underlying the accounts was generally regarded by all the BEA staff who commented as both impractical and too costly.

3. The response of outside reviewers.—The outside reviewers were, on the whole, more receptive to the modifications and extensions proposed by the IEA's, although the viewpoints they represent are quite varied. In the comments relating to the modifications of sectoring, there was considerable support for removing nonprofit institutions from the household sector, but one comment expressed concern for the effect this would have in blurring the profit-motivated character of the enterprise sector. With respect to modifications in the recording of transactions, strong approval was given to the alteration in the treatment of owner-occupied housing, government and consumer durables, and pensions, although in relation to owner-occupied housing and consumer durables one comment noted that the proposed treatment would alter the traditional concept of the household as a consumption unit. There was some support for, and no opposition to, the separation of nonmarket imputations from market transactions; it was felt that this would permit the future expansion of estimates, if desired, into other nonmarket areas.

With respect to the extension of the NIPA's to embrace balance sheets, all of the outside reviewers were strongly in favor of such a development, but they differed in their views on the form of presentation of this information. There was agreement that capital accounts showing stocks of durables should be developed for the government sector, and that owner-occu-

pied housing and consumer durables should be included in the balance sheets of households. There was relatively little discussion of the incorporation of micodata. One comment noted, however, that although the development of microdata was both difficult and costly, the micro-macro data methodology intuitively points in the right direction.

B. The national accounts as a framework for the statistical system

One of our major purposes in developing the IEA's was to demonstrate that, with some modifications and extensions, the NIPA's could be used as a comprehensive framework for the U.S. statistical system. Although our presentation of the IEA's strongly emphasized this objective, this topic was not commented upon by either the BEA staff or the outside reviewers. Nevertheless, we would argue that it is this aspect of an integrated and expanded system of accounts that is most fundamental and important for the future development of both the national accounts and the U.S. statistical system.

The Bonnen Report on "Improving the Federal Statistical System" pointed out that there are over 100 Federal agencies with statistical programs, and the statistics that are produced in smaller statistical units or as a byproduct of administrative and regulatory data are often unreliable and poorly designed for their purposes.8 Restrictions on interagency sharing of data for statistical purposes result in lack of comparability of data produced by different agencies as well as failure to exploit fully data bases developed at substantial costs. There is not enough interaction between data producers and data users, including policy analysts and policymakers. largely because they are in different agencies. As a result, producers are insufficiently informed about the utility of the data they provide, and ana-

^{8. &}quot;Improving the Federal Statistical System: Report of the President's Reorganization Project for the Federal Statistical System," Statistical Reporter, May 1980.

lysts are often unaware of important limitations of the data they use. As these conclusions of the Bonnen Report clearly imply, the term "statistical system" as applied to the United States is indeed a misnomer. The statistical resources that exist in the United States are highly fragmented and uncoordinated.

Prior to the 1970's, the Office of Statistical Standards of the Bureau of the Budget and its predecessor organications made an effort to improve the quality of statistics through forms review and review of the budgets of the statistical agencies, and by establishing outside review committees. Although such efforts were useful and in some degree successful, they were quite inadequate to deal with the decentralized statistical highly system. Since that time, however, the situation has steadily deteriorated. In 1971, the function of statistical coordination was assigned to the Statistical Policy Division of the Office of Management and Budget. By 1977, the staff had been reduced to 29, from the level of 69 its predecessor had had in 1947. In 1978, the Statistical Policy Division was abolished and the coordination function was moved to the Office of Federal Statistical Policy and Standards in the Department of Commerce, with further reduction of staff. That office has now been abolished, and at the present time the only statistical coordination function that remains in the Federal Government is in the Office of Information and Regulatory Affairs of the Office of Management and Budget—which is primarily concerned with meeting the mandates of the Paperwork Reduction Act, not with improving statistics.

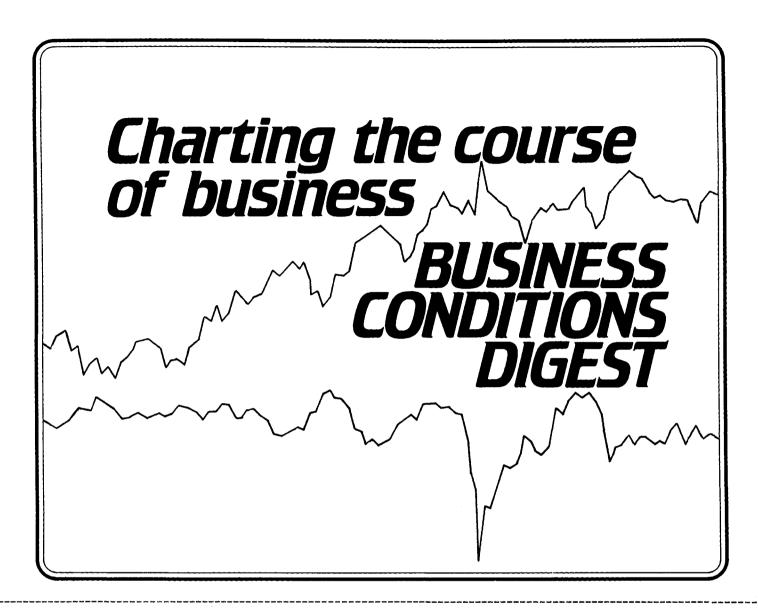
In the context of the fragmentation and decentralization of statistical activities coupled with the abandonment of serious efforts to achieve substantive coordination, the attempt to develop a comprehensive framework for the statistical system may seem to be an exercise in futility. Certainly BEA itself is in no position, in terms of either authority or budget, to bring about an integrated statistical system, and the Office of Management and Budget has neither the required staff nor the inclination to be concerned with this topic.

Nevertheless, some things can still be accomplished. Perhaps the most obvious and immediate step that could be undertaken would be a joint effort by BEA and the Federal Reserve Board to develop a system of accounts that would embrace the NIPA's, FOF accounts, and balance sheets, using common classifications of transactions and of sectors and subsectors. In such a common system, it would, of course, be reasonable that BEA would produce more detailed and expanded information relating to the current accounts and reproducible capital stocks, and the Federal Reserve Board would specialize in producing the financial information. The two agencies might indeed present different levels of detail in their respective publications, but it would be most useful if both sets of information were recognizable as parts of the same system of accounts.

There are also other areas where interagency cooperation would be desirable. There would, for example, be considerable advantage in having common classifications for the price information collected by the Bureau of Labor Statistics and for the industry and final product information in the national accounts. The fact that these systems differ reflects in large part the periods in which they originated, not present needs. Similarly, much would be gained by allowing all agencies providing data classified by industry to use the Standard Statistical Establishment List as the basis for assigning industrial classifications to their reporting units.

These partial and ad hoc measurements cannot, however, be expected to achieve the type of integrated statistical system here being proposed. To achieve this, it would be necessary to formulate in some detail an overall accounting system that is capable, not only of integrating all economic data, but also as serving as a framework for social, demographic, environmental, and regional information. Such a system would need to provide for the interrelation of macroand micro-data.

The required system cannot be expected to emerge without consideration of many of the important specific issues involved. The National Accounts Review Committee, which was convened by the Office of Statistical Standards a quarter of a century ago, was a useful device in setting forth the major issues of national accounting as viewed at that time. Similarly, in the development of the revised United Nations SNA, major issues were reviewed by those concerned with national accounting from many different countries, who met regularly over a period of years. The time may now be appropriate to assemble a new group of producers and users of statistics embracing not only those concerned with the national economic accounts but those involved in a wider spectrum of other types of information. In this connection, consideration should be given to the experiences of other countries in the development of their statistical systems, and to the international statistical emerging standards. Even if no immediate action is contemplated, such an effort to design an integrated set of national accounts and related data would be extremely important in helping to determine the future architecture of the statistical system. Without some overall plan to follow, the U.S. statistical system will remain fragmented and uncoordinated.



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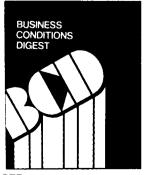
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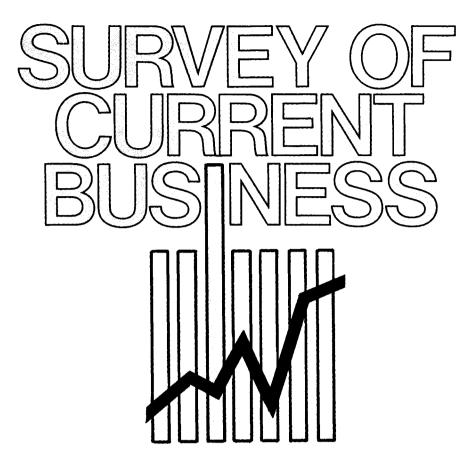
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CURRENT BUSINESS STATISTICS

THE STATISTICS here update series published in the 1979 edition of Business Statistics, biennial statistical supplement to the Survey of Current Business. That volume (available from the Superintendent of Documents for \$9.50, stock no. 003-010-00089-9) provides a description of each series, references to sources of earlier figures, and historical data as follows: For all series, monthly or quarterly, 1975 through 1978, annually, 1947-78; for selected series, monthly or quarterly, 1947-78 (where available).

The sources of the series are given in the 1979 edition of BUSINESS STATISTICS; they appear in the main descriptive note for each series, and are also listed alphabetically on pages 171-172. Series originating in Government agencies are not copyrighted and may be reprinted freely. Series from private sources are provided through the courtesy of the compilers, and are subject to their copyrights.

Unless otherwise stated in footnotes below, data	1980	1981		199	81		1982									
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
		GE	NER/	AL BU	JSIN	ess i	NDIC	АТО	RS							
PERSONAL INCOME BY SOURCE †																
Seasonally adjusted, at annual rates: † Total personal incomebil. \$	2,160.4	2,415.8	2,478.6	2,487.2	2,499.0	2,497.6	2,499.1	2,513.8	2,518.6	2,535.5	2,556.2	2,566.3	°2,590.4	r2,595.8	12,601.7	2,620.8
Wage and salary disbursements, total do Commodity-producing industries, total do Manufacturing	1,356.1 468.0 354.4 330.5	1,493.9 510.8 386.4 361.4	1,522.1 520.2 393.1 369.6	1,528.9 520.4 392.1 367.7	1,534.2 518.7 389.4 369.3	1,530.5 514.0 384.7 367.8	1,535.7 513.5 383.7 369.7	1,546.6 517.1 387.6 373.0	1,542.6 512.2 384.1 371.4	1,546.6 511.6 383.9 372.5	1,560.4 515.1 386.4 376.9	1,562.9 514.1 386.7 376.8	1,569.5 513.0 385.8 378.1	*1,570.3 *510.3 *384.0 *378.9	*1,569.8 *506.9 *381.3 *378.5	1,571.6 503.1 376.9 379.4
Service industries	297.4 260.2 127.2	338.6 283.1 140.4	345.8 286.5 143.5	349.7 291.1 144.7	353.8 292.5 145.8	355.0 293.6 146.9	357.0 295.4 148.0	360.1 296.4 149.1	361.4 297.6 150.2	363.7 298.8 151.3	368.5 300.0 152.5	370.7 301.2 153.6	374.3 304.2 154.6	*378.2 302.8 *155.5	r380.7 r303.6 r156.5	381.9 307.2 157.2
Farm do Nonfarm do	19.4 96.9	24.0 100.7	27.2 100.3	26.3 99.0	24.7 100.1	22.8 99.5	19.9 98.6	17.3 98.4	16.3 98.8	16.9 99.3	17.3 100.3	18.0 100.2	*17.3 *100.9	r16.5 r101.7	r15.9 r102.5	18.0 103.5
Rental income of persons with capital consumption adjustment bil. \$ Dividends do Personal interest income do Transfer payments do Less: Personal contrib. for social insur. do Total nonfarm income do	32.9 55.9 263.4 297.2 88.7 2,117.3	33.9 62.5 329.0 336.3 104.9 2,364.1	33.9 64.7 346.9 346.5 106.3 2,422.7	33.6 65.0 349.7 347.1 107.0 2,431.8	33.6 65.2 351.1 351.5 107.2 2,444.6	33.6 65.4 352.1 353.6 106.8 2,444.6	33.7 65.6 355.5 352.4 110.3 2,448.6	33.9 65.9 359.8 353.8 110.9 2,465.5	34.0 65.9 363.8 357.5 110.6 2,470.8	34.1 66.1 368.0 363.9 110.8 2,486.8	34.2 66.2 372.0 364.8 111.6 2,506.9	34.3 66.1 376.0 366.9 111.7 2,516.0	34.5 66.6 1379.7 379.7 112.4 12,541.8	34.6 67.3 *382.4 *380.1 *112.5 *2,549.0	34.7 67.7 '384.6 '382.5 '112.4 '2,556.6	34.8 68.4 386.4 393.3 112.4 2,573.4
DISPOSITION OF PERSONAL INCOME *		ŕ	ĺ	,	,	.,				,	,	,		,	,,,,,,	
Seasonally adjusted, at annual rates: Total personal income bil. \$. Less: Personal tax and nontax payments do Equals: Disposable personal income do Less: Personal outlays do Personal consumption expenditures do Durable goods do Nondurable goods do Services do Interest paid by consumers to business do do	2,160.4 336.3 1,824.1 1,717.9 1,667.2 214.3 670.4 782.5 49.9	2,415.8 386.7 2,029.1 1,898.9 1,843.2 234.6 734.5 874.1	2,478.6 401.1 2,077.5 1,938.7 1,881.2 241.1 746.4 893.7 56.9	2,487.2 391.2 2,096.0 1,930.2 1,872.1 228.1 742.7 901.3	2,499.0 393.9 2,105.1 1,943.3 1,885.1 230.7 745.9 908.5	2,497.6 394.7 2,103.0 1,954.7 1,896.4 230.1 751.0 915.3	2,499.1 389.9 2,109.2 1,965.8 1,907.4 234.7 746.0 926.7	2,513.8 396.3 2,117.5 1,986.9 1,928.3 240.1 755.9 932.3	2,518.6 394.2 2,124.4 1,981.1 1,922.4 238.8 745.4 938.2 57.9	2,535.5 389.1 2,146.3 1,993.9 1,934.8 238.8 747.0 949.1	2,556.2 403.7 2,152.5 2,013.1 1,954.0 245.6 759.2 949.1 58.3	2,566.3 410.7 2,155.6 2,014.4 1,954.7 237.8 758.9 958.0 58.8	r2,590.4 393.5 r2,196.9 r2,033.8 r1,974.0 r236.8 r767.9 r969.3 58.9	*2,595.8 *395.1 *2,200.7 *2,042.8 *1,983.1 *236.6 *767.7 *978.9	*2,601.7 *394.3 *2,207.4 *2,065.3 *2,005.4 *247.0 *768.2 *990.2	2,620.8 397.6 2,223.2 2,066.9 2,006.9 240.8 767.3 998.7
Personal transfer payments to foreigners (net) do	0.8	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8
Equals: personal saving	106.2 5.8	130.2 6.4	138.8 6.9	165.8 7.4	161.8 7.6	148.3 7.2	143.4 6.7	130.6 6.6	143.3 6.7	152.4 6.8	139.4 6.7	141.2 r6.8	'163.1 '7.1	°157.9 °7.0	*142.1 6.9	156.3
Disposable personal income in constant (1972) dollars. bil. \$ Personal consumption expenditures in constant (1972) dollars do Durable goods do Nondurable goods do Services do	1,018.0 930.5 137.1 355.8 437.6	1,043.1 947.7 140.0 362.4 445.2	1,050.1 950.8 141.1 363.5 446.2	1,054.1 941.5 133.6 361.5 446.4	1,053.0 943.0 134.8 362.7 445.5	1,048.6 945.6 133.9 365.1 446.7	1,042.9 943.1 135.4 359.5 448.2	1,047.7 954.1 139.0 365.5 449.6	1,050.0 950.1 138.0 361.4 450.7	1,057.6 953.4 137.7 362.7 453.0	1,058.1 960.5 141.5 367.8 451.2	1,048.8 951.0 135.8 362.9 452.3	*1,062.3 *954.5 134.9 *366.1 *453.5	*1,060.7 *955.8 *134.5 *366.0 *455.3	1,059.7 962.7 140.0 365.2 457.5	
Implicit price deflator for personal consumption expenditures index, 1972=100	179.2	194.5	197.8	198.8	199.9	200.5	202.2	202.1	202.3	202.9	203.4	205.5	206.8	1207.5	208.3	
INDUSTRIAL PRODUCTION																
Federal Reserve Board Index of Quantity Output																
Not Seasonally Adjusted Total index	147.0	151.0	155.8	152.4	146.4	139.1	136.6	142.7	142.0	139.4	138.5	141.8	r136.2	r140.4	₽141.3	*139.3
By industry groupings:	149.5	155.0	156.8	152.5	152.0	155.2	164.3	159.7	152.7	146.7	142.4	143.9	100.2	147.4	P141.1	°137.0
Mining and utilities	146.7 161.2 136.7	150.4 164.8 140.5	155.5 173.4 143.1	152.5 152.4 169.3 140.7	145.6 161.0 134.9	137.0 149.4 128.4	133.1 147.1 123.4	140.7 156.6 129.7	140.7 156.6 129.7	138.4 154.7 127.1	138.0 154.5 126.6	143.9 141.6 159.9 128.9	*135.1 *152.9 *122.7	*139.2 *161.8 *123.6	P141.1 P141.2 P164.0 P125.4	*139.9 *162.7 *124.0
Seasonally Adjusted								,								
Total index do	147.0	151.0	151.6	149.1	146.3	143.4	140.7	142.9	141.7	140.2	139.2	138.7	138.8	r138.4	₽137.4	°136.3
By market groupings: Products, total do Final products	146.7 145.3 145.4	150.6 149.5 147.9	151.0 150.0 147.8	149.4 148.9 146.5	147.5 147.2 144.0	146.2 146.3 142.0	142.9 142.8 139.6	144.6 144.1 141.8	143.7 143.3 141.5	142.9 142.6 142.1	142.3 142.2 143.6	142.1 142.1 144.8	*142.6 *142.5 *145.8	'141.8' '141.1 144.4	P140.8 P140.0 P143.6	*139.6 *138.5 *142.5

Unless otherwise stated in footnotes below, data	1980	1981		198	81						19	82				
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	GEI	NERA	L BU	SINE	SS IN	1DIC	ATOR	RS—C	ontin	ued				· · · · · · · · · · · · · · · · · · ·		l
INDUSTRIAL PRODUCTION—Continued																
Seasonally Adjusted—Continued																
By market groupings—Continued Final products—Continued																
Durable consumer goods 1967 = 100 Automotive products	136.7 132.8	140.5 137.9	140.4 139.1	136.3 132.8	129.7 121.7	123.2 119.2	120.1 109.2	125.9 117.5	128.1 125.0	130.7 129.9	132.6 138.9	134.6 143.0	*137.3 *149.7	⁷ 133.4 ⁷ 137.3	P131.8 P136.1	°127. °123.
Autos and utility vehicles do Autos do	110.1 103.6	111.2 103.4	110.0 103.3	101.7 92.5	88.9 81.1	87.5 78.1	71.6 61.3	82.0 70.5	93.6 79.8	100.5 87.2	111.8 96.1	117.1 101.9	127.7 114.6	109.6 ¹ 96.0	°107.7 °96.3	*90 *80
Home goods do	138.9	142.0	141.1	138.2	134.1	125.4	126.3	130.6	129.9	131.1	129.1	129.9	'130.4	⁷ 131.3	₽129.4	°130
Nondurable consumer goods do Clothing do	148.9 126.0	150.9 119.8	150.8 119.3	150.5 117.8	149.7 116.1	149.5 113.8	147.4	148.1	146.8	146.6	147.9	148.8	r149.1	148.7	₽148.4	°148
Consumer staples	155.2 147.4 164.3	159.5 150.3 170.0	159.5 149.5 171.1	159.6 150.7 169.9	159.0 150.4 169.1	159.4 150.9 169.3	158.9 150.0 169.1	159.2 151.1 168.7	158.1 149.6 168.0	158.3 148.1 170.0	159.0 149.9 169.5	159.9 150.9 170.4	'159.7 '149.9 '171.2	*159.6 *149.9 *170.8	P159.0 P149.2 P170.4	°159 °170
Equipment	145.2 173.2	151.8 181.1	152.9 182.7	152.1 180.5	151.5 179.0	152.1 179.0	147.2 172.2	147.3 171.6	145.9 169.0	143.4 164.9	140.4 159.9	138.4 156.7	r138.0 r154.9	*136.7 *153.1	°135.0 °149.5	*133 *146
Industrial equipment # do Building and mining equip do Manufacturing equipment do	156.5 239.9 128.2	166.4 286.2 127.9	168.9 293.6 129.3	166.9 295.6 125.7	165.1 293.8 123.6	164.0 294.6 122.0	158.1 289.0 116.9	155.9 274.9 116.8	151.2 256.9 116.3	145.9 242.2 114.0	138.9 224.4 109.7	134.0 209.0 107.5	r131.3 200.4 r106.0	"128.6 "190.8 "104.4	№124.0 №181.3 №100.9	*118 *163 *97
Commercial, transit, farm eq. # do Commercial equipment do Transit equipment	192.4 237.8 139.9	198.0 258.7 125.4	198.5 264.2 121.0	196.2 259.8 120.6	195.0 260.6 116.6	196.3 262.9 117.5	188.5 256.1 109.0	189.9 256.4 110.4	189.5 257.8 110.5	186.9 253.1 110.9	184.1 247.7 110.9	183.0 247.5 108.3	*182.2 *248.8 106.3	*181.4 *250.2 *102.0	P179.0 P249.4 P96.7	*178 *248 *94
Defense and space equipment do Intermediate products do	98.2 151.9	102.7 154.4	103.0 154.6	104.5 151.4	105.3 148.7	107.0 145.9	105.2 143.4	106.5 146.3	107.0 145.2	107.2 143.7	107.7 142.6	107.6 141.9	°109.5 °142.8	*109.1 *144.5	P110.7 P144.0	°111 °143
Construction supplies	140.9 162.8	141.9 166.7	139.7 169.4	135.2 167.5	130.1 167.1	127.0 164.6	124.2 162.4	127.5 165.1	125.6 164.6	123.6 163.7	122.2 162.8	123.1 160.6	'124.1 '161.4	'126.8 '162.0	P126.2 P161.6	°125
Materials do	147.6	151.6 149.1	152.5 150.4	148.5 145.6	144.6 141.0	139.0 134.0	137.2 129.7	140.4 132.4	138.5 130.7	136.2 128.1	134.3 126.6	133.5 126.6	'133.0 126.0	'133.0 125.2	₽132.0 ₽123.1	*131 *121
Durable goods materials	143.0 171.5 129.3	174.6 129.0	175.5 128.9	170.6 128.3	164.7 128.1	158.3 127.4	156.8 130.9	164.2 130.3	162.0 128.2	160.3 125.8	156.6 125.4	153.5 125.4	r152.3 r126.0	r154.6 r125.4	P156.6 P123.0	*156 *124
By industry groupings: Mining and utilitiesdo	149.5	155.0	155.8	156.1	155.4	154.7	157.4	155.6	153.1	151.6	148.8	145.2	r142.6	141.8	P140.3	°141
Mining	132.7 109.2	142.2 123.1	145.0 121.5	145.3 119.8	143.3 115.4	142.6 110.9	144.5 121.3 147.9	142.4 120.8	138.1 109.9 155.6	134.1 108.8 146.2	128.9 90.0	123.5 71.8	*120.1 58.1	'118.1 '56.8 139.9	P114.9 P53.0 P127.9	°115
Coal do Oil and gas extraction # do Crude oil do	146.7 133.3 94.9	141.3 146.8 95.1	161.9 148.8 95.0	166.9 148.9 94.0	160.8 148.4 93.9	145.5 150.5 94.5	151.5 96.2	156.0 146.6 94.7	141.4 94.2	137.7 95.9	149.2 132.7 95.2	144.4 129.1 95.7	140.3 127.0 195.7	124.0 195.0	P121.7 P95.4	*120
Natural gas do Stone and earth minerals	111.1 132.8	111.8 129.4	111.5 123.4	111.9 122.0	108.1 116.7	110.5 115.7	111.3 115.8	108.8 120.5	107.8 121.6	107.2 119.6	102.8 114.6	102.3 106.6	102.8 103.8	r105.7	P105.6	
Utilities do	168.3	169.1	167.8	168.1	168.9	168.2	171.8	170.4	170.0	171.0	170.9	169.4	*167.7	*168.2	₽168.7	•169
Electric	189.7 146.7	190.9 150.4	188.3 151.1	189.4 148.0	190.9 145.0	190.2 142.0	195.2 138.5	192.5 140.9	191.7 140.1	193.1 138.7	193.4 137.9	191.6 137.7	°189.2 °138.1	°189.8 °138.0	P190.7 P137.2	*191 *135
Nondurable manufactures do do do	161.2 149.6	164.8 152.1	165.9 150.7	162.8 151.4	160.3 153.0	157.4 152.8	155.1 151.1	157.8 151.7	157.3 150.8	156.1 149.7	155.0 150.5	155.3 151.0	r155.7 r151.0	r156.8 r150.5	P156.8 P150.1	°156
Tobacco products do Textile mill products do	119.9 138.6	122.2 135.7	122.4 136.3	124.3 132.5	119.6 126.1	112.6 122.8	112.7 120.0	126.7 125.8	126.7 126.0	116.1 126.3	118.6 123.5	123.6 123.7	'121.4 '124.3	121.4 125.3	P125.1	
Apparel products do Paper and products do	127.0 151.1	120.4 155.0	122.5 158.6	117.8 153.3	113.8 152.6	114.1 146.6	148.3	151.5	150.6	149.8	146.5	146.8	124.0	120.3	P152.7	*150
Printing and publishing do	139.6	144.2	145.9	145.6	143.4	145.3	145.6	146.4	145.9	144.2	143.8	142.6	⁷ 143.9	⁻ 145.3	₽144.7	*144
Chemicals and products do do	207.1 132.9 255.7	215.6 129.7 274.0	216.3 129.1 282.2	208.8 128.3 276.0	204.6 128.0	199.8 128.3 247.3	196.7 123.3 244.7	201.3 119.5	200.3 121.3	198.6 120.8 255.1	193.6 122.2 257.0	193.2 124.3 258.9	*194.1 124.7 256.8	*195.6 *121.4 *261.1	P195.7	°125
Rubber and plastics products do Leather and products do	70.1	69.3	69.7	71.2	264.1 70.8	65.6	63.1	251.8 64.0	253.4 61.2	60.6	61.1	62.3	62.9	¹ 60.8	°262.0 °60.5	
Durable manufactures do Ordnance, pvt. and govt do	136.7 78.5	140.5 81.1	140.9 82.3	137.8 82.5	134.4 84.3	131.3 85.5	127.1 84.1	129.3 83.8	128.2 83.8	126.7 85.2	126.1 86.3	125.5 86.5	125.9 87.1	*124.9 *87.8	°123.5 °88.5	e89
Lumber and products	119.3 150.0	119.1 157.2	113.2 159.9	109.6 157.2	104.7 153.7	104.8 149.4	99.2 144.3	104.9 148.4	103.5 150.2	106.2 151.8	110.6 151.1	112.2 152.5	116.9 154.5	*119.3 *156.1	P117.8	1
Clay, glass, and stone products	147.5 102.3	147.9 107.9	147.3 108.6	143.4 102.3	135.9 96.6	131.5 89.6	128.5 89.7	135.0 88.5	131.5 83.0	127.0 76.4	125.0 75.2	126.1 72.8	126.9 72.9	'128.8 '72.5	P130.6	
Iron and steel	92.4 119.8	99.8 122.4	99.2 125.0	92.2 119.3	87.2 112.8	79.2 108.0	79.6 108.9	78.5 106.7	73.0 100.7	65.1 95.9	62.4 97.0	58.0 98.9	58.1 102.9	*57.4 *100.3	°56.3 °103.5	
Fabricated metal products	134.1 162.8	136.4 171.2	136.8 173.9	133.8 169.7	130.2 167.9	126.1 167.4	120.7 160.9	121.4 160.0	121.1 157.3	119.1 153.7	115.8 150.0	115.0 147.4	115.5 147.1	'114.2 '146.7	P113.1 P143.2	
Electrical machinery do Transportation equipment do	172.8 116.9	178.4 116.1	180.0 114.2	179.6 110.6	175.7 106.1	170.7 103.7	168.2 96.6	172.9 102.0	172.6 104.4	172.2 105.9	170.9 110.0	170.8 111.6	170.3 112.7	*169.9 *107.5	°167.8	1
Motor vehicles and parts do Instruments do	119.0 171.1	122.3 170.3	120.4 169.7	113.8 168.6	105.5 167.1	100.4 166.8	90.4 162.2	98.6 164.5	105.6 163.0	110.7 162.8	119.8 163.8	124.0 164.8	127.2 165.2	'117.9 '165.5	P114.1 P162.2	*103
BUSINESS SALES																
Mfg. and trade sales (unadj.), total ‡ mil. \$ Mfg. and trade sales (seas. adj.), total ‡ do	3,858,053 13,858,053	4,207,460 14,207,460	357,828 353,725	359,213 346,605	344,041 344,943	359,752 341,330	308,418 334,579	323,388 340,571	355,915 342,121	343,372 339,835	347,636 349,096	356,134 346,126	329,795 344,603	r336,983	344,124 338,350	1
Manufacturing, total † do	1,850,983	1,994,600	168,156	163,957	161,442	159,614	155,023	158,143	157,518	156,114	160,828	161,519	161,382	158,619	158,566	
Durable goods industries do Nondurable goods industries do	930,482 920,501	1,001,001 993,597	84,671 83,485	81,265 82,692	80,279 81,163	79,133 80,481	75,551 79,472	77,976 80,167	78,124 79,394	77,136 78,978	79,518 81,310	78,888 82,631	79,036 82,346	177,248 181,371	76,193 82,373	
Retail trade, total §	1951,902 296,594 655,308	11,038,790 326,596 712,194	87,823 27,810 60,013	86,413 26,354 60,059	86,733 26,436 60,297	86,572 26,206 60,366	85,320 25,316 60,004	87,418 26,696 60,722	87,242 26,958 60,284	88,294 27,984 60,310	90,841 29,416 61,425	88,042 27,175 60,867	89,445 27,403 62,042	r88,502 r26,668 r61,834	89,038 27,298 61,740	
Merchant wholesalers, total @	1,055,168 448,040 607,128	1,174,072 499,970 674,102	97,746 41,643 56,103	96,235 40,882 55,353	96,768 41,495 55,273	95,144 41,053 54,091	94,236 40,416 53,820	95,010 39,932 55,078	97,361 39,408 57,953	95,427 38,707 56,720	97,427 38,407 59,020	96,565 37,950 58,615	93,776 38,033 55,743	792,343 737,121 755,222	90,746 36,984 53,762	
Mfg. and trade sales in constant (1972) dollars										·				,		
(seas. adj.), total * bil. \$ Manufacturing * do Retail trade * do Merchant wholesalers * do			157.7 73.4 45.9 38.4	153.4 70.8 44.9 37.8	153.2 69.8 44.9 38.5	152.4 69.4 45.0 38.0	148.4 67.0 44.1 37.3	152.2 68.8 45.1 38.3	152.5 68.8 44.8 38.9	150.9 67.7 45.0 38.2	155.2 69.4 46.1 39.7	153.0 69.4 44.5 39.0	152.3 69.0 44.9 38.4	*150.4 *67.9 44.6 37.9	150.3 67.9 45.0 37.3	

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		198	31						19	82				
in the 1979 edition of BUSINESS STATISTICS	Ann	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	GE	NERA	L BU	SINE	SS IN	DIC	ATOF	RS—C	ontin	ued						-
BUSINESS INVENTORIES																
Mfg. and trade inventories, book value, end of year or month (unadj.), total ‡ mil. \$	477,287	513,530	511,277	520,615	527,253	513,530	513,516	513,844	517,710	512,689	513,132	512,799	511,302	r509,661	510,996	
Mfg. and trade inventories, book value, end of year or month (seas. adj.), total ‡ mil. \$	482,570	519,394	515,349	518,241	521,574	519,394	516,256	513,906	513,054	515,074	510,517	512,981	513,387	r514,554	515,267	
Manufacturing, total †	264,015 174,674 89,341	283,152 188,429 94,723	282,209 187,686 94,523	284,386 189,461 94,925	285,783 190,222 95,561	283,152 188,429 94,723	281,154 187,054 94,100	281,688 187,121 94,567	280,065 186,063 94,002	278,986 185,916 93,070		275,115 184,289 90,826	274,914 183,798 91,116	r274,302 r183,550 r90,752	272,151 182,830 89,321	
Retail trade, total §	114,114 53,747 60,367	125,693 58,835 66,858	124,376 58,761 65,615	125,364 59,014 66,350	125,618 58,907 66,711	125,693 58,835 66,858	124,131 57,807 66,324	123,395 56,957 66,438	123,332 56,803 66,529	123,175 56,663 66,512	122,367 55,984 66,383	124,351 57,346 67,005	125,939 58,246 66,693	*127,151 *60,075 *67,076	129,066 61,485 67,581	
Merchant wholesalers, total @	104,441 67,033 37,408	110,549 73,224 37,325	108,764 71,842 36,922	108,491 71,798 36,693	110,173 73,479 36,694	110,549 73,224 37,325	110,971 73,036 37,935	108,823 72,003 36,820	109,657 72,782 36,875	112,913 74,668 38,245	111,701 72,858 38,843	113,515 73,908 39,607	113,534 75,241 38,293	'113,101 '74,956 '38,145	114,050 75,794 38,256	
Mfg. and trade inventories in constant(1972)dollars, end of year or month(seas.adj.),total* bil. \$ Manufacturing *			269.4 149.4 65.9 54.1	270.5 149.8 66.3 54.4	271.2 149.8 66.2 55.1	269.9 148.4 66.1 55.3	267.7 146.9 65.4 55.4	266.5 146.9 65.0 54.5	266.0 146.4 65.1 54.5	266.5 146.0 65.2 55.4	264.5 145.3 64.7 54.5	265.2 144.6 65.4 55.2	265.6 144.4 65.6 55.6	r265.5 r144.0 r66.5 r55.0	265.9 143.2 67.2 55.5	
BUSINESS INVENTORY-SALES RATIOS																
Manufacturing and trade, total ‡ ratio	1.45 1.66	1.44 1.66	1.46	1.50	1.51	1.52	1.54	1.50	1.50	1.52	1.46 1.72	1.48 1.70	1.49 1.70	1.52 *1.73	1.52 1.72	t
Manufacturing, total † do. Durable goods industries do. Materials and supplies do. Work in process do. Finished goods do.	2.18 0.70 0.95 0.53	2.19 0.69 0.97 0.53	1.68 2.22 0.70 0.98 0.55	1.73 2.33 0.73 1.03 0.58	1.77 2.37 0.74 1.05 0.58	1.77 2.38 0.74 1.05 0.60	1.81 2.48 0.77 1.09 0.62	1.78 2.40 0.74 1.05 0.60	1.78 2.38 0.73 1.05 0.61	1.79 2.41 0.74 1.06 0.61	2.32 0.71 1.02 0.60	2.34 0.71 1.03 0.60	2.33 0.71 1.01 0.60	2.38 70.71 1.04 0.62	2.40 0.72	
Nondurable goods industries	1.13 0.45 0.19 0.48	1.13 0.45 0.19 0.48	1.13 0.45 0.19 0.49	1.15 0.46 0.19 0.50	1.18 0.47 0.20 0.51	1.18 0.47 0.20 0.50	1.18 0.48 0.20 0.51	1.18 0.47 0.20 0.51	1.18 0.47 0.20 0.52	1.18 0.47 0.20 0.51	1.13 0.46 0.19 0.48	1.10 0.44 0.19 0.47	1.11 0.45 0.19 0.47	"1.12 0.45 0.19 "0.48	1.08 0.44 0.18 0.47	
Retail trade, total §	1.41 2.14 1.08	1.39 2.08 1.07	1.42 2.11 1.09	1.45 2.24 1.10	1.45 2.23 1.11	1.45 2.25 1.11	1.45 2.28 1.11	1.41 2.13 1.09	1.41 2.11 1.10	1.40 2.02 1.10	1.35 1.90 1.08	1.41 2.11 1.10	1.40 2.13 1.07	1.44 r2.25 1.08	1.45 2.25 1.09	
Merchant wholesalers, total @	1.13 1.70 0.70	1.09 1.67 0.66	1.11 1.73 0.66	1.13 1.76 0.66	1.14 1.77 0.66	1.16 1.78 0.69	1.18 1.81 0.70	1.15 1.80 0.67	1.13 1.85 0.64	1.18 1.93 0.67	1.15 1.90 0.66	1.18 1.95 0.68	1.21 1.98 0.69	*1.22 2.02 0.69	1.26 2.05 0.71	
Manufacturing and trade in constant (1972) dollars, total *			1.71 2.04 1.44 1.41	1.76 2.12 1.48 1.44	1.77 2.15 1.48 1.43	1.77 2.14 1.47 1.46	1.80 2.19 1.48 1.49	1.75 2.14 1.44 1.42	1.74 2.13 1.45 1.40	1.77 2.16 1.45 1.45	1.70 2.09 1.40 1.37	1.73 2.08 1.47 1.42	1.74 2.09 1.46 1.45	1.77 *2.12 1.49 *1.45	1.77 2.11 1.49 1.49	
MANUFACTURERS' SALES, INVENTORIES, AND ORDERS																
Shipments (not seas. adj.), total † do	1,850,983	1,994,600	173,758	169,614	160,772	155,117	144,431	160,220	165,832	158,058	161,541	169,159	147,553	r155,187	164,870	ļ
Durable goods industries, total do Stone, clay, and glass products do Primary metals do Blast furnaces, steel mills do Fabricated metal products do Machinery, except electrical do Electrical machinery do Transportation equipment do Motor vehicles and parts do Instruments and related products do	930,482 46,083 133,930 61,486 116,194 180,727 128,587 186,282 104,560 44,139	1,001,001 49,141 136,847 69,195 123,282 203,737 137,873 203,000 114,882 47,530	87,337 4,345 11,611 5,820 10,611 18,009 12,397 17,203 9,365 4,291	85,058 4,173 11,081 5,560 10,450 17,272 11,988 17,219 10,286 4,125	79,659 3,832 10,014 5,029 9,295 16,856 11,725 16,194 8,940 3,955	76,863 3,404 9,000 4,663 8,812 17,692 11,125 15,645 7,353 4,054	68,605 3,238 9,634 4,837 8,360 14,455 10,410 12,640 6,979 3,379	78,829 3,543 10,046 5,051 9,528 16,964 11,689 15,524 8,521 3,832	83,776 3,871 9,742 4,813 10,319 18,032 12,094 17,362 9,905 4,171	79,101 3,801 9,507 4,440 9,978 15,602 11,622 16,889 10,297 °3,758	80,485 3,923 8,951 3,974 10,244 15,810 11,716 18,004 10,682 °3,936	84,307 4,166 8,981 4,120 10,531 16,815 12,354 18,983 11,361 °4,285	70,361 3,708 7,481 3,291 9,126 13,619 10,654 14,767 8,412 °3,519	r73,374 r3,957 r7,951 r3,413 r9,746 r13,925 r11,131 r14,616 r8,483 r3,873	79,519 4,013 8,260 3,554 9,809 15,710 12,129 16,680 9,773 4,276	
Nondurable goods industries, total do Food and kindred products do Tobacco products do Textile mill products do	920,501 255,872 11,893 47,397	993,597 269,130 13,000 52,274	86,421 23,515 1,135 4,884	84,556 22,983 1,111 4,476	81,113 22,111 1,144 4,145	78,255 21,562 1,162 3,837	75,826 20,580 1,083 3,553	81,391 22,814 1,069 4,135	82,055 23,140 1,061 4,625	78,957 21,813 1,153 4,070	81,056 22,721 1,140 4,209	84,852 23,812 1,388 4,547	77,192 21,657 1,024 3,412	r81,813 r22,335 1,279 r4,259	85,351 24,159 1,492 4,370	
Paper and allied products do Chemical and allied products do Petroleum and coal products do Rubber and plastics products do	72,650 161,559 198,673 47,342	79,489 175,131 220,333 46,504	6,829 15,222 18,199 4,074	6,728 13,831 18,459 4,134	6,476 13,346 17,972 3,515	6,139 13,581 18,067 3,319	6,416 13,360 17,298 3,375	6,782 14,369 16,547 3,669	6,915 15,176 15,533 3,607	6,538 14,542 16,194 3,648	6,447 14,629 17,287 3,592	6,727 15,360 17,770 3,898	6,080 12,960 17,341 3,469	'6,721 '13,977 '17,006 '3,682	6,507 14,906 17,510 3,641	
Shipments (seas. adj.), total †			168,156 84,671 4,022 11,559 5,885	163,957 81,265 3,861 10,945 5,542	161,442 80,279 3,857 10,408 5,243	159,614 79,133 3,808 9,626 4,892	155,023 75,551 3,884 10,028 5,009	158,142 77,976 3,795 9,572 4,812	78,124 3,821 8,829	156,114 77,136 3,728 8,953 4,156	160,828 79,518 3,863 8,682 3,904	78,888 3,834 8,598 3,989	79,036 3,764 8,443 3,685	r158,619 r77,248 r3,730 r8,383 r3,654	l	
Fabricated metal productsdo Machinery, except electrical do Electrical machinerydo Transportation equipment do Motor vehicles and partsdo Instruments and related productsdo			10,233 17,543 11,740 17,450 9,941 4,020	9,914 17,074 11,451 16,004 8,933 3,982	9,492 17,527 11,581 15,695 8,439 3,876	9,361 17,116 11,252 16,118 8,262 4,035	9,231 15,939 11,210 13,847 7,357 3,754	9,557 16,587 11,451 15,152 8,241 3,933	9,765 16,570 11,508 15,805 8,829 3,942	9,750 15,432 11,677 15,945 9,509 3,825	10,096 15,899 11,912 17,314 10,109 3,988	9,890 15,488 11,639 17,573 10,420 4,007	9,965 14,879 12,108 17,806 10,918 3,905	*9,680 *14,847 *11,434 *17,589 *11,018 *3,894	9,456 15,286 11,494 16,153 9,542 4,005	
Nondurable goods industries, total # do Food and kindred products do Tobacco products do Textile mill products do Paper and allied products do Chemicals and allied products do Petroleum and coal products do Rubber and plastics products do			83,485 22,535 1,149 4,591 6,652 14,777 18,187 3,942	82,692 22,187 1,065 4,263 6,646 14,268 18,731 3,896	81,163 21,652 1,120 4,095 6,682 14,196 18,030 3,682	80,481 21,417 1,134 4,095 6,680 14,260 17,800 3,680	79,472 22,069 1,138 3,905 6,712 13,740 17,011 3,646	80,167 22,709 1,136 4,150 6,603 14,071 16,024 3,520	79,394 22,404 1,103 4,254 6,599 13,847 15,698 3,414	78,978 22,302 1,157 5,058 6,463 13,751 16,494 3,500	81,310 23,018 1,128 4,148 6,346 14,136 17,382 3,569	82,631 23,315 1,351 4,217 6,425 14,595 17,592 3,762	82,346 23,277 1,021 4,074 6,478 14,259 17,690 3,807	*81,371 *22,275 1,243 *4,198 *6,549 *14,551 *16,976 *3,590	82,373 23,130 1,511 4,102 6,328 14,434 17,498 3,520	

Juless otherwise stated in footnotes below, data hrough 1978 and descriptive notes are as shown	1980	1981		198	31						19	82				
nrough 1978 and descriptive notes are as shown n the 1979 edition of BUSINESS STATISTICS	Ann	ıual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Мау	June	July	Aug.	Sept.	Oct
	GE	NERA:	L BU	SINE	SS IN	DIC	ATOF	RS—C	ontin	ued						
MANUFACTURERS' SALES, INVENTORIES, AND ORDERS †—Continued																
hipments (seas. adj.) †Continued					:											
By market category: † Home goods and apparel mil. \$	¹128,123	¹136,418		11,211	11,042	10,513	10,467	11,176	11,208	10,708	10,803	10,858	11,328	11,242	11,297	
Consumer staplesdo Equipment and defense prod., exc. auto do	1328,375 1276,299	1349,269 1306,929	29,457 26,427	28,902 25,476	28,636 26,321	28,479 26,684	29,021 24,185	29,970 25,566	29,753 25,623	29,578 23,997	30,310 25,056	31,043 24,451	30,660 24,146	r30,207	31,271 24,388	
Automotive equipment do Construction materials and supplies do	1123,602 1144,922	1135,005 1152,663	11,563 12,498	10,542 12,056	9,933 11,728	9,804 11,515	8,836 11,398	9,769 11,400	10,332 11,738	11,002 11,446	11,661 12,058	11,974 11,720	12,456 12,102	'12,494 '11,899	10,947 11,784	
Other materials and supplies do Supplementary series:	1849,662	1914,319	76,763	75,770	73,783	72,619	71,115	70,261	68,862	69,383	70,940	71,473	70,690	*69,011	68,879	******
Household durables	158,247 1312,672	¹61,299 ¹344,647	5,164 29,572	5,012 28,733	4,945 29,532	4,782 29,600	4,723 27,067	4,876 28,417	4,982 28,549	4,897 26,869	4,808 28,140	4,904 27,727	5,133 27,283	r4,799 r26,423	5,038 26,934	
Nondefense do Defense do	1274,246 138,426	1297,724 146,927	25,584 3,988	24,676 4,057	25,387 4,145	25,315 4,285	23,066 4,002	24,043 4,374	24,060 4,490	22,599 4,271	23,471 4,669	22,906 4,821	22,483 4,800	'21,776 '4,647	22,111 4,823	
ventories, end of year or month: † Book value (unadjusted), total do	261,528	280,131	279,528	281,625	282,992	280,131	281,926	283,594	282,050	282,017	279,391	276,281	274,487	r273,292	269,499	
Durable goods industries, total	172,115 89,413	185,584 94,547	185,676 93,852	186,978 94,648	187,855 95,137	185,584 94,547	187,031 94,895	188,756 94,838	188,026 94,024	188,253 93,764	187,287 92,104	185,442 90,839	183,859 90,628	*183,110 *90,182	180,804 88,695	
Book value (seasonally adjusted), total † do	264,016	283,152	282,209	284,386	285,784	283,152	281,155	281,688	280,065	278,985	276,449	275,115		r274,302	272,151	
By industry group: Durable goods industries, total # do	174,674	188,429	187,686	189,461	190,222	188,429	187,054	187,121	186,063	185,916	184,870	184,289	183,798	*183,550	182,830	
Stone, clay, and glass products	5,995 22,878	6,792 26,250	6,766 25,927 13,198	6,741 26,236 13,332	6,781 26,415	6,792 26,250	6,582 25,974 13,120	6,629 26,070	6,544 26,056 13,441	6,479 25,403 13,075	6,429 25,063	6,382 24,617	6,318 24,450 12,485	16,396 124,142	6,289 23,971	
Fabricated metal products do	12,063 19,623	13,347 20,208	20,334	20,449	13,378 20,561	13,347 20,208	20,339	13,128 20,142	19,848	19,716	12,867 19,664	12,566 19,593	19,223	12,154	11,905 19,088	
Machinery, except electrical do	40,714 26,042	44,376 28,142	43,471 28,110	43,899 28,482	44,255 28,655	44,376 28,142	44,237 27,784	44,414 27,697	44,134 27,526	44,449 27,365	44,447 27,024	44,008 26,950	43,895 26,834	r43,572 r26,891	43,083 26,650	}
Transportation equipment do Motor vehicles and parts do	35,890 9,894	38,237 9,226	38,409 9,608	39,032 9,649	38,958 9,360	38,237 9,226	38,122 8,957	38,194 8,795	38,150 8,673	38,743 8,640	38,701 8,495	39,074 8,649	39,339 8,849	r39,785 r8,600	40,111 8,483	·
Instruments and related products do By stage of fabrication: †	9,154	9,610	9,528	9,541	9,587	9,610	9,420	9,513	9,399	9,516	9,303	9,393	9,422	*9,387	9,441	
Materials and supplies do Work in process do	55,310 76,851	58,461 82,814	58,908 82,621	59,117 83,588	59,216 84,058	58,461 82,814	58,184 82,211	57,999 82,097	56,897 81,729	56,947 81,562	55,996 81,284	55,643 81,304	55,781 80,216	r55,191 r80,458	54,721 80,404	
Finished goods do	42,513 89,341	47,153 94,723	46,158 94,523	46,756 94,925	46,946 95,561	47,153 94,723	46,659 94,100	47,026 94,567	47,435 94.002	47,408 93,070	47,590 91,579	47,342 90,826	47,801 91,116	'47,901 '90,752	47,705 89,321	
Nondurable goods industries, total # do Food and kindred products do Tobacco products	21,590 3,638	20,400 4,401	21,290 4,088	20,990 4,181	20,939 4,231	20,400 4,401	20,481 4,495	20,486 4,514	20,405 4,572	20,377 4,812	20,140 4,812	19,830 4,697	20,178 4,893	120,212 4,696	19,795 4,492	
Textile mill products do Paper and allied products do	6,695 7,788	7,011 8,825	7,008 8,545	7,041 8,654	7,061 8,802	7,011 8,825	6,761 8,675	6,710 8,850	6,587 8,921	6,513 8,842	6,501 8,810	6,367 8,757	6,428 8,734	6,381 18,748	6,394 8,870	
Chemicals and allied productsdo Petroleum and coal productsdo	19,514 9,814	21,615 10,544	21,334 10,810	21,714 10,510	21,792 10,431	21,615 10,544	21,420 10,373	21,418 10,615	21,428 10,531	21,363 9,675	20,895 9,060	20,973 9,101	20,798 9,220	r20,656	20,357 9,102	
Rubber and plastics products do By stage of fabrication:	6,029	6,298	6,434	6,473	6,546	6,298	6,120	6,172	6,153	6,165	6,115	6,046	5,868	5,791	5,514	
Materials and supplies do Work in process do	36,208 15,656	38,015 16,196	37,606 16,213	37,720 15,912	37,834 16,174	38,015 16,196	37,961 15,959	37,899 15,792	37,317 15,629	37,486 15.601	37,172 15,438	36,714 15.555	36,789 15,519	r36,448	35,838 15,002	
Finished goods do	37,478	40,511	16,213 40,705	41,293	41,555	40,511	40,179	40,877	41,057	39,983	38,969	15,555 38,557	38,808	r38,775	38,481	
By market category: † Home goods and apparel	20,817	22,948	22,084	22,653	23,153	22,948	22,766	22,631	22,041	21,948	21,779	21,598	21,675	121,517	21,384	
Consumer staples do do Equip. and defense prod., exc. auto do	32,196 70,150	33,100 76,445	33,375 75,187	33,369 76,189	33,305 76,718	33,100 76,445	33,309 76,265	33,644 76,744	33,631 76,716 11,220	33,673 77,708	33,355 77,506	32,832 77,622	33,351 77,423	r33,262 r77,618	32,533 77,499	
Automotive equipment	12,328 20,872 107,653	11,873 22,172 116,613	12,254 22,488 116,821	12,321 22,354 117,501	12,081 22,406 118,121	11,873 22,172 116,613	11,567 21,729 115,518	11,366 21,338 115,964	21,078 115,379	11,191 20,723 113,741	11,102 20,639 112,068	11,226 20,533 111,304	11,332 20,415 110,718	11,054 20,490 110,361	10,820 20,165 109,750	
Supplementary series: Household durablesdo	107,033	11,256	11,026	11,280	11,343	11,256	11.196	11,120	10,896	10,856	10,692	10,744	10,782	110,656	10,660	
Capital goods industries do Nondefense do	79,141 68,605	86,515 73,360	85,623 73,131	86,623 74,005	87,126 74,164	86,515 73,360	86,302 72,968	86,974	86,795 72,937	87,752 73,806	87,644	87,393 73,166	87,378	87,885	87,545	
Defense do	10,535	13,154	12,492	12,618	12,962	13,154	13,334	13,598	13,857	13,946	14,029	14,227	14,205	r14,459	14,790	
ew orders, net (not seas. adj.), total † do Durable goods industries, total	1,868,857 948,723	1,992,179 999,268	172,209 86,032	167,182 82,956	157,465 76,894	153,451 75,381	147,978 71,856	78,548	166,453 84,383	156,759 77,867	155,250 74,504	78,199	66,393	*149,397 *67,545	161,139 75,596	
Nondurable goods industries, total do ew orders, net (seas. adj.), total † do	920,134	992,912	86,177 167,728	84,226 159,558	80,571 159,460	78,070 156,660	76,122 154,519	80,949 155,984	82,069 157,198	78,892 154,995	80,746 156,791	84,531 157,058	76,982 158,588	r81,852 r154,380	85,543 155,519	1
By industry group: Durable goods industries, total	1948,723	1999,268	84,456	77,193	78,592	76,421	75,061	76,309	77,859	76,194	75,710	74,550	76,446	172,982	72,929	1
Primary metals	1133,936 162,217	1133,901 168,410	11,107 5,712	9,786 4,743	9,686 4,836	8,981 4,462	9,163 4,469	8,241 3,741	7,596 3,432	8,137 3,583	8,453 3,928	8,617 3,789	8,660 3,999	*8,178 *3,749	7,921 3,390	
Nonferrous and other primary met do	160,016	153,606	4,358	4,014	4,033	3,804	3,866	3,767	3,440	3,828	3,741	3,939	3,797	73,765	3,921	
Fabricated metal products	1115,658 1180,332 1135,199	122,031 1202,448	9,956 17,608	9,440 16,422	9,124 17,073	9,272 16,343	8,777 15,120	9,052 14,506	9,819 14,438 12,782	8,989 15,262 12,508	9,405 14,408	9,389 13,015	9,368 12,876 12,396	13,091	8,819 13,871	
Electrical machinery	198,898 170,394	1141,845 1202,472 166,145	12,458 17,204 6,245	10,594 15,050 4,500	12,036 15,067 5,341	11,566 14,617 5,282	11,842 15,182 5,841	11,391 17,305 7,475	17,138 7,206	16,595 5,779	11,888 16,011 4,854	11,705 16,347 4,560	17,515 4,989	'11,572 '16,084 '5,175	12,081 14,427 3,822	l
Nondurable goods industries, total do	1920,134	1992,912	83,272	82,365	80,868	80,239	79,458	79,676	79,339	78,803	81,081	82,508	82,142	r81,398	82,590	Ì
Industries with unfilled orders ‡	1186,011 1734,123	1205,870 1787,040	17,424 65,849	17,025 65,340	17,067 63,801	17,111 63,128	16,946 62,512	16,866 62,810	17,607 61,732	16,653 62,151	16,756 64,325	16,867 65,641	16,742 65,400	'17,181 '64,217	17,053 65,537	
By market category: † Home goods and apparel	127,594	1136,200	11,459	10,894	10,835	10,472	10,296	11,120	11,570	10,067	11,040	10,964	11,181	'11,099	11,241	
Consumer staples do Equip. and defense prod., excl. auto do	1328,433 1293,103	1349,430 1308,350	29,476 26,065	28,909 24,455	28,669 26,421	28,451 24,381	28,978 26,587	29,996 26,161	29,822 25,349	29,477 25,890	30,340 22,074	31,070 23,179	30,590 22,390	'30,181 '21,542	31,303 21,641	
Automotive equipment do Construction materials and supplies do	1122,045 1144,254	1134,898 1152,053	11,291 12,440	10,503	9,497 11,761	9,869 11,228	8,771 10,856	9,438 11,108	10,285 12,006	10,625 11,003	11,398 11,592	11,887 11,384	12,647 12,008	11,928	11,195 11,701	
Other materials and supplies	1853,428	1911,251	76,997	73,032	72,277	72,258	69,031	68,162	68,167	67,937	70,347	68,574	69,772	⁷ 68,201	68,438	
Household durables	157,820 1334,268	161,128 1347,082	5,195 30,240	4,700 26,636	4,739 29,372	4,747 27,774	4,578 28,291	4,869 28,772	5,353 29,239	4,254 28,782	5,022 25,107	5,004 24,715	4,990 25,006	74,670 724,207	4,993 24,031	
Nondefense do Defense do	1281,384 152,884	1288,731 158,350	24,312	22,528 4,109	24,369 5,003	22,130 5,644	21,717 6,573	21,560 7,213	22,174 7,065	22,608 6,174	20,332 4,775	19,278 5,437	20,322 4,684	18,893	19,789 4,242	l

inless otherwise stated in footnotes below, data	1980	1981		198	31						19	82				
hrough 1978 and descriptive notes are as shown the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	GEN	NERA	L BU	SINE	SS IN	IDIC	ATOF	RS—C	ontin	ued						I.
MANUFACTURERS' SALES, INVENTORIES, AND ORDERS †—Continued																
nfilled orders, end of year or month (unadjusted), total †	318,797 308,131 10,666	316,375 306,395 9,979	323,779 312,743 11,036	310.642	318,041 307,877 10,163	316,375 306,395 9,979	319,921 309,646 10,275	319,197 309,365 9,832	319,817 309,971 9,847	318,518 308,736 9,782	312,234 302,762 9,472	305,804 296,652 9,152	301,624 292,684 8,940	r295,827 r286,850 r8,977	292,094 282,927 9,167	
nfilled orders, end of year or month (seasonally adjusted) total † mil. \$ By industry group:	320,977	318,621	327,955	323,556	321,574	318,621	318,114	315,957	315,639	314,521	310,482	306,032	303,235	r299,001	295,950	
Durable goods industries, total #	310,051 29,658 16,966 8,899	308,370 26,623 16,113 7,302	316,841 29,148 17,751 8,078	312,769 27,989 16,951 7,638	311,082 27,268 16,543 7,433	308,370 26,623 16,113 7,302	307,877 25,759 15,573 7,030	306,211 24,427 14,502 6,921	305,947 23,195 13,679 6,697	305,004 22,378 13,106 6,572	301,194 22,147 13,129 6,419	296,866 22,168 12,930 6,586	294,272 22,385 13,244 6,499	⁷ 290,011 ⁷ 22,181 ⁷ 13,369 ⁷ 6,391	286,742 21,899 13,132 6,456	
Fabricated metal products do Machinery, except electrical do Electrical machinery do Transportation equipment do Aircraft, missiles, and parts do	30,497 73,884 47,917 114,304 86,831	29,240 72,627 51,939 113,709 87,207	30,170 74,505 52,028 116,791 89,054	29,696 73,854 51,171 115,838 88,203	29,328 73,400 51,625 115,211 88,029	29,240 72,627 51,939 113,709 87,207	28,785 71,807 52,570 115,043 88,123	28,281 69,727 52,510 117,196 90,514	28,334 67,595 53,784 118,529 92,483	27,574 67,425 54,613 119,178 93,349	26,883 65,934 54,588 117,876 92,613	26,384 63,462 54,655 116,652 91,494	25,788 61,458 54,942 116,359 91,178	55,082 114,855	24,367 58,289 55,668 113,126 89,762	
Nondur. goods ind. with unfilled orders ‡ do By market category: †	10,926	10,251	11,114	10,787	10,492	10,251	10,237	9,746	9,692	9,518	9,288	9,166	8,963	¹ 8,990	9,208	
Home goods, apparel, consumer staplesdo Equip. and defense prod., incl. autododo Construction materials and suppliesdo Other materials and suppliesdo Supplementary series.	3,559 186,434 17,588 112,788	3,457 187,724 16,982 109,671	17,527	3,704 190,296 17,235 111,538	3,497 189,959 17,269 110,033	3,457 187,724 16,982 109,671	4,029 190,058 16,440 107,588	3,998 190,323 16,148 105,488	16,416	3,684 191,517 15,972 103,346	3,951 188,274 15,506 102,751	4,087 186,916 15,170 99,859	3,866 185,350 15,076 98,943		3,675 180,061 14,522 97,692	
Abusehold durables	3,123 218,190 155,646 62,544	3,069 220,621 146,701 73,919	3,623 224,701 153,052 71,650	3,311 222,605 150,904 71,701	3,104 222,445 149,886 72,560	3,069 220,621 146,701 73,919	2,924 221,841 145,351 76,490	2,916 222,197 142,868 79,329	3,288 222,888 140,982 81,905	2,643 224,799 140,991 83,808	2,858 221,766 137,852 83,914	2,961 218,756 °134,226 84,530	2,815 216,480 132,067 84,413	129,183	2,642 211,360 126,860 84,500	
BUSINESS INCORPORATIONS @ (ew incorporations (50 States and Dist. Col.):											1		į			
Unadjusted	533,520	580,867	48,305 48,792	49,002 47,947	43,533 49,413	48,650 47,556	42,680 43,330	42,511 47,234	52,574 46,899	48,845 46,876	46,008 46,995	'48,876 '45,936	45,282 41,575			
ailures, total number Commercial service	11,742 1,594	***************************************	1,777 248	1,604 228			***************************************									
Construction do Manufacturing and mining do Retail trade do Wholesale trade do	2,355 1,599 4,910 1,284		379 233 702 215	361 199 657 159												
iabilities (current), total	4,635,080 413,502 752,109 1,885,017		752,345 40,512 79,209 343,714											,,		
Retail trade	993,539 590,913		129,967 158,943	119,337 86,675												
No. per 10,000 concerns	142.1		87.0	69.4	ODI		RICE	3								l
PRICES RECEIVED AND PAID BY					ODI.	- I	TICE.	•					Γ			
FARMERS ¶ rices received, all farm products 1910-14=100	614	633	608	594	593	583	601	608	608	616	633	628	622	609	r620	
Crops #	539 562	580 676	521 594	517 608	524 621	527 733	545 892	534 789	521 656	530	541 602	541 636	537 603	513 539	r540 r509	
Cotton do Feed grains and hay do	583 417	565 446	490 393	526 382	507 373	432 381	421 400	409 391	423 392	632 452 404	458 418	464 404	486 385	440 363	'464 '345	
Food grains do Fruit do Tobacco do	452 458 1,219	456 477 1,363	427 469 1,452	436 482 1,426	442 554 1,435	434 540 1,452	432 519 1,478	425 547 1,478	419 533 1,478	417 537 1,469	413 581 1,469	388 614 1,474	374 709 1,400	376 695 1,526	r382 r1,093 1,565	1,5
Livestock and products # do Dairy products do Meat animals do Poultry and eggs do	691 798 878 254	688 842 848 264	699 838 872 263	675 856 822 255	665 856 794 268	641 856 756 253	659 850 791 259	685 844 841 264	699 832 870 268	706 820 898 255	727 807 950 247	718 801 936 245	711 807 912 254	710 807 922 236	7705 826 7894 253	1,
rices paid: Production items	799 950	854 1,031	859 1,040	850 1,037	849 1,037	840 1,031	856 1,058	858 1,060	866 1,067	866 1,066	871 1,071	876 1,073	876 1,077	'874 '1,078	869 1,075	1,0
arity ratio §	65	61	58	57	57	57	57	57	57	58	59	59	58	⁻⁵⁶	58	
Not Seasonally Adjusted LL. ITEMS, WAGE EARNERS AND CLERICAL WORKERS, REVISED (CPI-W)	247.0	272.3	279.1	279.7	280.4	281.1	282.1	282.9	282.5	283.7	286.5	290.1	291.8	292.4	292.8	29
LL ITEMS, ALL URBAN CONSUMERS (CPI-U)	246.8	272.4	279.3	279.9	280.7	281.5	282.5	283.4	283.1	284.3	287.1	290.6	292.2	292.8	293.3	29
All items less shelter do All items less medical care do All items less food do All items less food do All items less food do All items less medical care do	235.5 244.0 245.5	258.5 270.6 270.9	263.5 278.2 277.8	264.5 279.0 278.3	265.4 280.1 279.0	266.0 280.8 279.6	267.4 281.4 280.6	268.3 282.1 281.5	268.5 281.7 280.9	268.7 282.9 282.1	270.6 286.0 284.9	273.8 289.7 288.4	275.3 291.5 289.9	275.7 292.5 290.5	276.9 292.9 290.8	27 29

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		198	31						19	82	,	.		
in the 1979 edition of BUSINESS STATISTICS	Ann	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
		CC	MM	DDIT	Y PR	ICES-	Coı	ntinu	ed							
CONSUMER PRICES—Continued (U.S. Department of Labor Indexes)—Continued																
Not Seasonally Adjusted						j										
All items (CPI-U)—Continued Commodities 1967 = 100	233.9	253.6	257.7	257.9	258.0	258.4	258.8	259.5	258.8	258.9	261.5	265.1	266.5	266.4	266.6	267.5
Nondurables do	245.0	266.3 257.5	269.5	269.5 260.7	269.5	269.8 261.1	270.8 260.2	271.7	270.7	269.3 255.0	270.7	274.4 261.2	275.7 263.0	275.5	276.2	276.5
Durables do	235.2 210.4	227.1	260.3 232.6	232.9	261.1 233.2	233.7	233.4	260.1 233.7	258.4 233.5	235.8	256.2 239.8	243.2	244.7	263.6 244.6	264.6 244.1	265.7 246.0
Commodities less food	222.0 270.3	241.2 305.7	245.5 317.3	245.9 318.6	246.2 320.6	246.5 321.8	245.9 323.9	246.0 325.3	245.2 325.5	245.0 328.4	247.8 331.8	251.9 334.9	253.5 337.0	253.8 338.9	253.9 339.7	255.4 340.3
Services less rent do	285.1	324.3	337.5	338.7	340.8	342.0	344.2	345.7	345.7	349.1	352.8	356.5	358.5	360.5	361.3	361.6
Food # do Food at home do	254.6 251.5	274.6 269.9	278.0 273.2	277.6 272.1	277.1 271.0	277.8 271.7	281.0 275.3	283.3 278.0	283.0 277.1	283.9 277.9	285.5 279.8	287.8 282.6	288.5 282.8	287.4 280.8	287.6 280.6	287.0 279.4
Housingdo	263.3	293.5	303.7	303.5	304.2	305.2	306.1	307.3	306.7	309.4	313.8	317.5	319.2	320.1	319.7	320.7
Shelter # do	281.7	314.7	326.9	326.6	327.2	328.0	328.3	329.5	327.6	331.4	336.7	340.9	342.8	344.2	342.6	342.8
Rent, residential	191.6 314.0	208.2 352.7	211.9 367.8	213.6 366.7	215.0 367.2	216.5 367.8	217.8 367.5	218.6 368.7	219.6 365.7	220.1 370.6	221.8 377.4	222.6 382.8	224.8 384.5	226.0 385.9	226.9 383.0	228.9 382.8
Fuel and utilities #	278.6 556.0	319.2 675.9	331.1 673.4	330.1 672.7	329.8 676.1	331.8 682.5	336.2 686.0	337.1 683.1	339.3 664.0	339.2 641.3	345.4 644.6	352.2 656.6	354.7 659.9	356.3 659.9	359.5 662.8	363.4 677.2
Gas (piped) and electricity do	301.8	345.9	364.5	360.6	358.3	359.91	367.4	368.7	375.9	377.8	389.0	398.9	402.1	404.4	409.2	413.4
Household furnishings and operation do	205.4	221.3	224.5	225.6	227.2	227.7	228.4	230.2	231.6	232.6	233.4	233.7	234.1	233.4	234.2	235.4
Apparel and upkeep	178.4 249.7	186.9 280.0	190.7 285.2	191.5 287.2	191.3 289.1	190.5 289.8	187.3 289.9	188.0 288.0	191.1 285.1	191.9 282.9	191.5 285.6	190.8 292.8	189.7 296.1	191.8 296.2	194.9 295.3	195.5 295.5
Private do New cars do	249.2 179.3	277.5 190.2	281.9 191.3	283.9 192.5	285.8 195.3	286.5 197.0	286.6 197.4	284.5 195.5	281.3 194.4	278.8 196.0	281.5 197.5	288.9 198.1	292.3 198.6	292.4 198.7	291.1 197.7	291.1 197.7
Used cars do	208.1	256.9	272.8	278.2	281.4	281.9	280.5	279.7	280.9	285.1	291.4	298.2	302.4	304.4	304.6	306.7
Public do	251.6 265.9	312.0 294.5	329.1 301.7	330.8 304.8	333.2 308.2	333.8 310.2	334.9 313.4	336.8 316.2	336.7 318.8	339.3 321.7	342.1 323.8	345.6 326.4	347.2 330.0	348.1 333.3	353.3 336.0	356.3 338.7
Seasonally Adjusted				ĺ	1											
All items, percent change from previous month			1.1	0.4	0.5	0.4	0.3	0.2	-0.3	0.2	1.0	1.0	0.6	0.3	0.2	0.5
Commodities 1967 = 100			257.3 244.9	258.3 245.9	258.8 246.5	259.6 247.5	259.9 247.2	260.4 247.2	259.1 245.9	258.4 244.6	260.7 246.9	264.0 250.6	265.5 252.7	265.6 253.1	266.2 253.5	267.9 255.6
Food do			278.3	279.0	279.3	279.5	281.5	283.2	282.2	283.0	285.4	287.2	287.0	286.2	287.6	288.2
Food at homedo			273.3	273.5	273.3	273.1	275.9	278.1	276.4	277.1	279.9	282.0	281.0	279.2	280.5	280.7
Apparel and upkeep do			189.0	189.5	189.3	189.4	189.3	190.1	190.9	191.1	191.0	191.2	192.1	192.8	193.2	193.6
Transportation do Private do			284.6 281.5	288.2 285.1	290.8 287.8	292.5 289.6	291.9 288.7	289.9 286.5	287.1 283.4	282.6 278.5	283.8 279.7	289.7 285.7	293.1 289.2	293.9 290.0	294.8 290.6	296.5 292.2
New cars do			193.7	194.0	194.6	196.1	196.0	194.5	194.6	196.0	196.5	197.9	198.8	199.7	200.1	199.3
Services do			316.9	318.4	321.4	322.9	324.4	325.6	325.7	328.7	331.8	334.5	336.4	338.5	338.9	339.7
PRODUCER PRICES § (U.S. Department of Labor Indexes)					- 1											
Not Seasonally Adjusted					}				{							
All commodities	268.8	293.4	295.7	296.1	295.5	295.8	298.3	298.6	298.0	298.0	298.6	⁷ 299.3	300.6	300.4	299.5	299.9
By stage of processing: †					1	ŀ						1		1	1	
Crude materials for further processing do Intermediate materials, supplies, etc do	304.6 280.3	329.0 306.0	327.4 309.7	319.9 309.4	313.9 309.0	311.5 309.4	318.4 311.0	321.6 311.1	320.0 310.6	322.6 309.9	328.3 309.8	*325.6 *309.9	323.4 311.4	320.5 311.0	316.3 310.7	312.2 310.0
Finished goods #	247.0 248.9	269.8 271.3	271.5 273.1	274.3 275.1	274.7 275.2	275.4 275.8	277.9 278.3	277.9 278.6	277.3 277.7	277.3 277.3	277.8 277.7	279.9 r280.1	281.7 282.0	282.4 282.7	281.4 282.0	284.1 284.2
Capital equipment do	239.8	264.3	265.3	271.5	273.0	274.1	276.2	275.0	275.8	277.2	278.1	279.2	280.9	281.4	279.5	283.8
By durability of product: Durable goodsdo	251.5	269.8	271.8	275.0	275.4	276.0	277.6	277.4	277.4	278.1	278.5	r278.3	279.1	279.1	278.7	281.4
Nondurable goods	282.4 261.5	312.4 286.0	315.0 288.3	312.8 289.8	311.4 289.7	311.4 289.9	314.7 291.9	315.4 292.0	314.2 291.4	313.6 291.1	314.5 291.3	316.0 292.4	317.7 293.9	317.3 293.9	315.9 293.1	314.3 293.9
Durable manufactures do	250.8	269.6	271.7	275.1	275.8	276.5	278.0	277.8	277.8	278.7	279.2	r279.3	280.1	280.1	279.7	282.4
Nondurable manufacturesdo	273.0	303.6	306.3	305.5	304.5	304.3	306.8	307.2	1	304.1	304.0	r306.3	308.6		307.3	305.9
Farm prod., processed foods and feeds	244.7 249.4	251.5 254.9	250.3 251.1	246.0 243.1	242.5 237.4	241.0 234.6	246.0 242.2	248.4 247.1	247.5 244.7	251.6 250.6	255.8 256.5	255.3 252.7	252.5 246.5	250.1 242.0	247.5 234.4	243.9 229.1
Foods and feeds, processed do	241.2	248.7	248.9	246.6	244.3	243.6	247.1	248.1	248.1	251.1	254.4	255.8	254.8	}	253.6	251.0
Industrial commodities do	274.8	304.1	307.4	309.0	309.3	310.0	311.8	311.6	311.0	309.9	309.6	r310.6	313.0	313.4	312.9	314.4
Chemicals and allied products	260.3 574.0	287.8 694.4	293.3 703.5	292.4 698.1	292.0 698.1	291.8 702.5	292.9 705.1	293.6 697.8	294.6 689.7	294.3 670.6	295.0 662.2	r293.3 r677.3	291.6 701.8	291.6 705.7	291.4 701.8	290.4 699.6
Furniture and household durables do Hides, skins, and leather products do	187.7 248.9	198.4 261.5	201.0 261.7	201.3 260.0	202.1 259.8	202.9 260.7	203.5 261.8	204.6 261.6	205.5 260.6	206.0 263.4	206.5 263.2	¹ 207.0 ¹ 261.8	206.8 261.3	207.4 263.2	207.7 264.8	208.4 264.7
Lumber and wood products do	288.9	292.8	289.3	284.3	282.1	285.4	285.5	285.2	285.3	286.5	284.6	r289.0	288.3	284.4	283.0	279.6
Machinery and equipment	239.8 286.4	263.1 300.4	268.1 304.9	269.3 305.3	270.4 304.2	272.0 303.3	274.1 304.7	275.4 304.2	276.2 302.9	277.6 303.1	278.2 302.8	r278.6 r299.3	279.4 300.2	279.7 300.2	280.3 301.8	280.9 302.1
Nonmetallic mineral productsdo	283.0	309.5	313.2	313.3	313.7	313.5	315.6	319.0	319.9	320.2	321.2	7320.9	320.3	320.4	320.2	321.2
Pulp, paper, and allied productsdo Rubber and plastics productsdo	249.2 217.4	273.7 232.8	277.8 235.7	279.2 237.3	280.4 238.0	281.0 238.3	285.5 237.3	286.3 239.3	287.4 240.8	288.5 241.1	289.6 242.1	r289.5 r242.5	288.9 243.1	289.1 243.6	289.2 243.3	289.2 243.0
Textile products and apparel do	183.5	199.6	202.9	204.0	203.6	203.4	205.0	205.6	205.0	205.4	205.4	^{205.0}	204.1	203.9	203.8	202.6
Transportation equipment # Dec. 1968 = 100 Motor vehicles and equip 1967 = 100	207.0 208.8	235.4 237.5	231.8 232.8	244.5 247.8	246.3 248.9	246.8 249.5	248.6 250.8	245.2 246.8	245.2 246.8	245.8 247.2	247.5 249.2	7249.1 7251.1	250.4 252.5	251.2 253.3	245.0 245.0	256.4 258.1
Seasonally Adjusted ‡					1	1			ļ							
Finished goods, percent change from previous					1											
month			0.2	0.6	0.5	0.3	` 0.5	-0.2	-0.1	0.1	-0.1	1.0	0.6	0.6	-0.1	0.5
Crude materials for further processing 1967 = 100			328.4	322.7	318.1	313.6	319.3	317.3	314.7	320.1	327.4	327.0	323.7	321.9	317.0	314.7
Intermediate materials, supplies, etc		}	309.8 272.6	309.7 274.2	310.6 275.5	311.1 276.3	312.0 277.8	311.1 277.3	310.1 276.9	308.3 277.1	308.8 276.9	*309.6 279.7	311.0 281.3	310.7 283.0	310.8 282.6	310.3 283.9
Finished consumer goods do			273.9 255.5	275.2 255.0	276.3 253.2	276.9 253.0	278.5 255.9	278.2 257.1	277.3 256.8	277.3	276.8 262.7	'279.8 263.9	281.3 260.0	283.0	282.7	284.2
Food			279.3	281.4	283.8	284.6	285.6	284.7	283.6	261.1 281.7	280.4	*284.1	288.1	260.3 290.3	258.9 290.6	258.5 293.0
Durable			219.5 323.9	222.5 325.3	224.5 328.0	224.7 329.3	224.4 331.3	223.1 330.6	224.3 327.8	223.7 325.0	224.6 322.0	r226.6	227.5 333.4	229.1 336.0	227.1 338.1	229.0 340.7
Capital equipment do			267.8	270.5	272.5	274.1	275.4	274.3	275.7	276.5	277.5	1279.5	281.2	283.1	282.1	282.7
PURCHASING POWER OF THE DOLLAR					ļ											
As measured by:	0.405	0.371	0.900	User	0 964	0 202	0.900	0.000	0.004	0.901	0.000	0.055	0.055	0.054	0000	0.000
Producer prices		. 11.3771	0.368	0.365	0.364	0.363	0.360 0.354	0.360 0.353	0.361 0.353	0.361	0.360 0.348	0.357	0.355	0.354	0.355	0.352

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		196	31						19	82				
in the 1979 edition of BUSINESS STATISTICS	Ann	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
		CON	STRU	JCTIO	ON A	ND F	EAL	EST	ATE							
CONSTRUCTION PUT IN PLACE	200 740	000 001	21 222	01.000		10.00	17.110		40.505		10.000	00.000	-22 24	-24 222		
New construction (unadjusted), total mil. \$ Private, total # do	230,749 175,699	238,201 185,222	21,986 16,595	21,308 16,417	19,963 15,487	18,865 14,941	15,142 12,170	14,726 11,794	16,705 13,349	17,943 14,173	19,323 15,205	20,932 16,281	*20,611 *15,901	°21,230	21,550 16,211	
Residential do New housing units do do	87,261 63,139	86,566 62,664	7,453 5,422	7,182 5,077	6,736 4,630	5,966 3,951	4,963 3,450	4,417 3,166	5,175 3,789	5,915 3,856	6,609 4,175	6,899 4,406	r6,940 r4,676	¹ 7,041 ¹ 4,826	7,058 4,942	
Nonresidential buildings, except farm and public utilities, total # mil. \$	52,434	60,818	5,602	5,739	5,545	5,230	4,542	4,575	5,018	5,195	5,383	5,776	5,610	⁵ ,615	5,611	
Industrial	13,837 29,945	17,030 34,248	1,635 3,115	1,680 3,180	1,588 3,117	1,456 3,008	1,226 2,619	1,239 2,623	1,338 2,898	$\frac{1,296}{3,078}$	1,417 3,119	1,543 3,320	1,433 3,302	*1,458 *3,235	1,454 3,221	
Public utilities: Telephone and telegraph	6,733	7,074	649	701	631	652	466	531	639	584	588	654	626	652		
Public, total #	55,050	52,979	5,392	4,891	4,476	3,924	2,971	2,932	3,356	3,770	4,118	4,651	4,710	r5,165	5,339	
Buildings (excluding military) # do Housing and redevelopment do	18,517 1,648	17,792 1,722	1,632 133	1,510 127	1,511 135	1,459 147	1,186	1,227	1,290 129	1,377 137	1,377 128	1,468 132	1,449 138	'1,515 '148	1,572 145	
Industrial	1,441 1,880	1,655 1,964	181 173	110 150	109 165	158 161	931 159	121 114	138 179	150 137	131 186	146 168	139 168	143 - 173	165 188	
Highways and streets do	13,807	13,304	1,569	1,389	1,110	756	434	444	585	721	1,014	1,467	1,563	r1,673	1,697	
New construction (seasonally adjusted at annual rates), total bil. \$			233.5	230.8	230.0	228.8	225.1	222.6	224.6	226.1	228.7	231.6	r228.8	'230 .2	229.8	
Private, total # do			182.4	180.0	178.1	176.6	175.5	173.0	173.6	175.1	179.9	182.6	180.3	°179.4	179.4	
Residential do New housing units do Nonresidential buildings, except farm and			80.4 57.1	78.2 53.4	76.2 50.4	75.8 49.4	73.7 51.0	69.2 49.2	70.0 51.0	72.3 49.6	75.5 51.0	75.3 49.8	76.2 *51.5	52.1	76.7 52.4	
public utilities, total #			62.9 18.5	62.9 18.5	63.4 18.4	62.2 16.6	62.8 17.1	$\frac{64.1}{17.2}$	64.9 16.6	64.2 15.9	64.4 17.1	67.1 18.4	64.0 16.4	r63.3 r16.7	63.5 16.5	
Commercial do Public utilities:			34.9	34.6	35.7	36.4	36.2	36.8	38.4	38.4	36.8	38.0	37.5	r36.1	36.3	
Telephone and telegraph			7.2	7.3 50.8	7.5	7.5	7.3	8.4	7.4	7.1	7.3	7.0	7.4	7.2 50.8	 50.4	
Public, total #			51.1 17.3	17.2	51.9 17.7	52.2 17.6	49.6 16.8	49.6 17.7	51.0 16.9	51.0 17.5	48.8 16.5	48.9 16.8	48.4 16.0	r16.7	50.4 16.5	
Housing and redevelopment do Industrial do			1.5 1.7	1.5 1.5	1.6 1.5	1.6 1.8	1.7 1.1	1.5 1.8	1.6 1.6	1.6 1.8	1.5 1.5	1.6 1.6	1.6 1.7	1.7 1.8	1.6 1.6	
Military facilities			1.9 12.5	1.9 11.9	1.9 12.8	2.0 12.7	2.1 11.5	1.5 12.4	2.3 13.3	1.7 12.1	$\frac{2.1}{11.7}$	1.9 13.1	1.9 14.1	⁷ 2.0 713.3	2.1 13.7	
CONSTRUCTION CONTRACTS	***************************************		12.0	11.0	12.0	12.1	11.0	12.1	10.0		11.1	10.1	14.1	10.0	10.1	***************************************
Construction contracts in 50 States (F.W. Dodge Division, McGraw-Hill):							}									
Valuation, total	148,393 1106	150,189 107	r12,724 100	'12,642 101	9,722 92	11,577 112	10,580 118	8,881 115	13,036 105	11,713 88	11,821 94	15,444 111	12,528 98	13,896 112	14,180 117	12,549 105
Public ownership mil. \$	41,717	39,070	^r 3,916	r3,439 r9,203	2,406	2,862 8,715	2,673 7,907	2,998 5,883	4,280 8,756	3,394	3,773	4,360 11,084	3,745 8,783	3,411	3,849 10,330	3,272 9,276
Private ownership do By type of building: Nonresidential	106,676 52,492	111,120 58,250	r8,808 r5,205	1	7,316 4,380	4,445	3,458	3,606	5,273	8,319 4,400	8,048 4,233	6,113	5,011	10,485 5,250	5,226	5,02
Residential do Non-building construction do	63,668 32,234	60,063 31,877	74,704 72,816	75,811 74,718 72,113	3,737 1,605	3,739 3,393	3,008 4,113	3,143 2,132	4,600 3,164	4,656 2,658	4,984 2,604	5,602 3,729	5,144 2,372	5,414 3,232	5,525 3,429	5,629 1,893
New construction planning (Engineering News-Record) §	149,143	166,366	11,999	16,597	15,492	17,516	13,920	12,102	10,844	14,043	9,119	8,278	11,992	10,385	11,936	13,373
HOUSING STARTS AND PERMITS	,	,		ĺ	, i		,		·		·	,			,	
New housing units started: Unadjusted:																
Total (private and public)thous Privately owned	1,312.6 1,292.2	1,100.3 1,084.2	90.9 84.1	88.2 87.2	64.9 64.6	59.7 59.1	47.6 47.2	52.0 51.3	78.7 78.2	85.1 84.1	99.2 98.8	91.9 91.1	107.2 106.8	r97.2 r96.0	106.5 104.5	
One-family structures do Seasonally adjusted at annual rates:	852.2	705.4	58.3	49.9	40.1	34.1	29.3	32.5	51.8	55.8	58.9	63.5	61.4	r62.0	'62.5	64.0
Total privately owned do One-family structures do			899 623	854 507	860 554	882 550	885 592	945 568	931 621	882 566	1,066 631	908 621	1,193 628	°1,033 °645	'1,111 '670	1,125 679
New private housing units authorized by building																
permits (16,000 permit-issuing places): Monthly data are seas. adj. at annual rates: Totalthous	1,191	986	835	738	743	797	803	792	851	879	944	929	1,062	888	1,003	1,181
One-family structures do	710	564	456	400	413	454	450	436	460	450	488	516	500	497	561	634
Manufacturers' shipments of mobile homes Unadjustedthous	221.6	240.7	21.5	20.2	15.7	14.2	13.9	17.2	22.1	22.3	21.8	23.6	19.4	22.2 234	21.2	
Seasonally adjusted at annual rates do CONSTRUCTION COST INDEXES			232	208	207	206	211	251	252	255	246	257	246	234	222	
Dept. of Commerce composite 1977=100	143.2	152.5	154.8	154.9	154.7	156.1	156.5	156.0	156.3	156.7	155.1	154.6	155.4	154.8	155.2	
American Appraisal Co., The: Average, 30 cities	2,495	2,643	2,676	2,678	2,678	2,700										
Atlanta do New York do	2,660 2,553	2,841 2,645	2,898 2,658	2,892 2,655	2,878 2,646	2,893 2,659										
San Francisco do St. Louis do	2,671 2,343	2,873 2,453	2,893 2,494	2,896 2,491	2,918 2,523	2,934 2,535										
Boeckh indexes: Average, 20 cities:	}															
Apartments, hotels, office buildings 1977=100 Commercial and factory buildings do	125.1 127.7	137.4 140.1	142.1 145.3		143.2 145.9		144.1 146.3		146.0 148.5		149.0 151.1		152.6 154.3		153.6 155.2	
Residences	128.9	136.0	140.4		141.6		142.1	***************************************	143.1		146.1		149.9	••••••	151.2	
Building	287.7 301.4	310.3 328.9	316.6 336.1	319.1 341.9	r322.8 r344.2	323.3 344.9	324.7 346.8	325.7 347.8	324.8 347.2	325.0 347.3	328.6 353.0	328.5 352.9	330.6 357.9	333.5 360.0	332.9 361.0	² 332.8 ² 360.9
Federal Highway Adm.—Highway construction:					544.2		540.5	30						20.0		
Composite (avg. for year or qtr.) 1977 = 100 See footnotes at end of tables.	163.0	156.7	157.3	· l		156.8	· ·		145.3			146.8			147.8	

Unless otherwise stated in footnotes below, data	1980	1981		198	B1						19	82				'
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Anı	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	CON	STRU	CTIO	N AN	ID RI	EAL I	ESTA	TE	Conti	nued		L	L	L		L
REAL ESTATE ¶																
Mortgage applications for new home construction: FHA net applicationsthous. units Seasonally adjusted annual rates	141.4	92.3	5.4 58	4.5 50	4.6 61	8.2 126	7.5 136	8.6 126	9.8 104	6.3 67	5.2 51	6.7 76	8.2 90	6.8 76	9.8 106	11.8 139
Requests for VA appraisals	202.2	1	8.5 99	9.0 100	8.7 123	9.1 141	9.3 142	9.1 119	11.1 118	13.6 143	13.0 151	14.1 154	12.3 139	11.9 127	12.9 150	15.7 181
Home mortgages insured or guaranteed by: Fed. Hous. Adm.: Face amount	16,458.53 13,855.54		1,014.78 660.19	654.28 485.73	727.94 464.19	593.31 357.69	443.87 327.39	606.52 393.60	585.12 421.78	547.57 374.45	589.61 327.85	716.28 443.89	653.80 438.90	592.51 552.50	772.41 743.54	724.61 385.69
Federal Home Loan Banks, outstanding advances to member institutions, end of period mil. \$	48,963	65,194	64,347	64,662	64,409	65,194	65,099	65,089	66,162	67,941	67,801	69,398	69,325	68,399	67,642	67,077
New mortgage loans of all savings and loan associations, estimated total mil. \$ By purpose of loan:	72,537	53,283	3,865	3,465	2,934	3,760	2,628	2,849	3,966	3,807	3,797	5,006	4,101	۲4,543°	4,809	<i></i>
Home construction do Home purchase do All other purposes do	14,946 42,957 14,634	11,599 28,299 13,385	803 1,970 1,092	650 1,838 977	600 1,498 836	824 1,682 1,254	495 1,204 929	592 1,320 937	966 1,647 1,353	832 1,612 1,363	796 1,607 1,394	1,052 2,080 1,874	859 1,921 1,321	'981 '1,962 '1,600	1,056 1,874 1,879	
		• • • • • • • • • • • • • • • • • • • •		DOM	ESTI	C TR	ADE					•				
ADVERTISING		[-	
Magazine advertising (Publishers Information Bureau): Cost, total mil. \$ Apparel and accessories do Automotive, incl. accessories do Building materials do Drugs and toiletries do Foods, soft drinks, confectionery do	2,872.6 112.2 231.1 52.5 280.8 211.9	141.7 290.1 56.5 318.3 231.8	284.8 21.1 14.7 7.2 30.9 18.4	330.5 15.4 29.3 5.4 28.2 23.7	393.3 16.5 38.4 5.4 31.1 34.2	275.3 11.6 21.1 3.8 23.5 20.3	211.2 7.9 20.3 2.7 20.1 10.3	249.5 8.4 23.5 2.5 27.8 21.1	287.8 15.1 29.6 4.4 27.5 18.5	290.9 15.9 25.5 5.9 30.8 26.2	338.9 11.8 36.5 6.8 34.4 21.2	262.7 5.5 17.0 4.4 28.7 22.8	210.7 7.6 21.2 3.7 22.6 20.9	211.6 13.0 20.1 3.0 23.5 15.8	307.5 23.2 17.9 6.9 30.4 22.3	
Beer, wine, liquors do do	239.2 139.6 71.0 30.0 290.3 1,213.9	67.5 29.6 314.5	18.1 14.6 5.9 3.2 25.6 125.1	24.8 21.1 7.9 3.6 23.6 146.8	33.7 23.5 8.3 3.5 28.4 170.3	37.9 13.0 4.7 1.7 25.2 112.7	15.1 7.1 3.5 1.5 21.2 101.4	16.2 6.7 4.2 1.9 24.5 112.5	20.8 12.5 5.5 2.8 27.1 123.3	20.7 14.9 5.2 3.1 28.9 129.6	22.7 19.2 8.0 3.0 32.3 143.0	23.2 9.6 3.5 2.3 28.2 117.5	16.1 8.5 3.2 1.4 27.2 66.6	12.2 6.7 3.2 1.7 31.0 82.8	19.5 17.1 3.9 2.1 32.0 132.1	
Newspaper advertising expenditures (Media Records Inc.): Total mil. \$. Automotive do. Classified do. Financial do. General do. WHOLESALE TRADE ‡	8,185.9 182.4 2,195.6 297.3 1,121.7 4,388.9	225.6 2,514.9 387.2 1,380.0	779.3 17.4 204.3 39.4 109.4 408.8	856.7 24.7 207.8 45.5 129.4 449.4	936.7 19.6 201.3 31.1 137.1 547.5	795.0 13.2 149.1 31.7 91.7 509.4	738.3 21.6 208.4 42.6 120.6 345.0	729.6 22.5 197.3 26.0 119.1 364.7	824.3 25.8 218.5 31.3 128.8 419.9	814.7 24.1 209.2 30.6 122.8 428.0	904.9 25.0 233.6 29.4 137.8 479.0					
Merchant wholesalers sales (unadj.), total mil. \$ Durable goods establishments do Nondurable goods establishments do	1,055,168 448,040 607,128	499,970	98,548 42,726 55,822	100,820 43,253 57,567	95,938 40,333 55,605	98,565 41,012 57,553	87,340 35,404 51,936	87,470 36,578 50,892	103,912 42,482 61,430	96,622 39,675 56,947	95,748 37,908 57,840	98,549 39,582 58,967	91,642 37,348 54,294	r92,666 r38,383 r54,283	91,769 38,168 53,601	
Merchant wholesalers inventories, book value, end of year or month (unadj.), total mil. \$ Durable goods establishments	104,655 65,825 38,830	111,163 72,345	107,225 71,411 35,814	108,655 71,008 37,647	111,015 72,450 38,565	111,163 72,345 38,818	111,331 71,575 39,756	110,187 71,931 38,256	111,386 73,073 38,313	113,319 75,265 38,054	111,342 74,169 37,173	112,469 75,238 37,231	112,444 76,219 36,225	'111,116 '75,031 '36,085	112,447 75,339 37,108	
All retail stores: † Estimated sales (unadj.), total † mil. \$	951,902	1,038,790	85,522	88,779	87,331	106,069	76,647	75,698	'86,129	87,502	90,347	88,426	90,600	r89,130	^r 87,485	190,106
Durable goods stores #	296,594 49,616 162,309 43,416	53,164 180,722	27,626 4,704 15,425 3,838	27,165 4,662 14,842 3,887	25,750 4,190 13,444 3,987	29,140 3,841 13,341 4,836	21,704 3,058 12,118 3,211	23,365 3,055 13,912 3,143	27,988 3,861 17,068 3,552	27,903 4,308 16,506 3,451	29,443 4,886 17,329 3,477	28,502 4,808 16,225 3,647	28,116 4,665 15,996 3,715	'27,889 '4,501 '15,880 '3,676	*27,563 *4,445 *15,707 *3,576	14,383 115,816
Nondurable goods stores do General merch. group stores do Food stores do Gasoline service stations do	655,308 117,227 217,047 93,624	1	57,896 9,905 19,544 8,551	61,614 11,014 20,723 8,664	61,581 12,622 19,514 8,271	76,929 19,888 22,019 8,555	54,943 7,442 19,966 8,110	52,333 7,468 18,594 7,460	r58,141 9,473 20,066 7,918	59,599 10,226 20,616 7,819	60,904 10,775 21,157 8,062	59,924 10,143 20,785 8,463	62,484 10,124 22,398 8,852	r61,241 r10,519 r20,600 r8,577	759,922 710,113 720,656 78,060	162,199 111,052
Apparel and accessory stores do Eating and drinking places do. Drug and proprietary stores do Liquor stores do	44,426 85,842 30,504 17,083	94,070 32,999	3,920 7,989 2,601 1,396	4,227 8,183 2,760 1,458	4,268 7,570 2,725 1,438	6,676 7,888 3,837 2,125	3,302 7,279 2,590 1,333	3,168 7,259 2,575 1,257	3,729 8,129 2,802 1,362	4,038 8,464 2,829 1,410	3,934 8,889 2,833 1,469	3,649 8,934 2,827 1,450	3,812 9,428 2,827 1,560	r4,130 r9,427 r2,802 r1,439	r3,947 r8,886 r2,737 1,400	¹ 4,140 ¹ 8,993 ¹ 2,781
Estimated sales (seas. adj.), total † do Durable goods stores #			87,823 27,810	86,413 26,354	86,733 26,436	86,572 26,206	85,320 25,316	r87,418 r26,696	187,242 26,958	88,294 27,984	90,841 29,416	88,042 27,175	89,445 27,403	r88,502 r26,668	r89,038 r27,298	189,554 128,072
Building materials, hardware, garden supply, and mobile home dealers # mil. \$ Building materials and supply stores do Hardware stores			4,313 2,807 782	4,152 2,712 771	4,213 2,758 789	4,058 2,586 783	4,046 2,538 844	74,102 72,668 7777	4,173 2,727 785	4,263 2,829 759	4,480 2,938 820	4,261 2,855 764	4,257 2,861 746	r4,076 r2,742 r714	*4,047 2,719 701	14,036
Automotive dealers do Motor vehicle dealers do Auto and home supply stores do			15,664 13,888 1,776	14,506 12,806 1,700	14,596 12,866 1,730	14,497 12,819 1,678	13,677 12,083 1,594	*14,819 *13,156 *1,663	15,175 13,526 1,649	16,074 14,360 1,714	17,269 15,485 1,784	15,288 13,446 1,842	15,492 13,688 1,804	*14,911 *13,137 *1,774	*15,550 *13,759 1,791	¹16,151 ¹14,327
Furniture, home furn., and equip. # do Furniture, home furnishings stores do Household appliance, radio, TV do			3,864 2,391	3,781 2,289	3,775 2,270 1,246	3,776 2,285 1,236	3,508 2,112	'3,634 '2,161	3,652 2,182	3,706 2,233 1,184	3,723 2,239 1,181	3,641 2,187	3,717 2,204 1,222	'3,613 '2,187 '1,123	73,599 2,188	13,670

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		196	31						19	82		,		, , , , , , , , , , , , , , , , , , ,
in the 1979 edition of BUSINESS STATISTICS	Anr	ıual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
		Ι	OME	STIC	TRA	DE-	-Cont	inued	l							
RETAIL TRADE—Continued																
All retail stores †—Continued Estimated sales (seas. adj.)—Continued																
Nondurable goods stores mil. \$ General merch, group stores do Department stores do Variety stores do	(²)		60,013 10,651 8,683 732	60,059 10,634 8,645 737	60,297 10,751 8,721 740	60,366 10,774 8,728 738	60,004 10,427 8,672 707	r60,722 r10,735 r8,890 r711	760,284 10,833 8,992 760	60,310 10,700 8,861 721	61,425 11,181 9,237 759	60,867 10,795 8,923 717	62,042 11,039 9,140 746	'61,834 '10,895 '9,003 '758	r61,740 r10,832 r8,921 726	161,482 110,847 18,977
Food stores do Grocery stores do Gasoline service stations do	***************************************		20,053 18,525 8,551	20,199 18,694 8,511	20,393 18,867 8,536	20,487 18,950 8,521	20,213 18,666 8,628	r20,390 r18,737 r8,363	20,340 18,798 8,047	20,555 19,026 7,827	20,984 19,390 7,935	20,648 19,017 8,075	20,990 19,361 8,257	r21,067 r19,428 r8,138	°21,023 °19,405 °8,092	121,040 119,417 17,972
Apparel and accessory stores #	***************************************		4,035 672 1,505 708	3,994 678 1,459 712	3,985 630 1,485 702	3,984 627 1,471 750	3,947 568 1,534 722	'4,334 '618 '1,661 '786	4,196 619 1,599 781	4,017 633 1,562 700	4,233 679 1,641 759	4,001 644 1,542 707	4,175 660 1,595 754	'4,082 '611 '1,556 '746	*4,035 652 1,517 747	13,996
Eating and drinking places			7,989 2,791 1,462	7,999 2,802 1,458	7,935 2,801 1,463	7,880 2,801 1,500	7,973 2,690 1,466	'8,431 '2,827 '1,465	8,329 2,880 1,495	8,364 2,852 1,519	8,514 2,882 1,496	8,549 2,920 1,453	8,697 2,905 1,468	'8,777 '2,892 '1,449	*8,772 *2,921 1,460	18,843 12,867
Estimated inventories, end of year or month: † Book value (unadjusted), total	111,104 52,991 9,197 24,708 8,346	122,236 57,994 9,390 28,211 8,847	124,524 56,491 9,772 25,759 8,908	130,334 58,528 9,776 26,879 9,256	133,246 59,819 9,745 27,838 9,349	122,236 57,994 9,390 28,211 8,847	119,899 57,454 9,372 28,249 8,663	120,063 56,869 9,657 27,384 8,605	123,374 57,842 9,795 28,097 8,630	123,540 57,780 9,970 27,624 8,630	122,399 57,319 9,997 27,207 8,688	124,049 58,419 9,951 28,483 8,772	*124,371 *58,462 *9,868 28,762 *8,738	125,205 57,896 9,795 27,678 8,888		***************************************
Nondurable goods stores #	58,113 19,811 14,835 12,600 9,041	64,242 22,515 16,897 13,825 9,574	68,033 26,223 19,514 13,446 10,525	71,806 28,405 21,242 13,905 10,978	73,427 28,746 21,730 14,208 11,193	64,242 22,515 16,897 13,825 9,574	62,445 22,113 16,600 13,573 9,249	63,194 22,575 16,882 13,724 9,565	65,532 24,016 18,025 13,907 10,054	65,760 24,411 18,395 13,907 9,945	65,080 24,070 18,069 13,825 9,882	65,630 24,324 18,039 14,009 9,837	r65,909 r24,686 18,128 r13,702 r9,963	67,309 25,380 18,722 13,574 10,542		
Book value (seas. adj.), total	114,114 53,747 9,610 24,488 8,542	125,693 58,835 9,822 27,987 9,074	124,376 58,761 9,881 28,276 8,811	125,364 59,014 9,895 28,294 8,900	125,618 58,907 9,903 28,091 9,068	125,693 58,835 9,822 27,987 9,074	124,131 57,807 9,652 27,695 8,968	123,395 56,957 9,638 27,006 8,826	123,332 56,803 9,500 27,068 8,708	123,175 56,663 9,587 26,716 8,604	122,367 55,984 9,734 25,911 8,679	124,351 57,346 9,785 27,414 8,728	*124,939 *58,246 *9,878 28,337 *8,791	127,107 60,038 9,854 29,826 8,835		
Nondurable goods stores #	60,367 21,810 16,213 12,535 9,388	66,858 24,821 18,487 13,702 9,952	65,615 24,519 18,375 13,568 9,901	66,350 25,188 18,899 13,474 9,899	66,711 25,113 18,798 13,583 10,030	66,858 24,821 18,487 13,702 9,952	66,324 24,666 18,465 13,766 10,097	66,438 24,611 18,470 14,018 10,197	66,529 24,689 18,506 13,824 10,301	66,512 24,620 18,469 13,893 10,200	66,383 24,444 18,270 13,979 10,177	67,005 24,751 18,370 14,165 10,236	*66,693 *24,929 18,442 *13,896 *10,115	67,069 25,056 18,629 13,823 10,305		
Firms with 11 or more stores: Estimated sales (unadjusted), total mil. \$	338,028	372,443	30,017	32,282	33,310	44,821	27,194	26,138	30,277	31,360	32,205	31,268	r32,491	31,899		
Durable goods stores do Auto and home supply stores do	25,023 3,606	27,216 3,846	2,230 322	2,278 342	2,404 321	3,447 345	1,710 275	1,718 259	2,115 323	2,205 352	2,370 346	2,368 359	r2,387 r370	2,310 348		
Nondurable goods stores # do General merchandise group stores do Food stores do Grocery stores Apparel and accessory stores do Eating places Drug stores and proprietary stores do	313,005 105,982 115,059 113,630 17,066 18,237 16,137	345,227 116,115 127,517 125,629 18,798 20,125 17,769	27,787 9,041 10,487 10,340 1,560 1,641 1,365	30,004 9,992 11,246 11,098 1,631 1,755 1,436	30,906 11,533 10,488 10,339 1,729 1,690 1,477	41,374 18,270 12,064 11,790 2,790 1,705 2,254	25,484 6,753 10,934 10,797 1,160 1,579 1,394	24,420 6,814 10,086 9,929 1,137 1,512 1,374	28,162 8,715 10,923 10,779 1,477 1,750 1,524	29,155 9,401 11,204 11,031 1,666 1,804 1,535	29,835 9,931 11,321 11,175 1,606 1,925 1,550	28,900 9,334 11,038 10,889 1,458 1,926 1,518	r30,104 r9,279 r12,046 r11,886 r1,534 r2,014 r1,554	29,589 9,685 10,932 10,771 1,759 1,992 1,522		
Estimated sales (sea. adj.), total # do Auto and home supply stores do Department stores do Variety stores do Grocery stores do	(²)		31,412 324 8,363 571 10,627	31,187 315 8,328 572 10,640	31,391 313 8,374 578 10,725	31,827 320 8,407 580 10,927	31,311 329 8,330 550 10,733	31,951 339 8,539 563 10,863	32,044 337 8,668 598 10,910	31,789 329 8,517 586 10,987	32,737 341 8,914 619 11,130	32,362 332 8,626 571 11,044	r32,932 r348 r8,830 r602 r11,140	32,639 338 8,679 604 11,314		
Apparel and accessory stores			1,572 665 336 1,493	1,544 651 337 1,501	1,567 655 337 1,503	1,591 655 366 1,489	1,598 674 358 1,488	1,710 718 368 1,561	1,664 697 365 1,611	1,614 676 342 1,547	1,724 713 388 1,578	1,614 679 353 1,588	'1,740 '713 379 '1,604	1,664 702 357 1,576		
	LAB	OR FO	RCE	, EMI	PLOY	MEN	T, A	ND E	ARN	INGS						
POPULATION OF THE UNITED STATES					-											
Total, incl. armed forces overseas ‡mil LABOR FORCE Not Seasonally Adjusted	³227.66	°229.81	230.26	230.48	230.67	230.84	231.01	231.18	231.32	231.48	231.63	231.81	231.99	232.22	232.43	232.63
Labor force, total, persons 16 years of age and over	109,042 2,102 106,940 99,303 7,637	2,142 108,670	110,438 2,165 108,273 100,389 7,884	111,402 2,158 109,244 101,028 8,216	111,337 2,158 109,179 100,502 8,676	110,738 2,164 108,574 99,562 9,013	110,173 2,159 108,014 97,831 10,183	110,492 2,168 108,324 97,946 10,378	110,936 2,175 108,761 98,471 10,290	110,990 2,176 108,814 98,858 9,957	112,089 2,175 109,914 99,957 9,957	2,173	114,706 2,180 112,526 101,490 11,036	114,083 2,196 111,887 101,177 10,710	112,744 2,198 110,546 99,851 10,695	112,958 2,188 110,76' 99,824 10,94:
Seasonally Adjusted ¶ Civilian labor force, total	63.8 58.5 3,364	63.9 58.3 3,368	108,494 63.6 100,258 58.0 3,358	109,012 63.8 100,343 58.0 3,378	109,272 63.9 100,172 57.9 3,372	63.8 99,613 57.5 3,209	108,879 63.5 99,581 57.4 3,411	109,165 63.7 99,590 57.3 3,373	109,346 63.7 99,492 57.2 3,349	109,648 63.8 99,340 57.1 3,309	110,666 64.3 100,117 57.5 3,488	64.0 99,764 57.2 3,357	110,522 64.1 99,732 57.1 3,460	64.1 99,839 57.1 3,435	110,980 64.3 99,720 57.0 3,368	110,64 64. 99,09 56. 3,42
Nonagriculture do Unemployed, total do Long term, 15 weeks and over do See footnotes at end of tables.	95,938	97,030 2,285	96,900 8,236 2,248	96,965 8,669 2,292	96,800 9,100 2,364	96,404 9,571 2,372	96,170 9,298 2,399	96,217 9,575 2,724	96,144 9,854 2,954	96,032 10,307 3,015	96,629 10,549 3,286	96,406 10,427 3,673	96,272 10,790 3,580	96,404 10,805 3,631	96,352 11,260 3,870	95,66 11,58 4,18

Unless otherwise stated in footnotes below, data	1980	1981		198	31						19	82				
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
LABO	R FO	RCE,	EMP	LOYI	MENT	r, AN	D EA	RNII	NGS-	-Con	tinue	d				
LABOR FORCE—Continued																
Seasonally Adjusted ¶ Civilian labor force—Continued Unemployed—Continued Rates (unemployed in each group as percent of civilian labor force in the group):		7.0	T 0				0.5		0.0	2.4	0.5		0.0	0.0	101	
All civilian workers	7.1 5.9 6.4 17.8	7.6 6.3 6.8 19.6	7.6 6.2 6.9 19.7	8.0 6.7 7.0 20.4	8.3 7.1 7.2 21.4	8.8 7.9 7.4 21.5	8.5 7.5 7.2 21.7	8.8 7.6 7.6 22.3	9.0 7.9 7.9 21.9	9.4 8.2 8.3 23.0	9.5 8.4 8.3 23.1	9.5 8.7 8.1 22.3	9.8 8.8 8.4 24.1	9.8 8.9 8.2 24.0	10.1 9.6 8.3 23.7	10.4 9.8 8.6 24.0
White Black and other Married men, spouse present Married women, spouse present Women who maintain families	6.3 13.1 4.2 5.8 9.2	6.7 14.2 4.3 6.0 10.4	6.6 14.8 4.4 6.0 10.7	7.0 15.2 4.8 6.1 10.6	7.4 15.2 5.2 6.5 10.8	7.7 15.7 5.7 6.6 10.5	7.5 15.1 5.3 6.2 10.4	7.7 15.9 5.3 7.0 10.2	7.9 16.6 5.5 7.1 10.6	8.4 16.9 6.0 7.8 11.5	8.5 17.2 6.1 7.4 11.8	8.4 17.1 6.5 7.0 12.4	8.7 17.3 6.6 7.4 12.0	8.6 17.5 6.7 7.1 11.6	9.0 18.2 7.3 7.5 12.4	18.5 7.6 7.9
Occupation: White-collar workers Blue-collar workers Industry of last job (nonagricultural): Private wage and salary workers	3.7 10.0 7.4	4.0 10.3 7.7	4.1 10.2 7.7	4.1 10.9 8.1	4.2 11.8 8.4	4.5 12.7 9.1	4.2 12.5 8.8	4.6 12.5 9.0	4.8 12.9 9.5	4.9 13.7 9.9	4.8 13.5 9.9	5.0 13.9 10.0	4.9 14.4 10.2	4.8 14.2 10.1	4.8 15.6 10.7	
Construction Manufacturing Durable goods EMPLOYMENT †	14.1 8.5 9.0	15.6 8.3 8.2	16.3 7.9 7.7	17.6 8.6 8.6	17.8 9.4 9.5	18.1 11.0 11.8	18.7 10.4 11.0	18.1 10.6 11.3	17.9 10.8 10.8	19.4 11.3 11.9	18.8 11.6 12.2	19.2 12.3 13.2	20.3 12.0 12.7	20.3 12.1 12.9	22.6 13.8 14.9	23.0 14.1
Employees on payrolls of nongricultural estab.: Total, not adjusted for seasonal variationthous Private sector (excl. government)	90,406 74,165	91,105 75,081	91,620 76,091	91,884 75,884	91,765 75,628	91,437 75,329	89,269 73,407	89,413 73,328	89,679 73,503	89,984 73,830	90,455 74,295	90,570 74,599	89,238 74,230	⁷ 89,057 ⁷ 74,180	⁷ 89,446 ⁷ 74,118	
Total employees, nonagricultural payrolls	90,406 74,165 53,880 25,658 1,027 4,346	91,105 75,081 54,908 25,481 1,132 4,176	91,363 75,459 55,192 25,583 1,192 4,124	91,224 75,307 55,210 25,393 1,195 4,101	90,996 75,088 55,185 25,176 1,202 4,071	90,642 74,725 55,049 24,908 1,206 4,026	90,460 74,596 55,079 24,684 1,201 3,966	90,459 74,609 55,155 24,631 1,203 3,974	90,304 74,445 55,126 24,450 1,197 3,934	90,083 74,231 55,062 24,289 1,182 3,938	90,166 74,313 55,198 24,255 1,152 3,988	89,839 74,007 55,077 23,994 1,124 3,940	89,535 73,900 55,087 23,840 1,100 3,927	*89,312 *73,640 *54,968 *23,657 *1,086 *3,899	*89,188 *73,493 *54,913 *23,535 *1,074 *3,881	P74,108 P55,760
Manufacturing do Durable goods do Lumber and wood products do Furniture and fixtures do Stone, clay and glass products do Primary metal industries do Fabricated metal products do Machinery, except electrical ed Electric and electronic equipment do Transportation equipment do Instruments and related products do Miscellaneous manufacturing do	20,285 12,187 690 465 662 1,142 1,613 2,494 2,090 1,899 711 418	20,173 12,117 668 467 638 1,121 1,592 2,507 2,092 1,892 726 410	20,267 12,184 661 473 638 1,125 1,604 2,539 2,113 1,884 734 413	20,097 12,059 643 469 629 1,104 1,577 2,532 2,101 1,861 731 412	19,903 11,901 628 462 620 1,082 1,553 2,511 2,077 1,830 727 411	19,676 11,724 615 457 610 1,053 1,529 2,049 1,791 725 409	19,517 11,622 607 452 596 1,038 1,515 2,459 2,055 1,777 720 403	19,454 11,575 611 449 596 1,024 1,505 2,446 2,048 1,778 718 400	19,319 11,490 607 446 590 1,007 1,496 2,419 2,038 1,774 716 397	19,169 11,375 615 443 584 976 1,481 2,389 2,034 1,748 713 392	19,115 11,332 617 443 586 945 1,472 2,377 2,034 1,755 713 390	18,930 11,203 615 442 580 926 1,452 2,322 2,026 1,745 708 387	18,813 11,133 614 439 579 906 1,446 2,274 2,018 1,759 708 390	*18,672 *10,993 *614 443 574 *889 1,427 *2,230 *2,011 *1,719 702 384	*18,580 *10,906 615 *442 573 *871 *1,414 *2,208 *1,994 *1,707 700 *382	P10,705 P613 P436 P568 P843 P1,386 P2,137 P1,973 P1,675 P695
Nondurable goods do do Food and kindred products do Tobacco manufactures do Textile mill products do Apparel and other textile products do Paper and allied products do Printing and publishing do Chemicals and allied products do Petroleum and coal products do Rubber and plastics products, ed Rubber and leather products do Leather and leather products do	8,098 1,708 68 847 1,263 692 1,252 1,107 197 726 232	8,056 1,674 69 822 1,244 687 1,265 1,107 215 736 233	8,083 1,658 69 827 1,253 695 1,274 1,110 216 746 235	8,038 1,662 69 814 1,243 685 1,276 1,107 215 734 233	8,002 1,664 69 804 1,235 681 1,276 1,103 215 725 230	7,952 1,661 68 794 1,222 677 1,276 1,100 214 716 224	7,895 1,657 69 780 1,201 1,275 1,095 210 712 222	7,879 1,663 68 777 1,201 670 1,276 1,093 208 708 215	7,829 1,658 68 760 1,186 1,278 1,088 1,088 207 703 213	7,794 1,643 67 773 1,165 664 1,274 1,082 206 706 214	7,783 1,652 67 759 1,165 661 1,274 1,079 207 708 211	7,727 1,637 67 741 1,161 658 1,269 1,073 205 704 212	7,680 1,643 65 741 1,126 657 1,267 1,068 205 700 208	"7,679 "1,628 65 737 "1,145 "653 "1,269 1,070 205 "699 208	77,674 1,631 63 7735 1,144 657 1,269 1,066 1209 694 1206	P1,635 P63 P736 P1,140 P648 P1,265 P1,060 P209 P684
Service-producing do. Transportation and public utilities do. Wholesale and retail trade do. Wholesale trade do. Retail trade do. Finance, insurance, and real estate do. Services do. Government do. Federal do. State and local do.	64,748 5,146 20,310 5,275 15,035 5,160 17,890 16,241 2,866 13,375	65,625 5,157 20,551 5,359 15,192 5,301 18,592 16,024 2,772 13,253	65,780 5,181 20,660 5,383 15,277 5,328 18,707 15,904 2,764 13,140	65,831 5,162 20,654 5,380 15,274 5,325 18,773 15,917 2,757 13,160	65,820 5,150 20,623 5,375 15,248 5,324 18,815 15,908 2,749 13,159	65,734 5,128 20,524 5,357 15,167 5,331 18,834 15,917 2,756 13,161	65,776 5,125 20,630 5,346 15,284 5,326 18,831 15,864 2,741 13,123	65,828 5,115 20,670 5,343 15,327 5,326 18,867 15,850 2,737 13,113	65,854 5,100 20,655 5,336 15,319 5,336 18,904 15,859 2,736 13,123	65,794 5,094 20,584 5,323 15,261 5,335 18,929 15,852 2,730 13,122	65,911 5,101 20,652 5,331 15,321 5,342 18,963 15,853 2,728 13,125	65,845 5,078 20,595 5,307 15,288 5,352 18,988 15,832 2,739 13,093	65,695 5,044 20,615 5,299 15,316 5,359 19,042 15,635 2,737 12,898	"65,655 "5,025 "20,550 "5,278 "15,272 "5,360 "19,048 "15,672 "2,739 "12,933	*65,653 *5,032 *20,480 *5,266 *15,214 *5,370 *19,076 *15,695 2,734 *12,961	"5,022 "20,438 "5,249 "15,189 "5,362 "19,107 "15,717 "2,723
Production or nonsupervisory workers on private nonagric. payrolls, not seas. adjustedthous Manufacturing	60,331 14,214	60,881 14,021	61,776 14,304	61,585 14,079	61,311 13,834	61,007 13,515	59,135 13,200	59,094 13,168	59,257 13,093	59,562 12,971	60,027 12,958	60,284 12,931	59,931 12,618	r59,868 r12,674	*59,864 *12,784	°59,567 °12,538
Seasonally Adjusted † Production or nonsupervisory workers on private	60.00	00.00-	61.100	01.015	00 555	00.404	00.040	60 000	00.100	E0 000	60.005	E0 550	EO 2002	ren 000	rE0 000	PAC 000
nonagricultural payrolls † thous. Goods-producing. do. Mining do. Construction do. Manufacturing do. Durable goods do. Lumber and wood products do. Furniture and fixtures do. Stone, clay, and glass products do. Primary metal industries do. Fabricated metal products do. Machinery, except electrical do. Electric and electronic equipment do. Transportation equipment do. Instruments and related products do. Miscellaneous manufacturing do.	60,331 18,442 762 3,421 14,214 8,442 577 375 513 877 1,195 1,602 1,328 1,233 425 313	60,881 18,245 832 3,250 14,021 8,301 8,301 8,505 491 860 1,172 1,585 1,311 1,215 428	61,180 18,164 876 3,201 14,087 8,345 549 381 492 865 1,182 1,606 1,327 1,206 431 306	61,017 17,972 877 3,180 13,915 8,218 531 376 484 843 1,156 1,598 1,314 1,184 428 304	60,775 17,754 882 3,155 13,717 8,061 516 369 475 821 1,133 1,576 1,285 1,159 424 303	60,401 17,478 83,107 13,488 7,885 503 364 465 795 1,110 1,552 1,257 1,115 423 301	60,248 17,251 875 3,035 13,341 7,793 457 452 780 1,096 1,526 1,266 1,102 420 295	60,282 17,225 876 3,059 13,290 7,759 502 356 452 770 1,089 1,514 1,258 1,108 418 292	60,132 17,073 871 3,023 13,179 7,685 497 353 446 756 1,081 1,248 1,109 415 290	59,923 16,922 83,017 13,042 7,576 507 1,069 1,460 1,241 1,086 411 1,086	60,025 16,917 835 3,074 13,008 7,553 507 350 444 702 1,063 1,454 1,240 1,098 412 288	59,759 16,686 805 3,029 12,852 7,443 506 349 438 686 1,046 1,408 1,233 1,089 407 281	59,670 16,564 782 3,022 12,760 7,388 505 346 438 669 1,043 1,366 1,221 1,112 406 282	**159,388 **16,414 **770 **72,72 **506 **350 **435 **657 **1,027 **1,328 **1,215 **1,075 **402 **277	759,299 '16,315 '762 '2,977 '12,576 '7,201 '506 349 435 '643 1,018 '1,309 '1,203 '1,063 '399 276	"16,100 "753 "2,965 "12,382 "7,031 "504 "430 "620 "995 "1,253 "1,190 "1,027

Unless otherwise stated in footnotes below, data	1980	1981		198	31						19	82				
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
LABO	OR FO	RCE,	EMP	LOYI	MENT	Γ, AN	D EA	RNII	NGS-	-Con	tinue	d		L	L	
EMPLOYMENT †—Continued Seasonally Adjusted † Production or nonsupervisory workers—Continued																
Nondurable goods thous. Food and kindred products do. Tobacco manufactures do. Textile mill products do. Apparel and other textile products do. Paper and allied products do. Printing and publishing do. Chemicals and allied products do. Petroleum and coal products do. Leather and leather products, nec do. Leather and leather products, do.	5,772 1,174 53 736 1,079 522 698 625 124 559	5,721 1,150 54 712 1,059 518 698 627 134 569 197	5,742 1,137 54 717 1,066 525 701 629 134 580 199	5,697 1,142 54 704 1,056 515 702 625 133 568 198	5,656 1,144 54 693 1,049 511 700 621 132 557 195	5,603 1,140 53 683 1,036 506 700 616 131 548 190	5,548 1,135 54 670 1,018 504 699 612 125 544 187	5,531 1,142 53 667 1,018 501 699 609 124 538 180	5,494 1,138 53 651 1,006 499 701 609 124 534 179	5,466 1,125 52 662 987 496 698 602 123 541 180	5,455 1,133 52 650 985 493 699 600 123 543 177	5,409 1,121 52 633 982 489 696 595 122 542 177	5,372 1,129 51 634 949 489 694 591 122 541	"5,375 "1,115 "51 630 "967 "487 "695 593 122 "540 175	5,375 *1,119 49 *631 967 *491 694 *592 *125 535 *172	P5,351 P1,120 P49 P632 P962 P484 P693 P589 P127 P526 P169
Service-producing	42,015 4,293 17,812 4,312 13,500 3,907 15,921	42,964 4,277 17,960 4,360 13,600 4,002 16,539	43,016 4,295 18,059 4,376 13,683 4,023 16,639	43,045 4,275 18,053 4,373 13,680 4,019 16,698	43,021 4,261 18,016 4,367 13,649 4,013 16,731	42,923 4,241 17,920 4,348 13,572 4,014 16,748	42,997 4,241 18,011 4,332 13,679 4,007 16,738	43,057 4,232 18,061 4,327 13,734 4,003 16,761	43,059 4,217 18,051 4,317 13,734 4,004 16,787	43,001 4,209 17,996 4,301 13,695 3,999 16,797	43,108 4,212 18,065 4,309 13,756 3,998 16,833	43,073 4,194 18,014 4,287 13,727 4,012 16,853	43,106 4,165 18,037 4,282 13,755 4,013 16,891	*42,974 *4,142 *17,941 *4,260 *13,681 *4,006 *16,885	*42,984 *4,155 *17,877 *4,249 *13,628 *4,016 *16,936	P42,920 P4,148 P17,834 P4,236 P13,598 P4,008 P16,930
Avg. weekly hours per worker on private nonagric payrolls: ¶ Not seasonally adjusted hours Seasonally adjusted do Mining ‡ do Construction ‡ do Manufacturing:	35.3 43.3 37.0	35.2 43.7 36.9	35.1 35.0 43.9 35.8	35.2 35.1 44.5 37.6	35.1 35.1 44.4 37.1	35.2 35.0 44.8 37.1	33.9 34.4 42.9 33.3	34.8 35.0 43.6 35.9	34.7 34.9 43.8 37.0	34.6 34.9 42.7 36.7	34.8 35.0 42.6 37.5	35.0 34.9 42.8 37.5	35.2 34.9 42.5 38.0	35.2 34.8 *42.4 37.6	34.8 34.8 741.7 36.9	P34.8 P34.7 P41.9 P37.0
Not seasonally adjusted do Seasonally adjusted do Overtime hours	39.7 2.8	39.8	39.5 39.4 2.7	39.7 39.5 2.7	39.7 39.3 2.5	39.9 39.1 2.4	37.1 37.6 2.3	39.2 39.4 2.4	39.1 39.0 2.3	38.7 39.0 2.4	39.0 39.1 2.3	39.3 39.2 2.4	38.9 39.2 2.4	39.0 39.0 2.4	r38.9 r38.7 2.3	₽38.8 ₽38.7 ₽2.2
Durable goods do Overtime hours do Lumber and wood products do Furniture and fixtures do Stone, clay, and glass products do Primary metal industries do Fabricated metal products do Machinery, except electrical do Electric and electronic equipment do Transportation equipment do Instruments and related products do Miscellaneous manufacturing do	40.1 2.8 38.5 38.1 40.8 40.1 40.4 41.0 39.8 40.6 40.5 38.7	40.2 2.8 38.7 38.4 40.6 40.5 40.9 39.9 40.9 40.4 38.8	39.7 2.7 37.6 37.4 40.3 40.6 39.6 40.3 39.7 40.1 40.4 38.4	40.0 2.6 37.8 38.0 40.1 40.0 40.0 40.8 39.8 40.6 40.3 38.9	39.7 2.4 37.7 37.6 40.1 39.6 39.7 40.7 39.4 40.2 39.0	39.5 2.3 37.7 37.9 39.7 39.2 39.5 40.4 39.5 39.7 39.7 39.0 38.5	38.2 2.2 35.0 33.6 38.6 38.3 38.1 39.3 38.3 39.0 37.3	39.8 2.2 37.9 37.7 40.1 39.4 39.7 40.7 39.8 40.5 39.9 38.6	39.5 2.2 37.6 37.3 40.0 38.8 39.5 40.2 39.4 40.4 39.9 38.6	39.5 2.2 37.6 37.4 40.0 38.5 39.4 40.1 39.3 41.1 39.9 38.5	39.6 2.2 38.5 37.5 40.2 38.5 39.8 39.4 41.1 40.2 38.7	39.7 2.3 38.7 37.8 40.4 38.9 39.4 39.6 39.5 41.6 40.2 38.6	39.7 2.2 38.6 37.6 40.6 38.9 39.5 39.8 41.0 40.1 38.7	39.4 2.2 38.2 37.9 40.3 38.8 39.2 39.5 39.3 40.5 40.1 38.6	738.9 738.3 737.5 740.1 737.9 738.8 738.9 738.8 739.8 739.7 38.1	P38.9 P1.9 P37.7 P40.2 P37.6 P38.8 P39.1 P38.9 P39.3 P39.3
Nondurable goods	39.0 2.8 39.7 38.1 40.1 35.4	39.1 2.8 39.7 38.8 39.6 35.7	38.9 2.8 39.3 40.2 38.8 35.2	38.9 2.8 39.5 39.4 39.0 35.5	38.7 2.7 39.5 38.8 38.7 35.5	38.6 2.6 39.8 38.1 37.8 35.1	36.8 2.5 39.1 36.1 32.3 31.4	38.9 2.6 40.2 38.3 38.3 35.5	38.5 2.5 39.5 37.3 37.6 35.0	38.4 2.6 39.4 36.6 37.7 34.7	38.5 2.5 39.4 37.2 37.9 34.8	38.6 2.5 39.5 38.4 37.8 35.1	38.6 2.6 39.5 36.8 37.7 35.2	38.5 2.6 739.1 738.1 38.2 735.0	38.5 2.6 39.4 739.7 38.1 735.2	P38.4 P2.6 P39.5 P39.7 P38.0 P34.9
Paper and allied products do Printing and publishing do Chemicals and allied products do Petroleum and coal products do Rubber and plastics products, nec do Leather and leather products do	42.2 37.1 41.5 41.8 40.0 36.7	42.5 37.3 41.6 43.2 40.3 36.8	43.0 37.1 42.2 43.1 39.7 36.2	42.4 37.1 41.5 42.2 39.9 36.7	42.0 37.1 41.2 42.5 39.6 36.5	41.8 37.1 41.3 42.7 39.4 36.1	41.3 36.9 41.0 44.3 37.9 34.1	42.3 37.4 41.2 43.5 40.0 35.6	41.8 37.1 40.7 43.5 39.6 35.8	42.1 37.1 40.7 44.0 39.8 35.6	41.8 36.8 41.0 44.1 39.9 35.6	42.0 37.1 41.0 44.1 40.1 35.7	41.9 37.0 40.9 43.3 40.2 36.1	*41.7 36.8 *40.9 *43.9 39.7 *36.0	41.5 '36.9 '41.2 '43.4 '39.6 35.7	P41.4 P36.9 P40.8 P43.5 P39.1 P34.8
Transportation and public utilities ‡ do	39.6 32.2 38.5 30.2 36.2 32.6	39.4 32.2 38.6 30.1 36.3 32.6	39.2 32.1 38.5 30.1 36.0 32.5	39.1 32.0 38.4 29.9 36.2 32.6	39.2 32.1 38.5 30.0 36.2 32.6	39.3 32.0 38.4 29.9 36.2 32.6	38.5 31.7 38.1 29.7 36.2 32.5	39.2 32.0 38.5 29.9 36.2 32.6	39.0 31.9 38.4 29.8 36.3 32.6	38.8 31.8 38.3 29.8 36.2 32.7	38.8 32.0 38.5 30.0 36.3 32.7	39.2 31.9 38.6 29.8 36.1 32.7	39.2 31.9 38.5 29.9 36.2 32.6	39.3 31.9 38.5 29.9 36.3 32.6	r38.9 32.1 r38.4 r30.1 r36.0 32.8	P38.8 P32.1 P38.3 P30.2 P36.1 P32.7
Seasonally Adjusted Employee-hours, wage & salary workers in non-																
agric. establish, for 1 week in the month, seas adj. at annual rate bil. hours Total private sector	169.39 137.55 2.32 8.36 41.89 10.61 34.17 9.74 30.45 31.84	169.96 139.05 2.58 8.01 41.69 10.57 34.54 10.01 31.65 30.91	167.34 139.03 2.72 7.52 41.72 10.55 34.78 10.03 31.71 28.31	169.73 139.08 2.76 7.86 41.46 10.52 34.54 10.04 31.91 30.64	168.76 138.55 2.77 7.94 40.84 10.48 34.45 10.04 32.03 30.22	168.66 137.41 2.79 7.75 40.14 10.41 34.21 10.05 32.05 31.24	165.66 136.28 2.73 7.28 39.44 10.43 34.25 10.03 32.11 29.38	168.93 137.80 2.73 7.76 39.93 10.46 34.64 10.01 32.27 31.13	167.92 136.61 2.73 7.61 39.31 10.40 34.36 10.06 32.14 31.32	167.23 135.98 2.65 7.53 38.92 10.36 34.26 10.05 32.21 31.25	167.99 136.79 2.58 7.75 39.06 10.37 34.60 10.14 32.29 31.20	166.52 135.78 2.51 7.49 38.79 10.34 34.32 10.09 32.24 30.73	166.16 135.75 2.45 7.56 35.58 10.27 34.48 10.09 32.33 30.40	*165.61 *135.14 2.38 *7.47 *38.24 10.22 34.38 *10.12 32.33 *30.47	*165.44 *134.84 2.33 *7.29 *37.82 *10.20 *34.43 *10.12 *32.64 *30.60	P164.6 P134.0 P2.3 P7.3 P37.3 P10.1 P34.3 P10.0 P32.5 P30.6
Indexes of employee-hours (aggregate weekly): ¶ Private nonagric payrolls, total	107.2 102.4 122.6 115.0 98.9 99.5 98.1 109.8 106.3 105.5 110.3 103.7 114.5	108.0 100.9 134.5 108.9 97.8 98.0 97.6 111.9 105.1 106.5 111.7 104.5 117.4	107.8 99.8 142.7 102.4 97.3 97.4 97.2 112.2 105.2 106.8 112.2 104.9 117.4	107.7 99.7 143.9 106.1 96.4 96.5 112.1 104.2 106.2 111.8 104.4 117.6 120.4	107.3 98.4 145.0 106.9 94.6 94.0 95.4 112.2 104.4 106.3 111.8 104.3 117.4 120.6	106.3 96.3 145.5 104.2 92.5 91.4 94.1 111.8 103.6 105.4 111.0 103.3 117.4 120.8	104.3 91.4 141.6 96.8 88.0 87.3 89.0 111.4 102.8 105.2 109.7 103.4 116.9 120.3	106.2 95.6 143.7 102.9 91.9 90.6 93.8 112.1 103.7 106.3 110.7 104.6 116.8 120.9	105.6 93.9 142.6 101.1 90.3 89.1 92.0 112.0 103.3 105.9 110.2 104.2 117.1 121.1	105.2 93.0 138.4 100.9 89.3 87.8 91.5 111.9 102.8 105.5 109.5 103.9 117.0 121.5	105.7 93.3 133.6 104.5 89.2 87.8 91.4 112.5 102.6 106.5 110.3 105.1 117.9 121.8	104.9 91.9 128.2 101.0 88.4 86.7 91.0 112.1 102.2 105.8 110.0 104.2 117.4 121.9	104.8 91.4 125.1 101.9 87.8 86.1 90.3 112.2 101.5 106.1 109.6 104.7 117.4	104.1 '90.0 121.4 '100.5 '86.5 '84.1 90.0 '111.8 101.2 105.5 '109.0 '104.2 117.2 '121.8	103.8 '88.7 '117.9 '98.2 '85.4 '82.2 '101.0 '105.6 '108.5 '104.4 '117.2 '122.9	P103 P87 P116 P97 P85 P86 P86 P111 P100 P100 P100 P100 P100 P110 P11

Unless otherwise stated in footnotes below, data	1980	1981		198	31						19	82	•			
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Anr	l nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
LABO	OR FO	PRCE,	EMP	LOYI	MENT	Γ, AN	D EA	RNI	NGS-	-Con	tinue	d				<u> </u>
HOURLY AND WEEKLY EARNINGS †																
Average hourly earnings per worker: Not seasonally adjusted:	6.66 9.17 9.94 7.27 7.75 7.49 6.55 5.49 7.50 9.77 7.45 8.00 6.94 9.35 6.80 5.46	10.05 10.80 7.99 7.72 8.53 8.25 7.00 5.91 8.27 10.81 8.20 8.81 7.62 10.39 7.43 5.96	7.40 10.27 11.07 8.16 7.87 8.70 8.40 17.16 6.01 8.53 11.22 8.33 8.96 7.75 10.49 7.59 6.05	7.42 10.25 11.16 8.16 7.89 8.73 8.44 7.10 6.06 8.50 10.97 8.39 9.04 7.80 10.74 7.60 6.05	7.47 10.39 11.18 8.20 7.94 8.77 8.50 7.16 6.05 8.54 11.10 8.42 9.08 7.83 10.74 7.68 6.11	7.45 10.41 11.26 8.27 8.80 8.85 7.16 6.12 8.56 11.08 8.53 9.18 7.90 10.76 7.81 6.19	7,55 10,65, 11,59 8,422 8,17 8,928 6,28 8,70 11,23 8,55 9,19 7,98 10,79 7,93 6,27	7.54 10.62 11.32 8.34 8.10 8.89 8.65 7.27 6.19 8.62 11.20 8.57 9.20 7.96 10.82 7.94 6.29	7.55 10.62 11.33 8.37 8.13 8.91 8.63 7.28 6.21 8.65 11.15 8.64 9.18 8.01 10.89 8.00 6.32	7.58 10.65 11.32 8.42 8.19 8.94 8.72 7.24 8.72 11.24 8.63 10.89 9.24 8.03	7.63 10.66 11.46 8.45 8.22 9.01 8.77 7.41 6.23 8.80 11.23 8.79 9.26 8.05 11.86 6.38	7.64 10.82 11.41 8.50 8.25 9.06 8.81 7.59 6.30 8.86 11.31 8.83 9.27 8.09 11.21 8.23 6.41	7.67 10.91 11.53 8.55 8.31 9.11 8.87 7.64 6.34 8.93 11.37 8.85 9.30 8.18 11.25 8.13 6.40	77.70 10.93 111.60 8.51 8.26 79.09 78.84 77.61 6.39 78.93 111.49 78.85 9.33 8.24 11.18 78.40 76.39	7.766 *11.06 *11.70 *8.59 *8.33 9.16 *8.91 *7.66 *6.40 *9.01 *11.55 *8.90 *9.32 *11.24 *6.48	P7.78 P10.97 P11.80 P8.56 P8.32 P9.13 P8.90 P7.56 P6.42 P8.87 P11.44 P8.88 P9.34 P8.36 P11.29 P8.47
Nondurable goods do. Excluding overtime do. Food and kindred products do. Tobacco manufactures do. Textile mill products do. Apparel and other textile products do. Paper and allied products do. Printing and publishing do. Chemicals and allied products do. Petroleum and coal products do. Rubber and plastics products, nec do. Leather and leather products do. Transportation and public utilities do. Wholesale trade do. Retail trade do. Finance, insurance, and real estate do. Services do.	6.55 6.32 6.85 7.74 5.07 4.56 7.84 7.53 8.30 10.10 6.52 4.58 8.87 5.48 5.78 5.85	7.43 8.88 5.52 4.96 8.60 8.18 9.12 11.38	7.36 7.08 8.76 8.76 5.69 5.04 8.95 8.95 11.55 7.09 9.95 6.04 7.70 5.37 6.39 6.52	7.33 7.07 7.51 8.67 5.70 5.70 8.82 8.40 9.37 11.47 7.30 5.09 9.94 6.01 7.73 6.03 6.43 6.58	7.38 7.12 7.61 9.04 5.73 5.04 8.89 8.42 9.42 11.58 7.31 5.11 10.05 6.04 7.79 5.32 6.52 6.67	7.44 7.20 7.67 8.96 5.72 5.04 8.96 8.48 9.53 11.59 7.38 5.15 10.06 6.02 7.81 5.04 6.66	7.67 7.42 7.822 9.21 5.76 5.18 9.06 8.58 9.68 11.91 7.51 5.19 10.10 6.17 7.94 5.43 6.56 6.79	7.54 7.31 7.74 9.56 5.13 8.99 8.56 9.68 12.29 7.49 5.22 10.13 6.16 7.94 5.42 6.62 6.62	7.57 7.34 7.79 9.72 5.76 5.15 9.03 8.59 9.71 12.32 7.45 5.24 10.07 6.16 7.93 5.43 6.59 6.77	7.65 7.43 7.90 10.05 5.79 5.11 8.59 9.81 12.50 7.52 5.32 10.14 6.18 7.97 5.44 6.64 6.81	7.66 7.43 7.92 9.93 5.16 9.14 8.61 9.83 12.52 7.56 5.32 10.17 6.20 8.03 5.47 6.85	7.70 7.46 7.90 10.35 5.79 5.18 9.28 8.66 9.95 12.53 7.64 5.36 10.20 6.20 8.01 5.71 6.71	7.77 7.58 10.42 5.81 5.17 9.41 8.74 10.02 12.42 7.65 5.30 10.29 6.21 8.07 5.48 6.87	7.74 7.48 9.53 5.82 5.18 9.45 8.79 10.03 12.42 7.64 5.33 10.43 6.22 8.11 5.48 6.87	7.84 7.56 7.90 9.57 5.86 5.20 9.63 8.89 10.21 12.62 7.7.66 15.40 10.44 16.26 8.15 5.90 6.99	P7.82 P7.56 P7.87 P9.64 P5.86 P5.20 P9.55 P8.86 P10.26 P12.55 P7.74 P5.41 P10.48 P6.27 P8.16 P5.29 P6.93 P7.03
Seasonally adjusted: Private nonagricultural payrolls	6.66 9.17 9.94 7.27 8.87 5.48 5.79 5.85	7.25 10.05 10.80 7.99 9.70 5.93 6.31 6.41	7.37 10.27 10.95 8.14 9.86 6.03 6.39 6.54	7.40 10.25 11.06 8.16 9.89 6.03 6.43 6.58	7.45 10.39 11.14 8.20 9.97 6.06 6.52 6.63	7.46 10.41 11.22 8.20 10.02 6.08 6.47 6.65	7.52 10.65 11.52 8.38 10.09 6.09 6.56 6.71	7.53 10.62 11.34 8.34 10.13 6.10 6.62 6.72	7.54 10.62 11.39 8.37 10.15 6.12 6.59 6.72	7.59 10.65 11.43 8.44 10.18 6.16 6.64 6.80	7.65 10.66 11.54 8.48 10.24 6.20 6.77 6.85	7.67 10.82 11.51 8.52 10.30 6.22 6.71 6.90	7.71 10.91 11.56 8.56 10.30 6.23 6.78 6.96	*7.74 *10.93 *11.58 8.57 *10.40 6.26 *6.87 *7.00	7.72 *11.06 *11.58 *8.56 *10.35 *6.25 6.90 *7.01	P7.75 P10.97 P11.69 P8.56 P10.43 P6.29 P6.93 P7.02
Indexes of avg. hourly earnings, seas. adj.: ¶ Private nonfarm economy: Current dollars	127.3 93.5 134.2 121.9 129.4 127.2 127.8 127.0 125.5	138.9 92.6 148.3 131.9 141.9 139.4 138.2 138.1 137.3 12.92 16.78	141.4 92.1 151.7 133.5 144.7 141.5 141.0 140.4 139.7	142.0 92.1 151.4 134.7 145.4 142.3 140.5 141.4 140.8	143.0 92.3 153.4 135.7 146.4 143.5 141.2 142.6 142.1	143.5 92.3 153.4 136.6 146.9 144.3 141.7 142.0 142.6	144.9 92.9 156.2 139.9 148.9 145.5 142.1 143.1 143.4	145.0 92.8 156.0 137.9 149.1 142.5 143.3 143.7 13.83 17.99	145.4 93.3 156.0 138.1 149.9 142.8 143.8 143.9 13.83 18.00	146.3 93.7 156.5 138.7 150.8 146.9 143.7 144.9 145.1	147.7 93.7 156.8 139.9 151.8 148.2 145.1 148.0 146.5	148.1 93.1 159.6 139.7 152.5 149.1 145.2 147.2 147.3	148.9 93.0 161.3 140.6 153.3 148.6 148.7 148.7	7149.9 93.2 161.5 140.7 154.2 150.3 146.5 150.6 149.7	*150.0 *93.2 *163.2 *140.6 *154.7 *149.6 *146.7 *151.2 *149.6	P150.6 P93.0 P161.9 P142.0 P154.7 P151.1 P147.3 P152.0 P150.3
method of pay: All workers, including piece-rate \$ per hr All workers, other than piece-rate do Workers receiving cash wages only do Workers paid per hour, cash wages only do Railroad wages (average, class I) do	3.66 3.59 3.82 3.67 9.92	10.64	10.65	10.61	10.79	11.00	11.25	11.39	11.09	11.22	11.29	11.29	11.54	11.55		
Avg. weekly earnings per worker, private nonfarm: ¶ Current dollars, seasonally adjusted	234.93 172.74	254.74 170.13	257.95 168.05	259.74 168.44	261.50 168.82	261.10 167.91	258.69 165.93	263.55 168.62	263.15 168.90	264.89 169.69	267.75 169.89	267.68 168.14	269.08 167.97	¹ 269.35 ¹ 167.61	268.66 166.87	P268.93 P166.11
Current dollars, seasonally adjusted 1977 dollars, seasonally adjusted; Private nonfarm, total dollars. Mining do. Construction do. Manufacturing do. Durable goods do. Nondurable goods do. Transportation and public utilities do. Wholesale trade do. Retail trade do. Retail trade do. Services do. Services do.	206.40 151.65 235.10 397.06 367.78 288.62 310.78 255.45 351.25 176.46 269.97 147.38 209.60 190.71	220.57 147.05 255.20 439.19 398.52 318.00 342.91 280.74 382.18 190.95 294.08 158.03 229.05 208.97	223.33 145.40 259.74 450.85 396.31 322.32 346.26 287.78 390.04 194.49 296.45 162.17 230.04 211.25	224.13 145.35 261.18 456.13 419.62 323.95 350.07 286.60 388.65 192.32 298.38 157.64 232.77 213.85	226.03 145.83 262.20 461.32 414.78 325.54 351.68 288.56 393.96 192.68 300.69 158.54 236.02 216.78	225.73 145.16 262.24 466.37 417.75 329.75 329.65 395.36 194.36 194.36 160.89 234.21 217.12	(1) (1) (255.95 456.89 385.95 312.38 336.28 277.65 388.85 191.89 300.13 157.47 237.47 219.32	262.39 463.03 406.39 326.93 352.93 291.04 397.10 194.66 303.31 159.35 239.64 220.68	261.99 465.16 419.21 327.27 352.84 289.93 392.73 194.66 303.72 159.64 239.22 220.03	262.27 454.76 415.44 325.85 350.45 291.47 393.43 195.91 304.45 161.02 240.37 221.33	265.52 454.12 429.75 329.55 355.90 294.14 394.60 197.78 308.35 163.01 245.75 222.63	267.40 463.10 427.88 334.05 360.59 297.99 399.84 199.02 309.19 164.65 242.23 224.35	269.98 463.68 438.14 332.60 357.11 299.15 403.37 202.45 312.31 168.24 245.44 227.40	r271.04 r463.43 r436.16 331.89 r356.33 299.54 r409.90 202.77 r313.05 168.24 r249.38 r227.70	270.05 '461.20 '431.73 '334.15 '357.24 '303.41 '406.12 '200.95 '312.96 '166.70 '248.40 '228.57	P270.74 P459.64 P436.60 P332.13 P356.98 P301.85 P406.62 P201.27 P314.16 P166.15 P250.17 P229.18
HELP-WANTED ADVERTISING leasonally adjusted index 1967 = 100	129	119	112	110	111	109	106	103	96	88	87	85	83	78	73	

140vember 1502			720 7 13						, <u> </u>							
Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		198	B1				r		19	82	r		<u> </u>	
in the 1979 edition of BUSINESS STATISTICS	Ann	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
LAB	OR FC	PRCE,	EMP	LOY	MEN	Γ, AN	D EA	RNI	NGS-	-Con	tinue	d		,		
WORK STOPPAGES ¶																
Work stoppages involving 1,000 or more workers: Number of stoppages:			_	_	_											
Beginning in month or year number Workers involved in stoppages:	187 795	145 729	5	12	5	2	6	2	3	9	14	17	37	14	15	
Beginning in month or yearthous Days idle during month or yeardo	20,844	16,908	26 899	13 734	12 141	146	200	237	8 352	36 480	44 636	41 894	852	40 779	391 2,147	
UNEMPLOYMENT INSURANCE																
Unemployment insurance programs: Insured unemployment, all programs, average weekly #@thous	3,837	3,410	2,680	2,753	3,228	3,935	4,681	4,723	4,892	4,760	4,388	4,328	4,495	4,398	4,283	
State programs (excl. extended duration prov.): Initial claimsthous	25,373	23,939	r1,681	1,996	2,286	3,272	3,328	2,272	2,418	2,347	1,988	2,398	12,658	2,358	P2,350	
Insured unemployment, avg. weekly do Percent of covered employment: @ @	3,350	3,048	2,488	2,592	3,061	3,778	4,470	4,376	4,282	4,067	3,729	3,707	3,912	3,831	3,713	
UnadjustedSeasonally adjusted	3.9	3.5	2.9 3.5	3.0 3.7	3.5 3.9	4.3 4.1	5.1 4.1	5.0 4.0	4.9 4.3	4.6 4.6	4.3 4.6	4.3 4.7	4.5 4.5	4.4 4.7	4.2 5.0	
Beneficiaries, average weekly thous Benefits paid @ mil. \$	2,864 14,590.3	2,614 13,206.7	2,174 1,001.0	2,142 997.2	2,392	3,171 1,592.5	3,801 1,764.2	3,908	3,944 2,072.6	3,672 1,849.9	3,257 1,573.4	3,326 1,689.1	3,331 1,679.4	3,413 1,746.2		
Federal employees, insured unemployment, average weeklythous	30	32	29	32	36	39	40	40	38	33	29	28	29	27	26	
average weeklythous Veterans' program (UCX): Initial claims	267	193	15	11	9	11	8	8	10	9	8	10	10	11	₽10	
Insured unemployment, avg. weekly do Beneficiaries, average weekly do	56 56	40 41	34 35	26 26	22 21	19 20	16 15	13 12 5.3	11 10	10 8	9 7	8 7	6	5	8 P6	
Benefits paid mil. \$ Railroad program:	294.9	230.3	17.1	13.0	10.1	10.2	7.1		5.1	4.0	3.4	3.3	2.8	2.8	P2.9	
Applicationsthous. Insured unemployment, avg. weekly do Benefits paidmil. \$	162 34 176.1	184 40 210.8	15 35 15.0	21 37 16.0	13 *43 16.4	19 56 25.3	22 73 30.5	11 67 28.0	9 65 33.9	5 52 26.3	5 43 19.1	36 41 18.6	68 54 18.0	20 59 27.0	14 65 31.1	
	1				FINA											1
BANKING					11											
Open market paper outstanding, end of period:	E 4 7744	co soc	CF 040	00.070		co 99c	70.000	70.400	71.010	71 100	71 001	71 705	70 550			
Bankers' acceptances	54,744 121,597 87,667	69,226 161,114 111,908	65,048 161,717 111,420	66,072 164,124 113,308	68,749 166,317	69,226 161,114	70,088 167,271 112,112	70,468 167,460 110,656	71,619 166,373 109,657	71,128 172,540 113,786	71,601 176,937 117,918	71,765 180,015 121,083		174,094 117,202		
Financial companies do Dealer placed do Directly placed do	19,904 67,763	30,357 81,551	30,440 80,980	30,716 82,592	113,411 30,728 82,683	111,908 30,357 81,551	30,666 81,446	30,974	31,844 77,813	32,723 81,063	34,336 83,582	35,446 85,637	36,983 85,902	36,657 80,545	35,584 79,632	************
Nonfinancial companies do	33,930	49,206	50,297	50,816	52,906	49,206	55,159		56,716	58,754	59,019	58,932	57,993	56,892		
Agricultural loans and discounts outstanding of agencies supervised by the Farm Credit Adm.:		=0 -00												24 524		
Total, end of period mil. \$ Farm mortgage loans: Federal land banks	68,648 38,138	78,188 46,463	77,614 44,720	78,283	78,103 45,961	78,188 46,463	78,387 46,899	79,035 47,324	79,758 47,966	80,695 48,425	80,972 48,838	81,415 49,289	81,659 49,582	81,564 49,845	81,553 50,006	
Loans to cooperatives do Other loans and discounts do	9,506 21,005	9,124 22,619	8,950 23,944	45,386 9,400 23,497	9,315 22,827	9,124 22,619	9,498 21,990	9,760 21,951	9,581 22,211	9,758 22,512	9,260 22,874	8,670 23,456	8,355 23,722	8,034 23,685	8,078 23,469	
Federal Reserve banks, condition, end of period:				, i						-		·				
Assets, total # mil. \$ Reserve bank credit outstanding, total # do	171,495 137,644	176,778 143,906	181,639 138,288	167,256 134,665	171,676 139,140	176,778 143,906		170,321 138,575	172,249 139,700	182,959 148,335	173,574 141,249	173,810 140,244	177,673 143,812	180,258 144,502		186,45 142,62
Time loans do do do do	1,809 121,328	1,601 130,954	2,486 124,330	924 123,005	232	1,601	2,217 128,230	1,180 125,410	2,646 125,589	1,799	1,058 129,407	1,638 127,005	458 132,640	449	1,123	43 132,08
Gold certificate account do	11,161	11,151	11,152	11,152	11,152	11,151	11,151	11,150	11,150	11,149	11,149	11,149	11,149	11,148	11,148	11,14
Liabilities, total #	171,495 31,546	176,778 30,816	181,639 41.924	167,256 28,742	171,676 29,053	30,816	179,941 39,324	170,321 29,630	172,249 30,073	182,959 38,357	173,574 26,834	173,810 25,325	177,673 29,893	180,258 29,076	180,647 32,095	186,45 36,63
Member-bank reserve balances do Federal Reserve notes in circulation do	27,456 124,241	25,228 131,906	27,243 125,050	23,672 125,351	24,312	25,228 131,906	25,066	24,964	26,357	24,702 130,189	23,463 132,619	20,198 134,228	24,974 134,115	24,993	20,318	24,67 136,04
All member banks of Federal Reserve System,			,	,	,	ĺ	,	,	ĺ	,	,	ŕ	·			
averages of daily figures: Reserves held, total	140,097 140,067	¹41,918 ¹41,606	40,593 40,177	40,711 40,433	40,951 40,604	41,918 41,606	43,210 42,785	41,280 40,981	39,230 38,873	39,558 39,284	39,552 39,192	39,567 39,257	39,864 39,573	40,177 39,866	r39,963 r39,579	40,91 40,18
Excess do Borrowings from Federal Reserve banks do	130	1312 1642	416 1,473	278 1,149	347 695	312 642	425 1,526	299 1,713	357 1,611	274 1,581	360 1,105	310 1,205	291 669	311 510	'384 976	73 45
Free reserves do	1-1,471	1-277	-835	-719	-269	-277	-1,026	-1,282	-1,080	-1,140	-508	-656	-153	-80	r-490	36
Large commercial banks reporting to Federal Re- serve System, Wed. nearest end of yr. or mo.: Deposits:														·		
Demand, adjusted § mil. \$	119,485	108,595	100,656	99,021	106,737	108,595	99,682	95,764	l '	94,010	95,278	102,299	97,375	[96,793	
Demand, total # do do Individuals, partnerships, and corp do	228,086 158,283	187,518 140,376	209,236 135,847	163,230 123,561	186,099 137,774	187,518 140,376	170,840 127,443	169,273 125,658	172,931 131,868	157,940 120,484	179,476 133,774	178,515 133,268	158,878 120,287	182,564 136,351	164,592 124,103	187,99 139,93
State and local governments	5,829 1,108	5,235 2,148	5,129 2,198	4,123 1,566	4,985 1,114	5,235 2,148	5,328 3,645	4,492 3,331	5,133 1,133	4,640 2,958	4,521 1,148	5,710 2,345	4,594 1,575	4,850 900	4,479 1,874	5,39 3,01
Domestic commercial banks	41,407 314,128	21,896 362,502	44,149 349,069	18,025 350,216	22,158 356,985	21,896 362,502	19,273 367,200	19,762 370,510	19,695 372,461	16,143 373,733	23,721 381,227	20,392 385,108	17,299 393,402	20,735 401,576	l	22,49 403,34
Individuals, partnerships, and corp.: Savings do	72,670	76,971	75,364	74,359	76,758	76,971	79,286	79,314	80,434	78,902	80,795	79,642	78,899	80,977	79,898	85,22
Other time	205,862 433,313	250,511 470,988	240,184 460,044	242,481 455,089	245,714 468.089	250,511 470,988	252,236 470,410	253,750 472,278	255,514 476,519	257,536 479,517	263,021 486,083	269,351 490,863	276,274 488,186	280,606 495,430		278,76 503,70
Commercial and industrial	433,313 174,581 9,988	195,499 10,756			191,818 10,672		198,009 8,675		202,573 7,782			212,428 8,700	210,500 9,421		217,315 10,496	
To nonbank financial institutions dododododododo	26,073 111,819	26,729 124,444	26,273 121,596	25,408 122,302	26,385 123,512	26,729 124,444	26,756 126,157	26,762 126,840	27,913	28,096 128,538	27,768 129,098	27,666 129,689	27,368 130,082	28,090 131,003	27,279	27,31
Other loans do	135,555	146,367	145,053	137,542	146,880	146,367	144,998	144,382	140,837	138,662	143,552	144,398	143,263	151,608	148,534	154,60
Investments, total	118,098 39,611	116,905 36,819	117,457 37,771	116,293 38,310	119,081 37,510	116,905 36,819	118,503 38,090	117,596 38,374	38,570	115,768 36,999	117,554 36,945	115,122 36,997	115,404 37,659	115,831 37,113	37,899	122,12 42,27
Investment account *	35,239 78,487	30,872 80,086	31,632 79,686	31,404 77,983	30,690 81,571	30,872 80,086	30,785 80,413	30,747 79,222	30,345 79,366	29,548 78,769	29,158 80,609	29,196 78,125	28,957 77,745	30,161 78,718	30,695 78,412	33,04 79,85
See footnotes at end of tables.								•								

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		19	81				r -		19	82	1			
in the 1979 edition of BUSINESS STATISTICS	Anr	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
			F	INAI	VCE-	-Cont	inue	1			_					
BANKING—Continued		,									Ì			·		
Commercial bank credit, seas. adj.: 5 bil. \$ Total loans and securities	1,239.6 110.0 214.4 915.1	1,316.3 111.0 231.4 973.9	1,317.8 113.2 225.6 979.0	1,324.0 112.5 228.7 982.8	1,327.5 110.3 231.2 986.1	1,316.3 111.0 231.4 973.9	1,320.0 114.1 231.5 974.5	1,332.4 115.1 232.0 985.2	1,342.5 114.4 233.1 995.0	1,352.6 116.6 234.0 1,002.0	1,361.9 116.3 234.9 1,010.7	1,368.7 115.8 235.8 1,017.1	1,376.1 116.5 235.9 1,023.7	1,383.2 117.8 237.1 1,028.4		
Money and interest rates: Discount rate (N.Y.F.R. Bank) @ @percent	11.77	13.41	14.00	14.00	13.00	12.10	12.00	12.00	12.00	12.00	12.00	12.00	11.81	10.68	10.00	9.6
Federal intermediate credit bank loans do Home mortgage rates (conventional 1st	²12.22	²14.20	15.11	15.28	15.26	14.87	14.63	14.45	14.11	14.14	13.93	13.73	13.63	13.43	13.21	°12.9
mortgages): New home purchase (U.S. avg.)percent Existing home purchase (U.S. avg.)	² 12.25 ² 12.58	² 14.17 ² 14.62	14.69 15.38	15.04 15.47	15.68 15.80	15.23 15.53	14.67 15.37	14.44 15.22	14.93 15.07	15.13 15.39	15.11 15.57	14.74 15.01	15.01 14.96	15.05 15.03	14.34 14.71	13.8 14.3
Open market rates, New York City: Bankers' acceptances, 90 days	\$12.78 \$12.29 \$11.28	*15.32 *14.76 *13.73	16.11 15.93 15.01	14.78 14.72 13.96	12.00 11.96 11.72	12.13 12.14 11.24	13.06 13.35 12.56	14.47 14.27 13.58	13.73 13.47 12.89	13.95 13.64 13.09	13.29 13.02 12.61	14.00 13.79 12.69	12.90 13.00 12.15	10.34 10.80 9.93	10.40 10.86 9.63	9.2 9.2 8.6
Yield on U.S. Government securities (taxable): 3-month bills (rate on new issue)percent CONSUMER INSTALLMENT CREDIT	³11.506	³14.077	14.951	13.873	11.269	10.926	12.412	13.780	12.493	12.821	12.148	12.108	11.914	9.006	8.196	7.75
Total extended and liquidated: Unadjusted:																
Extended mil \$ Liquidated do Seasonally adjusted:	306,076 304,628	336,341 316,447	30,158 26,133	27,158 26,693	26,526 26,125	30,914 26,595	22,574 25,814	22,758 25,460	27,986 28,289	28,449 27,217	28,389 27,413	31,098 28,586	27,415 26,792	29,608 28,272	28,988 26,848	
Extended, total # do By major holder: Commercial banks			29,406 12,384 7,158	26,836 11,610 5,327	27,370 12,430 5,287	26,656 13,264 4,089	26,888 11,775 4,433	27,150 12,431 4,857	27,462 12,519 5,002	28,684 12,790 5,343	29,197 12,765 6,135	29,737 13,460 5,700	27,514 12,485 4,607	27,579 12,499 4,685	28,268 12,750 4,894	
Credit unions			2,558 4,568	2,621 4,559	2,571 4,279	2,517 4,142	3,326 4,385	2,695 4,254	2,631 4,536	3,010 4,618	2,902 4,449	2,887 4,762	2,711 4,785	2,904 4,396	3,092 4,684	
Automobile do Revolving do Mobile home do			9,000 12,263 532	7,490 11,753 475	8,073 11,379 479	7,352 11,592 508	7,474 11,070 434	7,283 11,730 364	7,183 12,143 411	7,871 12,416 544	8,429 12,528 478	8,182 13,361 459	7,332 12,551 441	7,112 12,497 581	7,546 12,464 452	
By major holder: Commercial banks			26,431 11,957 4,476	25,834 11,686 4,123	26,770 11,997 4,825	26,689 12,104 4,503	26,445 11,765 5,030	27,075 12,602 4,550	26,472 12,353 4,329	27,509 12,694 4,799	27,798 12,778 5,009	28,388 13,560 4,826	26,944 12,551 4,412	27,513 12,751 4,827	27,176 12,269 4,779	
Retailers do			2,692 4,557	2,830 4,455	2,795 4,405	2,886 4,480	2,637 4,358	2,830 4,378	2,753 4,365	2,878 4,437	2,941 4,381	2,849 4,458	2,780 4,488	2,725 4,505	2,746 4,624	
By major credit type: Automobile do Revolving. do Mobile home do			6,921 11,692 375	6,466 11,429 353	7,509 11,358 404	7,284 11,533 365	7,595 11,266 460	7,339 11,885 408	7,211 11,836 396	7,638 11,917 493	7,470 11,991 408	7,527 12,854 392	7,271 11,939 378	7,514 12,354 440	7,041 12,254 442	
Total outstanding, end of year or month # do By major holder:	313,472	333,375	328,187	328,652	329,053	333,375	330,135	327,435	327,131	328,363	329,338	331,851	332,471	333,808	335,948	
Commercial banks do Finance companies do Credit unions do Retailers do	147,013 76,756 44,041 28,448	149,300 89,818 45,954 29,551	147,060 88,698 46,791 26,594	146,889 89,583 46,416 26,922	146,687 89,956 46,092 27,510	149,300 89,818 45,954 29,551	148,162 88,925 45,907 28,179	146,922 89,009 45,586 27,013	146,454 89,591 45,632 26,530	146,616 90,674 45,450 26,537	146,147 91,958 45,472 26,536	146,775 93,009 45,882 26,645	146,745 93,353 45,698 26,710	147,275 93,207 46,154 26,751	148,280 93,357 46,846 26,829	
By major credit type: Automobile do Revolving do Mobile home do	116,838 58,352 17,322	126,431 63,049 18,486	58,318	126,344 58,451 18,300	126,385 58,923 18,380	63,049	125,525 61,433 18,397	125,294 59,514 18,343	125,559 58,491 18,363	58,641	58,647	59,302	128,359 59,824	60,475	60,932	
FEDERAL GOVERNMENT FINANCE	11,022	10,400	18,124	10,300	10,000	18,486	10,037	10,040	10,000	18,402	18,479	18,543	18,601	18,741	18,778	*************
Budget receipts and outlays: Receipts (net) mil. \$ Outlays (net) do Budget surplus or deficit (—) do	1517,112 1576,675 1-59,563	1599,272 1657,204 1-57,932	60,594 53,698 6,897	45,467 63,573 -18,105	44,317 54,959 -10,642	57,407 76,875 -19,468	55,269 45,930 9,339	43,042 57,822 -14,780	45,291 63,546 -18,255	75,777 66,073 9,704	36,753 55,683 -18,930	66,353 59,629 6,724	44,675 64,506 -19,831	44,924 59,628 -14,704		
Budget financing, total	159,563 170,515 1-10,952	¹ 57,932 ¹ 79,329 ¹ –21,397	-6,897 8,577 -15,474	*18,749 10,374 8,375	12,522 10,972 1,550	20,516 14,274 6,242	-8,109 9,783 -17,892	14,993 10,693 4,300	18,773 12,305 6,468	-8,711 2,527 -11,238	21,424 3,187 18,237	-4,457 3,260 -7,717	20,962 14,348 6,614	16,751 21,086 -4,335		
Gross amount of debt outstanding do Held by the public do	1914,317 1715,105	11,003,941 1794,434	1,003,941 794,434	1,011,111 804,808	1,019,324 815,780	1,034,716 830,055	1,043,817 839,837	1,053,325 850,504	1,066,393 862,809	1,070,734 865,336	1,076,798 868,523	1,084,658 871,783	1,094,628 886,131	1,114,214 907,218		
Budget receipts by source and outlays by agency: Receipts (net), total	1517,112 1244,069 164,600	1599,272 1285,917 161,137	60,594 30,882 8,659	45,467 22,555 1,265	44,317 21,775 745	57,407 25,770 10,220	55,269 32,646 2,473	43,042 21,007 1,293	45,291 13,391 6,910	75,777 41,672 7,342	36,753 9,576 1,202	66,353 32,273 10,589	44,675 23,987 601	44,924 20,867 422		
Social insurance taxes and contributions (net)	¹157,803 ¹50,640	¹182,720 ¹69,499	14,516 6,537	15,369 6,278	15,795 6,002	14,641 6,777	14,575 5,574	15,109 5,633	18,752 6,238	21,593 5,170	20,483 5,493	17,572 5,918	14,874 5,214	17,961 5,674		
Outlays, total # do Agriculture Department do Defense Department, military do Health and Human Services	1576,675 124,555 132,840	1657,204 126,030 1156,035	53,698 604 13,624	63,573 3,146 14,351	54,959 3,072 13,889	76,875 4,793 15,880	45,930 4,573 13,783	57,822 2,984 14,239	63,546 4,394 16,042	66,073 2,484 16,013	55,683 1,362 14,826	59,629 1,526 16,041	64,506 2,668 16,329	59,628 2,184 15,011		•••••••
Department \$	194,691 176,691 14,850 121,135	1230,304 192,633 15,421 122,904	20,905 6,537 348 2,008	21,249 8,268 658 3,010	19,770 8,204 517 851	33,866 13,277 551 3,214	6,117 7,935 443 760	20,679 8,164 493 1,908	21,628 7,598 524 2,269	21,898 9,641 464 3,236	19,883 8,286 486 751	21,087 14,090 497 1,923	22,499 8,643 435 3,097	21,168 9,235 491 994		
Gold: Monetary stock, U.S. (end of period) mil. \$ Price at New York ‡; dol. per troy oz	11,160 612.509	11,151 459.614	11,152 444.095	11,152 437.195	11,152 413.671	11,151 408.743	11,151 384.125	11,150 374.071	11,150 330.248	11,149 350.488	11,149 334.403	11,149 314.982	11,149 340.102	11,148 365.952		421.75
Silver: Price at New York # dol. per troy ozle footnotes at end of tables.	20.632		10.035						7.213							

Unless otherwise stated in footnotes below, data	1980	1981		198	81						19	82				
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ıual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
			F	INAN	ICE-	-Cont	inue	1	·			L				
MONETARY STATISTICS																
Currency in circulation (end of period) bil. \$	137.2	145.6	138.5	138.8	142.7	145.6	140.5	140.5	142.6	144.0	146.5	148.2	148.1	149.4	149.2	
Money stock measures and components (averages of daily figures): † Measures (not seasonally adjusted): ‡																
M1	401.4 1,591.7	429.6 1,747.1	431.5	434.5 1,793.3	439.7 1,809.6	1451.2 1,829.4	453.4 1,849.2	437.2 1,842.9	440.0 1,861.9	455.5 1,887.9	445.1 1,888.9	450.5 1,906.4	454.0 1,924.8		'460.5 '1,950.7	470.0 1,971.6
M3 do L (M3 plus other liquid assets) do	1,873.0 2,267.6	2,089.9	1,775.7 2,132.4 2,568.3	2,152.6 2,598.5	2,175.6 2,628.5	2,199.9	2,217.2	2,216.0 r2,698.4	2,237.4 2,722.7	2,266.1 2,754.2	2,269.3 r2,766.5	2,290.0	2,314.1 2,819.0	r2,342.5		2,382.8
Components (not seasonally adjusted):	-			·												
Currency	111.7 263.9	119.8 239.9	120.8 234.6	121.2 236.6	122.9 237.5	125.4 243.3	123.3 243.6	123.0 228.5	123.8 228.2	125.6 236.1	127.2 228.3	128.3 230.4	129.8 231.5	130.0 229.3	*130.2 *232.4	131.2 237.1
Other checkable deposits ##	21.8 30.0	38.7	71.7 39.6	72.4 36.2	75.2 36.9	78.4 38.1	82.5 43.2	81.5 42.9	83.8 43.0	89.5 40.4	85.4 42.8	87.2 43.1	87.9 43.4	89.8 *44.5	r93.2 43.3	97.3 46.3
Money market mutual funds do	55.3 404.0	361.6	130.6 347.9	137.3 343.9	144.9 342.2	151.2 343.0	154.9 346.8	156.0 344.5	159.2 346.1	161.9 348.1	164.3 347.4	168.6	171.3 348.3	180.0 *346.1	181.9 1347.4	183.4 356.9
Small time deposits @	706.4 236.3	812.9 286.4	832.1 299.1	847.6 299.8	851.9 301.8	851.7 305.4	857.5 307.6	868.5 314.2	879.6 317.4	888.1 317.9	895.3 320.3	902.3 323.9	914.1 328.3	r920.2 r333.7	923.9 335.6	921.7 340.2
Measures (seasonally adjusted): ‡ M1do			431.2	432.9	436.4	1440.9	448.6	447.3	448.3	452.4	451.5	451.4	451.3	455.2	'460.5	468.2
M2 do do do			1,778.3 2,138.1	1,789.5 2,151.1	1,809.9 2,174.7		1,841.3 2,204.3	1,848.0 2,215.0	1,865.2	1,880.7 2,258.1	1,897.5 2,279.3	1,907.9 2,296.0	1,923.4 2,320.2	r1,946.3 r2,355.9	r1,954.4 r2,363.5	1,967.6
L (M3 plus other liquid assets) do			2,577.2	2,600.0	2,629.3	2,642.8	*2,667.9	r2,690.5	°2,716.7	¹ 2,743.7	r2,773.3	r2,797.9	2,830.5			
Components (seasonally adjusted): Currency			121.1	121.3	121.8	123.1	123.8	124.6	125.1	126.3	127.4	128.4	128.8		r130.5	131.3
Demand deposits do			234.7 343.1	235.7 339.6	235.7 340.9	236.4 343.6	239.3 348.8	234.5 348.6	233.0 350.7	233.0 350.5	232.7 350.9	231.0 349.9	230.6 344.0	r342.0	232.6 r342.5	236.1 352.5
Small time deposits @ do Large time deposits @ do			839.7 302.3	849.8 302.2	856.81 300.6	854.7 300.3	852.3 302.6	859.4 308.0	869.9 312.6	881.6 317.2	894.1 321.6	900.9 328.3	919.7 335.8	*930.6 *339.6	932.6 339.3	
PROFITS AND DIVIDENDS (QTRLY.)																
Manufacturing corps. (Fed. Trade Comm.): Net profit after taxes, all industries mil. \$	92,579		25,201			22,856			18,998			20,028				
Food and kindred products	8,222 977	9,109 1,157	2,293 308			2,446 198			2,120 78			2,079 146			}	
Paper and allied products do Chemicals and allied products	2,789 11,578		633 3,098			829 2,985			418 2,900			436 2,764				
Petroleum and coal products do Stone, clay, and glass products do	25,133 1,833	23,733 1,627	6,103 555			5,464 267			4,935 -167			4,146 205				
Primary nonferrous metal do Primary iron and steel dodo	2,768 2,334	2,124 3,507	290 1,421			369 5			82 25			44 -430				
Fabricated metal products (except ordnance, machinery, and transport, equip.) mil. \$	3,967	4,235	1,133			760			786	1		820				
Machinery (except electrical) do	11,459	12,580	3,084			3,492			2,657			2,454				
Elec. machinery, equip., and supplies do Transportation equipment (except motor	7,114	7,872	1,797			1,745			1,781			1,801	***************************************			
vehicles, etc.) mil. \$ Motor vehicles and equipment	3,084 -3,424	3,722 -209	903 622			707. ~139			645 1			693 1.072				
All other manufacturing industries do	14,745	15,762	4,205			3,728			2,737			3,798				
Dividends paid (cash), all industries do	36,495	40,317	9,703			10,763			10,160			10,418				
SECURITIES ISSUED Securities and Exchange Commission:																
Estimated gross proceeds, total mil. \$ By type of security:	81,111	75,870	4,972	5,363	r9,731	5,969	3,283	5,838	6,601	4,610	¹ 5,949	'5,791	r6,023	9,225		
Bonds and notes, corporate do	56,265	1 '	2,544	3,839	7,112	3,948	1,607	4,074	4,653	2,573	r3,405	13,066	r3,648	6,851		
Common stock do	18,996 3,635		2,037 186	1,382 141	2,039 59	r1,935 r80	1,477 199	1,430 185	1,750 198	1,875 172	1,527	2,559	1,482 644	1,650 622		
By type of issuer: Corporate, total # mil. \$	78,889	72,503	4,767	5,362	9,210	5,963	3,283	5,689	6,601	4,610	^{75,820}	15,692	r5,774	9,121		
Manufacturing do Extractive (mining) do	24,398 4,818	17,397	572 905	238 703	2,462 797	1,212 723	727 724	479 479	1,142 919	599 636	755 360	417 1,800	'1,494 '688	2,223 389		
Public utility do	15,940	r14,494	1,746	1,331	1,246	1,176	962	1,088	2,219	1,684	1,747	941	728	1,524		
Transportation do	3,745 7,385	r2,779 r6,158	150 765	74 91	120 411	105 201	68 66	76 366	255 87	41 20	108 r457	131 191	15 170	464 622		
Financial and real estate do State and municipal issues (Bond Buyer):	15,638	17,197	541	2,563	3,254	1,894	506	2,994	1,523	1,358	'1,719	1,906	r2,259	2,862		
Long-term do Short-term do	47,133 26,485		3,539 4,412	3,625 3,543	5,035 2,902	5,072 3,138	3,780 2,525	3,459 2,708	5,531 2,950	6,692 3,109	5,268 5,919	5,667 4,848	5,822 3,302	6,635 4,766	'6,377 '3,146	7,998 3,283
SECURITY MARKETS		,	.,	.,	}	.,	,,,,,,	}		.,	-,	,,,,,	-,	,	.,	-,
Stock Market Customer Financing								}								
Margin credit at brokers, end of year or month mil. \$	14,721	14,411	14,023	13,926	14,124	14,411	13,441	13,023	12,095	12,202	12,237	11,783	11,729	11,396	11,208	
Free credit balances at brokers: Margin accounts	2,105	3,515	2,940	2,990	3,290	3,515	3,455	3,755	3,895	4,145	4,175	4,215	4,410	4,470	4,990	
Cash accounts do	6,070	7,150	6,555	6,100	6,865	7,150	6,575	6,595	6,510	6,270	6,355	6,345	*6,730	7,550	7,475	
Bonds Prices:					•	}		}		1						}
Standard & Poor's Corporation: High grade corporate:						1		}								
Composite §dol. per \$100 bond. Domestic municipal (15 bonds)do	41.4 57.4	33.7 43.2	29.9 36.8	30.0 37.4	33.7 41.0	33.2 37.1	30.9 35.8	31.1 37.0	32.9 37.3	33.3 38.2	34.0 39.9	32.1 38.3	32.8 39.4	35.7 43.2	38.0 45.6	41.7 49.7
Sales:]]	"			55.0		50							}
New York Stock Exchange, exclusive of some stopped sales, face value, total mil. \$	5,190.30	5,733.07	577.36	567.54	611.97	673.76	410.47	388.34	512.80	509.13	510.05	499.02	463.04	724.38	699.80	875.39
See footnotes at end of tables.																

Unless otherwise stated in footnotes below, data	1980	1981		19	81						19	82				
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Anr	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	•		F	INA	ICE-	-Cont	inue	i i							•	
Bonds—Continued																
Yields: Domestic corporate (Moody's)percent	12.75	15.06	16.18	16.20	15.35	15.38	16.05	16.13	15.68	15.53	15.34	15.77	15.70	15.06	14.34	13.54
By rating: Aaa	11.94 12.50	14.17 14.75	15.49 15.95	15.40 15.82	14.22 14.97	14.23 15.00	15.18 15.75	15.27 15.72	14.58 15.21	14.46 14.90	14.26 14.77	14.81 15.26	14.61 15.21	13.71 14.48	12.94 13.72	12.12 12.97
A	12.89 13.67	15.29 16.04	16.36 16.92	16.47 17.11	15.82 16.39	15.75 16.55	16.19 17.10	16.35 17.18	16.12 16.82	15.95 16.78	15.70 16.64	16.07 16.92	16.20 16.80	15.70 16.32	15.07 15.63	14.34 14.73
By group: Industrials do	12.35	14.50	15.47	15.64	15.19	15.00	15.37	15.53	15.29	15.22	15.08	15.35	15.37	14.88	14.11	13.19
Public utilities	13.15 11.48	15.62 13.22	16.89 13.71	16.76 13.88	15.50 13.92	15.77 13.84	16.73 14.10	16.72 14.08	16.07 14.00	15.82 14.03	15.60 13.93	16.18 13.99	16.04 14.05	15.22 13.90	14.56 13.69	
Domestic municipal: Bond Buyer (20 bonds)	8.73	11.56	12.93	12.99	12.18	13.30	13.15	12.70	13.13	11.97	12.13	12.58	11.97	10.74	10.48	10.05
Standard & Poor's Corp. (15 bonds) do U.S. Treasury bonds, taxable ‡ do	8.51 10.81	11.23 12.87	12.86 14.14	12.67 14.13	11.71 12.68	12.77 12.88	13.16 13.73	12.81 13.63	12.72 12.98	12.45 12.84	11.99 12.67	12.42 13.32	12.11 12.97	11.12 12.15	10.61 11.48	9.59 10.51
Stocks																
Prices: Dow-Jones averages (65 stocks)Industrial (30 stocks)		364.61 932.92	333.33 853.38	337.10 853.24	346.44 860.44	351.31 878.28	333.99 853.41	327.54 833.15	318.94 812.33	332.69 844.96	333.11 846.72	313.66 804.37	316.31 818.41	321.30 832.11	356.89 917.27	383.92 988.71
Public utility (15 stocks)	110.43	108.58 398.56	105.18 353.12	103.77 368.56	110.42 383.56	110.73 387.11	105.68 353.99	105.98 345.93	107.47 328.85	112.17 344.68	114.49 340.90	108.41 314.58	106.28 316.68	109.64 318.34	116.18 368.32	119.97
Standard & Poor's Corporation: § Combined index (500 Stocks)	118.78	128.04	118.27	119.80	122.92	123.79	117.28	114.50	110.84	116.31	116.35	109.70	109.38	109.65	122.43	132.66
Industrial, total (400 Stocks) #	134.52 131.37	144.24 139.03	132.67 126.60	133.98 123.98	136.76 125.80	128.23	131.08 121.78	127.56 120.53	122.85 112.43	129.19 117.32	129.68 115.84	122.61 105.97	122.49 106.34	122.29 106.34	137.09 119.61	148.11 131.64
Consumer goods (189 Stocks)	86.88 50.54	100.67 51.87	93.67 51.01	96.89 51.41	98.38 54.52	98.37 53.53	95.43 51.81	97.32 51.39	97.00 52.33	102.91 54.25	103.81 54.88	100.92 52.13	102.66 51.87	102.46 53.34	115.51 56.48	126.43 59.41
Transportation (20 Stocks)	18.52 75.57	23.26 93.09	20.03 78.81	21.01 83.83	21.92 89.68	22.21 90.84	20.05 80.86	18.95 75.99	17.68 67.73	18.71 71.20	18.50 71.16	17.21 65.49	17.22 63.15	17.53 64.71	20.27 77.20	22.19 86.27
Financial (40 Stocks)	12.50 44.00	14.44 52.45	13.73 50.82	14.40 53.75	15.23 56.28	14.76 54.01	13.95 51.33	14.19 53.85	14.15 53.77	14.59 55.93	13.81 52.27	12.45 48.10	12.07 45.36	12.38 47.46	13.72 50.50	15.97 64.21
Banks outside N.Y.C. (10 Stocks) do Property-Casualty Insurance (6 Stocks) do	102.90 127.06	117.82 141.29	111.69 132.95	113.93 141.22	119.20 152.40	112.58 149.00	102.51 141.08	100.48 146.08	96.11 147.01	97.40 149.14	93.29 142.45	86.01 126.05	81.10 120.61	82.06 118.41	86.79 134.47	106.48 156.02
New York Stock Exchange common stock indexes. Composite	68.10 78.70	74.02 85.44	68.37 78.07	69.40 78.93	71.49 80.86	71.81 81.70	67.91 76.85	66.16 74.78	63.86 71.51	66.97 75.59	67.07 75.97	63.10 71.59	62.82 71.37	62.91 70.98	70.21 80.08	76.10 86.67
Transportation	60.61 37.35	72.61 38.91	63.67 38.17	65.65 38.87	67.68 40.73	68.27 40.22	62.04 39.30	59.09 38.32	55.19 38.57	57.91 39.20	56.84 39.40	53.07 37.34	53.40 37.20	53.98 38.19	61.39 40.36	66.64 42.67
Finance do Yields (Standard & Poor's Corp.):	64.25	73.52	69.38	72.56	76.47	74.74	70.99	70.50	69.08	71.44	69.16	63.19	61.59	62.84	69.66	80.59
Composite (500 stocks) percent. Industrials (400 stocks) do	5.26 4.94	5.20 4.90	5.69 5.38	5.65 5.35	5.54 5.28	5.57 5.28	5.95 5.64	6.06 5.75	6.28 5.99	5.99 5.70	5.97 5.65	6.28 5.90	6.31 5.91	6.32 5.94	5.63 5.26	
Utilities (40 stocks)	9.77 4.04 5.75	10.18 3.40 5.41	10.49 3.99 5.74	10.46 3.80 5.47	9.92 3.67 5.19	10.22 3.76 5.48	10.74 4.20 5.89	10.77 4.38 5.79	10.61 4.72 5.92	10.27 4.47 5.73	10.27 4.47 6.07	10.87 4.85 6.67	11.02 4.92 6.97	10.77 4.95 6.79	10.22 4.17 6.12	
Preferred stocks, 10 high-grade do	10.60	12.36	13.01	13.09	12.76	12.83	13.19	13.20	12.97	12.90	12.58	12.96	13.24	12.78	12.41	11.71
Sales: Total on all registered exchanges (SEC):									İ							
Market value	475,850 15,486	490,688 15,910	33,534 1,220	39,673 1,380	37,495 1,303	38,692 1,365	33,445 1,222	35,953 1,313	44,157 1,713	39,900 1,533	37,350 1,430	35,174 1,414	41,292 1,577	47,117 1,902		
Market value	397,670 12,390	415,913 12,843	28,378 974	33,826 1,129	32,029 1,062	32,701 1,092	28,301 987	30,268 1,071	38,232 1,411	33,714 1,242	31,913 1,167	30,420 1,169	35,580 1,304	40,659 1,555		
New York Stock Exchange: Exclusive of odd-lot and stopped stock sales	1															
(sales effected) millions Shares listed, N.Y. Stock Exchange, end of period:	11,352	11,854	959	996	988	959	968	972	1,270	1,136	1,027	1,111	1,145	1,673	1,548	2,069
Market value, all listed shares bil. \$. Number of shares listed millions.	1,242.80 33,709	1,143.79 38,298	1,080.56 37,709	1,134.19 37,874	1,181.82 38,144	1,143.79 38,298	1,115.82 38,408	1,053.75 38,572	1,036.85 38,588	1,081.87 38,738	1,039.18 38,594	1,017.45 38,894	993.56 39,064	1,106.56 39,070	1,120.26 39,177	1,244.38 39,262
	F	OREIG	N TF	RADE	OF	THE	UNIT	ED S	TAT	ES						
VALUE OF EXPORTS																
Exports (mdse.), incl. reexports, total @ mil. \$ Excl. Dept. of Defense shipments do	220,704.9 220,548.7	· ·	18,819.2 18,816.1	19,896.8 19,893.5	19,047.7 19,040.0	19,139.9 19,130.0	17,515.3 17,507.9	17,637.3 17,635.5	20,160.9 20,151.7	18,610.6 18,605.2	19,000.7 18,992.4	19,416.1 19,413.3	17,259.3 17,252.2	16,264.5 16,249.9		
Seasonally adjusted do	220,046.7	-200,077.0	19,550.7	19,163.2	19,152.9	18,885.4	18,736.7	18,703.6	18,602.0		18,218.0	18,821.8			17,387.3	
By geographic regions: Africa	9,060.4 60.168.3		875.4 5.010.8	944.4 5,582.6	795.5 5,286.4	925.4 5,628.8	850.6 5,172.3	972.4 5,194.8	967.1 5,752.2	1,001.7 5,215.9	936.3 5,545.1	1,038.0 5,786.2	681.9 5,793.3	693.7 5,186.8		
Australia and Oceania do Europe do	4,875.7 71,371.4	16,435.8 169,714.7	544.1 5,709.9	589.2 6,040.2	545.2 5,720.0	582.4 5,912.5	461.4 5,545.1	442.6 5,605.7	597.9 6,328.8	471.6 5,753.1	495.4 5,711.4	662.3 5,639.7	470.0 4,743.1	495.9 4,562.0		
Northern North America do	35,399.0 21,337.7	139,565.8 124,368.7	3,302.7 1,889.1	3,145.8 2,070.6	3,213.8 2,002.4	2,841.7 1.888.3	2,463.8 1,703.4	2,593.5 1,665.1	3,346.8 1,791.3	3,066.1 1,758.6	3,189.7 1,730.8	2,943.2 1,837.9	2,667.7 1,514.5	2,634.8 1,328.1	······································	
South Americado	17,376.8	117,732.1	1,364.8	1,423.0	1,408.5	1,305.6	1,318.6	1,163.0	1,376.6	1,258.2	1,323.2	1,437.0	1,334.4	1,336.0		***********
Africa: Egypt	1,873.6 2,463.5	¹2,159.4 ¹2,911.7	132.7 230.2	177.6 266.9	140.7 222.0	142.8 215.9	172.6 230.9	275.2 224.6	231.1 206.7	383.1 237.4	293.6 234.8	269.4 242.7	177.8 191.9	191.7 182.7		
Asia; Australia and Oceania: Australia, including New Guinea do	4,130.7	,	464.9	490.8	464.1	486.6	391.2	370.5	490.6	402.4	411.0	491.1	386.3			
Japando		121,823.0			1,940.1		1,785.8	1,705.6			1,710.2			1,732.2		
ee footnotes at end of tables.																

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		198	31			principal de la companie de la companie de la companie de la companie de la companie de la companie de la comp			19	82	,	,		
in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
FC	REIG	N TR	ADE	OF T	HE U	NITI	ED ST	CATE	S—C	ontin	ued					
VALUE OF EXPORTS—Continued																
Exports (mdse.), incl. reexports—Continued Europe:																
France	7,485.4	17,340.5	613.2	555.2	573.9	562.7	523.4	563.5	728.8	592.9	603.8	665.3	516.4	601.5		
E. Germany) mil. \$ Federal Republic of Germany (formerly W. Germany) mil. \$	478.6 10,959.8	¹295.7 ¹10,276.7	9.0 887.7	24.9 900.2	17.7 846.4	16.4 798.9	49.9 822.5	26.6 789.6	43.7 969.6	9.3 804.7	22.0 821.6	22.0 764.9	5.5 723.0	0.8 703.6		
Italy do Union of Soviet Socialist Republics do United Kingdom	5,511.1 1,512.8 12,693.6	15,360.0 12,431.3 112,439.2	419.6 257.4 952.1	390.4 280.8 926.8	459.0 239.9 908.3	548.0 358.3 940.6	413.6 398.0 912.1	397.5 450.5 817.5	379.0 421.3 991.0	395.2 325.1 992.7	446.1 265.7 913.3	499.4 134.4 928.1	328.8 71.8 885.2	308.0 55.1 805.5		
North and South America: Canadado	35,395.3	139,564.3	3,302.5	3,145.7	3,213.6	2,841.7	2,463.5	2,593.5	3,346.2	3,065.8	3,189.5	2,942.7	2,667.5	2,634.5		
Latin American republics, total # do	36,030.4	138,950.1	2,977.7	3,241.7	3,089.2	2,933.4	2,757.4	2,537.2	2,926.9	2,699.6	2,782.8	2,924.3	2,588.5	2,387.7		
Brazil do Mexico do Venezuela do	4,343.5 15,144.6 4,572.8	¹ 3,798.2 ¹ 17,788.7 ¹ 5,444.9	302.3 1,375.4 453.1	257.7 1,542.2 439.3	256.5 1,402.6 508.8	252.0 1,380.8 467.2	306.2 1,187.8 364.4	260.4 1,123.9 380.9		274.9 1,173.1 415.0	319.1 1,201.1 440.6		361.2 1,005.4 494.0	318.1 795.2 460.8		
Exports of U.S. merchandise, total \$	216,592.2 216,436.0	1228,960.8 1228,898.7	18,376.5 18,373.4	19,466.4 19,463.1	18,646.0 18,638.3		17,129.0 17,121.6	17,274.6 17,272.8		18,208.3 18,202.8	18,589.3 18,581.0		16,870.3 16,863.2			
Agricultural products, total	41,255.9 175,336.3	43,338.5 185,622.6	3,203.2 15,173.3	3,925.6 15,540.9	3,775.4 14,870.6	3,596.5 15,034.6	3,254.7 13,874.3	3,499.9 13,774.7		3,481.8 14,726.5	3,403.4 15,185.9		2,446.0 14,424.3	2,492.4 13,451.5		
commodities: Food and live animals # mil. \$	27,743.7	130,290.8	2,517.0	2,691.1	2,335.3	2,315.3	2,064.9	2,188.5	2,429.6	2,272.1	2,161.4	2,172.3	1,722.3	1,874.2	1,691.6	
Beverages and tobacco	2,663.0 23,790.7	12,914.7 120,992.4	259.8 1,376.6	304.8 1,831.5	375.1 1,930.7	236.8 1,811.4	208.9 1,724.7	250.0 1,782.6	300.2	224.2 1.789.3	262.5 1,839.6	221.3	167.0 1,350.5	211.6	193.1 1,328.1	
Mineral fuels, lubricants, etc. # mil. \$ Oils and fats, animal and vegetable do	7,982.3 1,946.3	10,279.0 1,750.3	958.4 124.3	1,131.1 131.9	1,097.7 121.5	1,106.2 158.4	1,048.5 102.8	1,050.9 167.3	1,246.3 132.4	1,190.2 124.3	1,143.5 102.2	1,090.4 141.7	996.8 157.3	954.9 125.6	1,073.3 146.8	
Chemicals	20,740.2 22,254.6	¹ 21,187.1 ¹ 20,632.5	1,684.9 1,660.7	1,798.2 1,651.7	1,665.5 1,623.6	1,715.4 1,446.3	1,594.2 1,456.9	1,662.1 1,388.7	1,858.4 1,633.8	1,688.2 1,439.6	1,722.4 1,535.6		1,648.6 1,348.5	1,274.2	1,548.7 1,321.7	
total mil. \$ Machinery, total # do	84,552.9 55,789.7 28,838.8	195,717.2 162,945.5 132,790.9	7,845.4 5,197.2 2,649.0	8,001.8 5,457.5	7,529.4 5,167.7 2,367.6	7,931.2 5,012.2 2,921.0	7,126.7 4,849.8 2,281.4	6,979.4 4,719.0 2,261.0		7,547.7 4,967.7 2,580.3	7,782.5 5,203.1 2,580.0	8,175.7 5,523.2 2,652.8	7,597.3 5,083.1 2,515.6	6,738.6 4,664.3 2,081.5	6,756.3	
Transport equipment, total do Motor vehicles and parts do	14,589.6	¹16,214.0		2,545.0 1,325.5	1,267.3	1,124.8	1,023.7	1,123.9		1,395.6	1,436.2		1,080.8			
VALUE OF IMPORTS General imports, total	240,834.3	1261,304.9	20,748.7 21,228.6	23,555.1 23,234.4	22,555.0 22,521.5	19,663.4 19,516.3	² 22,606.0 ² 22,828.8	18,264.6 19,090.4	20,823.4 20,348.7	17,882.1 17,386.8	20,804.5 20,558.1	21,810.9 21,309.6	19,763.2 19,558.8		20,187.8 20,644.0	
By geographic regions: Africado	32,250.9	127,070.6		1,669.6	1.797.2	1,367.3	²2,358.5	1,706.3		1,252.1	911.3		1,695.1	1,467.7		İ
Asia do do Australia and Oceania do Europe do do do do do do do do do do do do do	78,848.0 3,391.9 47,849.7		7,629.0 342.0 4,055.6	9,102.7 308.5 4,654.2	8,636.0 241.1 4,570.7	6,961.4 280.5 4,410.3		6,333.4 191.9 3,674.7		5,965.2 226.8 4,012.6	7,684.6 244.9 4,923.4		6,987.1 288.9 4,358.7	9,061.3 345.0 4,743.5		
Northern North America do Southern North America do South America do	41,470.9 22,656.9 14,361.6	146,432.0 123,477.4 115,526.4	3,707.7 1,899.6 1,329.7	4,259.8 2,155.7 1,404.2	4,132.2 1,874.7 1,302.7	3,606.0 1,826.3 1,211.3	² 3,508.5 ² 1,860.6 ² 1,452.5	3,549.0 1,831.9 977.2	4,158.8 1,967.5 1,144.3	3,737.8 1,660.2 1,027.2	4,070.3 1,824.7 1,145.1	4,399.5 2,309.5 1,182.9	3,462.0 1,881.2 1,090.1	3,829.5 2,210.3 1,210.3		
By leading countries:	ĺ	,	-,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	,,,,,,			,	,		ĺ	ĺ		
Africa: Egypt do Republic of South Africa do	458.4 3,320.5	¹397.3 ¹2,445.3	28.6 151.2	51.4 180.9	3.3 352.4	24.3 131.0	² 42.6 ² 168.1	100.1 183.1	80.0 138.5	32.7 141.1	46.5 138.6	90.7 147.5	22.4 144.6	2.3 159.0		
Asia; Australia and Oceania: Australia, including New Guinea mil. \$ Japando	2,562.3 30,701.3	¹2,514.8 ¹37,612.1	261.0 2,910.1	238.3 3,698.9	177.2 3,326.5	235.4 3,001.5	² 154.7 ² 3,720.0	152.8 2,708.0	215.3 3,586.6	162.6 2,790.4	181.1 3,759.4	215.5 3,117.2	219.7 2,887.9	220.4 3,814.7		
Europe: France do	5,247.0	15,851.4	432.2	466.9	599.6	534.1	²511.0	452.7	455.6	441.9	479.5	539.7	442.8	475.6	,	
German Democratic Republic (formerly E. Germany) mil. \$ Federal Republic of Germany (formerly	43.9	147.7	3.6	4.5	4.0	4.4	²3.6	5.1	6.9	3.1	3.7	3.6	2.8	4.6		
W. Germany) mil. \$ Italy do	11,681.2 4,313.1	¹11,379.0 ¹5,189.0	789.3 409.0	972.1 429.1	998.7 494.4	1,055.9 503.3	² 1,087.4 ² 499.2	874.9 394.4	492.7	944.8 439.7	1,221.1 494.6	1,090.5 459.3	957.1 379.4	1,025.4 498.5		
Union of Soviet Socialist Republics do United Kingdom do	453.2 9,755.1	1347.5 112,834.6	15.8 1,126.2	31.7 1,085.2	27.8 954.7	906.3	² 18.4 ² 981.7	22.0 780.0	18.0 1,011.3	15.5 821.4	10.2 1,151.5	31.8 1,210.4	7.7 1,139.7	25.7 1,217.6		
North and South America: Canadado	41,455.4	¹46,413.8	3,705.5	4,258.9	4,132.2	3,603.9	²3,507.8	3,547.6	4,156.2	3,735.7	4,068.6	4,398.1	3,459.2	3,828.4		
Latin American republics, total # do Brazil	29,851.2 3,714.6 12,519.5		2,651.5 395.0 1,119.2		2,755.6 412.6 1,287.1 373.5	2,573.1 376.4 1,170.9		2,376.0 314.4 1,255.3 312.4	369.8	2,222.5 312.1 1,014.2 350.2	2,624.6 343.7 1,238.3 293.0	3,011.3 313.2 1,578.2 399.2	2,550.6 346.8 1,230.8 387.0	1,435.3		
Venezuelado By commodity groups and principal	5,297.1	'5,566.0	472.7	467.0	313.3	436.6	002.2	312.4	300.2	350.2	200.0	339.2	331.0	201.4		
commodities: Agricultural products, total mil. \$ Nonagricultural products, total do	17,425.0 223,409.2	¹17,003.4 ¹244,301.4	1,290.0 19,487.8		1,247.7 21,305.4	1,367.9 18,285.2	² 1,306.8 ² 21,343.0	1,140.3 17,173.6	1,396.1 19,419.5	1,284.0 16,610.8	1,327.2 19,456.3		1,106.9 18,614.7			
Food and live animals #	15,762.7 2,771.5 10,495.9	115,237.6 13,138.3 111,193.4	1,150.7 239.3 829.2	1,295.4 316.3 944.7	1,132.7 299.9 824.3	1,299.2 238.9 696.1	² 1,035.8 ² 285.8 ² 740.9	948.4 193.5 669.2	1,270.6 266.3 689.7	1,158.2 284.1 703.2	1,267.2 321.2 771.6	292.4	1,122.5 251.3 695.3	1,301.1 300.1 782.1	1,266.6 310.1 715.8	
Mineral fuels, lubricants, etc	79,057.7 73,770.9 533.4 8,582.7	¹ 81,416.9 ¹ 75,577.3 ¹ 479.5 ¹ 9,445.9	6,557.9 6,154.3 37.2 816.6	6,643.7 6,153.7 41.4 826.3	6,613.2 6,113.7 40.4 718.2	5,426.9 4,854.3 35.3 691.3	² 7,439.3 ² 6,830.8 ² 42.8 ² 777.4	5,107.2 4,523.2 19.2 667.7	5,008.9 4,504.2 40.2 872.9	4,311.9 3,862.8 25.4 730.2	4,167.4 3,749.4 38.8 840.3	5,426.6 5,025.3 43.1 820.7	5,942.7 5,454.9 31.8 698.9	6,353.1 5,954.0 46.6 897.6	24.4	
Manufactured goods # do Machinery and transport equipment do Machinery, total # do Transport equipment do Automobiles and parts do	32,190.4 60,545.7 31,903.6 28,642.0	137,291.9	3,077.0 5,254.6 3,146.3 2,108.4	3,819.0 2,787.5	3,586.7	2 971 3	² 3,225.9 ² 6,199.7 ² 3,318.1 ² 2,881.6 ² 2,436.4	2,830.9 5,263.5 2,784.4 2,479.1	6,601.1 3,295.6	2,887.0	3,203.9 7,051.3 3,557.7 3,493.6 2,977.3	6,929.7 3,702.3 3,227.4	2,501.4 5,646.5 3,108.7 2,537.8 2,270.6	3,867.0 2,833.7	5,894.2	

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Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		19	81			r-			19	82	,			
in the 1979 edition of BUSINESS STATISTICS	Ann	ıual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
FC	REIG	N TR	ADE	OF T	HE U	NITI	ED ST	CATE	S—C	ontin	ued					
Indexes																
Exports (U.S. mdse., excl. military grant-aid): Unit value 1977 = 100 Quantity do Value do	138.1 132.9 183.6	¹150.8 ¹128.8 ¹194.1	151.3 123.6 187.0	152.8 129.6 198.1	153.0 124.0 189.7	152.9 123.9 189.5	156.2 111.6 174.2	155.6 113.0 175.8	154.8 129.4 200.2	154.6 119.9 185.3	154.3 122.5 189.1	152.6 126.5 193.1	153.5 111.8 171.6	151.3 107.1 162.1	150.8 107.8 162.6	
General imports: Unit value Quantity Value do Value do	161.4 102.6 165.5	¹170.3 ¹105.2 ¹179.1	166.3 102.6 170.6	166.4 116.3 193.6	165.7 111.9 185.3	167.4 96.5 161.6	170.7 109.1 186.2	171.7 87.6 150.4	170.4 100.7 171.5	169.6 86.8 147.3	167.3 102.4 171.3	165.9 108.3 179.6	167.4 97.2 162.7	165.1 114.0 188.3	164.1 101.3 166.2	
Shipping Weight and Value Vaterborne trade:																
Exports (incl. reexports): Shipping weight thous. sh. tons Value mil. \$	401,172 118,835	¹406,796 ¹123,495	36,081 10,079	39,812 10,871	36,674 10,429	37,820 10,350	29,927 9,657	32,880 9,856	37,243 11,113	37,240 10,237		***************************************				
General imports: Shipping weightthous. sh. tons Value mil. \$	487,936 164,924	¹464,420 ¹177,059	39,482 14,123	40,316 15,765	37,298 14,517	31,864 12,863	*39,974 *15,694	27,342 11,465	28,615 12,995	26,025 11,010						
	TR	ANSI	PORT	ATIC	N A	ND C	OMM	UNIC	CATIO	ON						
TRANSPORTATION																
Air Carriers (Scheduled Service) Certificated route carriers: Passenger-miles (revenue)bil	254.18 59.0	248.39 58.5	19.72 57.6	20.16 57.7	18.06 54.7	20.38 57.2	19.62 55.5	17.65 55.3	21.71 60.7	21.58 61.2	21.52 58.4	23.67 63.6	25.16 63.0			
Passenger-load factorpercent Ton-miles (revenue), totalmil. Operating revenues (quarterly) # § mil. \$	32,487 233,728	31,886 36,502	2,566 9,729	2,673	2,419	2,651 8,776	2,457	2,280	2,768	2,715	2,725	2,910				
Passenger revenues do do	28,049 22,432	30,579 2,480	8,195 624			7,238 651										
Mail revenues	623 233,949 2–124	675 236,922 533	161 8,600 73			192 9,284 -386					***************************************					
Domestic operations: Passenger-miles (revenue) bil Cargo ton-miles mil Mail ton-miles do	200.09 3,274 944	198.13 3,338 994	15.15 289 78	15.97 308 85	14.78 271 76	16.70 264 111	15.92 225 79	14.80 230 77	18.29 269 87	17.76 249 85	17.26 257 82	18.97 250 77	19.79 254 79	*16.99	⁵ 13.17	*14
Operating revenues (quarterly) §	26,404 26,409 ² 156	² 29,014 29,277 ² –360	7,463 7,442 -12			6,999 7,389 –322										
International operations: Passenger-miles (revenue) bil. Cargo ton-miles mil. Mail ton-miles do.	54.09 2,458 392	50.28 2,337 376	4.57 199 29	4.19 232 32	3.29 229 36	3.68 194 43	3.70 162 29	2.85 180 29	3.42 208 33	3.83 191 32	4.26 202 32	4.70 185 31				
Operating revenues (quarterly) \$ mil. \$ Operating expenses (quarterly) \$ do Net income after taxes (quarterly) \$ do	² 6,543 ² 6,766 –270	² 6,390 ² 6,595 -186	1,932 1,859 61			1,501 1,625 -59										
Urban Transit Systems assengers carried, totalmil	8,228	7,948	645	693	643	651	603	623	720	650	636	645	584	631		
Motor Carriers	0,220	1,040	040	038	040	001	000	025	120	000	000	040	004	001		***********
carriers of property, large, class I, qtrly.: @ Number of reporting carriers	100 15,432	100 16,489	100 4,301			100 4,247			100 3,587			100 3,910				
charges and credits mil. \$ Tonnage hauled (revenue), common and contract	304	199	78			10			48	•••••		58				
reight carried—volume indexes, class I and II intercity truck tonnage (ATA):	189	182	46	•••••		45			39		***************************************	41		***************************************	***************************************	
Common and contract carriers of property (qtrly.)	148.7	147.1	145.8	139.7	134.9	126.2	127.9	131.8	128.0	131.4	132.9	132.9	131.9	r133.8	133.9	
Class I Railroads ‡ 'inancial operations, qtrly. (AAR), excl. Amtrak:													! : :			
Operating revenues, total # mil \$. Freight do. Passenger, excl. Amtrak do.	28,258 26,350 439	30,904 28,925 535	°7,964 7,452 144			7,697 7,191 143			7,190 6,707 142			7,222			6,612	
Operating expenses	26,351 1,342	28,583 1,362	7,322 428			7,113 192			6,821 204			6,821 265			6,500	
Ordinary income	³1,130	³2,055	498			580			216	***************************************	***************************************	340				
Ton-miles of freight (net), total, qtrly	920.6 918.6 284.5	911.7 911.9 327.6	227.1 227.5 333.3	337.9	337.9	224.9 225.1 337.8	350.4	350.6	207.4 207.4 350.5	351.2	351.4	208.0 208.0 351.5	352.0	352.0	186.3 351.9	*7 33
lotels and motor-hotels: Restaurant sales index same month 1967=100	182	194	191	215	189	195	160	185	198							
Hotels: Average room sale ¶	49.48 65 35.30 66	56.39 68 38.31 67	55.55 67 38.56 67	59.56 74 38.85 68	58.72 64 38.57 59	57.95 50 38.21 50	60.33 57 40.22 56	63.37 45 40.97 56	62.00 68 41.30 66							
oreign travel: U.S. citizens: Arrivals (quarterly)thous	²9,010	8,905	2,666			1,965			2,051	4729	4772					
Departures (quarterly)	² 9,971 ² 11,252 ² 9,285	9,978 11,976 9,933	2,863 3,858 3,199			2,208 2,681 2,339			2,192 2,381 1,931	⁴ 830 ⁴ 883 ⁴ 732	⁴893 ⁴865 ⁴705					*******
Passports issued do ational parks, visits do	3,020 59,081	3,222 62,237	225 6,865	196 5,032	172 2,719	2,023 2,023	208 1,788	260 2,238	2,804	395 3,621	371 5,323	496 8,192	382	10,608		
se footnotes at end of tables.		2,20	. 5,000	. 0,004	-,	_,020	-,,,,,	_,200	_,004	. 0,041	. 5,020	. 0,102	,	. 10,000	,020	

Unless otherwise stated in footnotes below, data	1980	1981		198	31						19	82				
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
TR	ANSP	ORTA	TIOI	N AN	D CO	MMU	JNIC	ATIO	N—C	ontin	ued			L	L	1
COMMUNICATION									-							
Telephone carriers: Operating revenues #	56,738 24,333 22,983 37,983 10,194	66,498 28,117 26,505 44,594 11,903	5,816 2,415 2,310 3,812 1,085	5,838 2,466 2,354 3,820 1,111	5,806 2,463 2,264 4,060 950	5,978 2,503 2,394 4,505 865	5,911 2,508 2,324 3,924 1,041	5,802 2,515 2,163 3,944 987	6,163 2,552 2,468 4,304 996	6,128 2,604 2,348 4,229 1,011	6,080 2,591 2,321 4,216 998	6,238 2,660 2,379 4,315 1,037	6,225 2,665 2,348 4,292 1,059			
Phones in service, end of periodmil Celegraph carriers: Domestic:	159.9	164.9	165.3	165.3	165.1	164.9	164.5	164.4	164.1	164.3	164.1	162.7	162.2	************		
Operating revenues	697.0 561.4 95.9	779.2 623.8 112.7	67.7 56.0 7.8	67.6 56.8 7.7	65.7 53.1 9.1	68.3 49.6 9.6	64.2 51.8 8.7	64.3 52.2 8.4	70.3 55.3 10.5	66.9 54.0 9.4	68.1 55.4 9.0	70.0 55.8 10.6	68.4 56.6 8.2	***************************************		
Operating revenues	534.7 5374.8 5137.0	578.0 436.2 117.0	50.1 39.1 8.7	51.2 36.9 12.1	48.0 37.4 8.5	47.1 36.3 9.3	48.7 39.0 7.5	48.8 38.3 8.4	54.7 39.9 12.6	50.5 38.9 9.3	50.9 41.2 7.5	53.8 41.7 9.0	48.2 40.2 5.8			
		CHE	MICA	LS A	ND A	LLIE	D PF	RODU	CTS							
CHEMICALS Inorganic Chemicals																
Production: Aluminum sulfate, commercial (17% Al ₂ O ₃) ‡ thous. sh. tons	1,286	1,206	119	106	93	101	87	101	118	95	91	⁻ 111	94	111		
Chlorine gas (100% Cl ₂) ‡ do Hydrochloric acid (100% HCl) ‡ do Phosphorus, elemental ‡ do	11,421 2,895 432	10,556 2,444 426	851 183 34	837 173 38	765 173 32	770 184 30	768 210 30	786 227 27	815 251 34	828 218 33	794 215 31	782 225 31	783 198 31	698 199 26		
Sodium hydroxide (100% NaOH) \ddagger	11,606 786 1,139	10,650 738 1,162	861 69 95	826 61 92	767 57 89	771 54 97	764 48 82	767 64 84	801 62 81	837 64 74	807 51 73	786 54 772	794) 44 71	722 55 74		
do Titanium dioxide (composite and pure) ‡ do Sulfur, native (Frasch) and recovered:	1727 727	690 748	53 65	56 65	51 58	57 55	52 44	56 58	57 56	48 55	53 53	55 51	41 53	54 52		
Production	110,271 3,042	10,369 3,571	852 3,203	834 3,235	842 3,367	844 3,571	782 3,651	718 3, 69 7	808 3,775	755 3,911	726 4,152	687 4,195	686 4,231	685 4,202	658 4,230	
Production: Ammonia, synthetic anhydrous ‡									}							
thous. sh. tons. Ammonium nitrate, original solution ‡	19,653 9,127 2,136 9,232	19,043 8,791 11,642 9,039	1,537 684 152 717	1,547 744 (²) 742	1,491 723 148 728	1,570 768 (²) 751	1,361 705 136 682	1,296 680 159 692	1,434 812 164 822	1,498 701 174 716	1,523 664 154 664	1,356 573 156 585	'1,203 '490 '161 '524	1,168 491 146 532		
Nitrogen solutions (100% N) ±	2,773 10,938 44,157	42,951 9,914 40,795	252 742 3,116	4224 760 3,084	218 690 3,866	4223 707 2,888	*196 659 2,638	4202 672 2,625	4258 748 2,818	4244 663 2,612	4268 640 2,443	⁴ 230 673 2,462	r ⁴ 211 r696 r2,551	⁴ 215 759 2,703		
Superphosphate and other phosphatic fertilizers (100% P ₂ O ₃): Production thous. sh. tons	8,339 372	³16,903 ³1,068	1,158 1,211	1,261 1,177	1,112 1,276	1,076 1,068	1,128 1,197	1,213 1,306	1,240 1,317	983 1,200	857 929	967 917	'1,065 '998	1,179 910		
Stocks, end of period	6,950 29,445 3,668	6,478 22,391 2,834	1,872 220	1,512 167	1,579 221	1,834 246	416 1,497 243	1,637 212	2,031 274	1,582 259	552 1,736 244	375 1,811 251	340 1,872 317	^r 517 1,734 148	389 1,756	
Nitrogenous materials do Phosphate materials do Potash materials do mports:	17,524 1,815	13,308 1,203	1,029 90	880 93	982 101	1,148 100	860 62	1,135 30	1,309 106	992 37	1,022 109	911 142	933 146	979 139	1,013 158	
Åmmonium nitrate do	247 289 8,907 158	264 327 8,601 159	15 17 786 16	26 10 655 26	26 12 577 6	17 58 719 0	21 20 670 12	16 24 552 0	18 34 582 21	33 51 722 9	51 23 664 22	29 30 483 19	19 20 599 5	16 5 643 18	25 504	
Production: Acetylene ‡ mil. cu. ft Carbon dioxide, liquid, gas, and solid	5,493	⁷ 5,161	⁷ 447	r412	r403	r471	282	358	484	414	386	274	302			
Hydrogen (high and low purity) ‡mil. cu. ft Nitrogen (high and low purity) ‡do Oxygen (high and low purity) ‡do Organic Chemicals §	106,562 106,562 1479,240 1430,977	**3,813 *103,278 *490,285 *430,610	*8,935 *8,935 *41,668 *35,727	*8,429 *8,429 *41,985 *37,314	**300 *7,809 *39,646 *33,397	*8,171 *39,680 *32,220	287 7,065 40,609 31,172	313 7,563 38,065 30,753	369 7,760 41,462 34,580	340 7,462 38,948 30,835	362 7,742 39,042 30,058	*288 7,502 40,723 30,047	*285 7,648 40,807 28,844			
Production: Acetylsalicylic acid (aspirin)	¹33.7 152.5 ¹233.6 ¹5,555.3	29.6 117.9 1278.9 15,854.6	2.9 10.2 20.9 494.7	2.4 9.9 26.0 483.1	2.1 8.8 24.8 435.8	1.8 8.8 18.2 376.5	2.1 5.2 13.7 375.0	2.4 6.4 11.0 379.0	2.7 8.2 24.8 398.4	2.2 24.0 443.8	2.0 8.5 24.3 402.3	1.4 19.9 368.2	1.6 5.8 19.7 334.7	1.7 5.7 18.8 391.3	6.6 19.2 394.6	
Glycerin, refined, all grades do Methanol, synthetic mil. gal. Phthalic anhydride mil. lb. ALCOHOL	314.8 11,077.3 1818.2	299.1 11,266.2 1810.7	29.8 99.5 80.3	28.7 104.7 49.3	22.7 107.7 48.4	16.7 121.5 57.1	17.5 93.0 53.8	18.6 85.8 42.1	20.4 109.8 75.6	22.8 110.9 64.7	19.2 95.6 68.5	18.7 104.2 53.7	r20.4 97.4 57.2	16.4 76.7 48.0	18.7 77.3	
Ethyl alcohol and spirits: Production	643.2 72.0	'571.2 83.2	53.1 78.7	44.0 75.8	47.8 77.5	45.4 83.2	42.9 79.8	39.8 81.6	48.2 72.8	37.6 64.0	41.9 57.5	52.6 58.0	51.9 59.9	44.3 55.7		
Denatured alcohol: Productionmil. wine gal. Consumption (withdrawals)mil. do Stocks, end of perioddodo	301.2 284.2 10.1	230.2 •225.4 5.0	18.8 18.5 3.1	20.7 18.9 3.4	17.3 16.3 3.8	18.1 16.3 5.0	18.7 18.3 4.7	17.2 15.2 6.2	22.4 22.8 4.8	19.9 18.5 4.8	20.3 20.2 4.5	21.9 21.7 4.7	23.5 22.4 5.1	22.1 23.2 4.0		

	T			=												
Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981	ļ	19	31	T				ļ -	19	182	<u></u>			I
in the 1979 edition of BUSINESS STATISTICS	Anr		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	CHE	MICAI	S AN	ID Al	LLIE	D PR	ODU	CTS_	-Cont	inue	i 					
PLASTICS AND RESIN MATERIALS																
Production: mil. lb. Phenolic resins	11,744.9 111,719.9 13,699.0 15,540.1 15,485.4	11,489.0 111,998.4 13,948.1 15,686.6 15,663.3	125.4 984.3 316.9 496.3 451.1	129.5 954.2 327.3 491.6 402.2	104.9 886.8 301.4 433.2 384.9	273.3 404.6	93.2 814.6 276.4 351.8 329.0	100.7 845.8 304.5 397.5 384.5	101.5 1,012.5 347.9 432.8 436.9	103.7 955.5 321.8 414.4 426.2	102.5 942.3 287.8 435.4 491.4	102.7 944.7 271.6 422.2 490.5	89.7 974.4 261.0 432.1 374.3	91.8 1,053.7 273.1 441.1 408.5	101.1 1,053.7 280.4 460.5 481.0	
Explosives (industrial), shipments, quarterly mil. lb	13,000.4	3,003.6	846.1			816.7	***********		687.0		************	675.1			582.9	
Paints, varnish, and lacquer, shipments: mil. \$ Total shipments mil. \$ Architectural coatings do Product finishes (OEM) do	7,635.9 3,641.2 2,418.5	8,395.7 3,968.9 2,737.2	773.2 372.5 233.0	704.2 315.1 235.7	572.0 248.1 203.0	513.6 225.9 186.0	544.9 234.8 201.9	579.9 274.2 196.3	711.7 355.5 219.8	741.0 362.9 220.3	791.2 415.9 222.8	835.1 433.6 235.4	r744.9 r390.7 r204.0	798.8 409.4 223.4		
Special purpose coatings do	1,576.2	1,689.5	ELEC	153.3	121.0	L	108.2	109.4	136.4	157.9	152.5	166.1	r150.2	166.1		
	1		CLEC	INIC	PO	VER.	AND	GAS								Γ
ELECTRIC POWER Production:																
Electric utilities, total mil kwhr By fuels do By waterpower do	2,286,034 2,010,013 276,021	2,292,841 2,031,973 260,868	186,858 169,016 17,842	181,377 163,264 18,114	175,637 156,606 19,030	171,711	210,098 183,195 26,904	180,310 153,614 26,698	187,662 157,784 29,879	172,588 144,661 27,928	177,261 149,199 28,063	186,204 158,178 28,027				
Sales to ultimate customers, total (Edison Electric Institute) ‡	2,126,094 524,122 793,812	541,426				518,615 131,742 194,026			3542,662 3137,466 3185,625			512,758 133,118 188,374				
Railways and railroads	4,275 734,411	4,091 735,724	980 200,402			1,004 174,008			31,059 3204,112			1,006 171,862				
Street and highway lighting do Other public authorities do Interdepartmental do	14,832 48,284 6,358	14,975 51,055 6,640	3,533 13,171 1,723			3,830 12,424 1,581		······································	*3,936 *12,938 *1,527			3,458 13,358 1,581			***************************************	
Revenue from sales to ultimate customers (Edison Electric Institute) ‡ mil. \$	95,462	111,584	31,330			27,810			°30,513			29,440				
Total utility gas, quarterly (American Gas Association):	47,000	47.050	47,070		,	47.050			40.050			ļ				
Customers, end of period, totalthous Residentialdo	47,263 43,528	47,859 44,059	47,373 43,644			47,859 44,059			48,352 44,466							
Commercial do Industrial do Other do	3,499 188 48	3,563 189 48	3,493 189 47			3,563 189 48			3,644 194 49							
Sales to customers, total tril. Btu Residential do	15,409 4,823	15,426 4.565	2,812 398		************	3,844 1,227			5,332 2.279				S		***************************************	
Commercial do. Commercial do. Industrial do. Other do.	2,442 7,862 283	2,369 8,215 278	304 2,063 47			1,227 642 1,902 73			1,078 1,875 100							
Revenue from sales to customers, total mil. \$	48,276	56,980	10,372			15,199			22,859							
Residential. do. Commercial do. Industrial do. Other do.	17,409 8,149 22,081 637	19,188 9,297 27,718 776	1,969 1,211 7,062 130			5,478 2,683 6,812 226			10,449 4,787 7,272 351					••••••	***************************************	
	FO	OD A	ND K	INDI	RED	PROI	DUCT	S; TO	BAC	CO						
ALCOHOLIC BEVERAGES																
Beer: Production mil. bbl Taxable withdrawals do Stocks, end of period do	194.08 173.37 13.96	193.69 176.70 12.95	15.72 14.68 14.42	14.61 13.84 13.99	13.12 12.39 13.38	13.93 12.91 12.95	15.19 11.90 14.16	15.00 12.91 14.93	17.65 15.68 16.32	17.62 15.82 15.83	18.22 16.56 15.59	18.19 17.22 15.28	17.17 16.10 14.45	19.50 16.26 14.31		
Distilled spirits (total): Production mil. tax gal	140.53	151.96	11.43	13.71	13.73	14.05	11.02	12.34	15.28	13.59	10.98	10.83	6.85	6.57		
Consumption, apparent, for beverage purposes \$\frac{1}{2}\$	² 449.42 623.26 113.71	4449.45 613.76 117.93	34.75 612.74	39.07 609.60 13.32	41.70 606.20 12.32	54.09 613.76 9.12	30.70 612.96 7.03	30.22 608.32 6.33	35.69 618.40 5.82	36.13 621.06 7.98	33.29 616.72 9.12	38.32 616.84 10.86	33.47 614.96 7.29		9.87	
Whisky: Production ‡ mil. tax gal. Stocks, end of period ‡ do Imports. mil. proof gal.	84.31 554.88 86.00	96.66 541.07 86.53	6.92 543.60 9.32	8.80 540.06 10.00	9.14 535.10 9.30	9.06 541.07 6.62	7.37 541.03 4.91	8.88 543.22 4.65	10.32 545.29 4.06	10.20 547.76 5.91	7.54 547.25 6.88	7.81 545.48 8.09	4.94 544.59 5.40	4.57 501.07 5.88		
Vines and distilling materials:	30.00	30.00	0.02	-5.00	5.03	0.02		1.00	2.00	5.01	0.00	5.50	0.10	0.00	1.10	
Effervescent wines: Production mil. wine gal. Taxable withdrawals do. Stocks, end of period do. Importsdo.	26.20 25.28 9.27 4.83	30.73 27.30 11.53 7.66	2.04 2.11 14.44 0.53	3.80 4.52 20.75 0.76	2.88 3.91 12.63 1.07	1.95 2.72 11.53 1.01	1.83 1.15 12.67 0.53	1.89 1.12 13.09 0.33	2.06 1.93 13.23 0.45	1.92 1.62 13.59 0.52	2.18 2.57 13.36 0.67	2.92 1.98 13.65 0.70	2.51 1.21 15.52 0.52	3.11 2.17 15.56 0.67	0.71	
Still wines: Production ‡ do. Taxable withdrawals ‡ do. Stocks, end of period ‡ do.	509.05 349.35 610.53	460.19 *363.46 604.31	202.16 31.46 620.50	101.90 36.40 656.67	26.59 31.55 624.90	15.00 30.96 604.31	4.02 28.98 575.15	6.03 25.63 557.53	7.07 35.16 523.86	4.87 30.03 492.03	3.81 28.62 467.53	4.97 30.96 435.01	5.18 25.76 408.23	29.96 29.17 395.40		
Socks, end of period ;	97.68 224.38	107.60	8.37	10.24	11.12	10.91	9.96	6.49	7.81	8.16 11.35	9.45	10.61	8.83	9.99	9.93	}

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		199	81						19	82	•	••••		
in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
FO	OD A	ND KI	NDR	ED P	ROD	UCTS	S; TO	BACC	CO(Conti	nued					
DAIRY PRODUCTS										1						
Butter, creamery: Production (factory) @	1,145.3 304.6 1.448	1,228.2 429.2 11.535	85.2 489.5	99.5 470.0	93.4 451.1	109.5 429.2	128.3 433.1	116.8 440.4	123.4 447.8	(⁷)		*332.9 **541.6			262.2 522.1	
Cheese: Production (factory), total @mil. lb American, whole milk @	3,984.3 2,375.8	4,229.0 2,608.5	331.1 191.1	338.5 200.3	330.5 190.3	368.6 220.5	347.0 218.4	325.8 204.9	376.3 232.2			\$1,178.8 \$740.9			1,099.5 662.5	
Stocks, cold storage, end of period	578.8 479.6 231.2	709.6 623.0 247.7	694.3 598.6 22.0	682.4 591.3 23.4	677.5 590.4 26.5	709.6 623.0 52.9	717.3 632.0 19.0	696.4 622.6 11.8	722.2 641.6 15.7	16.8	18.8	r8804.4 r8712.3 20.6	18.2	22.7	821.3 720.9 25.6	
Price, wholesale, cheddar, single daisies (Chicago) \$ per lb	1.562	1.672	1.678	1.685	1.692	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.684	1.683	1.686
Condensed and evaporated milk: Production, case goods @	724.7 51.8	757.9 46.0	59.6 101.1	62.9 84.8	62.1 58.6	68.6 46.0	58.1 45.5	53.6 40.7	61.5 47.7	······	•••••	*195.0 *89.1			185.6 103.3	ł
periodmil. lb Exports	43.4	34.9	3.0	2.9	3.1	3.7	2.2	5.0	1.2	1.8	1.8	2.5	2.4	0.6	0.5	l
Fluid milk: Production on farms ‡ do Utilization in mfd. dairy products @ do Price, wholesale, U.S. average\$ per 100 lb	128,525 71,665 13.00	132,634 76,004 13.80	10,638 5,848 13.70	10,751 5,885 14.00	10,384 5,533 14.00	10,847 6,208 14.00	11,047 6,370 13.90	10,311 6,099 13.80	11,642 6,945 13.60	13.40	13.20	*35,512 *21,419 13.10	13.20	13.20	33,848 19,431 13.50	P13.80
Dry milk: Production: Dry whole milk @mil. lb Nonfat dry milk (human food) @do	82.7 1,160.7	92.7 1,314.3	8.2 93.0	8.9 92.0	8.5 89.3	8.9 110.1	9.2 104.1	8.0 107.2	9.4 125.3			*29.2 *417.2			21.4 346.7	
Stocks, manufacturers', end of period: Dry whole milk	5.3 85.0	6.0 86.7	3.0 87.2	2.8 83.7	4.3 75.8	6.0 86.7	7.6 87.7	6.9 94.5	6.9 94.4			*9.6 *127.5			7.3 89.8	
Exports, whole and nonfat (human food) do Price, manufacturers' average selling, nonfat dry milk (human food) \$ per lb	176.2 0.887	198.0 0.939	17.0 0.939	8.2 0.944	7.9 0.942	2.0 0.940	9.4 0.936	12.6 0.936	17.4 0.937	(7)	18.2	20.4	23.1	16.7	13.7	
GRAIN AND GRAIN PRODUCTS Exports (barley, corn, oats, rye, wheat) mil. bu	3,914.4	3,918.3	358.8	369.6	312.8	318.6	285.8	299.5	360.9	353.7	339.4	344.8	243.7	248.5	245.8	
Barley: Production (crop estimate) ¶	²361.0	²478.3													*516.2	
Stocks (domestic), end of period, total # do On farms # do Off farms do do	303.4 185.6 117.8	332.2 230.7 101.5	451.0 303.0 148.0			332.2 230.7 101.5			226.5 147.3 79.2		**149.6 *93.9 **55.7				497.6 350.1 147.5	
Exports, including malt § do	68.9	95.9	12.0	16.5	8.7	7.7	8.5	8.2	6.5	3.9	7.5	6.3	4.9	8.6	5.7	
Production (crop estimate, grain only) ¶ mil. bu Stocks (domestic), end of period, total ‡ do On farms ‡	² 6,644.8 5,858.8 4,141.5 1,717.3	28,201.0 6,898.6 4,965.4 1,933.2	\$1,034.0 \$490.1 \$543.8			6,898.6 4,965.4 1,933.2			5,074.7 3,569.7 1,504.9		33,853.7 32,708.1 31,145.6				*8,314.9 *2,365.9 *1,437.0 *929.0	108,329.8
Exports, including meal and flour do	2,485.3	2,159.3	150.0	194.6	175.0	172.4	151.1	147.2	189.3	195.0	212.4	179.8	119.8	112.8	107.4	
Oats: Production (crop estimate) \(\bar{1}\)	² 458.3 391.0 329.3	² 508.1 364.7 313.6	457.8 384.0		,	364.7 313.6			236.5 200.2		r4151.7 4126.9				°599.0 569.8 474.6	¹°599.0
Off farms	61.7 9.1 ([†])	51.1 12.8	73.7 0.9	0.6	0.5	51.1 0.3	0.6	0.3	36.3 0.6	1	**24.8 0.6	0.8	0.3	0.3	95.2	
Rice: Production (crop estimate)mil. bags #	²146.2	²185.4												***********	°156.4	¹°152.8
California mills: Receipts, domestic, roughmil. lb	3,582 2,711	3,359	92	473	293 79	287 97	84 70	184 62	221 76	202	204 210	77 279	723 161	225 332	76 110	
Shipments from mills, milled rice	2,711	2,267 510	106 98	90 326	426	510	493	550	628		577	356	344	174	108	
Southern States mills (Ark., La., Tenn., Tex.): Receipts, rough, from producersmil. lb Shipments from mills, milled rice	10,831 6,795	10,821 7,354	3,308 673	1,696 738	848 660	768 654	505 612	683 564	784 685	702 662	552 602	406 583	434 505	1,198 559	3,278 615	
Stocks, domestic, rough and cleaned (cleaned basis), end of periodmil. lb	2,969	2,763	2,722	3,091	2,906	2,763	2,572	2,300	2,132	1 '	1,610	1,308	1,012	1,270	2,826	
Price, wholesale, No. 2, medium grain (Southwest Louisiana) \$\) per lb.	6,620 0.225	6,801 0.256	470 0.250	532 0.225	583 0.213	458 0.195	479 0.185	515 0.175	399 0.160	0.158	661 0.165	538 0.163	370 0.160	809 0.165	320 0.165	0.165
Rye: Production (crop estimate) \P mil. bu Stocks (domestic), end of period \ddagger do	² 16.5 9.3	²18.6 7.8	14.5			7.8			5.7		43.1				°19.9 15.9	¹°19.9
Wheat: Production (crop estimate), total \$\ \] mil. bu Spring wheat \$\ \] do Winter wheat \$\ \] do Distribution, quarterly \$\(\textit{@} \) do	² 2,374 ² 479 ² 1,895 2,191	² 2,793 ² 695 ² 2,099 2,523	°1,049			559			620			*398			°2,810 °704 °2,106	102,810 10704 102,106
Stocks (domestic), end of period, total ‡	1,903.2 753.4 1,149.7	2,176.0 954.8 1,221.2	2,733.9			2,176.0 954.8 1,221.2			1,556.7 748.0 808.7		**1,162.7 *579.8 **582.9				3,010.0 1,431.8 1,578.1	
Exports, total, including flour	1,344.5	1,647.7 1,610.8	195.8	157.6	127.8	137.8 137.4	125.6	143.8	164.5 159.1	154.1	118.9 114.8	157.9 155.7	118.7	126.8	132.4	
See footnotes at end of tables.																

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		198	81			r			19	82	r	Γ	,	
in the 1979 edition of BUSINESS STATISTICS	Ann	ıual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
FO	OD A	ND KI	NDR	ED P	ROD	UCTS	s; TO	BACC	0—0	Contir	nued					
GRAIN AND GRAIN PRODUCTS—Continued																
Wheat flour: Production:	200 055	200 000	0.1100	0.7.0	00.00	22.001	20.005	00.550	05.050	00.454	01.000	00.471	TOO 1 TO	94.000	24.015	
Flour ‡ thous sacks (100 lb.) Millfeed ‡ thous sh tons.	282,655 4,866 628,599	283,966 5,045 634,381	24,189 436 54,589	24,712 440 55,552	22,835 410 50,982	22,321 403 50,197	23,985 432 53,740	23,553 423 52,786	25,256 453 56,663	22,474 403 50,348	21,886 393 49,018	22,471 406 50,215	¹ 23,153 424 ¹ 52,333	24,669 448 55,826	24,315 435 54,578	
Grindings of wheat ‡ thous. bu Stocks held by mills, end of period thous. sacks (100 lb.)	3,842	3,460	4,222	55,552	50,962	3,460	55,740	52,700	3,384	50,546	49,010	3,744	-02,000	55,526	3,563	***************************************
Exports	15,014	15,839	724	284	117	184	605	2,165	2,336	2,858	1,760	944	352	1,196	698	
Spring, standard patent (Minneapolis) \$ per 100 lb	¹10.566	10.844	10.588	10.525	10.675	10.338	10.763	10.950	10.738	10.538	10.550	10.500	10.538	10.188	10.475	10.388
Winter, hard, 95% patent (Kans. City) do POULTRY AND EGGS	¹10.116	¹10.347	10.200	10.025	10.313		10.638	10.700	10.638	10.425						
Poultry:																
Slaughtermil. lb Stocks, cold storage (frozen), end of period, total	14,233	15,058	1,365	1,376	1,193	1,232	1,087	1,070	1,253	1,220	1,222	1,360	1,306	1,377	1,364	
Turkeys do	339 198	392 238	716 532	703 528	469 305	392 238	378 238	374 236	377 233			r4425 r4282			570 440	
Price, in Georgia producing area, live broilers \$ per lb.;	0.270	0.265	0.245	0.245	0.235	0.230	0.255	0.250	0.256	0.235	0.260	0.270	0.270	0.250	0.265	0.230
Eggs: Production on farms mil. cases § Stocks, cold storage, end of period:	193.6	193.4	15.7	16.4	16.2	16.9	16.6	15.0			448.4			47.4		
Shell	31 24	35 22	19 25	21 26	38 24	35 22	26 21	19 19	39 17			*432 423			28 28	
Price, wholesale, large (delivered; Chicago)	0.628	0.690	0.707	0.713	0.773	0.721	0.762	0.742	0.752	i i	0.604	0.608	0.617	0.616	r0.659	0.66
LIVESTOCK	0.000				• • • • • • • • • • • • • • • • • • • •					,,,,,				0.020	0.000	
Cattle and calves: Slaughter (federally inspected):																
Calves thous animals Cattle do do do do do do do do do do do do do	2,294 31,642	2,478 32,819	228 2,846	236 2,939	217 2,668	254 2,829	228 2,771	210 2,591	263 2,819		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4608 48,193			693 8,770	
Prices, wholesale:	ee oe	60.04	er on	61.45	*****	50.04	eo 75	69.54	er 00	60.11	70.10	70.10	00.10		C1 05	50.71
Beef steers (Omaha)	66.96 71.30 75.52	63.84 64.26 577.25	65.37 64.58 777.30	61.45 62.52 71.75	*59.81 61.77 68.88	59.24 58.96 67.50	60.75 59.22 69.00	63.54 62.37 67.50	65.80 63.96 71.50	69.11 64.72 78.00	72.10 66.07 82.88	70.18 63.70 85.00	66.18 64.17 84.84	65.14 66.42 81.12	61.25 63.55 84.60	58.78 62.2 75.00
				ļ						10.00	02,00		04.04	01.12		70.00
Hogs: Slaughter (federally inspected) thous. animals Prices:	91,882	87,850	7,320	7,872	7,308	7,923	6,875	6,340	7,691		•••••	120,043		***************************************	18,310	
Wholesale, average, all weights (Sioux City) \$ per 100 lb	39.48	44.29	48.89	46.15	42.10	40.17	45.77	49.70	49.50	52.16	58.35	59.01	59.70	63.18	63.12	57.2
Hog-corn price ratio (bu. of corn equal in value to 100 lb. live hog)	14.4	14.9	19.1	18.4	17.7	16.3	17.1	19.8	19.8	20.1	21.8	22.4	23.2	26.7	⁷ 28.6	27.8
Sheep and lambs: Slaughter (federally inspected) thous. animals	5,363	5,789	546	558	476	522	510	490	570			⁴1, 49 3		************	1,577	
Price, wholesale, lambs, average (Omaha) \$ per 100 lb	59.81	*52.23	*48.53	⁷ 49.86	r45.27	'45 .10	49.75	51.50	59.00	59.50	66.25	60.50	57.25	50.50	50.00	48.2
MEATS				l												
Total meats (excluding lard): Production, totalmil. lb	38,590	38,675	3,247	3,433	3,185	3,417	3,152	2,894	3,296			49,097			9,163	
Stocks, cold storage, end of period do Exports (meat and meat preparations) do	750 1,663	578 1,847	509 123	547 174	552 154	578 153	554 129	524 147	536 124	131	167	r4504 147	111	108	468 112	
Imports (meat and meat preparations) do Beef and veal:	2,052	1,832	180	167	120	118	127	106	160	169	167	215	158	234	246	
Production, total	21,849 338	22,629 266	1,930 242	2,011 252	1,838 241	1,942 266	1,889 258	1,750 232	1,917 220			45,462 *4197			5,835 252	
Exports do	425 1,531	486 1,317	40 141	48 123	39 80	43 80	33 93	46 72	44 108	40 130	52 116	49 158	40 113	41 180	42 194	
Price, wholesale, beef, fresh, steer carcasses, choice (600-700 lbs.) (Central U.S.) \$ per lb	1.044	r0.998	1.030	0.960	0.946	0.937	0.974	1.012	1.038	1.095	1.151	1.112	1.026	1.008	0.955	0.930
Lamb and mutton:			-	-						1.000	1.101		1.020	1.008	Ì	0.530
Production, totalmil. lb Stocks, cold storage, end of perioddo	310 9	328 11	30 13	31 13	27 11	30 11	29 10	28 8	33 9			485 r48			88 8	
Pork (excluding lard): Production, totalmil. lb	16,431	15,719	1,287	1,391	1,319	1,445	1,234	1,116	1,346	,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	43,550			3,239	
Stocks, cold storage, end of period do Exports do	349 314	264 347	207 22	238 28	255 30	264 29	249 30	246 25	274 21	22	42	r4264 32	19	18	180 16	
Imports	433	432	29	36	35	33	30	30	46	34	43	50	42	45	44	
Hams, smoked # Index, 1967=100 Fresh loins, 8-14 lb. average (N.Y.) \$ per lb	² 254.8 1.011	266.5 1.137	284.3 1.185	284.5 1.148	283.3 1.074	292.5 1.007	271.1 1.209	278.6 1.169	282.4 1.100	283.7 1.186	289.2 1.301	299.4 1.386	299.6 1.376	305.6 1.366	327.5 1.415	342.7 1.349
MISCELLANEOUS FOOD PRODUCTS	1.011	1.10	1.100	1.140	1.014	1.001	1.200	1.100	1.100	1.100	1.001	1.000	1.0.0	1.500	1.410	1.040
Cocoa (cacao) beans: Imports (incl. shells)thous. lg. tons	148.5	245.0	20.3	24.1	5.8	11.5	10.0	29.0	17.6	15.3	16.0	11.0	120	90.9	14.0	
Price, wholesale, Accra (New York) \$ per lb	1.354	1.085	1.170	1.130	1.030	1.090	1.160	1.070	1.020	0.990	16.8 0.940	0.800	13.0 0.830	20.3 0.860	14.3 0.870	0.880
Coffee (green): Inventories (roasters', importers', dealers'),																
end of periodthous bags Roastings (green weight)do	2,834 17,047	(3) (3)	(3) (3)													
Imports, total	18,153 3,505	16,555 3,243	1,150 256	1,487 316	1,565 309	1,547 294	1,287 186	1,195 210	1,490 267	1,147 227	1,476 299	1,335 213	1,282 264	1,602 307	1,640 412	
Price, wholesale, Santos, No. 4 (N.Y.) \$ per lb Confectionery, manufacturers' sales @ mil. \$	2.066 4,684	1.594 5,189	1.270 594	1.295 601	1.470 460	1.500 466	1.510	1.360 *507	1.360 '486	1.450	1.450 r338	1.450 r360	1.450 r330	1.450 491	1.450 605	1.450
Fish:		1												}		
Stocks, cold storage, end of periodmil. lb	393	350	378	363	355	350	315	282	275	256	250	280	334	r372	389	▶363

Unless otherwise stated in footnotes below, data	1980	1981		198	31						19	82				
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	FOOD	AND	KINI	ORED	PRO	DUC	TS; 1	OBA	.CCO-	Con	ıt.					
MISCELLANEOUS FOOD PRODUCTS—Cont.																
Sugar (United States): Deliveries and supply (raw basis): § Production and receipts: Production	4,713	5,157	128	603	1,132	1,154	745	(*)								
Deliveries, total	10,838 10,149 2,970	10,922 9,731 3,311	1,099 986 1,416	861 783 1,579	842 766 2,416	785 746 3,311	648 638 3,743	(*) (*) 3,644	(4)							
Exports, raw and refinedsh. tons Imports, raw and refinedthous. sh. tons	608,029 4,127	979,157 5,054	91,131 424	68,370 653	65,210 462	47,605 902	4,370 223	16,359 100	4,246 316	2,953 215	2,837 142	15,619 218	2,212 360	1,478 133	1,751 90	
Prices, wholesale (New York): Raw\$ per lb	0.306	0.198	0.154	0.160	0.163	0.167	0.180	0.178	0.169	0.176	0.195	0.208	(4)			
Refined (excl. excise tax)	0.405 184,786	0.303 190,254	0.236 13,205	0.261 15,855	0.261 13,473	0.261 12,121	0.282 15,055	0.282 15,464	0.282 13,787	0.280 13,176	0.300 16,518	0.300 14,309	(4) 14,286	15,598	17,425	
Leaf:	1,786	12,060													*1,933	°1,938
Production (crop estimate) mil. lb. Stocks, dealers' and manufacturers', end of period † mil. lb. Exports, incl. scrap and stems thous lb.	4,850 591,518 365,622	5,080 575,255 335,920	4,697 45,510 32,372	63,222 27,889	86,775	5,080 55,577 12,970	31,670 31,264	39,392 16,579	4,909 49,862 20,393	41,756 22,659	53,960 24,820	37,226 25,012	23,910 17,725	30,179 41,903	24,805 25,541	
Imports, incl. scrap and stems	300,022	333,920	02,312	21,005	22,946	12,970	31,204	10,575	20,353	22,003	24,620	20,012	17,720	41,500	20,041	.,,,,,,,,,,
Tax-exempt millions Taxable do Cigars (large), taxable do	94,256 620,565 3,292	92,006 638,114 3,258	7,636 58,150 313	8,141 56,635 300	7,447 49,658 267	6,479 42,300 247	7,479 48,234 215	8,990 52,850 221	7,584 57,430 267	6,577 48,368 248	5,919 48,240 269	6,265 60,590 292	5,784 49,167 234	7,459 55,802 279	E 004	
Exports, cigarettes do	81,998	82,582	7,149 LEA '	7,300 THE	8,058 R AN	4,713 D PR	6,426 ODU	8,148 CTS	7,337	5,540	5,670	5,797	4,461	5,844	5,894	1
LEATHER																
Exports: Upper and lining leatherthous. sq. ft	192,597	192,193	15,393	12,682	19,464	11,660	10,849	10,343	13,696	15,534	17,449	18,610	18,486	12,065	10,417	
Price, producer: Sole, bends, light index, 1967=100 LEATHER MANUFACTURES	283.8	²306.7	284.7													
Footwear: Production, totalthous. pairs Shoes, sandals, and play shoes, except athletic	396,851	375,473	32,887	35,040	30,493	27,624	26,259	27,128	31,060	26,894	27,940	28,219	r23,561	27,835		
Slippers do Athletic do	299,131 73,337 24,383	278,979 70,834 25,660	24,545 6,362 1,980 397	25,196 7,631 2,213 303	22,562 6,197 1,734	21,061 4,715 1,848	20,178 4,829 1,252 257	20,102 5,734 1,292 274	22,975 6,672 1,413 365	19,680 5,991 1,223 334	20,878 5,672 1,390 298	20,444 6,427 1,348	718,831 3,933 7797	20,320 6,047 1,468		
Other footwear do	3,271 9,781	3,171 9,688	640	663	266 1,121	238 615	505	629	681	839	693	341 742	636	577	595	
Prices, producer: * Men's leather upper, dress and casual index, 12/80=100		103.1	104.1	103.6	103.9	103.7	104.9	103.5	104.0	105.8	106.0	'101.2	101.1	106.3		107.0
Women's leather upper index, 1967=100 Women's plastic upper index, 12/80=100	211.7	214.4 99.6	217.9 97.8	212.1 93.5	212.3 93.5	212.3 93.0	204.1 94.4	205.3 94.4	207.7 94.7	215.6 98.3	⁷ 214.1 98.3	⁷ 218.5 98.5	211.4 98.5	218.7 99.1	220.4 99.5	222.3 99.7
			LUN	IBER	ANI	D PR	ODU	CTS								
LUMBERALL TYPES #													:			ĺ
National Forest Products Association: Production, total	³ 31,632 ³ 7,297 24,335	³ 29,713 ³ 7,003 22,710	2,307 542 1,765	2,379 527 1,852	1,831 441 1,390	1,765 418 1,347	1,810 356 1,454	1,891 402 1,489	2,148 411 1,737	2,281 416 1,865	2,251 419 1,822	2,338 443 1,895	2,376 388 1,988	2,560 382 2,178		
Shipments, total do Hardwoods do Softwoods do	331,126 36,679 24,447	³ 29,715 ³ 6,812 22,903	2,260 518 1,742	2,382 514 1,868	2,045 441 1,604	1,989 413 1,576	1,637 393 1,244	1,837 430 1,407	2,148 446 1,702	2,336 427 1,909	2,308 465 1,843	2,513 438 2,075	2,363 381 1,982	2,450 377 2,073		
Stocks (gross), mill, end of period, total	5,805 1,807 3,998	5,842 1,972 3,870	6,284 1,947 4,337	6,285 1,964 4,321	6,075 1,968 4,107	5,842 1,972 3,870	6,016 1,936 4,080	6,068 1,906 4,162	6,042 1,842 4,200	5,983 1,827 4,156	5,915 1,786 4,129	5,853 1,789 4,064	5,867 1,797 4,070	5,977 1,802 4,175		
Exports, total sawmill products	1,655 9,859	9,518	660	755	728	591	530	585	601	792	848	888	874	888	962	
Douglas fir: Orders, newmil. bd. ft. Orders, unfilled, end of perioddo	6,791 499	6,393 429	483 455	536 458	476 477	459 429	407 471	393 443	523 496	473 487	486 481	550 500	504 488	569 494		
Production doShipments doStocks (gross), mill, end of period do	6,815 6,821 912	6,395 6,463 844	526 486 1,009	533 533 1,009	403 457 955	396 507 844	459 365 938	457 421 974	454 470 958	465 482 941	482 492 931	472 530 939	520 516 943	556 563 936		
Exports, total sawmill products	540 117 422	523 129 394	43 14 29	29 9 20	38 6 31	47 19	34 11 22	34 8 26	54 18 36	46 14 32	48 14 35	40 9 30	31 8	42 14 28	31 7 24	
Dimension, construction, dried, 2" x 4", R.L. \$ per M bd. ft	223.42		 	}		l			Ì					l		

Nov. Dec. Jun. Prob. Mer. Apr. May June Aug. Sup. Oct. Nov. Dec. Jun. Prob. Mer. Apr. May June Aug. Sup. Oct. Nov. Dec. Jun. Prob. Mer. Apr. May June Aug. Sup. Oct. Nov. Dec. Jun. Prob. Mer. Apr. May June Aug. Sup. Oct. Nov. Dec. Jun. Prob. Mer. Apr. May June Aug. Sup. Oct. Nov. Dec. June Aug. Sup. Oct. Nov. Dec. June Aug. Sup. Oct. Nov. Dec. June Aug. Sup. Oct.								, DO		, 	=====					JVemo	
Properties Pro	Unless otherwise stated in footnotes below, data	1980	1981		19	81						19	82				
SOFTWOODS-Continued	in the 1979 edition of BUSINESS STATISTICS	Anr	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
such temp pine: One of England, and of period			LUM	BER	AND	PRO	DUC	TS—	Conti	nued			-	-			•
Clégen, increa, and of period	SOFTWOODSContinued	[
Production	Southern pine: Orders, newmil. bd. ft					461		344	409	520		513					
Shippereds 60. 66.65 67.10 68.65 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Orders, unfilled, end of period do	!	ţ .		1	j .			l .	}					1		
Company Comp	Shipments do																
Piece, wholesale (inferesea)		1,270	1,284	1,360	1,347	1,281	1,284	1,318	1,346	1,341	1,340	1,334	1,295	1,291	1,354		
Secretary Secr	• •	280,243	227,020	16,719	19,043	21,334	15,032	14,283	18,936	20,195	23,660	19,318	26,989	18,752	17,778	22,926	
Florence C. and better, F. G., I' x \(\cdot S. L. \)	Boards, No. 2 and better, 1" x 6", R.L.	337.9]]	
Verders, pine: Orders, now milked, end of period depends depen	Flooring, C and better, F. G., 1" x 4", S.L.	·									***************************************						
Orders, millied, end of period	Western pine:			500	579		400	407		560	ene		600	220	741		
Skipernets — do — 7,877	Orders, unfilled, end of period do	326	219		264	243	219	257	261	333	302	331	305	304	337		
Price, wholesale, Prodeferas, boards, No. 8, "1" 12" 12" 12" 12" 12" 12" 12" 12" 12"								423 369									
Tright T	• .	1,185	1,104	1,258	1,240	1,166	1,104	1,158	1,166	1,205	1,187	1,183	1,196	1,208	1,226		
Decider Conference Confer	Price, wholesale, Ponderosa, boards, No. 3, 1" x 12", R.L. (6' and over)\$ per M bd. ft	287.55															
Orders, milled, end of period																	
### METALS AND MANUFACTURES ### IRON AND STEEL	Orders, unfilled, end of periodmil. bd. ft				2.1	2.4			2.2	2.6			2.1				
RON AND STEEL Steel mill products	Stocks (gross), mill, end of period do	12.4		8.8	7.9	7.7			10.3	9.9		10.2	11.8				
Seed mill products thous sh. tona. 1,10 2,904 228 233 244 227 173 154 197 148 194 180 146 152 158			M	ETAI	LS AN	ND M	ANU	FAC	TURE	S							
See See	IRON AND STEEL																
Scrap	Exports: Steel mill products thous sh. tons	4,101	2,904	228	233	244	227	173	154	197	148	194	180	146	152	158	
Seem	Scrap do				532 2	480 1	509 1		539		507	812 1			542		
Scrap.	Imports: Steel mill products do	15.495	19 898	1.748	1.872	1.921	1.613	1 969	1 600	1.356	1.029	1.696	1.784	1.113	1 451	1 191	
Production	Scrap do	558 400	572	56 30	33 34	43 42	45	32 36	41	36	41	57	49		45	37	
	Iron and Steel Scrap																
tocks, and of period do	Receipts, net do	140,954	41,981	3,542	3,496	3,064	2,661	2,715	2,889	3,114	2,779	2,611	2,303	2.033	2,128		
Composite \$ \$per g. ton. \$ 92.17 9,017.00 89.74 84.24 78.01 76.02 81.70 80.47 75.93 69.98 62.86 55.21 53.84 54.77 753.48 52.	Consumption			7,116 8,408		6,054 8,453			5,615 7,870			5,077 7,650	4,715 7,551	r4,336 r7,352	4,345 7,109		
Pittaburgh district. do. 96.17 100.50 102.50 95.50 86.00 85.50 94.00 91.50 85.00 75.00 64.00 59.50 57.50 58.00 75.80 55.00 75.00 55.00 75.00 55.00 55.00 75.00 55.	Prices, steel scrap, No. 1 heavy melting: Composite \$ per lg. ton																
ron ore (operations in all U.S. districts): Mine production	Pittsburgh district do	96.17	100.50	102.50	95.50	86.00	85.50	94.00	91.50	85.00	75.00	64.00	59.50	57.50	58.00	°58.00	55.0
Shipments from mines do. 495,94 72,181 8,133 7,112 5,048 3,507 1,076 1,180 1,433 2,265 5,306 4,964 4,795 4,189 1,532 1,424	Iron ore (operations in all U.S. districts):	100.000				2010											
U.S. and foreign ores and ore agglomerates: Receipts at iron and steel plants do 87,188 96,645 9,927 9,070 7,241 5,579 1,664 1,589 1,596 2,795 6,672 7,182 6,746 5,848 5,361 Consumption at iron and steel plants do 50,73 15,546 391 315 8,358 685 44 1 1 211 349 539 289 539 4,489 4,249 8,489 4,489 4,489 4,489 4,489 4,489 4,489 4,489 4,683 4,896 4,342 4,705 4,369 4,249 8,489 4,489 4,489 4,489 4,489 4,489 4,489 4,683 4,896 30,276 31,326 4,489 4,489 4,689 4,683 3,975 3,644 5,848 5,361 1,289	Shipments from mines do	169,594	172,181	8,133	7,112	5,048	3,507	1,076	1,180	1,433	2,265	5,306	4,964	4,795	4,193	1 494	
Consumption at iron and steel plants. do	U.S. and foreign ores and ore agglomerates:							,									
Stocks, total, end of period do 17.75 56.066 60.243 59.574 60.387 60.144 60.243 60.401 60.894 57.340 57.725 57.645 58.457 59.065 57.833	Consumption at iron and steel plants do	89,397	94,958	7,708	6,913	6,370	6,038	5,518	1,589 5,175		4,888	4,896	4,342	4,705	4,369	4,249	
At furnace yards do. At furnace yards do. At U.S. docks do. do. 6,095 6,571 6,675 6,735 6,735 6,736 6,736 6,571 6,509 6,380 6,110 5,481 5,122 5,168 4,908 5,420 5,406 d. At U.S. docks do. do. 6,095 6,571 6,675 6,735 6,736 6,736 6,736 6,571 6,509 6,380 6,110 5,481 5,122 5,168 4,908 5,420 5,406 d. Pig Iron and Iron Products Production (including production of ferroalloys) thous. sh. tons. do. 469,053 75,051 6,029 5,527 4,847 4,824 4,766 4,384 4,869 4,083 3,975 3,648 3,554 d. Price, basic furnace \$per sh. ton. 203.00 206.00 213.	-	56,066	60,243	59,574	60,387	60,144	60,243	60,401			57,725	57,645	58,457	59,065	57,833	l	
Amaganese (mn. content), general imports	At furnace yards do	35,706	36,203	34,062	36,137	36,939	36,203	32,298	28,813	24,654	22,504	24,209	26,909	28,860	30,276	31,326	
Figure 17 Production (including production of ferroalloys) thous. sh. tons. Consumption. do. Stocks, end of period do. Sto	At U.S. docks do Manganese (mn. content), general imports do	į į	(I			1			1						1	ł	
Production (including production of ferroalloys) thous. sh. tons 68,721 73,570 5,889 5,419 4,782 4,750 4,489 4,169 4,622 3,967 3,904 3,595 3,516 3,277 3,160 Consumption do '69,053 75,051 6,029 5,527 4,847 4,824 4,766 4,384 4,869 4,083 3,975 3,648 3,554 Stocks, end of period \$ per sh. ton 203.00 206.00 213.00	Pig Iron and Iron Products																
Consumption do '69,053 75,051 6,029 5,527 4,847 4,824 4,766 4,384 4,869 4,083 3,975 3,648 3,554 Stocks, end of period do satings, gray and ductile iron: Orders, unfilled, for sale, end of period do 6,457 6,702 548 555 458 344 399 412 482 445 432 428 359 404 Stocks, end of period drivers, unfilled, for sale, end of period dri		60 701	79 870	F 000	E 410	4 700	4.750	4.400	4.100	4 600	2.067	2.004	9 505	0.516	2 077	2.100	
Price, basic furnace	Consumption do	169,053	75,051	6,029	5,527	4,847	4,824	4,766	4,384	4,869	4,083	3,975	3,648	3,554			
Orders, unfilled, for sale, end of period thous. sh. tons. 964 743 833 781 727 743 783 761 726 696 651 610 7611 611 511 511 512			} !												Į.	1	
thous. sh. tons. 964 743 833 781 727 743 783 761 726 696 651 610 611 611 611 756 761 623 771 764 860 771 741 756 616 623 771 764 860 771 741 756 616 623 771 764 860 771 741 756 616 623 771 764 860 771 741 756 616 623 771 764 860 771 741 756 616 623 771 764 860 771 741 756 616 623 771 764 860 771 741 756 616 623 771 764 860 771 741 756 616 623 771 764 860 771 741 756 616 623 771 741 756 741 741 756 741 741 756 741 741 756 741 741 756 741 741 756 741 741 756 741 741 756 741 741 741 756 741 741 756 741 741 741 756 741 741 756 741 741 741 756 741 741 741 741 756 741 741 741 741 741 741 741 741 741 741	Castings, gray and ductile iron: Orders, unfilled, for sale, end of period																
For sale	Shipments, total do	11,799	11,929	956	986	823	681	771	764	860	771	741	756	r616	623	1	
Orders, unfilled, for sale, end of period thous sh. tons 22 32 36 31 33 32 31 29 29 25 24 24 16 16	For sale do			548	555	458			412	482				r359		(************
Shipments, total	Orders, unfilled, for sale, end of period thous. sh. tons	22	32	36	31	33	32	31	29	29	25	24	24	⁷ 16	16		***********
	Shipments, total do	450	421	33	35	26	23 10	24	26	30	28	27	29	21	22	{	

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		198	31		<u> </u>				19	82				
in the 1979 edition of BUSINESS STATISTICS	Anr	nual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	M	ETAL	S AN	D MA	NUF	ACT	URES	5—Со	ntinu	ed						
Steel, Raw and Semifinished																
Steel (raw): Productionthous. sh. tons Rate of capability utilizationpercent	¹111,835 72.8	¹120,828 78.3	9,618 75.9	9,003 68.7	7,962 62.8	7,672 58.6	7,737 59.3	7,178 60.9	8,049 61.7	7,006 55.2	6,678 50.9	6,050 47.7	5,719 43.8	5,538 42.4		
Steel castings: Orders, unfilled, for sale, end of period thous. sh. tons	605	385	469	366	366	385	381	359	335	304	276	250	r232	223		
Shipments, total	1,878 1,701	1,752 1,568	146 131	144 129	127 116	122 110	115 106	114 104	129 117	113 103	101 93	91 82	*63 *56	65 57		
Steel products, net shipments: Total (all grades) thous. sh. tons By product:	83,853	87,014	7,039	6,723	5,783	5,666	5,608	5,434	6,163	5,488	5,149	5,372	4,514	4,724	4,760	
Semifinished products do Structural shapes (heavy), steel piling do Plates do Rails and accessories do	5,342 5,207 8,080 1,797	5,598 4,903 7,397 1,458	437 432 630 88	437 362 543 99	385 313 498 98	389 299 482 81	314 329 463 98	285 323 498 102	325 365 527 91	318 321 393 73	306 290 330 74	291 284 316 68	257 272 259 56	269 265 300 41	283 280 269 44	
Bars and tool steel, total	13,258 6,911 4,683 1,585	13,828 17,770 4,371 1,620	1,163 659 364 134	1,140 638 364 133	953 543 296 109	898 471 323 99	912 525 271 112	821 506 205 105	1,015 573 320 117	865 470 298 93	846 434 321 87	855 440 319 92	668 304 296 66	766 361 325 76	746 347 322 73	
Pipe and tubing do. Wire and wire products do. Tin mill products do. Sheets and strip (incl. electrical), total do. Sheets: Hot rolled do. Sheets: Cold rolled do.	9,097 1,768 5,709 33,595 12,116 13,313	10,286 1,694 4,927 36,924 13,451 14,396	849 135 396 2,910 1,063 1,125	892 133 351 2,765 976 1,085	813 107 327 2,288 863 857	759 102 412 2,246 901 811	753 105 389 2,245 793 869	702 115 449 2,139 768 817	662 133 400 2,645 953 1,030	602 125 328 2,462 828 1,005	476 123 338 2,367 759 957	388 123 386 2,661 848 1,069	274 113 331 2,285 758 884	246 112 386 2,340 746 919	228 113 502 2,295 665 915	
By market (quarterly): Service centers and distributors	16,172 8,742 3,148 12,124 3,155 4,543 5,551 30,415	17,546 8,761 3,225 13,101 2,180 4,646 5,293 32,264	4,151 2,190 796 3,218 455 1,148 1,278 7,938			3,704 1,812 610 2,472 422 947 1,129 7,075			3,429 1,684 592 2,367 411 960 1,260 6,500			3,213 1,651 598 2,791 277 689 1,115 5,676			3,099 1,568 548 2,311 183 491 1,252 4,546	
Other do Steel mill shapes and forms, inventories, end of period—total for the specified sectors: mil. sh. tons	328.4	30.0	30.5	30.4	30.5	30.0	30.0	29.9	29.4	28.8	28.1	26.9	26.5	25.8	·	
Producing mills, inventory, end of period: Steel in process mil. sh. tons. Finished steel do Service centers (warehouses), inventory, end of	9.6 6.9	11.3 7.4	11.2 7.5	11.3 7.4	11.3 7.4	11.3 7.4	11.6 7.2	11.3 7.2	11.2 7.1	11.0 7.0	10.9 6.9	10.4 6.5	10.2 6.5	9.8 6.4		
period mil. sh. tons Consumers (manufacturers only): Inventory, end of period do Receipts during period do Consumption during period do	35.3 6.6 69.9 73.4	5.4 5.9 71.8 72.4	5.3 6.5 6.0 6.2	5.3 6.4 5.8 5.9	5.5 6.3 5.0 5.1	5.4 5.9 3.9 4.3	5.2 6.0 4.7 4.6	5.2 6.2 5.3 5.1	5.2 5.9 5.8 6.1	5.1 5.7 5.0 5.2	5.0 5.3 4.8 5.2	5.1 4.9 4.7 5.1	5.0 4.8 4.3 4.4	5.0 4.6 4.3 4.5		
NONFERROUS METALS AND PRODUCTS Aluminum:																
Production, primary (dom. and foreign ores) thous. sh. tons Recovery from scrap (aluminum content) do	5,130 1,377	4,948 1,653	393 140	396 150	364 129	364 123	351 144	311 156	336 170	319 170	321 167	300 182	297 185	287 163		
Imports (general): Metal and alloys, crude do Plates, sheets, bars, etcdo	580.8 71.4	698.5 140.1	60.5 14.0	55.2 15.6	41.5 14.9	49.3 13.7	38.5 17.5	65.9 19.1	61.7 21.4	61.0 14.1	51.0 19.5	66.5 15.5	42.2 16.7	78.2 17.9		
Metal and alloys, crude	714.9 315.3 0.6957	344.2 271.2 0.7600	9.2 17.2 0.7600	$24.1 \\ 21.6 \\ 0.7600$	23.1 16.0 0.7600	24.6 16.8 0.7600	22.1 18.0 0.7600	18.8 17.8 0.7600	46.0 18.3 0.7600	26.6 15.4 0.7600	19.9 15.9 0.7600	48.5 19.9 0.7600	24.2 13.3 0.7600	42.6 14.3 0.7600	23.6 22.0 0.7600	0.76
Aluminum products: Shipments: Ingot and mill prod. (net ship.) mil lb	14,057	13,148	1,083	1,060	860	928	849	934	1,095	995	971	1,113	880		0.7000	0
Mill products, total do Sheet and plate do Castings do	10,485 5,862 1,538	10,310 5,962 1,581	870 512 134	835 484 128	673 373 110	679 389 98	738 430 106	734 430 105	831 482 120	783 452 119	762 441 116	833 498 143	744 444 102	106		
Inventories, total (ingot, mill products, and scrap), end of periodmil. lb	5,076	6,607	6,187	6,276	6,524	6,607	6,670	6,742	6,658	6,683	6,684	6,577	6,624			
Production: Mine, recoverable copperthous. met. tons. Refinery, primarydo From domestic oresdo From foreign oresdo Secondary, recovered	1,168.3 1,210.9 1,121.9 189.0	1,529.0 1,520.7 1,416.5 104.1	133.9 121.8 114.4 7.4	139.9 128.9 120.5 8.3	134.1 113.4 108.5 6.2	113.3 130.2 123.9 6.2	112.6 106.2 97.3 8.9	107.4 104.7 96.2 8.5	119.9 117.2 110.4 6.9	112.0 105.4 97.9 7.4	97.0 99.3 90.5 8.8	90.0 93.9 85.8 8.0	'84.6 99.5 85.7 13.8	81.1 91.5 74.1 17.4		
as refined	573.0 551.8 459.8	631.9 502.5 359.3	50.2 45.7 37.8	58.8 52.7 36.7	32.5 42.4 30.2	60.1 42.3 24.3	47.5 45.2 20.6	51.8 40.6 15.7	51.4 30.8 18.8	30.6 22.3	47.5 20.4	50.6 29.2	47.5 27.2	42.9 25.8	57.3 38.9	
Exports: Refined and scrap do Refined	330.1 17.4	339.7 27.2	21.8 3.0	35.0 0.7	19.4 2.1	21.3 1.8	35.2 0.4	21.9	29.4 0.9	30.5 1.0	39.1 1.6	20.4	33.5 2.9	34.0 5.4	36.6 9.9	
Consumption, refined (by mills, etc.) thous. sh. tons Stocks, refined, end of period do	2,083 365	2,045 511	479 409			493 511			508 558			485 581				
Price, electrolytic (wirebars), dom., delivered \$ per lb	1.0242	0.8512	l	0.8231			l	l		0.7627		0.7149		0.7100	0.7106	0.72

Unless otherwise stated in footnotes below, data	1980	1981		19	81						19	82				
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	M	ETAL	S AN	D MA	NUF	'ACT	URES	5—Со	ntinu	ed			l	1		
NONFERROUS METALS AND PRODUCTS—Continued																
Copper-base mill and foundry products, shipments (quarterly total):																
Brass mill products	2,467 2,783 489	2,622 2,847 471	652 702 116			544 659 109			¹ 544 1654 1114			564 636 107				
Lead: Production: Mine, recoverable leadthous. met. tons Recovered from scrap (lead cont.)	549.5 675.6	¹444.1 627.4	*48.0 52.5	*47.5 50.9	r39.8 52.2	r41.3 48.7	40.5 45.5	43.5 48.2	48.7 48.0	44.3 47.6	42.1 46.1	42.6 44.8	37.0 34.4	42.9 44.2		
Imports (general), ore (lead cont.), metal do Consumption, total do	52.1 1,070.3	68.9 1,125.3	4.3 103.1	7.8 117.0	3.0 r94.4	2.1 107.6	5.6 93.9	3.4 84.4	4.9 90.9	3.8 88.3	1.9 82.1	5.4 84.5	1.6 73.0	8.5 90.7		
Stocks, end of period: Producers', ore, base bullion, and in process (lead content), ABMSthous. met. tons Refiners' (primary), refined and antimonial	135.3	83.3	106.9	100.5	88.0	83.3	78.9	79.3	81.2	85.7	85.6	82.1	79.2	79.0	75.1	
(lead content)thous. met. tons Consumers' (lead content) do Scrap (lead-base, purchased), all smelters (gross weight)thous. met. tons	54.8 95.8 59.6	79.5 98.1 41.7	45.9 105.0 52.8	59.8 98.9 54.0	71.9 101.0 45.8	79.5 98.1 41.7	68.3 92.0 41.7	70.0 88.4 36.8	73.4 85.2 35.1	65.5 87.2 34.5	61.7 81.7 32.7	69.0 88.3 36.1	66.6 84.2 39.3	61.7 83.5 34.8		
Price, common grade, delivered \$ per lb Tin:	0.4246	0.3653	0.4032	0.3705	0.3388	0.3107	0.2967	0.2870		0.2606		0.2476		0.2582	0.2532	0.2319
Imports (for consumption): Ore (tin content)	842 45,983 18,638 11,703 256,362 144,342	232 45,873 15,010 1,705 48,450 38,750	3,038 1,225 125 3,950 3,000	3,261 1,280 155 3,900 2,950	232 3,951 1,150 115 3,400 2,500	0 4,216 1,270 160 2,950 2,200	295 2,312 1,025 85 3,400 2,500	72 1,089 1,150 95 3,300 2,500	162 2,742 1,135 120 3,750 2,800	149 3,145 1,005 150 5,100 3,600	0 2,966 1,065 140 5,000 3,600	156 2,055 1,025 140 5,100 3,700	3,600	186 2,742 4,700 3,400		
Exports, incl. reexports (metal) do Stocks, pig (industrial), end of period do Price, Straits quality (delivered) \$ per lb	4,293 5,504 8.4600	5,989 5,988 7.3305	471 5,710 7.8022	253 5,325 7.9560	171 5,563 8.2147	1,180 5,988 7.9352	4,748 3,872 7.7590	1,610 3,490 7.4519	3,829 6.6917	454 5,222 6.5600	261 4,953 6.6284	662 4,653 6.0826	375 3,888 6.1255	305 2,910 6.2549	6.3904	
Zinc: Mine prod., recoverable zinc thous. met. tons Imports (general): Ores (zinc content) do do Metal (slab, blocks) do do	334.9 113.8 329.0	305.3 117.7 602.6	28.3 11.4 43.0	28.0 7.8 48.2	25.4 3.7 59.3	23.4 9.2 32.8	24.2 3.2 2.0	24.7 6.1 33.0	25.3 6.3 36.2	23.4 2.4 26.4	25.6 4.0 35.3	27.0 4.9 39.8	21.3 0.7 27.8	27.4 2.8 26.2	3.9 34.9	
Consumption (recoverable zinc content): Ores	67.6 236.1	58.2 224.1	4.6 18.5	4.6 19.5	4.6 18.7	5.3 18.6	4.6 17.1	4.2 16.8	4.7 18.2	6.8 18.0	6.2 17.7	3.9 17.3	3.1 17.3	2.6 17.5		**************
Slab zinc: @ Production, total ‡thous. met. tons Consumption, fabricatorsdo Exportsdo	1369.9 1811.1 0.3	341.8 834.7 0.3	26.7 70.2	27.0 66.2 0.1	26.6 59.8 (2)	23.0 52.0 (²)	24.2 55.1 (²)	21.6 55.3 (²)	21.4 60.0 (²)	19.3 57.8 (²)	21.5 58.8 (²)	21.5 65.8 (²)	18.7 56.3 0.	20.4 61.0 (2)	24.1 (²)	24.8
Stocks, end of period: Producers', at smelter (ABMS) do Consumers' do Price, Prime Western \$ per lb.	18.7 22.6 0.3743	34.6 72.1 0.4455	19.5 72.4 0.4872	24.5 72.1 0.4587	31.6 72.9 0. 46 15	34.6 72.1 0.4259	36.7 70.1 0.4217	41.2 67.0 0.4272	41.8 65.7 0.3923	39.9 60.0 0.3550	35.3 60.8 0.3467	27.9 57.7 0.3460	20.5 62.0 0.3566	14.9 57.7 0.3779	15.9 0.3964	19.9 0.4083
MACHINERY AND EQUIPMENT Heating, combustion, atmosphere equipment, new orders (domestic), net, qtrly # mil \$ Electric processing heating equipment do	348.3 82.8	470.0 106.9	126.8 23.2			115.3 28.4			113.7 20.2			73.3 17.5	••••••		53.8 18.1	
Fuel-fired processing heating equipdo Material handling equipment (industrial):	156.5	225.4	70.9			54.0			61.0			26.9			14.4	
Orders (new), index, seas. adj 1967 = 100 Industrial trucks (electric), shipments: Hand (motorized)	375.5 20,495	382.0 18,734	413.9 1,765	324.2 1,571	388.7 1,586	377.8 1,569	323.0 1,250	428.0 1,398	262.3 1,665	273.0 1,216	1,228	241.2 1,558	787	1,207	1,160	
Rider-type do Industrial trucks and tractors (internal combustion engines), shipments number	24,110 39,448	19,784 31,885	1,812 2,721	1,722 2,622	1,814 2,622	1,976 2,551	1,447 2,277	1,452 2,053	1,828 2,430	1,386 1,658	1,402 1,587	1,567 2,216	931 824	1,042 1,265	1,312 1,484	
Industrial supplies, machinery and equipment: New orders index, seas. adjusted 1977=100 Industrial suppliers distribution: †	r114.9	⁷ 148.1	r125.0	r121.5	'118.1	r117.3	^r 114.2	110.2	°104.8	r97.3	⁷ 91.1	r90.9	r88.3	90.8	92.1	
Sales index, seas. adjusted	134.5	142.3	147.2	147.9	140.0	132.5	135.2	130.9	133.3	134.4	123.5	121.3	120.0	119.1	115.9	109.8
handling equip., valves, fittings, abrasives, fasteners, metal products, etc.)	131.2 272 234	144.3 279 249	146.7 301 243	147.4 296 242	148.3 276 252	149.2 271 251	150.2 263 252	151.6 255 245	152.6 246 225	152.9 233 215	153.7 218 194	153.8 232 194	154.0 191 195	153.8 *198 *186	154.0 *178 *191	174
Machine tools: Metal cutting type tools: Orders, new (net), total	3,884.75 3,495.50 3,680.80 3,206.00 4,749.7	2,228.10 1,945.80 4,104.50 3,552.45 2,873.3	150.95 140.45 365.35 336.05 3,531.2	157.10 145.80 334.60 305.70 3,353.7	135.40 115.65 329.75 287.35 3,159.4	112.55 101.05 398.60 358.85 2,873.3	155.95 124.90 307.15 284.50 2,722.1	123.15 113.30 293.15 273.75 2,552.1	105.75 90.20 332.75 303.05 2,325.1	115.10 107.55 239.45 214.60 2,200.8	68.00 53.75 246.60 224.15 2,022.2	91.65 55.15 324.60 296.55 1,789.2	*70.40 *57.55 *203.55 *173.75 *1,656.0	60.45 49.25 212.50 184.30 1,504.0	°52.40 °46.75 °222.10 °190.35 °1,334.3	
Metal forming type tools: Orders, new (net), total	869.55 664.95 1,010.95 878.55 384.8	716.75 616.85 991.10 824.20 427.0	36.35 31.00 76.10 67.25 511.0	59.40 50.20 72.30 60.25 498.0	60.35 52.85 78.40 70.00 480.0	39.25 32.90 92.30 79.95 427.0	49.25 41.25 76.40 49.60 399.8	40.65 35.90 66.45 57.50 374.0	32.05 26.75 78.30 73.15 327.8	37.70 29.95 60.00 56.30 299.4	37.95 27.40 49.25 44.90 288.2	34.25 29.25 84.55 75.35 237.8	36.15 30.40 46.80 40.65 227.2	26.05 22.70 44.70 38.90	P34.35 P30.20 P51.40 P45.95	

November 1982		St	JRVE	Y OF	CUR	RENT	BUS	SINES	SS							S-27
Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown	1980	1981		19	91					<u> </u>	19	82				
in the 1979 edition of BUSINESS STATISTICS	Ann		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	M.	ETAL	SAN	D MA	NUF	'ACT	URES	S—Co	ntinu	ed					•	
MACHINERY AND EQUIPMENT—Continued																
Tractors used in construction, shipments, qtrly:	16 500	15 700	2.050			0.010			0.000			0.500	4500			
Tracklaying, total	16,503 1,306.1 4,781 387.5	15,789 1,569.9 4,309 410.9	3,850 422.4 1,127 112.4			3,010 311.2 784 90.3			2,390 264.4 547 58.2			2,589 272.7	4577 465.4			
Tractor shovel loaders (integral units only), wheel and tracklaying typesunits	45,480	33,369	7,557			6,774			6,218							
mil \$ Tractors, wheel, farm, nonfarm (ex. garden and construction types), ship., qtrlyunits mil. \$	1,697.1 146,274 3,183.4	1,605.5 141,170 3,479.3	354.6 32,247 805.5			344.6 31,417 822.7			300.8 28,096 754.0		·	25,754 737.7	46,543 4192.6			
ELECTRICAL EQUIPMENT	,	,														
Batteries (autotype replacement), shipthous	50,063	53,597	r6,079	6,201	4,668	5,012	4,897	4,269	3,839	3,611	3,584	3,640	3,629	4,750	5,819	
Radio sets, production, total marketthous Television sets (incl. combination models), production, total marketthous	28,104 18,532	31,476 18,480	² 3,233 ² 1,981	3,767 1,550	3,216 1,474	² 1,814	2,012 1,208	1,671 1,344	² 1,816 ² 1,499	1,609 1,375	2,460 1,292	² 3,179 ² 1,710	2,284 1,177	4,052 1,420	² 3,624 ² 1,619	1,106
Household major appliances (electrical), factory shipments (domestic and export) #thous Air conditioners (room)	30,260 3,204 2,738	30,336 3,692 2,484	'2,368 52 202	r2,344 90 220	1,854 94 165	1,831 163 144	1,947 191 169	2,177 361 160	2,650 572 151	2,452 517 201	2,232 419 169	2,341 289 160	2,196 145 187	2,257 61 203	2,097 17 167	2,350 31 218
Disposers (food waste) do do do do	2,962 2,530	3,178 2,325	r236 r177	¹ 234 ¹ 192	197 163	206 152	220 147	214 143	272 161	175 169	200 150	207 293	199 166	219 170	241 168	339 202
Refrigerators do Freezers do	5,124 1,681	4,944 1,561	456 108	383 185	272 62	264 76	276 89	324 99	343 117	379 107	359 112	437 161	456 151	432 156	381 109	401 80
Washers	4,550 3,177	4,365 2,977	416 293	°352 260	267 217	246 189	306 228	347 234	383 253	345 214	322 195	352 214	323 196	364 244	360 245	347 261
Vacuum cleaners (qtrly.) do GAS EQUIPMENT (RESIDENTIAL)	7,439	7,785	1,955			1,767			1,911			1,677				
Furnaces, gravity and forced-air, shipmentsthous Ranges, total, salesdo	1,446	1,417	125 136	139	111 119	95 124	80 99	69 107	77 135	70 110	69 113	85 123	78 96	¹ 96	122 124	
Water heaters (storage), automatic, sales @ do	1,538 2,818	1,496 2,785	202	128 224	203	211	239	268	305	295	246	248	230	225	232	
		PETI	ROLE	UM,	COA	L, AN	D PF	RODU	CTS							
COAL																
Anthracite: Production thous sh. tons. Exports do. Price, wholesale * Index, 1967=100.	6,056 1,795 463.7	5,423 2,249 582.2	417 307 619.9	457 252 629.1	550 171 642.5	394 101 643.7	^r 353 147 643.7	r381 44 643.7	°459 84 645.5	274 79 648.1	329 41 7639.0	319 45 637.5	427 106 637.5	505 86 637.4	476 77 637.4	637.4
Bituminous: Production † thous, sh. tons	823,644	'818,352	⁷ 81,303	r84,784	*76,027	r75,966	*65,720	¹ 69,621	¹ 82,209	72,432	69,933	76,508	57,354	67,889	62,220	
Consumption, total	669,061	r728,543	r59,332	r58,785	r58,293	r64,578	68,842	59,461	57,965	53,017	54,585	55,730				
Electric power utilities	568,322 125,815	595,575 127,527	48,385 r10,567	47,685 10,669	46,873 10,769	52,968 10,783	57,195 10,847	48,975 10,149	47,811 9,761	43,403 9,041	45,523 8,713	47,330 8,121	55,206	54,660		
Coke plants (oven and beehive)	66,493 4,924	r60,888 r5,440	°5,329 °379	5,150 '431	5,030 r651	4,833 r827	4,437 800	4,334 517	4,165 393	3,704 573	3,616 349	3,476 279			,	
Stocks, end of period, total do	199,077	179,607	r159,399	169,735	r177,361	*179,607	168,274	167,676	173,574	180,807	187,248	192,664	.,			
Electric power utilities do Industrial, total do	178,269 20,808 9,017	163,356 '16,251	r15,302		161,454 15,907		152,935 15,339	152,735 14,941	14,544	165,848 14,959	171,892 15,356	176,911 15,753	168,844	169,403		
Oven-coke plants do Exports do	89,882	6,446 110,243	¹ 6,118 11,589	12,105	6,357 11,676	6,446 11,462	6,181 6,029	5,887 8,918	5,594 10,335	5,914 10,742	6,216 10,057	6,518 10,626	9,071	7,293	8,603	
Price, wholesale	466.5	493.7	506.8	506.0	507.6	510.2	520.6	525.3	525.0	527.9	r529.6	*529.3	534.5	535.0	537.3	535.6
Production: Beehive and oven (byproduct) thous. sh. tons Petroleum coke §	46,132 27,094	42,786 28,296	11,175 2, 46 6	2,348	2,445	10,580 2,622	2,420	2,207	8,828 2,551	2,428	2,533	7,507 2,397	2,672	2,564		
Stocks, end of period: Oven-coke plants, totaldo	8,627	6,724	5,198			6,724			7,455			7,871				
At furnace plants	7,521 1,106	6,320 403	4,805 394			6,320 403			7,015 440							
Petroleum coke ‡ do Exports do	3846 2,162	900 1,251	765 94	708 123	836 67	900 134	829 48	894 105	939 97	959 37	963 154	1,091 175	1,171 129	1,088 61	141	
PETROLEUM AND PRODUCTS	2,102	1,201	}	120	0.	104	10	100	"	0.	104	110	120	01	141	
Crude petroleum: Oil wells completed number	27,026	r37,642	3,414	73,772	3,587	4,581	2,790	3,049	3,750	3,683	3,459	3,899	3,286	2,848	3,360	2,838
Price, wholesaleIndex, 1967=100 Gross input to crude oil distillation	556.4	803.5	796.8	788.2	785.9	787.2	787.2	770.3	744.8	717.9	'717.8	718.2	718.7	718.7	718.8	735.8
units mil. bbl Refinery operating ratio % of capacity	5,049.3 76	4,656.5 69	382.5 68	383.3 67	378.2 68	395.1 69	372.9 66	325.4 65	361.7 65	353.0 66	378.9 68	388.4 74	399.8 75	380.3 72		
All oils, supply, demand, and stocks: ‡ New supply, total ¶mil. bbl	6,266.9	5,905.7	498.2	500.5	476.2	501.3	480.2	418.6	454.9	437.5	465.2	464.1	495.7	479.2		
Production: Crude petroleumdo Natural gas plant liquidsdo	3,146.4 591.8	3,124.6 597.9	257.6 50.9	264.8 51.6	257.8 50.1	267.3 51.1	268.7 49.2	243.3 44.0	266.5 50.1	259.6 49.3	268.5 48.4	260.4 46.8	268.1 49.0	269.7 49.6		
Imports: Crude and unfinished oils	1,946.2	1,642.8	145.3	140.7	124.0	135.7	118.6	86.9	92.7	88.0	107.3	117.6	136.9	123.7		
Refined products do	582.5	540.4	44.4	43.4	44.3	47.1	43.6	44.4	45.6	40.6	41.0	39.2	41.8	36.1		
Change in stocks, all oils (decrease,—) do Demand, total	379.3 6,441.7	68.3 6,057.2	22.3 484.1	7.6 513.9	17.9 486.3	-17.6 535.0	-27.7 518.3	-29.5 468.9	_30.5 509.7	-51.0 505.0	-0.5 485.1	12.9 469.0	31.6 480.9	13.5 486.6	1	
Exports: Crude petroleumdo	104.9	83.2	5.8	7.0	8.3	5.9	7.4	8.5	10.0	5.2	8.1	2.8	7.1	9.4		
Refined products do See footnotes at end of tables.		133.9		15.9	12.7	14.5	18.3			18.3		18.3			1	l

Inless otherwise stated in footnotes below, data brough 1978 and descriptive notes are as shown	1980	1981		198	31						19	82				
n the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Мау	June	July	Aug.	Sept.	C
	PETF	ROLEU	J M , C	OAL,	ANI) PR	ODUC	CTS-	-Cont	inued	l					
PETROLEUM AND PRODUCTS—Continued																}
ll oils, supply, demand, and stocks ‡—Continued Domestic product demand, total # do	6,242.4	5,840.2	468.6	491.1	465.2	514.6	492.6	446.4	482.3	481.4	460.2	447.9	457.9	460.0		
Gasoline do Kerosene do	2,420.5 58.0	2,414.9 46.2	200.5 2.8	205.5 4.1	192.5 4.4	208.9 6.2	184.2 6.4	170.5 5.0	205.8 3.6	207.5 3.4	$207.0 \\ 3.2$	205.4 2.5	211.7 3.0	207.4 2.4		
Distillate fuel oildo	1,049.0	1,032.8	75.9	86.6	86.6	101.0	105.7	89.2	89.3	89.9	75.8	73.5	64.6	69.1		
Residual fuel oil	918.0 390.7	752.5 368.6	56.3 30.9	57.8 29.0	56.3 29.8	67.9 30.7	66.6 31.2	63.3 29.7	59.3 30.3	56.0 30.0	48.1 31.2	45.1 29.6	45.4 30.6	47.7 30.2		
Lubricants	58.3 142.4	56.0 124.8	4.6 13.9	5.3 13.7	3.7 9.9	4.4 5.8	3.9 2.9	4.2 4.3	4.2 5.2	4.6 7.1	4.1 10.5	4.5 14.3	4.3 16.7	4.2 18.2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Liquefied gases do	537.8	542.2	42.1	49.2	47.4	51.8	58.1	47.6	47.4	45.8	44.4	38.6	46.1	42.1		
Stocks, end of period, total	11,420.2 1482.9	1,488.5 598.8	1,480.7 560.7	1,488.3 584.3	1,506.2 594.8	1,488.5 598.8	1,460.9 606.2	1,431.4 612.2	1,400.9 614.2	1,349.9 611.0	1,349.4 609.5	1,362.3 606.9	1,393.9 611.7	1,407.4 625.4		
Strategic petroleum reserve do Unfinished oils, natural gasoline, etc do	1107.8 1192.0	230.3 176.8	199.2 179.9	214.8 178.0	594.8 222.5 178.3	230.3 176.8	235.3 181.5	241.2 184.0	248.5 183.5	255.5 178.4	261.0 174.5	264.1 174.1	267.2 176.4	273.6 171.9		.
Refined products	1745.3	712.9	740.0	726.0	733.0	712.9	673.3	635.2	603.1	560.4	565.4	581.2	605.8	610.1		
efined petroleum products: ‡ Gasoline (incl. aviation):	!			İ						1						
Productionmil. bbl Stocks, end of period	2,394.1 1213.5	2,350.8 205.8	198.1 193.2	200.9 192.9	198.3 202.9	206.0 205.8	192.3 216.8	166.3 216.1	186.8 201.5	183.7 182.0	196.8 176.2	203.9 180.2	211.3 185.3	201.0 187.2		
Prices (excl. aviation):						ı								}	}	
Wholesale, regularIndex, 2/73=100 Retail, regular grade (Lundberg/Platt's): ¶	576.7	666.0	666.4	666.1	661.7	657.7	651.7	642.3	621.1	578.6	*555.7	582.7	629.8	637.8	630.8	3
Leaded \$ per gal do do	1.217 1.261	(1) (1)	1.398 1.450	(4) (4)												
Aviation gasoline: Productionmil. bbl	12.8	11.5	1.1	1.0	0.8	0.8	0.6	0.6	0.7	0.5	0.9	0.9	0.9	1.1		
Stocks, end of period do Kerosene:	12.3	2.7	2.6	2.6	2.7	2.7	2.7	2.7	2.6	2.4	2.5	2.4	2.4	2.4		
Production doStocks, end of period do	50.1 111.4	43.6 11.1	2.7 13.8	2.7 12.6	3.7 12.4	4.5 11.1	4.4 9.6	4.3 9.1	3.3 8.8	3.6 9.6	2.4 8.9	2.7 9.2	2.7 9.1	2.6 9.5		
Price, wholesale (light distillate) Index, 1967=100	863.4	1,039.8	1,044.6	1,043.2	1,042.7	1,037.9	1,044.3	1,034.3	1,027.9	1,009.1	r975.9	1974.2	983.3	982.0	i .	1
Distillate fuel oil: Productionmil. bbl	974.1	954.9	78.3	77.2	81.9	88.7	81.1	68.5	71.1	70.7	81.2	81.9	84.8	78.3		
Imports do	51.9 1205.4	61.0 190.2	3.9 206.8	3.6 201.2	3.4 200.0	2.9 190.2	3.0 166.0	3.6 146.7	1.5 127.7	1.8 108.8	2.3 114.5	3.0	3.8	2.4 158.9		
Stocks, end of period	}			1				1,058.2	1,029.3	953.6	r928.7	124.6	148.2	1	l	
Index, 1967 = 100 Residual fuel oil: Productionmil. bbl	850.6	1,058.1	1,067.8	1,056.1	1,047.5	1,060.6	1,067.8			l i		Į.	· '	ļ .	'	1
Imports do	578.4 343.6	480.3 290.6	38.6 25.2	38.2 24.0	36.5 25.3	40.2 28.5	36.7 25.4	31.8 26.0	34.7 28.2	34.9 22.9	34.9 22.9	32.3 19.3	31.9 17.8	31.2 16.1		
Stocks, end of period	¹ 91.5 961.2	78.3 1,239.0	80.0 1,192.4	79.8 1,179.1	80.8 1,174.3	78.3 1,180.9	68.2 1,219.8	58.1 1,177.6	57.3 1,163.0	53.6 1,182.7	59.1 1,191.6	60.5 1,229.5	59.0 1,246.9	52.8 1,250.0	1,120.7	1
Jet fuel: Productionmil. bbl	365.6	353.5	28.0	28.0	28.9	29.3	27.8	28.0	34.7	30.3	27.9	27.9	29.9	30.4		İ
Stocks, end of period	142.4	40.5	43.3	42.8	41.9	40.5	37.2	37.0	42.5	44.1	41.8	40.1	39.8	40.8		
Lubricants: Production do	65.1	60.6	4.4	4.9	5.0	5.1	4.3	4.1	4.3	4.5	4.6	4.6	4.6	4.4	ļ	
Stocks, end of period do	13.6	14.2	13.7	12.9	13.9	14.2	14.4	14.3	13.7	13.4	13.5	13.4	13.5			
Asphalt: Production	141.2	124.2	11.9	10.7	9.0	7.6	6.5	5.4	7.0	8.0	10.5	12.4	13.1	13.3		
Stocks, end of period do	¹18.8	19.5	21.3	18.4	17.6	19.5	23.1	24.3	26.1	27.1	27.1	25.6	22.1			
Liquefied gases (incl. ethane and ethylene): Production, total	561.8	583.4	48.6	49.8	50.0	49.9	47.9	41.3	47.2	47.0	49.1	47.1	48.2	49.3		
At gas processing plants (L.P.G.)	440.9 120.8	467.9 115.6	39.3 9.3	40.6 9.2	41.0 9.0	41.0 8.9	40.3 7.6	34.8 6.6	39.2 8.0	39.1 7.8	40.4 8.7	38.3 8.8	38.9 9.3	40.5 8.9		.
Stocks (at plants and refineries) do	1128.0	137.0	151.3	148.7	146.4	137.0	122.2	113.5	109.0	105.8	107.7	110.9	111.1	112.5	<u> </u>	·] ···
		PULP	, PAF	PER,	AND	PAP	ER P	ROD	UCTS	8						
PULPWOOD AND WASTE PAPER																
lpwood: Receipts thous. cords (128 cu.ft.)	³81,007	³79,547	6,774	7,206	6,258	5,972	(²)									
Consumption do	379,703 6,697	379,604 6,045	6,645 5,693	7,058 5,917	6,459 5,600	5,658 6,045	(2) (2) (2)									
aste naner:	1				l											
Consumption thous sh tons. Stocks, end of period dodo	³13,185 831	°13,523 11,042	1,109 958	1,135 949	1,016 941	966 993	(2) (2)									
WOODPULP				i												
roduction: Total, all grades # thous. sh. tons	³52,055	³51,783	4,309	4,459	4,268	3,590	(²)									
Dissolving and special alpha do do	1,418 38,931	1,366 39,597	102 3,309	113 3,443	129 3,251	85 2,675	(2) (2) (2) (2) (2) (2) (2)									.
Sulfite do Groundwood do	1,911 4,887	1,812 5,038	149 427	154 423	147 407	130 420	(2) (2)									
Semichemical do	3,938	3,940	322	326	301	279	(2)									
ocks, end of period: Total, all millsdo	944	1,198	1,141	1,267	1,341	1,198	(²)									
Pulp mills do Paper and board mills do	439 449	690 454	602 485	745 462	842 443	690 454	(2) (2) (2) (2)									.
Nonpaper mills do	57	54	54	60	56	54						***************************************				1
oports, all grades, total	³3,805 769	³3,678 784	347 63	274 62	267 53	315 85	221 50	303 42	319 62	316 52	326 69	302 55	261 32	279 60	298 52	
All other do	³3,037	³2,894	284	212	214	230	172	261	257	264	257	247	229	219	246	i
nports, all grades, total	³ 4,051 194	³4,086 201	279 24	406 27	318 10	269 8	270 26	310 9	296 10	306 22	302 8	287 12	289 6	350 17	541 8	i
All other do	°3,858	33,885	255	379	308	262	244	301	286	284	294	275	283	333		

Unless otherwise stated in footnotes below, data	1980	1981		198	31		1982										
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	
	PULP	PAP	ER, A	ND I	PAPE	R PF	RODU	CTS-	–Con	tinue	ed						
PAPER AND PAPER PRODUCTS																	
Paper and board: Production (Bu. of the Census): All grades, total, unadjusted thous. sh. tons. Paper	65,834 30,164 31,143 138 4,390	66,439 30,669 31,561 160 3,846	5,548 2,556 2,688 14 290	5,592 2,676 2,629 14 273	5,252 2,500 2,497 9 247	4,693 2,309 2,177 9 197	(5) (5) (5) (5) (5)										
Producer price indexes: 1967 = 100 Building paper and board	234.6 206.2	258.1 231.7	261.6 234.2	261.7 233.3	261.6 232.1	260.0 230.3	259.7 233.8	261.4 231.4	261.1 239.6	261.2 236.3	258.8 *240.2	255.9 •240.0	255.0 239.2	255.5 243.8	250.7 242.8	248 241	
Selected types of paper (API): Groundwood paper, uncoated: Orders, newthous. sh. tons. Orders, unfilled, end of perioddo Shipmentsdo	¹1,475 110 ¹1,498	¹1,449 100 ¹1,463	118 134 110	117 117 133	95 90 116	122 112 113	113 89 110	112 95 108	123 98 126	140 104 123	116 102 115	113 99 118	*138 117 *121	*113 100 *124	124 105 121		
Coated paper: Orders, new do Orders, unfilled, end of period do Shipments do	14,753 391 4,673	¹4,853 360 4,940	409 317 434	448 324 439	396 319 399	363 308 389	397 343 404	411 361 389	407 332 437	408 336 409	381 307 408	432 306 431	r399 312 r400	'443 '307 '443	396 283 422		
Uncoated free sheet papers: Orders, new	¹7,694 ¹8,326	17,735 18,234	627 688	677 713	570 655	592 599	628 676	612 658	713 745	641 689	621 669	645 670	610 628	*674 *705	609 653	************	
converting papers: Shipments thous. sh. tons. Tissue paper, production do	¹3,930 ¹4,375	¹3,873 ¹4,519	318 372	311 390	326 373	269 350	311 355	324 365	343 406	288 356	272 365	291 r358	271 '339	326 '378	307 345		
Newsprint: Canada: Productionthous metric tons. Shipments from millsdo Stocks at mills, end of perioddo	8,625 8,622 165	8,946 8,915 194	707 708 235	815 795 255	769 773 252	743 800 194	783 671 304	719 709 326	760 750 336	694 703 327	743 718 353	652 611 394	617 615 397	r642 r591 r448	557 601 405		
United States: Production do Shipments from mills do Stocks at mills, end of period do	4,239 4,234 21	4,753 4,735 38	400 410 38	420 417 41	412 407 46	359 367 38	415 406 46	378 376 48	420 413 55	396 374 76	385 376 86	383 381 89	363 351 101	372 363 110	363 363 110		
Consumption by publishers \(\begin{align*} \ldots & \ldots \\ \ld	10,089 732	10,165 961	839 944	922 959	914 947	892 961	790 981	775 1,038	868 1,068	863 1,045	879 1,012	804 1,003	'767 992	*807 *952	825 903		
Imports thous. sh. tons Price, rolls, contract, f.o.b. mill, freight allowed or delivered Index, 1967 = 100	7,279 3279.3	6,977 3308.1	513 316.8	649 316.8	624 316.8	557 316.8	585 316.8	524 318.1	608 318.1	503 321.1	620 r322.4	570 r319.4	460 318.4	520 318.4	489 318.4	318	
Paper products: Shipping containers, corrugated and solid fiber shipmentsmil. sq. ft. surf. area	241,377	244,429	21,094	21,867	18,189	17,600	18,961	18,638	21,218	19,941	18,720	20,071	18,610	20,414	20,657	•••••	
Folding paper boxes, shipments thous. sh. tons mil. \$	(2) (2)													.,			
		RUI	BBER	ANI	RU	BBEI	R PRO	DDUC	CTS								
RUBBER																	
Natural rubber: Consumptionthous. metric tons Stocks, end of perioddodo	586.15 126.67	634.67 142.43	52.13 114.37	57.32 122.97	49.68 130.51	42.56 142.43	54.59 138.36	51.64 138.02	53.56 134.39	54.40 67.00	48.69 126.26	55.71 119.72	48.16 62.07	59.15 55.64			
Imports, incl. latex and guayulethous. lg. tons Price, wholesale, smoked sheets (N.Y.) \$ per lb	598.31 40.730	662.41 40.576	62.76 0.504	69.42	56.23 0.456	49.13 0.483	50.99 0.488	59.33 0.465	45.71 0.470	53.86 0.453	56.19 0.453	63.39 0.461	38.67 0.465	54.35 0.468	40.60 0.445	0.42	
Synthetic rubber: Productionthous. metric tons Consumptiondo	2,015.24 1,854.01	2,021.45 1,889.71	168.90 156.72	169.98 163.75	157.68 141.13	125.51	140.49 143.09	145.76 138.94		154.86 134.63	155.44 133.07	139.74 137.02	117.46 106.51	123.55 134.91			
Stocks, end of period	341.77 422.78	349.02 334.63	333.47 24.40	352.57 23.94	364.38 22.49	349.02 21.65	340.36 27.76	340.43 23.46	356.30 31.18	376.91 26.53	375.59 24.73	363.58 25.23	357.90 20.40	343.63 22.04	22.83		
Pneumatic casings, automotive: Productionthous	1159,263	181,762	15,851	16,534	13,750	11,855	14,866	15,387	17,051	15,077	14,856	15,669	12,293	14,835		**********	
Shipments, total do Original equipment do. Replacement equipment do. Exports do.	177,063 40,227 131,271 5,565	201,105 41,711 153,716 5,678	17,982 3,123 14,503 356	18,179 3,537 14,168 474	13,992 2,758 10,823 411	361	14,144 2,478 11,365 301	13,704 2,769 10,573 362	17,312 3,697 13,216 399	17,676 3,679 13,652 345	18,216 3,970 13,989 257	19,428 4,074 15,018 336	16,421 3,038 13,199 264	17,700 2,817 14,625 258			
Stocks, end of period	33,298 9,058	40,863 11,088	36,088 725	36,556 653	41,112 990	40,863 485	42,904 385	46,254 461	47,817 614	46,583 454	45,337 463	43,475 653	40,763 381	40,192 454	385		
Exports (Bu. of Census) do	4,557	3,428	259	268	208	231	141	151	254	174	102	178	195	162	201		

Unless otherwise stated in footnotes below, data	1980	1981		19	31		1982											
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.		
	L	STON	E, CI	LAY,	AND	GLA	SS P	RODI	JCTS			I						
PORTLAND CEMENT																		
Shipments, finished cementthous. bbl CLAY CONSTRUCTION PRODUCTS	¹404,569	¹382,452	37,303	36,266	29,590	23,495	15,149	17,755	25,729	28,213	30,984	35,388	34,527	35,957	35,351			
Shipments: Brick, unglazed (common and face)												,						
mil. standard brick Structural tile, except facing thous. sh. tons Sewer pipe and fittings, vitrified	6,090.1 101.5 758.7	5,199.9 91.9 462.2	440.6 7.3 41.1	431.3 10.6 41.7	352.6 6.1 30.9	276.7 5.1 21.9	176.7 3.2 14.9	213.7 2.7 13.4	345.1 3.5 23.3	370.9 2.6 25.9	398.4 3.7 29.0				***************************************			
mil. brick equivalent Floor and wall tile and accessories, glazed and unglazed mi. sq. ft	45.4 297.6	35.3 287.8	3.0 25.3	3.2 23.7	2.4 21.5	2.6 22.8	1.8 20.7	1.6 20.7	2.5 27.0	3.0 25.7	2.4 31.0							
Price index, brick (common), f.o.b. plant or N.Y. dock	280.8	300.2	303.2	303.1	303.8	303.8	303.8	304.2	304.2	308.4	r309.5	¹310.0	312.3	312.3	312.5	312.5		
Flat glass, mfrs.' shipments thous. \$	868,459	952,283	243,260			226,926			194,972			219,074						
Glass containers: Productionthous. gross	327,972	321,373	25,943	29,305	23,849	19,912	24,442	26,095	29,204	26,673	27,293	27,934	r25,982	27,994				
Shipments, domestic, total ‡	323,899 28.075	316,408 28,728	26,478 2,812	25,865 2,297	23,823 1.928	23,600 1.968	°24,731 2.517	23,307 2,208	27,448 2,579	26,259 2,488	26,774 2,520	28,991	¹ 25,165	28,148 3.489	***************************************			
Beverage do	57,848 122,678 24,574	60,248 113,066 24,003	4,809 8,733 1,937	4,596 8,487 2,124	4,454 8,175 1,893	4,488 8,208 1,832	3,696 8,559 2,097	4,103 8,462 1,541	5,299 9,503 1,947	5,156 9,509 1,865	5,699 9,695 1,852	2,834 6,326 10,254 1,943	75,732 78,661 71,607	6,013 9,081 1,779				
Wide-mouth containers: Food and dairy productsthous. gross	61,212	62,404	5,616	5,955	5,214	5,019	5,491	4,906	5,764	4,989	4,978	5,417	4,832	5,750				
Narrow-neck and wide-mouth containers: Medicinal and toilet	26,250 3,262	725,300 72,659	2,339 232	2,172 234	52,041 5118	⁵ 1,947 ⁵ 138	52,238 5133	*1,970 *117	⁵ 2,224 ⁵ 132	*2,099 *153	1,848 182	2,019 198	^r 1,542 193	1,773 263				
Stocks, end of period do GYPSUM AND PRODUCTS	46,966	46,683	47,960	50,420	50,278	46,683	46,462	49,124	50,405	51,009	51,433	49,982	r50,532	50,115				
Production: Crude gypsum (exc. byproduct) thous. sh. tons Calcined	¹12,376 ¹11,848	11,434 11,359	1,030 970	866 924	924 778	862 825	784 872	844 688	820 919	886 971	855 809	949 965	912 923	1,009 945				
Imports, crude gypsumdo	7,365	7,593	642	623	703	500	375	397	405	218	531	772	469	728				
Sales of gypsum products: Uncalcineddo	15,544	¹4,904	521	452	419	448	308	294	277	327	401	421	384	394				
Calcined: Industrial plasters do Building plasters: Regular basecoat do	40 9 217	¹370 ¹225	31 19	36 21	29 18	26 15	25 16	26 17	30 21	40 16	39 14	38 16	34 16	37 15				
All other (incl. Keene's cement) do Board products, totalmil. sq. ft	161 14,131	157 113,759	13 1,127	12 1,133	9 982	10 955	965	9 876	13 1,087	1,100	97 <u>1</u>	1,120	1,098	1,169				
Lath	78 339 190	59 325 208	27 19	25 17	21 15	3 21 15	22 15	18 15	25 18	24 20	3 20 20	26 25	3 24 22	26 23				
Regular gypsum board do Type X gypsum board do Predecorated wallboard do	9,923 3,266 105 4229	19,295 3,446 122 304	748 291 10 28	752 297 10 28	655 258 9 20	629 258 10 19	633 259 10 23	564 236 9 31	704 286 11 39	716 286 10	618 262 9 38	716 299	702 298 10 38	749 315 11				
5/16 mobile home board do	-229	304					UCTS			41	36	40	30	42				
FABRIC			<u>_</u>															
Woven fabric, finishing plants: * Production (finished fabric) mil. linear yd Cotton	8,420 3,531	8,176 3,212	³609 ³306	668 256	828 236	³657 ³255	495 172	550 196	³695 ³255	540 194	531 196	³663 ³259 r³403	r366 r133	508 186				
Manmade and silk fiber	4,990 769 339	5,163 740 317	3502 776 333	412 780 329	391 794 334 459	3402 740 317	323 725 284	354 742 312	3440 729 314	346 722 306	335 692 293	660 282	r233 r662 r282	323 673 285				
Manmade and silk fiber do Backlog of finished orders do	430 8,495	423 9,018	443 715	451 687	642	423 601	441 580	430 575	414 585	416 592	400 554	378 529	*380 *485	388 437				
Cottondo Manmade and silk fiberdo COTTON	4,577 4,219	4,711 4,307	364 351	348 339	343 301	326 275	249 330	255 320	269 317	264 328	254 300	194 334	7182 7302	176 261				
Cotton (excluding linters): Production: Ginnings ¶thous. running bales	²10,826	²15,150	1,725	5,539	10,157	13,502							40	453	1,531	5,290		
Crop estimatethous net weight bales § Consumptionthous running bales	² 11,122 6,135	² 15,646 5,409	³517	448	403	³400	378	391	³493	410	392	³460	317	386	³ 468	11,947		
Stocks in the United States, total, end of period # thous running bales Domestic cotton, totaldo	9,261 9,260	13,777 13,776	16,327 16,326	15,628 15,627	14,907 14,907	13,777 13,776	12,567 12,566	11,424 11,422	10,060 10,058	8,976 8,974	8,117 8,116	7,170 7,169	6,399 6,397	16,362 16,359				
On farms and in transit	2,502 5,927 831	3,752 9,268 756	13,692 1,940 694	10,906 4,059 662	7,170 7,064 673	3,752 9,268 756	2,257 9,488 821	1,810 8,729 883	1,221 7,921 916	953 7,112 909	924 6,292 900	728 5,542 899	300 5,269 828	10,617) 4,998) 744)				
See footnotes at end of tables.																		

Unless otherwise stated in footnotes below, data	1980	1981		198	31		1982										
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Ann	ual	Sept.	Oct.	Nov.	Dec	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	
		TF	EXTII	E PI	RODU	JCTS-	S—Continued										
COTTON AND MANUFACTURES—Cont.																	
Cotton (excluding linters)—Continued Exportsthous. running bales	17,975	8,021	261	262	478	. 737	653	754	873	676	484	498	396	342	351		
Imports thous net-weight bales § Price (farm), American upland § cents per lb	16 74.4	17 54.5	2 58.0	62.3	60.1	. 10. 1 51.2	0 49.9	0 48.4	(°) 50.1	53.5	13 54.2	4 54.9	57.6	52.1	10 54.9	▶59.5	
Price, Strict Low Middling, Grade 41, staple 34 (1-1/16"), average 10 markets cents per lb	³71.5	383.0	60.8	60.6	57.5	55.1	57.8	57.3	59.7	62.0	62.4	61.1	65.0	60.4	59.0	58.6	
Spindle activity (cotton system spindles): Active spindles, last working day, totalmil	- 1			1	1				1								
Consuming 100 percent cotton do	15.9 6.0	15.4 5.5	15.5 5.5	15.4 5.4	15.3 5.5	15.4 5.5	15.4 5.5	15.3 5.5	15.3 5.5	15.2 5.5	15.3 5.6	14.9 5.6 47.8	14.9 5.5	14.7 5.4	14.6 5.3		
Spindle hours operated, all fibers, total bil Average per working day do	102.4 0.388	91.8 0.357	48.9 0.358	7.4 0.371	7.0 0.349	46.9 0.278	6.5 0.327	6.8 0.339	48.3 0.414	6.7 0.337	6.6 0.327	0.310	5.4 *0.268	6.2 0.311			
Consuming 100 percent cotton do	42.0	33.6	43.1	2.6	2.5	⁴2.5°	2.3	2.4	43.0	2.5	2.5	42.9	2.0	2.4	42.9		
Cotton broadwoven goods over 12" in width: Production (gtrly.) mil. sq. yd	4,456	r3,913	⁷ 956			71.002			r983			953					
Orders, unfilled, end of period, compared with avg. weekly production no. weeks' prod	⁵ 15.8	14.1	14.4	12.7	12.8	14.6	15.3	12.5	12.7	11.5	9.6	8.8	12.7	10.7			
Inventories, end of period, compared with avg. weekly production no. weeks' prod	54.2	5.6	5.6	5.8	6.4	6.7	6.8	7.0	7.3	7.1	6.3	7.2	11.2	8.7			
Ratio of stocks to unfilled orders (at cotton mills), end of period	50.29	0.40	0.39	0.46	0.50	0.46	0.45	0.56	0.58	0.62	0.65	0.82	r0.88	0.81			
Exports, raw cotton equiv. thous. net-weight §bales Imports, raw cotton equivalentdo	540.2	345.6	25.8	27.5	26.6	21.9	18.2	18.6	20.4	20.6	24.3	24.8	22.7	15.7		 	
Imports, raw cotton equivalent do MANMADE FIBERS AND MANUFACTURES	567.0	766.3	62.9	71.8	66.7	58.9	66.5	55.1	47.4	45.4	54.1	47.8	41.4	48.7			
Fiber production, qtrly:				}			}										
Filament yarn (acetate) mil. lb Staple, incl. tow (rayon) do	308.5 443.3	257.0 460.6	65.8 118.5			54.8 111.7			52.9 95.4								
Noncellulosic, except textile glass: Yarn and monofilamentsdo	3,725.3	3,792.8	971.3			834.2			785.4							,	
Staple, incl. tow	4,148.2 867.3	4,191.1 1,041.1	1,051.3 280.6			940.8 263.2			864.6 206.9								
Fiber stocks, producers', end of period: Filament yarn (acetate)mil. lb	18.4	14.3	12.6	ĺ		14.3			13.5		i	-			 		
Staple, incl. tow (rayon)	27.2	31.1	27.3			31.1			38.2								
Yarn and monofilaments do Staple, incl. tow do	289.3 287.0	337.0 327.8	334.4 336.6			337.0 329.8			330.7 340.3								
Textile glass fiber do	104.1	146.2	121.0			146.2			151.8								
Manmade fiber and silk broadwoven fabrics: Production (qtrly.), total # mil. sq. yd Filament yard (100%) fabrics # do	10,774.1	11,448.7	2,890.9			2,764.9			¹ 2,352.3			2,282.0					
Chiefly rayon and/or acetate fabrics do	3,980.6	3,911.4 503.9	979.0 127.8			900.9 120.3			769.0 795.5			834.4 105.8					
Chiefly nylon fabrics do Spun yard (100%) fab., exc. blanketing # do	5,899.6	535.0 6,431.4	137.5			125.7 1,596.3			110.3 1,326.3			110.0 1,189.7					
Rayon and/or acetate fabrics, blends do Polyester blends with cotton do Filament and spun yarn fabrics	430.2 4,342.9 763.8	584.11 4,517.0 1,002.2	142.0 1,121.5			92.0 1,182.6			30.5 1,009.3 225.3			28.7 901.3 223.4					
Manmade fiber gray goods, owned by weaving mills:	163.6	1,002.2	265.2			239.4			-425.5	***************************************	*************	243.4					
Ratio, stocks to unfilled orders, end of period Prices, manufacturer to mfr., f.o.b. mill:																	
50/50 polyester/carded cotton printcloth, gray, 48", 3.90 yds./lb., 78x54-56	0.510																
Manmade fiber manufactures:	}																
Exports, manmade fiber equivalent mil. lbs Yarn, tops, thread, cloth	771.54 418.64	637.73 318.89	48.77 22.74	50.98 24.60	46.95 23.16	38.08 19.00	34.90 16.20	38.35 17.13	39.72 18.10	35.96 15.67	42.01 18.42	44.21 20.65	33.93 16.12	33.13 14.70			
Cloth, woven do Manufactured prods., apparel, furnishings do	249.77 352.91	208.48 318.84	13.84 26.02	15.97 26.38	15.51 23.79	12.74 19.09	9.72 18.70	10.13 21.22	11.48 21.61	10.59 20.29	12.11 23.59	13.36 23.56	10.66 17.80	9.32 18.44			
Imports, manmade fiber equivalent	540.64 97.48	639.08 130.52	56.77 10.05	67.24 12.33	49.12 10.56	39.51 7.71	53.18 10.88	48.07 8.73	47.74 9.33	40.14 9.58	67.85 12.27	91.93 12.48	77.34 9.50	100.05 14.40			
Cloth, woven	67.28 2443.15	95.38 508.56	7.77 46.72	8.46 54.92	8.02 38.56	5.83 31.80	7.74 42.30	6.58 39.34	6.82 38.41	6.79 30.56	8.74 55.58	9.14 79.46	6.58 67.83	10.44 85.65			
Apparel, total	378.52 187.74	434.87 184.70	40.84 17.30	47.43 22.75	31.96 12.63	25.97 8.64	36.48 12.46	33.95 11.22	32.29 10.55	25.39 8.56	40.45 15.32	53.04 21.76	43.58 17.80	60.91 26.41			
WOOL AND MANUFACTURES																	
Wool consumption, mill (clean basis): Apparel classmil. lb	113.4	127.8	411.4	9.4	9.4	111.2	9.4	9.6	412.8	9.0	8.2	19.4	5.9	8.1			
Carpet class	10.0 56.5	10.9 ² 75.3	*1.1 3.7	1.1 6.0	0.7 5.1	11.0 5.3	0.7 8.0	0.9 6.3	41.0 6.6	0.7 4.9	0.9 6.0	40.8 6.6	0.6 4.0	1.0 4.2	4.7		
Duty-free (carpet class)	26.0	26.1	1.6	1.8	2.0	2.0	2.1	1.6	1.8	2.0	2.0	2.6	1.7	2.0	1.8		
U.S. mills: Domestic—Graded territory, 64's, staple 2-3/4"																	
and up	⁵2.45 ⁵3.09	52.78 53.16	2.83 3.16	2.83 3.16	2.83 3.17	2.83 3.12	2.75 3.01	2.63 3.03	2.44 3.13	2.40 3.23	2.40 3.36	2.40 3.21	2.40 3.04	2.40 2.94	2.40 2.87	2.76	
Wool broadwoven goods, exc. felts: Production (qtrly.) mil. sq. yd	158.3	r165.0	r36.4			r33.1			38.1			36.1					
FLOOR COVERINGS			}							,							
Carpet, rugs, carpeting (woven, tufted, other), shipments, quarterly mil. sq. yds	1,058.4	990.6	252.5			217.6			214.0			242.7					
APPAREL																	
Women's, misses', juniors' apparel cuttings: Coatsthous. units	16,808	14,845	1,515	1,419	849	639											
Dresses do Suits (incl. pant suits, jumpsuits)do	179,401 18,162	136,176 13,605	11,238 1,196	9,961 1,026	8,152 939	8,015 813								1			
Skirts do Blouses thous dozen.	70,152	91,025 30,322	6,907	7,035 2,641	6,461 2,178	5,192											

Unless otherwise stated in footnotes below, data	1980	1981	1981			1982										
through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	Anr	ual	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
		TE	EXTII	E PF	RODU	CTS-	Con	tinue	ed			·	1			
APPAREL—Continued																
Men's apparel cuttings: Suitsthous units.	14,074	14,686	1,294	1,367	1,227	1,139		,								
Coats (separate), dress and sport	16,906 124,011 253,640	14,686	1,801	1,682	1,433	1,312										
Shirts, dress and sport thous doz. Hosiery, shipments thous doz. pairs.	40,988 286,379	38,112 304,826	3,198 26,448	3,107 27,141	2,864 24,125	2,441 19,796	25,065	21,634	23,902	23,898	22,248	23,888	29,632	22,725		
		TR	ANS	POR'	ГАТІ	ON E	QUIF	MEN	T			-				•
AEROSPACE VEHICLES																
Orders, new (net), qtrly, total @ mil. \$ U.S. Government do	70,409 33,497	70,912 38,747	13,276 8,144			18,485 10,588			20,078 11,016			18,469 10,908				
Prime contract	68,407 58,440	69,024 68,865	12,950 16,636			17,893 18,693			19,406 16,719			17,951 18,073				
U.S. Government	26,674 90,517	32,691 92,564	8,126 92,772			9,226 92,564			8,740 95,923			9,294 96,319				
U.S. Government do Aircraft (complete) and parts do	37,200 47,186 11,595	43,256 43,690	41,894 47,274			43,256 43,690			45,532 46,479 13,534			47,146 46,103				
Engines (aircraft) and parts	8,572	12,959 9,164	12,915 8,284			12,959 9,164			10,988			13,446 10,873				
Other related operations (conversions, modifications), products, services mil. \$	10,330	13,885	12,117			13,885			11,981			13,070				
Aircraft (complete); Shipments # # do	13,043.1	13,195.0	1,287.8	781.4	1,017.7	1,592.4	708.3	774.2	1,122.0	806.0	956.5	739.9	564.0	466.1		
Airframe weight ##thous. lb Exports, commercial ‡‡ mil. \$	97,068 8,250	89,076 8,551	8,102 804	5,067 538	7,025 476	9,871 952	4,187 504	3,993 369	5,857 809	4,270 412	5,045 453	4,059 434	3,437 445	2,801 370	77	
MOTOR VEHICLES (NEW) Passenger cars:																
Factory sales (from U.S. plants), totalthous Domestic	³6,400 5,840	6,225 5,749	522 487	520 486	425 394	370 344	273 256	320 302	469 431	488 441	510 468	561 523	439 405	⁷ 356 334	°429 406	²415
Retail sales, total, not seasonally adj † do Domestics §	8,979 6,581	8,535 6,209	687 519	649 492	585 432	523 358	535 368	632 457	777 576	669 499	774 584	651 452	630 430	609 409	671 488	656 488
Imports §	2,398	2,326	168 8.8	157 7.4	152 7.7	165 7.2	166 7.9	175 8.4	201 7.7	170 7.3	190 8.2	199 67.0	200 7.4	200 7.6	183 8.3	169 7.9
Domestics §			6.7 2.1	5.3 2.1	5.4 2.3	4.9 2.3	5.4 2.5	6.2 2.2	5.6 2.0	5.4 1.8	6.2 2.0	64.8 62.2	5.1 2.2	5.4 2.2	6.0 2.3	5.5 2.4
Retail inventories, end of period, domestics: † Not seasonally adjustedthous	1,520	1,471	1,427	1,481	1,490	1,471	1,432	1,325	1,247	1,256	1,213	1,364	1,377	1,379	1,350	
Seasonally adjusted §	1,440 2.6	1,495 2.9	1,500 2.7	1,528 3.5	1,494 3.3	1,495 3.7	1,383 3.1	1,241 2.4	1,171 2.5	1,187 2.6	1,146 2.2	61,247 63.1	1,378 3.2	1,531 3.4	°1,481	1,412 3.1
Exports (BuCensus), assembled carsthous To Canadado	607.80 509.13	538.12 470.86	37.99 34.08	35.22 28.41	29.73 24.95	29.18 22.37	17.27 13.42	23.87 19.46	40.21 36.03	49.59 45.72	45.70 42.55	38.66 35.72	34.29 32.27	21.18 18.39	26.30 23.70	
Imports (BuCensus), complete units ## do From Canada, total do	3,310.7 594.8	°2,998.6 °563.9	°174.8 °44.9	°240.4 48.8	237.3 58.9	233.7 45.7	259.9 37.1	195.9 58.0	285.7 70.4	249.2 73.2	309.5 71.2	275.5 83.3	261.9 44.1	263.0 47.7	217.4 61.0	
Registrations ¶, total new vehicles	8,761 2,469	8,444 2,432	763 209	654 182	614 169	612 184	509 159	546 164	626 176	672 186	708 189	717 206	626 203	627 214	625 200	
Trucks and buses: Factory sales (from U.S. plants), totalthous. Domesticdo	³1,667 1,464	1,700 1,513	130 115	165 152	123 112	127 115	116 108	144 133	197 184	183 169	193 180	212 197	166 154	'142 134	155 146	
Retail sales, seasonally adjusted: † Light-duty, up to 14,000 lbs. GVW do	⁸ 1,963.5	\$1,746.6	150.3	127.2	130.8	114.2	173.4	182.0	196.0	165.6	198.5	154.1	156.3	141.8	192.1	142.1
Medium-duty, 14,001-26,000 lbs. GVW do Heavy-duty, 26,001 lbs. and over GVW do	⁵ 92.3 ⁵ 175.7	*73.9 *151.7	5.9 13.3	4.9 11.4	4.3 11.2	5.3 13.6	3.9 14.6	3.4 12.2	3.3 12.6	3.8 13.2	4.7 12.4	4.2 11.7	4.1 9.8	⁷ 3.4 710.4	4.2 10.1	3.4 9.3
Retail inventories, end of period, seasonally adjusted †thous	5574.0	5559.4	516.2	548.2	547.5	575.5	517.0	492.4	473.9	510.6	521.5	566.0	622.5	⁷ 691.7	668.3	
Exports (BuCensus), assembled units	1,133.28	170.50 838.92	11.16 64.53	11.95 78.55	10.77 69.97	8.97 72.29	8.22 74.80	11.46 57.15	12.68 82.00	12.37 73.68	12.89 71.63	13.81 73.27	9.17 51.73	7.80 56.50	6.62 57.33	i
Registrations,¶ new vehicles, excluding buses not produced on truck chassisthous	2,477	2,185	196	171	169	180	156	171	208	219	226	226	197	193	182	
Truck trailers and chassis, complete (excludes detachables), shipments number	136,702	117,635	10,540	11,060	9,408	9,628	7,476	8,418	9,903	8,453	8,023	8,382	' 6,046	7,365		
Vans	86,248 11,849	70,928 7,239	6,854 387	7,378 542	6,109 404	5,611 336	4,327 252	4,928 203	6,355 429	5,300 440	5,240 504	5,388 376	r4,025 305	5,351 243		
Trailer chassis (detachable), sold separately do RAILROAD EQUIPMENT	14,202	8,615	530	510	817	561	449	564	817	846	790	598	⁻ 680	600	***************************************	
Freight cars (new), for domestic use; all railroads and private car lines (excludes rebuilt cars and																
cars for export): Shipments number	185,920	144,901	3,529	2,900	2,063	2,711	1,995	1,762	2,247	2,443	1,794	1,339	1,369	1,060	967	
Equipment manufacturers do New orders do do	180,357 143,955	141,435 117,916	3,299 1,743	2,656 1,013	1,839 860	2,455 1,811	1,833 815	1,526 753	2,032 1,485	2,265 539	1,694 487	1,244 586	1,369 179	992 373	913 583	
Equipment manufacturers do Unfilled orders, end of period do Equipment manufacturers do	140,140 52,370 47,866	117,288 16,485 14,819	1,743 21,852 19,837	638 18,831 16,685	860 17,724 15,802	1,811 16,485 14,819	815 14,735 13,231	753 13,486 12,218	1,485 12,599 11,546	539 10,560 9,685	487 9,253 8,478	586 8,500 7,820	179 7,187 6,507	373 6,829 6,217	583 5,895 5,337	1
Freight cars (revenue), class 1 railroads (AAR): ‡	1			,						·						
Number owned, end of periodthous Held for repairs, % of total owned	1,168 8.8 92.56	1,111 6.9 89.37	1,122 7.2 89.83	1,119 7.2 90.00	1,116 7.0 89.64	1,111 6.9 89.37	1,110 7.0 89.32	1,105 7.4 89.02	1,100 7.6 88.76	1,095 7.6 88.48	1,090 7.7 88.19	1,083 8.0 87.71	1,077 8.1 87.47	1,069 7.9 86.94	1,059 8.3 86.24	
Average per car tons.	79.24	80.43	80.08	80.41	80.30	80.43	80.48	80.58	80.71	80.84	80.92	81.02	81.19	81.35	81.44	

FOOTNOTES FOR PAGES S-1 THROUGH S-32 General Notes for all Pages:

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

Page S-1

- † Revised series. See Tables 2.6 2.9 in the July 1982 SURVEY for revised estimates back to 1977. Pre-1977 estimates are available in The National Income and Product Accounts of the United States, 1929-76: Statistical Tables.
 - Includes inventory valuation and capital consumption adjustments.
- New series. Detailed descriptions begin on p. 18 of the Nov. 1979 Survey. See note "†" for this page for information on historical data.
- 8 Monthly estimates equal the centered three-month average of personal saving as a percentage of the centered three-month moving average of disposable personal income.

Page S-2

- 1. Based on data not seasonally adjusted.
- # Includes data not shown separately.
- ‡ Revised series. For wholesale see note "‡" for p. S-8. For manufacturing see note "‡" for p. S-3. For retail see note "†" for p. S-8.
- † See note "†" for p. S-3. § See note "†" for p. S-8. @ See note "‡" for p. S-8.
- * New series. Data back to 1967 are available from the National Income and Wealth Division, Bureau of Economic Analysis.

Page S-3

- ‡ Revised series. For wholesale see note "‡" for p. S-8. For manufacturing see note "†" for this page. For retail see note "†" for p. S-8.
- † Revised series. Data have been revised back to 1972. A detailed description of these revisions and historical data appear in the reports "Manufacturers' Shipments, Inventories, and Orders" M3-1.10 (1972-1980) and M3-1.11 (1977-81), available from the Bureau of the Census, Washington, D.C. 20233.
- § See note "†" for p. S-8.@ See note "‡" for p. S-8.
- New series. Data back to 1967 are available from the National Income and Wealth Division, Bureau of Economic Analysis.
- # Includes data for items not shown separately.

Page S-4

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

Page S-5

- 1. Based on unadjusted data.
- † See note "†" for p. S-3.
- @ Compiled by Dun & Bradstreet, Inc.
- # Includes data for items not shown separately.
- Ratio of prices received to prices paid (parity index).
- ¶ Revisions, back to 1975 for some commodities, are available upon request.
- ‡ See note "‡" for p. S-4.

Page S-6

- § For actual producer prices of individual commodities see respective commodities in the Industry section beginning p. S-19. All data subject to revision four months after original publication.
- † Revised series. Stage-of-processing producer price indexes have been revised back to 1976 to reflect updated industry input-output relationships and improved classification of
 - # Includes data for items not shown separately.
 - ‡ Effective Feb. 1982, data have been revised back to 1977 to reflect new seasonal factors.

Page S-7

- 1. Computed from cumulative valuation total.
- 2. Index as of Nov. 1, 1982: building, 334.5; construction, 362.3.
- # Includes data for items not shown separately.
- § Data for Oct. 1981, and Jan., Apr., July, and Sept. 1982 are for five weeks; other months four weeks.

Page S-8

- 1. Advance Estimate.
- ¶ Home mortgage rates (conventional first mortgages) are under money and interest rates on p. S-14.
 - Data include guaranteed direct loans sold.
- ‡ Effective Oct. 1982 SURVEY, seasonally adjusted wholesale trade data have been revised for Jan. 1981-March 1982. Effective April 1982 SURVEY, wholesale trade data have been revised for Jan. 1972-Dec. 1981. Revised data are available upon request.
- † Effective April 1982 Survey, retail trade data have been revised for the years 1972-1981. Revised data and a summary of the changes are available from the Census Bureau, Washington, D.C. 20233.
 - # Includes data for items not shown separately.

Page S-9

- 1. Advance estimate.
- 2. Effective Jan. 1979 data, sales of mail-order houses are included with department store sales.
 - 3. As of July 1.
 - Includes data for items not shown separately.
- ‡ Revisions for Jan. 1977-Oct. 1979 appear in "Current Population Reports," Series P-25, No. 870, Bureau of the Census.
- ¶ Effective with the February 1982 Survey, the labor force series have been revised back to 1970 to reflect the 1980 Census of Population. Seasonal adjustment factors were revised accordingly. Revised monthly series appear in the February 1982 issue of Employment and Earnings. Revised annual series will appear in the March 1982 issue of Employment and Earnings, U.S. Department of Labor, Bureau of Labor Statistics.
- * New series. The participation rate is the percent of the civilian noninstitutional population in the civilian labor force. The employment-population ratio is employment as a percent of the total noninstitutional population, 16 years and over.
 - † See note "†" for p. S-8.

Page S-10

- † Effective June 1982 Survey, data have been revised back to 1977 based on March 1981 benchmark levels and updated seasonal adjustment factors. See "BLS Establishment Estimates Revised to March 1981 Benchmarks," in the June 1982 issue of Employment and Earnings. Effective July 1981 Survey, data have been revised back to 1974 to reflect new benchmarks and new seasonal adjustment factors. See "BLS Establishment Estimates Revised to March 1980 Benchmarks," in the July 1981 issue of Employment and Earnings.

 ¶ See note "¶" for p. S-9.

Page S-11

- † See note "†" on p. S-10.
- ‡ This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
 - ¶ Production and nonsupervisory workers.

Page S-12

- 1. This series has been discontinued.
- See corresponding note on p. S-10.
- Production and nonsupervisory workem.
- ‡ Earnings in 1977 dollars reflect changes in purchasing power since 1977 by dividing by Consumer Price Index.
 - § Wages as of Nov. 1, 1982; Common, \$14.69; Skilled, \$19.10.

Page S-13

- 1. Average for Dec.
- ¶ Effective April 1982 Survey, the series for work stoppages involving six or more workers have been discontinued and have been replaced by series for work stoppages involving 1,000
 - # Includes data for items 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).
- New series. Beginning Dec. 1978, data are for all investment account securities; comparable data for earlier periods are not available.
- @ 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 a percent of average covered employment in a 12-month period.

Page S-14

- 1. Data are for fiscal years ending Sept. 30 and include revisions not distributed to the
- 2. Average for the year.
- 3. Daily average
- 4. Beginning Jan. 1981, data are for top-rated only. Prior data cover a range of top-rated and regional dealer closing rates. See also note 3 for this page
- 5. Beginning Oct. 1981, data represent the total surplus or deficit (budget surplus or deficit plus off-budget surplus or deficit).
 - 6. Interest rate charged as of Nov. 1, 1982 was 12.48.
 - # Includes data for items not shown separately
- The Department of Health, Education, and Welfare was redesignated as the Department of Health and Human Services by the Department of Education Organization Act.
- ¶ Adjusted to exclude domestic commercial interbank loans and Federal funds sold to domestic commercial banks.
- ‡ Rates on the commercial paper placed for firms whose bond rating is Aa or the equivalent. Data through Oct. 1979 show a maturity for 120-179 days. Beginning Nov. 1979, maturity is for 180 days.
- @ Data through Oct. 1979 show a maturity for 150-179 days. Beginning Nov. 1979, maturity is for 180 days
 - ‡‡ Courtesy of Metals Week.
 - @@ Average effective rate.

Page S-15

- 1. M1-A has been discontinued. M1-B will now be designated "M1."
- † Effective Feb. 1982 SURVEY, the money stock measures and components have been revised back to 1959. The Federal Reserve has redefined the monetary aggregates. The redefinition was prompted by the emergence in recent years of new monetary assets-for example, negotiable order of withdrawal (NOW) accounts and money market mutual fund shares—and alterations in the basic character of established monetary assets—for example, the growing similarity of and substitution between the deposits of thrift institutions and those of commercial banks. Monthly data from 1959 to date are available from the Banking Section of the Division of Research and Statistics at the Federal Reserve Board, Washington, D.C. 20551.
- ‡ Composition of the money stock measures is as follows:
- M1.—This measure is currency plus demand deposits at commercial banks and interest-earning checkable deposits at all depositary institutions—namely NOW accounts, automatic transfer from savings (ATS) accounts, and credit union share draft balances—as well as a small amount of demand deposits at thrift institutions that cannot, using present data sources, be
- separated from interest-earning checkable deposits.

 M2.—This measure adds to M1 overnight repurchase agreements (RP's) issued by commercial banks and certain overnight Eurodollars (those issued by Caribbean branches of member banks) held by U.S. nonbank residents, money market mutual fund shares, and savings and small-denomination time deposits (those issued in denominations of less than \$100,000) at all depositary institutions. Depositary institutions are commercial banks (including U.S. agencies and branches of foreign banks, Edge Act corporations, and foreign investment companies), mutual savings banks, savings and loan associations, and credit unions
- M3.—This measure equals M2 plus large-denomination time deposits (those issued in denominations of \$100,000 or more) at all depositary institutions (including negotiable CD's) plus term RP's issued by commercial banks and savings and loan associations.
- L.—This broad measure of liquid assets equals M3 plus other liquid assets consisting of other Eurodollar holdings of U.S. nonbank residents, bankers acceptances, commercial paper, savings bonds, and marketable liquid Treasury obligations.
- ## Includes ATS and NOW balances at all institutions, credit union share draft balances, and demand deposits at mutual savings banks.
- Overnight (and continuing contract) RP's are those issued by commercial banks to the nonbank public, and overnight Eurodollars are those issued by Caribbean branches of member banks to U.S. nonbank customers.
- @ Small time deposits are those issued in amounts of less than \$100,000. Large time deposits are those issued in amounts of \$100,000 or more and are net of the holdings of domestic banks, thrift institutions, the U.S. Government, money market mutual funds, and foreign banks and official institutions.
- # Includes data for items not shown separately.
- Number of issues represents number currently used; the change in number does not affect the continuity of the series.

Page S-16

- 1. Beginning Jan. 1981 data, U.S. Virgin Islands trade with foreign countries is included.
- § Number of issues represents number currently used; the change in number does not affect the continuity of the series.
- For bonds due or callable in 10 years or more.
- Includes data for items not shown separately.
- @ 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

Page S-17

- 1. See note 1 for p. S-16.
- 2. Beginning Jan. 1982 data, the Customs value is being substituted for the f.a.s. value.
- Includes data not shown separately.
- Data may not equal the sum of geographic regions, or commodity groups and principal commodities, because of revisions to the totals not reflected in the components.

Page S-18

- 1. See note 1 for p. S-16.
- 2. Annual total; quarterly or monthly revisions are not available.
- Before extraordinary and prior period items.
- For month shown
- Domestic trunk operations only (averaging about 90 percent of domestic total).
- 6. See note 2 for p. S-17.
- # Includes data for items not shown separately.
- § Total revenues, expenses, and income for all groups of carriers also reflect nonscheduled service
- ‡ Beginning Jan. 1977, defined as those having operating revenues of \$50 million or more.

 ¶ Average daily rent per room occupied, not scheduled actor.
- Average daily rent per room occupied, not scheduled rates.

 © Effective January 1, 1980, contract carriers are not included because the data filed by these carriers were substantially reduced in scope, in accordance with the ICC revised reporting regulations.

Page S-19

- 1. Reported annual total; monthly revisions are not available.
- Data withheld to avoid disclosing operations of individual companies.
- 3. Beginning Jan. 1981, data represent gross weight (formerly phosphoric acid content weight) and are not comparable with data shown for earlier periods.
- 4. A portion of data is being withheld to avoid disclosing information for individual companies; not comparable with other published data.
 - 5. Beginning Jan. 1980 data, another company is included.
- 6. Data for carbon dioxide gas are being suppressed because they do not meet publication standards.
 - 7. Less than 500 short tons.
 - Includes data for items not shown separately.
- § Data are reported on the basis of 100 percent content of the specified material unless otherwise indicated.
- Revisions, back to 1977 for some commodities, are available upon request.
- Data for Jan. 1977-June 1979 exclude potassium magnesium sulfate; not strictly comparable with data shown for other periods.

Page S-20

- 1. Reported annual total; monthly revisions are not available.
- Annual total includes Hawaii; not distributed to the months.
- 3. Beginning 1982, the reporting frequency has been changed from a monthly to a quarterly basis. Revised quarterly data for 1979 through 1981 are available upon request.
- 4. Reported annual total, including Hawaii; monthly data are preliminary and subject to change.
- § Data are not wholly comparable from year to year because of changes from one classification to another
- ‡ Revisions back to 1977 are available upon request.

Page S-21

- 1. Average for three months, price not available for Apr.-Dec.
- 2. Crop estimate for the year.
- Stocks as of June 1.
- 4. Stocks as of June 1 and represents previous year's crop; new crop not reported until June (beginning of new crop year).
- 5. Previous year's crop; new crop not reported until Oct. (beginning of new crop year).
- See note "@@" for this page
- Data are no longer available.
- See note 4 for p. S-22
- October 1 estimate of the 1982 crop.
- November 1 estimate of the 1982 crop.
- Excludes pearl barley.
- Bags of 100 lbs.
- Revised crop estimates back to 1975 are available upon request.
- Revisions, back to 1977, for some commodities, are available upon request.
- Revisions back to 1975 are available upon request.
- @@ Data are quarterly except for June (covering Apr. and May) and Sept. (covering June-Sept.).

Page S-22

- 1. Average for 11 months; price not available for Dec.
- Average for nine months; index not available for Apr.-June.
- Data are no longer available.
- Effective with this reporting, data are for three-month intervals.
- Cases of 30 dozen.
- Bags of 132.276 lbs.
- ‡ Revisions for Jan.-July 1979 (back to 1975 for grindings of wheat) are available upon
- @ Revisions back to 1977 are available upon request.
- Effective Apr. 1981 Survey, the wholesale price of smoked hams has been discontinued and has been replaced with the comparable price index. Annual indexes prior to 1979 and monthly indexes prior to Feb. 1980 are available upon request.

Page S-23

1. Crop estimate for the year.

November 1982

- Average for seven months; price not available for July, Aug., and Oct.-Dec.
- Annual total; monthly revisions are not available.
- Data are no longer available.
- October 1 estimate of the 1982 crop.
- 6. November 1 estimate of the 1982 crop.
- § Monthly data reflect cumulative revisions for prior periods.
- ‡ Revisions back to 1975 are available upon request.
- New series. Source: Bureau of Labor Statistics.
- # Totals include data for items not shown separately.

Page S-24

- 1. Annual data; monthly revisions not available.
- 2. Less than 500 short tons.

Page S-25

- 1. Annual data; monthly revisions are not available.
- 2. For month shown
- 3. Effective Jan. 1981, data are revised back to Jan. 1980. Inventory data formerly calculated by the Bureau of the Census are now based on the Steel Service Center Institute monthly Business Conditions report.

Page S-26

- 1. Annual data; monthly revisions are not available.
- Less than 50 tons
- Includes secondary smelters' lead stocks in refinery shapes and in copper-base scrap.
- @ All data (except annual production figures) reflect GSA remelted zinc and zinc purchased for direct shipment.
- ‡ Source for monthly data: American Bureau of Metal Statistics. Source for annual data: Bureau of Mines.
- # Includes data not shown separately.
- Effective July 1980 Survey, data are revised and shown on a new base. The sample size has been restored to 100 firms and the base has been changed to 1977=100. The revised series are not comparable to previously published data.
- * New series. These indexes are based on shipments of hydraulic and pneumatic products reported by participating members of the National Fluid Power Association. Data back to 1959 are available upon request.

Page S-27

- 1. Effective Jan. 1980, total stocks for bituminous coal and lignite exclude residential and commercial stocks and are not comparable with data shown for earlier periods.
 - 2. Data are for five weeks; other months 4 weeks.
 - Based on new 1981 stock level. See also note "‡" for this page.
- For month shown.
- # Includes data for items not shown separately.
- @ Beginning July 1977, data are representive of those manufacturers reporting and are not an average of the total industry; they are not directly comparable with earlier data.
- * New series. Annual data prior to 1978 and monthly data prior to April 1979 are available upon request.
 - § Includes nonmarketable catalyst coke.
- ¶ Includes small amounts of "other hydrocarbons and alcohol new supply (field production)," not shown separately.
 - Revisions for 1978 are available upon request.
- Effective with 1981 petroleum data, the Energy Information Agency has changed some definitions and concepts to reflect recent developments in refining and blending practices. These changes include adding a category for gasohol production to motor gasoline production and accounting more precisely for distillate and residual fuel oil processed further after initial distillation. A description of these changes appears in the May 1981 issue of *Monthly Energy Review*, U.S. Department of Energy, Energy Information Administration.

Page S-28

- 1. Based on new 1981 stock level. See also note "‡" for p. S-27.
- See note 5 for p. S-29.
- Reported annual totals; revisions not allocated to the months.
- Simple averages of prices are no longer available.
- ¶ Prices are mid-month, include taxes, and represent full service; comparable prices prior to Jan. 1979 are not available.
 - # Includes data for items not shown separately.
 - New series. See note "¶" for this page.
- ‡ Except for price data, see note "‡" for p. S-27.

Page S-29

- 1. Reported annual total; revisions not distributed to the months.
- Effective Jan. 1980, data are no longer available
- 3. Average for 11 months; no price for Aug. 1980 or June 1981.
- Average for 11 months; no price available for Nov. 1980 or for Oct. 1981.
- 5. Monthly data will be discontinued as of April 1982 SURVEY, due to budgetary limitations. The related annual report, MA26A, will continue to be published.
- ¶ Source: American Paper Institute. Total U.S. estimated consumption by all newspaper
- § Monthly data are averages of the 4-week periods ending on the Saturday nearest the end of the month; annual data are as of Dec. 31.
- ‡ Data are monthly or annual totals. Formerly weekly averages were shown

Page S-30

- 1. Reported annual total; revisions not allocated to the months.
- Crop for the year.
- Data cover five weeks; other months, four weeks.
- 4. Data are not available prior to Jan. 1980.
- 5. Shipments of wide-mouth containers for "chemical, household and industrial" are included in shipments for "medicinal and toilet" containers.
 - See note "‡" for this page.
- 7. For the period November and December 1981, shipments of wide-mouth containers for "chemical, household and industrial" are included in shipments for "medicinal and toilet"
- New series. Data for finishing mills have replaced data for weaving mills, which are no longer available.
 - Includes data for items not shown separately.
- Cumulative ginnings to the end of month indicated.
- Bales of 480 lbs
- Beginning Jan. 1982, shipments include those for direct export; such shipments for 1980-81 were (thous. gross): 2,316 and 2,165 respectively.

Page S-31

- 1. Effective Jan. 1, 1978, includes reexports, formerly excluded.
- Annual total includes revisions not distributed to the months.
- Average for crop year; Aug. 1-Jul. 31.
- For five weeks; other months four weeks.
- Monthly average. Less than 500 bales.
- Bales of 480 lbs.
- Based on 480-lb. bales, preliminary price reflects sales as of the 15th; revised price reflects total quantity purchased and dollars paid for the entire month (revised price includes discounts and premiums).
 - # Includes data not shown separately.

Page S-32

- 1. Annual total includes revisions not distributed to the months.
- Estimates of production, not factory sales.
- 3. Beginning Jan. 1979, data reflect the inclusion of Volkswagens produced in the U.S. Beginning Jan. 1980, passenger vans (previously reported as passenger cars) are included with trucks.
- 4. Monthly data for 1980 as published in earlier issues of the Survey, exclude exports for off-highway trucks; not strictly comparable with data shown for other periods.
 - 5. Based on unadjusted data.
- See note "†" for this page.
- Effective with the September 1982 Survey, retail sales of trucks have been restated back to Jan. 1982 to include U.S.-built Mercedes-Benz trucks (19,501 - 33,000 lbs.); comparable stock data, prior to Aug. 1982, are not available.
- # Total includes backlog for nonrelated products and services and basic research.
- § Domestics comprise all cars assembled in the U.S. and cars assembled in Canada and imported to the U.S. under the provisions of the Automotive Products Trade Act of 1965. Imports comprise all other cars.
- ¶ Courtesy of R.L. Polk & Co.; republication prohibited. Because data for some states are not available, month-to-month comparisons are not strictly valid.
 - ‡ Excludes railroad-owned private refrigerator cars and private line cars.
- † Revisions, back to 1967 for some commodities, are available upon request. Effective with the July 1982 Survey, seasonally adjusted data for passenger cars have been revised back to Jan. 1977 and are available upon request.
 - @ In the 1979 BUSINESS STATISTICS, 4th Qtr. 1977 should read "13,946" mil. \$
- ‡‡ In the 1979 BUSINESS STATISTICS, annual data for 1977 should read "2,604.8"
- ## Revisions back to 1977 are available upon request.

INDEX TO CURRENT BUSINESS STATISTICS, Pages S1-S36

SECTIONS deneral:		Disposition of personal income	27
Business indicators	1-5	Distilled spirits	20 15
Commodity prices	5, 6		. 9
Construction and real estate	7, 8	Earnings, weekly and hourly	12
Domestic trade	8, 9		, 9
Labor force, employment, and earnings	9-13		22 20
Finance			-5,
Transportation and communication		10-12, 15,	
	,	Employee-hours, aggregate, and indexes	11
industry:	10.00		20
Chemicals and allied products Electric power and gas	19, 20 20	Exports (see also individual commodities) 16,	
Food and kindred products; tobacco Leather and products	20-23 23	Failures, industrial and commercial	5 , 6
Lumber and products	23 24	Farm wages	12
Metals and manufactures	24-27		17
Petroleum, coal, and products	27, 28		14 13
Pulp, paper, and paper products	28, 29		13
Rubber and rubber products	29		19
Stone, clay, and glass products	30 30-32	FishFlooring, hardwood	22 24
Transportation equipment	32		22
• • •		Food products 2-6, 8, 10-12, 15, 17, 20-	
ootnotes	33-35	Foeign trade (see also individual commod.) 16-	-18
INDIVIDUAL SERIES		Freight cars (equipment)	32 5
dvertising	8, 12		28
erospace vehicles	32	Fuels 2, 6, 17, 27,	
gricultural loansir carrier operations	13 18	Furnaces	27
ir conditioners (room)	27	Furniture 2, 6, 8-	
ircraft and parts	4, 32	Gas, output, prices, sales, revenues	
lcohol, denatured and ethyl	19	GasolineGlass and products	28 30
Alcoholic beverages	8, 20 25	Glycerin	19
ipparel	5, 8-12	Gold	14
Asphalt	28	Grains and products	22
Automobiles, etc 2-4, 6, 8, 9, 14, 15,	17, 32	Gypsum and products	30
Banking		**	8
BarleyBattery shipments	21 27	Hardware stores	26
Beef and veal	22	Help-wanted advertising index	12
Beverages 8,	17, 20	Hides and skins	6
Blast furnaces, steel mills	3-5	Highways and streets	7 22
Bonds, issued prices, sales, yields	15-16 26	Home Loan banks, outstanding advances	8
Brick	30	Home mortgages	8
Building and construction materials	2, 4, 5	Hotels and motor-hotels	18
Building costs	7	Hours, average weekly	11 8. 9
Building permits	5	Household appliances, radios, and television	
Business sales and inventories	2, 3	sets	27
Butter	21	Housing starts and permits	7
Cattle and calves	22	Imports (see also individual commodities) 17,	
Cement	30	Income, personal	2 14
Chain-store sales, firms with 11 or more stores	9	Income and employment tax receipts Industrial production indexes:	14
Cheese	21	By industry	1, 2
Chemicals 2-4, 10-12, 15, 17,			1, 2
Clay products	23 2–4, 30	Installment credit	14 12⊸
Clothing (see apparel)	_ 4, 50	Interest and money rates	14
Coal	2, 27	Inventories, manufacturers' and trade 3,	
Cocoa	22	Inventory-sales ratios	25
Coffee	22 27	Labor advertising index	
Combustion, atmosphere, heating equip-	4/		. 14 . 10
ment	26	Lamb and mutton	22
Confectionery, Siles		Lead	26
Construction:	22	Leather and products	, 23 , 22
Contracts	7	Loans, real estate, agricultural, bank (see	
Costs	- 7	also Consumer credit) 8	, 13
Employment, unemployment, hours, earnings	10-12	Lumber and products	28 24
Highways and streets	7	Machine tools	, 24 26
Housing starts	7	Machine tools	
New construction put in place	7 14	Manufacturers' sales (or shipments), inven-	, _,
Consumer credit	14 1, 2	tories, orders	3-5
Consumer Price Index	5, 6	Manufacturing employment, unemployment,	_11
Copper and copper products	25, 26	production workers, hours, earnings 10	-12
Cost of living (see Consumer Price Index)	21		1, 2
Cost of living (see Consumer Price Index)	5, 6 . 30. 31	Meat animals and meats 5	, 22
Credit, commercial bank, consumer	, 30, 31	Medical care	-26 -26
Crops 5, 21	, 23, 30	Metals	26 21
Crude oil	3, 27	Mining and minerals	
	15	Monetary statistics	15
Currency in circulation			
Currency in circulation		Money and interest rates	14
Currency in circulation Dairy products Debt, U.S. Government	14	Money supply	15
Currency in circulation	14 1		15

	18 29
New York Stock Exchange, selected data	16
Nonferrous metals 2, 4, 5, 15, 25,	26 21
Oils and fats	17
Orders, new and unfilled, manufacturers' 4 Outlays, U.S. Government	, 5 14
Paint and paint materials	20
Paper and products and pulp 2	_1
6, 10–12, 15, 28, Parity ratio	29 5
Personal consumption expenditures	18 1
Personal income	1
Petroleum and products	1 4,
10–12, 15, 17, 27,	28
Plastics and resin materials	24 20
Population	9 22
Poultry and eggs 5,	22
Price deflator, implicit (PCE)	1 5, 6
Printing and publishing 2. 10-	-12
Private sector employment, hours, earnings	-12
Producer Price Indexes	6
Public utilities	15 20
Pulp and pulpwood	28
Purchasing power of the dollar	6
Radio and television	27 32
Rayon and acetate	27 31
Real estate 8,	13
Receipts, U.S. Government	14 27
Registrations (new vehicles)	32
Rent (housing)	6 32
Rice	21
Rubber and products (incl. plastics)	-4, 29
Saving, personal	1
Savings and loan assoc., new mortgage loans . Savings deposits	8 13
Securities issued	15
Security markets	
Sheep and lambs	22
Shoes and other footwear	23 14
Spindle activity, cotton	31 25
Steel (raw) and steel manufactures	24
Stock market customer financing	15 16
Stone, clay, glass products 2-4, 10-12, 15	, 30
Sugar	23 19
Sulfuric acid	19
Superphosphate	19
Telephone and telegraph carriers	23 19
Television and radio	27
Tin	26
Tires and inner tubes	29
Tractors	
Transit lines, urban	18
Transportation	, 18
Travel	18
Truck trailers	32
Unemployment and insurance	
U.S. Government bonds	16
U.S. Government finance	14 , 20
Vacuum cleaners	27
Variety storesVegetables and fruits	9 5
Veterans' unemployment insurance	13
Wages and salaries 1	
Washers and dryers	27 27
Wheat and wheat flour 21	, 22
Wholesale trade)-12 28
Wool and wool manufactures	31
Zinc	26

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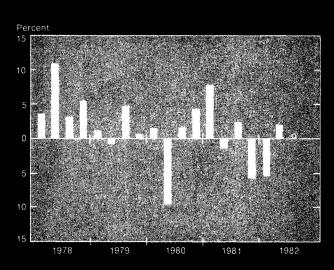
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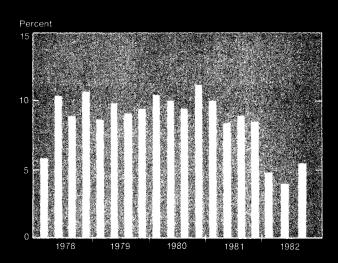
In the third quarter

- Real GNP was unchanged
- Real final sales declined 2 percent
 GNP fixed-weighted price index increased 5½ percent
- Real disposable personal income increased 2½ percent

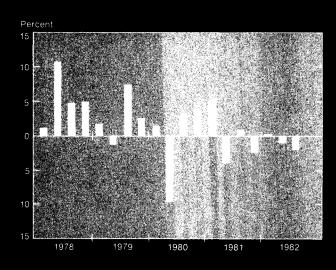
Real GNP



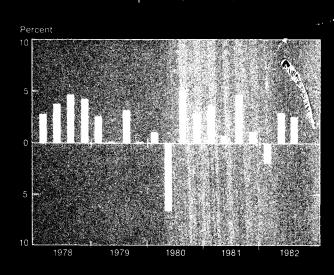
GNP Fixed-Weighted Price Index



Real Final Sales



Real Disposable Personal Income



Percent change from preceding quarter seasonally adjusted at annual rates.