

[JOINT COMMITTEE PRINT]

90th Congress, 1st Session

1967

SUPPLEMENT TO

Economic Indicators

HISTORICAL AND DESCRIPTIVE
BACKGROUND

*Prepared for the Subcommittee on Economic Statistics of the
Joint Economic Committee by the Committee Staff and the
Office of Statistical Standards, Bureau of the Budget*

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1967

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For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 - Price 70 cents

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U.S. Congress, Joint Economic Committee,
1967 Supplement to Economic Indicators,
Government Printing Office, Washington, D.C. 20260

LETTERS OF TRANSMITTAL

MAY 4, 1967.

To Members of the Joint Economic Committee:

For information of the members of the Joint Economic Committee and others interested there is transmitted herewith a seventh edition of the *Supplement* to the Committee's monthly publication *Economic Indicators*. This report presents a description of the derivation, limitations, and uses of each indicator published monthly in *Economic Indicators* along with selected charts and historical tables. These materials were developed by the Committee staff and the Office of Statistical Standards, Bureau of the Budget, with the cooperation of the agencies responsible for each series.

There has been continuing widespread interest in having this information available. The historical and descriptive *Supplement to Economic Indicators* is used not only by Members of Congress and other users of *Economic Indicators*, both within the Government and among the 9,000 private subscribers, but has also become an important teaching aid in college courses in statistics.

WILLIAM PROXMIRE,
Chairman, Joint Economic Committee.

MAY 2, 1967.

The Honorable WILLIAM PROXMIRE,
*Chairman, Joint Economic Committee,
U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: Transmitted herewith is the 1967 *Supplement* to the Committee's monthly publication *Economic Indicators* prepared in response to the Committee's instructions to the Subcommittee on Economic Statistics.

A brief explanation of the purpose and content of the *Supplement* is presented in the Foreword. It might be helpful to point out for the benefit of persons not familiar with the monthly *Economic Indicators* that this is a regular publication printed by the Congress in accordance with Public Law 120, 81st Congress, 1st session, Chapter 237. *Economic Indicators* was first published by the Joint Economic Committee as a Committee Print in 1948 to provide its members with information on current economic trends and developments in a concise and graphic form. Knowing that other Members of the Congress, businessmen, farm leaders, labor organizations, and representatives of the press also sought such information, the Joint Committee at the same time sponsored legislation which later resulted in authorizing publication on a permanent basis. *Economic Indicators* is prepared each month for the Joint Economic Committee by the Council of Economic Advisers.

The monthly *Indicators* is used widely by schools and libraries as a reference source and has an extensive circulation of foreign subscribers, covering all major nations of the world. The publication currently has a distribution of over 10,000. *Economic Indicators* is available at 25 cents a single copy or by subscription at \$2.50 per year (foreign, \$3.50), from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402. The domestic airmail subscription price is \$5.40 per year.

Over the years the Joint Committee has welcomed comments directed toward making *Economic Indicators* and the *Supplement* more useful publications. Many suggestions are received and considered. This 1967 edition of the *Supplement* is the first to contain brief descriptions of the methods used in making seasonal adjustments in the several series where adjustment is important. Of necessity, materials included have to be limited to those series most widely used by Members of Congress, executive Government agencies, and others. The Committee policy has been to publish these data without interpreting them. Interpretations of the data often appear in other publications of the Committee and Executive agencies.

The development and supervisory work on the first issue of the *Supplement* was done by the Committee staff, with descriptions of the series written by members of the staff of the Office of Statistical Standards, Bureau of the Budget, and tables prepared by Frances James of the Council of Economic Advisers and the agencies compiling the original data. The 1967 *Supplement* was prepared under the direction of Raymond T. Bowman, Assistant Director for Statistical Standards, Bureau of the Budget, by the staff of the Office of Statistical Standards in consultation with the Council of Economic Advisers and with the cooperation of the agencies compiling the data.

I wish to express the appreciation of the Subcommittee to the Council of Economic Advisers, the Bureau of the Budget, and other Government agencies and their staffs who have cooperated so ably and wholeheartedly with the Subcommittee over the years in the development of both *Economic Indicators* and this *Supplement*. Their cooperation has been a source of great satisfaction to each Member of the Committee. The monthly *Economic Indicators* and the biennial *Supplement* continue to give outstanding testimony to the benefits of this interagency collaboration.

Sincerely,

HERMAN E. TALMADGE,
Chairman, Subcommittee on Economic Statistics.

Foreword

This is the seventh edition of the *Supplement to Economic Indicators* which contains historical data and a description of each series which appears in the monthly *Economic Indicators*, as well as references to additional technical publications. Annual data are shown for each series in essentially the same tabular form as published monthly in *Economic Indicators*. The sections and tables showing these data are numbered to correspond to the pages in the monthly publication. The explanatory text accompanying each series is intended to meet the need for general information which cannot be repeated each month but which is essential for understanding and interpreting the significance of the current data. The *Supplement*, along with the current issues of *Economic Indicators*, also meets a need of teachers and students for a convenient source of information for keeping up with current economic conditions and at the same time becoming familiar with basic sources and methods used to provide such indicators.

The text accompanying each series provides in nontechnical language: a description of the series, an explanation of how the data are obtained and the series derived, its relation to other series, and its principal uses and limitations. References are also given to primary publications of the series, sources showing more detailed data, and publications which contain more complete and technical explanations.

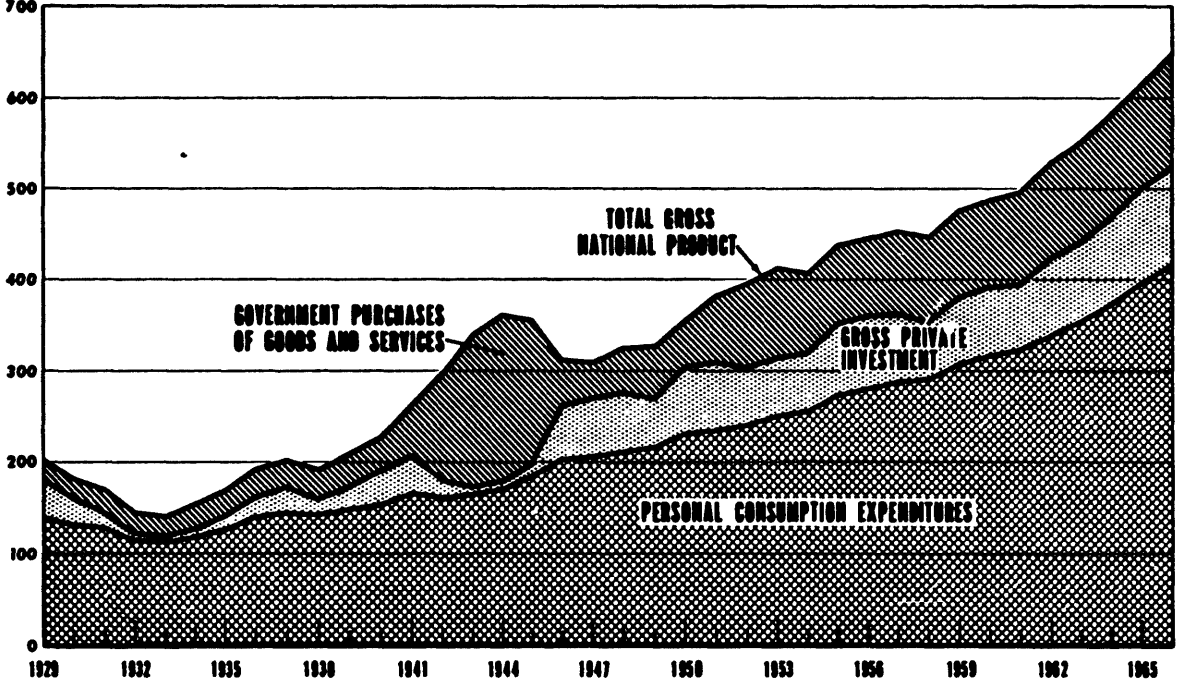
The *Supplement* was first published in December 1953. It was revised in November 1955, in September 1957, in December 1960, 1962, and 1964.

This issue of the *Supplement* reflects changes made in *Economic Indicators* through April 1967. Both text and tables are brought up to date. The descriptive material gives the sources of data and statistical procedures now being used in compiling the series. Brief explanations of the methods used in making seasonal adjustments are also provided.

A more comprehensive guide to the organization of Federal statistics and the basic responsibilities of the various Federal statistical agencies, as well as brief descriptions of the principal economic and social statistics series collected by Government agencies, is contained in *Statistical Services of the Federal Government*, prepared by the Bureau of the Budget and available from the Superintendent of Documents, Government Printing Office for \$1 a copy.

Gross National Product or Expenditure in 1958 Prices, 1929-66
(Annual data. Gross private investment includes net exports of goods and services)

BILLIONS OF DOLLARS

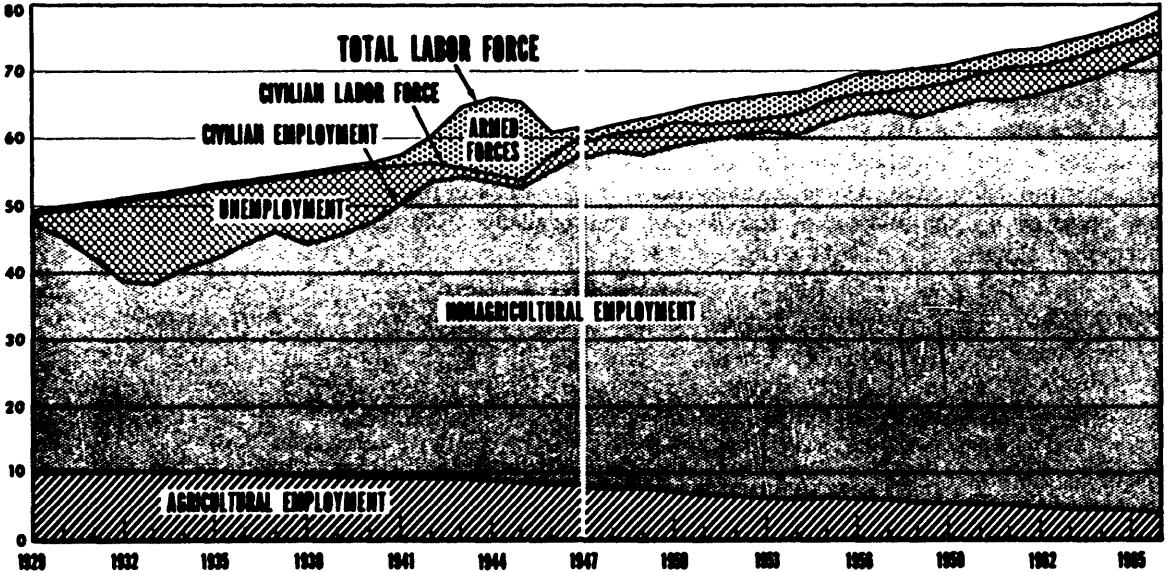


SOURCE OF DATA - DEPARTMENT OF COMMERCE

Growth of the Labor Force, 1929-66

(Annual data)

MILLIONS OF PERSONS



SOURCE OF DATA - DEPARTMENT OF LABOR

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TOTAL OUTPUT, INCOME, AND SPENDING

1. THE NATION'S INCOME, EXPENDITURE, AND SAVING

DESCRIPTION OF SERIES

The Nation's income, expenditure, and saving, representing a summary of the Nation's economic accounts, are shown in the accompanying table for the following sectors: persons, business, international, and government. The combined receipts of these four categories is equal to their combined expenditures, which, in turn, comprises the gross national product. It follows that for any period in which the receipts for any of the four categories exceed expenditures, the difference will be offset by an excess of expenditures over receipts in another category or categories. The relationship of receipts to expenditures for each of the four categories is shown in the first table in *Economic Indicators*. Important expenditure components in terms of 1958 prices are shown in the first chart in this volume.

The balancing of the combined receipts and expenditures reported for the four categories—persons, business, international, government—is conceptually exact. However, since the estimating procedure involves independent data sources for receipts and expenditures it does not produce the identity which is conceptually present. This requires a balancing "error" item or statistical discrepancy. In the accompanying table, the total of personal and business receipts, foreign net transfers by government, and government receipts plus the statistical discrepancy equals the total of personal and business expenditures, government purchases of goods and services, and net exports.

The personal account summarizes the more detailed statistics on personal income and consumption shown elsewhere in *Economic Indicators*, particularly in the table on Disposition of Personal Income. It should be noted that although personal income includes the income of unincorporated businesses and farms, consumer expenditure includes only expenditures for consumption purposes. Investments of noncorporate as well as corporate

businesses are included in the business account. The actual or imputed rent of dwellings is included in consumer expenditure; but residential construction, whether for owner occupancy or for rental purposes, is included with business investment.

In the business account, receipts or gross retained earnings include the undistributed profits of corporations after adjustment for inventory valuation, plus the capital consumption allowances of both corporate and noncorporate enterprises and institutions, including residences. The capital consumption allowances are added to net receipts since investment is on a gross basis. Business investment includes additions to plant, equipment, and inventories of corporate and noncorporate enterprises, as well as residential construction. Because of conceptual difficulties and limitations in the data which prevent differentiating investment items in the present consumer and government accounts, business investment is the only investment item shown as such in this table.

In the international account, the expenditures item represents the difference between exports of goods and services on the one hand, and imports of goods and services on the other. The receipts item consists solely of government and personal net transfers to foreigners.

The government account shows receipts and expenditures on an income and product account basis, rather than on either a cash or a conventional budget basis, to be consistent with the receipts and expenditures of consumers and business and with the gross national product total. The government receipts include personal, corporate and indirect business taxes and nontaxes, and contributions for social insurance. Government interest charges and transfer payments, such as social security and veterans' benefits and net transfers to abroad, are not included in the gross national product, although some items are income to recipients. They are therefore subtracted here from both receipts and expenditures.

TABLE 1.—The Nation's Income, Expenditure, and Saving, 1929-1968

(Billions of dollars)

Year	Persons					Government							Surplus or deficit (-), national income and product accounts
	Disposable personal income			Personal consumption expenditures	Personal saving or dis-saving (-)	Net receipts			Expenditures				
	Total	Less: Interest paid and transfer payments to foreigners	Equals: Total excluding interest and transfers			Tax and nontax receipts or accruals	Less: Transfers, interest, and subsidies ¹	Equals: Net receipts	Total expenditures	Less: Transfers, interest, and subsidies ²	Equals: Purchases of goods and services		
1929.....	83.3	1.0	81.4	77.2	4.2	11.3	1.8	9.5	10.3	1.8	8.5	1.0	
1930.....	74.5	1.2	73.3	69.9	3.4	10.8	1.9	8.9	11.1	1.9	9.2	-3.3	
1931.....	64.0	.9	63.1	60.5	2.6	9.5	3.1	6.3	12.4	3.1	9.2	-2.9	
1932.....	48.7	.7	48.0	48.6	-6	8.9	2.6	6.3	10.6	2.6	8.1	-1.8	
1933.....	45.5	.7	44.9	45.8	-9	9.3	2.7	6.7	10.7	2.7	8.0	-1.4	
1934.....	52.4	.6	51.7	51.3	.4	10.5	3.1	7.4	12.9	3.1	9.8	-2.4	
1935.....	58.5	.7	57.8	55.7	2.1	11.4	3.4	8.0	13.4	3.4	10.0	-2.0	
1936.....	66.3	.8	65.5	61.9	3.6	12.9	4.1	8.8	16.1	4.1	12.0	-3.1	
1937.....	71.2	.9	70.3	66.5	3.8	15.4	3.2	12.2	15.0	3.2	11.9	.3	
1938.....	65.5	.8	64.6	63.9	.7	15.0	3.8	11.2	16.8	3.8	13.0	-1.8	
1939.....	70.3	.9	69.4	66.8	2.6	15.4	4.2	11.2	17.6	4.2	13.3	-2.2	
1940.....	75.7	1.0	74.7	70.8	3.8	17.7	4.4	13.3	18.4	4.4	14.0	-7	
1941.....	92.7	1.1	91.6	80.6	11.0	25.0	4.0	21.0	28.8	4.0	24.8	-3.8	
1942.....	116.9	.8	116.1	88.5	27.6	32.6	4.4	28.2	64.0	4.4	59.6	-31.4	
1943.....	133.5	.8	132.7	99.3	33.4	49.2	4.7	44.4	93.3	4.7	88.6	-44.1	
1944.....	146.3	.8	145.5	108.3	37.3	51.2	6.5	44.7	103.0	6.5	96.5	-51.8	
1945.....	150.2	1.0	149.3	119.7	29.6	53.2	10.4	42.8	92.7	10.4	82.3	-39.5	
1946.....	160.0	1.4	158.6	143.4	15.2	50.9	18.5	32.4	45.5	18.5	27.0	5.4	
1947.....	169.8	1.8	168.0	160.7	7.3	56.8	17.3	39.5	42.4	17.3	25.1	14.4	
1948.....	189.1	2.2	186.9	173.6	13.4	58.9	18.8	40.1	50.3	18.8	31.6	8.5	
1949.....	188.6	2.4	186.2	176.8	9.4	56.0	21.3	34.7	59.1	21.3	37.8	-3.2	
1950.....	206.9	2.9	204.1	191.0	13.1	68.7	22.9	45.8	60.8	22.9	37.9	7.8	
1951.....	226.6	3.1	223.5	206.3	17.3	84.8	19.9	64.9	79.0	19.9	59.1	5.8	
1952.....	238.3	3.5	234.8	216.7	18.2	89.8	19.0	70.8	93.7	19.0	74.7	-31.4	
1953.....	252.6	4.3	248.3	230.0	18.3	94.3	19.5	74.8	101.2	19.5	81.6	-6.9	
1954.....	257.4	4.6	252.9	236.5	16.4	89.7	21.9	67.8	96.7	21.9	74.8	-7.0	
1955.....	275.3	5.1	270.2	254.4	15.8	100.4	23.4	76.9	97.6	23.4	74.2	2.7	
1956.....	293.2	5.9	287.2	266.7	20.6	109.0	25.5	83.5	104.1	25.5	78.6	4.9	
1957.....	308.5	6.4	302.2	281.4	20.7	115.6	28.7	86.8	114.9	28.7	86.1	.7	
1958.....	318.8	6.5	312.3	290.1	22.3	114.7	33.0	81.6	127.2	33.0	94.2	-12.5	
1959.....	337.3	7.1	330.3	311.2	19.1	128.9	34.0	95.0	131.0	34.0	97.0	-2.1	
1960.....	350.0	7.8	342.3	325.2	17.0	139.8	36.5	103.3	136.1	36.5	99.6	3.7	
1961.....	364.4	8.1	356.3	335.2	21.2	144.6	41.3	103.3	149.0	41.3	107.6	-4.3	
1962.....	385.3	8.6	376.6	355.1	21.6	157.0	42.8	114.2	159.9	42.8	117.1	-2.9	
1963.....	404.6	9.7	394.9	375.0	19.9	168.8	44.4	124.3	166.9	44.4	122.5	1.8	
1964.....	436.6	10.7	425.8	401.4	24.5	174.2	46.7	127.5	175.6	46.7	128.9	-1.4	
1965.....	469.1	11.9	457.2	431.5	25.7	189.0	49.6	139.4	185.8	49.6	136.2	3.2	
1966.....	505.3	13.3	492.0	464.9	27.0	212.3	55.7	156.6	208.7	55.7	153.0	3.5	

See footnotes on next page.

The government income and product accounts are on a consolidated basis, just as the cash accounts are, but they depart from the latter because of the timing of the items included in each and because of conceptual differences. The income and product accounts of the government are designed to be in accord with

the accrual records maintained by private business. Thus, business taxes, especially those on corporate profits, are recorded on an accrual rather than a collections basis, and government purchases of goods are recorded, to the extent possible, at the time of delivery rather than at the time payment is made.

TABLE 1.—The Nation's Income, Expenditure, and Saving, 1929-1966—Continued

(Billions of dollars)

Year	Business			International					Total income or receipts	Statistical discrepancy	Gross national product or expenditure
	Gross retained earnings ¹	Gross private domestic investment ²	Excess of investment (-)	Transfers to foreigners by persons and Government	Net exports of goods and services			Excess of transfers or of net exports (-) ³			
					Exports	Less: Imports	Equals: Net exports				
1929.....	11.2	16.2	-5.1	0.4	7.0	5.9	1.1	-0.8	102.4	0.7	103.1
1930.....	8.6	10.3	-1.6	.3	5.4	4.4	1.0	-.7	91.2	-.8	90.4
1931.....	5.3	5.6	-.3	.3	3.6	3.1	.5	-.2	75.1	.7	75.8
1932.....	3.2	1.0	2.2	.2	2.5	2.1	.4	-.2	57.7	.3	58.0
1933.....	3.2	1.4	1.8	.2	2.4	2.0	.4	-.2	55.0	.6	55.6
1934.....	5.2	3.3	1.9	.2	3.0	2.4	.6	-.4	64.5	.5	65.1
1935.....	6.4	6.4	*	.2	3.3	3.1	.1	.1	72.5	-.2	72.2
1936.....	6.7	8.5	-1.8	.2	3.5	3.4	.1	.1	81.3	1.2	82.5
1937.....	7.7	11.8	-4.0	.2	4.6	4.3	.3	-.1	90.5	*	90.4
1938.....	8.0	6.5	1.6	.2	4.3	3.0	1.3	-1.1	84.1	.6	84.7
1939.....	8.4	9.3	-.9	.2	4.4	3.4	1.1	-.9	89.2	1.3	90.5
1940.....	10.5	13.1	-2.7	.2	5.4	3.6	1.7	-1.5	98.7	1.0	99.7
1941.....	11.4	17.9	-6.5	.2	5.9	4.6	1.3	-1.1	124.1	.4	124.5
1942.....	14.5	9.8	4.6	.2	4.8	4.8	*	.2	159.0	-1.1	157.9
1943.....	16.3	5.7	10.6	.2	4.4	6.5	-2.0	2.2	192.6	-2.0	191.6
1944.....	17.1	7.1	10.0	.3	5.3	7.1	-1.8	2.1	207.6	2.5	210.1
1945.....	15.1	10.6	4.6	.8	7.2	7.9	-.6	1.4	208.0	3.9	211.9
1946.....	14.5	30.6	-16.1	2.9	14.7	7.2	7.5	-4.6	208.4	.1	208.5
1947.....	20.2	34.0	-13.8	2.6	19.7	8.2	11.5	-8.9	230.4	.9	231.3
1948.....	23.0	46.0	-13.0	4.5	16.8	10.3	6.4	-1.9	259.5	-2.0	257.6
1949.....	29.7	35.7	-6.0	5.6	15.8	9.6	6.1	-.5	256.2	.3	256.5
1950.....	29.4	54.1	-24.7	4.0	13.8	12.0	1.8	2.2	263.3	1.5	264.8
1951.....	33.1	59.3	-26.2	3.5	18.7	15.1	3.7	-.2	325.1	3.3	328.4
1952.....	35.1	51.9	-16.8	2.5	18.0	15.8	2.2	.3	343.3	2.2	345.5
1953.....	36.1	52.6	-16.5	2.5	16.9	16.6	.4	2.1	361.6	2.0	364.6
1954.....	39.2	51.7	-12.5	2.3	17.8	15.9	1.8	.5	362.1	2.7	364.8
1955.....	46.3	67.4	-21.1	2.5	19.8	17.8	2.0	.5	395.9	2.1	398.0
1956.....	47.3	70.0	-22.8	2.4	22.6	19.6	4.0	-.1	420.4	-1.1	419.2
1957.....	49.8	67.8	-18.1	2.3	26.5	20.8	5.7	-3.4	441.1	*	441.1
1958.....	49.4	60.9	-11.5	2.4	23.1	20.9	2.2	.2	445.8	1.6	447.3
1959.....	56.8	75.3	-18.5	2.4	23.5	23.3	.1	2.3	484.5	-.8	483.7
1960.....	56.8	74.8	-18.0	2.4	27.2	23.2	4.0	-1.7	504.8	-1.0	503.7
1961.....	58.7	71.7	-13.0	2.6	28.6	23.0	5.6	-2.0	520.8	-.8	520.1
1962.....	66.3	83.0	-16.8	2.7	30.3	25.1	5.1	-2.5	559.8	.5	560.3
1963.....	68.8	87.1	-18.4	2.8	32.3	26.4	5.9	-2.1	590.8	-.3	590.5
1964.....	76.9	93.0	-16.0	2.8	37.0	28.5	8.5	-5.7	633.1	-1.4	631.7
1965.....	82.4	106.6	-23.1	2.8	39.0	32.0	7.0	-4.2	682.8	-1.6	681.2
1966.....	88.5	117.0	-28.5	2.9	42.7	37.9	4.8	-1.8	739.6	-.2	739.6

¹ Personal income less personal tax and nondeductions payments (fines, penalties, etc.)

² Government transfer payments to persons, foreign net transfers by Government, net interest paid by government, and subsidies less current surplus of government enterprises.

³ Undistributed corporate profits, corporate inventory valuation adjustment, capital consumption allowances, and wage accruals less disbursements. Does not include retained earnings of unincorporated business, which are included in disposable personal income.

⁴ Private business investment, purchases of capital goods by private nonprofit institutions, and residential housing. See Table 8.

⁵ Net foreign investment with sign changed.

* Less than \$50 million.

NOTE.—Data for Alaska and Hawaii included beginning 1960. Details may not add to totals because of rounding.

SOURCE: Department of Commerce, Office of Business Economics.

Transactions in land and in financial assets and liabilities are excluded from the income and product accounts although such transactions are included in both the cash and conventional budgets.

USES AND LIMITATIONS

A set of economic accounts for the Nation reduces the voluminous detail of economic activity to understandable proportions by providing the factual background for placing in perspective the operations of the major categories of the economy—persons, business, international, and government—and the interrelationships or transactions between and among them. A statement of these accounts serves a number of purposes:

(1) In summarizing the pattern of change in the economy over recent periods, the statement indicates what one should look for among the other charts and tables included in *Economic Indicators*.

(2) The accounting methodology needed to prepare this statement helps to assure that the various estimates, such as income, expenditures, savings, investment, in the other charts and tables are consistent.

(3) It is frequently necessary to project and evaluate the likely economic impact of public and private programs on the economy. These accounts make possible the quantitative expression of the combination of such public and private plans within a framework of the flows of incomes and expenditures of various groups in the economy so as to measure inconsistencies or imbalances among them, and inconsistencies between and among the assumptions upon which these plans are based.

Preparation of a Nation's economic budget for a future period, using these accounts, is especially helpful when government programs are of such magnitude and importance that they dominate changes in the economy; in other words, when government spending and tax plans are the main forces making for changes in the economy. At other times, its main benefit is in identifying inflationary and deflationary programs of government and private economic groups.

(4) Another use, related to the preceding, is that of enabling those who must make actual forecasts,

such as business firms, private economists, and others, to check their forecasts for consistency with past patterns of fluctuations in activity in both the economy as a whole and in its various segments, and consistency among the various assumptions as to income, savings, investment, prices, and employment that underlie the forecast.

Certain limitations must be recognized in using these economic accounts. In the first place, the statistics do not throw light on all aspects of the economy but only on broad summary categories; thus they must be supplemented by the use of additional economic information, such as that contained in other parts of *Economic Indicators*. Second, since the data are national in coverage, their trends and changes must be carefully interpreted and supplemented by other data for use in the analysis of regional or individual industry problems. Third, they do not, of course, provide the assumptions or the reasons which one should have for explaining or projecting economic changes; they provide only the relevant statistical background for intelligent reasoning and judgment. Finally, it must be recognized that for some of these categories estimates for both receipts and expenditures rest upon data collected for other purposes, or upon indirect estimates in cases where no direct survey is regularly conducted. Thus, there will be times when it will be difficult to interpret the meaning of some of the changes in the accounts if statistical discrepancies arising from technical problems in estimating various items are so large that they throw doubt on the importance of movements in the accounts.

REFERENCES

The estimates included in the Nation's economic accounts are all taken from the national income and product statistics of the Department of Commerce: see references below, under National Income.

See also Technical Notes on the Nation's Economic Budget, Appendix A: *Report of the Joint Committee on the Economic Report on the January 1952 Economic Report of the President*, Senate Report No. 1295, 82d Congress, 2d session, pages 99-105, and statistical materials prepared by the Council of Economic Advisers for inclusion with the Economic Report of the President.

2. GROSS NATIONAL PRODUCT OR EXPENDITURE

DESCRIPTION OF SERIES

Gross National Product (often called GNP) represents the total national output of goods and services at current market prices. It measures this output in terms of the expenditures by which these goods are acquired. These expenditures are the sum of four major items: (1) personal consumption expenditures, (2) gross private domestic investment, (3) net export of goods and services, and (4) government purchases of goods and services. The total and its major components are charted below for the period 1947-66. The goods and services included in the GNP are for the most part within the framework of the market economy. There are some non-market items, the most important of which is the imputed rental value of owner-occupied dwellings.

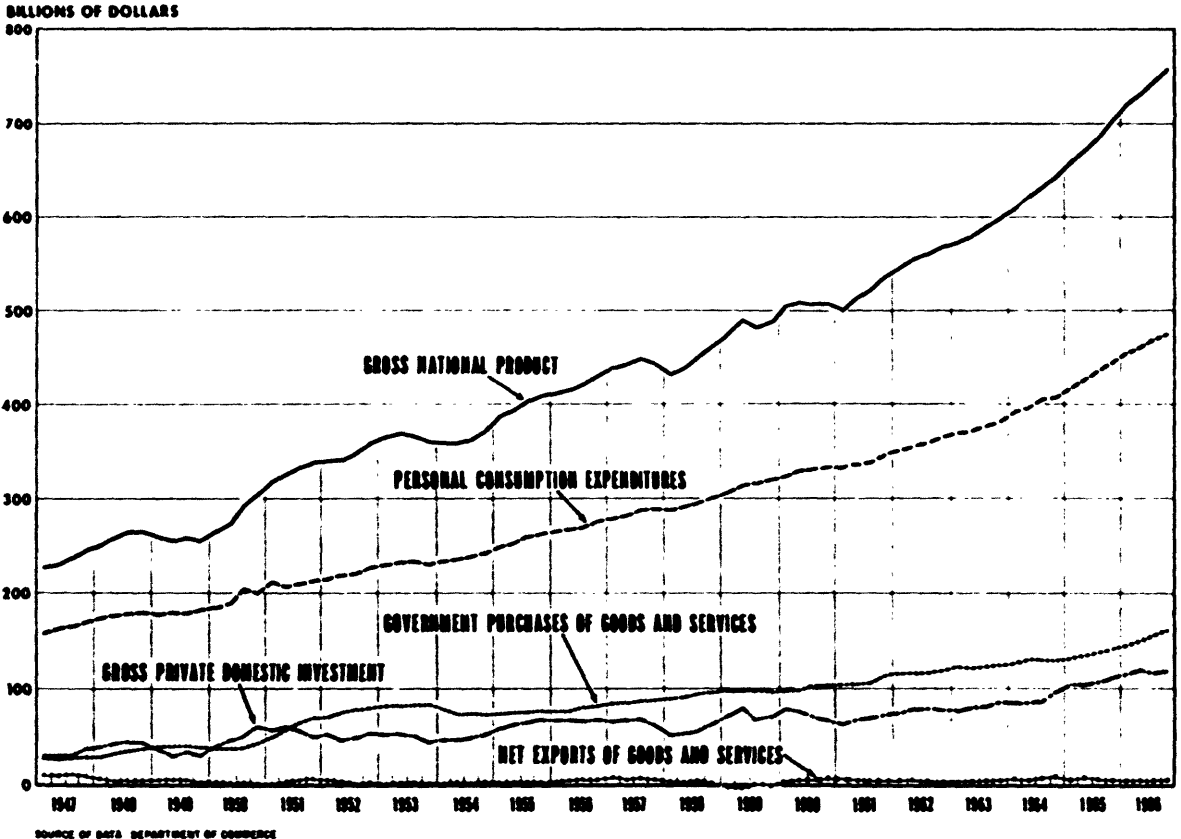
The GNP series measures the product attributable to the factors of production—labor and property—supplied by residents of the Nation. For the most part these factors are located in this country, but

the GNP total also includes earnings of American employees of the United States Government stationed abroad, foreign interest and dividends received by Americans, and the profits from foreign branches of American business.

The national income and product estimates beginning 1960 are defined to include Alaska and Hawaii; those for prior years do not. This does not significantly affect the comparability of the data for most purposes. The gross product of the two new States amounted to roughly \$2½ billion in 1960. A portion of this amount is probably included in the previous figures for the continental United States because the data sources and statistical techniques employed were not sufficiently refined to exclude all Alaskan and Hawaiian product and income from the estimates.

"Personal consumption expenditures" consists of the market value of purchases of goods and services by persons and nonprofit institutions and the

Gross National Product or Expenditure, 1947-66



value of food, clothing, housing, and financial services received by them as income in kind. It includes the rental value of owner-occupied houses but does not include purchases of dwellings, which are classified as capital goods. This series is described below, in the section on Disposition of Personal Income (p. 14).

"Gross private domestic investment" consists of the net acquisitions of fixed capital goods by private business and nonprofit institutions; including commissions arising in the sale and purchase of new and existing fixed assets, principally real estate; and the value of the change in the volume of inventories by business. It covers all private dwellings including those acquired by persons for their own occupancy. This component of GNP is described below, in a separate section (p. 25).

"Net exports of goods and services" measures the balance on goods and services, excluding transfers under military grants, as reported in the U.S. balance of payments statistics. Exports of goods and services are included in the gross national product because they are produced by the Nation's economy. Since imports of foreign goods and services are included in the purchases of the various market groups (consumers, government, etc.) distinguished in the GNP breakdown, they must be deducted from the sum of these purchases to derive a measure of output attributable to the Nation's economy. See also the sections of this report dealing with the U.S. Exports and Imports of Goods and Services and the U.S. Balance of Payments (p. 89).

"Government purchases of goods and services" consists of the net purchases of goods and services by general government and of the gross investment of government enterprises. General government purchases comprises employee compensation and net purchases from business and from abroad. They exclude the acquisition of land, current outlays of government enterprises, transfer payments, government interest, and subsidies, as well as transactions in financial claims.

The GNP series on government purchases differs from expenditures shown in the Federal Budget, which include many but not all of these items. Differences may also arise because of variation in the time at which expenditures occur and are recorded. For a more extended discussion, see the section below, "Federal Budget, National Income Accounts Basis" (p. 131).

Hundreds of basic economic series are evaluated, adjusted, and combined in the process of preparing the GNP estimates. For example, consumer expenditures are estimated for benchmark years primarily from data in the Censuses of Business and Manufactures, reports of the Department of Agriculture, Internal Revenue Service, and Interstate Commerce Commission, with current annual and quarterly estimates carried forward by using the Census Bureau's Annual Survey of Manufactures and Monthly Report on Retail Trade and data from other sources. Construction activity is estimated as described below in the section on New Construction (p. 64). Investment in producers' durable equipment is estimated for benchmark years from Census of Manufactures and related data, with current quarterly and annual totals estimated principally from sample surveys and construction data of the Department of Commerce and financial reports to other agencies. For details of the methods used, reference should be made to the comprehensive studies by the Department of Commerce, e.g., the 1954 *National Income Supplement* to the Survey of Current Business, *U.S. Income and Output*, 1958 and the August 1965 issue of the Survey of Current Business.

The methods used to eliminate seasonal variation differ with the particular series to be adjusted. For most components the conventional ratio-to-moving-average method has been employed. However, when satisfactory results have not been obtained, resort has been made to more refined methods. For further information see the section "Measurements of Quarterly and Monthly Movements," *U.S. Income and Output*, p. 95 ff.

The magnitude of the seasonal correction may be illustrated by the accompanying comparison of the GNP on an unadjusted seasonally adjusted basis for the year 1965. The corrections shown in the table are computed values reflecting the net results of many individually corrected components underlying the published series. It follows from this that the magnitude of the correction will vary somewhat from year to year as the result of shifts in the relative importance of the component series. The summary results may also be modified by changes in the seasonal patterns of the individual component series, which regularly come under review. (See table, "Seasonal Correction, GNP 1965," p. 8.)

TABLE 2.—Gross National Product or Expenditure, 1929-1966

(Billions of dollars)

Year	Total gross national product in 1958 prices	Total gross national product	Personal consumption expenditures	Gross private domestic investment	Net exports of goods and services	Government purchases of goods and services				Implicit price deflator for total GNP, 1958=100 ¹	
						Total	Federal ²		Other		State and local
							Total	National defense ³			
1929.....	203.6	103.1	77.2	16.2	1.1	8.5	1.3	1.3	7.2	50.6	
1930.....	183.5	90.4	69.9	10.3	1.0	9.2	1.4	1.4	7.8	49.3	
1931.....	169.3	75.8	60.5	5.6	.5	9.2	1.5	1.5	7.7	44.8	
1932.....	144.2	58.0	45.6	1.0	.4	8.1	1.5	1.5	6.6	40.2	
1933.....	141.5	55.6	45.8	1.4	.4	9.0	2.0	2.0	6.0	39.3	
1934.....	154.3	65.1	51.3	3.3	.6	9.8	3.0	3.0	6.8	42.2	
1935.....	169.5	72.2	55.7	6.4	.1	10.0	2.9	2.9	7.1	42.6	
1936.....	193.0	82.5	61.9	8.5	.1	12.0	4.9	4.9	7.0	42.7	
1937.....	203.2	90.4	66.5	11.8	.3	11.9	4.7	4.7	7.2	44.5	
1938.....	192.9	84.7	63.9	6.5	1.3	13.0	5.4	5.4	7.6	43.9	
1939.....	209.4	90.5	66.8	9.3	1.1	13.3	5.1	1.2	8.2	43.2	
1940.....	227.2	99.7	70.8	13.1	1.7	14.0	6.0	2.2	8.0	43.9	
1941.....	263.7	124.5	80.6	17.9	1.3	24.8	16.9	13.8	3.1	47.2	
1942.....	297.8	157.9	88.5	9.8	*	59.6	51.9	49.4	2.5	53.0	
1943.....	337.1	191.6	99.3	5.7	-2.0	88.6	81.1	79.7	1.4	56.8	
1944.....	361.3	210.1	108.3	7.1	-1.8	96.5	89.0	87.4	1.6	58.2	
1945.....	355.2	211.9	119.7	10.6	-.6	82.3	74.2	73.5	.7	59.7	
1946.....	312.6	208.5	143.4	30.6	7.5	27.0	17.2	14.7	2.5	66.7	
1947.....	309.9	231.3	160.7	34.0	11.5	25.1	12.5	9.1	3.5	74.6	
1948.....	323.7	257.6	173.6	46.0	6.4	31.6	16.5	10.7	5.8	79.6	
1949.....	324.1	256.5	176.8	35.7	6.1	37.8	20.1	13.3	6.8	79.1	
1950.....	355.3	284.8	191.0	54.1	1.8	37.9	18.4	14.1	4.3	80.2	
1951.....	383.4	328.4	206.3	59.3	3.7	59.1	37.7	33.6	4.1	85.6	
1952.....	395.1	345.5	216.7	51.9	2.2	74.7	51.8	45.9	5.9	87.5	
1953.....	412.8	364.6	230.0	52.6	.4	81.6	57.0	48.7	8.4	88.3	
1954.....	407.0	364.8	236.5	51.7	1.8	74.8	47.4	41.2	6.2	89.6	
1955.....	438.0	398.0	254.4	67.4	2.0	74.2	44.1	38.6	5.5	90.9	
1956.....	446.1	419.2	266.7	70.0	4.0	78.6	45.6	40.3	5.3	94.0	
1957.....	452.5	441.1	281.4	67.8	5.7	86.1	49.5	44.2	5.3	97.5	
1958.....	447.3	447.3	290.1	60.9	2.2	94.2	53.6	45.9	7.7	100.0	
1959.....	475.9	483.7	311.2	75.3	.1	97.0	53.7	46.0	7.6	101.6	
1960.....	487.7	503.7	325.2	74.8	4.0	99.6	53.5	44.9	8.6	103.3	
1961.....	497.2	520.1	335.2	71.7	5.6	107.6	57.4	47.8	9.6	104.6	
1962.....	529.8	560.3	355.1	83.0	5.1	117.1	63.4	51.6	11.8	105.8	
1963.....	551.0	590.5	375.0	87.1	5.9	122.5	64.2	50.8	13.5	107.2	
1964.....	580.0	631.7	401.4	93.0	8.5	128.9	65.2	50.0	15.2	108.9	
1965.....	614.4	681.2	431.5	106.6	7.0	136.2	68.8	50.1	16.7	110.9	
1966.....	647.8	739.6	464.9	117.0	4.8	153.0	76.9	60.0	16.9	114.2	

¹ Net of Government sales.

² This category corresponds closely to the national defense classification in the Budget of the United States Government for the Fiscal Year ending June 30, 1963.

³ Gross national product in current prices divided by gross national product in 1958 prices.

* Less than \$50 million.

NOTE.—Data for Alaska and Hawaii included beginning 1960.

Source: Department of Commerce, Office of Business Economics.

The GNP is also "deflated" or expressed in dollars of constant purchasing power. The procedure in general is to divide components of the current dollar GNP by appropriate price indexes, utilizing as fine a product breakdown as possible, and then to sum the components to obtain the constant dollar GNP.

The price information, which in most cases is available in greater detail than the current dollar esti-

mates, is combined into composite indexes applicable to the various current dollar series. The deflation makes use of price indexes and other information from such sources as the Bureau of Labor Statistics, Agricultural Marketing Service, Interstate Commerce Commission, etc.

Weights for constructing the composites, approximating expenditures for the products represented by

the price series, have been obtained from the detailed industrial censuses. Expenditure weights in some instances have been broken down between urban and rural areas in order to incorporate price data of the agricultural marketing service. Quantity data also are utilized in lieu of price deflation in a number of instances, most notably in the case of government employment. The GNP implicit deflator is an index of price changes in the GNP, and is computed by dividing the deflated estimates into the corresponding current dollar estimates.

The basic work in deflating the GNP converted the current dollar series to 1958 prices; 1958 prices are used in presenting the constant dollar GNP in *The National Income and Product Accounts of the United States 1929-1965* and other publications of the Department of Commerce.

RELATION TO OTHER SERIES

Two other series widely used as indicators of the general level of economic activity are National Income and the Federal Reserve Index of Industrial

Production. Gross national product and national income are compiled from the same series of accounts, but whereas the former measures the market value of total output, the latter measures only the earnings of the factors of production: labor and property (net of capital consumption) which flow from that output. National income is smaller than the gross national product chiefly because the former is a "net" estimate excluding (1) allowances for depreciation and other capital consumption, and (2) indirect taxes (such as sales and excise taxes).

The GNP measures total output, whereas the Federal Reserve Index of Industrial Production covers selected sections of the economy—manufactures, mining, electricity, and gas. The products in the GNP series are final product, whereas the Federal Reserve index includes both final and intermediate product, and thus may show an increase or decrease in activity to be reflected later or not at all in the flow of final output. The GNP series in current prices combines price and volume changes, whereas the Federal Reserve index measures only physical volume.

Seasonal Correction, Gross National Product, 1965

(Billions of dollars)

	Seasonally adjusted				Unadjusted				Corrections, quarterly rates (seasonally adjusted minus unadjusted)			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Gross national product.....	165.2	168.2	171.6	176.1	157.2	168.2	168.1	187.7	8.0	.0	3.5	-11.6
Personal consumption expenditures..	104.7	106.7	108.7	111.3	98.9	105.5	105.9	121.2	5.8	1.2	2.8	-9.9
Durable goods.....	16.3	16.1	16.7	17.0	14.6	16.2	15.3	20.0	1.7	-.1	1.4	-3.0
Nondurable goods.....	46.1	47.4	47.9	49.3	41.6	46.0	46.4	56.5	4.5	1.4	1.5	-7.2
Services.....	42.3	43.2	44.2	45.0	42.7	43.3	44.1	44.7	-.4	-.1	.1	.3
Gross private domestic investment..	26.0	25.9	26.7	28.0	25.5	27.0	26.5	27.6	.5	-1.1	.2	.4
Fixed investment.....	23.6	24.0	24.5	25.4	20.8	25.0	25.4	26.3	2.8	-1.0	-.9	-.9
Nonresidential.....	16.7	17.0	17.6	18.5	15.3	17.6	17.5	19.2	1.4	-.6	.1	-.7
Residential structures.....	6.9	7.0	7.0	6.9	5.4	7.4	7.9	7.1	1.5	-.4	-.9	-.2
Change in business inventories..	2.4	1.9	2.2	2.6	4.7	2.0	1.1	1.3	-2.3	-.1	1.1	1.3
Net exports of goods and services...	1.6	2.0	1.8	1.5	1.8	2.2	.9	2.1	-.2	-.2	.9	-.6
Exports.....	8.8	10.1	10.0	10.1	8.6	10.4	9.4	10.6	.2	-.3	.6	-.5
Imports.....	7.2	8.1	8.2	8.5	6.8	8.2	8.5	8.5	.4	-.1	-.3	.0
Government purchases of goods and services.....	32.9	33.6	34.4	35.3	31.0	33.6	34.8	36.9	1.9	.0	-.4	-1.6
Federal.....	16.1	16.4	16.9	17.5	15.4	16.2	16.2	19.0	.7	.2	.7	-1.5
State and local.....	16.8	17.2	17.6	17.9	15.6	17.4	18.6	17.9	1.2	-.2	-1.0	.0

USES AND LIMITATIONS

The GNP total is the most inclusive measure of trends in the economy as a whole which is currently estimated. It also has high value as an analytic tool, since the movements of many sectors of the economy, including the sales of many industries and enterprises, are quite closely related to changes in the level of GNP.

The GNP in current dollars combines the effects of changes in both the price level and the physical volume of output. Movements in the total from quarter to quarter should not be interpreted as necessarily representing changes in the physical quantity of goods and services produced by the economy.

3. NATIONAL INCOME

DESCRIPTION OF SERIES

National Income is the aggregate of earnings by labor and property which arise in the current production of goods and services by the Nation's economy. It is the sum of five major items: (1) compensation of employees, (2) proprietors' income, (3) rental income of persons, (4) net interest, and (5) corporate profits and inventory valuation adjustment.

"Compensation of employees" is the sum of wages, salaries, and supplements to wages and salaries such employer contributions for social insurance.

"Proprietors' income" measures the monetary earnings and income in kind of sole proprietorships (including doctors, lawyers, and other self-employed), partnerships and producers' cooperatives, exclusive of capital gains or losses on inventory or other asset holdings. The farm proprietors' income shown here is conceptually the same as farm operators' net income including adjustment for inventory change, as shown below in the section on Farm Income. The supplementary income which individuals obtain from renting property does not appear here, but under rental income of persons.

"Rental income of persons" consists of (1) net money income from rental of real property, (2) imputed net rental value to homeowners of their homes, and (3) royalties received from patents, copyrights, and rights to natural resources.

"Net interest" measures the excess of interest payments of the domestic business system over its

GNP estimates corrected for price changes ("deflated GNP") show annual and quarterly changes in the total volume of national output as well as in the major components. The accompanying table shows the trend in GNP in terms of 1958 prices since 1929, and the implicit deflator. One of the most important characteristics of the GNP is that changes in the total can be analyzed by examination of changes in its components, notably purchases by consumers, private business investment, government expenditures and the movement of foreign trade. It thus provides a useful framework for economic projections.

REFERENCES

See p. 12, under National Income.

interest receipts, plus net interest received from abroad. Interest paid by consumers and by government, including government enterprises, is not added into this computation because it is not treated as a factor cost of production. In consequence, the net interest component of national income falls short of total interest accruing to persons from the business system and from abroad by the amount of consumer and government interest received by business. In addition to monetary interest flows, net interest includes imputed interest arising in connection with the operations of financial intermediaries. A portion of imputed interest is equal to the value of financial services received by persons without explicit payment; the remainder represents property income received by life insurance companies and noninsured pension funds less profits of life insurance companies.

"Corporate profits" is the earnings of corporations organized for profit which accrue to residents of this Nation measured before Federal and State profit taxes, but without deduction of depletion charges and exclusive of capital gains and losses and intercorporate dividends. (For a more extended discussion, see section on Corporate Profits below, p. 21.)

"Corporate inventory valuation adjustment" measures the excess of the value of the change in the physical volume of corporate inventories (valued at average prices during the period) over the change in terms of book values. This adjustment is made to profits to remove the inventory profit or loss that occurs in business accounting when the book cost

of inventories differs from the current replacement cost. Valuation in current prices of the cost of inventories used up puts sales and costs on a consistent basis, and is necessary to derive measures of national output in current prices.

The accompanying chart shows the movements of the national income by these major components since 1947.

STATISTICAL PROCEDURES

The methods of estimation employed in the very complex area of national income are described in detail in the 1954 *National Income Supplement to the Survey of Current Business*. Further information is provided in *U.S. Income and Output, 1958*, also issued as a supplement to the Survey and in the August 1965 *Survey of Current Business*. The following indicates briefly the types of estimating procedures used:

“Compensation of employees”—reliable data are available each year from the unemployment insurance system, with current monthly estimates resting chiefly on employer reports on employment and earnings to the Bureau of Labor Statistics.

“Proprietors’ income” is estimated from income tax returns to the Internal Revenue Service with current quarterly data derived from analysis of trends in non-corporate as well as corporate sales and corporate profits in individual industries.

“Rental income of persons” is estimated from a variety of Census Bureau, Internal Revenue Service, Department of Agriculture, and BLS data on rents paid and on the distribution of property ownership and rental income between persons and business.

“Net interest” is estimated from reports on interest and debt to the Internal Revenue Service, Bureau of the Census, Board of Governors of the Federal Reserve System, and other agencies.

National Income, 1947–66

(Quarterly data. Seasonally adjusted annual rates)

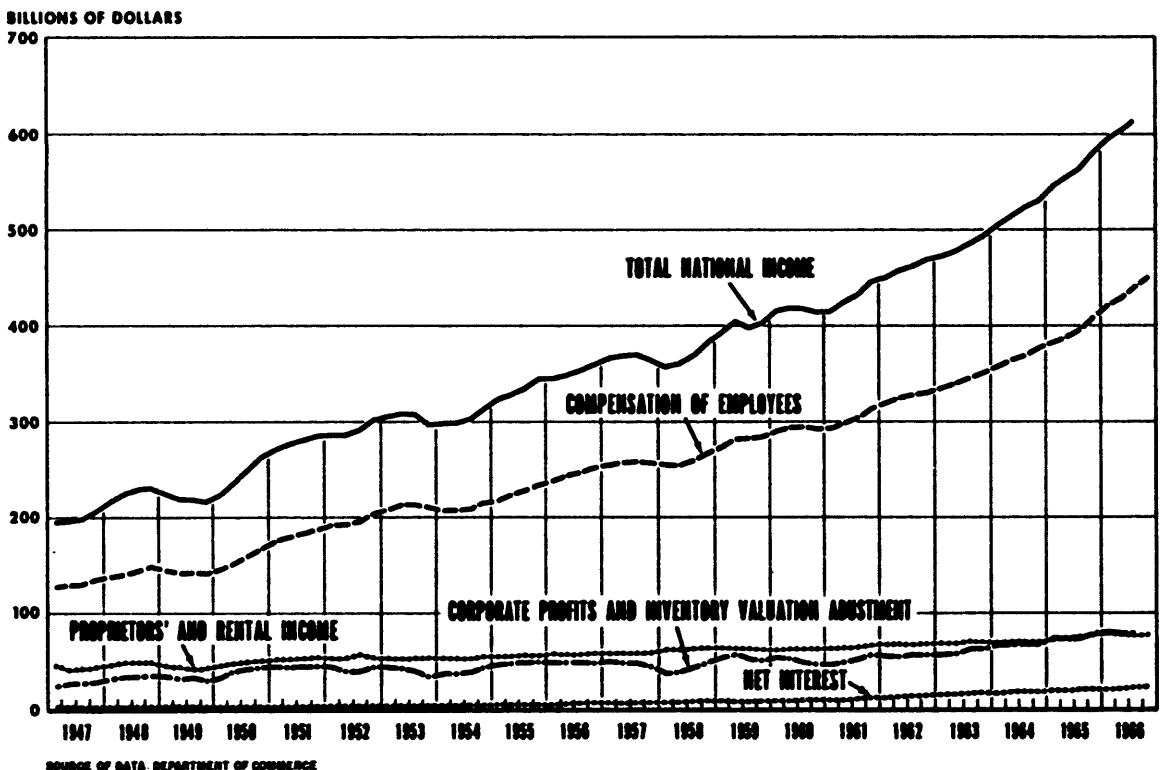


TABLE 3.—National Income by Type of Income, 1929-66

(Billions of dollars)

Year	Total national income	Compensation of employees ¹	Proprietors' income		Rental income of persons	Net interest	Corporate profits and inventory valuation adjustment		
			Farm ²	Business and professional			Total	Corporate profits before taxes ³	Inventory valuation adjustment
1929	86.8	51.1	6.2	9.0	5.4	4.7	10.5	10.0	0.5
1930	75.4	46.8	4.3	7.6	4.8	4.9	7.0	3.7	3.3
1931	59.7	39.8	3.4	5.8	3.8	5.0	2.0	-.4	2.4
1932	42.8	31.1	2.1	3.6	2.7	4.6	-1.3	-2.3	1.0
1933	40.3	29.5	2.6	3.3	2.0	4.1	-1.2	1.0	-2.1
1934	49.5	34.3	3.0	4.7	1.7	4.1	1.7	2.3	-.6
1935	57.2	37.3	5.3	5.5	1.7	4.1	3.4	3.6	-.2
1936	65.0	42.9	4.3	6.7	1.8	3.8	5.6	6.3	-.7
1937	73.6	47.9	6.0	7.2	2.1	3.7	6.8	6.8	*
1938	67.4	45.0	4.4	6.9	2.6	3.6	4.9	4.0	1.0
1939	72.6	48.1	4.4	7.4	2.7	3.5	6.3	7.0	-.7
1940	81.1	52.1	4.5	8.6	2.9	3.3	9.8	10.0	-.2
1941	104.2	64.8	6.4	11.1	3.5	3.2	15.2	17.7	-2.5
1942	137.1	85.3	9.8	14.0	4.5	3.1	20.3	21.5	-1.2
1943	170.3	109.5	11.7	17.0	5.1	2.7	24.4	25.1	-.8
1944	182.6	121.2	11.6	18.2	5.4	2.3	23.8	24.1	-.3
1945	181.5	123.1	12.2	19.2	5.6	2.2	19.2	19.7	-.6
1946	181.9	117.9	14.9	21.6	6.6	1.5	19.3	24.6	-5.3
1947	199.0	128.9	15.2	20.3	7.1	1.9	25.6	31.5	-5.9
1948	224.2	141.1	17.5	22.7	8.0	1.8	33.0	35.2	-2.2
1949	217.5	141.0	12.7	22.6	8.4	1.9	30.8	28.9	1.9
1950	241.1	154.6	13.5	24.0	9.4	2.0	37.7	42.6	-5.0
1951	278.0	180.7	15.8	26.1	10.3	2.3	42.7	43.9	-1.2
1952	291.4	195.3	15.0	27.1	11.5	2.6	39.9	38.9	1.0
1953	304.7	209.1	13.0	27.5	12.7	2.8	39.6	40.6	-1.0
1954	303.1	208.0	12.4	27.6	13.6	3.6	38.0	38.3	-.3
1955	331.0	224.5	11.4	30.3	13.9	4.1	46.9	48.6	-1.7
1956	350.8	243.1	11.4	31.3	14.3	4.6	46.1	48.8	-2.7
1957	366.1	256.0	11.3	32.8	14.8	5.6	45.6	47.2	-1.5
1958	367.8	257.8	13.4	33.2	15.4	6.8	41.1	41.4	-.3
1959	400.0	279.1	11.4	35.1	15.6	7.1	51.7	52.1	-.5
1960	414.5	294.2	12.0	34.2	15.8	8.4	49.9	49.7	.2
1961	427.3	302.6	12.8	35.6	16.0	10.0	50.3	50.3	-.1
1962	457.7	323.6	13.0	37.1	16.7	11.6	55.7	55.4	.3
1963	481.9	341.0	13.1	37.9	17.1	13.8	58.9	59.4	-.5
1964	517.3	365.7	12.0	39.9	17.7	15.5	66.6	67.0	-.4
1965	559.0	392.9	15.1	40.7	18.3	17.8	74.2	75.7	-1.5
1966	610.1	433.3	16.0	41.8	18.9	20.0	80.2	82.3	-2.1

¹ Includes employer contributions for social insurance and to private pension, health, and welfare funds; compensation for injuries; directors' fees; pay of the military reserve; and a few other minor items.

² Excludes income resulting from net reductions of farm inventories and gives credit in computing income to net additions to farm inventories during the period.

³ See Table 7 for corporate tax liability and profits after taxes.

NOTE.—Data for Alaska and Hawaii included beginning 1960.

SOURCE.—Department of Commerce, Office of Business Economics.

Seasonal adjustments are not available for the income components of the national accounts, with the exception of corporation profits. This is so because the basic data sources do not provide a completely unadjusted monthly series for wages and salaries, and because in the case of proprietors' income, actual net income data are lacking altogether on a quarterly basis.

USES AND LIMITATIONS

The national income is a useful measure of the rate of flow of earnings from current output. By definition it excludes income from the revaluation of past output—e.g., capital gains and losses. The movements of this series correspond with movements in production. However, the value of the national

income series lies more in the composition than in the total. It may mean little to know that national income (unadjusted for price changes) has gone up; but it may be very important to know the relative contribution of wages and profits to that increase.

The chief cautions for use result partly from the definitions used, and partly from the nature of the basic data. With respect to the first, care must be taken not to interpret movements in the series as measuring something other than they are intended to measure. For example, variations in wages and profits do not necessarily indicate changes in the welfare of workers or in the ability of corporations to provide new capital. For such purposes, these variations must be considered in the light of other factors such as the cost of living and the cost of new plant and equipment. With respect to the second—which is particularly applicable to the current data on proprietors' income, rental income of persons, and the corporate inventory valuation adjustment—it should be recognized that many of the available data permit only fair approximations of the phenomena being measured, and therefore too great reliance

should not be placed on these statistics as instruments of precise measurement.

REFERENCES

The official quarterly estimates for the series included in the national income and product accounts are published by the Office of Business Economics, Department of Commerce, in the *Survey of Current Business*; a preliminary estimate is published in the *Survey* in the first month after the close of the quarter; revised figures for each quarter are shown in a subsequent issue of the *Survey*. The figures also appear in *Economic Indicators*. Preliminary annual estimates are published by the Office of Business Economics in the January issue of the *Survey*, revised estimates in the July issue. Complete annual and quarterly statistics for 1929-65 were published in *The National Income and Product Accounts of the United States, 1929-65*.

A statistical evaluation report, *Revisions of First Estimates of Quarter-to-Quarter Movement in National Income Series, 1947-1958* is available from the Office of Statistical Standards, Bureau of the Budget.

4. SOURCES OF PERSONAL INCOME

DESCRIPTION OF SERIES

"Personal income" is the current income received by persons from all sources, inclusive of transfer from government and business but exclusive of transfers among persons. Not only individuals (including owners of unincorporated enterprises), but nonprofit institutions, private trust funds, and private health and welfare funds are classified as "persons." Personal income is measured on a before-tax basis, as the sum of wage and salary disbursements, other labor income, proprietors' and rental income, interest and dividends, and transfer payments, minus personal contributions for social insurance.

"Labor income" is principally wages and salaries. It excludes employer contributions for social insurance. "Proprietors' income" and "Rental income of persons" are defined above in the section on National Income. "Dividends" are cash dividend disbursements by corporations organized for profit to stockholders who are United States persons. "Personal interest income" is the sum of the "Net interest" component of National Income, total interest paid by consumers and net interest paid by Government including government enterprises. "Transfer pay-

ments" include payments not resulting from current production, such as social security benefits, military pensions, corporate gifts to nonprofit institutions, direct relief, and consumer bad debts.

Seasonally adjusted data, preferred for most purposes, are derived directly from seasonally adjusted source materials for some national income components. Unadjusted data are not available for personal income or for national income.

RELATION TO OTHER SERIES

Personal income differs from national income by including transfer payments (to persons and government) and consumer interest, and by excluding contributions for social insurance (by employee and employer), the corporate inventory valuation adjustment, and corporate profits tax liability and undistributed corporate profits.

USES AND LIMITATIONS

The estimates for personal income and components and for disposable income measure trends in spending power of individuals. The inclusion of substantial

TABLE 4.—Sources of Personal Income, 1929-66

(Billions of dollars)

Year	Total personal income	Wage and salary disbursements ¹	Other labor income ¹	Proprietors' income		Rental income of persons	Dividends	Personal interest income	Transfer payments	Less: Personal contributions for social insurance	Non-agricultural personal income ²
				Business and professional	Farm ³						
1929	85.9	50.4	0.6	9.0	6.2	5.4	5.8	7.2	1.5	0.1	77.6
1930	77.0	46.2	.6	7.6	4.3	4.8	5.5	6.8	1.5	.1	70.8
1931	65.9	39.1	.5	5.8	3.4	3.8	4.1	6.7	2.7	.2	60.8
1932	50.2	30.5	.5	3.6	2.1	2.7	2.5	6.3	2.2	.2	46.7
1933	47.0	29.0	.4	3.3	2.6	2.0	2.0	5.7	2.1	.2	43.2
1934	54.0	33.7	.4	4.7	3.0	1.7	2.6	5.8	2.2	.2	49.8
1935	60.4	36.7	.5	5.5	5.3	1.7	2.8	5.7	2.4	.2	53.0
1936	68.6	41.9	.6	6.7	4.3	1.8	4.5	5.5	3.5	.2	63.0
1937	74.1	46.1	.6	7.2	6.0	2.1	4.7	5.6	2.4	.6	66.7
1938	68.3	43.0	.6	6.9	4.4	2.6	3.2	5.5	2.8	.6	62.6
1939	72.8	45.9	.6	7.4	4.4	2.7	3.8	5.5	3.0	.6	66.9
1940	78.3	49.8	.7	8.6	4.5	2.9	4.0	5.4	3.1	.7	72.3
1941	96.0	62.1	.7	11.1	6.4	3.5	4.4	5.5	3.1	.8	87.8
1942	122.9	82.1	.9	14.0	9.8	4.5	4.3	5.3	3.1	1.2	111.0
1943	151.3	105.6	1.1	17.0	11.7	5.1	4.4	5.3	3.0	1.8	137.3
1944	165.3	116.9	1.5	18.2	11.6	5.4	4.6	5.6	3.6	2.2	151.2
1945	171.1	117.5	1.8	19.2	12.2	5.6	4.6	6.3	6.2	2.3	156.4
1946	178.7	112.0	1.9	21.6	14.9	6.6	5.6	6.8	11.3	2.0	161.0
1947	191.3	123.0	2.3	20.3	15.2	7.1	6.3	7.5	11.7	2.1	173.0
1948	210.2	135.3	2.7	22.7	17.5	8.0	7.0	7.9	11.2	2.2	189.4
1949	207.2	134.6	3.0	22.6	12.7	8.4	7.2	8.5	12.4	2.2	191.3
1950	227.6	146.7	3.8	24.0	13.5	9.4	8.8	9.2	15.1	2.9	210.9
1951	255.6	171.0	4.8	26.1	15.8	10.3	8.6	9.9	12.5	3.4	236.4
1952	272.5	185.1	5.3	27.1	15.0	11.5	8.6	10.6	13.0	3.8	254.1
1953	288.2	198.3	6.0	27.5	13.0	12.7	8.9	11.8	14.0	4.0	271.9
1954	290.1	196.5	6.3	27.6	12.4	13.6	9.3	13.1	16.0	4.6	274.7
1955	310.9	211.3	7.3	30.3	11.4	13.9	10.5	14.2	17.3	5.2	296.4
1956	333.0	227.8	8.4	31.3	11.4	14.3	11.3	15.7	18.5	5.8	318.5
1957	351.1	238.7	9.5	32.8	11.3	14.8	11.7	17.6	21.4	6.7	336.6
1958	361.2	239.9	9.9	33.2	13.4	15.4	11.6	18.9	25.7	6.9	344.3
1959	383.5	258.2	11.3	35.1	11.4	15.6	12.6	20.7	26.6	7.0	368.5
1960	401.0	270.8	12.0	34.2	12.0	15.8	13.4	23.4	28.5	9.3	385.2
1961	416.8	278.1	12.7	35.6	12.8	16.0	13.8	25.0	32.4	9.6	400.0
1962	442.6	296.1	13.9	37.1	13.0	16.7	15.2	27.7	33.3	10.3	425.5
1963	465.5	311.1	14.9	37.9	13.1	17.1	16.5	31.4	35.3	11.8	448.1
1964	496.0	333.6	16.6	39.9	12.0	17.7	17.3	34.6	36.8	12.5	479.7
1965	535.1	358.4	18.5	40.7	15.1	18.3	19.2	38.4	39.7	13.2	515.6
1966	580.4	392.3	20.8	41.8	16.0	18.9	20.9	42.8	44.6	17.6	559.7

¹ The total of wage and salary disbursements and other labor income differs from compensation of employees in Table 3 in that it excludes employer contributions for social insurance and excludes the excess of wage accruals over wage disbursements.

² Excludes income resulting from net reductions of inventories and gives credit in computing income to net additions to inventories during the period.

³ Nonagricultural income is personal income exclusive of net income of unincorporated farm enterprises, farm wages, agricultural net interest, and net dividends paid by agricultural corporations.

NOTE.—Data for Alaska and Hawaii included beginning 1960.

Source: Department of Commerce, Office of Business Economics.

nonmonetary items—imputed rent, interest, food, fuel—should be noted, but the effect of these items should not be overemphasized. They tend to make income estimates more stable, but have little effect on the ability of the estimates to show when a change is occurring and the direction of the shift.

Disposable personal income, discussed in the next section, is often used as a measure of income available for spending. For measuring changes, in real terms, i.e., in consumers' buying power, the estimates of disposable income in constant prices are to be preferred.

5. DISPOSITION OF PERSONAL INCOME

DESCRIPTION OF SERIES

"Disposable personal income" is equal to personal income less taxes on individuals (including income and other taxes not deductible as business expense) and other general government revenues received from individuals as individuals.

"Personal outlays" is the sum of personal consumption expenditures, interest paid by consumers, and personal transfer payments to foreigners. The latter consists of personal remittances in kind and in cash to abroad, net of such remittances from abroad.

"Personal consumption expenditures" is the sum of monetary and imputed expenditures made by persons (individuals, nonprofit institutions such as hospitals, etc.) for goods and services. The expenditure total covers total purchase cost to persons including general sales taxes. The full cost of automobiles, refrigerators, furniture, and the like is included in the period when sold—quarter or year—regardless of when payments are made or completed.

The purchase of homes is not included as an expenditure; instead, the estimated rental value to the homeowner is included if he occupies the home. More detail than is shown in *Economic Indicators* is presented in Table 5B.

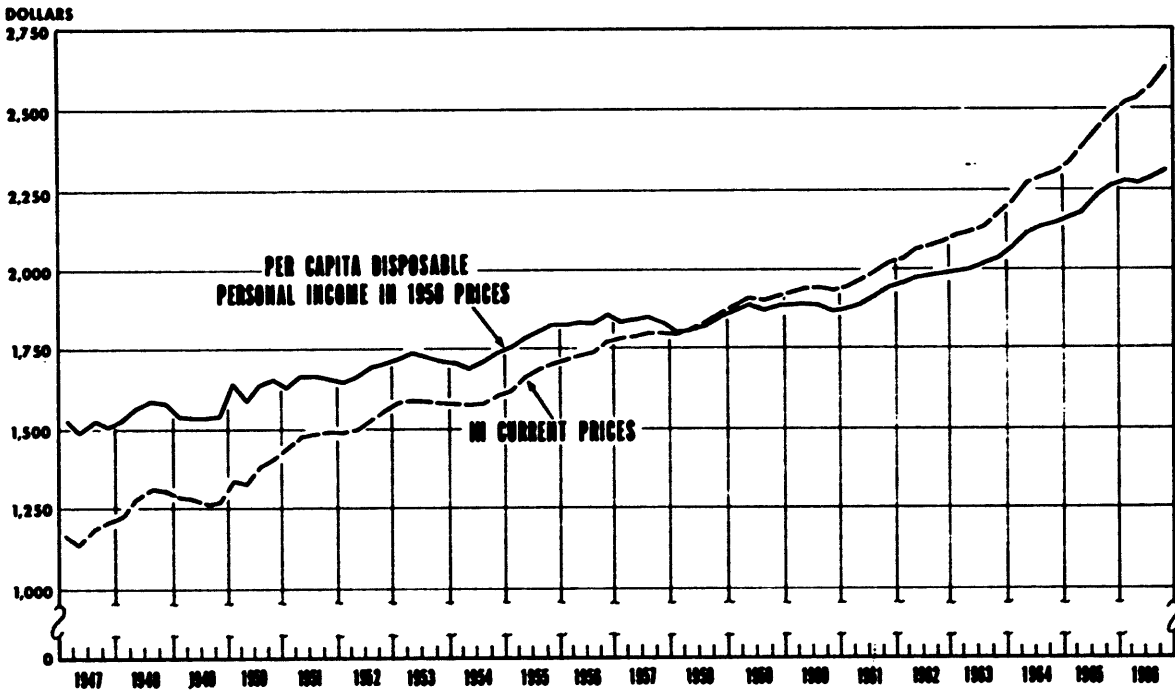
"Durable goods" are those items which generally last three years or longer in use. "Nondurable goods" are tangible commodities with a shorter life.

"Services" include purchases such as housing, telephone, electricity, shoe repair, gas and water, and also such items as the expense of handling life insurance, and banking services furnished without a specific charge.

"Personal saving" is equal to disposable personal income less personal outlays. As such, it equals the change in net worth of persons which may be further viewed as the acquisition of financial claims (such as cash and deposits, securities, and reserves of life insurance companies and noninsured pension funds) less the net increase in indebtedness, plus the acquisition of physical assets net of capital consumption allowances.

Per Capita Disposable Income, 1947-66

(Quarterly data. Seasonally adjusted annual rates)



SOURCE OF DATA: DEPARTMENT OF COMMERCE AND COUNCIL OF ECONOMIC ADVISORS

TABLE 5A.—Disposition of Personal Income, 1929-66

Year	Personal income	Less: Personal tax and nontax payments	Equals: Disposable personal income	Less: Personal outlays				Equals: Personal saving	Per capita disposable personal income		Personal savings as a percent of disposable income	Population ¹
				Total personal outlays ²	Personal consumption expenditures ³				Current prices	1958 prices		
					Durable goods	Non-durable goods	Services					
Billions of dollars								Dollars		Percent	Thousands	
1929.....	85.9	2.6	83.3	79.1	9.2	37.7	30.3	4.2	683	1,236	5.0	121,875
1930.....	77.0	2.5	74.5	71.1	7.2	34.0	28.7	3.4	605	1,128	4.6	123,188
1931.....	65.9	1.9	64.0	61.4	5.5	29.0	26.0	2.6	516	1,077	4.1	124,149
1932.....	50.2	1.5	48.7	49.3	2.6	22.7	22.2	- .6	390	921	-1.3	124,949
1933.....	47.0	1.5	45.5	46.5	3.5	22.3	20.1	- .9	362	893	-2.0	125,690
1934.....	54.0	1.6	52.4	52.0	4.2	26.7	20.4	.4	414	952	.7	126,485
1935.....	60.4	1.9	58.5	56.4	5.1	29.3	21.3	2.1	459	1,035	3.7	127,363
1936.....	68.6	2.3	66.3	62.7	6.3	32.9	22.8	3.6	518	1,158	5.4	128,181
1937.....	74.1	2.9	71.2	67.4	6.9	35.2	24.4	3.8	552	1,187	5.3	128,961
1938.....	68.3	2.9	65.5	64.8	5.7	34.0	24.3	.7	504	1,105	1.1	129,969
1939.....	72.8	2.4	70.3	67.7	6.7	35.1	25.0	2.6	537	1,190	3.7	131,028
1940.....	78.3	2.6	75.7	71.8	7.8	37.0	28.0	3.8	573	1,250	5.1	132,122
1941.....	96.0	3.3	92.7	81.7	9.6	42.9	28.1	11.0	695	1,427	11.8	133,402
1942.....	122.9	6.0	116.9	89.3	6.9	50.8	30.8	27.6	867	1,582	23.6	134,860
1943.....	151.3	17.8	133.5	100.1	6.6	58.6	34.2	33.4	976	1,629	25.0	136,739
1944.....	165.3	18.9	146.3	109.1	6.7	64.3	37.2	37.3	1,057	1,673	25.5	138,397
1945.....	171.1	20.9	150.2	120.7	8.0	71.2	39.8	29.6	1,074	1,642	19.7	139,928
1946.....	178.7	18.7	160.0	144.8	15.8	82.4	45.3	15.2	1,132	1,606	9.5	141,359
1947.....	191.3	21.4	169.8	162.5	20.4	90.5	49.8	7.3	1,178	1,513	4.3	144,126
1948.....	210.2	21.1	189.1	175.8	22.7	96.2	54.7	13.4	1,290	1,567	7.1	146,631
1949.....	207.2	18.6	188.6	179.2	24.6	94.5	57.6	9.4	1,264	1,547	5.0	149,188
1950.....	227.6	20.7	206.9	193.9	30.5	98.1	62.4	13.1	1,364	1,646	6.3	151,684
1951.....	255.6	29.0	226.6	209.3	29.6	108.8	67.9	17.3	1,469	1,657	7.6	154,287
1952.....	272.5	34.1	238.3	220.2	29.3	114.0	73.4	18.1	1,518	1,678	7.6	156,954
1953.....	288.2	35.6	252.6	234.3	33.2	116.8	79.9	18.3	1,583	1,726	7.2	159,565
1954.....	290.1	32.7	257.4	241.0	32.8	118.3	85.4	16.4	1,585	1,714	6.4	162,391
1955.....	310.9	35.5	275.3	259.5	39.6	123.3	91.4	15.8	1,666	1,795	5.7	165,275
1956.....	333.0	39.8	293.2	272.6	38.9	129.3	98.5	20.6	1,743	1,839	7.0	168,221
1957.....	351.1	42.6	308.5	287.8	40.8	135.6	105.0	20.7	1,801	1,844	6.7	171,274
1958.....	361.2	42.3	318.8	296.6	37.9	140.2	112.0	22.3	1,831	1,831	7.0	174,141
1959.....	383.5	46.2	337.3	318.3	44.3	146.6	120.3	19.1	1,905	1,881	5.6	177,073
1960.....	401.0	50.9	350.0	333.0	45.3	151.3	128.7	17.0	1,937	1,883	4.9	180,684
1961.....	416.8	52.4	364.4	343.3	44.2	155.9	135.1	21.2	1,983	1,909	5.8	183,756
1962.....	442.6	57.4	385.3	363.7	46.5	162.6	143.0	21.6	2,064	1,968	5.6	186,656
1963.....	465.5	60.9	404.6	384.7	53.9	168.6	152.4	19.9	2,136	2,013	4.9	189,417
1964.....	496.0	59.4	436.6	412.1	59.4	178.9	163.1	24.5	2,272	2,116	5.6	192,120
1965.....	535.1	66.0	469.1	443.4	66.1	190.6	174.8	25.7	2,411	2,214	5.5	194,572
1966.....	580.4	75.1	505.3	478.3	69.3	206.2	189.4	27.0	2,567	2,294	5.3	196,842

¹ Includes personal consumption expenditures, interest paid by consumers, and personal transfer payments to foreigners.

² See p. 16 for total personal consumption expenditures, and a breakdown of durable goods, non-durable goods, and services.

³ Population of the United States including armed forces abroad. Annual data are for July 1; quarterly data are for middle of period, interpolated from monthly data.

NOTE.—Data for Alaska and Hawaii included beginning 1960.

Sources: Department of Commerce (Office of Business Economics and Bureau of the Census) and Council of Economic Advisers.

“Per capita disposable personal income” is the disposable personal income series divided by the Census Bureau estimate of total population for the middle of the period covered.

Per capita disposable personal income in 1958 prices is obtained by dividing the current dollar

series by the implicit deflator for personal consumption expenditures on a 1958 base used in the GNP series.

The movements of the current and the constant dollar per capita estimates since 1947 are shown in the chart on page 14.

TABLE 5B.—Personal Consumption Expenditures, 1929-66

(Billions of dollars)

Year	Total personal consumption expenditures	Durable goods				Nondurable goods				Services					
		Total	Automobiles and parts	Furniture and household equipment	Other	Total	Food, excluding alcoholic beverages	Clothing and shoes ¹	Gasoline and oil	Other	Total	Housing ²	Household operation	Transportation	Other
1929	77.2	9.2	3.2	4.8	1.2	37.7	19.5	9.4	1.8	7.0	30.3	11.5	4.0	2.6	12.2
1930	69.9	7.2	2.2	3.9	1.1	34.0	18.0	8.0	1.7	6.3	28.7	11.0	3.9	2.2	11.5
1931	60.5	5.5	1.6	3.1	.9	29.0	14.7	6.9	1.5	5.7	28.0	10.3	3.5	1.9	10.3
1932	48.6	3.6	.9	2.1	.6	22.7	11.4	5.1	1.5	4.8	22.2	9.0	3.0	1.6	8.6
1933	45.8	3.5	1.1	1.9	.5	22.3	10.9	4.6	1.5	5.3	20.1	7.9	2.8	1.5	7.9
1934	51.3	4.2	1.4	2.2	.6	26.7	12.2	5.7	1.6	7.2	20.4	7.6	3.0	1.6	8.2
1935	55.7	5.1	1.9	2.6	.7	29.3	13.6	6.0	1.7	7.9	21.3	7.7	3.2	1.7	8.7
1936	61.9	6.3	2.3	3.2	.8	32.9	15.3	6.6	1.9	9.1	22.8	8.0	3.4	1.9	9.5
1937	66.5	6.9	2.4	3.6	1.0	35.2	16.5	6.8	2.1	9.8	24.4	8.5	3.7	2.0	10.2
1938	63.9	5.7	1.6	3.1	.9	34.0	15.6	6.8	2.1	9.5	24.3	8.9	3.6	1.9	9.9
1939	66.8	6.7	2.2	3.5	1.0	35.1	15.7	7.1	2.2	10.1	25.0	9.1	3.8	2.0	10.1
1940	70.8	7.8	2.7	3.9	1.1	37.0	16.6	7.4	2.3	10.7	28.0	9.4	4.0	2.1	10.4
1941	80.6	9.6	3.4	4.9	1.4	42.9	19.2	8.8	2.6	12.2	28.1	10.2	4.3	2.4	11.2
1942	88.5	6.9	.7	4.7	1.6	50.8	23.3	11.0	2.1	14.4	30.8	11.0	4.8	2.7	12.3
1943	99.3	6.6	.8	3.9	1.9	58.6	27.4	13.4	1.3	16.5	34.2	11.5	5.2	3.4	14.0
1944	108.3	6.7	.8	3.8	2.2	64.3	29.9	14.4	1.6	18.4	37.2	12.0	5.9	3.7	15.6
1945	119.7	8.0	1.0	4.6	2.5	71.9	33.2	16.5	1.8	20.5	39.8	12.5	6.4	4.0	16.8
1946	143.4	15.8	4.0	8.6	3.2	82.4	39.0	18.2	3.0	22.1	45.3	13.9	6.8	5.0	19.7
1947	160.7	20.4	6.2	10.9	3.3	90.5	43.7	18.8	3.6	24.4	49.8	15.7	7.5	5.3	21.4
1948	173.6	22.7	7.5	11.9	3.4	96.2	46.3	20.1	4.4	25.4	54.7	17.5	8.1	5.8	23.3
1949	176.8	24.6	9.9	11.6	3.2	94.5	44.8	19.3	5.0	25.4	57.6	19.3	8.5	5.9	23.9
1950	191.0	30.5	13.1	14.1	3.3	98.1	46.0	19.6	5.4	27.1	62.4	21.3	9.5	6.2	25.4
1951	206.3	29.6	11.6	14.4	3.6	108.8	52.1	21.2	6.1	29.3	67.9	23.9	10.4	6.7	26.9
1952	216.7	29.3	11.1	14.3	3.9	114.0	54.7	21.9	6.8	30.5	73.4	26.5	11.1	7.1	28.7
1953	230.0	33.2	14.2	14.9	4.1	116.8	55.5	22.1	7.7	31.6	79.9	29.3	12.0	7.8	30.8
1954	236.5	32.8	13.6	15.0	4.2	118.3	56.5	22.1	8.2	31.5	85.4	31.7	12.6	7.9	33.2
1955	254.4	39.6	18.4	16.6	4.6	123.3	58.1	23.1	9.0	33.1	91.4	33.7	14.0	8.2	35.5
1956	266.7	38.9	16.4	17.5	5.0	129.3	60.4	24.1	9.8	34.9	98.5	36.0	15.2	8.6	38.6
1957	281.4	40.8	18.3	17.3	5.2	135.6	63.9	24.3	10.6	36.7	105.0	38.5	16.2	9.0	41.3
1958	290.1	37.9	15.4	17.1	5.4	140.2	66.6	24.7	11.0	37.9	112.0	41.1	17.3	9.3	44.3
1959	311.2	44.3	19.5	18.9	5.9	146.6	68.4	26.4	11.6	40.2	120.3	43.7	18.5	10.1	48.0
1960	325.2	45.3	20.1	18.9	6.3	151.3	70.1	27.3	12.3	41.6	128.7	46.3	20.0	10.8	51.6
1961	335.2	44.2	18.4	19.3	6.5	155.9	72.1	27.9	12.4	43.5	135.1	48.7	20.8	10.6	54.9
1962	355.1	49.5	22.0	20.5	6.9	162.6	74.4	29.6	12.9	45.7	143.0	52.0	22.0	11.0	58.0
1963	375.0	53.9	24.3	22.2	7.5	168.6	76.5	30.6	13.5	48.0	152.4	55.4	23.1	11.4	62.5
1964	401.4	59.4	25.8	25.1	8.5	178.9	80.4	33.6	14.1	50.8	163.1	59.2	24.3	11.8	67.8
1965	431.5	66.1	29.8	27.1	9.1	190.6	85.4	35.9	15.1	54.1	174.8	63.2	25.6	12.8	73.3
1966	464.9	69.3	30.0	30.1	9.3	206.2	91.3	40.3	16.1	58.5	189.4	67.7	27.2	14.0	80.5

¹ Includes standard clothing issued to military personnel.

² Includes imputed rental value of owner-occupied dwellings.

Note.—Data for Alaska and Hawaii included, beginning 1960.

Source: Department of Commerce, Office of Business Economics.

STATISTICAL PROCEDURES

Most personal consumption expenditures for goods are estimated for benchmark years from the value of the output of specified items as reported in the Census of Manufactures, less the portion of this output bought by business and government or exported. To the consumer portion of manufactured products is

added the value of nonmanufactured consumer goods (for example, nonprocessed foods) to derive producers' output for consumers. Successive adjustments are added for transportation, imports and exports, wholesale and retail inventory changes, wholesale and retail markups, and sales taxes. Transportation charges are computed from data on transportation compiled by the Interstate Commerce Com-

mission and other sources. Wholesale and retail markups are derived from Census of Business and Internal Revenue Service data. For service items a great variety of sources and procedures are used.

Estimates of consumption expenditures for years between benchmarks and quarterly consumption expenditures estimates rest chiefly on the trends shown by the Census Bureau's Annual Survey of Manufactures and retail sales figures by kind of store, State sales tax reports, and other source data.

For information on seasonal adjustments, see the discussion in the sections on Gross National Product or Expenditure, and National Income.

RELATION TO OTHER SERIES

Estimates of personal consumption expenditures will show much the same movements from quarter to quarter as the figures for total retail sales. However, personal consumption expenditures also include a wide variety of services and such items as food produced and consumed on farms which are outside of retail trade. Conversely, retail trade includes some commodity items, such as building materials and trucks, which are not part of personal consumption expenditures.

The estimate of personal net saving and the net claims estimate of the Securities and Exchange Commission differ in level and trend. The chief reason for the difference is the inclusion in the personal sav-

ings series (and not in the net claims estimates) of net purchases of nonfarm residences and net increases in persons' equities in farms and other unincorporated businesses. (For a detailed reconciliation of the two series, see table 5.7 in *The National Income and Product Accounts of the United States, 1929-1965*, which is carried forward each year in the July issue of the *Survey*.)

USES AND LIMITATIONS

The estimates of personal consumption expenditures represent a generally useful, reliable measure of trends in consumer purchases. They may be used to study trends in the ratio of wages, or more generally of income, to expenditure, and to review the division of the national output between consumer takings, business capital formation, and government defense or other expenditures.

The estimates of personal saving are among the least satisfactory of the significant series which appear in the national income accounts. They are the residual from two larger estimates. The errors and limitations present in the hundreds of series, developed for other purposes, which must be used at present in estimating the national income do not completely cancel out. To this extent these errors are transmitted into the saving estimate. Quarter-to-quarter changes for recent periods are, however, subject to revision as better data become available.

6. FARM INCOME

DESCRIPTION OF SERIES

There are two major concepts of farm income. One, a personal income concept, relates to all the people who live on farms and the incomes they receive from nonfarm as well as farm sources. The other views agriculture as a business and measures the gross and net income received from farming. The Economic Research Service of the Department of Agriculture prepares estimates relating to both concepts.

Estimates of the personal income received by the total farm population are available only on an annual basis back to 1934. The personal income of the farm population from farm sources covers the net income of resident farm operators from farming plus farm wages received by farm resident workers less contributions to social insurance. It includes Govern-

ment payments and makes an allowance for the net value of physical changes in farm inventories of crops and livestock. Personal income from non-farm sources includes salaries and wages, interest, dividends, rents, royalties, and transfer payments, such as unemployment compensation and veterans' benefits.

Gross and net farm income from farming and farm production expenses are estimated annually from 1910 and quarterly at seasonally adjusted annual rates, from 1929. Realized gross income from farming is the sum of (1) cash receipts from farm marketings, (2) the value of farm products consumed directly in farm households, (3) the imputed gross rental value of farm dwellings, and (4) Government payments to farmers. Farm production expenses, which now offset about 70 percent of realized gross farm income, are the aggregate of all current farm

operating expenses and overhead costs. Farm operators' net income excluding the net change in inventories is the remainder of realized gross farm income after farm production expenses have been deducted. Farm operators' net income including net change in inventories takes into account changes in farmers' holdings of livestock and crops, as shown on the accompanying chart. Net income per farm is calculated by dividing the U.S. income totals by the Department of Agriculture series on estimated number of farms.

STATISTICAL PROCEDURES

Since the average farm family receives about a third of its total personal income in the form of earnings from employment in nonfarm occupations or as returns from investments in nonfarm property, the measurement of these items is obviously important as a supplement to the regular measures of farm income. Estimates of income received by the farm population from nonfarm sources are tied to benchmark estimates from sample surveys for several scattered years and interpolated or extrapolated for other years. Since the first benchmark surveys were for the years 1934-36, the series starts there and does not extend back to 1910 along with many

other series on farm income. Totals derived from various surveys covering the years 1946, 1950, 1955 and 1960 have been used as benchmarks or as supplementary check data.

For the computation of gross farm income, the estimates of cash receipts from marketings are based on information collected by the Department of Agriculture on the quantity sold and average prices received by farmers for the various farm commodities. The current estimates of monthly crop marketings are based on estimated production, the normal percentage of the crop sold, and the usual seasonal movement to market, supplemented by available current data on market receipts and Commodity Credit Corporation loan activity. For most of the important livestock items current reports on production or market receipts are available and are used to estimate current livestock marketings. The estimates of cash receipts from marketings are later revised as more complete data on production crop-year sales and monthly marketings become available. The value of farm products consumed directly in farm households is estimated on the basis of information obtained from farmers (annually for important products and less frequently for other products) on the volume of home consumption,

Farm Income, 1947-66

(Quarterly data. Seasonally adjusted annual rates)

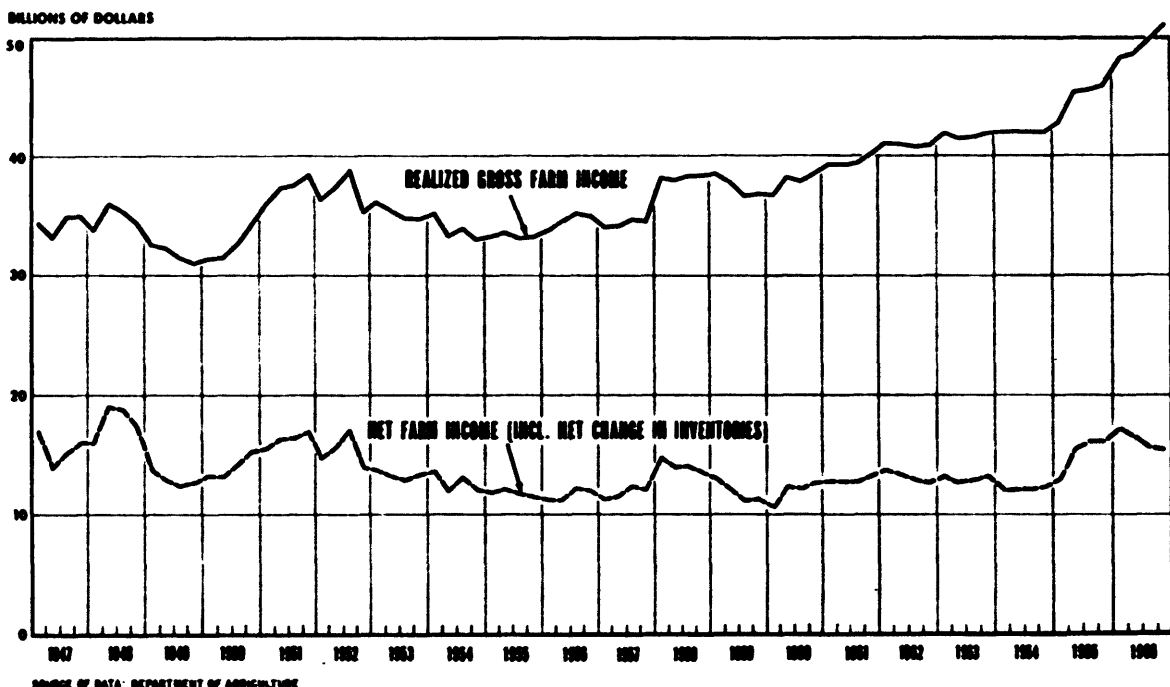


TABLE 6.—Farm Income, 1929-66

Year	Personal income received by total farm population			Income received from farming						Net income per farm, including net inventory change ¹	
				Realized gross		Production expenses	Net to farm operators				
	From all sources	From farm sources	From nonfarm sources	Total ²	Cash receipts from marketings		Excluding net inventory change	Including net inventory change ³	Current prices	1966 prices ⁴	
Billions of dollars									Dollars		
1929.....	(⁵)	(⁵)	(⁵)	13.9	11.3	7.7	6.3	6.2	945	1,929	
1930.....	(⁵)	(⁵)	(⁵)	11.5	9.1	6.9	4.5	4.3	651	1,415	
1931.....	(⁵)	(⁵)	(⁵)	8.4	6.4	5.5	2.9	3.3	506	1,297	
1932.....	(⁵)	(⁵)	(⁵)	6.4	4.7	4.5	1.9	2.0	304	894	
1933.....	(⁵)	(⁵)	(⁵)	7.1	5.3	4.4	2.7	2.6	379	1,115	
1934.....	5.4	3.2	2.2	8.6	6.4	4.7	3.9	2.9	431	1,108	
1935.....	7.7	5.4	2.3	9.7	7.1	5.1	4.6	5.3	775	1,987	
1936.....	7.2	4.6	2.6	10.8	8.4	5.6	5.1	4.3	139	1,638	
1937.....	9.0	6.2	2.7	11.4	8.9	6.2	5.2	6.0	905	2,207	
1938.....	7.2	4.7	2.5	10.1	7.7	5.9	4.2	4.4	668	1,713	
1939.....	7.4	4.8	2.6	10.6	7.9	6.3	4.3	4.4	655	1,803	
1940.....	7.6	4.8	2.8	11.1	8.4	6.9	4.2	4.5	706	1,858	
1941.....	10.1	6.8	3.3	13.9	11.1	7.8	6.1	6.5	1,031	2,515	
1942.....	14.1	10.1	3.9	18.8	15.6	10.0	8.8	9.9	1,588	3,379	
1943.....	16.5	12.1	4.4	23.4	19.6	11.6	11.8	11.7	1,927	3,636	
1944.....	18.6	12.2	4.4	24.4	20.5	12.3	12.1	11.7	1,950	3,482	
1945.....	17.2	12.8	4.4	25.8	21.7	13.1	12.8	12.3	2,063	3,557	
1946.....	20.0	15.5	4.6	29.5	24.8	14.5	15.0	15.1	2,543	3,973	
1947.....	21.1	15.8	5.3	34.1	29.6	17.0	17.1	15.4	2,615	3,487	
1948.....	23.8	18.0	5.8	34.7	30.2	18.8	15.9	17.7	3,044	3,805	
1949.....	19.5	13.3	6.2	31.6	27.8	18.0	13.6	12.8	2,233	2,900	
1950.....	20.4	14.1	6.3	32.3	28.5	19.4	12.9	13.7	2,421	3,104	
1951.....	22.7	16.2	6.5	37.1	32.9	22.3	14.8	16.0	2,946	3,486	
1952.....	22.1	15.4	6.7	36.8	32.5	22.6	14.1	15.1	2,896	3,367	
1953.....	19.8	13.4	6.4	35.0	31.0	21.3	13.7	13.1	2,626	3,099	
1954.....	18.4	12.5	5.9	33.6	29.8	21.6	12.0	12.5	2,606	2,930	
1955.....	17.6	11.4	6.2	33.1	29.5	21.9	11.2	11.5	2,463	2,864	
1956.....	17.8	11.2	6.6	34.3	30.4	22.4	11.9	11.4	2,335	2,914	
1957.....	17.7	11.0	6.6	34.0	29.7	23.3	10.7	11.3	2,590	2,878	
1958.....	19.5	12.8	6.7	37.9	33.5	25.2	12.7	13.5	3,189	3,504	
1959.....	18.1	11.0	7.0	37.5	33.5	26.1	11.4	11.5	2,795	3,071	
1960.....	18.7	11.4	7.2	37.9	34.0	26.2	11.7	12.0	3,043	3,308	
1961.....	19.0	12.1	6.9	39.6	34.9	27.0	12.6	12.9	3,389	3,684	
1962.....	19.2	12.2	7.0	41.1	36.2	28.5	12.5	13.1	3,562	3,789	
1963.....	18.7	12.0	6.7	42.1	37.2	29.6	12.5	13.1	3,671	3,864	
1964.....	17.9	11.1	6.7	42.3	36.9	29.4	12.9	12.1	3,479	3,662	
1965.....	20.6	13.7	6.8	44.9	39.2	30.7	14.2	15.2	4,493	4,632	
1966.....	21.3	14.5	6.8	49.5	42.9	33.2	16.3	16.1	4,955	4,955	

¹ Cash receipts from marketings, Government payments, and nonmoney income furnished by farms.

² Inventory of crops and livestock valued at the average price for the year.

³ The number of farms (in millions) are 3.4 for 1929 and 3.3 for 1966.

⁴ Income in current prices divided by the index of prices paid by farmers for items used in family living on a 1966 base.

⁵ Not available.

Source: Department of Agriculture.

valued at prices received by farmers for the sale of similar products. The gross rental value of farm dwellings is designed to represent the amount which would have to be paid if the dwellings were rented separately from the farms. Government payments to farmers comprise all Federal payments made directly to farmers in which a sale or title transfer to the Government is not involved—at the present time Feed Grain, Wheat, and Cotton Programs, Soil Bank, Cropland Adjustments, Conservation, Wool, and Sugar Act payments. Net Commodity Credit Corporation loans are included in cash receipts from marketings; loans are counted as income in the month made and redemptions are subtracted from income in the month redeemed.

The estimates of farm production expenses are based on about 40 separate series. Annual survey data are available only for purchased livestock and taxes on farm real estate. Some of the major operating expense series are based on data obtained in the Censuses of Agriculture, with interpolations for intercensal years; others are based on special surveys such as the 1955 Expenditure Survey and trade information. Depreciation charges on buildings, motor vehicles and other farm machinery and equipment are estimated annually as the amount which farmers would have to pay if they replaced, at prices prevailing during the year, the amount of plant and equipment used up during the year. Estimates are also made for other major expense accounts such as interest on outstanding indebtedness, repairs and operations, capital equipment, electricity, telephones, milk hauling and other items.

The net change in inventories reflects physical changes in all livestock and crops on farms, except crops under CCC loans, with the changes valued at average prices for the year.

Annual estimates are made of the number of farms, based on benchmark data from the Censuses of Agriculture adjusted for underenumeration and some of the Soil Bank farms excluded in the Census. National estimates for intercensal years utilize June Enumerative Surveys of the Statistical Reporting Service based on an area probability sample.

Quarterly estimates of cash receipts from farm marketings are expanded to a seasonally adjusted annual rate. The normal quarterly distribution of cash receipts in recent years has been 22 percent in the first quarter, 19 percent in the second quarter, 26 percent in the third quarter, and 33 percent in the

fourth quarter—requiring some fairly large seasonal adjustments.

Except for cash receipts, however, monthly or quarterly information on components of farm income and expense is insufficient for the direct application of ordinary methods of seasonal adjustment. While cash receipts can be seasonally adjusted in the usual manner, the other quarterly estimates are interpolated from annual data largely in terms of price changes, with the quantity factors either held constant throughout the year or varied in some reasonable manner.

RELATION TO OTHER SERIES

The series on net income of farm operators including net change in farm inventories is the same as farm proprietors' income in the national income series. Presently the Department of Agriculture series excludes Alaska and Hawaii while the Department of Commerce includes an estimate for these States starting in 1960.

The Department of Agriculture also publishes related series such as a net cash income of farm operators, the cash and other income of farm workers, farm capital expenditures and Government payments by programs.

USES AND LIMITATIONS

The estimates of realized gross farm income are for the most part based on a comprehensive body of basic data and are considered to be reasonably accurate. The estimates of farm production expenses, however, are based in part on incomplete data, less frequently collected, and are believed to be subject to more error than the estimates of cash receipts from farm marketings. Any errors in the expense estimates are fully reflected in the estimates of net income of farm operators.

Information on total farm income and on net income per farm, and on the per capita income of farm people is useful as a general indicator of the economic well-being of a broad sector of the economy. Its usefulness is limited, however, because of a wide variation in type-of-farming operations and in size of farms. Some segments of the farm economy may prosper at the same time that other segments are seriously distressed. In order to supply more detailed data on how the different segments of the farm economy are affected by changing prices of farm

products and of farm production goods and services, the Economic Research Service has developed data on farm costs and returns for 42 of the more important type-of-farming areas. The Economic Research Service has also developed estimates of income for commercial and for non-commercial farms and distributions of farm income by value of sales classes for 1959-65. Also, the Economic Research Service has developed estimates of the income per farm operator family from farm and off-farm sources by value of sales classes for 1959-65.

REFERENCES

The basic release of the farm income data is the *Farm Income Situation*, published 4 times a year by the Economic Research Service. In addition, an annual supplement is published showing State estimates of farm income starting in 1949. Some of

the principal series on farm income are also published in the Department of Agriculture's annual *Agricultural Statistics*. The methods used to estimate farm income are described in detail in *Major Statistical Series of the U.S. Department of Agriculture*. Volume 3—Gross and Net Farm Income, published in 1957; however, the section of this report dealing with nonfarm comparisons is no longer valid. The method used for the quarterly estimates, seasonally adjusted annual rates, of farm income are described in an article by Earnest W. Grove in the July 1954 issue of *Agricultural Economic Research*, published by the Agricultural Marketing Service (now published by the Economic Research Service). The individual studies of commercial family-operated farms by types and location are published annually by the Economic Research Service in *Farm Costs and Returns*.

7. CORPORATE PROFITS

DESCRIPTION OF SERIES

The corporate profits and related series of the Office of Business Economics, Department of Commerce, pertain to all United States corporations organized for profit. Data are shown for broad industry groups, and estimates are made of the distribution of profits between corporate tax liability, dividends, and retained earnings. Corporate capital consumption allowances and corporate cash flow (i.e., corporate profits after taxes plus capital consumption allowances) are also shown. Capital consumption allowances consist of depreciation, and accidental damage to fixed capital.

The national income concept of profit is used in these series. Dividends received by corporations are deducted from profits (and dividends) to obtain unduplicated totals reflecting income originating in the United States corporations. Profits are calculated inclusive of domestic depletion, which is not considered an element of capital consumption in the national income and product accounts. (Depletion allowances are not included in the capital consumption allowance estimates.) Capital gains and losses are eliminated from profits because they do not measure gains or losses originating from current production. Bad debt expenses are measured by actual losses, net additions to reserves; and the profit or loss of bankrupt firms includes the gain

from unsatisfied debt. Adjustments for international flows affecting profits are made. In these respects the national income measure of profits differs from those shown in the Internal Revenue Service tabulations of tax returns. The national income profits measure also differs from those commonly shown in company reports and from the financial reports series of the Federal Trade Commission and Securities and Exchange Commission.

STATISTICAL PROCEDURES

The annual data published in the corporate profits series are, except for the most recent year or two, based upon tabulations by the Internal Revenue Service of unaudited corporate income tax returns. The data in these tabulations are adjusted to make them comparable, statistically and conceptually, with other entries in the national income accounts. The important conceptual accounting adjustments are suggested by the statement above of differences between the tax-return concept of profit and the national income concept. In addition, the tax-return figures are augmented by the audit adjustment, which makes allowance for additional profit than would be disclosed by a complete auditing of the income tax returns by Internal Revenue. Mutual financial intermediaries are not considered part of the corporate universe for national income purposes.

Seasonal Correction, Corporate Profits and Inventory Valuation Adjustment, 1965

(Billions of dollars)

Quarters	Seasonally adjusted quarterly rates	Unadjusted quarterly rates	Correction, quarterly rates (seasonally adjusted minus unadjusted)
I.....	18.3	17.0	1.3
II.....	18.2	19.1	-.9
III.....	18.5	18.1	.4
IV.....	19.2	20.1	-.9

The estimates for the most recent year or two and for quarters are made by extrapolating the latest available estimates based upon Internal Revenue tabulations of corporation tax returns. The extrapolators for manufacturing corporations are based upon the FTC-SEC *Quarterly Financial Report*; those for Federally regulated industries are obtained from reports to the Federal regulatory agencies; and those for other industries are based upon non-governmental surveys and upon miscellaneous sources of varying reliability. When the Internal Revenue tabulations of tax returns for a given year become available, the estimates for that year are revised to conform to the Internal Revenue tabulations.

The adjustment of corporate profits estimates for seasonal variation is difficult because of the volatility of profits. A diversity in seasonal patterns exists among the various industries, so the adjustment is made in considerable industry detail. For most industry components the ratio-to-moving-average method has been used. The correction for seasonal variation is made in terms of the corporate profits share of national income (i.e., corporate profits before tax, plus inventory valuation adjustment).

The magnitude of the corporate profits seasonal correction may be seen in the comparison of unadjusted and seasonally adjusted quarterly data for the year 1965 shown in the table.

Corporate Profits, 1947-66

(Quarterly data. Seasonally adjusted annual rates)

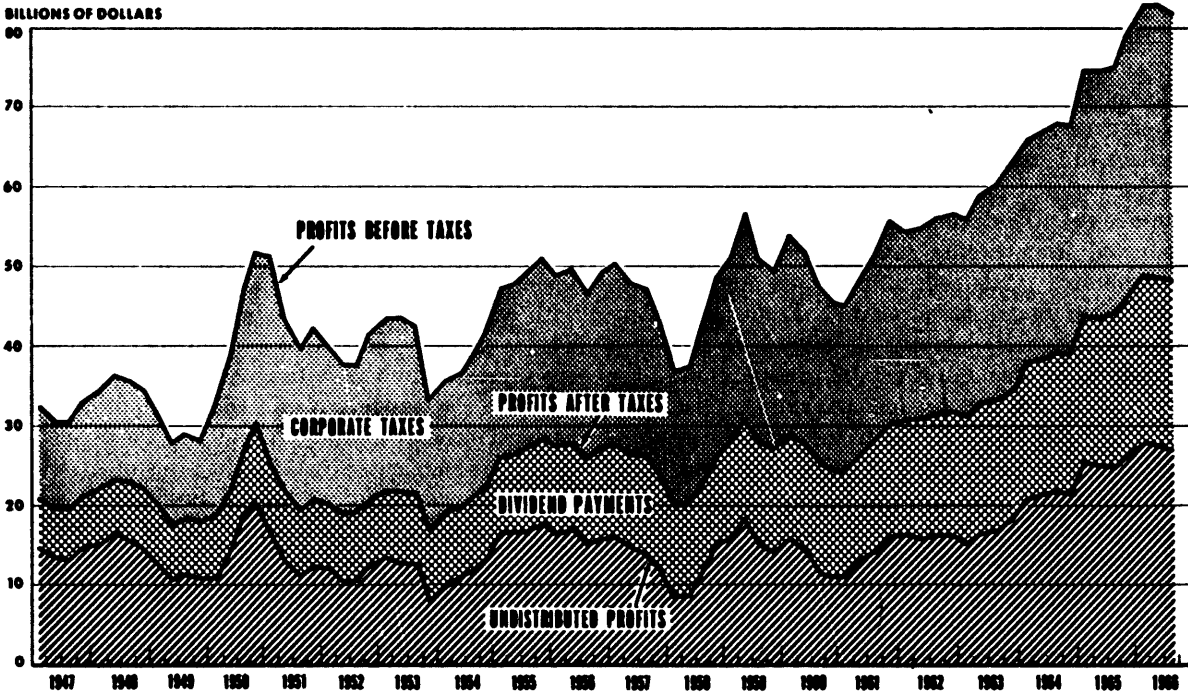


TABLE 7.—Corporate Profits, 1929-66

[Billions of dollars]

Year	Corporate profits (before taxes) and inventory valuation adjustment ¹						Corporate profits before taxes	Corporate tax liability	Corporate profits after taxes			Corporate capital consumption allowances ³	Profits plus capital consumption allowances ⁴
	All industries	Manufacturing			Transportation, communication, and public utilities	All other ²			Total	Dividend payments	Undistributed profits		
		Total	Durable goods industries	Non-durable goods industries									
1929	10.5	5.2	2.6	2.6	1.8	3.4	10.0	1.4	8.6	5.8	2.8	7.2	12.8
1930	7.0	3.9	1.5	2.4	1.2	1.9	3.7	.8	2.9	5.5	-2.6	4.3	7.2
1931	2.0	1.3	*	1.3	.5	.2	-.4	.5	-.9	4.1	-4.9	4.3	3.5
1932	-1.3	-.5	-1.0	.5	.2	-.9	-2.3	.4	-2.7	2.5	-5.2	4.0	1.3
1933	-1.2	-.4	-.4	*	*	-.8	1.0	.5	.4	2.0	-1.6	3.8	4.2
1934	1.7	1.1	.3	.8	.4	.3	2.3	.7	1.6	2.6	-1.0	3.6	5.2
1935	3.4	2.1	.9	1.1	.4	.9	3.6	1.0	2.6	2.8	-.2	3.6	6.3
1936	5.6	3.2	1.7	1.5	.7	1.7	6.3	1.4	4.9	4.5	.4	3.6	8.5
1937	6.8	3.8	1.7	2.1	.8	2.2	6.8	1.5	5.3	4.7	.6	3.6	8.9
1938	4.9	2.3	.8	1.6	.5	2.1	4.0	1.0	2.9	3.2	-.2	3.7	6.6
1939	6.3	3.3	1.7	1.7	1.0	2.0	7.0	1.4	5.6	3.8	1.8	3.7	9.3
1940	9.8	5.5	3.1	2.4	1.3	3.0	10.0	2.8	7.2	4.0	3.2	3.8	11.0
1941	15.2	9.5	6.4	3.1	2.0	3.7	17.7	7.6	10.1	4.4	5.7	4.2	14.4
1942	20.3	11.8	7.2	4.6	3.4	5.1	21.5	11.4	10.1	4.3	5.9	5.0	15.2
1943	24.4	13.8	8.1	5.7	4.4	6.2	25.1	14.1	11.1	4.4	6.6	5.4	16.4
1944	23.8	13.2	7.4	5.9	3.9	6.7	24.1	12.9	11.2	4.6	6.5	6.1	17.2
1945	19.2	9.7	4.5	5.2	2.7	6.7	19.7	10.7	9.0	4.6	4.4	6.4	15.4
1946	19.3	9.0	2.4	6.6	1.8	8.5	24.6	9.1	15.5	5.6	9.9	4.7	20.2
1947	25.6	13.6	5.8	7.8	2.2	9.9	31.5	11.3	20.2	6.3	13.9	5.8	26.0
1948	33.0	17.6	7.5	10.0	3.0	12.5	35.2	12.5	22.7	7.0	15.6	7.0	29.7
1949	30.8	16.2	8.1	8.1	3.0	11.6	28.9	10.4	18.5	7.2	11.3	7.9	26.5
1950	37.7	20.9	12.0	8.9	4.0	12.7	42.6	17.8	24.9	8.8	16.0	8.8	33.7
1951	42.7	24.6	13.2	11.4	4.6	13.5	43.9	22.3	21.6	8.6	13.0	10.3	31.8
1952	39.9	21.6	11.7	9.9	4.9	13.3	38.9	19.4	19.6	8.6	11.0	11.5	31.0
1953	39.6	22.0	11.9	10.1	5.0	12.6	40.6	20.3	20.4	8.9	11.5	13.2	38.5
1954	38.0	19.9	10.5	9.4	4.7	13.4	38.3	17.7	20.6	9.3	11.3	15.0	35.5
1955	46.9	26.0	14.3	11.8	5.6	15.2	48.6	21.6	27.0	10.5	16.5	17.4	44.4
1956	46.1	24.7	12.8	11.9	5.9	15.6	48.8	21.7	27.2	11.3	15.9	18.9	46.1
1957	45.6	24.0	13.3	10.7	5.8	15.8	47.2	21.2	26.0	11.7	14.2	20.8	46.8
1958	41.1	19.3	9.3	10.0	5.9	15.9	41.4	19.0	22.3	11.6	10.8	22.0	44.3
1959	51.7	26.3	13.6	12.7	7.0	18.4	52.1	23.7	28.5	12.6	15.9	23.5	52.0
1960	49.9	24.4	12.0	12.4	7.5	17.9	49.7	23.0	26.7	13.4	13.2	24.9	51.6
1961	50.3	23.3	11.4	11.9	7.9	19.1	50.3	23.1	27.2	13.8	13.5	26.2	53.5
1962	55.7	26.6	14.1	12.5	8.5	20.5	55.4	24.2	31.2	15.2	16.0	30.1	61.3
1963	58.9	28.8	15.8	13.0	9.5	20.6	59.4	26.3	33.1	16.5	16.6	31.8	64.8
1964	66.6	32.4	17.9	14.5	10.4	23.8	67.0	28.4	38.7	17.3	21.3	33.9	72.5
1965	74.2	37.8	22.1	15.7	11.1	25.3	75.7	31.2	44.5	19.2	25.3	36.3	80.8
1966	80.2	41.0	23.8	17.3	11.9	27.2	82.3	33.9	48.4	20.9	27.4	38.8	87.2

¹ See table 3 (p. 11) on National Income for the inventory valuation adjustment.

² Includes all other industries and financial institutions.

³ Includes depreciation and accidental damages.

⁴ Corporate profits after taxes plus corporate capital consumption allowances.

⁵ Less than \$50 million.

NOTE.—Beginning 1962 data reflect the new depreciation guidelines issued by the Treasury Department July 11, 1962, and the investment tax credit provided in the Revenue Act of 1962.

Source: Department of Commerce, Office of Business Economics.

Quarterly corporate income tax liability estimates are derived by multiplying the quarterly estimates of profits before taxes by annual tax ratios. For current quarters the ratios of taxes to profits before tax for the latest full year are used with any necessary adjustments, such as to allow for new Federal tax legislation. Quarterly net corporate dividends are estimated from a sample of publicly reported dividends which currently account for over one-half of total dividend disbursements. Other profit components are estimated as residuals: profits after tax being equal to profits before tax less corporate income tax liability, and undistributed corporate profits being equal to profits after tax less dividends. As such, undistributed profits equals the change in corporate net worth stemming from current operations. It may also be viewed as purchases of physical assets plus net acquisition of financial assets less capital consumption of allowances, borrowing, and new stock issues.

In general, the valuation of the capital consumption allowance charges reflects the type of accounting practices followed in arriving at the corporate profits reported to the Internal Revenue Service. Tabulations of Federal income tax returns data are the primary source of the estimates of depreciation. Pending the availability of tax return data for the latest two years, the same sources used to estimate corporate profits are used to estimate depreciation charges.

RELATION TO OTHER SERIES

The corporate profits series is designed primarily to measure the contribution of corporate profits to the national income. It is as consistent with the concepts of the national income accounts, and with other series which are a part of those accounts, as the basic data permit, and can be used in conjunction with the other national income series (e.g., net interest, proprietors' and rental income, compensation of employees, etc.) with confidence in their conceptual comparability.

The corporate profits series is based upon reports from companies rather than establishments. This limits the industrial comparability of profits with series based upon reports from establishments. Furthermore, surveys based upon the establishment unit of classification are not confined to establishments of corporations but include establishments of other forms of organization as well. The corporate

profits series, or any other series based upon company reports, cannot safely be assumed to be directly comparable with these establishment series unless the reports on the different bases have been reconciled. These factors are more important when series for specific industries are being compared, however, than when the broad aggregates published in *Economic Indicators* are compared.

The series on expenditures for new plant and equipment and sales and inventories are also based primarily upon company reports. The plant and equipment expenditures and the sales and inventories series, however, cover unincorporated as well as incorporated business. These three series cover closely related economic phenomena and can be used to supplement one another analytically.

USES AND LIMITATIONS

The corporate profits series is an important economic indicator, reflecting the state of health of a substantial part of the Nation's business community. Certain limitations of the series require that it be used with caution, however.

(1) As its title indicates, the series measures only the profits of corporations. It does not, therefore, portray fully the profit position of all business.

(2) The corporate profits series contained in *Economic Indicators* are rather broad aggregates and need to be supplemented by data pertaining to specific industries for some analytical uses.

(3) The quarterly corporate profits estimates are less reliable than the annual estimates, especially the annual estimates for periods more than two years prior to the current year. There are two principal reasons for this: (a) quarterly income statements, upon which the quarterly series must be based, are inherently less reliable than annual income statements; and (b) wide gaps in the financial data available quarterly for some industries, such as trade and services, make the underlying basis of the quarterly estimates weaker than that of the annual estimates.

REFERENCES

See above under National Income. A statement of the methods and the sources of data used in preparing these estimates is presented in the 1954 *National Income Supplement to the Survey of Current Business, U.S. Income and Output, 1958*, and the August 1965 *Survey of Current Business*.

8. GROSS PRIVATE DOMESTIC INVESTMENT

DESCRIPTION OF SERIES

Gross Private Domestic Investment is one of the major components of gross national product. The series consists of the net acquisitions of fixed capital goods by private business and nonprofit institutions; including commissions arising in the sale and purchase of new and existing fixed assets, principally real estate; and the value of the change in the volume of inventories held by business. It covers all private dwellings including those acquired by persons for their own occupancy.

Separate statistical series are published for "Fixed investment" (which in turn consists of separate series for "Nonresidential fixed investment" and "Residential structures" and for "Change in business inventories." The "Structures" series used in computing gross private domestic investment is based on the private construction component of the new construction series described below, with the addition of esti-

mates for oil- and gas-well drilling, commissions arising in the sale of new and existing structures, and net purchases of structures from government.

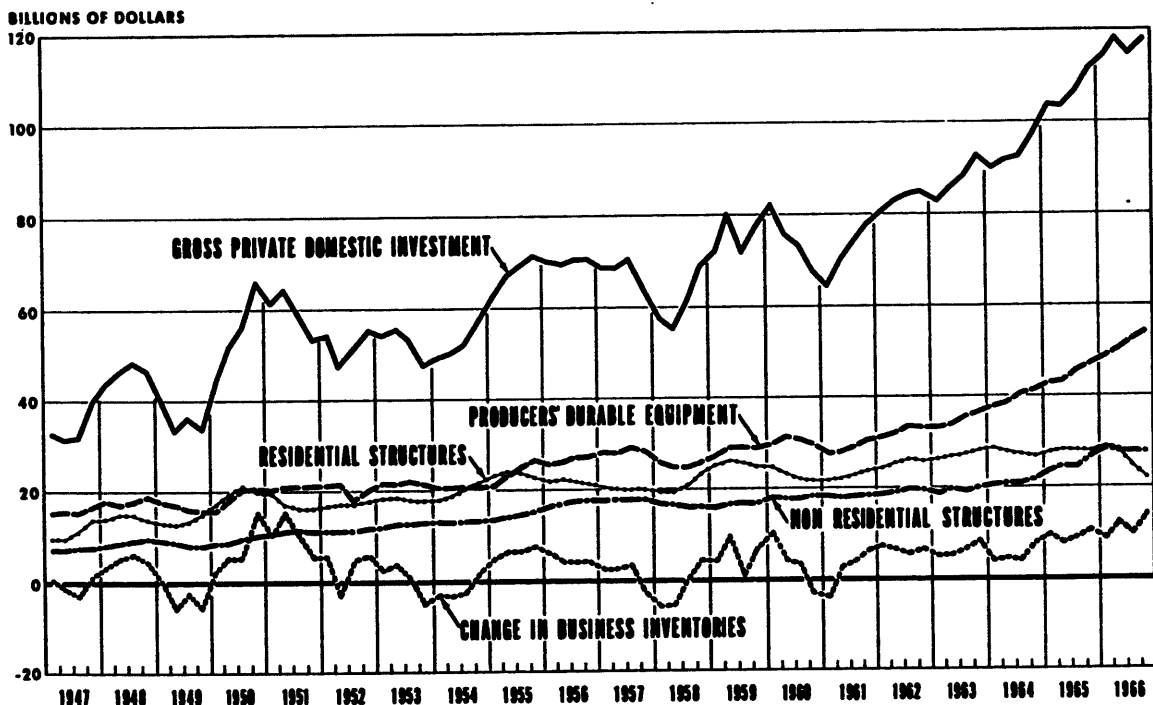
The quarterly estimates of producers' durable equipment and change in business inventories are revised annually to reflect more complete data than were available when the initial estimates were made. The revisions in the "Change in business inventories" series have sometimes been quite sizable, and have resulted primarily from revisions in the basic book value inventory aggregates.

STATISTICAL PROCEDURES

The principal method of estimation used for the "Producers' durable equipment" series is the commodity-flow technique. In brief, this technique consists of (1) analyzing total manufacturing output to obtain an estimate of the proportion that consisted of finished producers' durable goods, (2) tracing

Gross Private Domestic Investment, 1947-66

(Quarterly data. Seasonally adjusted annual rates)



SOURCE OF DATA: DEPARTMENT OF COMMERCE

the flow of those goods through distribution channels, (3) measuring their distributive costs, and (4) adding the estimate of those distributive costs to manufactures' sale value to arrive at an estimate of the costs of those goods to their purchasers.

For the years 1929-39, 1947, 1954, and 1958, data available from the manufactures and trade censuses made it possible to carry out the commodity-flow technique of estimating purchases of producers' durable equipment in greater detail than was possible in other years. "Secondary" benchmark estimates were developed for 1950-1953, 1955-57, and 1959-62 primarily from data collected by the Bureau of the Census in its annual sample survey of manufactures. Quarterly estimates for most of the period ending 1962 were interpolated by a series based on the OBE-SEC Plant and Equipment Expenditures Survey. The survey results are adjusted to make them more comparable with estimates of producers' durable equipment, principally by excluding expenditures on new plant, adding expenditures on new farm equipment, and adding an estimate of expenditures for business passenger cars to the extent that they are not already covered. Annual estimates for 1963 are based both on preliminary reports from the 1963 Census of Manufactures and on the series derived from the Plant and Equipment Expenditures Survey. The latter and a series based largely on Manufacturers' shipment series jointly provide the basis for the quarterly interpolation for 1963 and the quarterly and annual extrapolation for the period since 1963. The new estimates include purchases of equipment by private business from government, dealers margins on the sale of used equipment, and capitalized installation charges, and net of exports of used equipment and the sale of scrapped equipment.

The primary source for estimates of changes in the nonfarm portion of business inventories is reported accounting data on the book value of inventories at the beginning and end of the period for which the estimates are made. Because inventory calculation by individual business firms varies widely in method, numerous adjustments to the reported data are necessary to arrive at an estimate consistent with the basic concept. The principal adjustment is that of removing the price-change element in the reported figures and revaluing inventory change in current dollars.

RELATION TO OTHER SERIES

The relationship between the "Producers' durable equipment" series and the estimated equipment series implied in Expenditures for New Plant and Equip-

ment, to which it is most closely related, is discussed in the following section.

The "Change in business inventories" series is most closely related to the estimates of "Business Inventories," discussed later. A basic difference between these series is that the series on business inventory change, included here, measures changes in inventories over a period of time, whereas the inventories series presented below measures the level of inventories at a given point in time. The series also differ conceptually in their measurement of inventories: the inventories series is based upon data as reported by the reporting companies, whereas in the inventory-change series in the income accounts a uniform method of valuation is used.

The producers' durable equipment series and the change in business inventories series are seasonally adjusted primarily by use of the ratio-to-moving-average method. Modifications in this seasonal adjustment method are made when appropriate, and improvements in the seasonal adjustment factors are instituted when experience suggests that they are desirable. The magnitude of the gross private domestic investment seasonal correction may be seen in the table on page 8.

USES AND LIMITATIONS

Changes in business investment are a major—if not the major—factor determining business conditions.

Unfortunately, there are many shortcomings in the data on which both fixed investment and inventory changes are based, especially for current quarters.

The absence of reliable current data on government purchases of producers' durable equipment constitutes a special problem. The limitations of the data on manufacturers' commodity sales and on new plant and equipment expenditures affect the current estimates of investment in producers' durable equipment. The rate of investment in construction is also subject to many data inadequacies, requiring the use of "phasing patterns" and other synthetic statistical techniques.

The figures on "Change in business inventories," although rough estimates to a considerable degree, are useful indicators of the physical volume change in inventories during the period under review. A serious limitation in the series is inherent in the basic method of calculation that must be used. The estimates are calculated as the difference between large and possibly volatile inventory totals at two points

TABLE 8.—Gross Private Domestic Investment, 1929–66

[Billions of dollars]

Year	Total gross private domestic investment	Fixed investment								Change in business inventories	
		Total	Nonresidential				Residential structures		Total	Non-farm	
			Total	Structures		Producers' durable equipment		Total			Non-farm
				Total	Non-farm	Total	Non-farm				
1929	16.2	14.5	10.6	5.0	4.8	5.6	4.9	4.0	3.8	1.7	1.8
1930	10.3	10.6	8.3	4.0	3.9	4.3	3.7	2.3	2.2	-.4	-.1
1931	5.6	6.8	5.0	2.3	2.3	2.7	2.4	1.7	1.6	-1.1	-1.6
1932	1.0	3.4	2.7	1.2	1.2	1.5	1.3	.7	.7	-2.5	-2.6
1933	1.4	3.0	2.4	.9	.9	1.5	1.3	.6	.5	-1.6	-1.4
1934	3.3	4.1	3.2	1.0	1.0	2.2	1.8	.9	.8	-.7	.2
1935	6.4	5.3	4.1	1.2	1.2	2.9	2.4	1.2	1.1	1.1	.4
1936	8.5	7.2	5.6	1.6	1.6	4.0	3.3	1.6	1.5	1.3	2.1
1937	11.8	9.2	7.3	2.4	2.4	4.9	4.1	1.9	1.8	2.5	1.7
1938	6.5	7.4	5.4	1.9	1.8	3.5	2.9	2.0	1.9	-.9	-1.0
1939	9.3	8.9	5.9	2.0	1.9	4.0	3.4	2.9	2.8	.4	.3
1940	13.1	11.0	7.5	2.3	2.2	5.3	4.6	3.4	3.2	2.2	1.9
1941	17.9	13.4	9.5	2.9	2.8	6.6	5.6	3.9	3.7	4.5	4.0
1942	9.8	8.1	6.0	1.9	1.8	4.1	3.5	2.1	1.9	1.8	.7
1943	5.7	6.4	5.0	1.3	1.2	3.7	3.2	1.4	1.2	-.6	-.6
1944	7.1	8.1	6.8	1.8	1.7	5.0	4.2	1.3	1.1	-1.0	-.6
1945	10.6	11.6	10.1	2.8	2.7	7.3	6.3	1.5	1.4	-1.0	-.6
1946	30.6	24.2	17.0	6.8	6.1	10.2	9.2	7.2	6.7	6.4	6.4
1947	34.0	34.4	23.4	7.5	6.7	15.9	14.0	11.1	10.4	-.5	1.3
1948	48.0	41.3	26.9	8.8	8.0	18.1	15.5	14.4	13.6	4.7	3.0
1949	35.7	38.8	25.1	8.5	7.7	16.6	13.7	13.7	12.8	-3.1	-2.2
1950	54.1	47.3	27.9	9.2	8.5	18.7	15.7	19.4	18.6	6.8	6.0
1951	59.3	49.0	31.8	11.2	10.4	20.7	17.7	17.2	16.4	10.3	9.1
1952	51.9	48.8	31.6	11.4	10.5	20.2	17.6	17.2	16.4	3.1	2.1
1953	52.6	52.1	34.2	12.7	11.9	21.5	18.6	18.0	17.2	.4	1.1
1954	51.7	53.3	33.6	13.1	12.3	20.6	18.0	19.7	19.0	-1.5	-2.1
1955	67.4	61.4	38.1	14.3	13.6	23.8	21.2	23.3	22.7	6.0	5.5
1956	70.0	65.3	43.7	17.2	16.5	26.5	24.2	21.6	20.9	4.7	5.1
1957	67.8	66.5	46.4	18.0	17.2	28.4	25.9	20.2	19.5	1.3	.8
1958	60.9	62.4	41.6	16.6	15.8	25.0	22.0	20.8	20.1	-1.5	-2.3
1959	75.3	70.5	45.1	16.7	15.9	28.4	25.4	25.5	24.8	4.8	4.8
1960	74.8	71.3	48.4	18.1	17.4	30.3	27.7	22.8	22.2	3.6	3.3
1961	71.7	69.7	47.0	18.4	17.7	28.6	25.8	22.6	22.0	2.0	1.7
1962	83.0	77.0	51.7	19.2	18.5	32.5	29.4	25.3	24.8	6.0	5.3
1963	87.1	81.3	54.3	19.5	18.8	34.8	31.2	27.0	26.4	5.9	5.1
1964	93.0	88.3	60.7	21.0	20.3	39.7	35.9	27.6	27.0	4.7	5.3
1965	106.6	97.5	69.7	24.9	24.2	44.8	40.6	27.8	27.2	9.1	8.1
1966	117.0	105.1	79.3	27.8	27.2	51.4	46.3	25.8	25.3	11.9	12.2

NOTE.—Data for Alaska and Hawaii included beginning 1960.

Source: Department of Commerce, Office of Business Economics.

in time. Even small errors in the estimates of total inventories can lead to large relative errors in the estimates of inventory change. This limitation contributes appreciably to the difficulty of determining seasonal patterns in the quarterly changes in business inventories. Estimates of current inventory change are based upon less satisfactory data than are the estimates for past years.

REFERENCES

See above, under National Income. For a full discussion of the concepts and statistical methods, see particularly pages 43–45 and 122–138 in the 1954 National Income Supplement, and pages 82–85 and 97–98 of U.S. Income and Output, and the August 1965 Survey of Current Business.

9. EXPENDITURES FOR NEW PLANT AND EQUIPMENT

DESCRIPTION OF SERIES

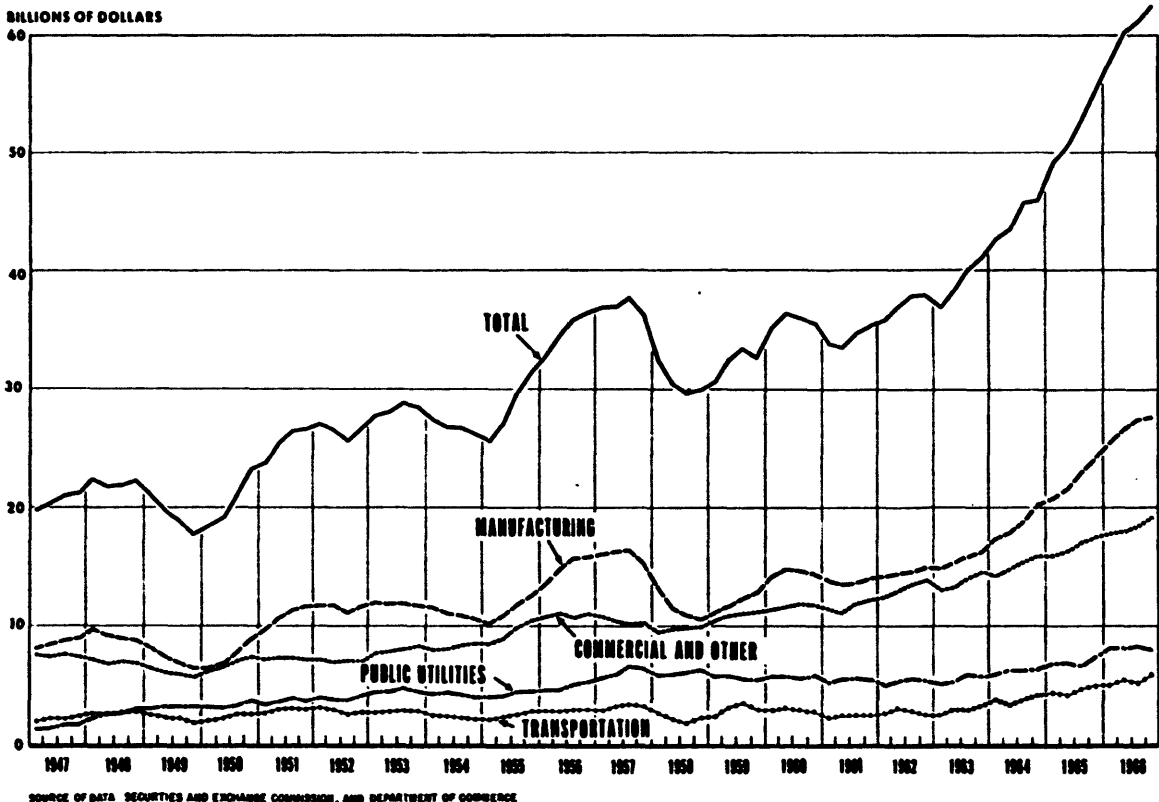
The series on expenditures for new plant and equipment, published jointly by the Office of Business Economics (Department of Commerce) and the Securities and Exchange Commission, measures the expenditures by all private business (except farming, real estate, the profession, and non-profit and other institutions) for new plant, machinery, and equipment for which depreciation accounts are maintained. Expenditures charged off as current expenses are excluded. Estimates are made quarterly for actual plant and equipment expenditures and for anticipated expenditures for two succeeding quarters and the calendar year. These estimates are based upon information contained in annual reports of all corporations registered with SEC and quarterly reports from a group of registered corporation which make over 90 percent of the capital expenditures by registered

corporations; in annual and quarterly reports by a group of unregistered mining, manufacturing, trade, service, and construction companies to OBE, and by regulated railroads, motor carriers, water carriers, and pipeline companies to the Interstate Commerce Commission. In 1960 a large expansion was made in the sample of financial organizations.

The last major revision in the series was published in two parts, the revision for manufacturing industries in the December 1951 issue of the *Survey of Current Business* and the revision for nonmanufacturing industries in the August 1952 issue. The revision established a new set of benchmark data and introduced improvements in the estimating procedures being used. For example, information contained in the annual mandatory financial reports (Form 10K) to SEC was used for the first time and adjustments were made for biases arising out of changes in the business population.

Expenditures for New Plant and Equipment, 1947-66

(Quarterly data. Seasonally adjusted annual rates)



Implicit Adjustment Factors, Expenditures for New Plant and Equipment, 1966

Quarter	Bias Adjustment Factors		Seasonal adjustment factors for the same quarter
	First anticipated expenditures estimate for a given quarter	Second anticipated expenditures estimate for the same quarter	
First.....	0.98	0.92	0.88
Second.....	.98	.97	1.02
Third.....	1.00	.94	1.02
Fourth.....	1.06	1.01	1.08

STATISTICAL PROCEDURES

The benchmarks for the estimates were developed by applying weights derived from reports to the Internal Revenue Service for the tax year 1948 to sample expenditure figures for the benchmark period (i.e., 1948). Actual plant and equipment expenditures data were not available for the universe of all firms, so it was necessary to derive a benchmark by using pieces of related information which were complete—specifically, total assets for corporations and total sales and operating receipts for unincorporated business. Ratios of plant and equipment expenditures to total assets or to sales and operating receipts were computed from the reporting sample and from other sources. These ratios were multiplied by IRS universe assets, or sales and operating receipts, to determine universe estimates of plant and equipment expenditures in 1948.

The estimations of year-to-year and quarter-to-quarter movements in these expenditures are made by extrapolating the benchmark estimates on the basis of the annual and quarterly reports received by SEC, OBE and ICC. Essentially, the estimation procedure is as follows: given a universe estimate for one period, the universe estimate for the next period is derived by multiplying the first given universe estimate by a link relative which is derived from aggregates for the first period and the period following for a matched sample of reporting companies. The group of reporting companies accounts for at least two-thirds of aggregate investment in plant and equipment, although the sample is not randomly selected. Coverage varies considerably by industry groups. Sample expenditures as a percent of estimated universe expenditures in the first quarter of 1966 were as follows: manufacturing 82; mining 50; railroads 99; transport, except railroads, 72; public utilities 83; communications 96; commercial 18; and total 69.

The factors used for adjusting plant and equipment expenditures data for seasonal fluctuations are derived from the X-11 version of the Census method adjustment program. These seasonal adjustment factors are applied both to the estimates of anticipated expenditures for a given quarter and to the estimates of actual expenditures for that quarter. The seasonally adjusted estimates of anticipated expenditures are further adjusted for the systematic biases of underestimation or overestimation that have been found in the reported data.

The seasonal adjustment factors and the bias adjustment factors have remained relatively stable for any given quarter during recent years, but they are modified as circumstances warrant. The bias adjustment factors are applied as multipliers; the seasonal adjustment factors are applied as divisors. The magnitudes of the seasonal and bias adjustments made in the 1966 quarterly estimates are suggested by the implicit adjustment factors shown in the table below.

RELATION TO OTHER SERIES

The OBE-SEC series on actual plant and equipment expenditures utilizes the same definitions of investment as those of the Census of Manufactures, Census of Business, and the annual survey of manufactures of the Bureau of the Census. There are substantial differences between the Census Bureau data on expenditures for plant and equipment and the OBE-SEC series, however. Most important, the OBE-SEC series supplies both actual and anticipatory data on a quarterly and annual basis, whereas the Census data relate only to annual expenditures in past periods. In addition, the OBE-SEC series obtains reports on companywide outlays, whereas the Census Bureau obtains reports on outlays of establishments. Thus, the Census Bureau's annual series on manufacturers covers only *establishments*

TABLE 9.—Expenditures for New Plant and Equipment, 1939 and 1945-67

(Billions of dollars)

Year	Total ¹	Manufacturing			Mining	Transportation		Public utilities	Commercial and other ²
		Total	Durable goods	Nondurable goods		Railroads	Other		
1939.....	5.51	1.94	0.76	1.19	0.33	0.28	0.36	0.52	2.08
1945.....	8.69	3.98	1.59	2.39	.38	.55	.57	.50	2.70
1946.....	14.85	6.79	3.11	3.68	.43	.58	.92	.79	5.33
1947.....	20.61	8.70	3.41	5.30	.69	.89	1.30	1.54	7.49
1948.....	22.06	9.13	3.48	5.65	.88	1.32	1.28	2.54	6.90
1949.....	19.28	7.15	2.59	4.56	.79	1.35	.89	3.12	5.98
1950.....	20.60	7.49	3.14	4.36	.71	1.11	1.21	3.31	6.78
1951.....	25.64	10.85	5.17	5.68	.93	1.47	1.49	3.66	7.24
1952.....	26.49	11.63	5.61	6.02	.98	1.40	1.50	3.89	7.09
1953.....	25.32	11.91	5.65	6.26	.99	1.31	1.56	4.55	8.00
1954.....	26.83	11.04	5.09	5.95	.98	.85	1.51	4.22	8.23
1955.....	28.70	11.44	5.44	6.00	.96	.92	1.60	4.31	9.47
1956.....	35.08	14.95	7.62	7.33	1.24	1.23	1.71	4.90	11.05
1957.....	36.96	15.96	8.02	7.94	1.24	1.40	1.77	6.20	10.40
1958.....	30.53	11.43	5.47	5.96	.94	.75	1.50	6.09	9.81
1959.....	32.54	12.07	5.77	6.29	.99	.92	2.02	5.67	10.88
1960.....	35.68	14.48	7.18	7.30	.99	1.03	1.94	5.68	11.57
1961.....	34.37	13.68	6.27	7.40	.98	.67	1.85	5.52	11.68
1962.....	37.31	14.68	7.03	7.65	1.08	.85	2.07	5.48	12.15
1963.....	39.22	15.69	7.85	7.84	1.04	1.10	1.92	5.65	13.82
1964.....	44.90	18.58	9.43	9.16	1.19	1.41	2.38	6.22	15.13
1965.....	51.96	22.45	11.40	11.05	1.30	1.73	2.81	6.94	16.73
1966.....	60.63	26.99	13.99	13.00	1.47	1.98	3.44	8.41	18.36
1967 (anticipated) ³	63.00	27.94	14.64	13.30	1.58	1.48	3.94	9.15	18.91

¹ Excludes agriculture.

² Includes trade, services, finance, communications, and construction.

³ Includes an anticipation for the fourth quarter.

NOTE.—These figures do not agree precisely with the plant and equipment expenditures included in the gross national product estimates of the Department of Commerce. The main difference lies in the inclusion in the gross national product of investment by farmers, professionals, real estate industry, and institutions; transactions in used assets; and certain outlays charged to current expenses.

Data on expenditures for new plant and equipment are not available for the years prior to 1939 and for the years 1940-44.

Sources: Securities and Exchange Commission and Department of Commerce.

whose primary activity is manufacturing, whereas the OBE-SEC quarterly and annual manufacturing series covers all activities, manufacturing as well as nonmanufacturing, of companies whose primary activity is manufacturing; and excludes manufacturing activities of companies whose primary activity is nonmanufacturing. Finally, the OBE-SEC estimates cover all industries except agriculture, the professions and nonprofit and other institutions, and real estate, whereas the Census estimates cover only manufacturing, mining (1954, 1958, and 1963) and the wholesale, retail and service trades (1958 and 1963).

The OBE-SEC series differs somewhat in concept from the "Producers' durable equipment" and "Nonresidential structures" components of gross

private domestic investment. Unlike the latter, the OBE-SEC series is confined to nonagricultural industries, and excludes expenditures of institutions and professional persons; it is based on a survey requesting information on expenditures charged to capital account, for which depreciation accounts are maintained. The current estimates of investment in producers' durable equipment are for the most part derived indirectly by extrapolating benchmarks on the basis of percent-change estimates developed from the equipment expenditures portion of the OBE-SEC series; and the estimates of new private construction are developed from both direct and indirect sources.

The OBE-SEC series on manufacturers' expenditures for new plant and equipment is directly com-

parable in classification and scope with the Census-OBE series on manufacturers' sales, new orders, and inventories, although the comparability will diminish somewhat as the sales, orders and inventories survey reports for large multi-industry firms are shifted from a company to a divisional basis. Then OBE series has a different scope from the Federal Trade Commission-Securities and Exchange Commission manufacturing, financial reports series, mainly in that the FTC-SEC estimates of balance sheet and income statement items covers only corporations, and a different degree of consolidation is involved.

USES AND LIMITATIONS

This series is one of the very few economic series in which estimates of expected events as well as historical events are made. Expected capital outlays, especially for the coming year, are of great importance in the analysis of business conditions. Expected expenditures for a period differ from actual expenditures for the same period for a number of reasons. Nevertheless, except in a few periods in the past when unexpected developments of major importance have occurred, such as the outbreak of Korean hostilities, both the annual data and the quarterly expected data adjusted for seasonal variations and systematic biases have proved a reliable indicator of the overall trend of capital expenditures. The survey has generally reflected the cyclical turning points in the postwar period.

There are two principal deficiencies in the statistical procedures employed in making the estimates of expenditures for new plant and equipment. One of these, mentioned above, is the inadequacy of the sample for some industries. This is so despite the fact that within the past few years the coverage in some of these industries—notably: mining, finance, service, construction, trade and transportation other than rail and air—has been strengthened considerably. The second deficiency is that in several areas, especially trade, services and construction, the benchmark data are either out of date or of limited reliability.

REFERENCES

These estimates are published quarterly in Department of Commerce and Securities and Exchange Commission press releases and in the *Survey of Current Business*. Annual data and quarterly data for the preceding four years are shown in *Business Statistics*, the biennial statistical supplement to the Survey of Current Business. For a fuller description of the methods employed in making the estimates and of the latest revisions in the series, see the December 1951 and August 1952 issues of the *Survey of Current Business*. Further elaboration on the methods employed and a qualitative evaluation of the series for the years 1948-1958 is contained in *Statistical Evaluation Reports, Report No. 1, "An Appraisal of OBE-SEC Estimates of Plant and Equipment Expenditures, 1947-1958,"* published by the Office of Statistical Standards, Bureau of the Budget.

EMPLOYMENT, UNEMPLOYMENT, AND WAGES

10. STATUS OF THE LABOR FORCE

DESCRIPTION OF SERIES

Each month the Bureau of Labor Statistics of the Department of Labor publishes estimates of the labor force and of total employment and unemployment. In addition to the overall figures, detail is presented on the characteristics of employed and unemployed persons, such as age, sex, color, and marital status. Employed persons are further subdivided into those employed in agriculture or in other pursuits, and into wage and salary workers or the self-employed. Workers are also classified by broad occupation groups, by hours worked during the survey week, and by reasons for part-time work. Duration of unemployment is shown for the unemployed.

The information is obtained from a monthly sample survey of households, conducted by the Bureau of the Census, which represents all persons in the United States except those living in institutions (such as prisons or homes for the aged). On the basis of responses to interviewers, all persons 16 years and over in the sample households are classified as employed, unemployed, or not in the labor force for the calendar week containing the 12th of the month. Prior to July 1955, the reference week was the calendar week containing the 8th of the month; this change was made to improve comparability with other series.

Counted as *employed* are all persons who, during the survey week, were either (a) "At work"—those who did any work for pay or profit, or those who worked without pay for 15 hours or more on a family farm or business; or (b) "With a job but not at work"—those who did not work but had a job or business from which they were temporarily absent because of vacation, illness, industrial dispute, bad weather, or for various other reasons.

Included as *unemployed* are persons who did not work or have a job during the survey week and were looking for work. Also included as unemployed are

those who did not work at all during the survey week and (a) were waiting to be called back to a job from which they had been laid off or (b) were waiting to report to a new wage or salary job scheduled to start within the following 30 days.

The sum of the employed and the unemployed constitutes the *civilian labor force*. The *total labor force* also includes members of the Armed Forces stationed either in the United States or abroad. All other civilians 16 years of age and over are classified as "not in the labor force" (mainly housewives, students, and retired or disabled persons).

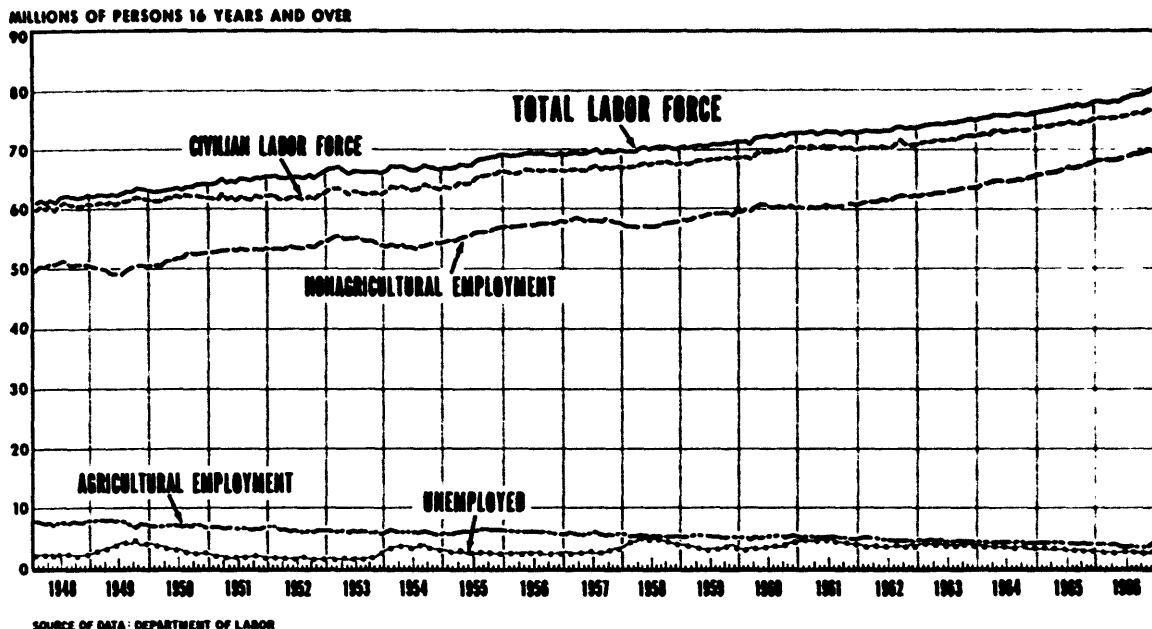
The sample survey described above was started in March 1940. Prior to that date there was no periodic direct enumeration of the labor force. The estimates shown for 1939 and earlier years were prepared by the Bureau of Labor Statistics, using information such as the 1930 and 1940 Census of Population, and employment trends from BLS and Department of Agriculture series for intervening years. The techniques used in preparing the estimates for the earlier years are described in "Labor Force, Employment, and Unemployment, 1929-30: Estimating Methods," which appeared in the July 1948 issue of the Labor Department's *Monthly Labor Review*.

The labor force survey, initiated by the WPA, was conducted by the Bureau of the Census from 1942 through June 1959 as part of the Current Population Survey. Since July 1959, the Bureau of Labor Statistics has been responsible for monthly statistics on the labor force, with the Bureau of the Census acting as collecting and compiling agent.

In January 1967, an improved system for measuring employment and unemployment went into effect. The improvements were in line with the basic recommendations of the President's Committee to Appraise Employment and Unemployment Statistics (the Gordon Committee), as set forth in its 1962 report, *Measuring Employment and Unemployment*.

Status of the Labor Force, 1947-66

(Monthly data. Seasonally adjusted)



Although the Gordon Committee approved of the underlying concepts of labor force and unemployment being used in the Current Population Survey, it pointed out that some of the procedures used to measure these concepts were inadequate. In particular, the Committee considered that the measurement of unemployment relied in too many instances on volunteered information and on questions not sufficiently detailed. It recommended more precise questioning. At the same time, the Gordon Committee urged that more information be collected on persons who are reported as not in the labor force.

Beginning in April 1964, the Bureau of Labor Statistics conducted an experimental program, in cooperation with the Census Bureau, to design and test questions which would implement these two major recommendations of the Gordon Committee. A separate panel of 17,500 households was utilized for this purpose. At the same time, the accuracy of other questions was tested, and the scope of the labor force definition reviewed.

The changes in definition, which were implemented in January 1967, increased the accuracy of the data but did not substantially alter the underlying concepts. In particular, the concept of unemployment relates to jobless individuals who are currently available for work and seeking work.

The principal improvements in definition were as follows:

(1) The lower age limit for official statistics on employment, unemployment and other labor force concepts was raised from 14 to 16 years of age. Employed youngsters of 14 and 15 work mainly as part-time newsboys, babysitters, etc., and are barred from most occupations under the child labor laws. Unemployment in this age group has little economic or social significance. Insofar as possible, the historical series were revised to provide consistent labor force information based on the population 16 years and over.

(2) To be counted as unemployed, an individual must be currently available for work. In the past, the test of current availability was not applied. A high school or college student, for example, who began to look for summer work in April was counted as unemployed in that month even though he didn't want to work until the beginning of vacation in June.

(3) To be counted as unemployed, a person must have engaged in some specific job-seeking activity (such as going to the Employment Service, applying to an employer, answering a want-ad) within the past 4 weeks. (An exception is made for persons waiting to start a new job in 30 days, or waiting to be recalled from layoff.) In the past, the household

interview questionnaire was ambiguous as to the time period for jobseeking, and there was no specific question concerning methods of seeking work.

(4) Persons with a job are classified as employed, even though they were absent from their jobs in the survey week and looking for other jobs. Previously, persons absent from their jobs because of strikes, bad weather, etc., who were looking for other jobs were classified as unemployed. Now, such persons are classified as employed—that is, among others “with a job but not at work.”

(5) “Probing questions” are asked in order to increase the reliability of information on hours of work, duration of unemployment, and the number of self-employed. For example, many working proprietors of small incorporated businesses tend to classify themselves as self-employed, although actually they are employees. Clarification of this point reduces the discrepancy in number of wage and salary employees between these data based on household reports and employment statistics based on establishment data. The more extensive questioning on hours counteracts the tendency of some respondents to report scheduled hours rather than actual hours of work.

The elimination of 14 and 15 year-olds reduced employment by about 1 million (mostly baby-sitters, newsboys, and persons who help out in a family business without pay), the number of unemployed by about 100,000, and the unemployment rate by about 0.1 percentage point.

The seasonal pattern of teenage unemployment was changed somewhat because those in school looking for summer jobs during the spring were eliminated. The number of teenage unemployed tends to be lower in April, May, and June, and the annual average level is about one percentage point lower as a result.

The employment figures for persons 16 and over were not perceptibly affected by the new definitions. However, the distribution of the employed by hours of work and by “class of worker” (self employed, wage and salary employee, etc.) are substantially changed because of the new probing questions.

Much more information is obtained on persons not in the labor force, with special emphasis on their potential availability for work. Questions are asked on when such persons last worked, why they left their jobs, the nature of those jobs, why they are not looking for work at the present time, and what their intentions are to seek jobs in the future. These questions asked of persons not in the labor force are

still considered to be experimental. As more experience is gained in analyzing the results over time, the questions may well be expanded to provide still more information.

STATISTICAL PROCEDURES

Since the survey was instituted in 1940, there have been a number of revisions in the series. In November 1943 an improved sample design was introduced and the estimates were revised back to 1940 using the 1940 Census of Population figures as a benchmark for that date. Starting in July 1945, a modified set of questions was used which resulted in a more nearly complete count of employed persons; the estimates were again revised back to 1940 to take account of the improvement in interviewing procedure. Beginning in 1953, 1950 population counts were introduced into the estimating procedure and no backward revisions were made. The 1953 changes raised the levels of labor force, total employment, and agricultural employment by about 350,000, affecting primarily the figures for totals and for males.

In 1954 the sample was spread from 68 sample areas to 230 sample areas (although retaining the overall size of about 21,000 interviewed households) in the interest of improving the reliability of the estimates. The estimates for 1953, which were deficient in certain respects, were revised to achieve greater comparability with those from the new sample. Estimates prior to 1953 are not exactly comparable with those from the expanded sample, although for most major items the series can be regarded as reasonably consistent.

In May 1956, the sample was expanded from 230 to 330 sample areas and from 21,000 to 35,000 interviewed households, to improve further the reliability of the statistics and to provide a basis for more detailed data for the Nation as a whole and limited data for broad geographic regions. Full comparisons of the results from the 230- and 330-area samples—available for both April and May of 1956—showed only small differences either in major categories or in detailed groups. For most purposes, therefore, the data from the expanded sample since May 1956 can be used as a continuous series with earlier statistics.

Starting in January 1957, certain limited changes were made in the definitions of employment and unemployment, following a comprehensive interagency review of concepts in this field. The changes involved primarily a transfer of two small groups

TABLE 10.—*Status of the Labor Force, 1929-66*

(In thousands)

Year	Total labor force	Civilian labor force					Labor force participation rate, unadjusted ²	
		Total	Employed		Unemployed			
	Number ¹		Total	Agriculture	Nonagricultural industries	Number	Percent of labor force	
Persons 14 years of age and over								
1929	49,440	49,180	47,630	10,450	37,180	1,550	3.2	(9)
1930	50,080	49,820	45,480	10,340	35,140	4,340	8.7	(9)
1931	50,680	50,420	42,400	10,290	32,110	8,020	15.9	(9)
1932	51,250	51,000	38,940	10,170	28,770	12,060	23.6	(9)
1933	51,840	51,590	38,760	10,090	28,670	12,830	24.9	(9)
1934	52,490	52,230	40,890	9,900	30,990	11,340	21.7	(9)
1935	53,140	52,870	42,260	10,110	32,150	10,610	20.1	(9)
1936	53,740	53,440	44,410	10,000	34,410	9,030	16.9	(9)
1937	54,320	54,000	46,300	9,820	36,480	7,700	14.3	(9)
1938	54,950	54,610	44,220	9,690	34,530	10,390	19.0	(9)
1939	55,600	55,230	45,750	9,610	36,140	9,480	17.2	(9)
1940	56,180	55,640	47,520	9,540	37,980	8,120	14.6	44,200
1941	57,530	55,910	50,350	9,100	41,250	5,560	9.9	43,990
1942	60,380	56,410	53,750	9,250	44,500	2,660	4.7	42,230
1943	64,560	55,540	54,470	9,080	45,390	1,070	1.9	39,100
1944	66,040	54,630	53,960	8,950	45,010	670	1.2	38,590
1945	65,300	53,860	52,820	8,580	44,240	1,040	1.9	40,230
1946	60,970	57,520	55,250	8,320	46,930	2,270	3.9	45,550
1947	61,768	60,168	57,812	8,256	49,552	2,356	3.9	45,850
Persons 16 years of age and over								
1947	60,941	59,350	57,039	7,891	49,148	2,311	3.9	42,477
1948	62,080	60,621	58,341	7,629	50,711	2,276	3.8	42,447
1949	62,903	61,286	57,647	7,656	49,990	3,637	5.9	42,708
1950	63,858	62,208	58,914	7,160	51,752	3,288	5.3	42,787
1951	65,117	62,017	59,957	6,726	53,230	2,055	3.3	42,604
1952	65,730	62,138	60,247	6,501	53,748	1,853	3.0	43,093
1953 ⁴	66,560	63,015	61,176	6,261	54,915	1,834	2.9	44,041
1954	66,993	63,643	60,107	6,206	53,898	3,532	5.5	44,678
1955	68,072	65,023	62,168	6,449	55,718	2,852	4.4	44,660
1956	69,409	66,552	63,793	6,283	57,507	2,750	4.1	44,402
1957	69,729	66,929	64,071	5,947	58,123	2,859	4.3	45,336
1958	70,275	67,639	63,036	5,586	57,450	4,602	6.8	46,088
1959	70,921	68,369	64,630	5,565	59,065	3,740	5.5	46,960
1960 ⁵	72,142	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1961	73,031	70,459	65,746	5,200	60,546	4,714	6.7	48,312
1962 ⁶	73,442	70,614	66,702	4,944	61,759	3,911	5.5	49,539
1963	74,571	71,833	67,762	4,687	63,076	4,070	5.7	50,583
1964	75,830	73,091	69,305	4,523	64,782	3,786	5.2	51,394
1965	77,178	74,455	71,088	4,361	66,726	3,366	4.5	52,058
1966	78,893	75,770	72,895	3,979	68,915	2,875	3.8	52,288

¹ Data for 1940-52 revised to include about 150,000 members of the armed forces who were outside the United States in 1940 and therefore were not enumerated in the 1940 census and were excluded from 1940-52 estimates.

² Total labor force as percent of noninstitutional population 14 years of age and over, 1940-1947, and 16 years of age and over, 1947-1968.

³ Not available.

⁴ Beginning 1963, labor force and employment figures are not strictly comparable with previous years as a result of the introduction of material from the 1960 Census into the estimating procedure. Population levels were raised by about 600,000; labor force, total employment, and agricultural employment by about 350,000, primarily affecting the figures for total and male. Other categories were relatively unaffected.

⁵ Data for 1960 include Alaska and Hawaii and are therefore not strictly comparable with previous years. This inclusion has resulted in an increase of about half a million in the noninstitutional population 14 years of age and over, and about 300,000 in the labor force, four-fifths of this in nonagricultural employment. The levels of other labor force categories were not appreciably changed.

⁶ Beginning in 1962, comparability with previous years is affected somewhat by the introduction of material from the 1960 census into the estimating procedure. The level of labor force and employment was lowered by about 150,000.

NOTE.—Monthly labor force data available beginning March 1940. Annual data are averages of monthly figures. Data for 1947 forward adjusted to reflect new definitions of employment and unemployment adopted in 1967.

Source: Department of Labor.

from the employed to the unemployed classification, (1) persons on layoff who had definite instructions to return to work within 30 days after the date of layoff (now classified as unemployed) and (2) those waiting to start new wage and salary jobs within 30 days (now classified either as unemployed or, if currently in school, as not in the labor force). Statistics for major categories on both the old and new bases were published by the Bureau of the Census for 1957 and adjustments carried back to 1947. Starting in 1960, Alaska and Hawaii were included, increasing the number of sample areas to 333. This inclusion resulted in an increase of about 300,000 in the labor force, four-fifths of this in nonagricultural employment. The levels of other labor force categories were not changed appreciably.

In December 1961 a modification of the CPS sample design was begun to incorporate gradually information obtained from the 1960 Decennial Census. The transition was completed in March 1963. The number of households interviewed each month remained at approximately 35,000 but the number of geographical areas sampled was increased from 333 to 357. The sampling areas continued to be stratified according to the following criteria:

- (1) Standard Metropolitan Statistical Area or not;
- (2) Rate of population change;
- (3) Percent of population living in urban areas;
- (4) Percent of population in manufacturing;
- (5) Principal industries;
- (6) Average value of retail trade;
- (7) Proportion of non-

white population. (For further information, see the 1962 Report of the President's Committee To Appraise Employment and Unemployment Statistics: *Measuring Employment and Unemployment*, Appendix E: "Revision of the Current Population Survey Sample, 1961-1963.")

In January 1967, other changes were made in the definition of employment and unemployment, as discussed above. The sample was expanded from 357 to 449 sample areas and from 35,000 to 52,500 households, improving further the reliability of the statistics and providing a basis for more detailed data.

The panel of respondents is rotated. A single household is interviewed for four consecutive months, dropped for eight months, and picked up again for the next four months. Thus, roughly three-fourths of the sample is identical from one month to the next, and one-fourth is added; and in any given month about one-half of the sample is identical with that interviewed in the same month a year earlier.

A composite estimating procedure is used. This method involves the preparation of two intermediate estimates for a given item each month: (1) an estimate of month-to-month change based on those parts of the sample common to the current and the preceding month (roughly 75 percent of the sample units), and (2) an estimate based on the data for the current month only (prior to 1954 the sole estimation procedure used) each inflated to independent estimates of the population by age, sex, and color.

Current Seasonal Adjustment Factors for Labor Force Components for 1967

Series title	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Unemployed—Men 20 Years and Over	129.6	132.8	121.7	102.0	86.9	91.7	90.3	91.3	80.6	78.5	89.4	105.5
Unemployed—Women 20 Years and Over	108.0	108.8	101.6	95.2	93.7	101.8	96.4	105.6	101.3	97.3	103.4	86.7
Unemployed—Boys 16-19 Years	94.5	91.2	99.0	85.6	72.7	163.4	146.3	99.1	87.3	79.8	86.3	95.0
Unemployed—Girls 16-19 Years	88.2	82.0	82.3	77.1	70.8	182.9	145.3	100.3	90.2	93.6	106.0	81.4
Nonagricultural employment—Men 20 Years and Over	98.4	98.7	99.1	99.7	100.3	100.8	100.9	101.0	100.5	100.5	100.3	99.8
Nonagricultural employment—Women 20 Years and Over	99.6	100.7	101.3	101.6	101.7	98.9	96.6	96.8	98.8	100.7	101.3	102.1
Nonagricultural employment—Boys 16-19 Years	85.4	86.7	85.3	90.8	96.0	115.6	133.4	130.2	96.3	94.7	91.8	93.7
Nonagricultural employment—Girls 16-19 Years	90.9	89.8	90.6	88.9	90.5	101.8	122.8	123.2	97.2	99.7	99.4	105.0
Agricultural employment—Men 20 Years and Over	92.2	92.1	95.6	99.1	103.0	108.4	106.4	102.6	104.2	104.7	100.2	91.4
Agricultural employment—Women 20 Years and Over	63.1	63.4	71.2	87.5	118.2	132.6	130.9	113.7	124.5	129.8	99.7	65.4
Agricultural employment—Boys 16-19 Years	63.3	65.7	74.4	92.3	100.0	153.3	159.6	144.8	100.3	102.0	80.2	64.2
Agricultural employment—Girls 16-19 Years	29.9	34.1	37.2	53.2	83.2	192.4	198.4	163.2	136.1	138.6	85.4	46.9

The final estimate is then obtained from a weighted average of the intermediate estimates (1) and (2), achieving a substantial reduction in sampling variability for most items.

The major labor force categories have been seasonally adjusted back to 1947 using a ratio-to-moving-average method with a provision for "moving" adjustment factors to take account of changing seasonal patterns. The method used is described in *BLS Seasonal Factor Method*, available upon request to the Division of Statistical Standards, Bureau of Labor Statistics, Washington, D.C.

RELATION TO OTHER SERIES

The labor force estimates of employment, obtained from a sample of households, differ in a number of respects from estimates of employment prepared from reports of employing establishments and based on payroll records, such as the Bureau of Labor Statistics current nonagricultural employment series and the Department of Agriculture estimates of farm employment. Because of these differences and variability in sampling and response, changes in the various series may not always be consistent. The labor force estimates provide information on the work status of the population; persons employed at more than one job, either because they hold more than one job concurrently or because they changed jobs during the survey week, are counted only once and are classified according to the job at which they work the greatest number of hours during the week. Estimates based on reports from business establishments and farms, on the other hand, count persons who work for more than one establishment as many times as the number of different payrolls on which their names appear. The labor force estimates relate to all types of workers, including domestic service workers, unpaid family workers (working 15 hours or more during the week) and self-employed persons, groups which are excluded from nonagricultural employment series based on establishment reports. On the other hand, workers less than 16 years of age are excluded from the labor force estimates, whereas the payroll-based series have no age exclusions. An additional difference arises from the fact that persons with a job but not at work are included with the employed in the labor force estimates, whereas only part of this group (those receiving pay while away from work) are included in the payroll estimates.

For a number of reasons, the unemployment estimates are not directly comparable with statistics

derived from unemployment insurance operations. In the first place, some unemployed persons are not eligible for unemployment insurance, particularly young persons looking for their first jobs, domestic servants, most former State and local government workers, agricultural workers, and persons who lost their jobs in firms too small to be covered by the various State unemployment insurance laws. Unemployed persons who have already received all of the benefits to which they are currently entitled are not included in the insured unemployment figures. Also, the qualifications for drawing unemployment insurance differ from the definition of unemployment used in the labor force series. For example, some persons with a job but not at work and persons working only a few hours during the week are eligible for unemployment insurance, but are classified in the labor force series as employed. Furthermore, some persons may be reported to the Census Bureau interviewers as not looking for work even though they may be registered at public employment offices, consider themselves available for jobs, and may be eligible for unemployment insurance.

The effect of differences in these series is analyzed in Chapter IV, *A Comparison of Estimates from the Different Sources*, in *Measuring Employment and Unemployment*.

USES AND LIMITATIONS

One of the chief advantages of the household labor force, employment, and unemployment estimates is that they provide the only comprehensive figures covering the employment status of the whole population. The data are collected monthly and published promptly. The estimates of unemployment, in particular, are used as a current indicator of the general health of the economy.

Another advantage of the household enumeration method of obtaining labor force information is the possibility of relating work status to other personal and family characteristics. Classifications are made not only by broad occupation and industry groups, but also by sex, age, and color, and by marital status and number of children. For example, changes in the employment of married women, and of married women with small children, can be studied. By asking supplementary questions from time to time, other information concerning the family can be similarly estimated, such as family incomes and the amount of migration during the course of a year.

All these analyses throw light on the changing size and composition of the labor force.

Since the estimates are prepared from a relatively small sample, the user should not attach significance to very small changes. Estimates of sampling variability in the data are regularly published in the "Technical Note" of *Employment and Earnings and the Monthly Report on the Labor Force*.

Average Standard Error of Major Employment Status Categories

(In thousands)

Employment status and sex	Average standard error of—	
	Monthly level	Month-to-month change (consecutive months only)
BOTH SEXES		
Labor force and total employment.....	190	145
Agriculture.....	120	100
Nonagricultural employment.....	200	150
Unemployment.....	75	80
MALE		
Labor force and total employment.....	100	75
Agriculture.....	95	80
Nonagricultural employment.....	120	95
Unemployment.....	60	60
FEMALE		
Labor force and total employment.....	150	115
Agriculture.....	50	40
Nonagricultural employment.....	150	115
Unemployment.....	50	55

hold. For this reason, as well as because of the relatively small size of the sample, only broad occupational and industry groupings of the data are published. Finally, the measurement of unemployment is in some cases difficult, since it depends in part on the attitude of the person interviewed. The classification of a person as unemployed has been made as objective as possible, by using the criterion of "looking for work," but no method has been as yet developed which will insure consistent reporting of activity month after month. Most of these problems of measurement affect persons whose attachment to the labor force is casual or intermittent, especially married women and youths still in school looking for part-time jobs.

REFERENCES

Summary employment and unemployment figures are released near the first of the month for the preceding month by the Bureau of Labor Statistics. More detailed estimates are available a week or so later in *Employment and Earnings and Monthly Report on the Labor Force* which presents the household labor force series, the employer nonagricultural employment series, and the insured unemployment series in a combined release. It also includes explanatory notes describing the data and the methodology, indicating the reliability of the estimates, and summarizing the seasonal adjustments. A more detailed technical note is available on request to the BLS. Supplementary information on work experience during the preceding year, multiple job-holding, etc., is published by the BLS in a series of Special Labor Force Reports. Related demographic data from the Current Population Survey are published by the Bureau of the Census in special reports (*Current Population Reports: Series P-60, Consumer Income; Series P-20, Population Characteristics*).

The user should also keep in mind that the information is collected by personal interview, usually with the housewife. She may not, in some cases, have exact knowledge for all members of the house-

11. SELECTED MEASURES OF UNEMPLOYMENT AND PART-TIME EMPLOYMENT

Unemployment Rates

In addition to unemployment rates for all workers, it is often useful to have rates computed for specific groups. The rate for experienced wage and salary workers excludes unemployed new entrants into the labor force, the self employed, and unpaid family workers. This rate tends to be about the same as the overall unemployment rate. The unemployment rate for married men is sometimes considered to indicate better "hardship" or "need" than the overall rate but has many deficiencies for the purpose. For example, widowers with family responsibilities and women heads of households are not represented. Other unemployment rates for selected groups are published in *Employment and Earnings and Monthly Report on the Labor Force*.

Labor Force Time Lost

This is a measure of productive hours lost to the economy. Total labor force time lost is computed on the assumption that those working part time for "economic" reasons—i.e., reasons aside from personal preference (see below)—lost the difference between their average hours and 37.5 hours per week, that those seeking full-time jobs lost the full 37.5 hours per week, and that persons seeking part-time work lost the average hours worked by the voluntary part-time employed. "Time lost" is expressed as a percent of potentially available man-hours. Data are available to compute this measure only since May 1955. However, data regarding persons seeking part-time work were not available on a monthly basis until January 1963. This refinement in the measurement of labor force time lost reduced the rate an average of 3-5 percentage points each month.

Persons at Work, by Hours Worked

DESCRIPTION OF SERIES

As part of the collection of information on the labor force, hours worked during the survey week at all jobs are obtained. Those working less than 35 hours a week are divided first into two groups, those who usually work full time, and those who usually work part time. Each of these groups is then classified according to whether the part-time work during the survey week was the result of (1) "economic"

reasons, such as slack work, material shortages, plant or machine repairs, new job started during week, could find only part-time work; or (2) other reasons, such as holidays, bad weather, own illness, vacation, participation in labor dispute, did not want full-time work, etc.

The average hours worked per week by persons working part time in nonagricultural industries for economic reasons differ according to whether such persons usually work full time or usually hold part-time jobs. Annual averages are available since 1956 (based on workers 14 years of age and over):

	Usually work full time	Usually work part time
1956.....	24.0	18.2
1957.....	24.5	18.3
1958.....	25.2	18.1
1959.....	23.8	18.3
1960.....	24.7	18.2
1961.....	24.2	18.1
1962.....	23.6	17.3
1963.....	23.6	17.5
1964.....	23.4	17.6
1965.....	23.3	17.6
1966.....	23.3	17.7

As explained above, the question on hours worked was revised in January, 1967. As a result of the more extended probing on hours of work, about 1.3 million more persons were identified as working less than 35 hours. At the same time about 0.6 million more persons were identified as working more than 40 hours. Virtually all of these extra part-time and overtime workers moved out of the group that formerly reported working precisely 40 hours. The net effect of all these changes was to reduce average hours for all workers and for nonfarm workers by 0.2 hour.

About 900,000 or 70 percent of the 1.3 million additional part-time workers were those who usually work full time but in the survey week worked under 35 hours for noneconomic reasons—mainly temporary illness or miscellaneous personal reasons. The probing question also raised the estimate of persons on part time for economic reasons, as well as those who usually work part time voluntarily, by about 200,000 each.

As a result of these changes the series on hours worked and the numbers of workers on part time for 1967 and later years cannot be compared with those prior to 1967.

TABLE 11.—Selected Measures of Unemployment and Part-Time Employment, 1947-66

Year	Unemployment rate (percent of civilian labor force in group)			Labor force time lost through unemployment and part-time work ²	Persons at work in nonagricultural industries by hours worked per week ⁴				
	All workers	Experienced wage and salary workers ¹	Married men ² (wife present)		Over 40 hours	35-40 hours	Under 35 hours		
							Total	Part time for economic reasons	
							Usually work full time ³	Usually work part time ³	
	Percent				Millions of persons 16 years and over ⁷				
1947.....	3.9	(9)	(9)	(9)	20.3	21.2	5.6	(9)	(9)
1948.....	3.8	(9)	(9)	(9)	19.4	21.0	8.1	(9)	(9)
1949.....	5.9	(9)	(9)	(9)	17.6	20.9	9.5	(9)	(9)
1950.....	5.3	(9)	(9)	(9)	17.5	22.4	9.7	(9)	(9)
1951.....	3.3	(9)	(9)	(9)	19.3	23.3	8.4	(9)	(9)
1952.....	3.0	(9)	(9)	(9)	19.4	25.1	6.8	(9)	(9)
1953.....	2.9	(9)	(9)	(9)	18.1	26.3	8.2	(9)	(9)
1954.....	5.5	6.2	(9)	(9)	15.7	24.4	11.3	(9)	(9)
1955.....	4.4	4.8	2.8	(9)	18.0	27.0	8.2	(9)	(9)
1956.....	4.1	4.4	2.6	5.1	18.7	27.3	8.7	1.1	.9
1957.....	4.3	4.6	2.8	5.3	17.6	28.6	9.1	1.2	1.
1958.....	6.8	7.2	5.1	8.1	16.6	28.3	9.7	1.6	1.3
1959.....	5.5	5.7	3.6	6.6	17.3	27.7	11.0	1.0	1.3
1960 ⁸	5.5	5.7	3.7	6.7	17.7	28.7	10.9	1.2	1.3
1961.....	6.7	6.8	4.6	8.0	18.2	29.0	10.3	1.3	1.5
1962.....	5.5	5.6	3.6	6.7	19.0	28.9	10.8	1.0	1.3
1963.....	5.7	5.5	3.3	6.4	19.3	29.4	11.1	1.1	1.2
1964.....	5.2	5.0	2.8	5.8	19.3	29.1	13.0	1.0	1.2
1965.....	4.5	4.3	2.4	5.0	20.8	30.8	11.8	.9	1.0
1966.....	3.8	3.5	1.9	4.2	21.3	32.1	12.0	.9	.8

¹ Includes all wage and salary workers who have worked at a job two weeks or more.

² Data for 1955 and 1956 have not been adjusted to reflect changes in the definition of employment and unemployment adopted in January 1960.

³ This ratio relates man-hours lost to man-hours which would have been worked had there been no unemployment and no involuntary part-time employment. It is assumed that the unemployed looking for full-time work and persons on part time for economic reasons would have worked 37.5 hours per week, and the unemployed looking for part-time work would have worked the average number of hours actually worked by the voluntary part-time workers.

⁴ Differs from total employed in nonagricultural industries which includes persons with jobs but not at work for such reasons as illness, vacation, bad weather, and industrial disputes.

⁵ Includes persons who worked part time because of slack work, material shortages or repairs, new job started, or job terminated.

⁶ Primarily includes persons who could find only part-time work.

⁷ All persons ages 14 and 15 were assumed to be working part-time for noneconomic reasons in adjusting back data for period 1947-1963.

⁸ Not available.

⁹ Data include Alaska and Hawaii beginning 1960 and are therefore not strictly comparable with previous years. This inclusion has resulted in an increase of about 300,000 in the labor force, four-fifths of this in non-agricultural employment. The levels of other labor force categories were not appreciably changed.

¹⁰ If data had not been available as to whether unemployed persons sought full- or part-time work, the rate would have been 6.8 percent in 1963. (See discussion on p. 30).

NOTE.—Monthly data on persons at work by hours worked per week available monthly beginning 1940, and numbers classified by reason for part-time work available monthly beginning May 1955.

Source: Department of Labor.

USES AND LIMITATIONS

Changes in the number of persons working part time for economic reasons may reflect changes in economic conditions as soon as, or even earlier than, the number of unemployed. Experience in interpreting the series on reasons for part-time employment

has been limited, since the figures have been available on a monthly basis only since May 1955. Information on persons at work by hours worked is also published classified by broad industrial and occupational groups and by selected personal characteristics.

The monthly labor force survey is the only source

of information on hours covering all industries. In analyzing these data, and comparing them with the results of the establishment survey, it should be remembered that the labor force survey includes hours worked at all jobs during the survey week, and that the hours reported by the household respondent have reflected in some cases scheduled hours rather

than actual hours worked. The establishment survey, on the other hand, includes hours paid for but not worked as well as hours worked, and the average is affected by turnover during the payroll period.

REFERENCES

See page 38 above, under Status of the Labor Force.

12. UNEMPLOYMENT INSURANCE PROGRAMS

DESCRIPTION OF SERIES

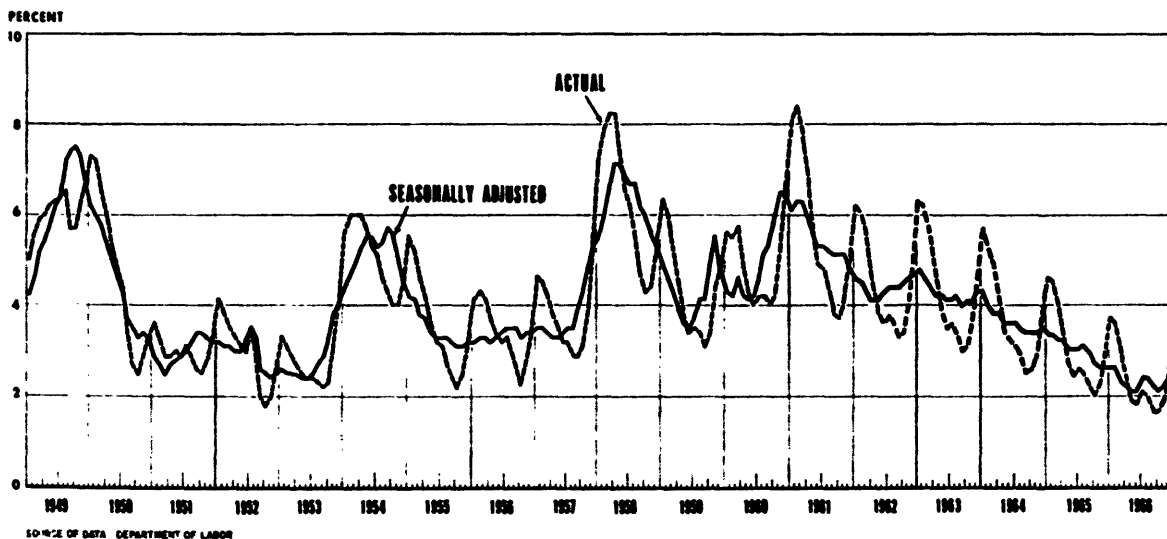
Weekly data on claims for benefits under employment security programs, obtained as a byproduct of operations, represent a measure of unemployment among workers covered by the programs. The series are compiled by the Bureau of Employment Security from reports from State employment security agencies covering State programs, the program of unemployment compensation for Federal employees, and the ex-servicemen's unemployment compensation program. Figures also include World War II veterans who filed for benefits under the Servicemen's Readjustment Act of 1944, Korean War veterans filing under the Veterans' Readjustment Assistance Act of 1952, and claimants under the Federal and

State programs for temporary extension of unemployment compensation. The data for "all programs" also include in the national totals the program of unemployment insurance administered by the Railroad Retirement Board. "State programs" exclude the Federal employee, servicemen, and railroad industry programs.

Insured unemployment represents the number of covered workers totally or partially unemployed during a given week for which they have filed unemployment insurance claims. Weekly insured unemployment figures are available for each State for the State, Federal employee (UCFE), and ex-servicemen's (UCX) programs. Weekly averages for the calendar month are also provided. In addition, for the week including the twelfth of each month, insured

Rates of Insured Unemployment Under State Programs, United States, 1949-66

(Monthly data. Percent of covered employment)



unemployment figures for 145 major labor market areas are provided, including State programs, UCFE, and UCX.

Initial claims are notices of the beginning of a period of unemployment for which benefits may later be claimed. These data are also available on a weekly basis for each State. This series provides a measure of the volume of new unemployment emerging under the State, UCFE, and UCX programs. Data on initial claims are not added to the insured unemployment count, however, since such claims do not certify to completed weeks of unemployment.

Exhaustions are a count of the number of claimants who have drawn the final weekly benefit payment to which they are entitled in a given benefit year under provisions of the State unemployment insurance laws.

Covered employment under all programs includes the employment of workers covered by State programs, and the Railroad Retirement Board programs from the beginning of the series, the employment of Federal government workers since 1955, and the armed forces since 1958, when the UCX program became operative. Although coverage of the Federal and State unemployment insurance programs has expanded until it now includes about 80 percent of all wage and salary workers in nonagricultural industries, certain groups of workers are excluded—namely, self-employed persons, unpaid family workers, and persons employed in specific industries, such as agriculture, domestic service, many nonprofit organizations, and most State and local governments. Also, within the "covered" industries, employees of firms below a specified size (fewer than four employees) are excluded in many States.

Prior to 1958, members of the armed forces were excluded from the count of covered employment because it was impossible to estimate the numbers actually eligible in any given year under the various programs which were in effect beginning with World War II. Between September 1940 and July 1947, an estimated 16.5 million different individuals served in the Armed Forces. These persons, upon discharge, could have drawn benefits under the Servicemen's Readjustment Act between September 1944 and September 1951 if unemployed and otherwise eligible. Between June 1950 and January 1955, an estimated 6.8 million individuals served in the armed forces during the Korean conflict. These individuals, upon discharge, could have drawn benefits under the UCV program (Unemployment Compensation for Veter-

ans) beginning October 1952. The rights for most such veterans under this program were terminated in July 1958. However, a small number, depending upon their discharge dates, were still eligible for UCV benefits through January 1960. Persons eligible for benefits under the UCX program include ex-servicemen who entered the armed forces after January 31, 1955, as well as veterans who entered prior to that date but were discharged after October 27, 1958.

The annual covered employment series is the average of 12 mid-monthly employment figures for the year. In 1962, workers covered by State programs accounted for about 87 percent of the total. Insured unemployment as a percent of covered employment (shown here for the State programs only) relates insured unemployment to the average covered employment for a preceding 12-month period, the period approximating the time when the wage credits were earned on which benefits were based.

Under State programs, the average weekly check is obtained by dividing the number of weeks compensated for total unemployment into the amount of benefits paid for total unemployment.

STATISTICAL PROCEDURES

The insured unemployment figures are complete counts of completed weeks of unemployment for which benefits are claimed (by the filing of continued claims). The BES sums the data reported by the State employment security agencies and the Railroad Retirement Board to get national totals weekly. Generally, a continued claim filed in a given week certifies to unemployment in the preceding week. Therefore, the weeks of unemployment claimed in a given week are assumed to represent insured unemployment in the preceding week, i.e., the week in which the unemployment actually occurred.

Insured unemployment as a percent of covered employment is seasonally adjusted by a ratio-to-moving-average method, using the same techniques as are used in the labor force and nonagricultural employees series noted above. The seasonal adjustment factors for the rate of insured unemployment, State programs, for use with data for 1967 are:

January.....	140.1	July.....	86.0
February.....	137.2	August.....	81.6
March.....	125.8	September.....	73.1
April.....	107.8	October.....	75.3
May.....	90.1	November.....	87.9
June.....	82.5	December.....	112.3

RELATION TO OTHER SERIES

For a comparison with total unemployment, see above, under Status of the Labor Force (p. 37).

USES AND LIMITATIONS

The BES series are derived from administrative records and provide complete counts of claims-taking transactions, on a weekly basis and with minimum delay. The insured unemployment figures serve two purposes as economic indicators. First, since they are available weekly they provide the most up-to-date information on current trends in unemployment. Second, they provide geographic detail for labor market areas as well as for States. In

using these figures as economic indicators, however, certain inherent limitations must be kept in mind.

The limitations of the series, as well as their unique advantages, stem from the fact that they are by-products of administrative records. In the first place, as described above, workers in certain industries and in the very small firms are not covered, at least in some States. In addition, some groups of covered workers may not be included in the data on insured unemployment because they are not eligible for benefits. These groups include: unemployed workers whose previous jobs were in covered industries, but who did not earn sufficient wage credits or were not employed the required length of time; unemployed covered workers who were disqualified for various rea-

TABLE 12.—Unemployment Insurance Programs 1940-66

Year	All programs			State programs					
	Covered employment ¹	Insured unemployment (weekly averages) ²	Benefits paid ²	Insured unemployment	Initial claims	Exhaustions	Insured unemployment as percent of covered employment	Benefits paid	
								Total	Average weekly check
	Thousands		Mil. dol.	Weekly average, thousands			Percent	Mil. dol.	Dollars
1940.....	24,291	1,331	534.7	1,282	214	50	5.6	518.7	10.56
1941.....	28,136	842	358.8	814	164	30	3.0	344.3	11.06
1942.....	30,819	661	350.4	649	122	21	2.2	344.1	12.66
1943.....	32,419	149	80.5	147	36	4	.5	79.6	13.84
1944.....	31,714	111	67.2	105	29	2	.4	62.4	15.90
1945.....	30,087	720	574.9	589	116	5	2.1	445.9	18.77
1946.....	31,856	2,804	2,878.5	1,295	189	38	4.3	1,094.9	18.50
1947.....	33,876	1,805	1,785.0	1,009	187	24	3.1	775.1	17.83
1948.....	34,646	1,468	1,328.7	1,002	210	20	3.0	789.9	19.03
1949.....	33,098	2,479	2,269.8	1,979	322	37	6.2	1,736.0	20.48
1950.....	34,308	1,605	1,467.6	1,503	236	36	4.6	1,373.1	20.76
1951.....	36,334	1,000	862.9	969	208	16	2.8	840.4	21.09
1952.....	37,006	1,069	1,043.5	1,024	215	18	2.9	998.2	22.79
1953.....	38,072	1,065	1,050.6	995	218	15	2.8	962.2	23.58
1954.....	36,622	2,048	2,291.8	1,865	303	34	5.2	2,026.9	24.93
1955.....	40,018	1,395	1,560.2	1,254	226	25	3.5	1,350.3	25.04
1956.....	42,751	1,318	1,540.6	1,212	226	20	3.2	1,380.7	27.02
1957.....	43,436	1,567	1,913.0	1,450	268	23	3.6	1,733.9	28.17
1958.....	44,411	3,269	4,290.2	2,509	370	50	6.4	3,512.7	30.58
1959.....	45,728	2,099	2,803.0	1,682	281	33	4.4	2,279.0	30.41
1960.....	46,334	2,067	3,022.7	1,906	331	31	4.8	2,726.7	32.87
1961.....	46,266	2,994	4,358.2	2,290	350	46	5.6	3,422.7	33.80
1962.....	47,776	1,946	3,160.0	1,783	302	32	4.4	2,675.4	34.56
1963.....	48,434	1,973	3,025.9	1,806	298	30	4.3	2,774.7	35.28
1964.....	49,637	1,753	2,749.2	1,605	268	26	3.8	2,522.1	35.96
1965.....	51,580	1,450	2,343.7	1,328	232	21	3.0	2,166.0	37.19
1966 ³	53,700	1,129	1,890.9	1,061	203	15	2.3	1,771.3	39.76

¹ For definitions of persons covered under various programs, see accompanying text.

² Includes among others, persons covered by Federal and State programs for temporary extension of benefits from June 1958 through June 1962.

³ Preliminary.

Source: Department of Labor.

sons, such as voluntary quitting without good cause, discharge for misconduct, refusal of suitable work, or temporary illness; persons who were eligible to receive benefits but for one reason or another did not apply; and finally, workers who have exhausted their benefit rights. In a period when unemployment is substantial and of long duration, the volume of exhaustions may have an important bearing on the magnitude of the insured unemployment level. Unlike total unemployment, the insured unemployment series does not include new entrants into the labor market, who are looking for, but have not yet found work.

These limitations vary over time as well as between States. During the years since 1939, exclusions due to "size-of-firm" provisions have declined. Originally, State unemployment insurance programs excluded workers in firms with fewer than eight employees. In January 1956, amendments to the Social Security Act resulted in coverage of workers in firms employing four or more. In addition, changes in many State laws during these years have resulted in the coverage of workers in firms employing fewer than four. At the beginning of 1967, twenty-one States had "size-of-firm" provisions of one or more.

Weekly data are subject to some variation from week to week as holidays call for a rescheduling of the claimant's appearance at the local office. The effects of this factor, however, have been reduced considerably since 1959, when nearly all the States adopted procedures for adjusting "weeks claimed" totals affected by holidays. Monthly data are presented as "average weekly volume of insured unemployment" and are not significantly affected by holiday weeks. The monthly data, however, are influenced to some extent by administrative factors. Forty-six States, Puerto Rico, and the District of Columbia operate on an "individual benefit year" basis. In such States a worker who previously had insufficient wage credits may become eligible for benefits when the earnings of a new quarter become a part of his base period. This administrative factor exerts an upward influence on both insured unemployment and initial claims during the first month of each quarter in most States. Similarly, four States which operate on a "uniform benefit year"

usually show an administrative rise in insured unemployment at the beginning of the new benefit year.

Exhaustion of benefits reflects both economic conditions and duration provisions of the various State unemployment insurance laws. While a count of the number of claimants who have exhausted their benefit rights is a useful economic indicator, it is difficult to determine how long unemployment continues after the claimant has exhausted his benefits. It may be assumed that some exhaustees will find new employment shortly after their benefits for a given benefit year have been exhausted, while others will remain unemployed for varying periods of time. Consequently, a knowledge of the number of persons who have exhausted benefits in the past gives no indication of the number who are still unemployed, and hence does not provide an estimate which can be added to insured unemployment to estimate a total count of unemployment from covered industries. Furthermore, in interpreting monthly figures on exhaustions, the usual seasonal increase in the late winter months should be kept in mind.

REFERENCES

The basic release of the weekly data is the BES Unemployment Insurance Claims, which contains initial claims as well as insured unemployment for the State, Federal employee and ex-servicemen programs by States, and nationally for the Railroad Retirement Board program. Insured unemployment for the week including the 12th of the month is included in *Employment and Earnings and The Monthly Report on the Labor Force* for the States and for major labor market areas. Weekly figures monthly averages, and actual and seasonally adjusted insured unemployment rates are also published in the BES monthly periodical, *Unemployment Insurance Review*. Weekly data back to July 1945 are available upon request from the BES. A comprehensive summary of technical notes, "Insured Unemployment and Wage Statistics: Their Source Nature and Limitations," appears in the March 1960 issue of *The Labor Market and Employment Security*. Reprints of this summary of technical notes are available upon request to the BES.

13. NONAGRICULTURAL EMPLOYMENT

DESCRIPTION OF SERIES

Current monthly series on employment in non-agricultural establishments, with related information on hours and earnings (see below), are prepared by the Bureau of Labor Statistics. Employment estimates are published for about 400 separate industry groups and subgroups as well as 8 major industry divisions (manufacturing, mining, trade, etc.). Annual average data for all the major industry divisions are available on a comparable basis back to 1919. For the 21 major groups in manufacturing, all series go back to 1947 and for most groups to 1939. Estimates of women employed in nonagricultural establishments are available quarterly.

Employment figures represent the total number of persons employed in nonagricultural establishments in the United States during a specified payroll period which, for all industries except Federal Government is that including the 12th of the month. Employed persons include all those who worked during or received pay for any part of the payroll period, including part time as well as full time, temporary as well as permanent, employees. Workers on an establishment's payroll who are on paid sick leave, paid holiday or paid vacation, or who work a part of a specified pay period and are unemployed or on strike during the other part are considered employed.

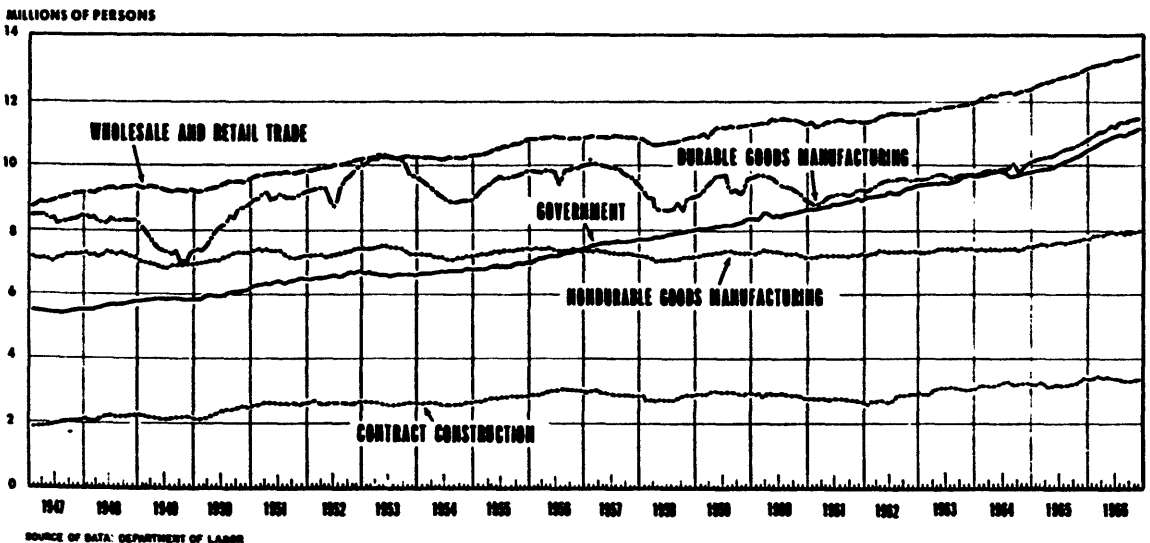
Persons on the payroll of more than one establishment during the pay period are counted each time reported. On the other hand, persons are not considered employed who are laid off, on leave without pay, or on strike for the entire pay period. Proprietors, the self-employed and unpaid family workers, and domestic workers in households are not included. Government employment statistics refer to civilian employees only, but include employees of State and local governments as well as Federal.

Information on employment, hours and earnings is collected each month from a sample of establishments under cooperative arrangements with State agencies (primarily State employment security agencies affiliated with the Bureau of Employment Security). The cooperating State agencies mail questionnaires to the reporting establishments and edit them when returned, before passing the information on to the BLS. To eliminate duplicate reporting, the same establishment reports are used for preparing State, area, and national estimates.

Durable goods manufacturing industries include: ordnance and accessories, lumber and wood products, furniture and fixtures, stone, clay and glass products, primary metal industries, fabricated metal products, machinery, electrical equipment and supplies, transportation equipment, instruments, and miscellaneous manufacturing industries. All other manufacturing

Employees in Nonagricultural Establishments, 1947-66

(Monthly data. Seasonally adjusted)



industries are included in the nondurable manufacturing estimates. Employees of government-operated manufacturing establishments, such as ordnance plants and shipyards, are included under government.

STATISTICAL PROCEDURES

THE SAMPLE

Current estimates depend on monthly reports from a sample of employers. The sampling plan used is an optimum a location design known as "sampling proportionate to average size of establishment." Under this design, large establishments fall into the sample with certainty, however, the proportion of total employment covered varies considerably from industry to industry. For example, sample coverage is high (85 percent on the average) in manufacturing industries in which a high proportion of total employment is concentrated in relatively few establishments and which have a greater tendency to fluctuate from regular cyclical or seasonal patterns than nonmanufacturing industries. On the other hand, coverage is much lower (20 percent) in wholesale and retail trade industries which are made up of many small establishments.

The BLS establishment sample consists of about 150,000 reports and is, therefore, the largest monthly sampling operation in the field of social statistics. The sample design is based primarily on the needs of the national program, however, it also provides the technical framework within which State and area sample needs are determined. Since the estimates for States and areas are generally not prepared in as much industry detail as the national estimates, the national design usually provides sufficient reports for the preparation of State and area estimates. Occasionally, the national design may need to be augmented by additional reports in order to satisfy area sample requirements.

The present sample is designed to meet the major requirements of the employment statistics program. With its use the BLS is able to produce timely estimates within a few weeks after reports have been mailed to respondents, in great industrial detail, and for many geographic levels.

ESTIMATING PROCEDURE

The principal feature of the procedure used to estimate employment for the industry statistics is known as the "benchmark-link relative" technique which is a form of ratio estimation. This technique relies on a reasonably complete employment universe

count—the benchmark—which is prepared annually from a number of sources (see section on benchmark data) and the "simple link" which is the ratio of the current month's employment to that of the previous month computed from the sample establishments reporting for both months.

This technique and the relatively large size of the establishment sample assures a high degree of accuracy for most estimates. However, since the previous month's estimate is used as the base in computing the current month's estimate, small sampling and response errors may cumulate over several months. Part of this error is removed on a current basis through the use of small average monthly bias adjustment factors applied before publication. Any remaining accumulated error is removed at the time the estimates are adjusted to new benchmarks annually. In addition to the sampling and response errors, the benchmark revision adjusts the estimates for changes in the industrial classification of individual establishments (resulting from changes in their product). In fact, at the more detailed industry levels, particularly within manufacturing, changes in classification are the major cause of benchmark adjustments. Another cause of differences, generally minor, arises from improvements in the quality of the benchmark data.

An approximation of the average standard deviation (based on the experience of the last several years) of differences between benchmarks and estimates is presented in the following table. The chances are about 2 out of 3 that the revisions will be less than the amount indicated for each size of estimate. The chances are about 19 out of 20 that the revisions will be less than twice the amount indicated.

Average Standard Deviation of Differences Between Benchmark and Estimates

Size of employment estimate	Standard deviation ¹
50, 000	2, 000
100, 000	2, 500
200, 000	4, 000
500, 000	7, 500
1, 000, 000	12, 000

¹ Assuming 12-month intervals between benchmark revisions.

Since these differences are established at the end of 12 monthly estimates, it follows that the deviation between successive months during the year is much smaller or approximately $\frac{1}{12}$ of the amount indicated.

The actual comparison made for March 1965, the last benchmark date, indicated that the estimate

TABLE 13.—Nonagricultural Employment, 1929-66¹

(Thousands of wage and salary workers)

Year	Total	Manufacturing, private			Nonmanufacturing, private							Government	
		Total	Durable goods	Non-durable goods	Total	Mining	Contract construction	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Service and miscellaneous	Federal	State and local
1929	31,339	10,702	(²)	(²)	17,572	1,087	1,497	3,916	6,123	1,509	3,440	533	2,533
1930	29,424	9,562	(²)	(²)	16,714	1,009	1,372	3,695	5,797	1,475	3,376	526	2,622
1931	28,649	8,170	(²)	(²)	15,215	873	1,214	3,254	5,284	1,407	3,183	560	2,704
1932	23,628	6,931	(²)	(²)	13,472	731	970	2,816	4,683	1,341	2,931	559	2,666
1933	23,711	7,397	(²)	(²)	13,148	744	809	2,672	4,755	1,295	2,873	565	2,601
1934	25,953	8,501	(²)	(²)	14,153	863	862	2,750	5,281	1,319	3,058	652	2,647
1935	27,053	9,069	(²)	(²)	14,503	897	912	2,786	5,431	1,335	3,142	753	2,728
1936	29,062	9,827	(²)	(²)	15,587	946	1,145	2,973	5,809	1,368	3,326	826	2,842
1937	31,026	10,794	(²)	(²)	16,476	1,015	1,112	3,134	6,265	1,432	3,518	833	2,923
1938	29,209	9,440	(²)	(²)	15,886	891	1,055	2,863	6,179	1,425	3,473	829	3,054
1939	30,618	10,278	4,715	5,564	16,345	854	1,150	2,936	6,426	1,462	3,517	906	3,090
1940	32,376	10,985	5,363	5,622	17,189	925	1,294	3,038	6,750	1,502	3,681	966	3,206
1941	36,554	13,192	6,968	6,225	18,702	957	1,790	3,274	7,210	1,549	3,921	1,340	3,320
1942	40,125	15,280	8,823	6,458	19,362	992	2,170	3,460	7,118	1,538	4,064	2,213	3,270
1943	42,452	17,602	11,084	6,518	18,771	925	1,567	3,647	6,982	1,502	4,148	2,905	3,174
1944	41,893	17,328	10,856	6,472	18,511	892	1,094	3,829	7,058	1,476	4,163	2,928	3,116
1945	40,394	15,524	9,074	6,450	18,925	836	1,132	3,906	7,314	1,497	4,241	2,808	3,137
1946	41,674	14,703	7,742	6,962	21,376	862	1,661	4,061	8,376	1,697	4,719	2,254	3,341
1947	43,881	15,545	8,385	7,159	22,862	955	1,982	4,166	8,955	1,754	5,050	1,892	3,582
1948	44,891	15,582	8,326	7,256	23,659	994	2,169	4,189	9,272	1,829	5,206	1,863	3,787
1949	43,778	14,441	7,489	6,953	23,481	930	2,165	4,001	9,264	1,857	5,264	1,908	3,948
1950	45,222	15,241	8,094	7,147	23,955	901	2,333	4,034	9,386	1,919	5,382	1,928	4,098
1951	47,849	16,393	9,089	7,304	25,067	929	2,603	4,226	9,742	1,991	5,576	2,302	4,067
1952	48,825	16,632	9,349	7,284	25,585	898	2,634	4,248	10,004	2,069	5,730	2,420	4,188
1953	50,232	17,549	10,110	7,438	26,038	866	2,623	4,290	10,247	2,146	5,867	2,305	4,340
1954	49,022	16,314	9,129	7,185	25,957	791	2,612	4,084	10,235	2,234	6,002	2,188	4,563
1955	50,675	16,882	9,541	7,340	26,879	792	2,802	4,141	10,535	2,335	6,274	2,187	4,727
1956	52,408	17,243	9,834	7,409	27,887	822	2,999	4,244	10,858	2,429	6,536	2,209	5,069
1957	52,894	17,174	9,856	7,319	28,104	828	2,923	4,241	10,886	2,477	6,749	2,217	5,399
1958	51,363	15,945	8,830	7,116	27,580	751	2,778	3,976	10,750	2,519	6,806	2,191	5,648
1959 ³	53,313	16,675	9,373	7,303	28,554	732	2,960	4,011	11,127	2,594	7,130	2,233	5,850
1960	54,234	16,796	9,459	7,336	29,085	712	2,885	4,004	11,391	2,669	7,423	2,270	6,063
1961	54,042	16,326	9,070	7,256	29,122	672	2,816	3,903	11,337	2,731	7,664	2,279	6,315
1962	55,596	16,853	9,480	7,373	29,853	650	2,902	3,906	11,566	2,800	8,028	2,340	6,550
1963	56,702	16,995	9,616	7,380	30,481	635	2,963	3,903	11,778	2,877	8,325	2,358	6,868
1964	58,332	17,274	9,816	7,458	31,461	634	3,050	3,951	12,160	2,957	8,709	2,348	7,249
1965	60,770	18,032	10,386	7,645	32,647	632	3,181	4,033	12,633	3,019	9,098	2,378	7,713
1966	63,864	19,081	11,186	7,896	33,934	628	3,281	4,137	13,220	3,086	9,582	2,565	8,283

¹ Includes all full- and part-time wage and salary workers in nonagricultural establishments who worked during or received pay for any part of the pay period including the 12th of the month. Excludes proprietors, self-employed persons, domestic servants, unpaid family workers, and personnel of the armed forces. Total derived from this table not comparable with estimates of nonagricultural employment of the civilian labor force which include proprietors, self-employed persons, unpaid family workers, and domestic servants, which count persons as employed when they are not at work because of industrial disputes, bad weather, etc., and which are based on a sample survey of households, whereas the estimates in this table are based on reports from employing establishments.

² Not available.

³ Data include Alaska and Hawaii beginning 1960. This inclusion has resulted in an increase of 212,000 (0.4 percent in the nonagricultural total for the March 1960 benchmark month).

Note.—Monthly data available beginning January 1960 and annual from 1919 for all major industry divisions.

Source: Department of Labor.

was within 0.5 percent of the benchmark. For manufacturing, the discrepancy was only 0.2 percent; in other industry divisions the discrepancy was less than 1.0 percent, except for services and miscellaneous, which was 2.1 percent.

BENCHMARK DATA

Since 1939, the basic sources of benchmark information for "all employees" have been periodic tabulations of employment data by industry compiled by State employment security agencies from reports of establishments covered under State unemployment insurance laws. Beginning with 1959, these data were also compiled by size of establishments.

In recent years, unemployment insurance coverage data accounted for three-fourths of the total benchmark. For the group of establishments exempt from State unemployment insurance laws because of their small size, and for certain classes of nonprofit organizations, data provided by the Federal old-age insurance program administered by the Social Security Administration of the U.S. Department of Health, Education, and Welfare are used.

For industries not covered, or only partially covered, by either of these two programs, benchmarks are compiled from a number of special sources. The most important of these are the Interstate Commerce Commission (for data on interstate railroads), the American Hospital Association (private nonprofit hospitals), the Office of Education in the U.S. Department of Health, Education, and Welfare and the National Catholic Welfare Conference (private schools, colleges, and universities), the U.S. Civil Service Commission (Federal Government), and the Governments Division of the Bureau of the Census in the U.S. Department of Commerce (State and local Government).

SEASONAL ADJUSTMENT

The seasonal adjustment method used for these series is an adaptation of the standard ratio-to-moving average method, with a provision for "moving" adjustment factors to take account of changing seasonal patterns. The seasonal factors, prepared for "two-digit" manufacturing industries and for the nonmanufacturing industry divisions, are available from the Bureau of Labor Statistics on request. The magnitudes of the adjustments may be judged from the implicit seasonal adjustment factors for total nonagricultural employment for 1966. The adjusted series prepared by summing the aggregates of the seasonally adjusted components will give

slightly different results from that which might be obtained from an independent seasonal adjustment of the total nonagricultural series.

Implicit Seasonal Adjustment Factors for Total Nonagricultural Employment for 1966, by Months

January.....	98.4	July.....	100.3
February.....	98.1	August.....	100.5
March.....	98.4	September.....	101.1
April.....	99.3	October.....	101.1
May.....	99.9	November.....	100.9
June.....	100.9	December.....	101.3

RELATION TO OTHER SERIES

A comparison between the series discussed above and the nonagricultural employment estimates compiled as a part of the labor force series can be found in the section on Employment Status of the Labor Force, as above, p. 37.

In addition to total employment in each industry, BLS also prepares estimates of production worker employment for mining and manufacturing industries, for construction workers in contract construction, and for nonsupervisory workers in some or all industry components of the other nonmanufacturing divisions except government. These estimates are comparable with the average hours and earnings series (see below) which are prepared from information reported on the same questionnaires as the employment figures.

Establishments reporting employment information are classified into industries on the basis of their principal product or activity. All series are classified in accordance with the Standard Industrial Classification Manual (Bureau of the Budget, 1967).

In general, BLS employment estimates are comparable with other data collected from establishments, such as employment, production, and similar data obtained by the Census Bureau in the manufacturing censuses and annual surveys. Some differences will be found, however, especially for individual industries, caused chiefly by differences in definitions of the industries covered, in the business units considered parts of an establishment, and in the industrial classification of some establishments.

The BLS establishment-based series are not comparable with those based on reports from companies because the industry totals that result when a single industry classification is assigned to an entire company differ substantially from those in which each establishment of the company has been assigned to the industry of its principal activity. (See Corporate Profits, above, p. 21.)

USES AND LIMITATIONS

Current employment statistics are widely used as a timely indicator of changes in economic activity in various sectors of the economy. Comparable information for a large number of detailed industries is provided within a few weeks. Furthermore, because of the promptness with which basic information is supplied in considerable industry detail, these estimates are frequently incorporated in other Federal statistical series, particularly in making current estimates of production, productivity, and national income.

The publication of comparable State and local area estimates by the cooperating State agencies using the same concepts and methods provides a means whereby business trends can be followed for all State and the District of Columbia and for nearly 200 labor market areas.

REFERENCES

Monthly summary data first appear in a press release entitled "The Employment Situation". The

basic monthly release for the employment, hours, and earnings series is the *Employment and Earnings, and Monthly Report on the Labor Force*, which contains national, State and area estimates and explanatory notes. The National employment hours and earnings series for 12 months are also reprinted in the *Monthly Labor Review*. Continuous data for the entire history of the national series prior to June 1966 are available in *Employment and Earnings Statistics for the United States, 1909-66*, BLS Bulletin 1312-4. This is the fifth of a series of annual compendium volumes. More detailed technical notes are available in "Measurement of Employment, Hours, and Earnings in Nonagricultural Industries."

Historical State and area annual average data from the earliest date of availability for all industry series published by cooperating State agencies are available in *Employment and Earnings Statistics for State and Areas 1939-66* BLS Bulletin 1370-3. This is the fourth of a series of annual publications presenting State and area data, and it contains more than 7,000 series on payroll employment by industry and over 3,000 series of hours and earnings of production workers by industry.

14. WEEKLY HOURS OF WORK—SELECTED INDUSTRIES

Average Weekly Hours

DESCRIPTION OF SERIES

With the employment figures for the specified payroll period, described in the preceding section, BLS collects from the sample establishments total man-hours for which pay is received by production or non-supervisory workers, including hours for holidays, vacation time, or other employer-paid leave. Data on average weekly hours, weekly earnings and hourly earnings are currently published for all production and nonsupervisory workers in five of the eight major divisions of industry—mining, contract construction, manufacturing, trade and finance, insurance and real estate—and for 75 percent of such workers in transportation and public utilities, 13 percent in service, and 25 percent in government. Detailed statistics are regularly shown for 21 major manufacturing groups and 246 manufacturing indus-

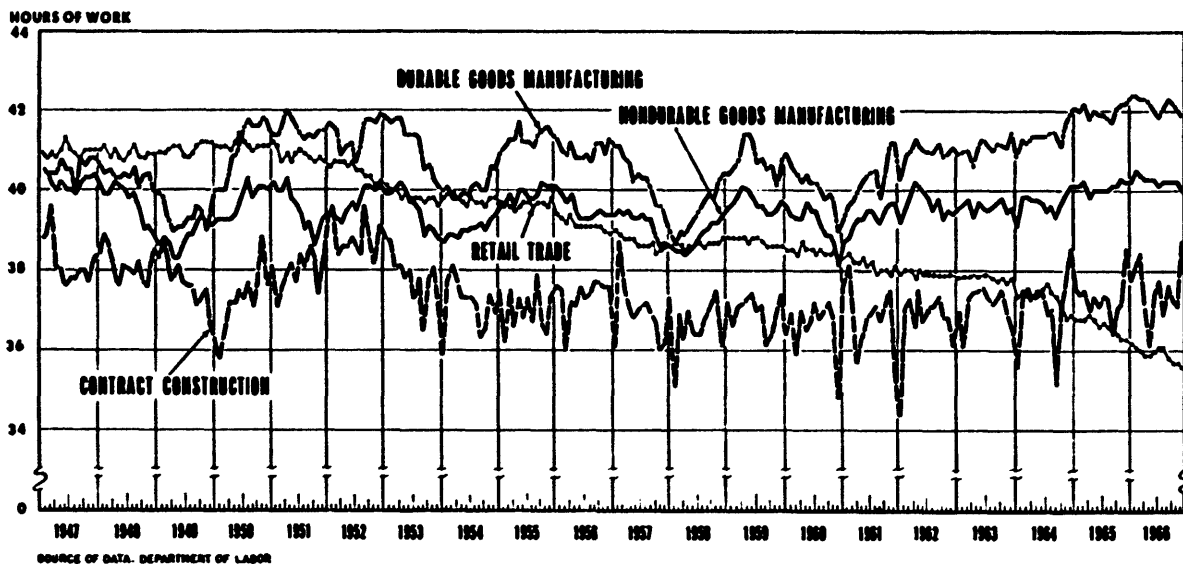
tries as well as for 82 nonmanufacturing groups and divisions. For overtime hours (hours in excess of regular hours for which premium payments were made) series are prepared for 146 manufacturing industries. The industries for which hours and earnings estimates are not prepared are characterized by small establishments (such as offices of physicians and surgeons, religious organizations) with special problems relating to data collection or definition.

STATISTICAL PROCEDURES

The average hours figures are obtained by dividing the number of production and related workers (or nonsupervisory workers in industries other than mining and manufacturing) into the total man-hours reported for each industry. The average hours are normally less than scheduled hours because of such factors as absenteeism, labor turnover, part-time work, and stoppages.

Average Weekly Hours in Selected Industries, 1947-66

(Monthly data for production workers or nonsupervisory employees. Seasonally adjusted)



Seasonally adjusted series are prepared in a manner similar to that for nonagricultural employment. The magnitude of the seasonal adjustments is illustrated by the seasonal adjustment factors for average hours of manufacturing production workers, which are:

Average Weekly Hours—Seasonal Adjustment Factors

January.....	99.5	July.....	100.0
February.....	99.5	August.....	100.1
March.....	99.8	September.....	100.1
April.....	99.3	October.....	100.2
May.....	100.1	November.....	100.1
June.....	100.7	December.....	100.9

USES AND LIMITATIONS

Changes in hours worked supplement the information on employment, since frequently hours worked are affected even before employment by changes in economic activity. Hours in manufacturing are an

important leading indicator. The hours figures are used in compiling the average earnings figures discussed below. They also serve as a basis for current production estimates for some industries (see description of the Index of Industrial Production, p. 55).

A limitation of the average hours series is that the figures generally refer only to production or non-supervisory workers.

Hours paid for as measured by these series differ from hours worked, and from "plant man hours," which do not include hours paid for vacation, sick leave, or holidays.

In addition to average gross hours and average overtime hours for a large number of industries, BLS also publishes indexes of aggregate weekly man-hours in industrial and construction activities.

REFERENCES

See page 49, under Nonagricultural Employment.

TABLE 14.—Weekly Hours of Work in Selected Industries, 1929-66¹

(Hours per week)

Year	Manufacturing ¹			Contract construction ¹	Retail trade ¹
	Total	Durable goods	Nondurable goods		
1929.....	44.2	(?)	(?)	(?)	(?)
1930.....	42.1	(?)	(?)	(?)	(?)
1931.....	40.5	(?)	(?)	(?)	(?)
1932.....	38.3	32.5	41.9	(?)	(?)
1933.....	38.1	34.7	40.0	(?)	(?)
1934.....	34.6	33.8	35.1	(?)	(?)
1935.....	36.6	37.2	36.1	(?)	(?)
1936.....	39.2	40.9	37.7	(?)	(?)
1937.....	38.6	39.9	37.4	(?)	(?)
1938.....	35.6	34.9	36.1	(?)	(?)
1939.....	37.7	37.9	37.4	(?)	43.4
1940.....	38.1	39.2	37.0	(?)	43.2
1941.....	40.6	42.0	38.9	(?)	42.8
1942.....	43.1	45.0	40.3	(?)	41.8
1943.....	45.0	46.5	42.5	(?)	40.9
1944.....	45.2	46.5	43.1	(?)	41.0
1945.....	43.5	44.0	42.3	(?)	40.9
1946.....	40.3	40.4	40.5	(?)	41.3
1947.....	40.4	40.5	40.2	38.2	41.0
1948.....	40.0	40.4	39.6	38.1	40.9
1949.....	39.1	39.4	38.9	37.7	41.0
1950.....	40.5	41.1	39.7	37.4	41.1
1951.....	40.6	41.5	39.5	38.1	40.9
1952.....	40.7	41.5	39.7	38.9	40.5
1953.....	40.5	41.2	39.6	37.9	39.8
1954.....	39.6	40.1	39.0	37.2	39.7
1955.....	40.7	41.3	39.9	37.1	39.6
1956.....	40.4	41.0	39.6	37.5	39.1
1957.....	39.8	40.3	39.2	37.0	38.7
1958.....	39.2	39.5	38.8	36.8	38.7
1959 ²	40.3	40.7	39.7	37.0	38.7
1960.....	39.7	40.1	39.2	36.7	38.5
1961.....	39.8	40.3	39.3	36.9	38.1
1962.....	40.4	40.9	39.6	37.0	37.9
1963.....	40.5	41.1	39.6	37.3	37.8
1964 ³	40.7	41.4	39.7	37.2	37.0
1965.....	41.2	42.0	40.1	37.4	36.6
1966.....	41.3	42.1	40.2	37.6	35.9

¹ For manufacturing, data relate to production and related workers; for contract construction, to construction workers, and for retail trade to nonsupervisory workers. Hours are hours paid for including paid holiday, vacation, and sick-leave hours.

² Not available.

³ Data include Alaska and Hawaii beginning 1959. This inclusion has not significantly affected these weekly hours series.

⁴ Data exclude eating and drinking places prior to 1964.

NOTE.—Monthly data on average weekly hours available beginning 1932 for manufacturing industries, 1947 for contract construction, and 1939 for retail trade. Annual data for total manufacturing industries available for years 1939 and 1944 and on continuous basis beginning with 1949.

Source: Department of Labor.

15. AVERAGE HOURLY AND WEEKLY EARNINGS—SELECTED INDUSTRIES

DESCRIPTION OF SERIES

The payroll figures on which these averages are based are collected by BLS from employers on the same form with the employment and hours figures, described above. They are reported before deductions for taxes, social insurance, etc. They include pay for overtime, holidays, vacations, and sick leave paid directly by the firm but exclude retroactive pay and bonuses, unless earned and paid regularly each pay period.

STATISTICAL PROCEDURES

Average hourly earnings are derived by dividing total payrolls by total manhours reported for each industry. Average weekly earnings are obtained by multiplying average weekly hours and average hourly earnings for each industry. Only the sample data are used, since there are no benchmarks available for hours and earnings. The tendency of the optimum allocation sample design with its heavy sampling of large establishments (see discussion under Nonagricultural Employment) to produce biased estimates of the level of earnings for certain industries is counteracted by a stratified estimating procedure which makes use of establishment size and in some cases regional stratification. Whenever a new em-

ployment benchmark becomes available, national estimates of average weekly hours and average hourly earnings, using eight size strata and four regional strata (Northeast, North Central, South and West) are prepared. These estimates are used as a standard against which the published averages are compared. This comparison may indicate that new stratification patterns or modifications in existing patterns are needed. New or revised patterns of stratification are then introduced into the estimating structure at the time of the next benchmark revision.

The series "adjusted hourly earnings" is constructed to show the relation between straight-time hourly earnings in the base period, 1957-59, and other years on the assumption that the proportion of workers in each industry remains unchanged. The object is to show changes in pay scales unaffected by such factors as variations in the amount of overtime pay or shifts of workers into higher (or lower) paying industries.

USES AND LIMITATIONS

Average hourly earnings figures are widely used in collective bargaining, in "escalating" long-term sales contracts (such as labor costs for equipment which takes a number of months or years to build) and in general economic analysis.

Average Hourly Earnings in Selected Industries, 1947-66

(Monthly data for production workers or nonsupervisory employees)

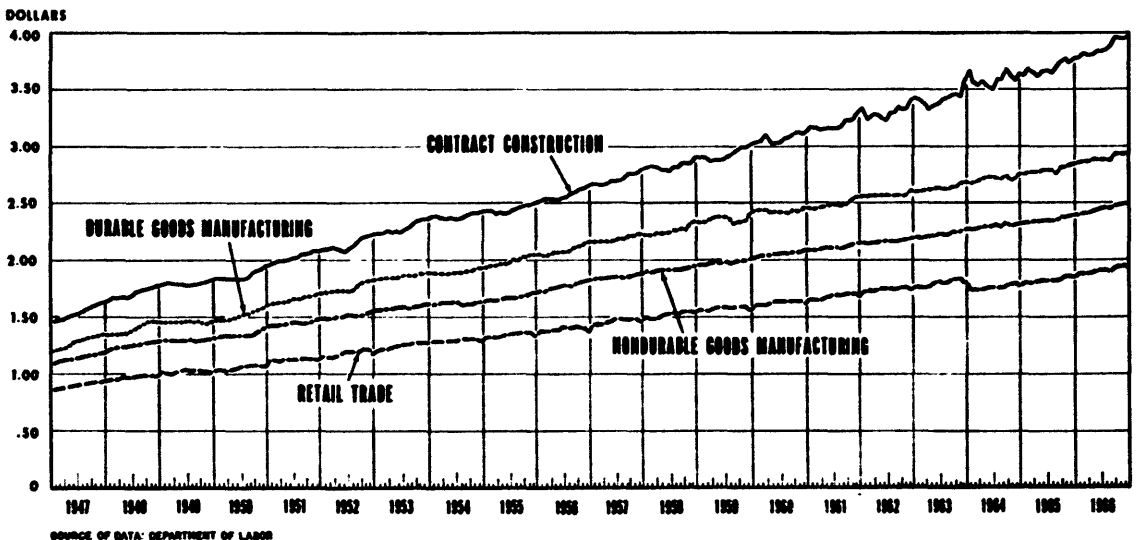


TABLE 15.—Average Hourly and Weekly Earnings—Selected Industries, 1929-66¹

Year	Average hourly earnings—current prices					Average weekly earnings—current prices					Manufacturing industries	
	Manufacturing industries			Contract construction	Retail trade	Manufacturing industries			Contract construction	Retail trade	Index of adjusted hourly earnings, 1957-59=100 ²	Average weekly earnings, 1957-59 prices ³
	All	Durable goods	Non-durable goods			All	Durable goods	Non-durable goods				
1929	\$0.560	(9)	(9)	(9)	(9)	\$24.76	\$26.84	\$22.47	(9)	(9)	(9)	(9)
1930	.546	(9)	(9)	(9)	(9)	23.00	24.42	21.40	(9)	(9)	(9)	(9)
1931	.509	(9)	(9)	(9)	(9)	20.64	20.98	20.09	(9)	(9)	(9)	(9)
1932	.441	\$0.492	\$0.412	(9)	(9)	16.89	15.99	17.26	(9)	(9)	(9)	(9)
1933	.437	.467	.419	(9)	(9)	16.65	16.20	16.76	(9)	(9)	(9)	(9)
1934	.526	.550	.505	(9)	(9)	18.20	18.59	17.73	(9)	(9)	(9)	(9)
1935	.544	.571	.520	(9)	(9)	19.91	21.24	18.77	(9)	(9)	(9)	(9)
1936	.550	.580	.519	(9)	(9)	21.56	23.72	19.57	(9)	(9)	(9)	(9)
1937	.617	.667	.566	(9)	(9)	23.82	26.61	21.17	(9)	(9)	(9)	(9)
1938	.620	.679	.572	(9)	(9)	22.07	23.70	20.65	(9)	(9)	(9)	(9)
1939	.627	.691	.571	(9)	\$0.484	23.64	26.19	21.36	(9)	\$21.01	32.2	\$48.84
1940	.655	.716	.590	(9)	.494	24.96	28.07	21.83	(9)	21.34	(9)	51.15
1941	.726	.799	.627	(9)	.518	29.48	33.56	24.39	(9)	22.17	33.4	57.47
1942	.851	.937	.709	(9)	.559	36.68	42.17	28.57	(9)	23.37	37.5	64.58
1943	.957	1.048	.787	(9)	.606	43.07	48.73	33.45	(9)	24.79	40.8	71.43
1944	1.011	1.106	.844	(9)	.653	45.70	51.38	36.38	(9)	26.77	43.7	74.55
1945	1.016	1.099	.886	(9)	.699	44.20	48.36	37.48	(9)	28.59	45.5	70.49
1946	1.075	1.144	.995	(9)	.797	43.32	46.22	40.30	(9)	32.92	50.4	63.71
1947	1.217	1.278	1.145	\$1.541	.901	49.17	51.76	46.03	\$58.87	36.94	57.8	63.20
1948	1.328	1.395	1.250	1.713	.972	53.12	56.36	49.50	65.27	39.75	63.2	63.39
1949	1.378	1.453	1.295	1.792	1.015	53.88	57.25	50.38	67.56	41.62	66.1	64.92
1950	1.440	1.519	1.347	1.863	1.050	58.32	62.43	53.48	69.68	43.16	68.2	69.59
1951	1.56	1.65	1.44	2.02	1.13	63.34	68.48	56.88	76.96	46.22	73.6	69.99
1952	1.65	1.75	1.51	2.13	1.18	67.16	72.63	59.95	82.86	47.79	77.4	72.61
1953	1.74	1.86	1.58	2.28	1.25	70.47	76.63	62.57	86.41	49.75	81.6	75.61
1954	1.78	1.90	1.62	2.39	1.29	70.49	76.19	63.18	88.91	51.21	84.3	75.31
1955	1.86	1.99	1.67	2.45	1.34	75.70	82.19	66.63	90.90	53.06	86.9	81.14
1956	1.95	2.08	1.77	2.57	1.40	78.78	85.28	70.09	96.38	54.74	91.5	83.19
1957	2.05	2.19	1.85	2.71	1.47	81.59	88.26	72.52	100.27	56.89	96.2	83.26
1958	2.11	2.26	1.91	2.82	1.52	82.71	89.27	74.11	103.78	58.82	100.2	82.14
1959	2.19	2.36	1.98	2.93	1.57	88.26	96.05	78.61	108.41	60.76	103.5	86.96
1960	2.26	2.43	2.05	3.08	1.62	89.72	97.44	80.36	113.04	62.37	106.6	87.02
1961	2.32	2.49	2.11	3.20	1.68	92.34	100.35	82.92	118.08	64.01	109.6	88.62
1962	2.39	2.56	2.17	3.31	1.74	96.56	104.70	85.93	122.47	65.95	112.3	91.61
1963	2.46	2.63	2.22	3.41	1.80	99.63	108.09	87.91	127.19	68.04	115.2	93.37
1964	2.53	2.71	2.29	3.55	1.75	102.97	112.19	90.91	132.06	64.75	118.0	95.25
1965	2.61	2.79	2.36	3.69	1.82	107.53	117.18	94.64	138.01	66.61	121.0	97.84
1966	2.71	2.89	2.45	3.87	1.91	111.92	121.67	98.49	145.51	68.57	124.9	99.20

¹ For manufacturing, data relates to production and related workers; for contract construction, to construction workers; and for retail trade to nonsupervisory workers.

² Earnings in current prices, adjusted to exclude overtime and interindustry shifts (April used for 1941-46).

³ Earnings in current prices divided by consumer price index on a 1957-59 base.

⁴ Not available.

⁵ Data include Alaska and Hawaii beginning 1960. This inclusion has not significantly affected these earnings series.

⁶ Excludes eating and drinking places prior to 1964.

NOTE.—Average hourly earnings monthly data available beginning 1932 for manufacturing industries, 1947 for contract construction, and 1939 for retail trade. Annual data for total manufacturing industries available for years 1909 and 1914 and on continuous basis beginning with 1919.

Average weekly earnings monthly data available beginning June 1914 for all manufacturing industries, 1923 for durable and nondurable goods manufacturing, 1947 for building construction, and 1939 for retail trade. Annual data for all manufacturing industries also available for the years 1909 and 1914.

Source: Department of Labor.

The hourly earnings figures reflect not only changes in basic hourly and incentive wage rates, but also such variable factors as premium pay for overtime and late-shift work and changes in output of workers paid on an incentive basis. The changing employment of workers as between relatively high-paid and low-paid work, and relatively high-wage and low-wage industries, also affects the hourly earnings averages.

Hourly earnings refer to the average actual return to workers, and should not be confused with wage rates, which represent the rates stipulated for a given unit of work or time. Since certain types of payments (see above) as well as payments to workers excluded from the production worker (or nonsupervisory employee) definition are not included, the earnings series should not be taken to represent labor costs to the employer.

Average weekly earnings are affected by changes in the length of the workweek as well as all of the

factors which affect average hourly earnings. While they represent what the worker has earned for the week, they do not represent take-home pay, since they are subject to deductions for income and social security taxes, group insurance, occupational supplies, union dues, or other items.

The BLS has, during the last several years, increased its hours and earnings coverage to an increasingly wider band of industries and expects to begin publishing a summary series of hourly and weekly earnings in all nonagricultural establishments within the next year.

REFERENCES

See above, under Nonagricultural Employment (p. 49). Estimates of hourly earnings excluding overtime in manufacturing and of net spendable weekly earnings in current and 1957-59 dollars for selected industries are also published in *Employment and Earnings and Monthly Report on the Labor Force*

PRODUCTION AND BUSINESS ACTIVITY

16 and 17. INDUSTRIAL PRODUCTION AND PRODUCTION OF SELECTED MANUFACTURES

DESCRIPTION OF SERIES

The index of industrial production is prepared monthly by the Board of Governors of the Federal Reserve System. It is designed to measure changes in the physical volume or quantity of output of manufacturing and mining establishments and electric and gas utilities. The industries covered by the index produce about 35 percent of the value of the total output of goods and services in the United States.

The monthly indexes are based on figures compiled by government agencies and by various trade organizations and publications. The component series are selected to represent the industries, industry groups, and other subdivisions in the index, and where necessary and possible they include adjustments for under-coverage or other deficiencies in the basic series. For example, series based on shipments data are adjusted, where feasible, for inventory changes; and those based on man-hours data for estimated changes in output per man-hour. In all, there are 207 monthly series, combined according to relative value added in 1957 adjusted to 1957-59 for the period beginning in 1953.

The monthly series are adjusted periodically to levels indicated by more reliable and comprehensive annual indexes and, for manufactured goods, Census benchmark indexes. The most recent benchmark indexes were based on quantity and value data for thousands of individual products covered in the Censuses of Manufactures for 1947 and 1954. Benchmark indexes 1954 to 1958 based on the 1958 Census of Manufactures are now being calculated; also, benchmark indexes 1958 to 1963 based on the 1963 Census of Manufactures are in the process of being calculated. Annual indexes which are based on more information than is available monthly

but generally less than is available at Census intervals are also used to adjust many of the monthly series.

The Census benchmark indexes were based very largely on physical product data, and to a minor degree on value data deflated by price indexes and materials consumption data. The annual indexes rely more heavily on deflated value data, although they are still predominantly physical product measures. A little less than half of the monthly series are based on physical product data, and about half are based on man-hour data adjusted for estimated changes in output per man-hour. Man-hour series are of very minor importance in the annual indexes, and were not used at all in the Census benchmark indexes.

INDUSTRY GROUPINGS

The 207 monthly series are grouped in two separate classifications, permitting two alternative ways of accounting for changes in the total index. One of the two, based largely on the 1957 edition of the Standard Industrial Classification (SIC), has as its principal categories durable manufactures, nondurable manufactures, mining, and utilities. Durable manufactures include 11 of the SIC major groups—primary metals; fabricated metal products; nonelectrical machinery; electrical machinery; transportation equipment; instruments; ordnance; stone, clay, and glass; lumber; furniture; and miscellaneous manufactures. It also includes measures of the manufacturing activities of the Department of Defense. It accounted, in the 1957-59 base period, for 48 percent of the weight of the total index.

Nondurable manufactures include 10 SIC major groups—food and beverages; tobacco; textiles; apparel; paper; printing; chemicals; petroleum; rubber and plastics; leather; and also includes representation

of the manufacturing establishments owned by the Atomic Energy Commission. It accounted, in the 1957-59 base period, for 38 percent of the total index. Mining activities, accounting for 8 percent of the index in this same period, include coal and metal mining, crude oil and natural gas extraction, oil and gas well drilling, and production of sand, clay, and other nonmetallic minerals. Utility output of electricity and gas includes both private- and government-owned establishments, and accounted for 5 percent of the total index in the 1957-59 base period.

In the table "Production of Selected Manufactures" nine series selected from the component group indexes are shown for the period 1947-66. These are among the major components of the index of manufactures.

MARKET GROUPINGS

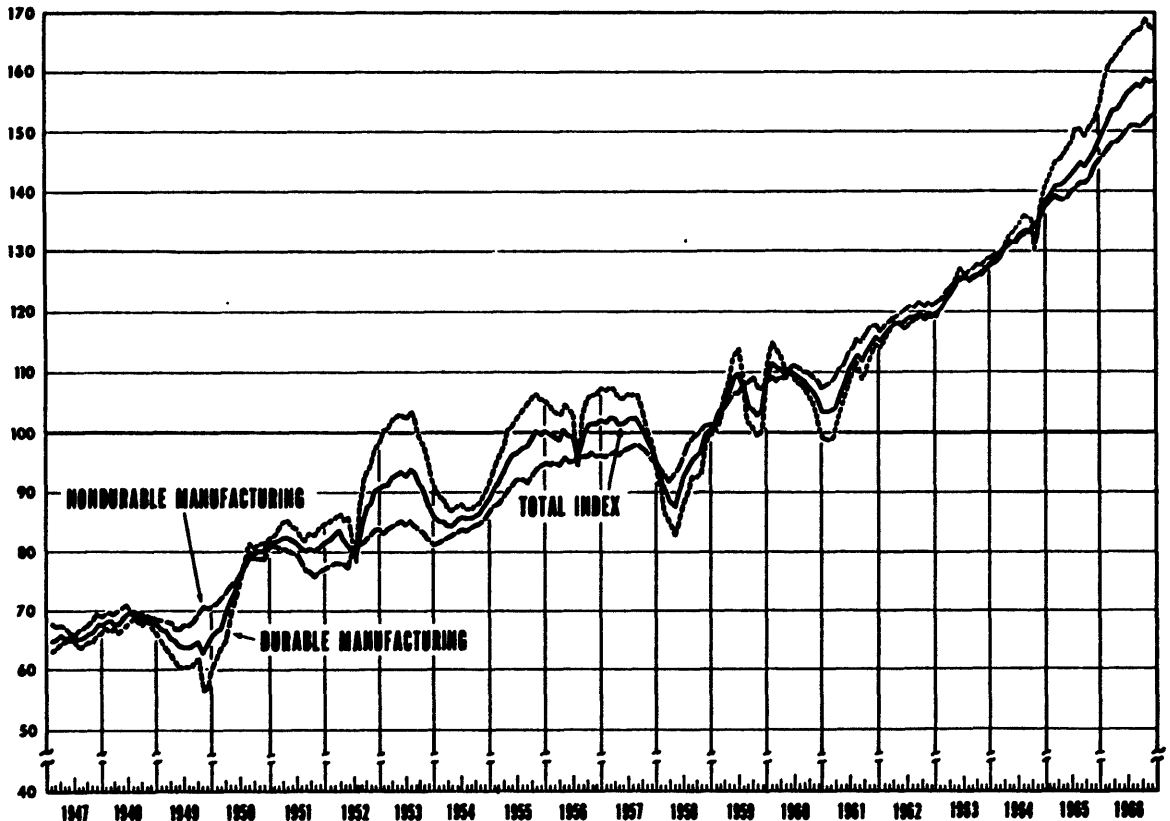
The second system of classification is based on type of end-use, and has as its major categories consumer goods, equipment, and materials. Each of the 207 monthly series is assigned to one of the market groupings as well as to an industry grouping. For example, the auto production series is a component of consumer goods in the market classification and of transportation equipment in the industry classification. Truck production, which is also part of transportation equipment in the industry grouping, is in equipment in the market grouping.

The consumer goods grouping, accounting for 32 percent of the total index in the 1957-59 period, is further subdivided into automotive products, home goods (including appliances, furniture, tele-

Industrial Production, 1947-66

(Monthly data. Seasonally adjusted)

INDEX: 1957-59 = 100



SOURCE OF DATA: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

vision, etc.), apparel, and consumer staples. The first two of these categories, automotive and home goods, include the series which comprised the consumer durables sector of the index previous to the 1959 Revision and the combination of these two is now published as a supplementary grouping of the regular production index. The equipment series, accounting for 15 percent of the total in 1957-59, are further divided between business equipment and an unpublished defense equipment category.

The materials component consists of two major categories, durable goods materials and nondurable materials. Durable goods materials, accounting for 27 percent of the total index in 1957-59, include all industries producing materials or components used primarily in the manufacture of finished durable goods; they range from metal mining and logging to electronic tubes and original equipment auto tires. Nondurable materials, comprising 26 percent of the total in 1957-59, include business fuel and power, containers, and other business supplies as well as textiles, industrial chemicals, paper, and other basic nondurable materials.

STATISTICAL PROCEDURES

The method used in combining the individual series is the weighted average of relatives. This consists of (1) reducing each series into relatives with the average for the base period, 1957-59, as

100; (2) multiplying each series of relatives by a base-year weight factor; and (3) adding the products (series of relatives multiplied by weights) for any one month to obtain the index number for the month. The weights used are percentage weight factors, that is, percentage of the weight assigned to each series to the total weight assigned to all series in the base period. Since the total of the percentage weight factors is equal to 100, the sum of the products of all series for any one month (all series times their respective weight factors) gives the index of industrial production for that month. The products of the component series and their weights give the number of points contributed to the index by individual series. This method of computation facilitates analysis of the changes in the index. For example, it makes it possible to observe the points contributed by each series or group of series, and therefore to determine which series or group of series is responsible for the month-to-month changes in the total index or in the index for any group or subgroup of industries.

The weights used are based on value added—the difference between the value of production and the cost of materials or supplies consumed—in individual industries in 1957 adjusted to 1957-59. The value-added data for mining are based on the 1954 Census of Mineral Industries and on Department of Commerce national income estimates by industry for 1954

Relative Importance of Major Groupings in the Index of Industrial Production—1957-59 Comparison Basis

Industry group	1957-59 base period proportion	Market group	1957-59 base period proportion
Total index.....	100.00	Total index.....	100.00
Manufacturing, total.....	86.45	Final products, total.....	47.35
Durable.....	48.07	Consumer goods.....	32.31
Nondurable.....	38.38	Equipment, including defense.....	15.04
Mining.....	8.23	Materials.....	52.65
Utilities.....	5.32		
Durable Manufactures		Consumer Goods	
Primary metals.....	6.95	Automotive products.....	3.21
Fabricated metal products.....	5.37	Home goods.....	4.59
Machinery.....	14.80	Apparel, including knit goods and shoes.....	5.41
Transportation equipment.....	10.19	Consumer staples.....	19.10
Lumber and products.....	1.73	Equipment	
Other durable manufactures.....	9.03	Business equipment.....	11.63
Nondurable Manufactures		Defense equipment.....	3.41
Textiles, apparel, and leather.....	7.60	Materials	
Paper and printing.....	8.17	Durable goods materials.....	26.73
Chemicals, petroleum, and rubber.....	11.54	Nondurable materials.....	25.92
Food, beverages, and tobacco.....	11.07		

and 1957. The value-added figures for manufacturing were obtained mainly from the Census Bureau Annual Survey of Manufactures for 1957. Weights for utility series were derived from Federal Power Commission data. In many cases, value-added data are available only for groups of two or more individual series in the index; the assumption usually made in these cases is that value added is proportional to value of product within each group. The 1957-59 proportions (or the relative importance of the major groupings based on the 1957 weights) shown here for major groupings are given in detail in *Industrial Production—1957-59 Base*, Board of Governors of the Federal Reserve System.

Components of the index are adjusted for two kinds of short-time recurring fluctuations—differences in the number of working days from month-to-month and seasonal variations. The first adjustment is accomplished by reducing reported quantity figures to average daily output in the month. For this purpose, only regular weekend closings—where in effect—are treated as nonworking days. No allowance is made for holiday shutdowns, whose effects on production are adjusted by the seasonal variation factors. The adjustment, in effect, leads to monthly estimates of output on a daily-average basis. No working day adjustment is needed for the man-hour series which are reported in terms of weekly rates.

Adjustment for seasonal variation is made for 75 series or groupings of series, about half of them in the industry classification and half in the market classification. Seasonally adjusted indexes for larger aggregates in both classifications and for total industrial production are weighted combinations of these groupings. Seasonal factors have been developed by the ratio-to-moving-average method described in "Adjustment for Seasonal Variation," published in the *Federal Reserve Bulletin* for June 1941. Use has been made of variations of the Census Method II programs for seasonal adjustment by electronic computer, which are a mechanical version of the ratio-to-moving-average technique. A description of the editing and professional review which accompanies the mechanical procedure is described in *Industrial Production 1959 Revision* published by the Board of Governors of the Federal Reserve System.

REVISIONS IN THE INDEX

Since its first publication in 1927, the index has undergone several major revisions. A major revision

was completed in 1959, with revised indexes and new groupings carried back to January 1947. The principal changes were: (1) adjustment of individual monthly series to levels shown by Census of Manufactures and other data; (2) broadening of coverage to include electric and gas utility output, and introduction of new component series in a number of manufacturing and mining industries; (3) introduction of new market groupings of production series described above; (4) selection of 1957 as weight year for the period beginning with January 1953, and as a new reference base period; the old reference base of 1947-49 was continued through October 1962 in addition to the new one for major groupings of the index; and (5) adoption of the 1957 version of the Standard Industrial Classification, prepared under the auspices of the U.S. Bureau of the Budget.

The 1962 revision of the index of industrial production shifted the comparison base from 1957 to an average of the years 1957-59. At the same time the index was updated for the period 1957 to 1961 by a general revision in seasonal factors and interim adjustments in the levels of eight series (see *Federal Reserve Bulletin*, October 1962). The 1957 value added continues to be the basis for the weights. Shifting the comparison base has raised the total index by less than 1 percent. The annual levels of eight series in the apparel, food, and chemical groups were revised since 1957 to take account of additional information based on more comprehensive annual data. These eight series of the 207 component series account for about 5 percent of the total index, and since these changes were largely offsetting, the total index and its major divisions of market and industry groupings were not generally affected. Seasonal adjustment factors were revised generally beginning in 1959 and through 1961, though in a few series some revisions were carried back to 1957 and 1958 as well. This resulted in substantially modified cyclical patterns for some of the component indexes and a slight raising of the first quarter and a slight lowering of the third quarter in the total index.

RELATION TO OTHER SERIES

As an important general economic indicator, the index of industrial production is related in varying degrees to other general economic indicators. Among the more important series to which the index is closely related are those on manufacturers' sales. It should be observed, however, that these are value or dollar-

TABLE 16.—Industrial Production, 1929–68

[1957–59=100]

Year	Total industrial production	Industry groupings					Market groupings			
		Manufacturing			Mining	Utilities	Final products			Materials
		Total	Durable	Non-durable			Total	Consumer goods	Equipment	
1929.....	38	39	38	38	54	13	(1)	(1)	(1)	(1)
1930.....	32	32	28	35	47	13	(1)	(1)	(1)	(1)
1931.....	27	26	20	33	40	13	(1)	(1)	(1)	(1)
1932.....	21	20	12	29	34	12	(1)	(1)	(1)	(1)
1933.....	24	24	16	33	39	12	(1)	(1)	(1)	(1)
1934.....	27	26	19	34	40	12	(1)	(1)	(1)	(1)
1935.....	31	31	24	37	44	13	(1)	(1)	(1)	(1)
1936.....	36	36	31	42	50	15	(1)	(1)	(1)	(1)
1937.....	40	40	35	44	57	16	(1)	(1)	(1)	(1)
1938.....	31	31	23	39	49	17	(1)	(1)	(1)	(1)
1939.....	38	38	31	45	54	18	(1)	(1)	(1)	(1)
1940.....	44	44	40	47	60	20	(1)	(1)	(1)	(1)
1941.....	56	58	58	58	65	23	(1)	(1)	(1)	(1)
1942.....	69	73	80	64	67	26	(1)	(1)	(1)	(1)
1943.....	83	89	103	71	69	28	(1)	(1)	(1)	(1)
1944.....	82	86	101	68	74	30	(1)	(1)	(1)	(1)
1945.....	71	73	78	66	73	31	(1)	(1)	(1)	(1)
1946.....	60	60	55	65	72	32	64	67	55	67
1947.....	66	66	64	67	80	37	67	69	58	70
1948.....	68	69	67	70	84	41	65	69	52	65
1949.....	65	65	61	68	75	43	73	79	56	77
1950.....	75	76	74	76	83	50	79	78	78	84
1951.....	81	82	84	79	91	56	84	80	94	84
1952.....	84	85	89	80	91	61	90	85	101	93
1953.....	91	93	100	84	93	67	86	84	89	86
1954.....	86	86	88	84	90	72	94	93	95	99
1955.....	97	97	102	92	99	80	98	96	104	102
1956.....	100	100	104	95	105	88	99	97	105	102
1957.....	101	101	104	97	105	94	95	96	91	93
1958.....	94	93	90	97	96	98	106	107	104	105
1959.....	106	106	106	107	100	108	110	111	108	108
1960.....	109	109	109	110	102	116	111	113	120	117
1961.....	110	110	107	113	103	122	120	120	124	124
1962.....	118	119	118	120	105	131	132	132	132	133
1963.....	124	125	125	125	108	140	143	140	147	144
1964.....	132	133	134	133	112	151	155	147	173	157
1965.....	143	145	148	141	115	161	147	147	173	157
1966.....	156	159	165	151	120	173				

¹ Not available.

² Indexes should be used with caution because of special conditions due to wartime activity.

Source: Board of Governors of the Federal Reserve System.

volume series, and are therefore influenced by price as well as quantity changes. The industrial production index, on the other hand, being a measurement of physical volume, registers quantity changes only. Differences in movement between the production index for manufacturing and the shipment series for manufacturing are also possible for other reasons:

production differs from shipments because of changes in factory inventories; the production index uses the establishment as the unit for the industry classification, whereas the shipment series uses the company division as the unit; and the production index uses value added as weights for the series whereas the shipments series implicitly uses value of shipments.

TABLE 17.—*Production of Selected Manufactures, 1947-68*

[1957-59 = 100]

Year	Durable manufactures					Nondurable manufactures			
	Primary metals	Fabricated metal products	Machinery	Transportation equipment	Lumber and products	Textiles, apparel, and leather	Paper and printing	Chemicals, petroleum, and rubber	Food, beverages, and tobacco
1947.....	91	76	65	43	88	81	67	48	81
1948.....	94	77	67	47	92	85	69	51	80
1949.....	79	70	59	47	81	81	69	49	81
1950.....	100	85	73	56	98	89	77	61	84
1951.....	109	91	83	63	98	87	79	67	85
1952.....	99	89	92	73	97	90	78	70	87
1953.....	113	100	101	92	102	91	83	75	88
1954.....	91	90	88	84	100	87	85	75	90
1955.....	118	98	97	102	110	96	93	87	93
1956.....	116	99	107	97	105	98	97	91	97
1957.....	112	102	104	106	96	97	98	96	97
1958.....	88	93	89	90	96	95	97	96	99
1959.....	100	106	107	104	109	108	105	109	104
1960.....	101	108	111	108	102	108	109	114	107
1961.....	99	107	110	104	101	108	112	119	110
1962.....	105	117	124	118	106	115	117	131	113
1963.....	113	123	129	127	109	119	120	142	117
1964.....	129	133	141	131	113	125	128	153	121
1965.....	138	148	161	149	117	136	135	165	123
1966.....	143	163	184	168	119	142	146	182	128

Source: Board of Governors of the Federal Reserve System.

The "consumer" and "business equipment" market groupings of industrial production refer to many of the same goods as the consumer goods and producers' durable equipment categories of the gross national product. Even after these gross national product categories are deflated for price changes, however, there are conceptual and statistical differences from the production series which should be kept in mind in comparing the two. The production series include production for inventory, for export, and for government purchase as well as for domestic business and consumers, and are weighted on the basis of value added by industry in 1957. The deflated consumer goods and equipment expenditure series in the gross national product include imported goods but not goods for export, inventory, or government use. They are implicitly weighted on the basis of final purchase price in 1958, including value added by transportation, trade, and other sectors as well as industry. The basic data used to calculate the expenditure series, furthermore, differ in concept and coverage from the basic production data.

USES AND LIMITATIONS

The total index of industrial production is probably most widely used as a business barometer. Both in whole and in detail it is used with related data on employment, inventories, trade, prices, and other economic variables, in analyzing short- and long-run developments in the economy.

The component indexes are used to determine the areas in which the occurrence of important changes accounted for the observed changes in the total index. They are also used in analyses relating to individual industries. Many companies, for instance, make continuing studies of their own output and sales figures in relation to the output movements of the industry. They also use the industry and product series in studies of potential markets, and in other types of research.

The coverage of the index is limited to manufacturing, mining, and electric and gas utilities. It should not be used as a measure of total production, because agriculture, construction activity, and the various

service sectors are not included. It might be noted, however, that changes in the output of manufactures, minerals, and utilities are especially significant, in part because they account for much of the variation in the total of all economic activity.

REFERENCES

The index of industrial production is published monthly in the Business Indexes release, available on request from the Division of Administrative Serv-

ices, Board of Governors of the Federal Reserve System, Washington, D.C., 20551. Each issue shows all the groupings and individual indexes published on a 1957-59 base. Indexes on a 1957-59 base for groupings, but not for individual series, are shown in the monthly *Federal Reserve Bulletin*. A detailed description, including historical tables for the revised indexes on the new base from January 1947 through December 1961 is found in a Federal Reserve Board publication, *Industrial Production—1957-59 Base*.

18. WEEKLY INDICATORS OF PRODUCTION

Steel Produced

The weekly series on steel production is compiled by the American Iron and Steel Institute. It includes steel for ingots and castings produced by open-hearth, Bessemer, basic oxygen, and electric-furnace processes, except for the small amount of steel for castings produced in foundries operated by companies which do not produce ingots.

The series is based on current reports received from more than 97 percent of the industry, giving actual production for the preceding week.

The Institute publishes the weekly series each Monday, showing production for the preceding week, year to date, and preceding year to date. Also issued are indexes for each of the 11 steelmaking districts, but only for the previous week's production. The Institute also publishes each month detailed production of steel by types of furnaces, whether ingots or castings, and volume of carbon alloy and stainless steel. Monthly production of blast furnaces shows volume of pig iron and ferroalloys produced. Both series are supplemented with statistics showing States in which the steel and iron were produced. Annual statistics in similar detail are presented in the Institute's *Annual Statistical Report*.

With its weekly, monthly, and annual figures on production, the Institute publishes an "Index of Ingot Production, 1957-59=100." The index provides an accurate comparative measure of the volume of steel production from one period to another.

The weekly series was initiated in October 1933. Comparable annual data on steel production are available from 1867.

Electric Power Distributed

The weekly series on electric power distributed is compiled by the Edison Electric Institute. It may be defined as the energy sold to ultimate consumers plus energy lost, including unaccounted-for losses; or as net generation by the total electric utility industry plus net imports over international boundaries plus purchases from industrial sources. It includes operations of all private, municipal, cooperative, and governmental enterprises engaged in the production or distribution of electricity for the use of the public; it does not include energy generated by captive plants of industrial establishments.

The weekly figures are collected by the Institute by telegraph from approximately 110 reporting utilities (either utilities or groups of interconnected utilities) representing about 95 percent of the total energy available for public consumption. The estimated 100-percent electricity output is obtained by applying to the summarized reported data an adjustment factor derived from the ratio of the monthly output of utilities reporting for the week to the output of all utilities as collected and presented by the Edison Electric Institute for the previous month.

The weekly series is useful in economic analysis, because it is available promptly and is a reliable measure of net energy distribution to the public supply. It is not a sensitive measure of important changes in industrial activity, however, since it includes energy used for nonindustrial purposes, such as air-conditioning and electric space heating loads, and total sales to residential and commercial consumers.

The weekly series is issued each Wednesday by the Edison Electric Institute. The Institute also publishes monthly statistics on the total electric utility industry, including additional data on source and disposal of energy, for which the data on generation are obtained from the Federal Power Commission. The Federal Power Commission issues a monthly bulletin on *Electric Power Statistics*, with monthly and annual data on production, fuel consumption, requirements, and supply.

The weekly series was initiated in 1928. Annual data on the production of electrical energy are available from 1902.

Bituminous Coal Mined

The series on production of bituminous coal is compiled weekly by the Bureau of Mines, Department of the Interior. It includes bituminous coal and lignite, and is a very close approximation of total production in the United States.

The figures are estimated on the basis of carloadings and river shipments. The method of estimation consists of raising the rail and river shipment figures by factors to represent the coal that is not transported by rail or river, such as truck shipments, local sales, colliery fuel, and coal produced by small mines for local use. The weekly estimates are adjusted annually by the actual figures on production of coal and lignite collected each year from all producers. The correction is negligible—within less than one-half of 1 percent. The daily average for the week is obtained by dividing the weekly production by the maximum number of working days (not days actually worked) in that week.

Although bituminous coal is still an important industrial fuel, its importance has decreased in recent years. In 1920 it accounted for 67.4 percent of the total supply of energy from mineral fuels, in 1940 for 47.2 percent, and in 1959 for 22.4 percent. The series on production of bituminous coal and lignite has other weaknesses as an indicator of industrial activity. Coal mines normally operate at a fraction of their capacity—about 3 days a week—and the coal-using industries carry considerable stocks to allow for changes in industrial activity, with resultant changes in coal consumption, without regard to the ups and downs in coal output. The figures on coal production should therefore be analyzed in conjunction with related series, also compiled by the Bureau of Mines, on the consumption of coal by

industries and deliveries to retail dealers, and on stocks of coal held by industries and retail dealers.

The weekly estimates of total production and average production per working day and series on consumption and consumer's stocks are published in the Bureau of Mines multilithed *Weekly Coal Report*. Detailed annual data and monthly data for the current and preceding years, as well as a description of the method used in making the estimates, are published in the Bureau of Mines *Minerals Yearbook*. Prior to publication of the bound volumes of the *Yearbook*, this information is also available in the "preprint" of the *Yearbook* chapter distributed as a separate publication.

Weekly data on production of bituminous coal and lignite are available from 1917, annually from 1807.

Freight Loaded

The weekly revenue freight cars loaded series, compiled by the Association of American Railroads, was initiated in 1919 as an operations report for railroad officers. The published data are totals of weekly reports received by the AAR from all class I railroads. Revisions in the data are necessary in only a very few cases, usually when a preliminary estimate is filed to meet the reporting deadline and then is corrected when a final figure is available. The weekly revenue freight loaded report to the AAR contains information on carloads of revenue freight by eight broad commodity groups, and on total loads received from connections by railroad geographical districts and by individual class I railroads. Comparisons are shown for the corresponding week of the preceding year. The number of cars loaded with highway trailers or containers and the number of such trailers and containers as well as estimated ton-miles for all traffic are also included in the reports to the AAR.

The weekly revenue freight loaded series is widely used by business analysts as one of the indicators of general business activity. It should be remembered, however, that long-term changes in the series inadequately reflect business activity, especially because of the increased importance of competing means of transportation (primarily truck).

The detailed data are published by the AAR in its CS-54A report, "Revenue Freight Loaded and Received from Connections." The report is published weekly on the Thursday following the week to which the data relate.

The freight loaded data are available from 1919.

TABLE 18.—Weekly Indicators of Production, 1929-66

(Weekly Averages)

Year	Steel produced		Electric power distributed (millions of kilowatt-hours)	Bituminous coal mined (thousands of short tons) ¹	Freight loaded (thousands of cars)	Paperboard produced (thousands of tons)	Cars and trucks assembled (thousands) ²		
	Thousands of net tons	Index (1957-59 = 100)					Total	Cars	Trucks
1929.....	1,184	63.5	1,733	1,740	1,016	82	103.0	88.2	14.8
1930.....	855	45.9	1,714	1,522	882	76	64.5	53.5	11.0
1931.....	549	29.5	1,646	1,243	714	73	45.9	37.9	8.0
1932.....	289	15.5	1,488	1,007	542	64	26.3	21.8	4.5
1933.....	493	26.5	1,544	1,090	562	76	37.0	30.3	6.7
1934.....	560	30.1	1,655	1,173	593	76	52.9	41.8	11.1
1935.....	732	39.3	1,793	1,217	606	88	75.9	62.5	13.4
1936.....	1,023	54.9	2,037	1,432	694	101	85.7	70.6	15.1
1937.....	1,086	58.3	2,256	1,456	724	107	92.5	75.3	17.2
1938.....	609	32.7	2,148	1,139	586	95	47.9	38.5	9.4
1939.....	1,013	54.4	2,398	1,293	652	114	69.5	55.7	13.8
1940.....	1,281	68.8	2,684	1,503	699	122	86.8	71.7	15.1
1941.....	1,589	85.3	3,142	1,695	814	152	93.4	72.3	21.0
1942.....	1,650	88.6	3,552	1,909	823	138	20.8	4.0	16.9
1943.....	1,704	91.5	4,155	1,907	816	147	14.5	(C)	14.5
1944.....	1,716	92.0	4,385	2,009	835	153	15.2	(C)	15.2
1945.....	1,529	82.0	4,244	1,891	806	153	15.1	1.6	13.5
1946.....	1,277	68.6	4,235	1,745	795	163	59.6	41.5	18.1
1947.....	1,628	87.4	4,821	2,058	856	177	92.2	68.4	23.8
1948.....	1,695	91.0	5,313	1,948	822	184	101.5	75.2	26.3
1949.....	1,496	80.3	5,498	1,427	691	177	120.4	98.6	21.8
1950.....	1,857	99.7	6,183	1,687	748	214	154.2	128.4	25.9
1951.....	2,016	108.3	6,958	1,772	779	229	129.8	102.7	27.2
1952.....	1,782	95.7	7,450	1,548	730	212	106.8	83.4	23.4
1953.....	2,141	114.9	8,237	1,521	735	241	141.1	118.0	23.2
1954.....	1,694	90.9	8,859	1,303	652	236	125.6	106.0	19.7
1955.....	2,245	120.5	10,315	1,542	724	270	176.7	152.7	24.0
1956.....	2,204	118.3	11,292	1,693	728	276	132.8	111.6	21.2
1957.....	2,162	116.0	11,873	1,644	683	273	138.6	117.6	21.0
1958.....	1,635	87.8	12,082	1,380	581	274	98.4	81.6	16.8
1959.....	1,792	96.2	13,297	1,380	596	307	129.5	107.6	21.9
1960.....	1,899	101.9	14,424	1,390	585	306	151.8	128.8	23.0
1961.....	1,880	100.9	15,139	1,353	550	322	127.8	106.1	21.7
1962.....	1,886	101.2	16,325	1,414	552	343	157.5	133.4	24.1
1963.....	2,096	112.5	17,490	1,535	555	358	175.0	146.9	28.1
1964.....	2,431	130.5	18,728	1,630	558	384	178.8	148.8	30.0
1965.....	2,521	135.3	20,169	1,735	562	410	213.7	179.4	34.3
1966.....	2,572	138.1	21,971	1,791	570	446	199.2	165.4	33.8

¹ Daily average. Includes data for Alaska.

² Production figures for 1929-63.

³ Less than 500.

NOTE.—Detail will not necessarily add to totals because of rounding.

Sources: American Iron and Steel Institute, Edison Electric Institute, Department of the Interior, Association of American Railroads, American Paper Institute, and Ward's Automotive Reports.

Paperboard Produced

The weekly series on production of paperboard, compiled by the Paperboard Group, American Paper Institute, Inc., measures the production of container board, folding, set-up, special food board,

special paperboard, and other miscellaneous types of paperboard. The data are obtained from weekly reports which the Paperboard Group collects from member companies of the American Paper Institute, currently accounting for about 87 percent of total

production. The estimated 100 percent production is calculated on the basis of the ratio of the annual production of the companies which submit weekly reports to total production for the previous year. The figures on total annual production are a summation of annual data reported to the Paperboard Group by practically all mills. Because of the extensive use of paperboard in the manufacture of containers and boxes for packaging and shipping numerous products, the production of paperboard moves closely with general economic activity.

The weekly data are issued by the Institute in a one-page release on Wednesday of the week following that to which the figures relate. More detailed statistics are presented in the American Paper Institute's, annual *Paperboard Industry Statistics*. The Institute also publishes a series on "percent of activity" based on industry reports of the time in use of the machines on an inch-hour basis (1 inch of machine width operated for 1 hour).

Comprehensive monthly and annual data on pulp, paper, and paperboard are collected by the Bureau of the Census and published in its *Current Industrial Reports* series. The paperboard component of the Census series is not completely comparable with the Institute series, through the differences are not large.

Weekly data on paperboard production were initiated in 1933. Comparable annual data are

available from 1925 from the Paperboard Group, American Paper Institute, Inc.

Cars and Trucks Assembled

The weekly series on output of cars and trucks is compiled by Ward's Reports, Inc., and is based on information received from each of the individual producers in the United States. It is published each Monday in *Ward's Automotive Reports*, which shows a breakdown of the weekly total by cars and trucks and by makes, current and cumulative monthly totals, and corresponding figures for the previous year, with similar data for Canada. Summary data are presented in *Ward's Automotive Yearbook*.

Monthly and annual data on factory sales are compiled and published by the Automobile Manufacturers Association. The sales figures differ somewhat from the production figures, principally because they include some units produced in earlier periods and exclude some units produced in the current month.

In the accompanying historical table, data for the years 1929 through 1963 are average weekly production figures derived from annual totals in Ward's yearbooks; and data for 1964 are taken from the weekly reports.

The weekly production figures have been published by Ward's since 1925. Annual data on factory sales of cars and trucks are available from 1900.

19. NEW CONSTRUCTION

Value of New Construction Put in Place

DESCRIPTION OF SERIES

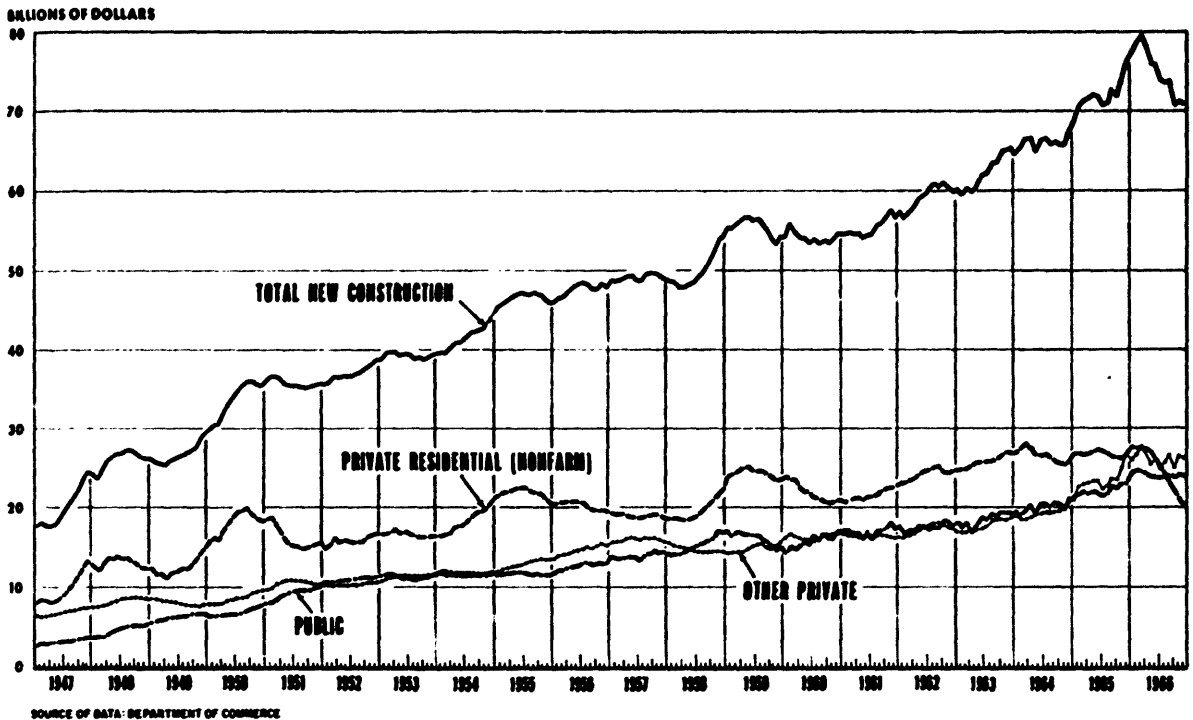
The series on the value of new construction put in place are compiled monthly and represent estimates of the dollar value of construction work installed or erected on the site during each month. Annual data for recent years and seasonally adjusted annual rates of the data for recent months are published by the Department of Commerce in current issues of *Construction Report C30*. Data are also included currently in *Economic Indicators*.

New construction covers the erection or installation of, and additions and alterations to, buildings, structures, and utilities, together with the necessary service facilities, such as plumbing, heating, and

elevators. Construction also covers certain types of immobile equipment which are primarily assembled or erected on the site, such as blast furnaces and fractionating towers. New construction does not include maintenance and repair, drilling of oil and gas wells, digging and shoring of mines, and operations which are an integral part of farming such as plowing, terracing, and digging drainage ditches.

The distinction between private and public (Federal, State, and local) construction is made on the basis of ownership, not source of funds. Residential construction includes housekeeping units and nonhousekeeping facilities such as hotels, motels and dormitories.

New Construction, 1947-66
(Monthly data. Seasonally adjusted annual rates)



REVISIONS IN THE HISTORICAL SERIES

Since the publication of the 1964 Supplement to Economic Indicators, new series were introduced for two major components of the statistics on the monthly value of new construction put in place. These new series are based on the results of two new and continuing surveys conducted by the Bureau of the Census: the Survey of Monthly Construction Progress, which covers new private nonfarm non-residential buildings, and the quarterly survey of expenditures on State and local government construction. The new statistics provide improved measures of the short-term changes in the series involved.

The new series replace the old series for these two components of the total, beginning for private non-residential buildings with data for July 1962 and for State and local government construction with data for January 1963. For private nonresidential buildings the new series has been made to be substantially comparable in level with the old series (though the month-to-month movements of the new series before seasonal adjustment are very different from those of the old series). For State and local government

construction, however, the new series estimates are not entirely comparable in level with the old, and a small break is therefore introduced between December 1962 and January 1963. The extent of this break in comparability is discussed in Construction Report C30-65S.

Because of the sharp changes in the seasonal patterns, new seasonal indexes have been computed for the new series, and the seasonally adjusted data for the new series are based on these new indexes.

The estimates for total public construction, total private construction, and total construction have been revised to reflect the new series data. These revisions appear not only in the unadjusted series but also in the seasonally adjusted data.

For a more complete discussion of these revisions, see the introductory text and appendixes in the Bureau of the Census January 1966 release, Construction Report C30-65S.

STATISTICAL PROCEDURES

Construction Report C30-65S describes the procedures used for obtaining the estimates for two new series which were introduced in January 1966: (1)

New private nonfarm nonresidential buildings and (2) State and locally owned public construction. Both of these series are based on actual progress data reported to the Census Bureau in continuing sample surveys. For the private nonresidential buildings category, reports are received monthly showing the value of construction put in place during the month on a sample of active projects. For the State and local series, reports are received quarterly showing the value of construction expenditures during the quarter by a sample of State and local governments and governmental agencies.

In addition to the procedures used for the two new series, three general methods are used by the Bureau of the Census in making the final estimates of new construction activity, depending on the kind of data available for the different types of construction. In some instances, a preliminary projection is made based on related data or normal seasonal changes, pending receipt of data required for the final estimates.

The first method is used for the following types of new private nonfarm construction: housing units, nonhousekeeping residential and "all other private" and for a few minor components of Federally owned construction. It involves the derivation of estimates of the value of work started and the translation of those estimates into value of work put in place by the application of phasing patterns. Phasing patterns are estimates of the monthly rate at which the total value of work started monthly is put in place from the start to the completion of construction. Separate patterns have been developed which vary by type of construction, project valuation, and month in which the work is started. The estimates of value of work started are derived by two separate procedures, as follows: (1) For new housing units, an estimate of the value of work started is obtained by multiplying the number of units reported in the new nonfarm housing starts series (p. 70) by average valuation figures derived from permit data. The building permit valuations are first adjusted to reflect the relationship between permit valuation figures and construction costs. (2) For the remaining categories for which the first method is used, data representing the value of contracts awarded for privately owned construction are compiled by the F. W. Dodge Company and for Federally owned construction by the responsible Federal agency. The F. W. Dodge Company data that are used cover awards in only

the 37 Eastern States. An estimate of the value of contracts awarded for privately owned projects in the 13 Western States is obtained by applying a factor derived from building permit statistics to the Dodge contract award data. The factor represents the ratio of the value of building permits issued in the 13 Western States to the valuation of permits issued in the 37 Eastern States for each of the types of construction involved. The sum of these data, which represents the estimated value of contracts awarded in the 50 States is adjusted for undercoverage—chiefly small projects and work done on force account—and for architectural and engineering fees. The resulting adjusted value of contracts awarded each month is assumed to represent the value of work started in the following month.

The second method is used for most Federally owned programs and for some public utility construction. The Census Bureau obtains monthly reports of construction expenditures made, or of the estimated value of physical progress, on Federally owned construction from the Federal agencies administering the various programs. Monthly estimates of construction by telephone and telegraph companies are obtained from the American Telephone and Telegraph Company and the Western Union Telegraph Company, respectively.

The third method is used for farm construction, Federal highway construction, and most public utility construction. This involves obtaining annual construction expenditure estimates and fitting a trend line to the estimates for successive years. Monthly value put-in-place estimates are then derived by applying appropriate seasonal indexes to the monthly values described by the annual trend line. The annual estimates for the current year are based on forecasts of construction expenditures and are later revised to reflect estimates of construction actually accomplished.

The annual forecasts and estimates are based on data prepared by: The U.S. Department of Agriculture for farm construction; the Bureau of Public Roads for Federal highway construction; the Federal Power Commission, Rural Electrification Administration and Edison Electric Institute for electric light and power construction; the Federal Power Commission and American Gas Association for construction of gas lines and gas plants; the Interstate Commerce Commission for: construction of Class I line-haul railroads, adjusted to an estimate for all

TABLE 19.—New Construction, 1929-66

Year	Total expenditures	Private expenditures					Federal, State, and local expenditures ²	Construction contracts ³	
		Total	Residential non-farm		Commercial and industrial	Other		Total value	Commercial and industrial floor space
			Total ¹	New housing units					
Billions of dollars								(Index 1957-59=100)	Millions of square feet
1929.....	10.8	8.3	3.6	3.0	2.1	2.6	2.5	(9)	267
1930.....	8.7	5.9	2.1	1.6	1.4	2.4	2.9	(9)	145
1931.....	6.4	3.8	1.6	1.3	.7	1.5	2.7	(9)	70
1932.....	3.5	1.7	.6	.5	.3	.7	1.9	(9)	33
1933.....	2.9	1.2	.5	.3	.3	.5	1.6	(9)	42
1934.....	3.7	1.5	.6	.4	.4	.5	2.2	(9)	46
1935.....	4.2	2.0	1.0	.7	.4	.6	2.2	(9)	56
1936.....	6.5	3.0	1.6	1.2	.6	.9	3.5	(9)	97
1937.....	7.0	3.9	1.9	1.5	.9	1.1	3.1	(9)	123
1938.....	7.0	3.6	2.0	1.6	.5	1.1	3.4	(9)	67
1939.....	8.2	4.4	2.7	2.3	.5	1.2	3.8	(9)	93
1940.....	8.7	5.1	3.0	2.6	.8	1.3	3.6	(9)	162
1941.....	12.0	6.2	3.5	3.0	1.2	1.5	5.8	(9)	294
1942.....	14.1	3.4	1.7	1.4	.5	1.2	10.7	(9)	520
1943.....	8.3	2.0	.9	.7	.2	.9	6.3	(9)	128
1944.....	5.3	2.2	.8	.6	.3	1.1	3.1	(9)	96
1945.....	5.8	3.4	1.3	.7	.8	1.3	2.4	(9)	221
1946.....	14.3	12.1	6.2	4.8	2.8	3.0	2.2	33.9	354
1947.....	20.0	16.7	9.9	7.8	2.7	4.2	3.3	41.1	243
1948.....	26.1	21.4	13.1	10.5	2.8	5.5	4.7	43.7	211
1949.....	26.7	20.4	12.4	10.0	2.2	5.9	6.3		147
1950.....	33.6	26.7	18.1	15.6	2.5	6.1	6.9	61.4	237
1951.....	35.4	26.2	15.9	13.2	3.6	6.7	9.3	63.4	225
1952.....	36.8	26.0	15.8	12.9	3.5	6.8	10.8	66.8	197
1953.....	39.1	27.9	16.6	13.4	4.0	7.3	11.2	69.5	235
1954.....	41.4	29.7	18.2	14.0	4.2	7.2	11.7	76.2	238
1955.....	46.5	34.8	21.9	18.2	5.6	7.3	11.7	91.1	298
1956.....	47.6	34.9	20.2	16.1	6.7	8.0	12.7	91.6	436
1957.....	49.1	35.1	19.0	14.7	7.1	9.0	14.1	93.2	421
1958.....	50.2	34.7	19.8	15.4	6.0	8.9	15.5	101.7	359
1959 ^a	55.0	39.0	24.1	19.1	6.0	8.9	16.0	105.1	440
1959 ^b	55.3	39.2	24.3	19.2	6.0	8.9	16.1		
1960.....	53.9	38.1	21.7	16.4	7.0	9.3	15.9	105.2	461
1961.....	55.4	38.3	21.7	16.2	7.5	9.2	17.1	107.6	443
1962.....	59.7	41.8	24.3	18.6	8.0	9.5	17.9	119.7	500
1963.....	63.0	43.6	25.8	20.1	7.9	9.9	19.3	132.0	534
1964.....	66.2	45.9	26.5	20.6	9.0	10.4	20.3	137.0	599
1965.....	71.9	50.0	26.7	20.8	11.8	11.5	21.9	142.8	680
1966.....	74.4	50.6	24.6	18.8	13.7	12.3	23.7	145.3	753

¹ Includes nonhousekeeping residential buildings not shown separately.
² Includes public residential construction.
³ Compiled by F. W. Dodge Company. Omits small contracts and covers rural areas less fully than urban. Also excludes floor space of some Atomic Energy Commission projects, because of security reasons.
⁴ Not available.
⁵ Revised series covering 48 States beginning January 1965; not comparable with early data covering 37 States.
⁶ Alaska and Hawaii included beginning 1959. Comparable data for 1959, exclusive of Alaska and Hawaii, also shown.
 NOTE.—Detail may not add to totals due to rounding.
 Source: New construction expenditures by U.S. Department of Commerce; construction contracts by F. W. Dodge Company.

railroads on the basis of Interstate Commerce Commission data on the value of gross investment in railroad property by each class of railroad; and, for construction of interstate petroleum pipelines, inflated to include an estimate for intrastate companies on the basis of data, prepared by the Chase Manhattan Bank, on the ratio of gross investment in carrier properties by interstate companies to gross investment in all carrier properties.

For a complete and detailed discussion of the procedures used for obtaining monthly estimates for each of the individual series, see appendixes in Construction Report C30-658.

RELATION TO OTHER SERIES

The new construction activity series is one of the components in the gross national product series and in the gross private domestic investment series. The series differ in one respect, however: gas and oil well drilling is included in the new construction series in the national accounts, but not in the series shown here.

The definition of construction used in the new construction series is more inclusive than that in some of the series pertaining to labor. The non-agricultural employment series contains a component for employment in the contract construction industries only, excluding employment on construction performed by force account. (For a fuller discussion of noncomparability of these data, see the Technical Note in the March 1955 issue of *Construction Review*.) The series on average weekly hours and average hourly and weekly earnings cover contract construction of buildings only.

USES AND LIMITATIONS

Although the new construction series indicates the current volume of this segment of economic activity it does not serve the same purpose as would a series on new work started. The future trend in the series is determined to a considerable extent by past commitments made.

The new construction figures cannot be used as an indicator of the physical volume of construction without extensive adjustment for changes in price and wage rates, technological advances, and other relevant factors. Also, since the series does not include maintenance and repair, it cannot be related directly to the total use of construction labor and materials. Seasonally adjusted annual rates of new

construction in 1957-59 dollars, which reflect some of these adjustments, are published monthly in *Construction Report C30* and in *Construction Review*. In addition, annual estimates of the value of maintenance and repairs are published in *Construction Review*.

The statistics on the value of new construction put in place are derived in part from direct measurements and in part from indirect estimation. A series is defined as derived from direct measurement when it is based on direct reports of the actual value of construction progress or construction expenditures during a specific period (month, quarter or year) which are obtained from a complete enumeration or from a sample survey. All other series are defined as derived from indirect estimation. The indirectly estimated series are not calculated from direct measurements of construction progress or expenditures. However, most of the series are derived from direct measures (monthly, quarterly or annual) which are in some way related to construction progress.

To the extent that the value-in-place statistics are indirect estimates, the data cannot respond accurately to actual events, particularly over the span of a few months. The indirectly estimated series probably reflect sustained trends reasonably well. However, except by chance, they cannot respond to temporary departures from a continued trend or— even more importantly—show correctly the precise time at which a major turning point occurs.

In addition, while extensive adjustments are made for undercoverage of the source data now used, there is no satisfactory factual basis for making these adjustments and much reliance is placed on judgment and opinion.

Special limitations on data for recent months.—In each monthly report, the value-in-place data for the most recent month are preliminary figures representing, almost entirely, projections of data reported for recent prior months. In subsequent monthly reports, varying from one month to more than a year later, the projections for nearly all series are replaced by revised estimates.

Use of the data for recent months is thus subject to important special qualifications. For most series, the projections for any given month rest on the assumption of a continuation of the trend of the seasonally adjusted annual rate of activity in the most recent period for which value-in-place estimates based on direct measurement are available.

The month-to-month changes which will be indicated by the final value-in-place estimates that are substituted, in subsequent months, for the projections may be significantly different from those indicated by the projections they replace.

For a more complete discussion of the nature of the projections for recent months, see *Construction Report C30-65S*, which was released in January 1966.

Extent of direct measurement in final value-in-place statistics.—As indicated above, data for the most recent month are almost entirely projections which are subsequently replaced by revised figures. For series that account for about 50 percent of total new construction, the estimates are ultimately based on some type of directly measured data; as indicated in more detail below, directly measured monthly data are available for less than half of this 50 percent. For series that account for about 40 percent of total new construction, the estimates are ultimately based entirely on indirect estimation and virtually all of these revisions become available in the month following initial publication of projections.

For the series on private residential additions and alterations, which accounts for less than 10 percent of total new construction, projections are included in the totals, although not shown separately, and no reported data for current periods are being used to revise those projections.

The final estimates for the major component¹ of the private nonresidential buildings series, for the telephone and telegraph series and for nearly all of the Federal series are based on direct measurements of monthly construction activity. These series account for about 20 percent of the total value of new construction. The projections initially published for these series are replaced, almost entirely in the following month, by estimates based on direct measurement.

The final monthly estimates for the State and local public construction series, which account for approximately 25 percent of total new construction activity, are interpolated values based on directly measured quarterly expenditure data. These final monthly estimates become available and are substituted for the previously published projections 4 to 6 months after the projections are initially published.

¹ At the present time, monthly reports of the actual value of construction progress on private nonresidential buildings are being obtained only for projects in the 37 Eastern States and the District of Columbia. Comparable data for the remaining 13 States are indirectly estimated.

The final monthly estimates for the public utility series (other than telephone and telegraph), which account for about 5 percent of total new construction, are based on directly measured annual data from which monthly values are interpolated. The final monthly estimates are substituted for the previously published projections approximately 18 months after the close of the year.

REFERENCES

Data on construction value put in place are published in detail by type of construction and ownership in *Construction Report C30, Value of New Construction Put in Place*, a monthly publication of the Bureau of the Census. This publication also presents data on a seasonably adjusted annual rate basis, both in current dollars and in constant (1957-59) dollars. These value in place data are also published in *Construction Review*, a monthly publication of the Business and Defense Services Administration, U.S. Department of Commerce.

Historical monthly data for the 1939-1966 period are published in the following reports: 1939-1945—*Construction Volume and Cost, 1915-1966*, a statistical supplement to *Construction Review*; 1946-1961—*Construction Report C30-61 (Supplement)*; 1962-1964—*Construction Report C30-65S*; 1965-1966—Current issues of *Construction Report C30*. Although the statistics for the more recent years have been revised, historical annual data back to 1915 appear in *Construction Statistics 1915-1964* a supplement to *Construction Review*. More detailed descriptions of the sources of data and the methods of compiling the estimates are also published in *Construction Report C30-65S*.

F. W. Dodge Construction Contracts Series

DESCRIPTION OF SERIES

The total value index on construction contracts compiled by the F. W. Dodge Company covers private and public ownership for residential buildings, nonresidential buildings, public works and utilities construction. The series includes additions and alterations, but not maintenance and repair. Coverage is not complete, particularly for force-account work and smaller construction projects. Farm construction is excluded, and rural nonfarm construction is probably covered less fully than urban. Prior to 1956, Dodge construction statistics covered only

the 37 Eastern States. Beginning in January 1956, coverage was expanded to 48 States and the value index, together with its 1947-49 base, was adjusted back to 1947. Current issues of Economic Indicators show the annual index for recent years and seasonally adjusted data for recent months.

The major segments of the Dodge series on construction contracts are compiled by several methods. Data on privately owned one and two-family houses are based upon a combination of building permits in the most active building permit areas and a sample in all other areas. Permit costs are adjusted to reflect estimated actual construction costs. In the 37 Eastern States, data for all other project types in the Dodge series are based upon the Company's news reporting service: interviews with architects, contractors, owners, real estate brokers and others, to obtain information on construction jobs being planned and the awarding of construction contracts. In the 11 Western States the corresponding segment of the series is based predominantly on information for building permits with valuations

adjusted to reflect actual construction costs. This information is supplemented with project information from secondary sources and field reports on project construction. Small private construction projects in building-wise inactive areas are estimated through a sampling procedure.

In the series showing square feet of commercial and industrial construction, the Dodge category of "Commercial" includes store buildings, restaurant buildings, office and bank buildings, nonindustrial warehouses and storage structures, and commercial garages and service stations. The category of "Industrial" includes the manufacturing facilities (less cost of processing equipment) and warehouses built by companies classified by the Bureau of the Budget in their Standard Industrial Classification as "Manufacturing" and covered by the major group codes 19 through 39.

Data on construction contracts are available monthly in more detail by type of construction, geographic location, and ownership in F. W. Dodge Company's several subscription statistical services.

20. NEW HOUSING STARTS AND APPLICATIONS FOR FINANCING HOUSING STARTS

DESCRIPTION OF SERIES

The current series of housing starts is compiled by the Bureau of the Census. The series contains data on the number of housing units on which construction is started in the United States. Until 1959 the data cover only nonfarm units. Beginning with January 1959, the coverage of the series extends to all new housing units including not only farm housing but also seasonal, and possibly temporary units. Breakdowns by public and private ownership are provided.

The data beginning with 1959 are based on a technique of direct measurements described below. The estimates for the period from 1946 to 1958 reflect an old series adjusted to provide comparability with the data for the subsequent years (see Census Bureau Construction Report, Series C20-60).

Independently of the Census (or BLS) compilation, the Federal Housing Administration and the Veterans' Administration provide reports on the number of units involved in their respective programs.

The description which follows refers to the procedures used in deriving the current estimates of new housing starts.

The current series is a comprehensive measure of the number of new housing units in housekeeping residential buildings on which construction has started in the United States each month. Start of construction is defined as the beginning of excavation for the footings or foundation of the building. A housing unit is defined as a room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is a building consisting primarily of housing units.

The housing starts series exclude group quarters (such as dormitories, fraternity houses, nurses' homes, etc.), transient accommodations (such as transient hotels and motels) and units in primarily nonresidential buildings. Also excluded is the manufacture of mobile homes.

Housing units are classified as public or private on the basis of ownership. They are classified as farm

or nonfarm on the basis of responses of builders of a sample of units to questions regarding the intended use of the land on which the building is located.

STATISTICAL PROCEDURE

Four steps are involved in preparing the monthly estimates.

(a) Each month the Census Bureau mails questionnaires to some 4,000 local government officials who issue building permits in incorporated places or in counties and townships throughout the country. Of these places, 3,500 account for approximately 90 percent of housing units authorized, the remaining 500 represent a sample of the approximately 8,500 other permit-issuing places accounting for the remaining 10 percent. Information is requested, among other things, on the number of privately owned housing units authorized by building permits issued during the month.

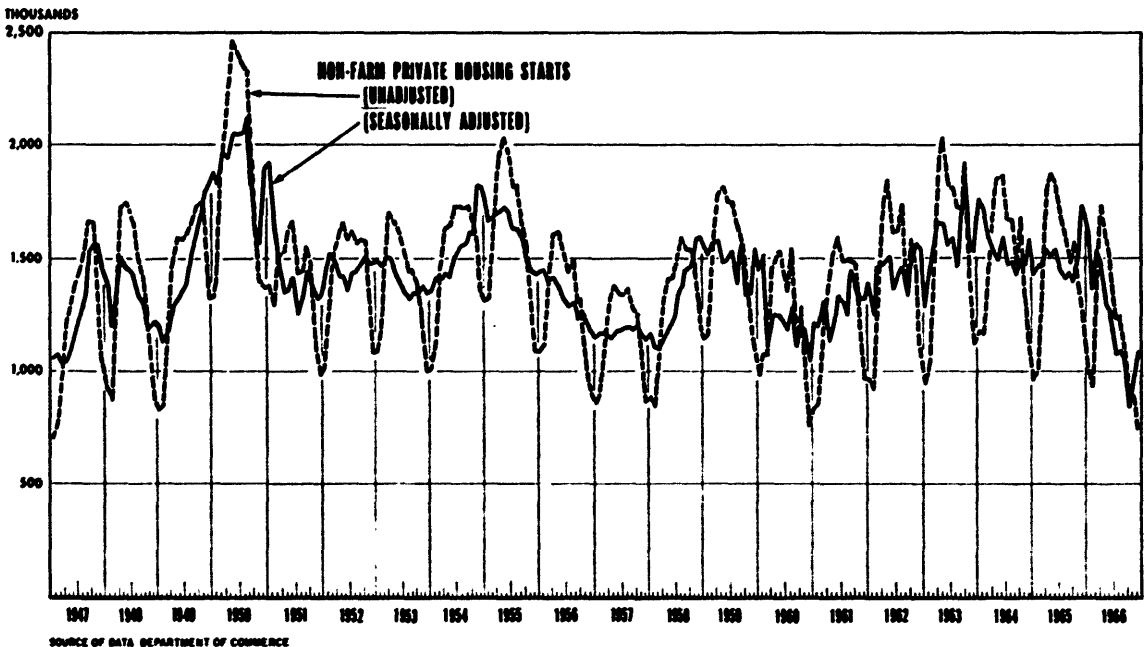
(b) The second step is to convert the permit authorizations to starts. The information required for this conversion is obtained through a continuing monthly sample survey of building permits conducted in a sample of about 570 places. In this survey a sample of building permits is selected each month and then an inquiry is made of the owner or the builder to find out whether and when the units covered by the

permits have been started. In case the units authorized by permits in a particular month are not started by the end of that month, follow-up calls are made in successive months to find out when the units were actually started. From this sample of permits, ratios are calculated of the number of units started to the number of units authorized by permits, with separate ratios for units started each month from permits of that month and of each preceding month. These ratios are then applied to the total number of units authorized by permits in the same months to provide estimates of the total number of units started each month with permit authorization. This is done separately for each of four major regions (Northeast, North Central, South and West) of the United States, and within each region by inside or outside Standard Metropolitan Statistical Areas. Having produced an estimate of the number of units started in each month with permit authorization, an adjustment of 4.8 percent is added to take care of units started within permit-issuing areas but without permit authorization. This factor is based primarily on information from the 1956 National Housing Inventory, and, will be modified as current survey information becomes available.

(c) Information on new private housing starts in areas not covered by building permits is obtained

Nonfarm Private Housing Starts, 1947-66

(Monthly data. Annual rates)



from field surveys in a sample of 95 primary sampling units (counties or groups of counties). Visits are made to a select group of persons who are most likely to know about local housing activities. A list is obtained from them of all residential buildings they know to have been started within the nonpermit portions of these areas during the preceding month. Next, the information provided by these sources is verified by field visit or by telephone interview with the owners or builders. In addition, within those portions of the broad areas which are not covered by building permits, a sample of 315 small land areas is then canvassed intensively by Census employees who look for all units started since the previous month, identifying those not reported by the sources as well as those reported by them. This canvass provides a basis for estimating the number of units not reported by the local sources. The number of units not reported by local sources is then added to the number of units reported by these sources, with appropriate weighting, to provide an estimate of total housing starts in areas not covered by building permit systems.

The separate estimates for permit-issuing areas and for nonpermit areas are added to produce the figures for starts of privately-owned housing.

(d) Information on the number of public units started is obtained from the Public Housing Agency, which collects the data directly from the sponsoring Federal, State, and local agencies. This figure, added to the estimate for private units, gives the estimate of the total number of housing units started each month.

The seasonally adjusted annual rate of starts of private units, published in current issues of *Economic Indicators*, is based on almost 6 years of unadjusted data for starts in both permit-issuing places and in nonpermit areas (May 1959–April 1965). The rate is obtained by making separate seasonal adjustments of housing units started in permit-issuing places and nonpermit areas in each of the four regions using the standard X-11 modification of the Univac No. II Census method for seasonal adjustment and then adding the eight individual adjusted series. The implicit seasonal factors for total private housing starts for 1966 are as follows:

January.....	63.0	July.....	114.9
February.....	68.4	August.....	114.5
March.....	96.6	September.....	103.1
April.....	117.3	October.....	113.3
May.....	123.3	November.....	89.2
June.....	119.0	December.....	70.2

A preliminary estimate is issued 15 to 20 days following the end of the month. The preliminary estimate differs somewhat from the final figures for the following reasons: (a) it is based in part on a sub-sample of permit-issuing places; and (b) not all the results of the field survey used to convert housing unit authorizations to starts are received in time to be used. Revisions are made within the next two months, and a final annual revision of all monthly data is made about the middle of the following year.

The figures for the FHA and VA programs are based on administrative reports of the number of units on which first compliance inspections have been made by those agencies. The first inspection is usually made after the footings are in—normally only a slight lag from the time construction is considered started in the Census series. The FHA and VA figures for “Proposed home construction” are also based on administrative reports of the two agencies. The number of units for which FHA has received applications is limited to those on 1-to-4-family home mortgages; the VA program covers only homes to be built for occupancy by veteran owners.

RELATION TO OTHER SERIES

The series on new housing starts has a limited relationship to Census of Housing figures. Units started should not be added to housing inventory figures without an adjustment to allow time for completion. Also, although new construction usually accounts for the greater part of the difference in inventory reported in successive housing censuses, there are other changes, too, such as demolitions, disaster losses, and additions and losses due to conversions or mergers. The magnitudes of these factors are indicated in the National Housing Inventory of 1956. The Census of Housing also includes certain types of residences which are not counted in the new housing starts series, such as living quarters in mobile homes and in institutions or primarily nonresidential or transient structures.

The Census Bureau also publishes data on the number of housing units authorized by building permits each month. These figures differ from housing starts in that the units are reported in the month of permit issuance rather than in the month of start of construction and they exclude units in nonpermit areas.

Data compiled for the housing starts series are used in the preparation of estimates for the series

TABLE 20.—*New Housing Starts and Applications for Financing, 1946-66*

[Thousands of units]

Year	Housing starts						New private housing units authorized by building permits	Proposed home construction		
	Total private and public (including farm)	Total private (including farm)	Private nonfarm			Government programs		Applications for FHA commitments ¹	Requests for VA appraisals ¹	
			Total	1-family	2 or more families	FHA (1-4 family units)				VA
1946.....	(?)	(?)	1, 015. 2	(?)	(?)	67. 1	91. 8	(?)	121. 7	(?)
1947.....	(?)	(?)	1, 265. 1	(?)	(?)	178. 3	160. 3	(?)	286. 4	(?)
1948.....	(?)	(?)	1, 344. 0	(?)	(?)	216. 4	71. 1	(?)	293. 2	(?)
1949.....	(?)	(?)	1, 429. 8	(?)	(?)	252. 6	90. 8	(?)	327. 0	(?)
1950.....	(?)	(?)	1, 906. 1	(?)	(?)	328. 2	191. 2	(?)	397. 7	(?)
1951.....	(?)	(?)	1, 419. 8	(?)	(?)	186. 9	148. 6	(?)	192. 8	164. 4
1952.....	(?)	(?)	1, 445. 4	(?)	(?)	229. 1	141. 3	(?)	267. 9	226. 3
1953.....	(?)	(?)	1, 402. 1	(?)	(?)	216. 5	156. 5	(?)	253. 7	251. 4
1954.....	(?)	(?)	1, 531. 8	(?)	(?)	250. 9	307. 0	¹ 1, 056. 5	338. 6	535. 4
1955.....	(?)	(?)	1, 626. 6	(?)	(?)	268. 7	392. 9	1, 152. 6	306. 2	620. 8
1956.....	(?)	(?)	1, 324. 9	(?)	(?)	183. 4	270. 7	921. 9	197. 7	401. 5
1957.....	(?)	(?)	1, 174. 8	(?)	(?)	150. 1	128. 3	820. 3	198. 8	159. 4
1958.....	(?)	(?)	1, 314. 2	(?)	(?)	270. 3	102. 1	950. 8	341. 7	234. 2
1959.....	¹ 1, 553. 5	1, 516. 8	1, 494. 6	1, 212. 1	282. 5	307. 0	109. 3	¹ 1, 208. 3	369. 7	234. 0
1960.....	¹ 1, 296. 0	1, 252. 1	1, 230. 1	972. 7	257. 4	225. 7	74. 6	998. 0	242. 4	142. 9
1961.....	¹ 1, 365. 0	1, 313. 0	1, 284. 8	946. 2	338. 6	198. 8	83. 3	1, 064. 2	243. 8	177. 8
1962.....	¹ 1, 492. 4	1, 462. 7	1, 439. 0	967. 8	471. 2	197. 3	77. 8	1, 186. 6	221. 1	171. 2
1963.....	1, 641. 0	1, 609. 2	1, 581. 7	993. 2	588. 5	166. 2	71. 0	¹ 1, 334. 7	190. 2	139. 3
1964.....	1, 590. 7	1, 557. 4	1, 530. 4	944. 5	585. 9	154. 0	59. 2	1, 285. 8	182. 1	113. 6
1965.....	1, 542. 7	1, 505. 0	1, 482. 7	940. 0	542. 7	159. 9	52. 5	1, 240. 6	188. 9	102. 1
1966 (preliminary).....	1, 251. 9	1, 220. 2	1, 196. 9	770. 5	424. 4	129. 1	40. 5	966. 3	153. 0	99. 2

¹ Units in mortgage applications for new home construction.

² Not available.

³ For 1964-66, coverage limited to 6,000 places; 1959-62, 10,000 places; and for 1963-65, 12,000 places.

⁴ Military housing starts including those financed with mortgages insured by FHA under Section 803 of the National Housing Act, are included in publicly financed starts but excluded from the privately financed starts for FHA and Government programs.

NOTE.—Monthly data on new nonfarm housing starts available beginning 1959, annual from 1959. Revised series, beginning with 1945, includes Alaska and Hawaii, and beginning with 1969, includes farm as well as nonfarm housing starts.

Sources: Department of Labor prior to 1946, Department of Commerce, Federal Housing Administration (FHA), Veterans' Administration (VA).

on value of new construction put in place described in the preceding section.

USES AND LIMITATIONS

The series on housing starts serves as an important guide in the formulation of national housing policy and as an indicator of residential building activity. It must be recognized that the current estimates have a number of limitations: First, both the level of the estimates and the measures of month-to-month change are subject to sampling error. The standard error for the monthly estimate of total housing is be-

tween 3 and 4 percent. Secondly, it is possible that there is still some understatement of starts due to the difficulty of locating and identifying construction projects in nonpermit areas.

The FHA and VA series indicate the importance of these government programs in the field of new home construction. Certain limitations in these series should be observed, however, particularly in their relation to other data. Although FHA and VA may make inspections during construction and the units may be counted as FHA or VA "starts" the permanent financing after completion may not be under-

written. Also, some applications for FHA commitments or requests for VA appraisals lapse. There is some duplication of units in application for FHA commitments and requests for VA appraisals. In cases where both agencies issue valuation commitments, FHA makes the compliance inspection and the unit is reported as an FHA start, even though the mortgage may finally be underwritten by VA or by neither agency. The FHA series on housing starts includes units in buildings with 5 or more housing units as well as those in buildings with 1-4 housing units, whereas the FHA applications series covers only 1-to-4-family homes.

REFERENCES

Monthly data on housing starts are published in greater detail in *Construction Reports, Housing Starts (Census Series C20)*. Related information on residential housing units authorized by building permits is published in *Construction Reports, Housing Authorized in Permit-Issuing Places: Summary Statistics (Census Series C42)*. Much of this information is reprinted in *Construction Review* published monthly by the Department of Commerce. Historical data for 1889 to 1964 may be found in: *Housing Construction Statistics, 1889-1964*, U.S. Department of Commerce, Bureau of the Census; *Construction During Five Decades, Historical Statistics 1907-1952 (BLS Bulletin 1146)*; *Trends in Building Permit Activity (BLS Bulletin 1245) Nonfarm Housing Starts 1889-1958 (BLS Bulletin 1260)*. A more detailed technical description of the methods used to prepare the new series of housing starts may be found in the *Census Report C20-11 (Supplement), May 1960*. A description of the old series is given in *Techniques of Preparing Major BLS Statistical Series (BLS Bulletin 1168)*, December 1954. A series on *Sales of New One-Family Homes (Census-HUD Report Series C25)* was initiated in 1962.

For the government programs, monthly data from 1952 on starts and on proposed home construction are given in current issues of *Housing Statistics*, a monthly publication of the Department of Housing and Urban Development.

For the method of seasonal adjustment see The X-11 Variant of the Census Method II Seasonal Adjustment Program by Julius Shiskin and others, published as Technical Paper No. 15 by U.S. Department of Commerce, Bureau of the Census.

New Private Housing Units Authorized in Permit Places

DESCRIPTION OF SERIES

A revised monthly series on the number of new private housing units authorized by local building permits, unadjusted and seasonally adjusted by region and by type of structure, was introduced by the Bureau of the Census in January 1964, presenting data from January 1963. The new series pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. For 1954-59, available data relate to only 6,600 places. In 1963, the number of housing units authorized in the 12,000 places was 3.9 percent greater than the number in the 10,000 places. The procedure followed in arriving at the monthly building permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some States) in a recent year with estimates for the less active places based on a stratified probability sample of these places. Annual totals are based on reports from all 12,000 permit-issuing places. This 12,000 place universe accounts for a major portion of all residential building in the United States. About 83 percent of all private housing in 1965 was constructed within these 12,000 permit-issuing places.

These figures relate to new building intended for occupancy on a housekeeping basis. They do not include hotels, motels, and other structures for transient accommodation or group residential buildings such as nurses' homes and college dormitories. They also exclude additions, alterations, and repairs to existing buildings, as well as conversions.

The building permit data are adjusted for seasonal variation by the use of moving seasonal indexes (derived by the X-11 version of the Census Method II, based on data from January 1959-December 1965). It is assumed that the 12,000 permit-issuing place universe has seasonal movements which are very little different (if different at all) from those that apply to the 10,000 place universe, since the additional places added about 4 percent to the units reported by the 10,000 places.

Building permit seasonal adjustments take account

of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Year's, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month to arrive at a daily average for that month. The seasonal adjustment indexes are then applied to the daily average and the results multiplied by the number of working days in the year.

Building permit data are also presented in considerable geographic detail not available for the housing starts series.

Number of new private housing units authorized by local building permits in 10,000 and 12,000 permit-issuing places: Unadjusted and seasonally adjusted annual rates, 1959-66

Period	In thousands of units	
	Unadjusted	Seasonally adjusted annual rate
10,000 PERMIT-ISSUING PLACES		
Annual totals:		
1959.....	1,208.3	-----
1960.....	998.0	-----
1961.....	1,064.2	-----
1962.....	1,186.6	-----
1963.....	1,285.0	-----
12,000 PERMIT-ISSUING PLACES		
Annual totals:		
1962.....	1,229.5	-----
1963.....	1,334.7	-----
1964.....	1,285.8	-----
1965.....	1,240.6	-----
1966.....	966.3	-----
Monthly:		
1965—January.....	74.3	1,273
February.....	75.4	1,226
March.....	115.7	1,245
April.....	120.6	1,204
May.....	115.0	1,243
June.....	122.0	1,245
July.....	108.6	1,234
August.....	108.9	1,228
September.....	104.2	1,180
October.....	105.7	1,244
November.....	99.3	1,280
December.....	90.9	1,292
1966—January.....	75.3	1,255
February.....	72.5	1,197
March.....	117.3	1,268
April.....	113.5	1,185
May.....	108.8	1,098
June.....	94.6	954
July.....	76.9	921
August.....	78.7	844
September.....	65.6	733
October.....	61.1	714
November.....	55.7	715
December.....	48.5	759

Source: Department of Commerce, Bureau of the Census.

LIMITATIONS OF DATA

The portion of residential construction measurable from building records is inherently limited, since such records obviously do not reflect construction activity outside of areas subject to local permit requirements. During 1965 about 17 percent of private housing units in the United States were constructed in areas not requiring building permits. This proportion varies from State to State and among the metropolitan areas. The reported statistics are also influenced by the following factors:

1. Some new residential construction in building permit jurisdictions escapes recording. A current measure of such incomplete filing is not presently available.

2. Changes in boundaries of localities due to annexation, new incorporations, etc., result in problems in comparability over time, even for the same places.

To the extent that these limiting factors apply rather consistently over an extended period, they may not seriously impair the usefulness of building permit statistics as indicators of *trends* in residential construction activity, although even in this connection the geographical limitations of the data need to be kept in mind.

REFERENCES

Monthly data are published in Construction Reports, Series C20, "Housing Starts." Building permit authorizations by type of structure, and covering the numbers of units as reported by individual permit-issuing places, appear in the C40 reports of the Bureau of the Census, *Housing Authorized in Individual Permit-Issuing Places*.

Data showing authorizations by type of structure and covering both numbers of units and permit valuations, for States and selected metropolitan statistical areas (based on 3,014 places), appear each month in the C42 series of reports, *Housing Authorized in Permit-Issuing Places: Summary Statistics*. Similar data covering all SMSA's and States, and based on all of the approximately 12,000 permit-issuing places in the United States, appear in the annual summaries of the C42 series of reports, *Housing Authorized in Permit-Issuing Places: Summary Statistics*.

Related Construction Data Reports

Housing Construction Statistics, 1889-1964, U.S. Department of Commerce, Bureau of the Census (annual and monthly data)
Construction Reports, Series C25: *Sales of New*

One-Family Homes (monthly)
Construction Reports, Series C30: *Value of New Construction Put in Place* (monthly)
Construction Reports, Series C41: *Authorized Construction, Washington, D.C. Area* (monthly)

21. BUSINESS SALES AND INVENTORIES—TOTAL AND TRADE

Total Business

For convenience in summarizing business trends, total business sales and inventories as shown here combine wholesale, retail, and manufacturers' data. The series included are described in the individual presentations which follow. It should be noted that these data, when compared with the nonfarm business statistics used in gross national product computations and elsewhere, are smaller, since they do not include construction, utilities, or other nonindustrial sectors.

Wholesale Trade

DESCRIPTION OF SERIES

The term "sales" as used here includes sale of merchandise, after deducting returns, allowances, and discounts, and receipts from repairs or other services to customers. Inventories represent stocks, at cost, of all merchandise owned by wholesalers and available for sale. They do not include goods held on a consignment basis nor do they include such items as fixtures, equipment and supplies not held for sale.

The series on wholesale sales and inventories is limited to merchant wholesalers as information on other types of wholesalers is not available except for years when the Census of Business is taken. The 1963 Census of Business indicated that merchant wholesalers accounted for 44 percent of the sales and 74 percent of the inventories of all wholesale establishments. The areas of wholesale trade not covered in this series include manufacturers sales offices and branches, agents and brokers, petroleum bulk stations and terminals and assemblers of farm products. The wholesale series shown in issues of this report prior to December 1963 included information for some types of nonmerchant wholesalers but this series has been discontinued. The revised series, beginning with data for 1948 and limited to merchant wholesalers was issued in December 1963.

STATISTICAL PROCEDURES

Sales and inventories of merchant wholesalers are compiled and released by the Bureau of the Census, on the basis of dollar estimates reported monthly by a probability sample of merchant wholesalers representing all kinds of business. The data for 1966 are based on a sample selected from the 1963 Census of Business universe and supplemented by a sample of new businesses obtained from Social Security Administration lists. Data from 1959-1965, based on samples selected from the 1958 and 1954 Censuses of Business, have been adjusted by the Bureau of the Census and Office of Business Economics to yield a series comparable to the 1966 data.

The sales and inventory data are adjusted for seasonal variation and, in the case of sales, also for trading day differences using the X-11 version of the Census Method II seasonal adjustment program. The magnitude of these adjustments is suggested by the following comparison of unadjusted and adjusted data for 1965 for merchant wholesalers, all trades combined.

(Dollar figures in billions)

1965	Unadjusted		Seasonally adjusted		Implicit seasonal adjustment factors	
	Sales	Inventories	Sales	Inventories	Sales	Inventories
Jan....	13.4	17.3	15.0	17.3	89.2	100.0
Feb....	13.3	17.3	14.8	17.4	89.7	99.5
Mar....	16.0	17.6	15.6	17.6	102.9	99.9
Apr....	15.5	17.6	15.4	17.7	100.6	99.6
May....	15.2	17.7	15.5	17.9	98.1	99.2
June....	16.0	17.8	15.5	17.9	103.2	99.3
July....	15.5	17.8	15.7	17.9	98.7	99.3
Aug....	15.8	17.8	15.6	17.9	101.5	99.4
Sept....	16.2	18.1	15.7	18.1	103.4	100.3
Oct....	16.4	18.4	15.8	18.1	104.0	101.8
Nov....	16.8	18.5	16.2	18.2	104.1	101.9
Dec....	16.9	18.1	16.2	18.3	104.6	99.2

USES AND LIMITATIONS

The monthly wholesale trade series are important economic indicators which reflect the level of eco-

TABLE 21.—Business Sales and Inventories—Total and Trade, 1929, 1939, 1940-66

[Billions of dollars]

Period	Total business ¹		Wholesale ⁴		Retail ⁵					
	Sales ²	Inventories ³	Sales ²	Inventories ³	Sales ²			Inventories ³		
					Total	Durable goods stores	Non-durable goods stores	Total	Durable goods stores	Non-durable goods stores
1929.....	(9)	(9)	(9)	(9)	4.04	1.30	2.74	(9)	(9)	(9)
1939.....	(9)	(9)	(9)	(9)	3.50	0.94	2.56	5.53	2.09	3.45
1940.....	(9)	(9)	(9)	(9)	3.86	1.13	2.73	6.12	2.47	3.65
1941.....	(9)	(9)	(9)	(9)	4.61	1.43	3.17	7.78	3.18	4.60
1942.....	(9)	(9)	(9)	(9)	4.77	1.03	3.74	8.02	2.75	5.27
1943.....	(9)	(9)	(9)	(9)	5.27	1.02	4.25	7.56	2.21	5.35
1944.....	(9)	(9)	(9)	(9)	5.85	1.16	4.69	7.64	2.24	5.40
1945.....	(9)	(9)	(9)	(9)	6.50	1.34	5.17	7.95	2.43	5.52
1946.....	(9)	(9)	(9)	(9)	8.73	2.35	6.38	12.06	3.85	8.21
1947.....	(9)	(9)	(9)	(9)	10.20	3.13	7.07	14.24	5.35	8.90
1948.....	35.26	52.51	6.81	7.96	11.14	3.57	7.56	16.01	6.57	9.44
1949.....	33.79	49.50	6.51	7.71	11.15	3.75	7.40	15.47	6.26	9.21
1950.....	38.60	59.82	7.70	9.28	12.27	4.52	7.75	19.46	8.29	11.17
1951.....	43.36	70.24	8.60	9.89	13.05	4.54	8.51	21.05	9.63	11.42
1952.....	44.84	72.38	8.78	10.21	13.53	4.61	8.92	21.03	9.49	11.54
1953.....	47.99	76.12	9.05	10.69	14.09	5.03	9.06	21.49	9.78	11.71
1954.....	46.44	73.18	8.99	10.64	14.10	4.85	9.25	20.93	9.27	11.66
1955.....	51.69	79.52	9.89	11.68	15.32	5.58	9.74	22.77	10.53	12.24
1956.....	54.06	87.30	10.51	13.26	15.81	5.48	10.33	23.40	10.50	12.91
1957.....	55.88	89.05	10.48	12.73	16.67	5.70	10.97	24.45	11.28	13.17
1958.....	54.23	86.92	10.26	12.74	16.70	5.28	11.41	24.11	10.53	13.59
1959.....	59.66	91.89	11.49	13.88	17.95	5.97	11.98	25.30	11.03	14.28
1960.....	60.75	94.75	11.66	14.12	18.29	5.88	12.41	26.81	11.92	14.89
1961.....	61.11	95.81	11.99	14.49	18.23	5.58	12.65	26.24	10.96	15.27
1962.....	65.59	100.63	12.67	14.94	19.61	6.21	13.40	27.94	11.66	16.28
1963.....	68.69	105.58	13.38	16.05	20.54	6.63	13.91	29.38	12.39	17.00
1964.....	73.46	111.05	14.53	16.98	21.80	7.01	14.79	31.13	13.14	17.99
1965.....	79.53	120.90	15.60	18.27	23.65	7.81	15.84	34.61	15.19	19.41
1966.....	86.32	135.55	16.98	20.69	25.31	8.15	17.16	36.96	16.54	20.43

¹ The term "business" here includes wholesale, retail, and manufacturing trade (see page 76).

² Monthly average for year and total for month.

³ Book value, end of period, seasonally adjusted.

⁴ Merchant wholesalers. Beginning January 1961, data include Alaska and Hawaii.

⁵ Beginning January 1960, data include Alaska and Hawaii.

⁶ Not available.

⁷ In 1961, a basic change in the method of estimating retail sales directly from sample data (rather than linked to a Census of Retail Trade) was introduced. The "new" series, which begins with data for 1948, is not comparable with sales figures for earlier periods.

⁸ Retail inventory estimates beginning with year-end 1946 utilize as benchmarks the *Retail Trade Annual Reports* of the Bureau of the Census, are based on the latest (1967) Standard Industrial Classification, and include data for Alaska and Hawaii. The "old" estimates for 1939 through 1945 are based on the Censuses of Business for 1939 and 1945 and are not comparable with the "new" series.

Source: Department of Commerce.

conomic activity at an intermediate stage of the distributive process. The wholesale data are also used together with similar data for manufacturing and retail trade to provide a consistent aggregate series for total business.

The monthly estimates of sales and inventories are based upon a sample and are therefore subject to sampling variability. In addition, they are subject to nonsampling errors, such as the failure of respondents to submit reports in time for tabulation,

to submit correct figures, or to respond at all. The estimates of sales are more accurate than the estimates of inventories. The statistics on inventories are based on estimates by respondents or imputations due to nonresponse to a greater extent than are sales statistics, reflecting the fact that wholesalers do not keep inventory records on a monthly basis to the same extent that they keep monthly sales records. Comparisons of the monthly estimates with the Census of Business data indicate that the monthly estimates are subject to some undercoverage due primarily to the time lag in representing births in the monthly survey. This undercoverage, however, is not considered sufficiently serious to affect the reliability of short term trend comparisons made from these data.

REFERENCES

Sales and inventory data for merchant wholesalers, both unadjusted and adjusted, are published in greater detail by kind of business by the Bureau of the Census in its Monthly Wholesale Trade Report which also includes a detailed description of the sample, estimation procedures and reliability of the data. The data for the summary trade groups are also published by the Office of Business Economics in its Business News Reports series and in the Survey of Current Business. Data from 1960 to date are available from the Bureau of the Census; data from 1948 to 1959 are available from the Office of Business Economics.

Additional information on the seasonal adjustment of these series may be found in the references to the retail trade section, page 80.

Retail Trade

DESCRIPTION OF SERIES

The series on retail sales and inventories represent sales and inventories of all establishments classified in retail trade. Sales are net, i.e., less discounts, returns and allowances, and include all business receipts of the reporting establishments, not just receipts from sales of merchandise, as well as sales taxes and excises. Inventories are valued at the cost of merchandise on hand. The separation of estimates into "durable goods" and "nondurable goods" is based upon classifications of stores according to the durability of the commodities accounting for the major portion of their sales.

In 1951 a basic change in the method of estimating retail sales was introduced. The "new" series, which started in January 1951, was not comparable with the sales figures for earlier periods. In early 1957 the new series was revised back to January 1951 to exclude data for milk dealers engaged in processing on the premises; this exclusion conforms to a change made in the Standard Industrial Classification. Estimates of retail sales in Alaska and Hawaii are included beginning with data for 1960. In mid-1961 the sales data for 1946-50 were revised for comparability with the latest revised series. A "new" series on inventories, comparable in concept and coverage to the latest series on sales begins with January 1946. The new series is not comparable with the series for years prior to 1946.

STATISTICAL PROCEDURES

Census of Retail Trade data for the years 1929, 1933, 1935, 1939, and 1948 were used as benchmarks for the sales series for the period 1929-1951. Sales estimates for the intercensus years between 1935 and 1951 were based in large part on changes in sales-tax collections of 20 States (whose sales accounted for 40 percent of total retail sales) supplemented by data from special Internal Revenue Service tabulations, Federal Reserve System data on department stores, and data on the taxable quantity and average price of gasoline. In developing these estimates, use was also made of monthly estimates of sales derived from data reported to the Bureau of the Census by a constant sample of large independent retailers and chain stores.

Beginning with January 1951 monthly estimates have been prepared by the Census Bureau directly from probability sample data. Estimates comparable in concept and coverage were prepared by the Office of Business Economics back to January 1946. The new estimates are not linked to a census of business benchmark, a factor that accounts for most of the difference in level between the sales estimates for 1951 indicated by the old and new series. The new estimates from the probability sample of reporting firms are derived essentially by weighting the reported sales of each firm or store in the sample by a value dependent upon its probability of selection. For a description of the current sample see the Monthly Retail Trade Reports for 1966. Sales estimates for the period January 1959 through September 1965 have been adjusted to yield a series comparable to the current series.

The year-end estimates of inventories prior to 1946 were based on the Censuses of Retail Trade for 1939 and 1948, the Internal Revenue Service's *Statistics of Income, Part 2*, and Federal Reserve data on department store inventories. Retail inventories estimates beginning with December 1946 utilize as benchmarks the data in the *Annual Retail Trade Reports* of the Bureau of the Census. Monthly estimates are made by the Office of Business Economics and are based primarily on sample data reported to the Bureau of the Census.

The sales and inventories data are adjusted for seasonal variation and, in the case of sales, also for holidays and trading day differences, using the X-11 version of the Census Method II seasonal adjustment program. The magnitude of the seasonal adjustments is indicated by the following comparison of unadjusted and seasonally adjusted data for 1965.

(In billions of dollars)

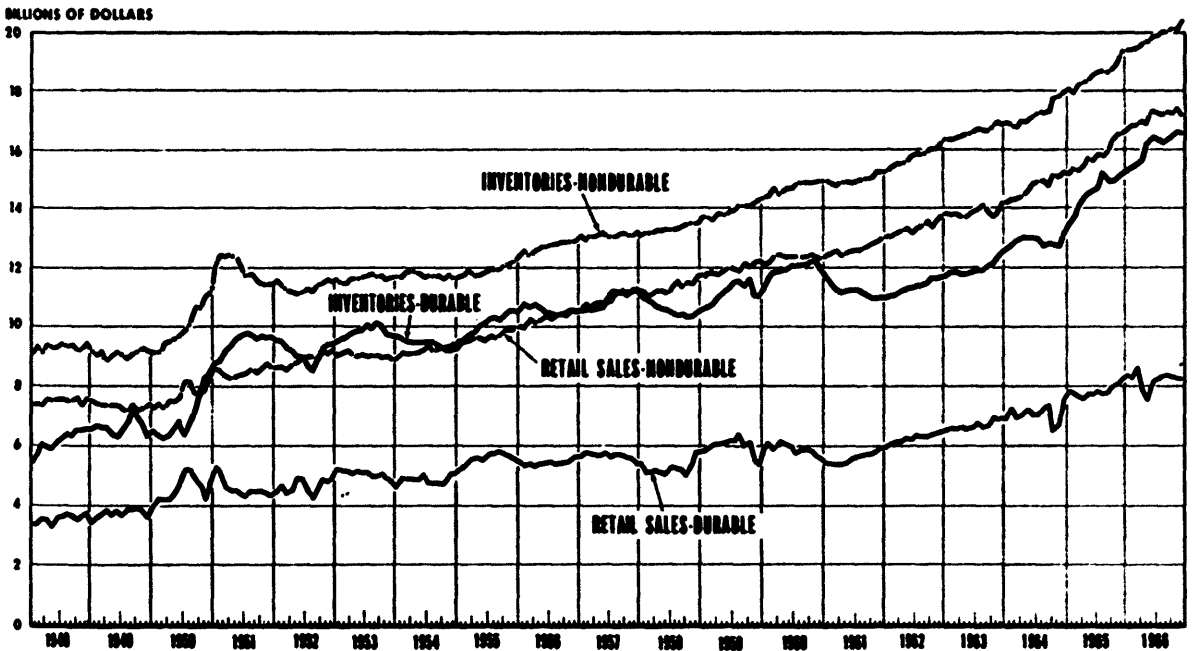
1965	Unadjusted		Seasonally adjusted		Implicit seasonal adjustment factors	
	Sales	Inventories	Sales	Inventories	Sales	Inventories
Jan....	20.6	30.5	22.9	31.6	89.7	96.6
Feb....	19.6	31.4	23.1	31.7	85.0	99.1
Mar....	21.9	33.0	22.9	32.4	95.9	102.1
Apr....	23.5	33.6	22.8	32.7	103.0	102.6
May....	23.8	33.5	23.3	32.9	102.0	101.7
June....	23.8	33.4	23.3	33.2	102.2	100.3
July....	24.1	33.2	23.7	33.4	101.9	99.6
Aug....	23.0	33.1	23.6	34.0	97.5	97.4
Sept....	22.7	32.9	23.8	33.6	95.7	98.0
Oct....	25.1	34.2	24.3	33.7	103.0	101.4
Nov....	25.2	35.3	24.6	33.9	102.1	104.0
Dec....	30.6	33.4	24.8	34.6	123.3	96.6

RELATION TO OTHER SERIES

Retail sales data reflect a substantial portion of personal consumption expenditures and are, therefore, related to the personal consumption expenditure

Retail Sales and Inventories, 1948-66

(Monthly data. Seasonally adjusted)



SOURCE OF DATA: DEPARTMENT OF COMMERCE

estimates that appear in the national accounts. They are different from personal consumption expenditures in that they include purchases by others than households and exclude such major expenditures as household expenditures for personal services, rent, medical services, etc. Retail sales and inventories data are closely related to wholesale trade and manufacturers' sales and inventories data, reflecting as they do the activities of the final stage of distribution in our economy.

USES AND LIMITATIONS

The monthly retail trade series reflect the trend of a major part of personal consumption expenditures well in advance of the availability of more comprehensive data. They and the inventories series are useful indicators of probable future economic activity at the manufacturing and other earlier stages of production and distribution.

Since the monthly retail sales estimates are based on a probability sample, they are subject to sampling variability, as well as such biases as nonresponse or reporting errors. The monthly sales estimates are compared with Census of Business data when those statistics become available. Although differences for individual kinds of business occur, reflecting, among other things, differences in classification due to differences in data collection methods, measures of total retail sales from these two sources have not differed significantly. To illustrate, the sum of the twelve monthly estimates of total retail sales as revised were within one percent of the 1963 retail sales shown by the 1963 Census of Business.

The monthly retail inventories statistics are believed to be less accurate than the sales statistics, since fewer retailers maintain monthly records of their inventories than monthly records of sales. Even so, the monthly series estimate for December 1965 was within two percent of the *Annual Retail Trade Survey* estimate for the same date.

REFERENCES

Sales and inventories data for wholesale and retail trade, seasonally adjusted as in current issues of *Economic Indicators*, are issued as monthly press releases by the Office of Business Economics and are published shortly thereafter in the *Survey of Current Business*. Retail sales data are also published by the Bureau of the Census in the *Monthly Retail Trade Report*. Advance estimates are published ten days after the report month in the *Advance Monthly Retail Sales Report*. Beginning with data for January 1962, estimates of weekly sales of retail stores are issued as a weekly report, generally on Thursday following the week covered. Wholesale sales and inventories data are also published in the *Monthly Wholesale Trade Report*.

More complete descriptions of these series have been published in the following issues of the *Survey of Current Business*: June 1948, October 1951, September and November 1952, January 1954, June 1957, December 1961, December 1963, May 1964, February, April and November 1966, and in the biennial *Business Statistics*, a supplement to the *Survey*. The *Monthly Retail Trade Report* contains a detailed description of the Census Bureau's monthly retail trade series. A description of the sample and estimating procedure used for that series and additional information on the reliability of the estimates are available in a Bureau of the Census pamphlet entitled "Description of the Sample for the *Monthly Retail Trade Report*."

Additional information on the seasonal adjustment of sales, including specifications for the X-11 seasonal adjustment program, are available from the Chief Economic Statistician, Bureau of the Census. Adjustments for trading day differences are similar to that described in "Census Trading-Day Adjustment Method", published in the May 1964 issue of *Business Cycle Developments*. A description of the retail sales series and seasonal adjustment techniques is also provided in the September 1964 issue of *Business Cycle Developments*.

22. MANUFACTURERS' SHIPMENTS, INVENTORIES, AND NEW ORDERS

DESCRIPTION OF SERIES

Manufacturers' shipments, inventories, new orders, and unfilled orders are estimated monthly by the Bureau of the Census. In several respects, these

series are conceptually different from the monthly "Industry Survey," formerly published by the Office of Business Economics, from which they were evolved. The changes from the earlier series are explained in detail in the Bureau of the Census com-

prehensive report, "Manufacturers' Shipments, Inventories, and Orders: 1947-1963 Revised." They include: introduction of the Annual Survey of Manufactures as a new benchmark level, broadened coverage, revision of the sample design, refinement of industry reporting, expansion in the number of industry groups published, revision of seasonal factors, and introduction of market groupings. Totals for all manufacturing, durable goods industries, and nondurable goods industries, have been carried back to 1947, while figures for detailed industry and market categories are shown back to 1953.

The term "shipments" as used here represents manufacturers' receipts, billings, or the value of products shipped, less discounts, returns, and allowances. Shipments for export as well as those for domestic use are included. Shipments of foreign subsidiaries are excluded, but shipments of a foreign subsidiary by a domestic firm are included. The shipment figures from the Annual Survey of Manufactures to which the current series is benchmarked, include interplant transfers as well as commercial sales. The new orders series represents new orders net of cancellations received during the period.

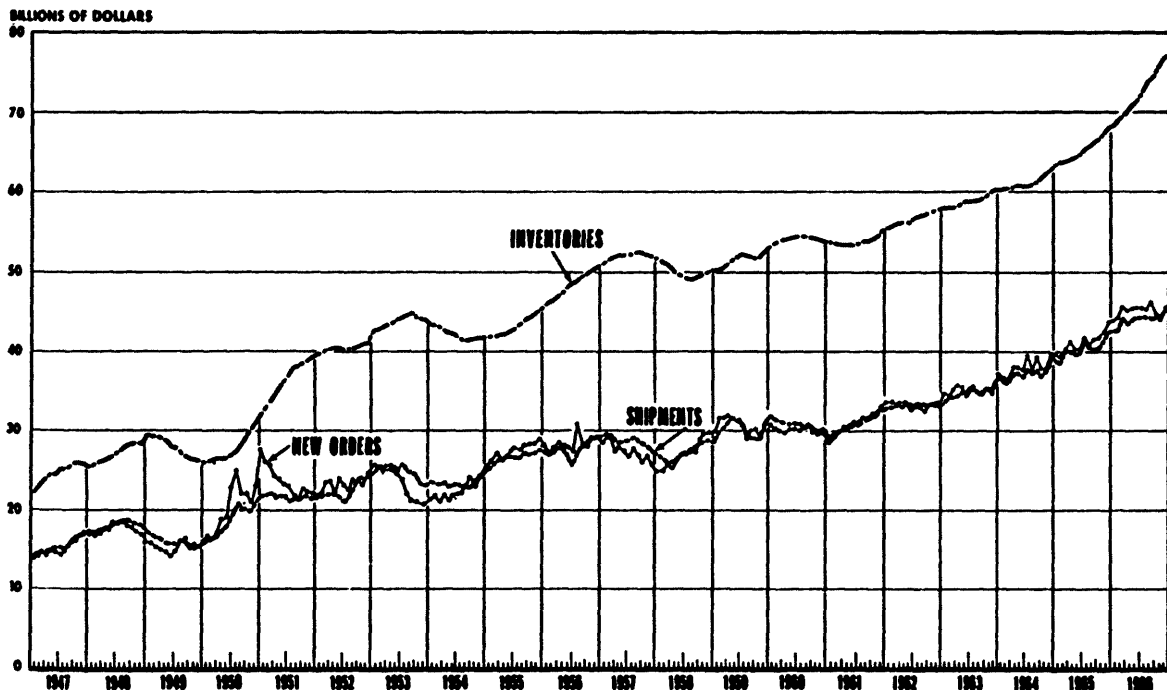
Inventory data are book values of stocks on hand at the end of the period, seasonally adjusted, and include materials and supplies, goods-in-process, and finished goods. Inventories associated with the non-manufacturing activities of the company are excluded from the benchmark in the revised series. In general, inventories are valued at the lower of cost or market price.

STATISTICAL PROCEDURES

Current estimates of manufacturers' shipments, inventories, and orders are made on the basis of reports received in the monthly manufactures program. The sample is defined as a subsample of the 1959 Annual Survey of Manufactures and was designed to provide estimates for approximately 55 detailed industry categories and to permit supplementary presentations of the data such as by market groupings. As in the Annual Survey, all companies engaged in manufacturing constituted the sampling units. All manufacturing companies with 1,000 or more employees were included with certainty, while smaller companies were sampled with probabilities proportional to their employment size within each

Manufacturers' Shipments, Inventories, and New Orders, 1947-66

(Monthly data. Seasonally adjusted)



SOURCE OF DATA: DEPARTMENT OF COMMERCE

industry category stratum. Approximately 7,500 companies were thus drawn for the sample.

Estimates of shipments, inventories, and unfilled orders are obtained for each detailed category by multiplying the estimate for the preceding month by the link relatives based on a matched sample of reporting companies. The data for each company are inflated by their sampling weights before being summarized. Estimates for higher levels (subtotals and totals) are obtained by aggregating the related component categories within the series.

The currently published shipments and inventory estimates have been benchmarked to the 1962 level of the Annual Survey of Manufactures. Work is now underway to benchmark these estimates to the levels of the 1963 Census of Manufactures and to the Annual Survey of Manufactures for 1964 and 1965. Since comparable universe data are not available for new and unfilled orders, a level for unfilled orders was established as of August 1964 by relating a modified ratio of unfilled orders to shipments obtained from the sample to the August 1962 shipments estimates by each detailed category. Net new orders estimates are derived by adding the change in unfilled orders to the shipments estimate.

All the component series were seasonally adjusted by the Bureau of the Census using the X-9 and X-10 versions of Census Method II. In addition, the series on shipments and new orders were adjusted for the number of trading days and length of calendar month prior to seasonal adjustment. The magnitude of the seasonal adjustments are suggested by the comparison of shipments, orders, and inventories data with and without seasonal adjustment for 1965 as shown below.

RELATION TO OTHER SERIES

The revised shipments and inventories series are coordinated with a large number of monthly, quarterly, and annual surveys which are also conducted by the Bureau of the Census on a product-oriented basis. The shipments series is, in general, more nearly comparable than before with the manufacturing component of the Federal Reserve Board's index of industrial production.

The manufacturers' shipments and inventories series are closely related to the sales and inventories series for merchant wholesalers and retail trade. The shipments and inventories series are not entirely comparable to the sales and inventories series which are compiled on a company-oriented basis, particularly the FTC-SEC "Quarterly Financial Report for Manufacturing Corporations" and Internal Reve-

nue Service, "Statistics of Income, Corporation Income Tax Returns."

The manufacturers' inventory data, together with inventory data for retailers and merchant wholesalers, are the basic data used in computing estimates of the "change in business inventories" component of Gross Private Domestic Investment. In measuring the change in business inventories, the book value inventory change data are adjusted to remove the effect of changes in replacement costs.

The new orders estimates are most closely related to the Census unfilled orders series, although they are also akin to other anticipatory series such as new plant and equipment expenditures, construction contracts, etc.

Comparison of Shipments, Inventories, and Orders Data With and Without Seasonal Adjustments, 1965

(In billions of dollars)

	Without seasonal adjustment		Seasonally adjusted		Implicit seasonal adjustment factors	
	Shipments	Inventories	Shipments	Inventories	Shipments	Inventories
Jan...	38.4	63.3	38.0	63.2	93.6	100.2
Feb...	39.4	63.8	38.7	63.4	101.8	100.6
Mar...	41.2	64.1	40.3	63.7	102.2	100.6
Apr...	41.3	64.4	40.0	64.0	103.3	100.6
May...	40.1	64.8	39.8	64.3	100.8	100.8
June...	41.9	65.0	39.9	64.6	105.0	100.6
July...	37.8	65.1	41.5	65.4	91.1	99.5
Aug...	39.4	65.5	40.5	65.8	97.3	99.5
Sept...	41.2	65.9	40.2	66.3	102.5	99.4
Oct...	42.2	66.2	40.5	66.6	104.2	99.4
Nov...	41.6	66.8	41.4	67.2	100.5	99.4
Dec...	40.8	67.6	42.6	68.0	95.8	99.4

USES AND LIMITATIONS

The manufacturers' shipments, inventories, and orders series reflect present and prospective conditions in this vital sector of the economy. The shipments series reflect the demand for the goods and services of manufacturers; trends in the inventories and changes in inventories series reflect the difference between production and shipments of manufactures; the new orders series indicates the probable course of manufacturers' activity in some industries in the immediate future. Study of the chart showing seasonally adjusted shipments, inventories, and new orders will reveal the tendency of new orders to lead shipments over the business cycle.

The market groupings provide a breakdown between final products and materials and a further division of final products between consumer goods and equipment for business and government use. Subtotals are shown for home goods and apparel and for consumer staples within the consumer goods

TABLE 22.—Manufacturers' Shipments, Inventories, and New Orders, 1947-66

Year	Shipments ¹			Inventories ²			New orders, net ³			Manufacturers' inventory—sales ratio ⁴	
	Total	Durable goods	Non-durable goods	Total	Durable goods	Non-durable goods	Total	Durable goods			Non-durable goods
								Total	Machinery and equipment		
Millions of dollars											
1947.....	15, 513	6, 683	8, 819	25, 897	13, 061	12, 836	15, 256	6, 388	(^o)	8, 868	1.58
1948.....	17, 316	8, 337	9, 738	28, 543	14, 662	13, 887	17, 692	8, 126	(^o)	9, 566	1.57
1949.....	16, 126	7, 167	8, 935	26, 321	13, 060	13, 261	15, 614	6, 633	(^o)	8, 981	1.75
1950.....	18, 634	8, 845	9, 789	31, 078	15, 539	15, 539	20, 110	10, 165	(^o)	9, 945	1.48
1951.....	21, 714	10, 493	11, 221	39, 306	20, 991	18, 315	23, 907	12, 841	(^o)	11, 066	1.66
1952.....	22, 529	11, 313	11, 216	41, 136	23, 731	17, 405	23, 203	12, 061	(^o)	11, 142	1.78
1953.....	24, 843	13, 349	11, 494	43, 948	25, 878	18, 070	23, 533	12, 105	2, 084	11, 428	1.76
1954.....	23, 355	11, 828	11, 527	41, 612	23, 710	17, 902	22, 313	10, 743	1, 770	11, 570	1.81
1955.....	26, 480	14, 071	12, 409	45, 069	26, 405	18, 664	27, 423	14, 954	2, 499	12, 469	1.62
1956.....	27, 740	14, 715	13, 025	50, 642	30, 447	20, 195	28, 383	15, 381	2, 870	13, 002	1.73
1957.....	28, 736	15, 237	13, 499	51, 872	31, 728	20, 143	27, 514	14, 073	2, 566	13, 441	1.80
1958.....	27, 280	13, 572	13, 708	50, 070	30, 095	19, 975	26, 901	13, 170	2, 354	13, 731	1.84
1959.....	30, 219	15, 544	14, 675	52, 707	31, 839	20, 868	30, 679	15, 951	2, 878	14, 728	1.70
1960.....	30, 796	15, 817	14, 979	53, 814	32, 360	21, 454	30, 115	15, 223	2, 791	14, 892	1.76
1961.....	30, 884	15, 532	15, 352	55, 087	32, 646	22, 441	31, 061	15, 664	2, 854	15, 397	1.74
1962.....	33, 308	17, 184	16, 124	57, 753	34, 326	23, 427	33, 167	17, 085	3, 090	16, 082	1.70
1963.....	34, 774	18, 071	16, 704	60, 147	36, 028	24, 119	35, 036	18, 300	3, 326	16, 736	1.69
1964.....	37, 129	19, 231	17, 898	62, 944	38, 412	24, 532	37, 697	19, 803	3, 706	17, 895	1.64
1965.....	40, 279	21, 020	19, 258	68, 015	42, 324	25, 691	41, 023	21, 728	4, 140	19, 295	1.61
1966.....	44, 037	23, 008	21, 032	77, 897	50, 037	27, 860	45, 182	24, 153	4, 731	21, 029	1.64

¹ Monthly average for the year.

² Book value, end of year, seasonally adjusted.

³ Ratio of weighted average inventories to average monthly shipments.

⁴ Not available.

Source: Department of Commerce.

division, while materials, including supplies and intermediate products are subdivided into construction materials and all other. Such economic time series provide useful measures for isolating the impact of changes in demand in various sectors of the economy and facilitate analysis of cyclical and growth developments.

The user should keep in mind the conceptual differences between the new series and the old monthly Industry Survey series. In summary, the new series (1) reflects only manufacturing activities from its Annual Survey benchmark basis, (2) is based on the 1957 SIC system, (3) excludes significant nonmanufacturing activities of companies, and (4) includes interplant as well as intercompany sales. Although the two series exhibited similar cyclical movements and approximate the same levels on an overall basis, the component series differed rather substantially, particularly with regard to level.

Although the objectives of the Bureau ultimately are to publish detail and sampling errors for approximately 54 industry categories and 12 market groupings, data are currently shown separately for only 14 two-digit major industry groupings, 16 detailed industry categories, 6 market categories and 3 supplementary series. The current response rate precludes the publication of sampling errors or additional detail at this time, particularly in industries which are predominantly comprised of small firms such as apparel, lumber, and furniture. In addition, there are a few industry categories for which the inclusion of secondary activities is considered to be too high and for which additional divisional reporting is necessary. The Bureau of the Census in studying various approaches to these problems which would permit a gradual increase in published data until the long-range goals are achieved.

REFERENCES

Detailed data for manufacturers' shipments, inventories, and orders are published by the Bureau of the Census in its *Current Industrial Report M3-1*, "Manufacturers' Shipments, Inventories, and Orders." Selected series are published by the Office of Business Economics in the *Survey of Current Business* and by the Census Bureau in *Business Cycle Developments*. A detailed explanation of the revisions made to the survey as well as revised

historical data are published in the background report, *Manufacturers' Shipments, Inventories, and Orders: 1947-1963 Revised*. A supplementary chart-book shows seasonally adjusted data for each of the series published in its monthly M-3 survey, "Manufacturers' Shipments, Inventories, and Orders" for the years 1953-1963. Charts are provided for industry groupings, market groupings, and supplementary series such as machinery and equipment industries, consumer durables, and defense products.

23. MERCHANDISE EXPORTS AND IMPORTS

DESCRIPTION OF SERIES

The several export series cover exports of merchandise (except in-transit merchandise) from the United States to foreign countries. The larger aggregate, total exports (including re-exports), includes exports of domestic merchandise and re-exports of foreign merchandise, defined to cover commodities of foreign origin which have entered the United States as imports and which at the time of exportation are in the same condition as when imported. Imported foreign merchandise which has undergone some change in form in the United States is included under exports of domestic merchandise. The smaller aggregate, for total exports of domestic merchandise, shown also by general commodity categories, is exclusive of reexports. Both series as presented here include commercial shipments and shipments made under U.S. Government economic aid programs. Data on Department of Defense shipments of grant-aid military equipment and supplies under the Mutual Security Program (referred to below as D.O.D. military shipments) are excluded from the aggregate but included in the commodity data. Shipments to United States armed forces and diplomatic missions abroad for their own use are excluded from all export data shown.

Export series covers all exports from within the customs area of the United States, which includes all of the States, the District of Columbia, and Puerto Rico (and included the Territories of Alaska and Hawaii prior to their admission to statehood). Other possessions are not included in the customs area, nor are shipments between the United States and these possessions included in the export series.

Excluded are certain special types of shipments as follows: gold and silver, oil and coal bunkers laden in the United States on vessels engaged in foreign trade, and some items of relatively small importance

such as low valued or noncommercial shipments by mail and gifts valued at less than \$100.

Export shipments are valued at the time and place of export—that is at actual selling price, or at cost if not sold, including inland freight, insurance, and other charges to the place of export. The value, as defined, does not include costs, if any, of loading the merchandise aboard the exporting carrier. Transportation and other costs beyond the United States port of exportation are also excluded.

The import data shown are general imports which represent total arrivals of merchandise, except for in-transit shipments. Goods which enter Customs bonded warehouses are included, as well as goods released from customs custody immediately upon arrival. Government imports are included. Import coverage is in terms of the customs area (as explained above) and, as in the case of exports, in-transit shipments, gold and silver, and items of small importance are excluded.

Imports are valued in accordance with the Tariff Act of 1930, as amended, which defines the value of imports of merchandise generally as the market value in the foreign country and should exclude United States import duties, ocean freight, and marine insurance. Prior to January 1962, in actual practice only the values reported for imports subject to an *ad valorem* rate of duty (a percentage of the value) tended to conform precisely to the valuation definition.

For merchandise not subject to an *ad valorem* rate of duty (80-90 percent of imports), the reported values prior to 1962 may not be in accordance with the market value in the foreign country. For example, ocean freight may be included inadvertently in the values, data for shipments between allied firms may reflect arbitrary values, etc. Beginning January 1962, procedures were inaugurated for the verification by Customs examiners of statistical

factors on import entries, and close conformity with the Tariff Act value definition is expected regardless of whether the item involved is dutiable at an *ad valorem* rate. In general, import values approximate an f.o.b. exporting country basis.

STATISTICAL PROCEDURES

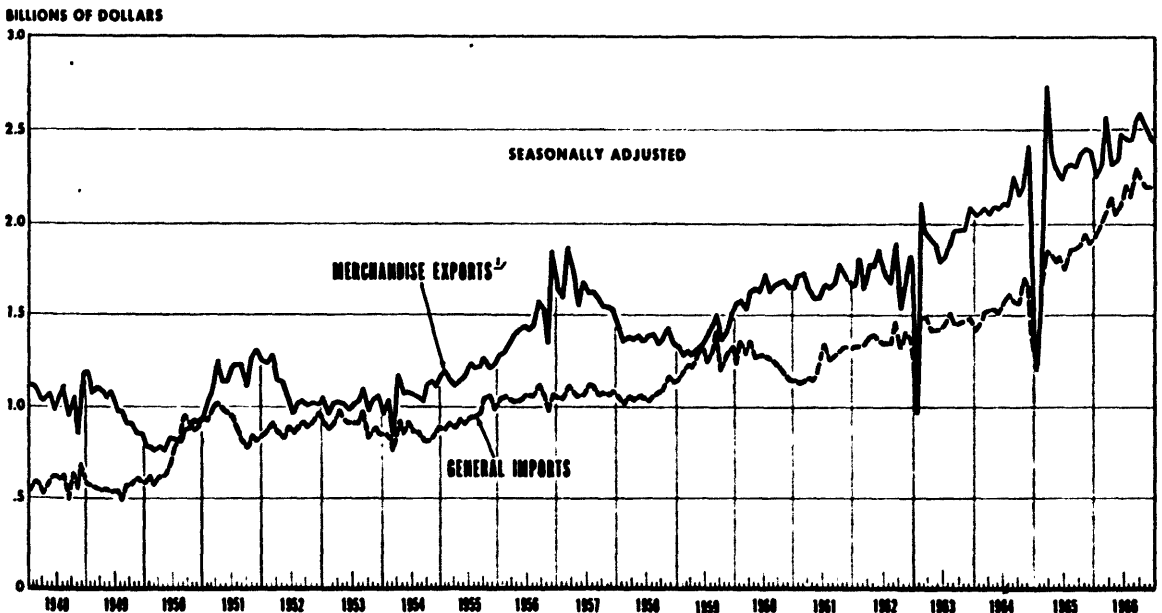
Export statistics (except for D.O.D. military aid shipments, as explained below) are obtained from the Shipper's Export Declaration which exporters are required to file with the collectors of customs, giving a description of the merchandise, its classification under the prescribed commodity classification for exports, quantity, value, and other essential information. These declarations, after a preliminary review for accuracy and completeness, are transmitted by the Bureau of Customs to the Bureau of the Census, where they are sorted and coded prior to further processing. Data for smaller valued shipments, accounting for a considerable proportion of the volume of documents but a relatively small proportion of total value, are based on estimating procedures. Currently, shipments to Canada valued at \$100-\$1,999 are sampled at a ratio of 10 percent while shipments to countries other than Canada valued at \$100-\$499 are sampled at a ratio of 50 percent. These sampled shipments are distributed by commodity.

For exports made by the Department of Defense of grant-aid military equipment and supplies under the Mutual Security Program (excluded from the aggregates but included in the commodity data in table 23) and for other Department of Defense shipments such as those under the civilian supply program, information is compiled by the Bureau of the Census from the records of the Department of Defense. In most instances, these records show values f.o.b. point of origin. These are adjusted to show value at the United States port of exportation.

Import information is derived from the import entry form prescribed by the Customs Bureau to be filed by the importer for each shipment arriving in the United States, and on which importers report value, country of origin, type of commodity, classified in accordance with the prescribed import commodity classification, and other essential information. After a review by Customs, the statistical copy of the entry form is transmitted to the Bureau of the Census. Statistics covering low valued import shipments are estimated on the basis of a sample. The sampling procedures have varied. From January 1958 through June 1965, data on imports valued at less than \$100 reported on formal entries and imports reported on informal entries (which generally contain items valued at not more than \$250) were estimated from a 1-percent sample. Since July 1965,

Merchandise Exports and Imports, 1947-66

(Monthly data. Seasonally adjusted)



SOURCE OF DATA: DEPARTMENT OF COMMERCE, AND DEPARTMENT OF DEFENSE.

∫ SEE NOTE 1 ON TABLE.

the 1-percent sample has been applied to all imports valued at \$250 and under reported on both formal and informal entries. Sampled shipments (generally amounting to less than 2 percent of total imports per month), along with U.S. goods returned and other commodities and transactions not classified according to kind, are included in the total import figures in table 23 but not in the commodity data.

With respect to both exports and imports, coverage for a given calendar month approximates fairly closely all shipments departing or entering during the calendar month. Documents arriving too late for inclusion, as well as those rejected for verification, are included in the total for a subsequent month, usually the following month.

The seasonally adjusted series have been adjusted for working days as well as seasonal variation. The seasonal adjustment factors are derived by a ratio-to-moving-average method. The seasonal adjustment factors used in 1966 are:

	Imports	Exports excluding MSP
January.....	97.1	95.7
February.....	99.4	102.9
March.....	102.6	103.5
April.....	100.8	105.2
May.....	99.0	106.3
June.....	103.0	100.6
July.....	97.7	92.6
August.....	95.3	91.3
September.....	98.8	93.3
October.....	103.6	101.1
November.....	101.2	103.3
December.....	101.2	103.8

RELATION TO OTHER SERIES

Statistics of exports and imports are available in Census and other Government publications on bases varying with respect to the treatment of re-exports, of D.O.D. military aid shipments, of goods entering into or withdrawn from Customs bonded warehouses and other matters, depending on the purpose of the presentation. The series here shown are among those presented in monthly Census releases.

The merchandise exports and imports by commodity group shown in table 23 are combinations of Bureau of the Census Schedules A and B sections—food, beverages, and tobacco, 0 and 1; crude materials and fuels, 2-4; and manufactured goods, 5-8. Section 9 is omitted from the commodity group detail. The sections of Schedules A and B correspond to those of the Standard International Trade Classification, Revised (SITC).

Series for merchandise exports and imports appear as major components of the balance of international payments. They are combined with series covering various other current transactions to form the larger aggregates for exports and imports of "goods and services." The merchandise series used are based on, and roughly equivalent to, the series shown here for total exports (including re-exports) net of D.O.D. military aid shipments and for general imports. The series are further adjusted by exclusion of other military shipments and by other adjustments with

TABLE 23.—*Merchandise Exports and Imports, by Commodity Group, 1958-66*

[Monthly averages in millions of dollars. Detail not adjusted to add to revised totals]

Year	Merchandise exports					Merchandise imports				Gross merchandise trade surplus ⁵
	Total exports (including re-exports) ¹	Domestic exports				General imports				
		Total ²	Food, beverages, and tobacco	Crude materials and fuels ³	Manufactured goods ⁴	Total ²	Food, beverages, and tobacco	Crude materials and fuels ³	Manufactured goods ⁴	
1958.....	1,364	1,351	225	258	927	1,105	296	338	440	259
1959.....	1,368	1,353	239	252	897	1,302	298	382	591	66
1960.....	1,636	1,620	264	329	1,047	1,251	283	365	571	385
1961.....	1,682	1,662	289	322	1,062	1,228	288	359	544	456
1962.....	1,748	1,725	312	280	1,138	1,366	306	387	636	382
1963.....	1,869	1,845	349	315	1,188	1,428	322	391	672	441
1964.....	2,141	2,110	387	361	1,366	1,557	335	415	758	584
1965.....	2,225	2,196	377	356	1,449	1,780	334	449	936	444
1966.....	2,450	2,413	433	367	1,593	2,129	382	473	1,202	320

¹ Total excludes Department of Defense shipments of grant-aid military equipment and supplies under military assistance programs.

² Total includes and detail excludes firearms, ammunition, and certain low value shipments not classified by kind.

³ Includes fats and oils.

⁴ Includes machinery, transportation equipment, chemicals, metals, and other manufactures. Export data for these items include military grant-aid shipments.

⁵ Surplus represents exports, excluding military grant-aid, f.a.s., less general imports, f.o.b. foreign port, as reported by the Bureau of the Census. Export values include both commercially financed shipments and those financed under government assistance and relief programs.

Source: Department of Commerce.

TABLE 23A.—Merchandise Exports and Imports, by Economic Class, 1929-66
 [Monthly averages in millions of dollars. Detail not adjusted to add to revised totals.]

Year	Merchandise exports					Merchandise imports					Gross merchandise trade surplus ⁴
	Total exports (including reexports)	Domestic exports				Total general imports	Total imports for consumption	Food-stuffs ²	Industrial materials ³	Finished manufactures ³	
		Total ¹	Food-stuffs ²	Industrial materials	Finished manufactures ¹						
1929.....	437	430	63	156	211	367	362	80	204	83	70
1930.....	320	315	45	112	158	255	259	58	134	63	65
1931.....	292	198	31	74	93	174	174	44	85	46	28
1932.....	134	131	20	59	52	110	110	34	48	28	24
1933.....	140	137	17	69	51	121	119	35	59	27	19
1934.....	178	175	19	83	73	138	136	43	64	29	40
1935.....	190	187	18	86	83	171	170	53	83	34	19
1936.....	205	202	17	89	96	202	202	61	102	39	3
1937.....	279	275	24	117	135	257	251	71	134	46	22
1938.....	258	255	36	92	127	163	163	48	80	35	95
1939.....	265	260	26	95	139	193	190	50	103	37	72
1940.....	335	328	20	114	194	219	212	47	131	34	116
1941.....	429	418	42	94	281	279	268	58	175	35	150
1942.....	673	667	83	111	472	230	232	52	142	38	443
1943.....	1,080	1,070	140	146	784	282	283	84	143	56	798
1944.....	1,188	1,180	150	138	892	327	324	114	149	62	861
1945.....	817	799	143	138	518	347	342	96	176	69	470
1946.....	812	792	184	193	415	412	402	110	222	71	400
1947.....	1,278	1,263	263	282	719	481	474	139	252	82	797
1948.....	1,054	1,044	219	238	587	594	593	167	317	109	460
1949.....	1,004	995	187	261	546	553	551	173	274	104	451
1950.....	833	822	116	251	455	740	730	221	384	125	93
1951.....	1,164	1,151	190	345	616	917	904	258	488	158	247
1952.....	1,100	1,088	175	300	612	896	899	263	462	174	204
1953.....	1,022	1,012	143	254	614	910	902	274	444	183	112
1954.....	1,071	1,060	131	310	620	858	860	276	400	183	213
1955.....	1,191	1,180	162	351	667	958	954	260	477	217	233
1956.....	1,445	1,432	216	441	775	1,065	1,056	267	521	268	380
1957.....	1,626	1,611	208	530	872	1,105	1,102	274	534	294	521
1958.....	1,364	1,351	198	368	784	1,105	1,101	287	486	325	259
1959.....	1,368	1,353	210	366	775	1,302	1,285	285	569	431	66
1960.....	1,636	1,620	230	513	877	1,251	1,251	274	539	438	365
1961.....	1,662	1,662	254	487	920	1,226	1,221	277	522	423	456
1962.....	1,748	1,725	281	442	1,002	1,366	1,354	297	561	496	382
1963.....	1,869	1,845	314	493	1,038	1,428	1,417	310	575	532	441
1964.....	2,141	2,111	352	582	1,176	1,557	1,550	321	622	614	584
1965.....	2,225	2,196	346	576	1,274	1,780	1,774	324	717	739	444
1966.....	2,450	2,413	399	617	1,397	2,129	2,114	369	787	974	320

¹ Data exclude Department of Defense shipments of grant-aid military equipment and supplies under military assistance programs beginning in 1950. For 1941 and subsequent years, figures include shipments under other special programs, such as Lend-Lease, Department of the Army civilian supply program, UNRRA, Greek-Turkish Aid, AID and predecessor programs, and Food for Peace (PL-480).
² Private relief shipments of foodstuffs are included in "Finished manufactures" prior to 1941 and in "Foodstuffs" thereafter.
³ Data are "General imports" for the years 1929-1932 and 1964-1966, and "Imports for consumption" for 1933-1964.
⁴ Surplus represents exports, excluding military grant aid, i.e., less general imports, f.o.b. foreign port, as reported by the Bureau of the Census. Export values include both commercially-financed shipments and those financed under government assistance and relief programs.
 Source: Department of Commerce.

respect to coverage, valuation, and timing, for consistency with balance of payments concepts. The seasonally adjusted quarterly figures for merchandise exports and imports will not necessarily agree precisely with corresponding quarterly totals compiled from the seasonally adjusted monthly series

in the balance of payments because they differ in content. (See discussion in Balance of Payments Section which follows.)

Historical statistics on a comparable basis for the general commodity categories shown in table 23 are not available. However, during earlier years, data on

a somewhat similar basis were compiled in terms of economic classes. Although differences exist between the economic classes and the general commodity categories included in the current series, a supplementary table 23A containing data on merchandise exports and imports by economic class during 1929-1966 is presented in order to show developments over time in the totals and in the type-of-commodity content of export and import trade. As indicated by the footnotes, Department of Defense shipments of grant-aid military equipment and supplies under the Mutual Security Program are completely excluded from the export data in table 23A. For imports, figures are shown for both general imports and imports for consumption. Both series cover merchandise which is released from customs custody immediately upon arrival. They differ in their treatment of merchandise which enters into customs bonded warehouses. Such merchandise is included in "general imports" when it enters such warehouses on arrival. It enters into "imports for consumption" only when withdrawn from the warehouse for consumption.

The merchandise exports and imports by economic class shown in table 23A are derived from the five Department of Commerce classes of "crude foodstuffs" and "manufactured foods" (combined as "foodstuffs"), "crude materials" and "semimanufactures" (combined as "industrial materials"), and "finished manufactures."

The titles of the first two columns of tables 23 and 23A indicate some of the principal differences in the content of those columns, and also help to show the difference between the "manufactured goods" column in table 23 and the "finished manufactures" in table 23A. Differences which may not be so apparent include the assignment of leather, yarn and thread, metals, and semi-manufactured chemicals to the "manufactured goods" column in table 23. These are reflected in "industrial materials" in table 23A. Also, lubricating oils and greases, included in table 23A as "finished manufactures," and edible fats and oils, assigned to the "foodstuffs" column, are both tabulated under the "crude materials and fuels" heading of table 23.

The statistics in table 23 for the years 1958-1960 and table 23A for the years for 1942-1960 include data on exports and imports of uranium, thorium, and related material which are not included in the regular foreign trade statistics released by the Bureau of the Census. Data for these commodities have been released separately by the Bureau of the Census.

Indexes of quantity, unit value, and value of foreign trade, prepared by the Bureau of International Commerce, are available for exports of domestic merchandise on the basis of the series shown in table 23A (i.e., net of D.O.D. military aid shipments) and for imports for consumption through 1964 and general imports thereafter. Indexes are available for the five economic classes and, for exports only, for manufactured goods as defined in table 23.

USES AND LIMITATIONS

These summary series provide useful monthly indicators of the movement of merchandise exports and imports. As a measure of cyclical or long-term movement, monthly foreign trade data, even after seasonal adjustment, are erratic. While these data will necessarily be followed by users from month to month, judgments as to trend are more properly based on derived series for longer periods such as quarterly or four-month moving totals.

Although merchandise trade bulks large among the sources of international payments, the balance of payments can be comprehended only in terms of the full range of merchandise, service, capital, unilateral and other transactions. Undue importance should not be attached to the trade figures alone or to the surplus or deficit in merchandise trade.

Because of the variety of bases on which foreign trade data are presented the user must be attentive to the precise specifications of particular series, especially when they are to be used with or compared with other series. Similarly, when U.S. trade statistics are compared with those of other countries, special attention should be given to the extent to which the series differ as to valuation and coverage.

REFERENCES

Totals for exports of domestic and foreign merchandise, general imports and imports for consumption are published monthly in the Census Bureau's United States Foreign Trade summary reports FT 900 E and I and, effective January 1967, in FT 990. (Former Summary Reports FT 930 E and I, 950 E and I, and 970 E and I were discontinued with the December 1966 issues.) Reports FT 900 E and I and FT 990 give monthly data for the current and preceding years. Separate data on Department of Defense shipments of grant-aid military equipment and supplies are provided in both reports.

Detailed commodity by country data are also published by the Census Bureau. Supplementary in-

formation is available on such items as unusual transactions appearing in the statistics, changes in the types of shipments included in the statistics, and special problems of valuation, commodity classification, and the like. This information, formerly published in a monthly pamphlet *Foreign Trade Statistics Notes*, has been carried since January 1961 in the statistical reports themselves. Indexes of foreign trade (quantity, unit value, and value) are computed by the Bureau of International Commerce of the

Department of Commerce and published in its *Overseas Business Reports*.

Summary explanations of the export and import series appear in the introductory notes of Census monthly bulletins FT 125, 135, 150, 155 for imports and FT 410, 450, and 455 for exports. The last comprehensive discussion of the series appeared in the 1946-1963 edition of *Foreign Commerce and Navigation of the United States* (1965). A list of Census foreign trade publications is available in the Census Catalog.

24 and 25. UNITED STATES BALANCE OF INTERNATIONAL PAYMENTS

DESCRIPTION OF SERIES

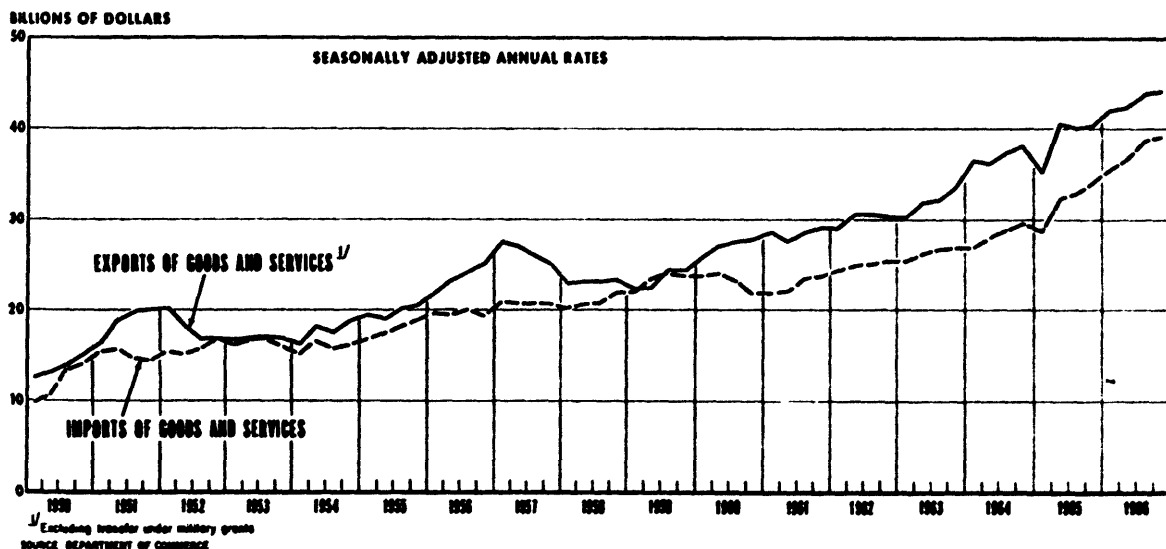
The balance of payments of the United States is a summary of the economic transactions between residents of the United States and residents of the rest of the world. The tables here presented are derived from the more detailed regular quarterly presentation published by the Office of Business Economics, Department of Commerce.

All reported or recorded foreign transactions or those which can be estimated on the basis of sample data are summarized under general categories shown in the balance of payments. Since not all transactions can be accurately measured or estimated, a discrepancy between total payments and total receipts regularly appears which is designated "errors and unrecorded transactions."

Tables 24 and 25 summarize the detailed presentation of the balance of payments accounts published quarterly in the *Survey of Current Business* by the Office of Business Economics. Table 24 shows the major transactions in goods and services between the United States and foreign countries; table 25 shows the principal types of private capital flows and U.S. Government grants and capital, together with two alternative measures of the balance in the accounts. The "balance on liquidity basis" is measured by changes in U.S. official reserve assets and in liquid liabilities to all foreigners; the "balance on official reserve transactions basis" is measured by changes in U.S. official reserve assets and in liquid, and certain nonliquid, liabilities to foreign central banks and certain other government financial agencies.

U.S. Exports and Imports of Goods and Services, 1947-66

(Quarterly data. Seasonally adjusted annual rates)



The use of these two measures of balance was adopted in December 1965, and follows the recommendation of the Executive Committee of the Cabinet Committee on Balance of Payments under the chairmanship of the Bureau of the Budget. A revised tabular presentation of the balance of payments

accounts was published, with back data in the June 1966 *Survey of Current Business*.

Transactions reflected in the "Balance on goods and services" are shown in some detail and on a gross basis in Table 24. They include mainly merchandise trade, but also military sales and purchases, income

TABLE 24.—U.S. Exports and Imports of Goods and Services, 1929-66

[Millions of dollars]

Period	Exports of goods and services						Imports of goods and services				Balance on goods and services
	Total	Merchandise ¹	Military sales	Income on investments		Other services ²	Total	Merchandise ¹	Military expenditures	Other services ³	
				Private	Government						
1929.....	7,034	5,347	(9)	982	157	548	5,886	4,463	50	1,373	1,148
1930.....	5,448	3,929	(9)	876	164	479	4,416	3,104	49	1,263	1,032
1931.....	3,641	2,494	(9)	674	92	381	3,125	2,120	48	957	516
1932.....	2,474	1,667	(9)	460	67	280	2,067	1,343	47	677	407
1933.....	2,402	1,736	(9)	417	20	229	2,044	1,510	41	493	358
1934.....	2,975	2,238	(9)	437	-----	300	2,374	1,763	34	577	601
1935.....	3,265	2,404	(9)	521	-----	340	3,137	2,462	41	634	128
1936.....	3,539	2,590	(9)	567	2	380	3,424	2,546	38	840	115
1937.....	4,553	3,451	(9)	576	1	525	4,256	3,181	41	1,034	297
1938.....	4,336	3,243	(9)	583	2	508	3,045	2,173	41	831	1,291
1939.....	4,432	3,347	(9)	539	2	544	3,366	2,409	46	911	1,066
1940.....	5,355	4,124	(9)	561	3	667	3,636	2,698	61	877	1,719
1941.....	6,896	5,343	(9)	535	9	1,009	4,486	3,416	162	908	2,410
1942.....	11,769	9,187	(9)	496	18	2,068	5,356	3,499	953	904	6,413
1943.....	19,134	15,115	(9)	497	12	3,510	8,096	4,599	1,763	1,734	11,038
1944.....	21,438	16,969	(9)	556	17	3,896	8,986	5,043	1,982	1,961	12,452
1945.....	16,273	12,472	(9)	572	17	3,211	10,232	5,245	2,434	2,553	6,041
1946.....	14,735	11,707	(9)	751	21	2,256	6,991	5,073	493	1,425	7,744
1947.....	19,737	16,015	(9)	1,036	66	2,620	8,208	5,979	455	1,774	11,529
1948.....	16,789	13,193	(9)	1,238	102	2,256	10,349	7,563	799	1,987	6,440
1949.....	15,770	12,149	(9)	1,297	98	2,226	9,621	6,879	621	2,121	6,149
1950.....	13,807	10,117	(9)	1,484	109	2,097	12,028	9,108	576	2,344	1,779
1951.....	18,744	14,123	(9)	1,684	198	2,739	15,073	11,202	1,270	2,601	3,671
1952.....	17,992	13,319	(9)	1,624	204	2,845	15,766	10,838	2,054	2,874	2,226
1953.....	16,947	12,281	192	1,658	252	2,564	16,561	10,990	2,615	2,956	386
1954.....	17,759	12,799	182	1,955	272	2,551	15,931	10,354	2,642	2,935	1,828
1955.....	19,804	14,280	200	2,170	274	2,880	17,795	11,527	2,901	3,367	2,009
1956.....	23,595	17,379	161	2,468	194	3,393	19,628	12,804	2,949	3,875	3,967
1957.....	26,481	19,390	375	2,612	205	3,899	20,752	13,291	3,216	4,245	5,729
1958.....	23,067	16,264	300	2,538	307	3,659	20,861	12,952	3,435	4,474	2,206
1959.....	23,489	16,295	302	2,694	349	3,849	23,342	15,310	3,107	4,925	147
1960.....	27,244	19,489	335	3,001	349	4,070	23,198	14,732	3,069	5,397	4,046
1961.....	28,575	19,954	402	3,561	380	4,278	22,954	14,510	2,981	5,463	5,621
1962.....	30,278	20,604	656	3,954	471	4,593	25,148	16,187	3,083	5,878	5,130
1963.....	32,339	22,071	657	4,156	498	4,957	26,442	16,992	2,936	6,514	5,897
1964.....	36,958	25,297	747	4,932	460	5,522	28,468	18,621	2,834	7,013	8,490
1965.....	38,993	26,276	844	5,389	512	5,972	32,036	21,488	2,881	7,667	6,957
1966.....	42,910	29,180	908	5,585	595	6,642	37,614	25,507	3,649	8,458	5,296

¹ Adjusted from Customs data for differences in timing and coverage.

² Includes transportation, travel, fees and royalties from direct investments, and other services.

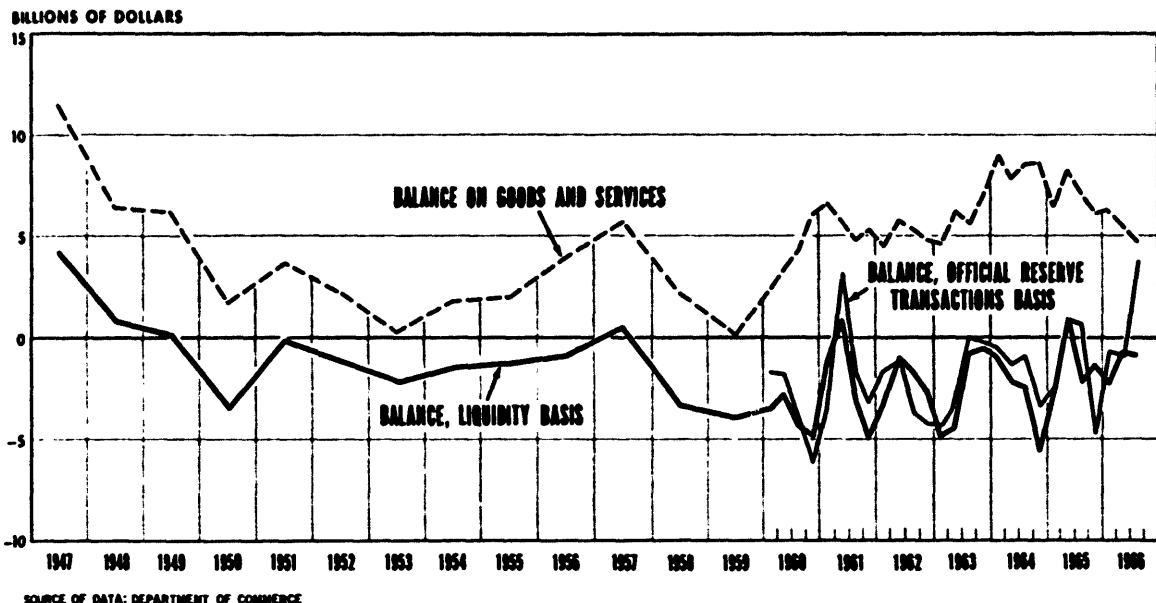
³ Includes transportation, travel, income paid on foreign assets in the U.S., and payments for other services.

⁴ Military transactions for cash and credit prior to 1953 are included in "Merchandise" and in "Other Services".

Source: Department of Commerce.

U.S. Balance of International Payments, 1950-66

(Quarterly data. Seasonally adjusted annual rates)



on investments, both private and governmental, transportation services, travel expenditures, and miscellaneous transactions.

In Table 25, the item "U.S. Government grants and capital, net" includes Government grants other than military under the various aid programs, and the net outflow of U.S. Government capital through various foreign lending programs. "U.S. private capital" refers to investment of U.S. capital abroad, and is classified as: (a) "direct investment," which includes investments in foreign branches and subsidiaries; or (b) "other long-term," which includes long-term security investments not entailing effective control and loans with a maturity of more than one year; or (c) "short-term" investment—i.e., in loans or instruments with an original maturity of one year or less. "Foreign capital" includes corresponding foreign investments in the United States exclusive of those investments which are accounted for as a component of the surplus or deficit.

The "balance" measured on the "liquidity" basis is equal to the algebraic sum (with sign reversed) of changes in official reserve assets, and changes in liquid liabilities to foreigners and international organizations in the form of deposits, U.S. Government securities, bankers acceptances, commercial paper, and certain other short-term liabilities of the United States.

The balance measured on the "Official Reserve Transactions" basis is equal to the algebraic sum (with sign reversed) of the changes in official reserve assets, and changes in liquid and nonliquid liabilities to foreign central banks and certain government financial agencies.

STATISTICAL PROCEDURES

The preparation of the balance of payments involves the bringing together, and the adjustment to balance of payments concepts, of data from a variety of sources, including direct reports to the Office of Business Economics. The largest components are those for merchandise imports and exports, as published by the Bureau of the Census, subject to certain adjustments for coverage, valuation, and timing. Other sources include quarterly reports by U.S. companies with branches or subsidiaries abroad and by branches and subsidiaries of foreign companies in the United States; occasional "benchmark" surveys of U.S. investments abroad and of foreign investments in the United States; reports from U.S. Government agencies on their foreign transactions, including grants, loans, and purchases and sales; reports from U.S. and foreign shipping lines and financial data from the Maritime Administration; reports from U.S. travelers on their expenditures abroad and from foreign travelers on their expendi-

TABLE 25.—United States Balance of International Payments, 1929-66

(Millions of dollars)

Year	Government grants and capital, net ¹	U.S. private capital, net			Foreign capital, net ²	Errors and unrecorded transactions	Balance		Changes in selected liabilities (decrease (-)) ³			Changes in gold convertible currencies, and IMF, gold tranche position (increase (-))
		Direct investment	Other long-term ⁴	Short-term			Liquidity basis ⁵	Official reserve transactions basis ⁶	To foreign official holders ⁷		To other foreign holders ⁸	
									Liquid ⁹	Non-liquid		
1929..	38	-602	-34	-200	358	-384	-53	(10)	(10)	196	-143	
1930..	77	-294	-70	-191	66	320	598	(10)	(10)	-288	-310	
1931..	14	-222	350	628	66	99	1,132	(10)	(10)	-1,265	133	
1932..	26	-16	267	227	-26	79	726	(10)	(10)	-677	-53	
1933..	-7	32	-80	42	125	61	323	(10)	(10)	-454	13	
1934..	-5	-17	202	104	15	62	1,140	(10)	(10)	126	-1,266	
1935..	1	34	82	427	320	364	1,174	(10)	(10)	648	-1,822	
1936..	3	-12	189	52	600	157	896	(10)	(10)	376	-1,272	
1937..	2	35	241	43	245	425	1,053	(10)	(10)	311	-1,364	
1938..	-9	16	24	36	57	249	1,482	(10)	(10)	317	-1,799	
1939..	-14	9	104	226	-86	788	1,915	(10)	(10)	1,259	-3,174	
1940..	51	32	36	177	-90	1,277	2,890	(10)	(10)	1,353	-4,243	
1941..	-1,323	47	19	21	-327	476	1,119	(10)	(10)	-400	-719	
1942..	-6,525	19	-84	96	-84	-8	-205	(10)	(10)	182	23	
1943..	-12,847	98	-58	-12	-63	34	-1,979	(10)	(10)	1,222	757	
1944..	-14,077	71	-62	-85	175	-37	-1,859	(10)	(10)	509	1,350	
1945..	-7,561	-100	-354	-96	-104	8	-2,737	(10)	(10)	2,189	548	
1946..	-5,293	-230	127	-310	-615	218	993	(10)	(10)	-370	-623	
1947..	-6,121	-749	-49	-189	-432	949	4,210	(10)	(10)	-895	-3,315	
1948..	-4,918	-721	-69	-116	-361	1,193	817	(10)	(10)	919	-1,736	
1949..	-5,649	-660	-80	187	44	786	136	(10)	(10)	130	-266	
1950..	-3,640	-621	-495	-149	181	-11	-3,489	(10)	(10)	1,731	1,758	
1951..	-3,191	-508	-437	-103	540	500	-8	(10)	(10)	41	-33	
1952..	-2,380	-852	-214	-94	52	627	-1,206	(10)	(10)	1,621	-415	
1953..	-2,055	-735	185	167	146	366	-2,184	(10)	(10)	928	1,256	
1954..	-1,554	-667	-320	-635	249	191	-1,541	(10)	(10)	1,061	480	
1951..	-2,211	-823	-241	-191	297	515	-1,242	(10)	(10)	1,060	182	
1956..	-2,362	-1,951	-603	-517	615	568	-973	(10)	(10)	1,842	-899	
1957..	-2,574	-2,442	-859	-276	545	1,184	578	(10)	(10)	587	-1,165	
1958..	-2,587	-1,181	-1,444	-311	186	511	-3,365	(10)	(10)	1,073	2,292	
1959..	-1,986	-1,372	-926	-77	736	423	-3,870	(10)	(10)	2,835	1,035	
1960..	-2,769	-1,674	-863	-1,348	366	-941	-3,881	-3,402	1,449	289	2,143	
1961..	-2,780	-1,599	-1,025	-1,556	707	-1,006	-2,370	-1,347	681	1,083	606	
1962..	-3,013	-1,654	-1,227	-544	1,021	-1,159	-2,203	-2,706	457	254	1,533	
1963..	-3,581	-1,976	-1,695	-785	689	-352	-2,670	-2,044	1,673	-7	378	
1964..	-3,560	-2,416	-1,961	-2,146	685	-1,011	-2,798	-1,546	1,073	302	1,554	171
1965..	-3,375	-3,371	-1,080	761	194	-429	-1,337	-1,305	-17	100	132	1,222
1966..	-3,396	-3,363	-213	-335	-2,168	-589	-1,424	271	-1,574	735	2,430	568

¹ Includes associated Government liabilities and loan repayments.

² Includes banking claims.

³ Other than liquid funds; includes miscellaneous Government nonliquid liabilities.

⁴ Equals changes in liquid liabilities to foreign official holders, other foreign holders, and changes in official reserve assets consisting of gold, convertible currencies, and the U.S. gold tranche position in the IMF.

⁵ Equals changes in liquid and nonliquid liabilities to foreign official holders and changes in official reserve assets consisting of gold, convertible currencies, and the U.S. gold tranche position in the IMF.

⁶ Includes short-term official and banking liabilities and foreign holdings of U.S. Government bonds and notes (other than nonmarketable, nonconvertible).

⁷ Central banks, governments, and U.S. liabilities to the IMF arising from reversible gold sales to, and gold deposits with, the United States.

⁸ Includes change in Treasury liabilities to certain foreign military agencies, 1960-1962.

⁹ Private holders; includes banks and international and regional organizations. Excludes IMF. Data were not collected separately for liabilities to foreign officials and to other holders prior to 1960.

¹⁰ Not available.

Note.—Data excludes military grant aid and, U.S. subscriptions to IMF.

Source: Department of Commerce.

tures in the United States, together with travel statistics of the Immigration and Naturalization Service; reports to the Treasury Department on international claims and liabilities; and a variety of other sources including Government administrative data, and questionnaire surveys of the Office of Business Economics.

Balance of payments series manifesting seasonal variation are separately adjusted, including the unrecorded items, and the resultant effect of these adjustments becomes the seasonal adjustment for the balances. Series shown to the right of the balances are not individually adjusted, and are shown as unadjusted in the monthly *Economic Indicators*.

RELATION TO OTHER SERIES

Since the balance of payments statistics represent a synthesis of data from a variety of sources, a close relationship exists between various components of the balance of payments and certain other bodies of published data. Because of technical adjustments to balance of payments concepts, which cannot be detailed here, the components will ordinarily differ somewhat from the related sources. Among the important bodies of related data are: data on merchandise exports and imports published by the Bureau of the Census; data on U.S. Government aid as published in the Office of Business Economics semi-annual bulletin *Foreign Grants and Credits of the United States*; annual estimates of the international debtor-creditor position of the United States as published in the *Survey of Current Business*; and data on international capital transactions of the United States as published by the Treasury Department in the *Treasury Bulletin*. Balance of payments data are used as a component of the national income and products accounts, summarized under the categories of exports and imports.

The regular quarterly balance of payments presentation in the *Survey of Current Business* shows transactions with major areas of the world, and gives a more detailed classification of transactions by type.

USES AND LIMITATIONS

The balance of payments statistics present an integrated summary of international transactions and their relation to the international financial

position of the United States. A major contribution is the presentation of individual components in their proper context in the total flow of international transactions. The interrelationships within the balance of payments are complex and no discussion of analytical technique can be attempted here.

The "unrecorded transactions" reflect a significant and fluctuating difference between the net surplus or deficit figure arrived at independently by (a) netting all measured payments and receipts on account of gold, convertible currencies and liquid liabilities to foreigners, and (b) netting all other measured payments and receipts. The reduction of the errors and omissions through more complete reporting presents considerable difficulty because of the elusiveness of many international transactions and some caution is indicated in the interpretation of the balance of payments and its components.

REFERENCES

The most complete discussion of balance of payments concepts used and of statistical sources and techniques is contained in the 1952 Supplement to the *Survey of Current Business* entitled *Balance of Payments of the United States: 1949-51*, although there have been subsequent developments in sources and technique. Later, briefer statements of sources may be found in *Business Statistics, 1965 Edition*, and in the Census publication, *Historical Statistics of the United States: Colonial Times to 1957. A Balance of Payments Statistical Supplement* (to the *Survey of Current Business*), Revised Edition, 1963 gives detailed global figures by quarters for the period 1919-1961 and by areas for 1946-1961. *Historical Statistics* gives available, but fragmentary, data back to 1790. The *Survey of Current Business* carries balance of payments data regularly, with quarterly and annual detailed tables and explanatory text, as well as regular articles detailing developments in major components of balance of payments accounts.

The Report of the Review Committee for Balance of Payments Statistics, entitled *The Balance of Payments Statistics of the U.S.*, issued in 1965, contains extended discussions of the concepts and methodology of the accounts.

PRICES

26. CONSUMER PRICES

DESCRIPTION OF SERIES

The Consumer Price Index compiled by the Bureau of Labor Statistics, is a measure of changes in prices of goods and services purchased by urban wage earners and clerical workers. The index is often called the "cost-of-living" index, but its official name is *Consumer Price Index for Urban Wage Earners and Clerical Workers*. Prior to January 1964 a complete name for the index was "Index of Change in Prices of Goods and Services Purchased by City Wage-Earner and Clerical-Worker Families to Maintain Their Level of Living." Through December 1963, the index applied only to families of two or more persons. With the January 1964 index, the coverage was extended to include single workers living alone.

The index covers prices of everything people buy for living—food, clothing, automobiles, homes, house-furnishings, household supplies, fuel, drugs, and recreational goods; fees to doctors, lawyers, beauty shops, rent, repair costs, transportation fares, public utility rates, etc. It deals with prices actually charged to consumers, including sales and excise taxes. It also includes real estate taxes on owned homes, but it does not include income or social security taxes.

The index is based upon prices of about 400 items collected in 56 cities. The 400 items were selected by the BLS as representative of the thousands of commodities and services purchased by wage earners and salaried clerical workers, as reported in a survey conducted in 66 cities. Detailed specifications are

Consumer Prices, 1947-66

(Monthly data)

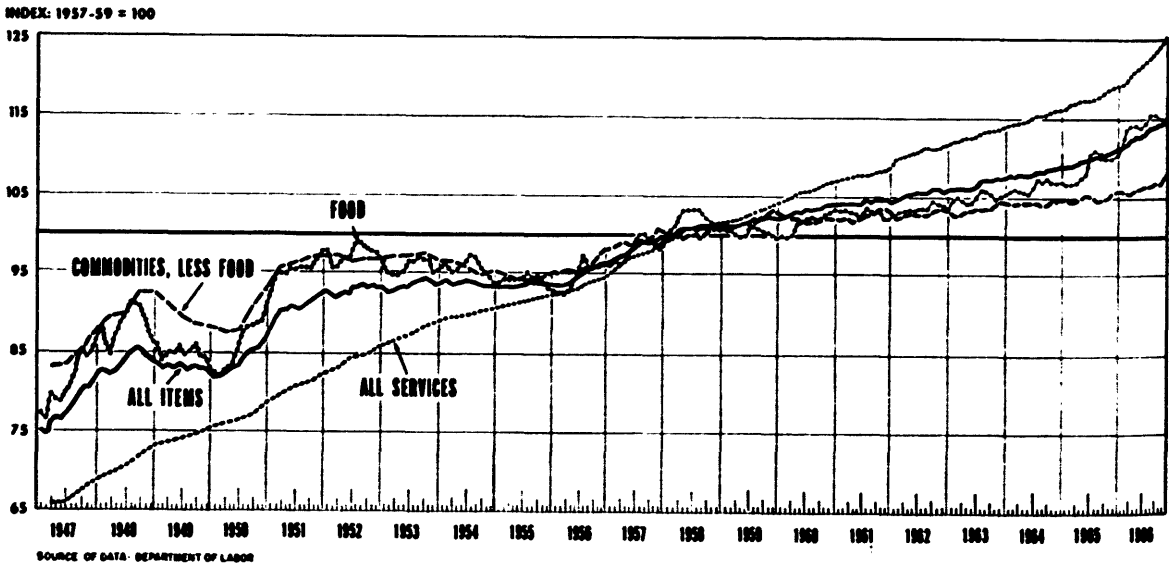


TABLE 26.—Consumer Prices, by Special Groups, 1929-66

[1957-59=100]¹

Year	All items	Commodities					Services		
		All ex- mod/uses	Food	Commodities less food			All services	Rent	Services less rent
				All	Durable	Non- durable			
1929.....	59.7	(²)	55.6	(²)	(²)	(²)	(²)	85.4	(²)
1930.....	58.2	(²)	52.9	(²)	(²)	(²)	(²)	83.1	(²)
1931.....	53.0	(²)	43.6	(²)	(²)	(²)	(²)	78.7	(²)
1932.....	47.6	(²)	36.3	(²)	(²)	(²)	(²)	70.6	(²)
1933.....	45.1	(²)	35.3	(²)	(²)	(²)	(²)	60.8	(²)
1934.....	46.6	(²)	39.3	(²)	(²)	(²)	(²)	57.0	(²)
1935.....	47.8	45.0	42.1	50.2	47.1	48.8	52.2	56.9	49.3
1936.....	48.3	45.6	42.5	50.8	47.8	49.2	52.8	58.3	49.0
1937.....	50.0	47.4	44.2	53.0	50.8	51.2	54.4	60.9	49.5
1938.....	49.1	45.6	41.0	53.0	51.7	50.9	55.4	62.9	49.9
1939.....	48.4	44.7	39.9	52.1	50.6	50.1	55.5	63.0	49.9
1940.....	48.8	45.1	40.5	52.4	50.2	50.6	55.7	63.2	50.0
1941.....	51.3	48.2	44.2	55.0	53.6	52.8	56.4	64.3	50.6
1942.....	56.8	55.2	51.9	61.2	60.9	58.4	58.2	65.7	52.8
1943.....	60.3	60.1	57.9	63.8	62.9	60.9	59.3	65.7	55.2
1944.....	61.3	60.8	57.1	67.3	68.7	64.0	60.7	65.9	57.9
1945.....	62.7	62.6	58.4	70.0	73.9	66.3	61.5	66.1	59.1
1946.....	68.0	69.4	66.9	74.4	77.3	71.1	62.7	66.5	61.2
1947.....	77.8	83.4	81.3	83.9	83.8	81.7	65.3	68.7	64.3
1948.....	83.8	89.4	88.2	90.3	89.9	88.0	69.4	73.2	68.0
1949.....	83.0	87.1	84.7	89.0	91.2	86.3	72.6	76.4	71.4
1950.....	83.8	87.6	85.8	88.9	92.2	86.2	75.0	79.1	73.4
1951.....	90.5	95.5	95.4	95.6	99.2	92.7	78.9	82.3	77.8
1952.....	92.5	96.7	97.1	96.4	100.5	93.2	82.4	85.7	81.5
1953.....	93.2	96.4	95.6	96.6	99.8	94.0	86.0	90.3	84.9
1954.....	93.6	95.5	95.4	95.6	97.3	94.4	88.7	93.5	87.4
1955.....	93.3	94.6	94.0	94.9	95.4	94.4	90.5	94.8	89.4
1956.....	94.7	95.5	94.7	95.9	95.4	96.5	92.8	96.5	91.9
1957.....	98.0	98.5	97.8	98.8	98.5	99.1	96.6	98.3	96.1
1958.....	100.7	100.8	101.9	99.9	100.0	99.8	100.3	100.1	100.2
1959.....	101.5	100.9	100.3	101.2	101.5	101.0	103.2	101.6	103.6
1960.....	103.1	101.7	101.4	101.7	100.9	102.6	106.6	103.1	107.4
1961.....	104.2	102.3	102.6	102.0	100.8	103.2	108.8	104.4	110.0
1962.....	105.4	103.2	103.6	102.8	101.8	103.8	110.9	105.7	112.1
1963.....	106.7	104.1	105.1	103.5	102.1	104.8	113.0	106.8	114.5
1964.....	108.1	105.2	106.4	104.4	103.0	105.7	115.2	107.8	117.0
1965.....	109.9	106.4	108.8	105.1	102.6	107.2	117.8	108.9	120.0
1966.....	113.1	109.2	114.2	106.5	102.7	109.7	122.3	110.4	125.0

¹ Beginning in January 1964, the index structure has been revised. The Bureau of Labor Statistics converted the Consumer Price Index series from a 1927-49=100 base to a 1967-69=100 as of January 1962. Index users who desire to maintain previous index series on a 1947-49 base may obtain such indexes from the Bureau, upon request.

² Not available.

NOTE.—The "all items" and "food" indexes are available monthly from 1913; "rent" annually from 1912 through 1918, for varied intervals (generally semi-annually or quarterly) from 1919 through September 1940, monthly from October 1940 through September 1944, quarterly from December 1944 through January 1947, and monthly from February 1947 to date; all other groups, selected months for 1935 and 1936, quarterly from 1937 through 1946, and monthly from 1946 to date.

Source: Department of Labor.

used to identify each of the 400 items so that, insofar as possible, prices are obtained for articles of the same quality in successive periods. Revisions in the specifications are made from time to time as production changes and descriptions become obsolete.

PRICING PROCEDURES

Current prices for the 400 items are collected regularly from a list of stores and service establishments in the 56 cities. This list includes chain stores, independent stores, department stores, specialty stores,

and public utilities which have been selected by BLS as representative of the types of outlets in which wage-earner and clerical-workers make their purchases. Prices are also collected on the services of physicians and dentists, hospitals and beauty parlors, repairmen and service contractors.

Prices for most items are collected at intervals ranging from every month to every third month. A few items are priced semiannually or annually. Food pricing is conducted each month in all cities. In the five largest cities most goods and services are priced every month. Rent in these five cities is priced every second month and some items such as medical care, alcoholic beverages, tobacco and certain services are priced quarterly or semiannually. In the remaining 51 cities, prices for foods and some other goods and services, such as fuels, used cars, streetcar and bus fares, and a few other important items, are collected each month. For most of the remaining items prices are collected every third month. Pricing in these 51 cities is on a rotating cycle, so that several cities of each size group are priced each month. Prices for most unpriced items are held constant between the scheduled pricing periods in a given city in the computation of the monthly national index.

Prices for practically all of the commodities and most of the services are collected by personal interview. A few prices (e.g., public utility rates and fuel prices) are collected by mail.

STATISTICAL PROCEDURES

The purpose of the index is to measure price change, i.e. to show how much more or less it would cost to purchase the same quantities and qualities of goods and services in one period than in an earlier period. The first step in the index computation is to calculate for each city, a price relative for each item by comparing the prices reported for that particular item by the same retail outlets as in the preceding period. This relative change for the item is next multiplied by the estimated cost in the preceding period for a fixed quantity of the item. (The fixed quantity, or weight, for each item is determined by the average annual quantity of that item purchased by urban wage-earner and clerical-worker families in the years 1960-61, plus the purchases of those unpriced commodities it represents in the index.) These calculations are then totaled for all items in a group—all food items, for

example, are combined into a total showing the food cost for the fixed quantities in the current period. This total is compared with the food total for the preceding period to give a measure of the average price change for all foods, from which the index number of food for each city is computed. Similar calculations are made for apparel, rent, and all other groups of items priced.

The national index is calculated by combining the city totals with weights based on estimated 1960 population of urban wage earner and clerical workers. Two-fifths of the weight is carried by the 12 largest cities; more than one-fourth by the 17 cities selected to represent the 56 cities with populations of 250,000 to 1,400,000; nearly 15 percent by the 10 cities selected to represent the 145 cities with populations of 50,000 to 250,000; and one-fifth by the 17 cities selected to represent the over 3,000 towns with populations ranging from 2,500 to 50,000.

HISTORICAL SERIES

In addition to the national index, separate indexes are computed for 23 of the 56 cities—monthly for the 5 largest and quarterly for the other 18.

Beginning with the January 1962 index, the Consumer Price Index was converted to the standard reference base period of 1957-59=100 from the former base 1947-49=100. No other aspects of the index, such as weight structure, and city and item samples, were changed in connection with the rebasing. Historical tables of monthly and annual price indexes on the 1957-59 base are available upon request to the Bureau of Labor Statistics. As a convenience to users of the index, the all items and group indexes will continue to be published on the 1947-49=100 base indefinitely.

National indexes are shown for all items and for major commodities and services groupings back to 1935 in the accompanying table.

Over this period major revisions, incorporating expenditure patterns for 1934-36 and 1950 and other changes were introduced by linking—in 1940 and 1953 respectively; other minor revisions were introduced at other points in the series. A third major revision was completed with the release of the January 1964 index; this incorporated a new weight structure, and updated city, commodity and outlet samples and certain improvements in statistical procedures, such as greater use of probability sampling and more flexible use of specification pricing.

The relative importance of the various groups shown in the table of indexes can be seen in the following table which compares relative importances in the old and new series for December 1963:

Relative Importance of Specified Groups in the CPI, December 1963, Old and New Series

Specified group	New series	Old series
All items.....	100.00	100.00
All commodities.....	65.97	67.13
All food.....	22.43	28.18
All commodities less food.....	43.54	39.55
All durable commodities.....	18.78	17.53
All nondurable commodities, less food.....	24.76	22.02
All services.....	34.03	32.27
Rent.....	5.50	6.16
Services less rent.....	28.53	26.11

USES AND LIMITATIONS

The index is designed to measure only changes in prices, not expenditures resulting from changes in purchasing habits or standards of living. Also, it measures price changes for only a limited population group: wage earners and salaried clerical workers living in urban areas. Other qualities of commodities and weights would have to be used to measure price changes for other groups, such as farm families, retired people, etc. The fixed market basket represents the average quantities bought by all wage earners and clerical workers and is not necessarily representative of the purchases made by any single family or individual consumer.

The city indexes indicate the difference in the rate of price movement in the various cities, but should not be used to compare price levels in one city with those in another. For instance, if the index for

city A is 113 and that for city B is 115, it does not necessarily follow that prices are higher in city B than in city A, since the base-period prices may have been higher in city A. These indexes do show that prices have increased more rapidly since the base period in city B than in city A.

Although efforts are made to minimize the effects of quality changes on the "fixed market basket," it has not been possible thus far to adjust completely for these effects.

REFERENCES

The basic release of the index is the report entitled "Consumer Price Index," issued by the Bureau of Labor Statistics toward the end of the month following the month to which the figures relate. The periodic indexes—semiannually, quarterly, or monthly—for periods earlier than those shown in current issues of *Economic Indicators* are available from the Bureau of Labor Statistics upon request. Monthly indexes and average prices are available for individual food and fuel items; quarterly indexes are available for selected groups of items and for individual commodities and services other than foods and fuels. Descriptions of the procedures, uses, and limitations of the index are presented in varying degrees of technical detail in "The Consumer Price Index (Revised January 1964)—A Short Description," in *BLS Handbook of Methods for Surveys and Studies* (BLS Bulletin 1458), in "Consumer Price Indexes in the United States, 1963-58 (BLS Bulletin 1256)," in the *Consumer Price Index: History and Techniques* (BLS Bulletin 7517), and in various articles, such as the "Statistical Structure of the Revised Consumer Price Index," in the July 1964 issue of the *Monthly Labor Review*.

27. WHOLESALE PRICES

DESCRIPTION OF SERIES

The Wholesale Price Index, compiled by the Bureau of Labor Statistics, is a measure of the change of the composite of price movements in primary markets, and of the specific rates and directions of price movements for individual commodities and groups of commodities.

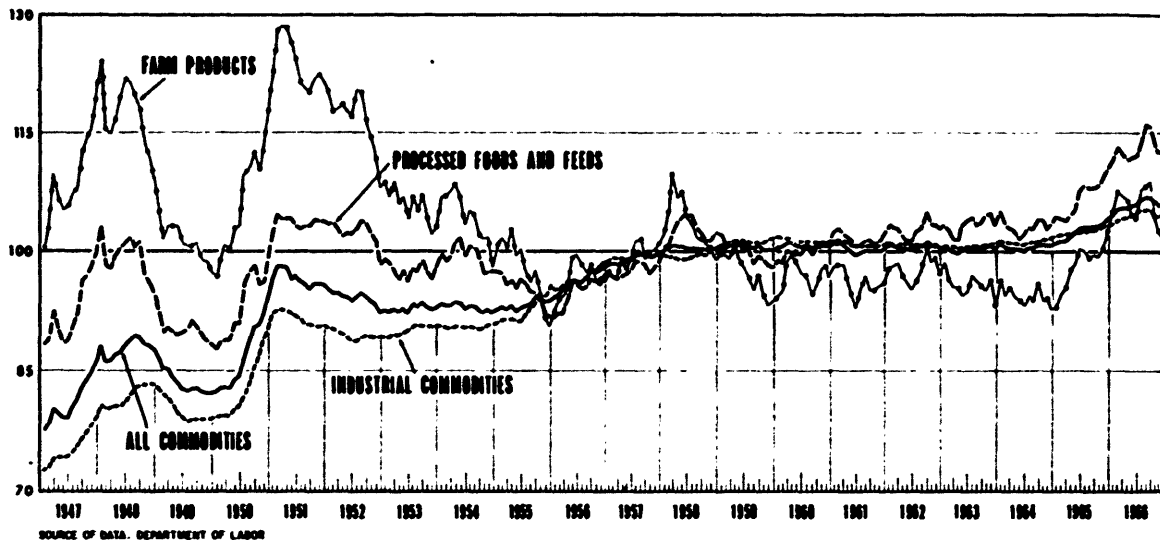
The index is based on price quotations for approximately 2,300 commodities selected to represent all commodities sold on primary markets in the United States. All types of commodities, from raw ma-

terials to fabricated products, are included in the index. For commodities traded on organized exchanges, such as livestock and gains, the quotations are furnished by the exchanges or Government agencies, or are taken from published sources. For some standardized commodities, such as certain chemicals and specified constructions of cotton gray goods, quotations are taken from authoritative trade publications. For the majority of fabricated products, prices are reported to the Bureau of Labor Statistics by producers.

Wholesale Prices, 1947-66

(Monthly data)

INDEX: 1957-59=100



SOURCE OF DATA: DEPARTMENT OF LABOR

Initial contacts with manufacturers to solicit their cooperation in reporting prices on specified commodities are made by personal interview; subsequent price reports are mailed to Washington by the reporting firm.

Prices are quoted at the level of the first significant commercial transaction, and, for each commodity, the reporter is requested to quote the price which he charges to specified types of purchasers. The prices relate to a particular day of the month—usually Tuesday of the week containing the 15th. Starting in January 1967, prices usually will relate to the Tuesday of the week containing the 13th.

Insofar as possible, identical qualities of the commodities are priced from period to period so that the index will measure only real price changes, not changes due to differences in qualities or terms of sales. When commodities of identical qualities are not available for pricing in successive periods, it is sometimes possible to obtain information on the cost of the features added to or removed from the original article. This can frequently be done, for example, when new models of machinery are introduced. In such cases it is possible to estimate the true price change, excluding the effect of changes due to specification modifications. When adequate estimates of the true price change cannot be made, the new commodity is substituted for the original in such a way that the level of the index is not affected by the

difference in their prices. To the extent that identical qualities are not available in successive periods and no adjustment can be made, the index may not precisely measure price changes.

A major revision of this index was introduced with release of the January 1952 index. The principal changes from the old series were: (1) increase in the number of items priced, from approximately 900 to about 2,000; (2) change in the basis for weights from quantity of shipments for sale in 1929-31 to 1947 value of shipments for sale; (3) change of the base period from 1926 to 1947-49; and (4) modification of the classification system. Weights based upon the industrial censuses for 1947 were used in the index from January 1947 through December 1954. Adjustments were made in January 1955 to bring the major groups weight totals into agreement with the 1952-53 average shipment values. New weights were introduced in January 1958 based upon the industrial censuses for 1954. Weights based upon the 1958 censuses were introduced early in 1961. Data from Alaska and Hawaii were included in this last weight revision. Weights based upon the 1963 industrial censuses were introduced in January 1967.

With release of data for January 1962, the indexes were shifted to a new base (1957-59=100). Data which had previously been available for each series on the 1947-49 base are available on the new base

TABLE 27.—Wholesale Prices, 1929-66

(1957-59=100)

Year	All commodities	Farm products	Processed foods and feeds	Industrial commodities					
				All industrials ¹	Industrial crude materials	Industrial intermediate materials ²	Producer finished goods	Consumer finished goods excluding food	
								Durable	Nondurable
1929.....	52.1	63.9	(?)	51.7	(?)	(?)	(?)	(?)	(?)
1930.....	47.3	54.0	(?)	48.1	(?)	(?)	(?)	(?)	(?)
1931.....	39.9	39.6	(?)	42.4	(?)	(?)	(?)	(?)	(?)
1932.....	35.6	29.4	(?)	39.7	(?)	(?)	(?)	(?)	(?)
1933.....	36.1	31.3	(?)	40.2	(?)	(?)	(?)	(?)	(?)
1934.....	41.0	39.9	(?)	44.2	(?)	(?)	(?)	(?)	(?)
1935.....	43.8	48.0	(?)	44.0	(?)	(?)	(?)	(?)	(?)
1936.....	44.2	49.4	(?)	44.9	(?)	(?)	(?)	(?)	(?)
1937.....	47.2	52.7	(?)	48.1	(?)	(?)	(?)	(?)	(?)
1938.....	43.0	41.9	(?)	46.1	(?)	(?)	(?)	(?)	(?)
1939.....	42.2	39.9	(?)	46.0	(?)	(?)	(?)	(?)	(?)
1940.....	43.0	41.3	(?)	46.8	(?)	(?)	(?)	(?)	(?)
1941.....	47.8	50.1	(?)	50.3	(?)	(?)	(?)	(?)	(?)
1942.....	54.0	64.6	(?)	53.9	(?)	(?)	(?)	(?)	(?)
1943.....	56.5	74.8	(?)	54.7	(?)	(?)	(?)	(?)	(?)
1944.....	56.9	75.3	(?)	55.6	(?)	(?)	(?)	(?)	(?)
1945.....	57.9	78.3	(?)	56.3	(?)	(?)	(?)	(?)	(?)
1946.....	66.1	90.6	(?)	61.7	(?)	(?)	(?)	(?)	(?)
1947.....	81.2	109.1	92.6	75.3	79.2	73.4	61.8	75.9	86.5
1948.....	87.9	117.1	99.1	81.7	92.5	79.8	67.4	81.1	92.0
1949.....	83.5	101.3	90.0	80.0	84.0	77.8	70.7	83.2	88.2
1950.....	86.8	106.4	93.2	82.9	93.6	81.4	72.4	84.1	89.6
1951.....	96.7	123.8	103.5	91.5	102.9	91.2	79.5	89.7	96.5
1952.....	94.0	116.8	102.3	89.4	93.1	88.3	80.8	90.4	94.1
1953.....	92.7	105.9	97.6	90.1	92.4	89.4	82.1	91.1	95.0
1954.....	92.9	104.4	99.3	90.4	88.0	89.8	83.1	91.8	95.3
1955.....	93.2	97.9	95.0	92.4	96.6	92.5	85.6	92.8	95.8
1956.....	96.2	96.6	94.8	96.5	102.3	97.0	92.0	95.9	97.7
1957.....	99.0	99.2	97.6	99.2	100.9	99.6	97.7	98.7	99.9
1958.....	100.4	103.6	102.5	99.5	96.9	99.4	100.2	100.1	99.3
1959.....	100.6	97.2	99.9	101.3	102.3	101.0	102.1	101.3	100.8
1960.....	100.7	96.9	100.0	101.3	98.3	101.4	102.3	100.9	101.5
1961.....	100.3	96.0	101.6	100.8	97.2	100.1	102.5	100.5	101.5
1962.....	100.6	97.7	102.7	100.8	95.6	99.9	102.9	100.0	101.6
1963.....	100.3	95.7	103.3	100.7	94.3	99.6	103.1	99.5	101.9
1964.....	100.5	94.3	103.1	101.2	97.1	100.2	104.1	99.9	101.6
1965.....	102.5	98.4	106.7	102.5	100.9	101.5	105.4	99.6	102.8
1966 ⁴	105.9	105.6	113.0	104.7	104.5	103.6	108.0	100.2	104.8

¹ Excludes all farm products and foods; coverage of the subgroups does not correspond exactly to coverage of this index.
² Excludes intermediate materials for food manufacturing and manufactured animal feeds; includes, in part, grain products for further processing.
³ Not available for this classification prior to 1947.
⁴ Preliminary.

NOTE.—Monthly indexes available for some groups from January 1926 on the 1927-29=100 base and on the 1947-49=100 base through 1961. Monthly indexes available for "all commodities" from 1920 through 1961 on the 1926=100 base.

Source: Department of Labor.

from the earliest date for which they were published on the former base.

The relative importance of the groups and subgroups in the Wholesale Price Index in December 1960 (1958 weights) and December 1966 (1963 weights) are shown in the following table.

Relative Importances of Components of the Wholesale Price Index, December 1960 and December 1966

Commodity grouping	December 1960 (1958 weights)	December 1966 (1963 weights)
All commodities.....	100.00	100.00
Farm products.....	10.64	10.59
Processed foods and feeds.....	16.53	17.69
Industrial commodities ¹	72.83	72.25
Industrial crude materials.....	2.70	2.77
Industrial intermediate materials ²	40.72	33.86
Producer finished goods.....	9.67	11.09
Consumer finished goods excluding food.....	21.17	21.31
Durables.....	8.22	7.14
Nondurables.....	12.95	14.17

¹ Excludes all farm products and foods; coverage of the subgroups does not correspond exactly to coverage of this index.

² Excludes intermediate materials for food manufacturing and manufactured animal feeds; includes, in part, grain products for further processing.

In addition to the comprehensive index, BLS publishes a large number of subindexes in varying degrees of detail. One series (see table) describes price changes at various stages of production. Commodities are first divided by stage of processing among three categories: (1) crude materials for further processing; (2) intermediate materials, supplies, and components; and (3) finished goods. Each of these is further subdivided according to end-use and durability. Another series consists of separate indexes for durable and nondurable goods which are published each month for all commodities, total manufactures, and total raw or slightly processed goods. Indexes by commodity groupings are given each month for 15 major groups, such as farm products and processed foods; 90 subgroups such as grains and cotton products; 314 product classes; and many individual product series. In addition to the above, indexes for 25 other special commodity groups are regularly issued including an index of prices of construction materials. Beginning in January 1967, some changes will be made in commodity classifications to provide more index detail and to eliminate some inconsistencies in the previous classification system.

STATISTICAL PROCEDURES

Basically, the same statistical method is used in computing the Wholesale Price Index and the Consumer Price Index. The individual price series are combined into the index by multiplying the value weight assigned each item by its current price relative and summing to obtain the current aggregate. The current aggregates are totaled by product classes, subgroups, groups, and all commodities. The current index for each of these is obtained by dividing the current aggregate by its appropriate value weight in the base period.

Each commodity price series in the index, as representative of prices for a group of commodities, is assigned its own direct weight (the value of the shipments for sale of that individual commodity), plus the weight of other commodities it was selected to represent in the index. Weights for commodities not priced for the index are assigned to commodities which are priced on the basis of available information on similarity of manufacturing process and price movements. Statistical studies and the advice of experts in industry and elsewhere are utilized in making these determinations.

USES AND LIMITATIONS

The index is based for the most part on producers' prices; therefore, it should not be used as a measure of price change at the wholesale market level. "Wholesale" as used in the title of this index refers to sales in large lots, not to prices paid or received by wholesalers, jobbers, or distributors.

A comparison of the movement of the subgroup indexes of the Wholesale Price Index and the Consumer Price Index should not be used as a measure of the change in retailers' margins for the specified groups of commodities, mainly because the two indexes are based on different weighting patterns and the lists of commodities priced are not identical.

The index is designed to measure real price changes, that is, changes which are not occasioned by changes in quality, quantity, terms of sale, etc. It is not designed to measure changes in manufacturers' average realized prices which are affected by product mix and terms of sale as well as by price movements.

REFERENCES

The basic release of the index is the report entitled *Wholesale (Primary Market) Price Index*, usually

issued by the Bureau of Labor Statistics during the second week of the month following the month to which the figures relate. This release contains indexes for groups and subgroups.

A more detailed report containing figures for all levels of the index plus a review of the month's price changes and special indexes is issued about three weeks after the press release.

Monthly indexes for periods earlier than those shown in current issues of *Economic Indicators* are available from the Bureau of Labor Statistics upon request. A detailed description of the index and its uses and limitations is presented in BLS Handbook of Methods for Surveys and Studies, Chapter 11 of BLS Bulletin 1458, October 1966. An article in the February 1962 *Monthly Labor Review* (Reprint No. 2384) and one of the detailed monthly reports (January-May 1961) gives information concerning the latest reweighting of the WPI and the effect that it has on the index. The detailed report for January 1962 contains information explaining the rebasing of the index to 1957-59=100 and also a

table showing the conversion factors that are to be used when converting a particular index from a 1947-49=100 base to the base of 1957-59=100 or vice versa. In addition, statistical series and summaries as well as descriptions of the procedures, uses, and limitations of the Wholesale Price Index and of the various special indexes are in a series of annual bulletins *Wholesale Prices and Price Indexes, 1954-56* (Bulletin 1214) which contains a description of the stage of processing series and the construction materials index, *Wholesale Prices and Price Indexes, 1957* (Bulletin 1235) which describes the indexes on durability of product, *Wholesale Prices and Price Indexes, 1958* (Bulletin 1257) which supplies information on the most recent change in procedures for the construction materials index, *Wholesale Prices and Price Indexes, 1959* (Bulletin 1295), *Wholesale Prices and Price Indexes, 1960* (Bulletin 1376), *Wholesale Prices and Price Indexes, 1961* (Bulletin 1382), *Wholesale Prices and Price Indexes, 1962* (Bulletin 1411), and *Wholesale Prices and Price Indexes, 1963* (Bulletin 1513).

28. PRICES RECEIVED AND PAID BY FARMERS

Prices Received by Farmers

DESCRIPTION OF SERIES

The Index of Prices Received by Farmers is computed by the Statistical Reporting Service (SRS) of the Department of Agriculture as a measure of the change from month to month in average prices of farm products. For most commodities, it is based on estimates of the average prices received for all grades and qualities at the point of first sale—generally the local market—about the middle of the month. For apples, peaches, pears, citrus, potatoes, tobacco, wholesale milk, broilers, and wool, monthly average prices rather than midmonth prices are used in computing the index.

The index is based on prices for 55 commodities which accounted for about 93 percent of the total cash receipts from marketings of all farm commodities in the years 1953-57. The price data are obtained chiefly by mail on a voluntary basis from buyers of farm products (e.g., country elevators, creameries and milk plants, cooperative marketing organizations, and local dealers) and other persons with a knowledge of farm product prices (for example, local bankers, and farmers).

In addition to the index for "all farm products," indexes are prepared for "all crops," with 11 sub-

groups, and for "livestock and products," with 4 subgroups. Five of these subgroup indexes (fresh fruit; fresh vegetables; potatoes, sweetpotatoes, and dry edible beans; dairy products; and poultry and eggs) are published also on a seasonally adjusted basis.

STATISTICAL PROCEDURES

Weights based on average quantities sold during 1953-57 have been used since September 1952 to combine the United States average prices for individual commodities into subgroup indexes. In combining the subgroup indexes into group and all-commodity indexes, the index numbers are weighted by the percentages that cash receipts from marketings for the particular commodity subgroups bear to total cash receipts for the same period—1953-57. For the official index the subgroups and group indexes are then converted from the 1953-57 to a 1910-14=100 base, the base period prescribed by law.

The accompanying tables show the Index converted to 1957-59=100 to facilitate comparison with other indexes.

Revisions have been made in the index series from time to time, mainly involving revisions in basic price series or changes in weights. A major revision in January 1950 put the index on a basis more consistent with that of the Parity Index, improved the weighting structure, and made minor changes in commodity coverage. Minor revisions in January 1954 incorporated revisions in component price series and reflected some revisions in the 1937-41 weight data. The latest major revision was made in January 1959 at which time the weight base period was shifted from 1937-41 to 1953-57, and improvements were made in the weighting and pricing system for vegetables and for noncitrus fruits. The new weighting structure was made effective as of September 1952. The following table shows the percent weights for important categories for the three periods 1924-29, 1937-41, and 1953-57:

Relative Weights for Index of Prices Received by Farmers

Commodity group	1924-29	1937-41	1953-57
All farm products.....	100.0	100.0	100.0
Crops.....	48.0	42.2	45.2
Food grains.....	8.9	7.0	7.9
Feed grains and hay.....	7.5	6.7	9.1
Cotton.....	13.9	8.3	8.4
Tobacco.....	2.6	3.7	4.1
Oil-bearing crops.....	2.3	3.1	4.9
Fruit.....	6.0	5.8	4.7
Commercial vegetables.....	3.5	4.8	4.2
Potatoes, sweetpotatoes, and dry edible beans.....	3.3	2.8	1.9
Livestock and products.....	52.0	57.8	54.8
Meat animals.....	26.1	28.6	29.1
Dairy products.....	15.1	17.7	14.6
Poultry and eggs.....	9.9	10.2	10.7
Wool.....	.9	1.3	.4

RELATION TO OTHER SERIES

This index should not be confused with the farm-product component of the Wholesale Price Index. There are significant differences. The Index of Prices Received by Farmers measures changes in prices at the point of first sale, and is based on average prices for all grades of a given commodity. The Wholesale Price Index, on the other hand, in general measures prices in selected central markets, and is based on prices of specific grades or qualities. Finally, there are differences in the weights and base periods used in the two indexes.

USES AND LIMITATIONS

The index is widely used as a measure of changes in average prices received by farmers for commodities

sold in local markets. It is a close approximation to a measure of the price component of receipts by farmers from the sale of farm products. It is used in computation of adjusted base-period prices, which are necessary for calculating parity prices under the formula prescribed by the Agricultural Adjustment Act of 1938, as amended.

The Index of Prices Received by Farmers is designed to measure the change in average prices for all grades and qualities of the products sold by farmers. Hence, the price changes it shows do not result wholly from price changes for specific grades, but may also reflect changes in the relative proportion of the various grades or qualities of commodities sold.

As noted above, the index is based on commodities which account for about 93 percent of the total value of farmers' sales. Adequate marketing and price data are not available for most of the other 7 percent (timber and other forest products, greenhouse products, and a number of miscellaneous and minor commodities), but these omissions are probably not significant with respect to the index as a whole.

REFERENCES

See below, under Prices Paid by Farmers.

Prices Paid by Farmers

DESCRIPTION OF SERIES

The Index of Prices Paid by Farmers for Commodities and Services, Including Interest, Taxes, and Farm Wage Rates (commonly called the Parity Index) is computed by the Statistical Reporting Service (SRS) of the Department of Agriculture. It is a measure of the changes in prices paid by farm families for a list of commodities and services used for family living and farm production.

The index is composed of five major groups; (1) prices paid for items used in family living, (2) prices for items used in farm production, (3) interest on indebtedness secured by farm mortgages, (4) taxes on farm real estate, and (5) rates of wages paid hired farm labor. The percents of the total weight which are accounted for by the groups and their principal components at different periods are given in the following table. Those utilized in the indexes subsequent to September 1952 are shown in the last column of the table.

Relative Weights for the Index of Prices Paid by Farmers, Including Interest, Taxes, and Farm Wage Rates

Item	Weight base period		
	1934-39 ¹	1937-41 ²	1946 ³
Commodities, interest, taxes, and cash wage rates.....	100.0	100.0	100.00
Living.....	41.2	44.0	39.50
Food (including tobacco) ⁴	14.8	16.7	13.40
Clothing.....	12.5	8.6	6.34
Autos and auto supplies.....	4.5	6.9	5.63
Household operations.....	3.9	5.9	5.77
Household furnishings.....	2.4	4.0	3.99
Building materials, house.....	3.1	1.9	4.37
Production.....	36.4	41.2	50.90
Feed.....	10.1	10.2	12.80
Livestock.....	4.4	5.3	4.60
Motor supplies.....	3.9	5.2	8.39
Motor vehicles.....	3.9	5.2	4.38
Farm machinery.....	3.4	4.5	5.21
Building and fencing materials.....	3.7	2.7	5.20
Fertilizer and lime.....	2.7	3.1	4.11
Equipment and supplies.....	3.3	3.3	3.66
Seeds.....	1.0	1.7	2.55
Total commodities.....	77.6	85.2	90.40
Taxes.....	5.7	3.8	2.04
Interest.....	6.5	3.0	.96
Cash wage rates.....	10.2	8.0	6.60

¹ 1910 to March 1935.
² March 1936 to September 1952, inclusive.
³ Subsequent to September 1952.
⁴ June 1936 forward.

The most recent revision of the index was in January 1959. The revised indexes are of the same general form as those of the preceding revision in 1950. There were two major changes in the revised series:

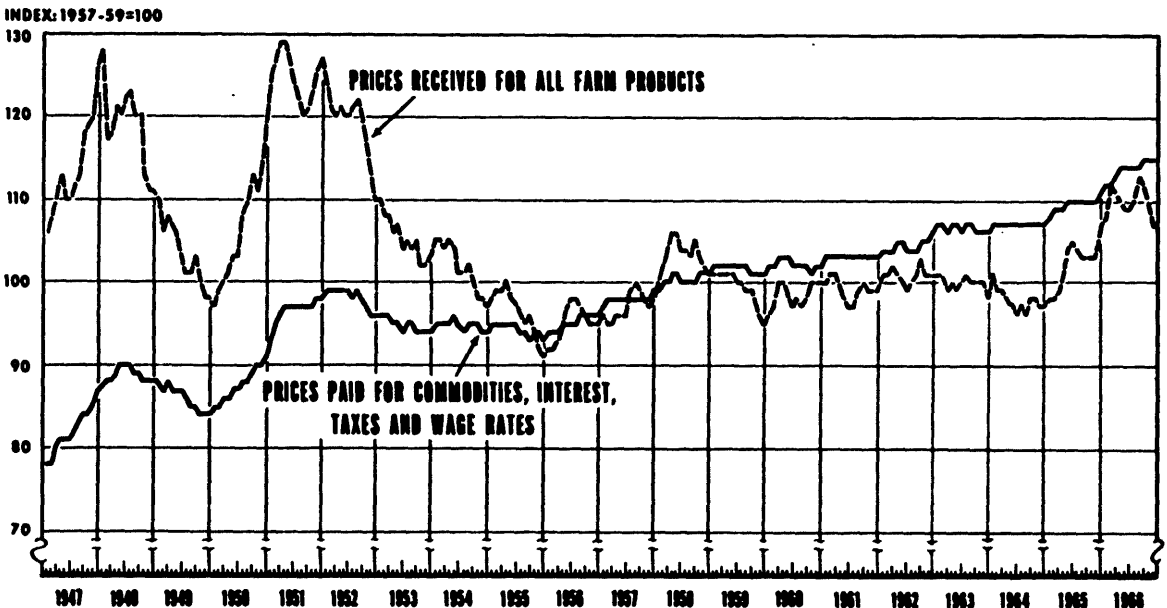
(1) a weighting pattern based on farmers' expenditures during 1955 was adopted for the period subsequent to September 1952, in place of the previous weighting pattern which related to 1937-41; and (2) the commodity content of the various groups was modernized and expanded. As of June 1966, the index of prices paid for items used in family living included price series for 252 commodities and services, and the index for items used in farm production included 253, with 42 series being used in both indexes.

STATISTICAL PROCEDURES

The Index of Prices Paid by Farmers for commodities and services is based upon prices of commodities reported by chain and independent stores and costs of electricity and telephone services reported by farmers. Beginning in March 1953 the index has been based primarily on price information collected monthly from chain stores and quarterly from independent stores. Price changes for the independent stores in interquarterly months are estimated largely from changes in chain-store prices. Information on average costs of electricity and telephone services is obtained in an annual survey of about 15,000 farmers. The index base period 1910-14 is set by law. As in the case of the Index of Prices Received

Prices Received and Paid by Farmers, 1947-66

(Monthly data)



SOURCE OF DATA: DEPARTMENT OF AGRICULTURE

by Farmers, the Parity Index also is shown in the table on a 1957-59=100 base to facilitate comparisons with other indexes.

Price reports for independent dealers are received in the SRS State offices, where average prices for the State are calculated for each item. Chain store prices and farm utility costs are reported directly to the Washington office of SRS. Where appropriate, they are combined with State averages of independent store prices. Final estimates by States and commodities are combined into national averages for each item by weighting each State price estimate by an estimate of the amount of that commodity purchased by farmers in that State. These estimates of purchases are based upon the distribution of farm population, farm income, farm expenditures and other available information.

From the national averages for each item the SRS computes subgroup indexes for 15 types of expenditures. Six subgroup indexes (food and tobacco, clothing, autos and auto supplies, household operations, household furnishings, and building materials for farm homes) are combined into the index of prices paid by farmers for items used in family living; and 9 subgroup indexes (feed, livestock, motor supplies, motor vehicles, farm machinery, building and fencing materials, fertilizer and lime, equipment and supplies, and seed) are combined into the index of prices paid for items used in farm production.

These two group indexes of prices paid for items used in family living and farm production are then combined with the indexes for interest, taxes, and wage rates to form the Parity Index. The index of interest charges is developed annually on the basis of data obtained from lending agencies and special surveys. The tax index is developed annually from data obtained in special surveys. The wage-rate index is based on information collected in a quarterly mail survey of farmers.

RELATION TO OTHER SERIES

The Index of Prices Paid by Farmers for family-living items is frequently used with the Consumer Price Index (CPI) to compare the movements of retail prices as they affect farmers and urban workers, respectively. Even though in some periods the movements of the two indexes have been quite similar, there are important differences between the two indexes which on occasion give rise to differences in movements. Some of the principal differences are:

1. The lists of commodities included in the two indexes are not identical, and different weights are used for individual commodities, since the CPI is based on the purchasing habits of urban families and the farm family-living index on those of farm families.

2. Expenditures for all major commodity and service groups purchased by urban families are represented in the weights for the CPI. It has not been possible to include in the family living component of the Parity Index price series for certain types of farm family-living expenditures. For example, medical care, utilities, public transportation, and personal care, are directly represented in the CPI; but of these only telephone and electricity costs are represented in the farm family-living index. Since few farmers rent homes other than those that are rented with the farm, the farm family-living index does not include residential rents. The CPI price series represent various costs of homeownership—purchase, repairs and maintenance, and insurance; whereas the prices of building materials for houses comprise the only representation of this expenditure group which it has been possible to include in the farm family-living index.

3. Although both the CPI and the farm family-living index are composed of a fixed list of items for any two successive dates, the CPI measures price changes in successive periods for narrowly specified descriptions of the items, whereas the Index of Prices Paid by Farmers is designed to measure average price changes for those qualities of each item which are currently purchased in greatest volume by farmers. These qualities may change in response to (a) changes, resulting from technological developments and other causes, in the quality or types of commodity stocked by merchants, or (b) changing levels of farm income.

USES AND LIMITATIONS

The Index of Prices Paid by Farmers for Commodities and Services, including interest, taxes, and farm wage rates is based for the most part upon data relating to the middle of a given month. For certain uses, in accordance with statutory formulae, it constitutes the Parity Index for the following month; that is, the Index and parity prices of individual commodities computed from it are the legally applicable index and parity prices for the month following that to which the prices-paid data

TABLE 28.—Prices Received and Paid by Farmers, 1929-66

Year	Prices received by farmers			Prices paid by farmers			Parity ratio ¹	
	All farm products	Crops	Livestock and products	All items, interest, taxes, and wage rates (parity index)	Family living items	Production items	Actual percent	Adjusted percent ²
1929.....	61	61	62	55	54	56	92	(³)
1930.....	52	52	52	52	50	52	83	(³)
1931.....	36	34	38	44	43	43	67	(³)
1932.....	27	26	28	38	37	38	58	(³)
1933.....	29	32	27	37	38	38	64	66
1934.....	37	44	32	41	43	44	75	80
1935.....	45	46	44	42	43	46	88	95
1936.....	47	49	46	42	43	46	92	95
1937.....	51	53	49	45	45	50	93	97
1938.....	40	36	43	42	43	47	78	83
1939.....	39	37	41	42	42	46	77	85
1940.....	42	41	42	42	42	47	81	88
1941.....	51	48	53	45	45	50	93	98
1942.....	66	65	66	52	52	57	105	109
1943.....	* 80	84	* 77	58	58	63	113	116
1944.....	* 82	89	* 76	62	61	66	108	110
1945.....	* 86	91	* 82	65	64	67	109	111
1946.....	* 98	102	* 94	71	71	73	113	115
1947.....	114	118	111	82	83	85	115	116
1948.....	119	114	122	89	88	95	110	111
1949.....	103	100	106	86	85	91	100	100
1950.....	107	104	108	87	86	94	101	102
1951.....	125	119	130	96	94	104	107	108
1952.....	119	120	119	98	95	104	100	101
1953.....	105	108	104	95	94	97	92	93
1954.....	102	108	97	95	94	97	89	89
1955.....	96	104	90	94	95	96	84	85
1956.....	95	105	88	95	96	95	83	84
1957.....	97	101	94	98	99	98	82	85
1958.....	104	100	106	100	100	100	85	88
1959.....	99	99	100	102	101	102	81	82
1960.....	99	99	98	102	102	101	80	81
1961.....	99	102	98	103	102	101	79	83
1962.....	101	104	99	105	103	103	80	83
1963.....	100	107	95	107	104	104	78	81
1964.....	98	107	91	107	105	103	76	80
1965.....	102	104	101	110	107	105	77	82
1966.....	110	105	113	114	110	108	80	86

¹ Percentage ratio of Index of Prices Received by Farmers to Index of Prices Paid, including interest, taxes, and wage rates on 1910-14 base.

² Not available.

³ The adjusted parity ratio reflects Government payments made directly to farmers.

* Includes wartime subsidies paid on beef cattle, sheep, lambs, milk, and butterfat between October 1943 and June 1946.

NOTE.—For the Index of Prices Received by Farmers, monthly and annual data available from January 1910; for the Indexes of Prices Paid, annual data available from 1910, quarterly from 1923, and monthly from January 1937.

The official indexes are published on a 1910-14=100 base as required by law. The indexes have been converted to 1957-59=100 for the above tables to facilitate comparison with other indexes.

Source: Department of Agriculture.

relate. Agricultural support programs are in many cases based on these parity prices.

The Index of Prices Paid by Farmers including interest, taxes, and farm wage rates is a close approximation to a measure of the price component of aggregate expenditures by farmers for living and production purposes.

REFERENCES

The Parity Index and the Index of Prices Received by Farmers are published monthly by SRS in *Agricultural Prices*. Revisions of the Parity Index are published in "*Agricultural Prices*" in September of each year; revised indexes of Prices Received by Farmers, in May. A comprehensive discussion of the January 1959 revision of the price indexes is presented in the April-July 1959 issue of *Agricultural Economic Research*. A detailed description of the price series is presented in the Statistical Reporting Service of the U.S. Department of Agriculture—Scope and Methods (Miscellaneous Publication No. 967 of the Department of Agriculture).

The Parity Ratio and the Adjusted Parity Ratio

Parity Ratio.—The Parity Ratio is computed by dividing the Index of Prices Received by Farmers by the Index of Prices Paid by Farmers, including Interest, Taxes, and Farm Wage Rates. It measures the extent to which prices farmers receive for farm products are on the average higher or lower in relation to the prices they pay for goods and services than they were in the base period 1910-14. This is strictly and solely a price comparison.

Adjusted Parity Ratio.—In view of the importance of non-price income supplements of recent years, such as payments from Federal farm programs, a summary figure somewhat comparable to the Parity Ratio that incorporates and reflects these supplements to farm income has been developed. It is identified as an "Adjusted Parity Ratio". It allows for direct Government payments made to farmers, and starts with the year 1933, the first year when such payments were made. See *Agricultural Prices*, January 1967, for a more detailed explanation.

MONEY, CREDIT, AND SECURITY MARKETS

29. MONEY SUPPLY

DESCRIPTION OF SERIES

"Money supply" is defined here as the total of the public's holdings of coin, currency, and demand deposits. The currency component is the total of coin and currency in circulation outside the Treasury and Federal Reserve Banks, from which has been deducted the vault cash holdings of commercial banks (but not that of other financial institutions). The deposit component includes deposits of individuals, partnerships, and corporations, as well as

commercial bank demand deposit liabilities to non-bank financial institutions, mutual savings banks, foreign banks, and State and local governments, but excludes those to other commercial banks (with minor exceptions) and to the Federal government (these being shown as a separate series). Foreign balances with Federal Reserve banks also are included in the deposit component.

Time deposits are not included in the "money supply" but are nevertheless closely related because of their high liquidity. They consist of savings

TABLE 29.—Money supply, 1947-66

(Averages of daily figures, billions of dollars)

End of year ¹	Money supply			Time deposits ²	Money supply			Time deposits ²	U.S. Government demand deposits ²
	Total	Currency outside banks	Demand deposits		Total	Currency outside banks	Demand deposits		
	Seasonally adjusted				Unadjusted				
1947.....	113.1	26.4	86.7	35.4	115.9	26.8	89.1	35.1	1.0
1948.....	111.5	25.8	85.8	36.0	114.3	26.2	88.1	35.7	1.8
1949.....	111.2	25.1	86.0	36.4	113.9	25.5	88.4	36.1	2.8
1950.....	116.2	25.0	91.2	36.7	119.2	25.4	93.8	36.4	2.4
1951.....	122.7	26.1	96.5	38.2	125.8	26.6	99.2	38.0	2.7
1952.....	127.4	27.3	100.1	41.1	130.8	27.8	103.0	40.9	4.9
1953.....	128.8	27.7	101.1	44.5	132.1	28.2	103.9	44.2	3.8
1954.....	132.3	27.4	104.9	48.3	135.6	27.9	107.7	48.0	5.0
1955.....	135.2	27.8	107.4	50.0	138.6	28.4	110.2	49.6	3.4
1956.....	136.9	28.2	108.7	51.9	140.3	28.8	111.5	51.4	3.4
1957.....	135.9	28.3	107.6	57.4	139.3	28.9	110.4	56.7	3.5
1958.....	141.1	28.6	112.6	65.4	144.7	29.2	115.5	64.6	3.9
1959.....	141.9	28.9	113.1	67.4	145.6	29.5	116.1	66.6	4.9
1960.....	141.1	28.9	112.1	72.9	144.7	29.6	115.2	72.1	4.7
1961.....	145.5	29.6	116.0	82.7	149.4	30.2	119.2	81.8	4.9
1962.....	147.5	30.6	116.9	97.8	151.6	31.2	120.3	96.7	5.6
1963.....	153.1	32.5	120.6	112.2	157.3	33.1	124.1	111.0	5.1
1964.....	159.7	34.2	125.4	126.6	164.0	35.0	129.1	125.2	5.5
1965.....	167.2	36.3	130.9	146.9	172.0	37.1	134.9	145.2	4.6
1966.....	170.3	38.3	132.1	158.0	175.2	39.1	136.2	156.3	3.5

¹ Averages of daily December figures.

² Deposits at all commercial banks.

Source: Board of Governors of the Federal Reserve System.

accounts of individuals and nonprofit organizations, and other time deposits held by individuals, partnerships, corporations, states and political subdivisions, and foreign central governments and official institutions. Certificates of deposit are redeemable after 30 days' notice, and prior notification of up to 30 days may also be required for withdrawals from savings accounts. Banks may pay interest on time deposits but not on demand deposits. The published series cover deposits at all commercial banks.

All monthly and semi-monthly data are shown as averages of daily figures while annual data are represented by averages of daily figures for December. In general the series cover all banks in the United States, with upward adjustments (amounting to approximately \$400 million for demand deposits) during 1959 for the admission of Alaska and Hawaii to statehood.

STATISTICAL PROCEDURES

The total of demand deposits is derived, on the basis of daily figures reported by member banks, as follows: from the total of reported demand deposits of member banks (excluding interbank deposits of domestic commercial banks) cash items in process of collection and U.S. Government demand deposits are deducted. An estimate of deposits in nonmember banks based on reported daily figures from "country" member banks (those outside the larger centers) in conjunction with semi-annual "call report" data from non-member banks is added. From this aggregate is deducted the Federal Reserve "float", the resulting figure being the estimate for commercial bank demand deposits. Foreign balances with Federal Reserve Banks are added to the commercial bank demand deposits.

"Currency" is derived from daily Treasury figures for money "in circulation" (i.e., outside Treasury and the Federal Reserve Banks) from which is deducted an estimate of vault holdings of commercial banks, based on reported member bank data and an estimate for vault cash holdings of non-member banks prepared by a method similar to that for estimating deposits.

Seasonal adjustment is made separately for the two components, using a ratio-to-moving-average procedure. Adjustment factors applied to the 12 monthly periods for 1966 are shown in the table at the top of the next column.

Estimates for time deposits and U.S. government deposits, also shown in the table on page 107, are arrived at in a similar manner.

Seasonal Adjustment Factors for 1966

	Deposit component	Currency component	Time deposits adjusted
January.....	103.9	99.8	99.7
February.....	100.0	98.9	100.1
March.....	99.2	99.0	100.5
April.....	100.8	99.1	100.5
May.....	97.7	99.2	100.6
June.....	98.3	99.8	100.3
July.....	98.6	100.4	100.3
August.....	97.9	100.2	100.2
September.....	99.2	100.0	99.9
October.....	100.3	100.2	99.9
November.....	101.0	101.3	99.2
December.....	103.1	102.1	98.9

RELATION TO OTHER SERIES

The measure of "money supply" presented here is to be distinguished sharply from the well-known Treasury figure for "money in circulation." The latter is a much smaller aggregate covering only paper money and coin outside the Treasury and Federal Reserve Banks, and does not include the much larger volume of demand deposits. M₁ is the Treasury figure identical with the currency component of the money supply figure, since the latter excludes from the total "in circulation" the relatively small amount of vault cash held by commercial banks.

The money supply series here presented differs also from certain other similar data on deposits and currency, also published by the Federal Reserve. Thus, as part of its Consolidated Condition Statement for Banks and the Monetary System, the Federal Reserve presents money supply estimates as of the last Wednesday of each month which differ in certain technical respects from the series shown here. However, this older series provides a measure of deposits and currency over a much longer time period.

As part of the Flow of Funds accounts published in the *Federal Reserve Bulletin*, quarterly figures on changes in demand deposits and currency are presented, again with certain technical differences from the series here presented.

The series on money supply in its present form appeared first in 1962, with data revised back to 1947. It is similar to the series on deposits and currency shown in the table on page 110 as one of the components of "Selected Liquid Assets Held by the Public." However, the latter is net of deposits held

by mutual savings banks and savings and loan associations.

USES AND LIMITATIONS

Changes in the total of deposits and currency, whether regarded as causative or symptomatic, are important factors in the analysis of economic change and of monetary policy. The definition of money supply here used has been chosen from among alternative definitions as one closely related to the mechanism through which money is created or extinguished. The money supply series permit a reasonably adequate measurement of the level and movement of this aggregate. They should be considered in the light of changes in the use of deposits as measured in the series on bank debits.

For analytical uses requiring attention to a broader group of highly liquid assets possessing some of the attributes of money, the reader may turn to table 30, "Selected Liquid Assets Held by the Public."

30. SELECTED LIQUID ASSETS HELD BY THE PUBLIC

DESCRIPTION OF SERIES

The accompanying table shows public holdings of major types of liquid assets—that is, cash or assets readily convertible into cash with minimum risk of loss. In addition to currency and demand deposits, the table includes time deposits in commercial and mutual savings banks and the Postal Savings System—savings and loan shares, savings bonds, and short-term U.S. Government securities. Certain other assets ordinarily regarded as important liquidity instruments, particularly prime commercial paper, bankers acceptances, and credit union shares, have been omitted because adequate data are not available. However, these assets would add less than 5 per cent to the existing total.

For purposes of this table, public holdings include all holdings except those of the United States Government, Government agencies and trust funds, Federal Reserve Banks, and domestic commercial banks. The principal holders are individuals, partnerships, and nonbank corporations, State and local governments, corporate pension funds, non-profit institutions, and foreign holders, including foreign banks, Governments, and international institutions.

REFERENCES

The money supply series are issued weekly by Federal Reserve, and appear monthly in the *Federal Reserve Bulletin*. An article in the August, 1962 *Bulletin* presents a technical discussion of the derivation of the series and a comparison with similar series. Weekly and monthly average data for money supply, time deposits, and U.S. Government demand deposits were most recently revised in September 1966, when data for the period 1959–1966 were published in the *Federal Reserve Bulletin*, pages 1303–1315. Data for the period 1947 to June 1964 appear in the *Federal Reserve Bulletin* for June 1964. The related Consolidated Condition Statement continues to appear in the monthly release J. 4 and in the *Bulletin*, with data for most component series for selected years back to 1929. Historical data on deposits and currency are available in *Banking and Monetary Statistics* from 1892 and in *Historical Statistics of the United States* from 1867.

There are substantial differences in the ownership characteristics of the various types of assets. Deposits in mutual savings banks and the Postal Savings System, savings and loan shares, and savings bonds are almost entirely personal savings of individuals, while short-term U.S. Government securities are held mainly as liquidity reserves by financial and non-financial businesses. Although the bulk of commercial bank time deposits are savings accounts of individuals, substantial amounts of other time deposits are also held by businesses, State and local governments, and foreign banks and international institutions.

All of the series were adjusted for seasonal variation by the X-9 variant of Method II developed by the Bureau of the Census. Demand deposits and currency were independently adjusted for seasonal variation and then combined into a single seasonally adjusted series. For these two series special adjustments were made for those months in which the seasonal movement is greatly affected by the date on which the last Wednesday falls. The rationale for these adjustments is contained in an article in the *Federal Reserve Bulletin* for February 1960, page 133.

TABLE 30.—Selected Liquid Assets Held by the Public, 1946-66

(Amounts in billions of dollars, seasonally adjusted)

End of year	Total selected liquid assets	Demand deposits and currency ¹	Time deposits		Postal Savings System	Savings and loan shares	U.S. Government savings bonds	U.S. Government securities maturing within one year ²
			Commercial banks	Mutual savings banks				
1946.....	239.1	108.5	33.0	16.9	3.3	8.5	48.6	19.4
1947.....	246.2	112.4	35.3	17.8	3.4	9.7	50.9	16.6
1948.....	254.1	110.5	35.9	18.4	3.3	11.0	53.4	21.6
1949.....	262.1	110.4	36.3	19.3	3.2	12.5	55.0	25.5
1950.....	271.4	115.5	36.6	20.1	2.9	14.0	55.8	26.4
1951.....	281.0	120.9	38.2	20.9	2.7	16.1	55.4	26.8
1952.....	294.0	125.5	41.2	22.6	2.5	19.2	55.7	29.3
1953.....	311.5	127.3	44.6	24.4	2.4	22.8	55.6	34.4
1954.....	320.3	130.2	48.2	26.3	2.1	27.2	55.6	30.6
1955.....	332.5	133.3	49.7	28.1	1.9	32.0	55.9	31.6
1956.....	343.2	134.6	52.0	30.0	1.6	37.0	54.8	33.2
1957.....	356.0	133.5	57.5	31.6	1.3	41.7	51.6	38.8
1958.....	373.1	138.8	65.4	33.9	1.1	47.7	50.5	35.6
1959.....	393.9	139.7	67.4	34.9	.9	54.3	47.9	48.8
1960.....	399.2	138.4	73.1	36.2	.8	61.8	47.0	41.9
1961.....	424.6	142.6	82.5	38.3	.6	70.5	47.4	42.6
1962.....	459.0	144.8	98.1	41.4	.5	79.8	47.6	46.8
1963.....	495.4	149.6	112.9	44.5	.5	90.9	49.0	48.1
1964.....	530.5	156.7	127.1	49.0	.4	101.4	49.9	46.1
1965.....	572.9	164.0	147.1	52.6	.3	109.7	50.5	48.6
1966 (preliminary).....	601.0	168.2	159.4	55.1	.1	113.3	50.9	53.9

¹ Agrees in concept with money supply, except for deduction of demand deposits held by mutual savings banks and savings and loan associations. Data for last Wednesday of month.

² Excludes holdings of Government agencies and trust funds, domestic commercial and mutual savings banks, Federal Reserve Banks, and beginning February 1960, savings and loan associations.

Source: Board of Governors of the Federal Reserve System.

Demand Deposits and Currency

The figures are a combination of two series—"demand deposits adjusted" and "currency outside banks."

By "demand deposits adjusted" is meant total demand deposits at commercial banks in the United States less demand deposits due to the U.S. Government, to other domestic commercial banks, to mutual savings banks, or to savings and loan associations. Demand deposits held by mutual savings banks and savings and loan associations are deducted to avoid double counting, since liquid assets held by the public in these two types of institutions are shown separately. Cash items reported as in process of collection and Federal Reserve float have been eliminated. The series differs in concept from that shown under "Money Supply" above only in the deduction of deposits of mutual savings banks and savings and loan associations.

"Currency outside banks" is again consistent in concept with that shown under "Money Supply" except that it excludes cash in the vaults of mutual savings banks as well as commercial banks in the United States.

Demand deposits and currency are as of the close of business of the last Wednesday of the month and are available in the Federal Reserve J-4 release and the *Federal Reserve Bulletin*.

Time Deposits

Time deposits at commercial banks are roughly the same in concept as shown in the "Money Supply" table, but do exclude postal savings redeposited in commercial banks. Figures are as of the last Wednesday of each month, except that June 30 and December 31 "call report data" were used when available or Federal Reserve estimates were made for those dates.

Deposits at mutual savings banks are as of the end of the month and are supplied to the Federal Reserve by the National Association of Mutual Savings Banks. They include a small amount of demand deposits.

Figures for both commercial and mutual savings banks are included in the Federal Reserve J-4 release and are published in the *Federal Reserve Bulletin*, with some subsequent adjustment of commercial bank time deposits by the Federal Reserve.

Postal Saving System

Data are end-of-month totals for savings accounts, obtained from the Post Office Department.

Savings and Loan Shares

Data are end-of-month figures compiled by the Federal Savings and Loan Insurance Corporation and are published in the *Federal Reserve Bulletin*, except that prior to 1955 data are Federal Reserve estimates based on monthly figures of inflow of new savings and withdrawal of savings capital compiled by the Federal Home Loan Bank Board.

United States Savings Bonds

Figures include all types of savings bonds held by investors other than domestic commercial banks and

United States Government agencies and trust funds. To avoid double counting, holdings of mutual savings banks are excluded throughout and holdings of savings and loan associations beginning February 1960. Figures show par value and are partly estimated. They are as of the end-of-month and are obtained from the United States Treasury Department's survey of ownership of U.S. Government securities.

United States Government Securities Maturing Within One Year

Beginning December 1950 figures include Treasury marketable securities and Federal agency securities maturing within one year, except holdings of domestic commercial, mutual savings, and Federal Reserve Banks, Government agencies and trust funds, and beginning February 1960, savings and loan associations. Figures show par value and are partly estimated. They have been adjusted to include partially tax-exempt securities 12 months prior to first call date, and, prior to 1956, nonmarketable Treasury savings notes with maturities up to 36 months. Prior to December 1950, figures for marketable issues include securities callable within one year. Figures are as of the end of the month and are obtained from the U.S. Treasury's survey of ownership of U.S. Government securities.

31. BANK LOANS, INVESTMENTS, DEBITS, AND RESERVES

DESCRIPTION OF SERIES

Major loan and investment categories are shown for all commercial banks in the United States. Commercial banks are in general distinguished from other lending institutions by the fact that they accept deposits subject to check or withdrawal on demand. They numbered 13,784 on November 30, 1966. Mutual savings banks are not included, nor are savings and loan associations or, in general, any other "banking" institutions which do not receive demand deposits. The "all commercial banks" series has been increased by the addition of banks in Alaska and Hawaii in January, April, and August, 1959, with an increase in total loans and investments of approximately \$650 million.

The series for "Weekly reporting member banks" for which "business loans" are shown was revised in July 1966. The revised series covers virtually all member and nonmember commercial banks in the

U.S. with deposits over \$100 million. There are about 340 banks holding more than 61 percent of the assets of all commercial banks (as of July 1966), reporting in the revised series (see page 1137 of the August 1966 *Federal Reserve Bulletin*).

The category of "business loans" is a major component of total loans. In general, it includes all commercial and industrial loans (and agricultural loans prior to 1946 except those secured by real estate or for the purpose of purchasing or carrying securities and loans to financial institutions. The exclusion of the latter category was accomplished by the revision of July 1959, when such loans were reclassified, with a reduction of approximately 14 percent in the total of commercial and industrial loans. Data prior to July 1959 are not available on the revised basis. The weekly reporting banks currently account for about 75 percent of business loans at all commercial banks.

The series on bank debits outside New York City covers debits to demand deposit accounts except interbank and U.S. Government accounts. Figures are aggregates for approximately 1,700 reporting banks in the 343 leading centers and cover substantially all debits in those centers.

Data on reserves and borrowings and free reserves are reported for all member banks of the Federal Reserve System. With few exceptions* these are commercial banks and comprise approximately 4,800 nationally chartered banks ("National banks") plus about 1,400 State chartered banks which have chosen, and have been found eligible, to join the Federal Reserve System. Member banks account currently for about 82 percent of the total loans and investments and total deposits of commercial banks. Required reserves are minimum balances required to be maintained by member banks pursuant to Federal Reserve regulations, measured as a percent of deposit liabilities and varying with the type of deposits and the classification of the bank; these reserve requirements vary from time to time. Prior to December 1959, the only permissible legal reserves were balances with the Federal Reserve Banks;

since then, the inclusion of vault cash has been allowable. At first only limited amounts could be included, but since November 24, 1960, all vault cash has been allowed as reserves. Excess reserves are member bank balances of these types maintained in excess of the required minimum.

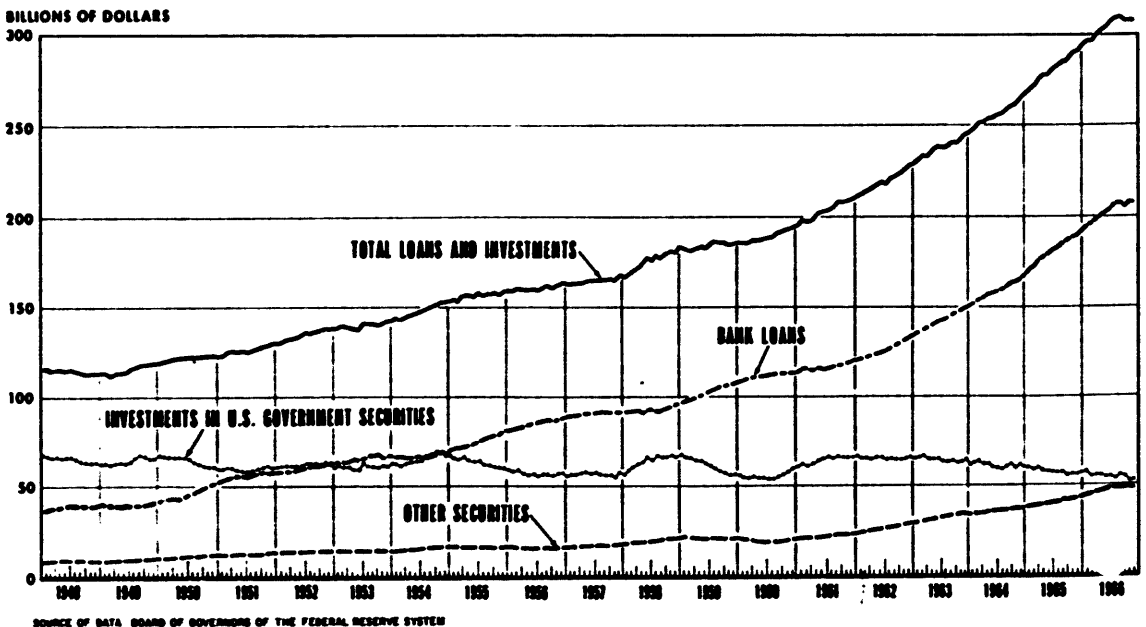
Member bank reserves have been affected by the inclusion of banks in Alaska and Hawaii—as have those for all commercial banks.

Monthly figures shown for commercial banks and weekly reporting member banks are as of the last Wednesday of the month, except that final December figures for "all commercial banks" are always as of the last day of the month, and are estimated for those years when call report data were not available for December 31 (1962 and 1963). The same is true of final June figures except that last Wednesday data were used in years when June 30 call report data were not available. Beginning in 1948, seasonally adjusted monthly data for loans and investments at all commercial banks are available. Reserves and borrowings are shown as averages of daily figures during the period.

*There have been no member mutual savings banks since 1962.

Loans and Investments at All Commercial Banks, 1948-66

(Monthly data. Seasonally adjusted)



STATISTICAL PROCEDURES

The "all commercial banks" and "weekly reporting member banks" series are closely related. The weekly series is based on weekly reports filed with Federal Reserve Banks and compiled cooperatively by these banks and the Board of Governors. Published figures are simple aggregates for the reporting banks. The monthly estimates for all commercial banks are prepared, also by the Federal Reserve System, on the basis of the weekly series, monthly reports from all other member banks, and other information. Estimates are made for nonmember banks, accounting currently for about 18 percent of commercial bank credit, on the basis of the relation-

ship between the movement of "country" member banks (those outside the major cities) and that of the nonmember banks, as determined semiannually when complete reports for the banking system are available. The December and June estimates are later replaced by "benchmark" figures, if available, for all commercial banks. These benchmarks are compiled by the Federal Deposit Insurance Corporation on the basis of compulsory "call reports" filed by all banks subject to Federal supervision (national banks, State member banks, and nonmember insured banks) with one or another of the Federal bank supervisory agencies, and of information obtained from State banking authorities and other sources

TABLE 31.—Bank Loans, Investments, Debts, and Reserves, 1948-66

End of period	All commercial banks (seasonally adjusted data)				Weekly reporting large commercial banks ²	Bank debts outside New York City (232 SMSA's) ³	All member banks ^{4,5}			
	Total loans and investments ¹	Loans, excluding inter- bank ¹	Investments				Business loans ²	Total reserves	Excess reserves	Borrow- ings at Federal Reserve Banks
			U.S. Gov- ernment securities	Other securi- ties ¹						
Billions of dollars						Millions of dollars				
1948.....	113.0	41.5	62.3	9.2	15.6	784	19,990	797	134	663
1949.....	118.7	42.0	66.4	10.3	13.9	760	16,291	803	118	685
1950.....	124.7	51.1	61.1	12.4	17.9	871	17,391	1,027	142	885
1951.....	130.2	56.5	60.4	13.4	21.6	998	20,310	826	657	169
1952.....	139.1	62.8	62.2	14.2	23.4	1,045	21,180	723	1,593	-870
1953.....	143.1	66.2	62.2	14.7	23.4	1,126	19,920	693	441	252
1954.....	153.1	69.1	67.6	16.4	22.4	1,148	19,279	703	246	457
1955.....	157.6	80.6	60.3	16.8	² 26.7	1,277	19,240	594	839	-245
1956.....	161.6	88.1	57.2	16.3	30.8	1,385	19,535	652	688	-36
1957.....	166.4	91.5	56.9	17.9	31.8	1,468	19,420	577	710	-133
1958.....	181.2	95.6	65.1	20.5	² 31.7	1,481	18,899	516	557	-41
1959.....	185.9	107.5	57.9	20.5	² 30.7	1,656	18,932	482	906	-424
1960.....	194.5	113.8	59.8	20.8	32.2	1,736	19,283	756	87	669
1961.....	209.6	120.5	65.2	23.9	² 32.9	1,832	20,118	568	149	419
1962.....	227.9	134.1	64.5	29.2	35.2	2,021	20,040	572	304	268
1963.....	246.2	149.7	61.5	35.0	38.8	2,199	20,746	536	327	209
1964.....	267.2	167.4	61.1	38.7	42.1	2,706	21,609	411	243	168
1965.....	294.4	192.0	57.7	44.8	² 50.6	3,013	22,719	452	454	-2
1966 (preliminary).....	310.7	208.2	54.3	48.3	60.6	3,421	23,830	392	557	-165

¹ Effective June 9, 1966, about \$1.1 billion of balances accumulated for payment of personal loans were deducted from loans as a result of a change in Federal Reserve regulations. Beginning June 30, 1966, Commodity Credit Corporation certificates of interest and Export-Import Bank portfolio fund participation certificates totaling an estimated \$1 billion are included in "Other securities" rather than "Loans."

² Member banks are all national banks and those State banks which have taken membership in the Federal Reserve System.

³ Commercial and industrial loans and prior to 1956 agricultural loans. Series revised beginning October 1965, July 1968, July 1969, April 1961, and July 1965.

⁴ Debts during period to demand deposit accounts except interbank and U.S. Government. Prior to 1964, relates to 244 centers outside New York City, between 1956 and 1963, to 249 centers, and beginning 1964, to 223 (new series) SMSA's (Standard Metropolitan Statistical Areas). For description of series, see *Federal Reserve Bulletin* for March 1964, pp. 360-62.

⁵ Data are daily averages for December.
NOTE.—Between January and August 1959, series for all commercial banks expanded to include data for all banks in Alaska and Hawaii. Data for all member banks include Alaska and Hawaii beginning 1964 and 1969, respectively.

Source: Board of Governors of the Federal Reserve System.

for the relatively few uninsured banks. Interim monthly estimates are revised semiannually to bring them into line with the "call report" benchmarks.

The debits series is a simple aggregate of the reports of reporting banks. Monthly data are seasonally adjusted by means of a modified ratio-to-moving-average procedure. The series shown is a composite of adjusted series derived separately for each of six major centers and for the aggregate of the other centers.

The series on total and excess reserves and member bank borrowing is based on reports of deposits, reserves, and borrowing from all member banks, filed biweekly or more frequently, depending on the class of bank. "Free reserves" for the member banks as a group are computed by netting total borrowings at Federal Reserve Banks against excess reserves.

Relation to other series.—The Federal Government published a variety of statistical series covering all or part of the banking system. For purposes of general analysis these may conform closely in trend and lead to similar conclusions, but the differences should be kept in mind. Thus, the all-commercial-bank series should be distinguished from the somewhat larger "all-bank" series which includes some 500 mutual savings banks; and from smaller aggregates such as those for national banks and insured commercial banks. The all-commercial-bank aggregates here are for the United States, exclusive of possessions, and may differ slightly from totals which include banks in the possessions, published by the Comptroller of the Currency and the FDIC.

The weekly series includes most of the larger banks in larger cities and covers a substantial segment of total commercial bank resources. Although the series is not identical in coverage with any published call report aggregate, it is similar in coverage to the aggregate for all member banks other than "country" banks. The "business loans" series is shown in Federal Reserve publications as "commercial and industrial loans." A more recently developed Federal Reserve series showing changes in commercial and industrial loans by type of business of borrower, weekly from 1951, is based on a subsample of the weekly reporting banks and ties in with the aggregate commercial and industrial loan figure.

The series on reserves and member bank borrowings, being averages of daily figures, are not directly comparable with week-end or month-end member bank or Reserve bank statistics.

USES AND LIMITATIONS

The all-commercial-bank figures are useful indicators of business activity and trends in bank credit use. Data for the weekly reporting member banks are more frequent and more prompt than those for all commercial banks and provide the more detailed category of "business loans." The weekly series also is a more sensitive indicator of developments in the short-term money market, because it covers the larger banks in the more important centers.

The series on reserves and borrowing are a partial reflection of the credit potential of the banking system. Excess reserves are available, to the banks holding them, for further credit expansion. Member bank borrowing from the Reserve banks reflects the extent to which some banks (not holding excess reserves) have borrowed temporarily to meet minimum reserve requirements. "Free reserves" may be computed by subtracting borrowings from excess reserves. The series on required and excess reserves forms an integral part of the significant weekly and monthly Federal Reserve tabulation entitled "Member Bank Reserves, Reserve Bank Credit and Related Items," which shows interrelationships among various sources and uses of reserve funds. Users should recognize that there is a seasonal movement in the data on loans and reserves.

REFERENCES

The monthly estimates for all commercial banks appear initially about two weeks after the last Wednesday of the month in a Federal Reserve release J.4, showing the major balance sheet items and changes during the past month and year for all banks, all commercial banks, and member banks. The *Federal Reserve Bulletin* also carries the estimates for recent months, with call report data for selected years back to 1941. Historical data to 1914 and explanatory technical footnotes are presented in *Banking and Monetary Statistics. A Supplement to Banking and Monetary Statistics, Section 1 Banks and the Monetary System*, published in 1962, contains a tabulation of recent data.

The Wednesday data for the weekly reporting member banks appear initially on the following Wednesday in a Federal Reserve release (H.4.2), showing also changes in assets and liabilities over the last week and year. The *Federal Reserve Bulletin* carries the weekly data for the last two months and for the comparable month a year ago. Historical

data from 1919 appear in *Banking and Monetary Statistics*. The most recent revisions of the weekly series are discussed in the June 1961 and August 1966 issues of the *Federal Reserve Bulletin*. Revisions in the bank debit and deposit turnover series are discussed in the March 1965 issue of the *Federal Reserve Bulletin*.

Debits figures appear in an advance monthly release G.6, showing aggregates for all centers, for Federal Reserve districts, and for individual centers, and in an annual summary release, G.5. A summary table appears monthly in the *Federal Reserve Bulletin*, with annual data for about eight years. The last major revision of the debits series is discussed in the April 1953 *Bulletin*. Back data may be traced in current and past issues of the *Federal Reserve Bulletin*, and historical data, though not wholly comparable, are presented in *Banking and Monetary Statistics* back to 1919.

Figures for member bank reserves and borrowings appear first in the weekly release H.4.1, showing weekly averages of daily figures, available the day following the end of the weekly period. The bi-weekly release J.1 gives similar data for biweekly periods (semimonthly periods prior to 1959) available with a lag of about twenty days. Weekly and monthly data appear in the *Bulletin*, and back data may be traced in current and past issues and in *Banking and Monetary Statistics* back to 1914. A *Supplement to Banking and Monetary Statistics, Section 10, Member Bank Reserves and Related Items*, published in 1962, contains a tabulation of recent data.

Banking and Monetary Statistics, published by the Federal Reserve Board in 1943, contains technical discussions of the general banking series, the weekly reporting member bank series, and the data on reserves. *Historical Statistics of the United States, Colonial Times to 1957* presents earlier banking series, in part back to 1834.

32. CONSUMER AND REAL ESTATE CREDIT

DESCRIPTION OF SERIES

"Consumer credit" is defined as short- and intermediate-term credit used to finance the purchase of commodities and services for personal consumption or to refinance debts originally incurred for such purposes. Credit covers both loans and sales involving deferred payment. Personal consumption is defined to exclude consumption by businesses and by nonprofit organizations. The estimates of consumer credit are made in total and for major types of credit. They exclude home mortgage credit, which is shown separately for one-to-four family homes in the last column on the accompanying table.

The above definition is followed generally but not rigidly in the construction of the series. In the absence of sufficiently refined data, certain arbitrary decisions have been made. For example, all bank credit to farmers is excluded even though an undetermined part is for consumption. Credit for the purchase of passenger automobiles by individuals probably includes a relatively small amount of credit on vehicles that are used for business purposes.

Instalment credit, accounting for the bulk of consumer credit, is that scheduled to be repaid in two or more payments. Instalment credit classified as "automobile paper" includes credit for the purchase

of automobiles regardless of whether originating as loans or as credit sales, and regardless of whether the paper is held by a dealer or a financial institution. Other components of total instalment credit are "other consumer goods paper," defined analogously to automobile paper; "repair and modernization loans," representing debt owed to financial institutions for repair and modernization of owner-occupied home; and "personal loans," comprising loans by financial institutions for all other consumer purposes, such as to consolidate debts, to pay medical expenses, or for education. "Noninstalment credit" comprises three major types: charge accounts (including service station and miscellaneous credit-card accounts and home heating-oil accounts); single-payment loans; and service credit extended by a variety of creditors including hospitals, doctors, utilities, and service establishments.

The several series on instalment credit extended and repaid measure the gross flows of lending and repayment which determine changes in the level of instalment credit outstanding. The monthly series for extensions and repayments, as shown in *Economic Indicators*, are adjusted for trading day and seasonal variation.

Data for Alaska were added in January, and for Hawaii in August, of 1959, with an increase in total consumer credit of approximately \$180 million.

STATISTICAL PROCEDURES

The several series are aggregates of separate estimates of credit held (or extended and repaid) by various types of creditors—financial institutions, retail and service establishments, and others. The procedures vary but in general involve estimates based on a benchmark and moved by monthly sample data. The 1948 Census of Business and subsequent annual surveys provide benchmarks for credit held by the various retail lines. For the more important credit-granting lines there are monthly and annual sample data on receivables. For some lines monthly receivables are estimated on the basis of weighted sales adjusted annually to survey benchmark data. Monthly data on receivables are available from reporting samples of financial institutions engaged in consumer lending. Benchmarks for credit outstanding are provided for certain holders by an-

nual or more frequent reports with complete coverage, and for others by occasional special surveys. For example, a benchmark survey of sales and consumer finance companies (or finance companies) was held as of June, 1965, to update the benchmark derived from similar surveys in 1955 and 1960. Estimates of service credit vary but in general are based on less substantial data. The largest component, medical debt, is based on periodic data collected in a sample survey of consumers and an estimated seasonal pattern. On the other hand, virtually complete reports on certain utility receivables are available monthly or semiannually.

Estimates of instalment credit extended and repaid are derived from currently reporting samples of lending and instalment-selling groups covering either collections or credit extended. These data are shown currently on a monthly basis by type of credit and major holder group. The imputed fac-

Consumer Credit Outstanding, 1947-66

(Short- and intermediate-term. End-of-month data)

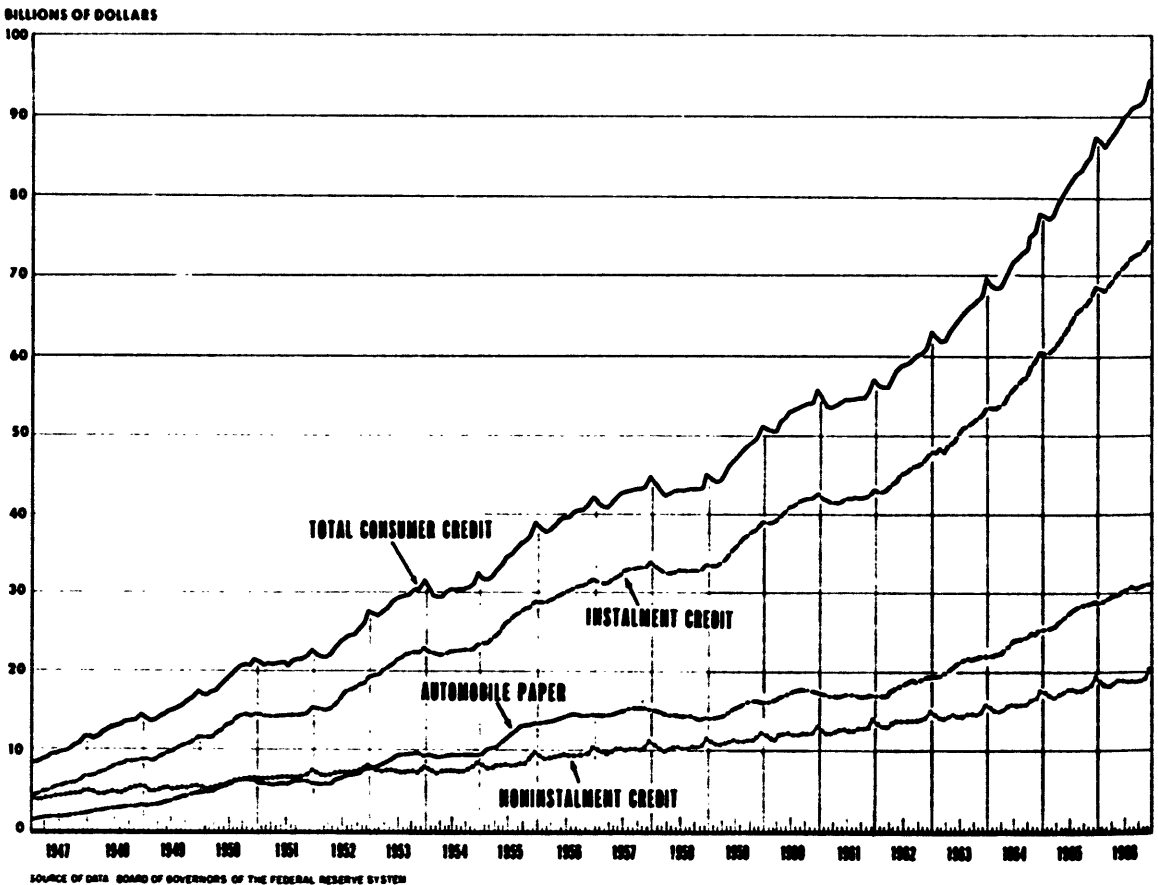


TABLE 32.—Consumer and Real Estate Credit, 1929-66

[Billions of dollars]

Year	Consumer credit outstanding ¹					Consumer instalment credit extended and repaid				Mortgage debt on 1- to 4-family homes ¹
	Total	Instalment			Non-instalment ²	Total		Automobile paper		
		Total ³	Auto-mobile paper	Per-sonal loans		Ex-tended	Repaid	Ex-tended	Repaid	
1929.....	7.1	3.5	1.4	0.6	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	18.9
1930.....	6.4	3.0	1.0	.6	3.3	(⁴)	(⁴)	(⁴)	(⁴)	18.9
1931.....	5.3	2.5	.7	.5	2.9	(⁴)	(⁴)	(⁴)	(⁴)	18.1
1932.....	4.0	1.7	.4	.5	2.4	(⁴)	(⁴)	(⁴)	(⁴)	16.7
1933.....	3.9	1.7	.5	.4	2.2	(⁴)	(⁴)	(⁴)	(⁴)	15.4
1934.....	4.2	2.0	.6	.5	2.2	(⁴)	(⁴)	(⁴)	(⁴)	15.6
1935.....	5.2	2.8	1.0	.6	2.4	(⁴)	(⁴)	(⁴)	(⁴)	15.4
1936.....	6.4	3.7	1.4	.7	2.6	(⁴)	(⁴)	(⁴)	(⁴)	15.4
1937.....	6.9	4.1	1.5	.9	2.8	(⁴)	(⁴)	(⁴)	(⁴)	15.5
1938.....	6.4	3.7	1.1	.9	2.7	(⁴)	(⁴)	(⁴)	(⁴)	15.8
1939.....	7.2	4.5	1.5	1.1	2.7	(⁴)	(⁴)	(⁴)	(⁴)	16.3
1940.....	8.3	5.5	2.1	1.2	2.8	8.2	7.2	3.1	2.5	17.4
1941.....	9.2	6.1	2.5	1.3	3.1	9.4	8.9	3.8	3.4	18.4
1942.....	6.0	3.2	.7	1.0	2.8	5.2	8.2	1.0	2.7	18.2
1943.....	4.9	2.1	.4	.8	2.8	4.6	5.6	.8	1.1	17.8
1944.....	5.1	2.2	.4	.9	2.9	4.9	4.9	.9	.9	17.9
1945.....	5.7	2.5	.5	1.0	3.2	5.4	5.1	1.0	.9	18.6
1946.....	8.4	4.2	1.0	1.5	4.2	8.5	6.8	2.0	1.4	23.0
1947.....	11.6	6.7	1.9	1.9	4.9	12.7	10.2	3.7	2.7	28.2
1948.....	14.4	9.0	3.0	2.2	5.5	15.6	13.3	5.2	4.1	33.3
1949.....	17.4	11.6	4.6	2.4	5.8	18.1	15.5	7.0	5.4	37.6
1950.....	21.5	14.7	6.1	2.8	6.8	21.6	18.4	8.5	7.0	45.2
1951.....	22.7	15.3	6.0	3.4	7.4	23.6	23.0	9.0	9.1	51.7
1952.....	27.5	19.4	7.7	4.1	8.1	29.5	25.4	11.8	10.0	58.5
1953.....	31.4	23.0	9.8	4.8	8.4	31.6	28.0	13.0	10.9	66.1
1954.....	32.5	23.6	9.8	5.4	8.9	31.1	30.5	11.8	11.8	75.7
1955.....	38.8	28.9	13.5	6.1	9.9	39.0	33.6	16.7	13.1	88.2
1956.....	42.3	31.7	14.4	6.8	10.6	39.9	37.1	15.5	14.6	99.0
1957.....	45.0	33.9	15.3	7.6	11.1	42.0	39.9	16.5	15.5	107.6
1958.....	45.1	33.6	14.2	8.1	11.5	40.1	40.3	14.2	15.4	117.7
1959.....	51.5	39.2	16.4	9.4	12.3	48.1	42.6	17.8	15.6	130.9
1960.....	56.0	42.8	17.7	10.5	13.2	49.6	46.0	17.7	16.4	141.3
1961.....	57.7	43.5	17.2	11.3	14.2	48.4	47.7	16.0	16.5	153.1
1962.....	63.2	48.0	19.5	12.6	15.1	55.1	50.6	19.8	17.5	166.5
1963.....	70.5	54.2	22.4	14.5	16.3	61.3	55.2	22.3	19.4	182.2
1964.....	78.4	60.5	25.2	16.2	17.9	67.5	61.1	24.4	21.7	197.6
1965.....	87.9	68.6	28.8	18.4	19.3	75.5	67.5	27.9	24.3	213.7
1966.....	94.8	74.7	31.0	20.1	20.1	78.9	72.8	28.5	26.4	225.4

¹ End of period, unadjusted.

² Also includes other consumer goods paper, and repair and modernization loans, not shown separately.

³ Consists of single-payment loans, charge accounts, and service credit.

⁴ Not available.

NOTE.—Data for Alaska and Hawaii included beginning January and August 1960, respectively.

Source: Board of Governors of the Federal Reserve System and Federal Home Loan Bank Board.

tors for seasonal and trading day adjustment of total instalment credit for the 12 months of 1965 are as follows:

	Credit extended	Credit repaid
January.....	85	97
February.....	84	93
March.....	102	107
April.....	105	101
May.....	101	97
June.....	110	103
July.....	102	100
August.....	102	99
September.....	95	98
October.....	97	98
November.....	101	102
December.....	116	105

RELATION TO OTHER SERIES

The series shown here are selected from a more comprehensive body of consumer credit data prepared by Federal Reserve, showing consumer credit outstanding by major types in greater detail; instalment credit outstanding by type of holder; and supplementary tabulations of instalment credit of commercial banks, sales finance companies, and other financial institutions, and of noninstalment credit by type of holder. Instalment credit extended and repaid for major types, with changes in outstanding credit, are shown on both an adjusted and an unadjusted basis. Related series may also be found as components of the separate statistics published for banks, and other financial institutions.

USES AND LIMITATIONS

The widespread interest in consumer credit is due in part to its importance as a source of consumer purchasing power and especially its significance in the market for consumer goods frequently bought on the instalment plan. In part it is due to the fact that consumer credit reflects one aspect of the financial position of consumers. Consumer credit is also an important element in the demand for funds in the financial community.

Because of the difficulty of adapting available data to the precise definition of consumer credit adopted, Federal Reserve faces problems of both over- and under-coverage, the net effect of which is probably some understatement of the true total of consumer credit outstanding.

REFERENCES

General discussion of concepts and sources and estimating techniques appear in a Federal Reserve pamphlet "Consumer Credit", Section 16 (new) of

Supplement to Banking and Monetary Statistics, 1965. Back figures are shown in the Supplement and in the *Federal Reserve Bulletin* for May 1966. Consumer credit estimates appear originally in several monthly Federal Reserve releases of which the basic one is "Consumer Credit G-19." Current data with selected historical data appear in detail in monthly issues of the *Bulletin* supplemented by periodic revisions.

Mortgage Debt Outstanding on Nonfarm One-to-Four Family Properties

Estimates of mortgage debt on one-to-four family nonfarm homes are available for the end of each year since 1925. The present series of quarterly estimates, dating from the first quarter of 1949, are prepared by the Federal Home Loan Bank Board in cooperation with the Federal Reserve Board. Quarterly estimates from 1949 to 1957 are available from the Federal Reserve Board.

The major holders of mortgage debt are the saving and loan associations, commercial banks, mutual savings banks, and insurance companies. Estimates of the volume of mortgage debt held by these institutions rest on firm data, although the proportion of debt on one-to-four family properties to debt on all residential properties is not a matter of record in most cases and must be imputed from related information.

Data on mortgage holdings by savings and loan associations are compiled from reports of the associations to the FHLBB or to State supervisory authorities' mortgage holdings of life insurance companies (which include all legal reserve companies) are based on direct reports from such companies to the FHLBB and the Institute of Life Insurance. Home mortgage debt held by commercial banks (including nondeposit trust companies) are estimated by the Federal Reserve Board from related call report figures compiled by the Federal Reserve Board, the Federal Deposit Insurance Corporation and the Comptroller of the Currency. Estimates for mutual savings banks are compiled from FDIC call reports.

The mortgage debt series also covers holdings recorded by the various Government agencies, including the Federal National Mortgage Association, the Federal Housing Administration, the Veterans Administration, and the Home Owners' Loan Corporation (for the period 1935-50).

The volume of mortgages held by real estate and mortgage companies trust departments of commer-

cial banks, pension funds, philanthropic institutions, fraternal organizations, casualty and fire insurance companies and individuals is more difficult to determine with certainty. Estimates for this miscellaneous group are based on the 1950 Census Bureau Survey of Residential Financing, updated by esti-

mates of nonfarm mortgage recordings and related information.

The FHLBB publishes estimates of home mortgage debt in a quarterly release, "Estimated Home Mortgage Debt and Financing Activity," and the Federal Reserve Board publishes estimates of various categories of real estate debt regularly in the *Bulletin*.

33. BOND YIELDS AND INTEREST RATES

3-Month Treasury Bills

Treasury bills are issued weekly. An average discount rate is computed for each weekly issuance, on the basis of the varying prices at which portions of the issue are awarded, in order, to the highest bidders. The monthly series presented in *Economic Indicators* is a simple average of the average rates for the 4 or 5 issues during the month.

The series is useful as a measure of a short-term rate on relatively riskless borrowing. Issuance or "auction" rates are related to but not typically identical with average "market" rates, also published by Federal Reserve, which are averages based on daily trading quotations for the issue closest in maturity to 3 months.

The monthly averages are issued in an advance Federal Reserve release, G. 13, and are published in the *Federal Reserve Bulletin*. Fuller information on the individual issues appears in the *Treasury Bulletin*. Textual discussion appears in *Banking and Monetary Statistics*, with yield data back to 1929.

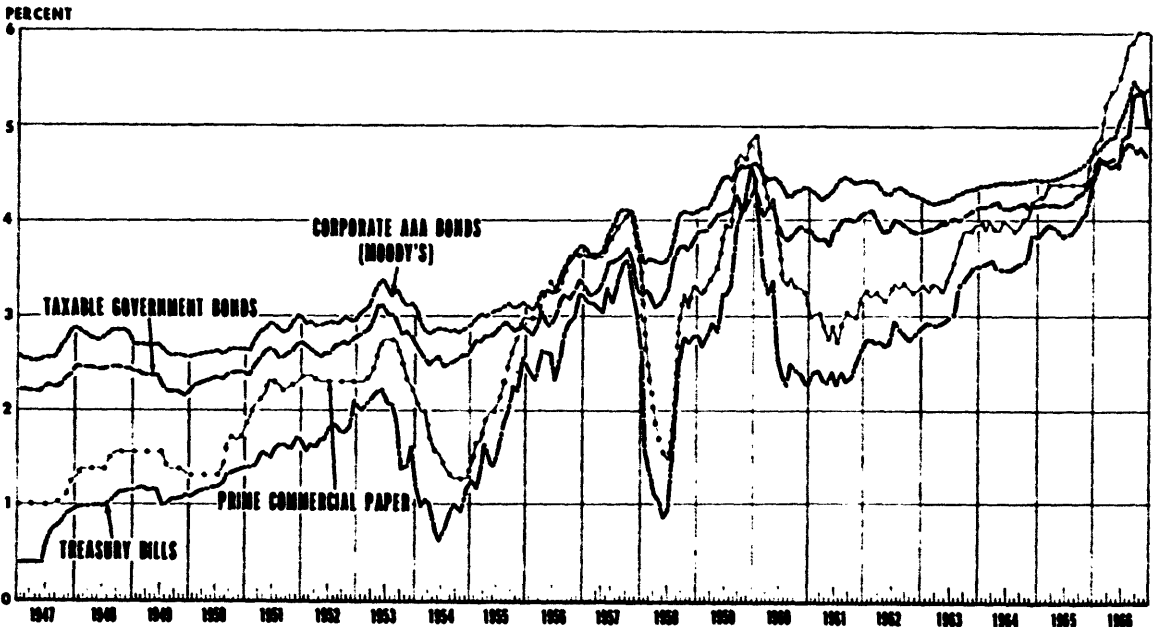
Taxable Bonds

TREASURY NOTES AND BONDS

Two series of market yields on longer-term Treasury obligations are computed—3-5 year issues and long-term bonds. The series covering 3-5 year issues includes both notes and bonds and in July 1964 was composed of six issues. On the same date, the

Bond Yields and Interest Rates, 1947-66

(Monthly data. Percent per annum)



SOURCE: MOODY'S INVESTORS SERVICE, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, AND TREASURY DEPARTMENT

series on long-term bonds comprised twelve issues, all due or callable in more than 10 years. Prior to April 1953 this series incorporated bonds due or callable after 12 years and prior to April 1952 bonds due or callable after 15 years.

Since 1942 both series have included fully taxable issues. The maturity distribution of the obligations entering into the averages varies with the passage of time and as new issues are added or old issues removed.

Both series are based on daily closing-bid quotations in the over-the-counter market as reported to the Federal Reserve Bank of New York by leading dealers in New York City. Prior to April 1953 the yields were computed on the basis of the mean of closing bid and ask quotations. Table 33 shows averages of daily figures, each of which is an unweighted average of yields on the individual bonds.

The long-term series is published monthly in the *Treasury Bulletin*. A similar series is published in the *Federal Reserve Bulletin*, and in the Federal Reserve release G. 13, Open Market Money Rates and Bond Prices. The two series differ only in that the series in the *Treasury Bulletin* includes yields based on "when issued" prices for new issues. The difference is generally very small and is limited to those months in which new securities appear in the market. The 3-5 year series is published in the *Federal Reserve Bulletin* and the G. 13 release.

High-Grade Municipal Bonds

This series, compiled by Standard & Poor's Corporation, is an arithmetic average of the yield to maturity of 15 high-grade tax-exempt, general obligation domestic municipal bonds, each with approximately 20 years to maturity. The issues are selected on the basis of quality, trading activity, and geographic representation. The bonds vary in quality, however, as is indicated by the fact that the yield sometimes exceeds that of U.S. taxable bonds. The yields are based on Wednesday's closing bid quotation, and the monthly figures are averages of the four or five weekly figures for the month. Prior to 1929 the monthly figures were based on an average of the high and low prices for the month. The series is available from 1929 on a weekly, and from 1900 on a monthly basis.

The series is published weekly in Standard & Poor's *Outlook* and *Bond Outlook*. Monthly and annual average figures back to 1900 and a descrip-

tion of the series and list of the issues used appear in the 1964 edition of Standard & Poor's *Security Price Index Record*.

Corporate Aaa and Baa Bonds

These series measure the currently prevailing maturity yields on seasoned long-term corporate bonds of the highest quality and of "lower medium grade", as reflected in the yields of selected bonds rated Aaa and Baa by Moody's Investors Service. The series shown here are 2 of a group of similar series computed by Moody's covering bonds classified by 4 rating groups (Aaa, Aa, A, Baa) and by 3 industrial groups. The formula for these series was established in 1928 to include for each rating 10 industrial, 10 railroad, and 10 public utility bonds. Since 1935 however, there have not always been 10 suitable bonds for each classification. The Aaa series currently includes 7 industrials, 6 railroads, and 10 public utilities; and the Baa 10 industrials, 10 railroads, and 10 public utilities.

The series were calculated on a monthly basis from 1919 through 1931, and have been calculated daily beginning in 1932. Weekly and monthly figures are averages of daily figures; annual figures are averages of 12 monthly figures.

The daily yield for each selected bond is computed on the basis of closing price, as reported in the dealers' asked quotation, adjusted as necessary for occasional abnormally wide spreads between the bid and asked quotation or for other temporarily distorting factors. For each of the rating classifications the 10 (or fewer) individual yields for each industrial group are averaged, without weighting; and the corporate index is computed as the unweighted average of the 3 industrial-group averages.

Issues included in each average are selected to represent typical long-term bonds in each rating group. Occasional substitutions in the bond list have been made when ratings have been changed, when a bond has been called or sells too high above its call price, or because of approaching maturity. Suitable adjustments (usually small), which are gradually amortized, are introduced to prevent such substitutions from impairing the comparability of the series.

These series are useful general indicators of the level and movement of average yields of selected seasoned bonds of the respective grades with suffi-

TABLE 33.—Bond Yields and Interest Rates, 1929-66

[Percent per annum]

Year	U.S. Government security yields			High-grade municipal bonds (Standard & Poor's)	Corporate bonds (Moody's)		Prime commercial paper, 4-6 months	FHA new home mortgage yields ⁴
	3-month Treasury bills ¹	3-5 year issues ²	Taxable bonds ³		Aaa	Baa		
1929	(⁵)	(⁵)	(⁵)	4.27	4.73	5.90	5.85	(⁵)
1930	(⁵)	(⁵)	(⁵)	4.07	4.55	5.90	3.50	(⁵)
1931	1.402	(⁵)	(⁵)	4.01	4.58	7.62	2.64	(⁵)
1932	.879	(⁵)	(⁵)	4.65	5.01	9.30	2.73	(⁵)
1933	.515	2.66	(⁵)	4.71	4.49	7.76	1.73	(⁵)
1934	.256	2.12	(⁵)	4.03	4.00	6.32	1.02	(⁵)
1935	.137	1.29	(⁵)	3.40	3.60	5.75	.75	(⁵)
1936	.143	1.11	(⁵)	3.07	3.24	4.77	.75	(⁵)
1937	.447	1.40	(⁵)	3.10	3.26	5.03	.94	(⁵)
1938	.053	.83	(⁵)	2.91	3.19	5.80	.81	(⁵)
1939	.023	.59	(⁵)	2.76	3.01	4.96	.59	(⁵)
1940	.014	.50	(⁵)	2.50	2.84	4.75	.56	(⁵)
1941	.103	.73	(⁵)	2.10	2.77	4.33	.53	(⁵)
1942	.326	1.46	2.46	2.36	2.83	4.28	.66	(⁵)
1943	.373	1.34	2.47	2.06	2.73	3.91	.69	(⁵)
1944	.375	1.33	2.48	1.86	2.72	3.61	.73	(⁵)
1945	.375	1.18	2.37	1.67	2.62	3.29	.75	(⁵)
1946	.375	1.16	2.19	1.64	2.53	3.05	.81	(⁵)
1947	.594	1.32	2.25	2.01	2.61	3.24	1.03	(⁵)
1948	1.040	1.62	2.44	2.40	2.82	3.47	1.44	(⁵)
1949	1.102	1.43	2.31	2.21	2.66	3.42	1.49	4.34
1950	1.218	1.50	2.32	1.98	2.62	3.24	1.45	4.15
1951	1.552	1.93	2.57	2.00	2.86	3.41	2.16	4.23
1952	1.766	2.13	2.68	2.19	2.96	3.52	2.33	4.30
1953	1.931	2.56	2.94	2.72	3.20	3.74	2.52	4.65
1954	.953	1.82	2.55	2.37	2.90	3.51	1.58	4.60
1955	1.753	2.50	2.84	2.53	3.06	3.53	2.18	4.65
1956	2.658	3.12	3.08	2.93	3.36	3.88	3.31	4.80
1957	3.267	3.62	3.47	3.60	3.89	4.71	3.81	5.44
1958	1.839	2.90	3.43	3.56	3.79	4.73	2.46	5.49
1959	3.405	4.33	4.08	3.95	4.38	5.05	3.97	5.77
1960	2.928	3.99	4.02	3.73	4.41	5.19	3.85	6.16
1961	2.378	3.60	3.90	3.46	4.35	5.08	2.97	5.78
1962	2.778	3.57	3.95	3.18	4.33	5.02	3.26	5.60
1963	3.157	3.72	4.00	3.23	4.26	4.96	3.55	5.46
1964	3.549	4.06	4.15	3.22	4.40	4.83	3.97	5.45
1965	3.954	4.22	4.21	3.27	4.49	4.87	4.38	5.46
1966	4.881	5.16	4.65	3.82	5.13	5.67	5.55	6.29

¹ Rate on new issues within period.

² Selected note and bond issues. Prior to 1941 these were tax-exempt issues.

³ Series includes: April 1963 to date, bonds due or callable 10 years and after; April 1962-March 1963, bonds due or callable after 12 years; October 1941-March 1962, bonds due or callable after 15 years.

⁴ Based on the maximum permissible interest rate (6¼% since May 1961). Beginning 1962, 30-year mortgages paid in 15 years and prior to 1962, 25-year mortgages paid in 12 years.

⁵ Not available.

Sources: Treasury Department, Board of Governors of the Federal Reserve System, Federal Housing Administration, Standard & Poor's Corporation, and Moody's Investors Service.

ciently long maturities and other features to afford adequate measures of long-term interest rates. They are not a measure of average yields of all Aaa or all Baa bonds available to the investor, particularly those on new offerings; nor do they reflect changes in qualitative terms of borrowing such as call provisions.

The daily corporate bond yield averages are published weekly in *Moody's Bond Survey*, which includes from time to time the list of bonds. Historical monthly data and annual averages for these two series are available back to 1919, and are published in *Moody's Industrial Manual*.

Prime Commercial Paper

This series measures the prevailing rate on prime 4 to 6 months' commercial paper. It is useful as a measure of the cost of open-market short-term credit available to large business borrowers of the highest credit standing.

The prevailing daily selling quotation is determined by the Federal Reserve Bank of New York on the basis of information obtained through continuing contacts with New York City dealers handling the bulk of the volume of commercial paper of the inventory type, and less frequent reports concerning rates outside New York. Monthly and weekly figures are averages of daily prevailing rates.

Annual, monthly, and weekly figures for the period since 1963 are available in the *Federal Reserve Bulletin*, and the most recent data are shown in the advance Federal Reserve monthly release, G. 13. Annual and monthly data, 1890-1941, and weekly data, 1919-41, may be found in *Banking and Monetary Statistics*, and monthly data, 1941-63, may be found in Section 12 of Supplement to *Banking and Monetary Statistics*.

FHA New Home Mortgage Yields

Yields on mortgages on new homes insured by the Federal Housing Administration are computed from a national average of secondary market prices.

34. COMMON STOCK PRICES, YIELDS, AND EARNINGS

Price Indexes

The Standard and Poor's composite price index measures the average price movement of a sample of common stocks listed on the New York Stock Exchange. The sample, selected from the more actively traded shares, currently includes 500 stocks, accounting for about 85% of the total market value of all common stocks listed on the Exchange. The base of the index is the aggregate value of the shares of these securities in the period 1941-43, considered as equal to 10. Weekly figures shown in the monthly *Economic Indicators* are averages of daily figures (except that for the capital and consumer goods series Wednesday figures are used). Monthly figures are averages of daily figures, and annual figures are averages of the twelve monthly indexes.

The index is shown in *Economic Indicators* for three main subgroups: industrials (with further classifica-

Mortgages in this series carry FHA's maximum permissible interest rate, and, until 1961, a maturity of 25 years, and the assumption is made that they will be prepaid at the end of 12 years. From 1962 the series is based on 30-year mortgages that will be prepaid at the end of 15 years. Data on prices per \$100 of mortgage loan amount are based on FHA field office opinion reports on transactions in market areas of insuring office cities as of the first of each month.

Transactions are for immediate delivery of home mortgages in the secondary market and exclude seasoned mortgages or deliveries to Federal National Mortgage Association. Average prices are net after discounts, commitment fees, or other charges.

Price quotations prior to January 1956 represent typical transactions; for the more recent period, they represent new-home mortgages with a 10 percent downpayment and a 25-year maturity through 1961, and with minimum downpayments and a 30-year maturity thereafter. Prior to March 1956, the national average prices were unweighted; subsequently, data have been weighted to reflect the probable volume of transactions in the various insuring office areas. After a regulatory change in FHA's maximum permissible interest rate, generally a lapse of about two months is required before a national average price can be computed on a firm basis for mortgages bearing the new interest rate.

tion into capital goods and consumers' goods groups), railroads, and public utilities.

The index measures fluctuations in current market values of the sample. Each component stock is weighted according to the number of shares outstanding at the time of observations. Appropriate adjustments in these weights and/or base period values are made on the occasion of stock dividends, splits, consolidations or similar events, to insure that the index will reflect only price movement.

The Standard & Poor's Corporation also provides readings of the composite 500-stock index and of the three main sub-categories hourly, with closing and high and low values for the day.

It should be noted that this series covers active listed stocks on the New York Stock Exchange only, and may not reflect price movements on other exchanges or in over-the-counter issues.

TABLE 34.—Common Stock Prices, Yields, and Earnings, 1929-66

Period	Price index ¹						Dividend yield ² (percent)	Price/ earnings ratio ³
	Total	Industrials			Public utilities	Railroads		
		Total	Capital goods	Consumers' goods				
	1941-43=10							
1929.....	26.02	21.35	21.48	22.40	59.33	46.15	3.47	13.32
1930.....	21.03	16.42	16.24	15.67	53.24	39.62	4.51	15.81
1931.....	13.66	10.51	8.81	11.41	37.18	23.72	6.15	13.31
1932.....	6.93	5.37	3.99	6.19	20.65	8.75	7.43	16.80
1933.....	8.96	7.61	6.33	8.27	19.72	12.75	4.21	22.95
1934.....	9.84	9.00	7.62	9.85	15.79	14.05	3.72	19.39
1935.....	10.60	10.13	8.91	11.18	15.15	11.78	3.82	14.18
1936.....	15.47	14.69	13.96	14.90	22.47	17.71	3.44	15.44
1937.....	15.41	14.97	15.34	13.81	19.07	16.86	4.86	12.38
1938.....	11.49	11.39	11.26	10.77	14.17	9.15	5.18	18.38
1939.....	12.06	11.77	11.91	11.88	16.34	9.82	4.05	13.80
1940.....	11.02	10.69	11.07	11.34	15.05	9.41	5.59	10.24
1941.....	9.82	9.72	10.21	9.80	10.93	9.39	6.82	8.26
1942.....	8.67	8.78	8.93	8.56	7.74	8.81	7.24	8.80
1943.....	11.50	11.49	10.87	11.65	11.34	11.81	4.93	12.84
1944.....	12.47	12.34	11.23	13.43	12.81	13.47	4.86	13.66
1945.....	15.16	14.72	13.66	16.46	16.84	18.21	4.17	16.33
1946.....	17.08	16.48	15.86	19.22	20.76	19.09	3.85	17.69
1947.....	15.17	14.85	14.27	16.38	18.01	14.02	4.93	9.36
1948.....	15.53	15.34	14.67	15.75	16.77	15.27	5.54	6.90
1949.....	15.23	15.00	14.14	15.76	17.87	12.83	6.59	6.64
1950.....	18.40	18.33	18.07	18.97	19.96	15.53	6.57	6.63
1951.....	22.34	22.68	22.54	20.99	20.59	19.91	6.13	9.27
1952.....	24.50	24.78	23.04	21.40	22.86	22.49	5.80	10.47
1953.....	24.73	24.84	23.46	21.91	24.03	22.60	5.80	9.69
1954.....	29.69	30.25	29.93	24.85	27.57	23.96	4.95	11.25
1955.....	40.49	42.40	42.55	32.28	31.37	32.94	4.08	11.50
1956.....	46.62	49.80	48.79	34.55	32.25	33.65	4.09	14.05
1957.....	44.38	47.63	47.01	32.48	32.19	28.11	4.35	12.89
1958.....	46.24	49.36	47.93	36.33	37.22	27.05	3.97	16.64
1959.....	57.38	61.45	63.93	47.35	44.15	35.09	3.23	17.05
1960.....	55.85	59.43	59.75	47.21	46.86	30.31	3.47	17.09
1961.....	66.27	69.99	67.33	57.01	60.20	32.83	2.98	21.06
1962.....	62.38	65.54	58.15	54.96	59.16	30.56	3.37	16.68
1963.....	69.87	73.39	63.30	62.28	64.99	37.58	3.17	17.62
1964.....	81.37	86.19	76.34	73.84	69.91	45.46	3.01	18.06
1965.....	88.17	93.48	85.26	81.94	76.08	46.78	3.00	17.08
1966.....	85.28	91.09	84.78	74.00	68.21	46.34	3.40	14.92

¹ Includes 500 common stocks, 425 are industrials; 55 are public utilities; and 20 are railroads.

² Aggregate cash dividends (based on latest known annual rate) divided by the aggregate monthly market value of the stocks in the group. Annual yields are averages of monthly data. Weekly data are Wednesday figures.

³ Ratio of price index for last day in quarter to quarterly earnings (seasonally adjusted annual rate). Annual ratios are averages of quarterly data.

Source: Standard & Poor's Corporation.

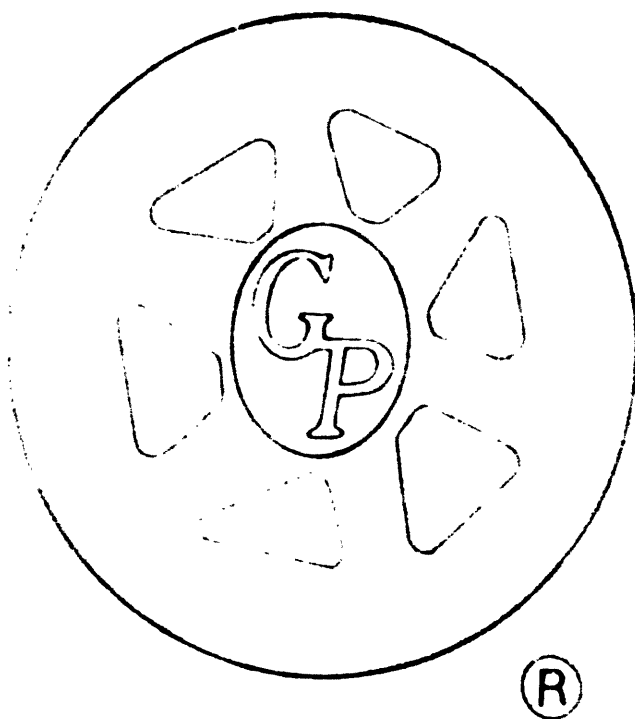
Price-Earnings Ratios and Dividend Yields

The price-earnings ratio compares the aggregate value of the stocks in the index as of the last day of the quarter with the latest available quarterly earn-

ings, adjusted for seasonal influences and converted to an annual rate. Since 1935, annual data are averages of the four quarterly ratios. Prior to that time, annual data were based on annual earnings and end of year prices.

Dividend yield, or *dividend-price* ratio, is the ratio of the current annual rate of cash aggregate dividends to aggregate market value based on Wednesday closing prices. Monthly yield figures are averages of the four or five weekly figures. Annual data are averages of the 12 monthly figures.

Standard & Poor's Stock Price Indexes are privately published. Indexes for the main groups appear hourly and daily on the tickers of stock exchanges and are also sent over the wires of news services.



FEDERAL FINANCE

35. FEDERAL ADMINISTRATIVE BUDGET RECEIPTS AND EXPENDITURES

DESCRIPTION OF SERIES

Budget receipts and expenditures are frequently referred to as the conventional or administrative budget, to distinguish them from other budget concepts. They measure the financial transactions of all federally owned Government funds. Budget receipts are derived mainly from individual and corporate income taxes, but also from excise taxes, estate and gift taxes, customs duties, and from miscellaneous sources such as rents, fines, fees, sales of products and services, and collections on certain loans and investments. Budget expenditures primarily include outlays for goods and services, transfer payments to individuals, aids to States, loans, purchases of financial and other existing assets, and Government contributions as employer to civilian retirement and social security trust funds. Transactions of trust funds, representing monies held in trust by the Government for specific purposes, are excluded from both budget receipts and expenditures.

"Administrative budget receipts," as shown in the table on page 127, represents the total revenues collected for the general fund and for special federally owned funds whose receipts are earmarked under law for specific purposes, less (a) refunds of receipts, (b) transfers of receipts to trust funds in those cases where the law provides an indefinite appropriation to a trust fund in an amount based on certain tax receipts, and (c) certain interfund transactions, namely those general or special fund receipts which are also expenditures of a Government-owned fund. Budget receipts do not include money obtained from borrowing; nor do they include receipts of public enterprise revolving funds (such as the postal fund and most Government corporations) or of intragovernmental revolving and management funds, since these funds are included on a net expenditure basis in budget expenditures figures.

"Administrative budget expenditures" covers Government-owned funds; namely, the general fund, the

special funds, the public enterprise revolving funds, and the intragovernmental revolving and management funds. Expenditures for the public enterprise funds and for the intragovernmental funds are included in the totals on a net basis—that is, their collections are deducted from gross expenditures and the net results are budget expenditures. The transfer of capital from the general fund to revolving funds and its return are excluded; the transfer of dividends from the revolving funds to the general fund is also excluded. Certain interfund transactions (namely, general or special fund receipts which are also expenditures of a Government-owned fund) are deducted to avoid double counting. Interest paid to the Treasury by such funds is the major category of this kind.

Administrative budget expenditures do not include retirement of Government debt nor do they include investments of Government enterprises in United States securities.

"National defense," shown in the table, is a major classification of budget expenditures which is currently used in the budget. It comprises: (1) Department of Defense military functions; (2) military assistance to other nations; (3) development and control of atomic energy; and (4) stockpiling and certain other defense-related activities.

The "budget surplus or deficit" represents the difference between budget receipts and budget expenditures.

The "public debt" figures shown consist of all securities issued or guaranteed by the U.S. Government, excluding guaranteed securities held by the Treasury.

The budget surplus or deficit is not the only factor which affects the size of the public debt, although it is generally the major factor. The other factors affecting the size of the debt are: (1) changes in Government cash balances; (2) trust fund transactions; (3) the use of Government corporation borrow-

ing directly from the public or the utilization of their net receipts to repay such borrowing; and (4) changes in the amount of checks outstanding.

STATISTICAL PROCEDURES

Data on budget receipts and expenditures for actual past periods are derived for the most part from accounting records rather than statistical estimating procedures. Budget receipts and expenditures are published each month by the Treasury Department in the *Monthly Statement of Receipts and Expenditures of the United States Government*.

Under a reporting procedure instituted in February 1954 (which also covers comparative data for part of fiscal 1953), budget expenditures are reported on the basis of checks issued or cash payments made by Government disbursing officers, except that since June 1955, interest on the public debt has been reported on an accrual basis.

Data for fiscal 1952 and earlier were reported on a different basis under which receipt and expenditure totals were derived primarily from daily telegraphic reports from Federal Reserve Banks reporting deposits and withdrawals clearing through the accounts of the Treasurer of the United States.

Data on the public debt are published in the *Daily Statement of the United States Treasury* (with details at the end of each month) as well as in the *Monthly Statement*.

RELATION TO OTHER SERIES

Budget receipts and expenditures are one of the five major series dealing with Federal Government income and outgo. The others are:

1. Cash receipts from and payments to the public.
2. Cash deposits in and withdrawals from the Account of the Treasurer of the United States.
3. Federal receipts and expenditures in the national income accounts.
4. Federal revenue and expenditures as reported by the Bureau of the Census.

The differences among these various measures are mainly ones of coverage and timing. Significant specific differences are:

(a) Coverage

1. All four of the other measures encompass, in addition to budget amounts, the very sizable transactions of Federal trust funds with the public.
2. Transactions of five Government-sponsored enterprises not included in the budget are included

(on a net basis) in cash payments to the public and (to the extent such transactions affect the Treasurer's cash position) in cash withdrawals.

3. Cash withdrawals, payments to the public, and Federal expenditures as reported by the Census include actual disbursements for interest rather than interest accruals.

4. Federal receipts and expenditures in the national income accounts and Federal revenues and expenditures as reported by Census exclude loans, loan repayments, and related financial investments from both receipts and expenditures.

5. The Federal sector of the national income accounts excludes receipts and expenditures of the District of Columbia, the Federal Land Banks and the Federal home loan banks.

6. Census figures record transactions of some public enterprises such as the Post Office on a gross rather than a net basis—that is, postal receipts are counted as revenue rather than as an offset to expenditures.

(b) Timing

7. Budget receipts as well as cash receipts are by-and-large on a cash basis, whereas Federal receipts in the national income accounts record tax revenues mainly on an accrual basis.

8. Budget expenditures are on a checks-issued basis whereas payments to the public and Treasury cash withdrawals are recorded on a checks-paid basis.

9. Budget expenditures are largely measured at the time of payment, whereas that portion of Federal expenditures in the national income accounts which consists of purchases of goods and services is reported at the time of delivery.

USES AND LIMITATIONS

The main use for budget receipts and expenditures is as a guide to executive and legislative budget and tax policy. Budget receipts and expenditures figure prominently in the annual budget process, involving the projection of fund requirements by Government agencies, and preparation of an integrated executive budget including estimates under both existing law and under proposed changes in laws and programs. The administrative budget also is the vehicle for congressional review and enactment of annual appropriation bills, agency financial management, and it also is a prime consideration in changes in tax legislation. Moreover, the relationship between the totals of budget receipts and budget expenditures usually

TABLE 35.—Federal Administrative Budget Receipts and Expenditures, 1929-66

[Billions of dollars]

Fiscal year	Net budget receipts	Net budget expenditures				Budget surplus or deficit (-)	Public debt (end of period) ²
		Total	National defense ¹				
			Total	Department of Defense, military functions	Military assistance ³		
1929.....	3.9	3.1	0.7	0.7	(⁴)	0.7	16.9
1930.....	4.1	3.3	.7	.7	(⁴)	.7	16.2
1931.....	3.1	3.6	.7	.7	(⁴)	-.5	16.8
1932.....	1.9	4.7	.7	.7	(⁴)	-2.7	19.5
1933.....	2.0	4.6	.6	.6	(⁴)	-2.6	22.5
1934.....	3.0	6.6	.5	.5	(⁴)	-3.6	27.7
1935.....	3.7	6.5	.7	.7	(⁴)	-2.8	32.8
1936.....	4.0	8.4	.9	.9	(⁴)	-4.4	38.5
1937.....	5.0	7.7	.9	.9	(⁴)	-2.8	41.1
1938.....	5.6	6.8	1.0	1.0	(⁴)	-1.2	42.0
1939.....	5.0	8.8	1.1	1.1	(⁴)	-3.9	45.9
1940.....	5.1	9.1	1.5	1.5	(⁴)	-3.9	49.5
1941.....	7.1	13.3	6.1	6.0	(⁴)	-6.2	55.3
1942.....	12.5	34.0	24.0	23.6	0.4	-21.5	77.0
1943.....	21.9	79.4	63.2	62.7	.5	-57.4	140.8
1944.....	43.6	95.0	76.8	75.8	.9	-51.4	202.6
1945.....	44.4	98.3	81.3	80.0	1.2	-53.9	259.1
1946.....	39.6	60.3	43.2	42.0	1.1	-20.7	269.9
1947.....	39.7	38.9	14.4	13.8	.3	.8	258.4
1948.....	41.4	33.0	11.8	10.9	.3	8.4	252.4
1949.....	37.7	39.5	12.9	11.6	.4	-1.8	252.8
1950.....	36.4	39.5	13.0	11.9	.1	-3.1	257.4
1951.....	47.5	44.0	22.5	19.8	1.0	3.5	255.3
1952.....	61.3	65.3	44.0	38.9	2.4	-4.0	259.2
1953.....	64.7	74.1	50.4	43.6	4.0	-9.4	268.1
1954.....	64.4	67.5	47.0	40.3	3.6	-3.1	271.3
1955.....	60.2	64.4	40.7	35.5	2.3	-4.2	274.4
1956.....	67.8	66.2	40.7	35.8	2.6	1.6	272.8
1957.....	70.6	69.0	43.4	38.4	2.4	1.6	270.6
1958.....	68.6	71.4	44.2	39.1	2.2	-2.8	276.4
1959.....	67.9	80.3	46.5	41.2	2.3	-12.4	284.8
1960.....	77.8	76.5	45.7	41.2	1.6	1.2	286.5
1961.....	77.7	81.5	47.5	43.2	1.4	-3.9	289.2
1962.....	81.4	87.8	51.1	46.8	1.4	-6.4	298.6
1963.....	86.4	92.6	52.8	48.3	1.7	-6.3	306.5
1964.....	89.5	97.7	54.2	49.8	1.5	-8.2	312.5
1965.....	93.1	96.5	50.2	46.2	1.2	-3.4	317.9
1966.....	104.7	107.0	57.7	54.4	1.0	-2.3	320.4

¹ Includes military functions of Department of Defense, military assistance, Atomic Energy Commission, stockpiling, defense production expansion, and certain other defense-related activities. For 1942-44, also includes Coast Guard.

² Expenditures for 1941 through 1946 represent the part of defense aid (lend-lease) classified as military.

³ Includes guaranteed securities held outside the Treasury. Not all of total shown is subject to statutory debt limitation.

⁴ Beginning in 1952, total budget receipts and expenditures have been adjusted to exclude certain intragovernmental transactions.

⁵ Not av. table.

⁶ Less than \$50 million.

serves as the major determinant of increases or decreases in the public debt. Finally, since this series is prepared in detail based on the Govern-

ment's financial accounts, it is a basic source of data for various other series on Federal financial transactions which are more important for economic analysis.

For purposes of appraising the effect of Federal financial transactions on the economy, however, this series has important limitations. For example, the operations of the trust funds and Government-sponsored enterprises play an important role in the economy which is not reflected in the budget figures. Moreover, business activity may be influenced by Government financial operations long before such operations are reflected in the figures on budget expenditures or receipts; some of the economic impact is reflected at the stage when contracts for goods and services are let, i.e., when obligations are incurred, or when tax liabilities accrue. In addition, Federal guaranties and insurance of private loans also influence the economy, although they have a relatively minor effect on budget receipts or expenditures.

REFERENCES

The basic release of the budget receipts and expenditures data is made in the *Monthly Statement*

of Receipts and Expenditures of the United States Government issued by the Treasury Department. A description of the basis for this statement is summarized in current issues of the *Treasury Bulletin*, page II. Annual data are available in the Budgets of the United States Government issued by the Bureau of the Budget, and are also reported in the *Combined Statement of Receipts, Expenditures, and Balances of the United States Government*, issued by the Treasury Department. Data beginning with 1789 are published in the *Annual Report of the Secretary of the Treasury on the State of the Finances*.

For further detail on the relation of Federal Government receipts and expenditures in the national income accounts to the Budget, see table 3.12 in *The National Income and Product Accounts of the United States, 1929-1965* (Statistical Tables) and Part 6, Special Analysis A, "Three Measures of Federal Financial Transactions," in the *Budget of the United States Government* for fiscal 1968.

36. FEDERAL CASH RECEIPTS FROM AND PAYMENTS TO THE PUBLIC

DESCRIPTION OF SERIES

This series, often referred to as the consolidated cash statement, presents information on the cash flows between the public and the Federal Government as a whole. It represents, in effect, a consolidated statement of Federal cash transactions with the public—other than borrowing. The public is defined to include individuals, banks, other private corporations and associations, unincorporated businesses, the Federal Reserve System, the Postal Savings System, State and local governments, foreign governments, and international organizations. The Government includes, in addition to the Federal funds comprising budget receipts and expenditures, the transactions of trust and (on a net basis) of deposit funds and Government-sponsored enterprises.

STATISTICAL PROCEDURES

Annual totals and unadjusted monthly and quarterly cash receipts from and payments to the public are taken from accounting records rather than statistical estimates. These series are based on data published in the *Monthly Statement of Receipts and Expenditures of the United States Government* and the *Daily Statement of the United States Treasury*.

The figures on Federal cash receipts from and payments to the public are derived from the conventional budget data by making three basic adjustments: (1) adding receipts and expenditures of Federal trust and deposit funds, and certain net transactions of Government-sponsored enterprises which are not considered a part of the Government in the conventional budget figures (the enterprises are the Federal Deposit Insurance Corporation, Federal land banks, Federal home loan banks, banks for cooperatives, and—after January 1, 1959—the Federal intermediate credit banks); (2) eliminating intragovernmental transactions which do not involve any flow of money with the public; and (3) shifting to a cash basis (i.e., a checks-paid basis (certain noncash transactions recorded as receipts or expenditures in the budget and trust accounts. For example, the semiannual increase in the redemption value of Series E savings bonds, although a part of budget expenditures, is deducted from cash payments while interest actually paid in cash to the public on savings bonds redeemed during the years is added. Receipts of the Government from exercise of the monetary authority—seigniorage on coinage—are subtracted as are payments to certain international organizations made in

the form of notes. When the notes are redeemed, this constitutes a cash outflow and a cash payment.

Historical data have been adjusted wherever possible for conceptual and statistical revisions of this series. Data beginning with fiscal year 1953 and calendar year 1954 are on the reporting basis instituted in February 1954.

Seasonally adjusted data published in *Economic Indicators* have been derived by applying the Census Bureau's Univac X-11 method to the two totals—cash receipts and cash payments. Quarterly data from 1947 to date are adjusted using this Univac method, a variant of the Univac II method.

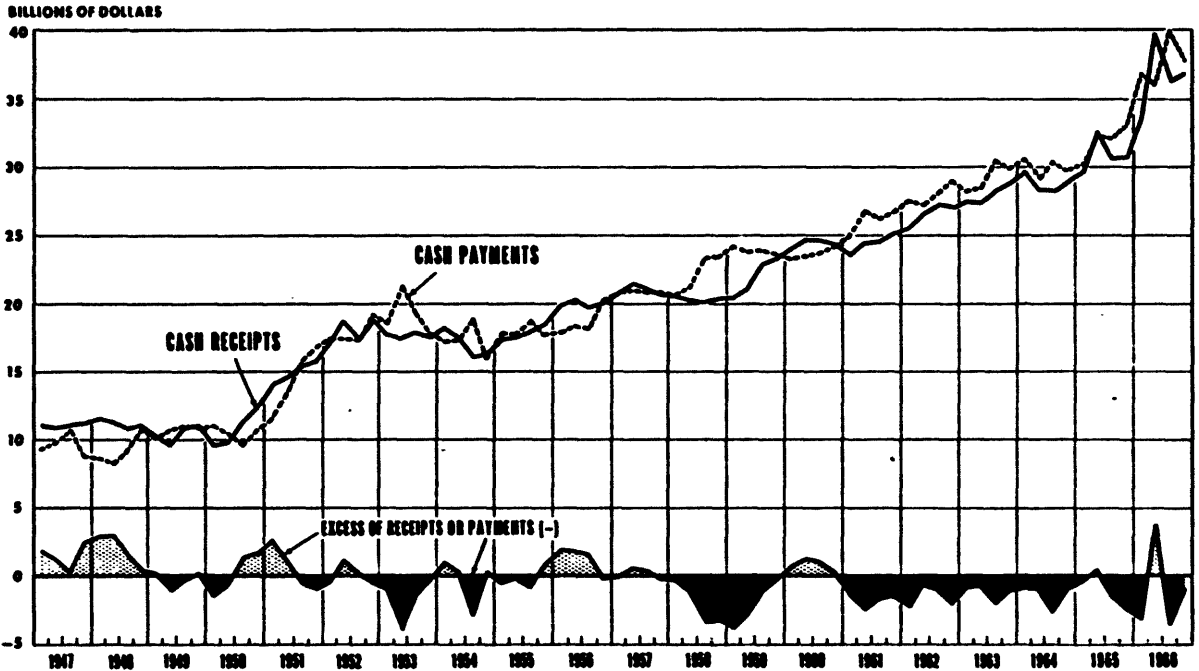
RELATION TO OTHER SERIES

The major differences between "cash receipts and expenditures" and "budget receipts and expenditures" were enumerated above. The cash series are very similar in general concept to the series on Treasury cash deposits and withdrawals published in the *Daily Statement of the United States Treasury*. Both series and the reconciliation between the two are published monthly in the *Treasury Bulletin*.

Principal differences between the cash receipts and payments series and the other major series have been discussed in the section on the administrative budget and are as follows:

1. Federal Government receipts and expenditures in the national income accounts and Federal revenue and expenditure as reported by the Census exclude loans, loan repayments, mortgage purchases, and similar financial investments.
2. That part of Federal expenditures for goods and services in the national income accounts consisting of purchases of goods and services are recorded to the maximum extent possible on the basis of time of delivery rather than time of payment.
3. Federal Government employer and employee contributions to employee retirement funds are considered intragovernmental transactions and are deducted from both receipts and payments in arriving at the consolidated cash totals, whereas in the national income accounts, payments of both employers and employees are counted both as receipts ("contributions for social insurance") and expenditures ("purchases of goods and services—compensation of

Cash Receipts From and Payments to the Public, 1947-66
(Quarterly data. Seasonally adjusted)



SOURCE OF DATA: BUREAU OF THE BUDGET

TABLE 36.—Federal Cash Receipts From and Payments to the Public, 1929-66

(Billions of dollars)

Year	Cash receipts from the public	Cash payments to the public	Excess of receipts (+) or payments (-)	Year	Cash receipts from the public	Cash payments to the public	Excess of receipts (+) or payments (-)
Fiscal year:				Fiscal year—Continued			
1929.....	3.8	2.9	+0.8	1961.....	97.2	99.5	-2.3
1930.....	4.0	3.1	+ .9	1962.....	101.9	107.7	-5.8
1931.....	3.2	4.1	-1.0	1963.....	109.7	113.8	-4.0
1932.....	2.0	4.8	-2.7	1964.....	115.5	120.3	-4.8
1933.....	2.1	4.7	-2.6	1965.....	119.7	122.4	-2.7
1934.....	3.1	6.4	-3.3	1966.....	134.5	137.8	-3.3
1935.....	3.8	6.3	-2.4	Calendar year:			
1936.....	4.2	7.6	-3.5	1943.....	37.9	89.0	-51.1
1937.....	5.6	8.4	-2.8	1944.....	48.1	94.8	-46.7
1938.....	7.0	7.2	-.1	1945.....	49.4	86.1	-36.7
1939.....	6.6	9.4	-2.9	1946.....	41.4	41.4	.1
1940.....	6.9	9.6	-2.7	1947.....	44.3	38.6	+5.7
1941.....	9.2	14.0	-4.8	1948.....	44.9	36.9	+8.0
1942.....	15.1	34.5	-19.4	1949.....	41.3	42.6	-1.3
1943.....	25.1	78.9	-53.8	1950.....	42.4	42.0	+.4
1944 ¹	47.8	94.0	-46.1	1951.....	59.3	58.0	+1.2
1945.....	50.2	95.2	-45.0	1952.....	71.3	72.0	-.6
1946.....	43.5	61.7	-18.2	1953.....	70.2	77.4	-7.2
1947.....	43.5	38.9	+6.6	1954.....	68.6	69.7	-1.1
1948.....	45.4	36.5	+8.9	1955.....	71.4	72.2	-.7
1949.....	41.6	40.6	+1.0	1956.....	80.3	74.7	+5.6
1950.....	40.9	43.1	-2.2	1957.....	84.5	83.4	+1.1
1951.....	53.4	45.8	+7.6	1958.....	81.7	89.0	-7.2
1952.....	68.0	68.0	(*) 0.0	1959.....	87.6	95.6	-8.0
1953.....	71.5	76.8	-5.3	1960.....	98.3	94.7	+3.6
1954.....	71.6	71.9	-.2	1961.....	97.9	104.7	-6.8
1955.....	67.8	70.5	-2.7	1962.....	106.2	111.9	-5.7
1956.....	77.1	72.5	+4.5	1963.....	112.6	117.2	-4.6
1957.....	82.1	80.0	+2.1	1964.....	115.0	120.3	-5.2
1958.....	81.9	83.5	-1.6	1965.....	123.4	127.9	-4.5
1959.....	81.7	94.8	-13.1	1966.....	145.1	150.9	-5.7
1960.....	95.1	94.3	+.8				

¹ Data for fiscal years prior to 1944 are not exactly comparable with those for later years in that only major intragovernmental transactions have been eliminated in the earlier years.

² First calendar year for which data are available.

³ Less than \$50 million.

Sources: Treasury Department and Bureau of the Budget.

employees"). In Federal revenue and expenditure as recorded by the Census, the Federal Government's contribution as employer is deducted as an intra-governmental transaction (but not employee contributions).

4. Transactions of public enterprises such as the Post Office are recorded gross in the Census tabulation of Federal revenue and expenditure but net in Federal cash receipts from and payments to the public.

USES AND LIMITATIONS

The series on receipts from and payments to the public is a more complete measure of the impact of Federal financial transactions on the economy than budget receipts and expenditures. Moreover, since it furnishes comprehensive totals of cash transactions, the consolidated cash series is valuable for determining Government financing and net borrowing require-

ments and for analyzing the financial impact of the Government's overall program. Nevertheless, for purposes of economic analysis the cash receipts and payments series has certain shortcomings.

Any series on overall Government transactions is necessarily an aggregation of many different kinds of transactions with widely varying economic effects. Government loans and purchases of existing assets in most cases do not have the same impact as an equivalent sum expended for Government purchases of currently produced goods and services. Equivalent sums collected from income taxes or estate taxes may also be expected to vary in effect. The date of accrual of tax liabilities may have a more important impact on the economy than the actual tax payment.

Other steps in the Federal financial process may be important indicators of economic impact. An expansion in new appropriations and in Government

orders can stimulate business activity before the authorized funds are paid to the public. Likewise, the enactment of a tax measure may affect business activity before the cash flows involved between the Federal Government and the public take place.

Finally, other financial activities have important economic effects. For example, Federal guaranties and insurance of private loans influence the economy even though they normally have little or no immediate impact on Federal receipts from and payments to the public. Aside from the significance of interest payments to the public, the management of the public debt is a factor which has particular impact in the money and credit markets of the economy.

REFERENCES

Unadjusted monthly data on Federal cash receipts from and payments to the public appear in the *Monthly Statement of Receipts and Expenditures of the United States Government*, *Treasury Bulletin*, and the *Federal Reserve Bulletin*, and quarterly data in *Economic Indicators* and the *Federal Reserve Bulletin*. Seasonally adjusted quarterly data also appear in *Economic Indicators* and the *Federal Reserve Bulletin*. Annual data by fiscal years back to 1929 are published in the *Historical Statistics of the United States*,

Colonial Times to 1957. Starting with the 1944 budget each year the *Budget of the United States Government* has also presented data for the most recent fiscal year and estimates for the current and following fiscal years. The closely related series on Treasury cash deposits and withdrawals is published in the *Daily Statement of the United States Treasury*, and monthly in the *Treasury Bulletin*.

Adjustments made in the data on budget receipts and expenditures to arrive at Federal cash receipts from and payments to the public on a monthly basis are summarized in the *Monthly Statement of Receipts and Expenditures of the United States Government* and in the *Treasury Bulletin*. The adjustments made in the annual figures are listed in detail in a release of the Bureau of the Budget entitled "Receipts From and Payments To the Public, Supporting Tables and Supplementary Information." This release is issued in conjunction with the annual publication of the *Budget of the United States Government*. A summary reconciliation of the differences between this series and the Treasury cash deposits and withdrawals series is published monthly in the *Treasury Bulletin* and annually in "Receipts From and Payments To the Public, Supporting Tables and Supplementary Information."

37. FEDERAL BUDGET, NATIONAL INCOME ACCOUNTS BASIS

DESCRIPTION OF SERIES

This series reports Federal transactions as they are recorded in the U.S. income and output accounts. The Federal sector data are designed to measure the purchases of current output by the Federal Government and the relationship of Federal receipts and other Federal expenditures to national, personal, and disposable personal income. (See descriptions of these concepts in prior sections of this *Supplement*.) The Federal sector is recorded in a manner consistent with the conceptual treatment of the personal, business, and State and local government sectors in the national income and output accounts.

Federal purchases of goods and services are measured, insofar as is possible, on a delivery basis rather than on an obligation, checks-issued, or payments basis. This timing of purchases corresponds more closely to current production. Receipts, by and large, are on an accrual basis. For example, corporate profits taxes are included on an accrual basis, rather than when collected. There may be

a substantial lag between the accrual of a liability and its collection.

As shown in the table, expenditures in the Federal sector account are presented in a 5-way classification:

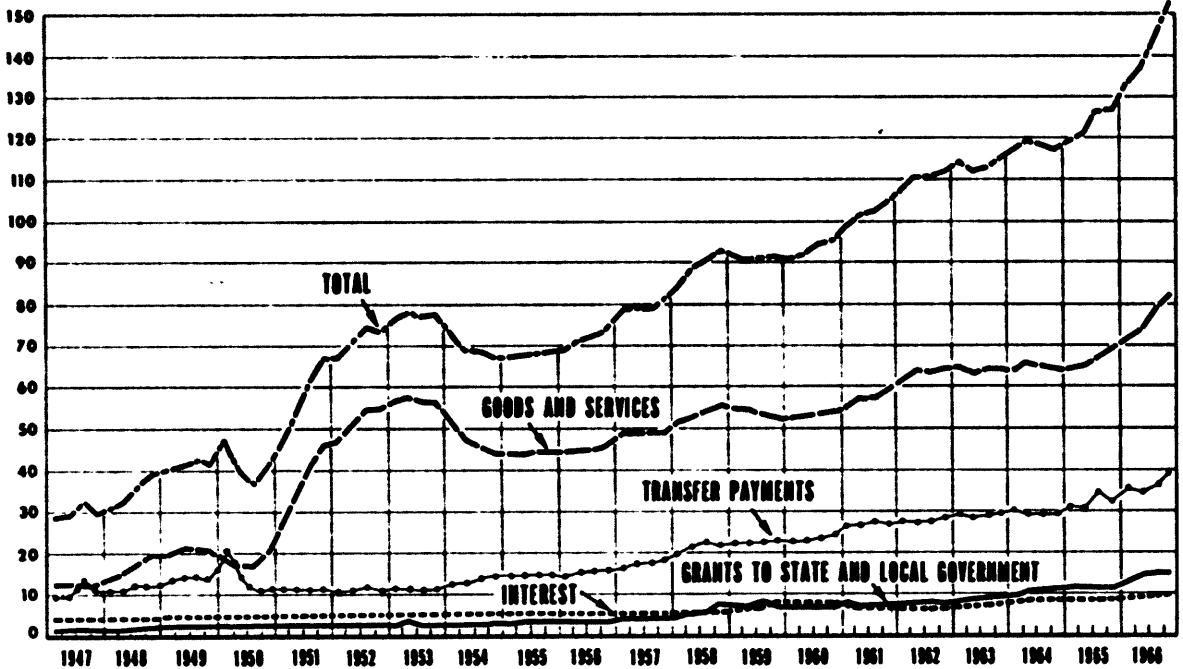
Federal *purchases of goods and services* is the only category of Federal spending which is included in the gross national product (GNP). These purchases represent the value of the Nation's output bought directly by the Federal Government. They include the pay of military and civilian employees of the Federal Government, outlays on equipment and supplies for defense and other programs, new construction, and the capital formation of Government enterprises.

Transfer payments and *net interest paid* by the Federal Government are outlays in return for which no current service is deemed to be obtained; the most important transfer payments include such items as old-age and survivors' insurance benefits, medicare benefits, unemployment compensation, and military and veterans pensions. Although such pay-

Federal Expenditures, National Income Accounts Base, 1947-66

(Quarterly data. Seasonally adjusted annual rates)

BILLIONS OF DOLLARS



SOURCE OF DATA: DEPARTMENT OF COMMERCE

ments are not included in GNP, they do enter into the income stream and have an impact on national output; they are reflected in the GNP in another sector of the accounts when spent by the recipients.

Federal grants-in-aid to State and local governments, like transfer payments and net interest paid, have their impact on GNP when respent by the recipient governmental unit. Most grants are for highways, public assistance, education, and public health.

Private incomes are also affected by Federal subsidies and by the net surplus of Government enterprises in their operations with the public. These *subsidies less current surplus of Government enterprises* reflect mainly Government payments to farmers, certain outlays for the export and disposal of surplus agricultural commodities, shipping subsidies, and the current operating deficit of the Post Office and other Government enterprises.

The receipts of the Federal sector account are shown in a 4-way classification: (1) *Personal tax and nontax receipts* consist mostly of individual income taxes, estate and gift taxes, and certain payments such as fines, and penalties; (2) *corporate profits tax accruals* represent the Federal tax liability incurred

and accrued by resident corporations on their corporate earnings during the specific year or period; (3) *indirect business tax and nontax accruals* primarily include liquor, tobacco, and other excise taxes, and customs duties; (4) *contributions for social insurance* are composed chiefly of employment taxes, contributions to the retirement funds for Government employees, and deposits by the States to the unemployment trust fund.

STATISTICAL PROCEDURES

Data for the Federal sector account are based on the *Budget of the United States Government*, reports of various agencies (particularly the Internal Revenue Service), and (unlike other records of Federal transactions) to an extent, on estimates made by the Department of Commerce. Thus, the results are to be regarded as statistical estimates, rather than as accounting totals in the ordinary sense.

Data are available quarterly and annually for both the fiscal and calendar years. The quarterly figures are published in seasonally adjusted as well as in unadjusted form. Both expenditures and receipts are seasonally adjusted by applying the adjustments

TABLE 37.—Federal Government Receipts and Expenditures in the National Income and Product Accounts, 1929-66

(Billions of dollars)

Year	Receipts					Expenditures							Surplus or deficit (-), national income and product accounts
	Total	Personal tax and non-tax receipts	Corporate profits tax accruals	Indirect business tax and non-tax accruals	Contributions for social insurance	Total	Purchases of goods and services	Transfer payments		Grants-in-aid to State and local governments	Net interest paid	Subsidies less current surplus of government enterprises	
								To persons	To foreigners (net)				
Calendar year													
1929..	3.8	1.3	1.2	1.2	.1	2.6	1.3	.7	(*)	.1	.4	.1	1.2
1930..	3.0	1.1	.7	1.0	.1	2.8	1.4	.7	(*)	.1	.4	.1	.3
1931..	2.0	.6	.4	.9	.1	4.2	1.5	1.7	(*)	.3	.4	.2	-2.1
1932..	1.7	.3	.3	.9	.1	3.2	1.5	.9	(*)	.1	.5	.2	-1.5
1933..	2.7	.5	.5	1.6	.1	4.0	2.0	.7	(*)	.5	.5	.3	-1.3
1934..	3.5	.6	.6	2.2	.1	6.4	3.0	.6	(*)	1.6	.6	.6	-2.9
1935..	4.0	.8	.8	2.2	.1	6.5	2.9	.6	(*)	1.7	.5	.7	-2.6
1936..	5.0	1.1	1.3	2.3	.4	8.7	4.9	2.1	(*)	.7	.5	.4	-3.6
1937..	7.0	1.7	1.3	2.4	1.6	7.4	4.7	.8	(*)	.8	.6	.5	-.4
1938..	6.5	1.6	.9	2.2	1.7	8.6	5.4	1.2	(*)	.8	.6	.6	-2.1
1939..	6.7	1.2	1.3	2.3	1.9	8.9	5.1	1.2	(*)	1.0	.6	.9	-2.2
1940..	8.6	1.4	2.6	2.6	2.0	10.0	6.0	1.4	(*)	.9	.7	.9	-1.3
1941..	15.4	2.0	7.3	3.6	2.5	20.5	16.9	1.4	(*)	.8	.8	.7	-5.1
1942..	22.9	4.7	11.1	4.0	3.2	56.1	51.9	1.4	.1	.9	1.0	.8	-33.1
1943..	39.3	16.5	13.6	4.9	4.2	85.8	81.1	1.2	-1	.9	1.7	.9	-46.6
1944..	41.0	17.5	12.5	6.2	4.8	95.5	89.0	1.8	-1	.9	2.4	1.4	-54.5
1945..	42.5	19.4	10.2	7.1	5.8	84.6	74.2	4.3	.4	.9	3.3	1.5	-42.1
1946..	39.1	17.2	8.6	7.8	5.5	35.6	17.2	9.2	2.2	1.1	4.2	1.6	3.5
1947..	43.2	19.6	10.7	7.8	5.1	29.8	12.5	8.8	1.9	1.7	4.2	.6	13.4
1948..	43.3	19.0	11.8	8.0	4.5	34.9	16.5	7.6	3.8	2.0	4.3	.7	8.4
1949..	38.9	16.1	9.8	8.0	4.9	41.3	20.1	8.7	5.1	2.2	4.4	.8	-2.4
1950..	49.9	18.1	17.0	8.9	5.9	40.8	18.4	10.8	3.6	2.3	4.5	1.2	9.1
1951..	64.0	26.1	21.5	9.4	7.1	57.8	37.7	8.5	3.1	2.5	4.7	1.3	6.2
1952..	67.2	31.0	18.5	10.3	7.4	71.0	51.8	8.8	2.1	2.6	4.7	1.0	-3.8
1953..	70.0	32.2	19.5	10.9	7.4	77.0	57.0	9.5	2.0	2.8	4.9	.8	-7.0
1954..	63.8	29.0	17.0	9.7	8.1	69.7	47.4	11.5	1.8	2.9	5.0	1.1	-5.9
1955..	72.1	31.4	20.6	10.7	9.3	68.1	44.1	12.4	2.0	3.1	4.9	1.5	4.0
1956..	77.6	35.2	20.6	11.2	10.6	71.9	45.6	13.4	1.9	3.3	5.3	2.4	5.7
1957..	81.6	37.4	20.2	11.8	12.2	79.6	49.5	15.7	1.8	4.2	5.7	2.6	2.1
1958..	78.7	36.8	18.0	11.5	12.4	83.9	53.6	19.5	1.8	5.6	5.6	2.7	-10.2
1959..	89.7	39.9	22.5	12.5	14.8	91.0	53.7	20.1	1.8	6.8	6.4	2.1	-1.2
1960..	96.5	43.6	21.7	13.5	17.7	93.0	53.5	21.5	1.9	6.5	7.1	2.5	3.5
1961..	98.3	44.7	21.8	13.6	18.2	102.1	57.4	24.9	2.1	7.2	6.6	3.8	-3.8
1962..	106.4	48.6	22.7	14.6	20.5	110.3	63.4	25.5	2.2	8.0	7.2	4.0	-3.8
1963..	114.5	51.5	24.6	15.3	23.1	113.9	64.2	27.0	2.2	9.1	7.7	3.6	.7
1964..	115.1	48.6	26.5	16.2	23.9	118.1	65.2	27.8	2.2	10.4	8.3	4.2	-3.0
1965..	124.9	54.2	29.1	16.8	24.8	123.4	66.8	30.3	2.2	11.2	8.7	4.2	1.6
1966..	142.5	61.9	31.7	15.9	33.0	142.2	76.9	34.2	2.3	14.5	9.6	4.7	.3

See footnotes at end of table, p. 124.

TABLE 37. Federal Government Receipts and Expenditures in the National Income and Product Accounts, 1929-66—Continued

[Billions of dollars]

Year	Receipts					Expenditures						Surplus or deficit (-), national income and product accounts	
	Total	Personal tax and non-tax receipts	Corporate profits tax accruals	Indirect business tax and non-tax accruals	Contributions for social insurance	Total	Purchases of goods and services	Transfer payments		Grants-in-aid to State and local governments	Net interest paid		Subsidies less current surplus of government enterprises
								To persons	To foreigners (net)				
<i>Fiscal year</i>													
1946..	38.4	16.9	8.3	7.4	5.8	55.5	40.1			0.9	3.7	2.1	-17.1
1947..	42.7	18.8	10.6	7.9	5.5	29.5	13.0	8.3	1.8	1.5	4.2	.7	13.2
1948..	43.6	20.0	11.2	7.9	4.6	30.9	13.2	8.7	2.6	1.8	4.2	.5	12.7
1949..	40.0	16.3	11.0	8.0	4.8	39.6	19.3	8.1	5.0	2.1	4.3	.8	.4
1950..	42.0	16.5	11.9	8.2	5.5	42.4	19.0	11.3	4.3	2.4	4.4	1.0	-.5
1951..	60.8	23.2	21.5	9.5	6.6	44.6	25.1	8.1	3.1	2.4	4.6	1.3	16.2
1952..	65.1	28.8	19.3	9.7	7.3	66.0	46.6	8.5	2.6	2.5	4.8	1.1	-1.0
1953..	69.3	31.4	19.7	10.7	7.5	75.8	56.1	9.3	2.1	2.8	4.8	.9	-6.5
1954..	65.8	30.3	17.3	10.4	7.8	74.2	53.2	10.5	1.7	2.9	5.0	1.0	-8.5
1955..	67.2	29.7	18.7	10.0	8.7	67.3	43.9	12.1	2.1	3.0	4.9	1.3	-.1
1956..	75.8	33.6	21.1	10.8	10.2	69.8	45.2	12.8	1.8	3.2	5.1	1.7	6.0
1957..	80.7	36.7	20.6	11.7	11.7	76.0	47.7	14.4	1.9	3.7	5.5	2.8	4.7
1958..	77.9	36.3	17.8	11.6	12.2	83.1	50.7	17.8	1.7	4.7	5.7	2.5	-5.1
1959..	85.4	38.2	21.5	11.9	13.8	90.9	54.7	19.8	1.8	6.2	5.9	2.4	-5.5
1960..	94.8	42.5	22.3	13.2	16.7	91.3	52.7	20.6	1.8	6.8	7.0	2.3	3.5
1961..	95.3	43.6	20.3	13.3	18.1	98.0	55.5	23.6	2.1	6.9	6.8	3.2	-2.7
1962..	104.2	47.3	22.9	14.2	19.9	106.4	60.9	25.1	2.1	7.6	6.8	3.8	-2.1
1963..	110.2	49.6	23.5	15.0	22.1	111.4	63.4	26.4	2.1	8.4	7.5	3.6	-1.2
1964..	116.5	50.7	25.6	15.6	23.6	116.9	65.7	27.3	2.2	9.8	8.1	3.8	-1.4
1965..	120.6	51.3	27.8	16.9	24.6	118.3	64.3	28.2	2.2	10.9	8.5	4.1	2.3
1966..	132.6	57.9	30.7	15.9	28.1	132.3	71.7	32.0	2.3	12.9	9.1	4.5	.3

NOTE.—These accounts, like the cash budget, include the transactions of the trust accounts. Unlike both the administrative budget and the cash statement, they exclude certain financial transactions. In general, they do not use the cash basis for transactions with business. Instead, corporate profits taxes are included in receipts on an accrual instead of a cash basis; expenditures are timed with the delivery instead of the payment for goods and services; and CCC guaranteed price-support crop loans financed by banks are counted as expenditures when the loans are made, not when CCC redeems them.

Data for Alaska and Hawaii included beginning 1960.

*Less than \$50 million.

Sources: Department of Commerce (Office of Business Economics) and Bureau of the Budget.

individually to their many components having marked seasonal variation. The seasonally adjusted total is the sum of the several separately adjusted components. Many statistical adjustment techniques are used including the X-II seasonal adjustment program of the Bureau of the Census. The deficit or surplus is not seasonally adjusted separately. The seasonally adjusted deficit or surplus is the difference between seasonally adjusted receipts and expenditures.

RELATION TO OTHER MEASURES

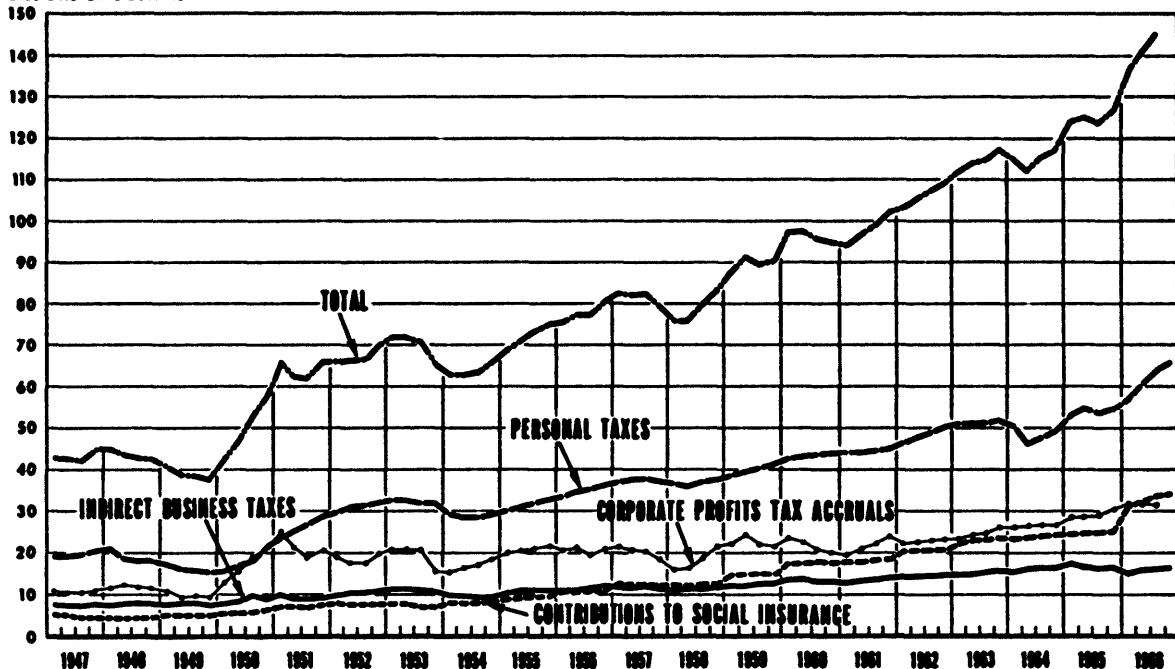
The Federal sector account differs from the budget receipts and expenditures series and the consolidated cash series in several major respects: (1) coverage, (2) netting and consolidation, (3) timing, and (4) the exclusion of financial transactions.

With respect to *coverage*, the Federal sector account, unlike the administrative budget, includes the trust and deposit funds. It omits the revenues

Federal Receipts, National Income Accounts Basis, 1947-66

(Quarterly data. Seasonally adjusted annual rates)

BILLIONS OF DOLLARS



SOURCE OF DATA: DEPARTMENT OF COMMERCE

and expenditures of the District of Columbia, which are classified by the Department of Commerce in the State and local government sector. Also omitted are the net expenditures of the Federal Home Loan Banks and Federal Land Banks which are treated as private enterprises in the national income accounts.

As to *netting and consolidation*, the national income accounts record both interest paid by the Government and Government purchases on a net basis. Accordingly, interest received by the Government is excluded from receipts and subtracted from Federal interest payments; and receipts from sales of Government products are similarly subtracted from Government purchases. Neither adjustment affects the surplus or deficit, for, in effect, both receipts and expenditures are decreased by the same amount.

Adjustments for consolidation are needed to reflect in the Federal sector account a few transactions such as employer and employee contributions to Federal employees' retirement funds. These contributions are part of the total compensation of Government employees, but are excluded from the consolidated cash statement. Again, the deficit or surplus is unaffected by the adjustment, since total receipts

and expenditures are both increased by the same amount.

With respect to *timing*, business taxes are recorded in the national income accounts as they are accrued by the private sector, rather than when they are collected by the Government. The accrued liability is more likely to coincide with the effects of corporate taxes on corporate spending decisions than are the collections. The principal timing adjustments for expenditures are: (1) The Federal sector account records Federal purchases in terms of the delivery of goods and services to the Government, whereas cash payments for these deliveries may precede or follow; and (2) interest on savings bonds and Treasury bills is treated as an expenditure by the Government when the interest is accrued, rather than when it is actually paid out in cash.

The *financial* transactions which are included in budget receipts and expenditures and cash receipts and payments are excluded from the Federal sector. These are primarily net lending through mortgages, subscriptions to international institutions, and other claims; net borrowing through certificates of interest issued by various government agencies; and pur-

chases of foreign currency by the Commodity Credit Corporation to facilitate exports of surplus agricultural commodities. (CCC pays dollars to exporters in exchange for foreign currencies received for the exports.)

The Federal sector account differs from the cash budget in several other respects. For instance, it excludes purchases and sales of land, as not representing current production. On the other hand, it includes the purchases, sales, grants, interest receipts, etc. recorded in the government's foreign currency accounts, whereas the cash budget refers only to transactions in the dollar accounts.

USES AND LIMITATIONS

Each of the three major series on Federal finance—the administrative budget, consolidated cash, and the Federal sector account—is useful for specific kinds of analysis, and the selection of which to use should be determined by the problem at hand. The Federal sector account is especially suited for an analysis of fiscal policy. It was specifically designed to complement the data on private expenditures and incomes contained in the national income accounts. The accounts, however, exclude a substantial volume of financial transactions through which the Federal Government significantly affects the capital and credit markets. As a result, for purposes of analysis of the Federal impact on such markets, the consolidated cash statement may be more useful than the national income accounts.

For certain types of problems, no overall measure of receipts and expenditures will serve adequately. Since the various receipt and expenditure transactions have different economic effects, a given aggregate will have an economic impact which depends largely on the composition of the total. In addition, many Government activities besides receipts and expenditures affect the economy. For example, a rapid expansion in new appropriations and in Government orders could stimulate a rise in business activity well before either the delivery of goods, the performance of services, or the payment for them. The management of the public debt is a further factor which has a significant impact on the money and credit markets of the economy. Consequently, in evaluating the economic impact of Federal Government activities, there is no substitute for complete and detailed analysis of the Government program in all its aspects.

REFERENCES

Current estimates by quarters on both seasonally unadjusted and adjusted bases are published regularly by the Department of Commerce in the *Survey of Current Business*. Revised estimates for previous years are generally published in the July issue. For the latest historical time series see *The National Income and Product Accounts of the United States, 1929-1965*, published as a supplement to the *Survey of Current Business* in 1966.

