

SEPTEMBER 1948

SURVEY OF

CURRENT BUSINESS



U. S. DEPARTMENT OF COMMERCE

BUREAU OF FOREIGN AND DOMESTIC COMMERCE

SURVEY OF CURRENT BUSINESS

Vol. 28



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SEPTEMBER 1948

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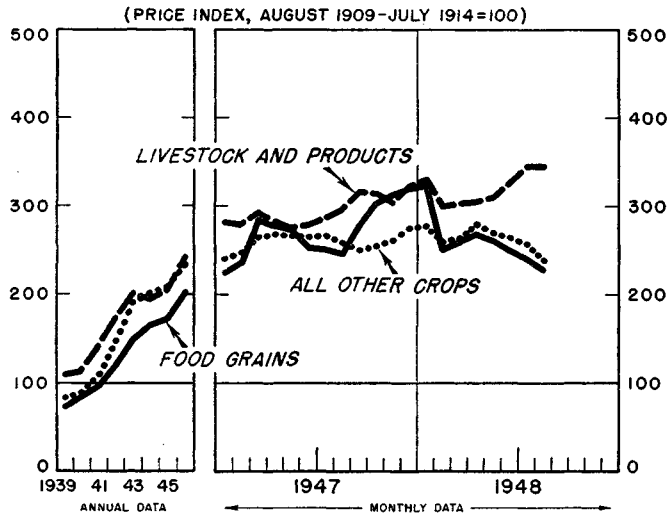
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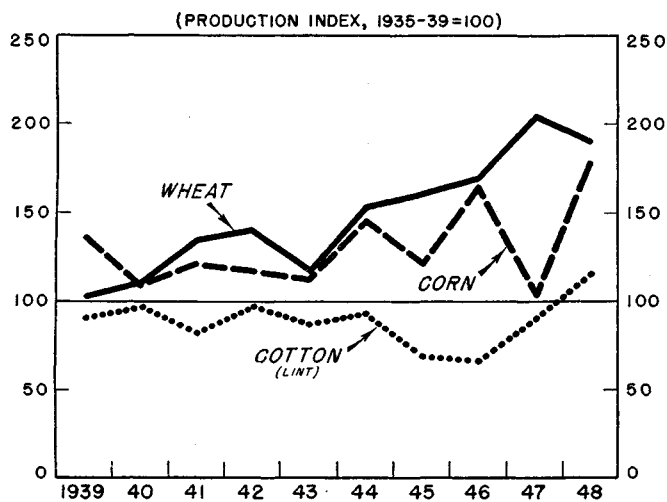
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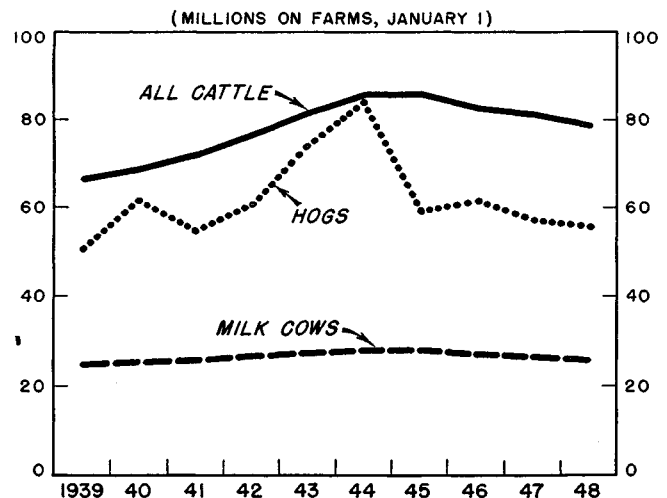
Contrasting movements of crop and livestock prices reflect in part.....



Improved crop production prospects.....



and reduced livestock supply.



U. S. DEPARTMENT OF COMMERCE, OFFICE OF BUSINESS ECONOMICS.
SOURCE OF DATA: U. S. DEPARTMENT OF AGRICULTURE, BUREAU OF AGRICULTURAL ECONOMICS. 48-303

THE *Business* SITUATION



By the Office of Business Economics

SEASONAL factors dominated business developments in August with no significant change in the underlying trend. Resumption of factory operations after the mid-summer vacation shut-downs lifted industrial output, but retail trade was erratic under the influence of weather changes. The general commodity price level continued to edge higher notwithstanding the declines, depicted in the chart on this page, in crop prices resulting from actual or prospective bumper harvests.

Total August civilian employment of 52.8 million persons in nonagricultural pursuits was over 2 million larger than a year ago, while unemployment remained at the low figure of 1.9 millions. Except in agriculture, employment was generally higher throughout the entire economy in July and August than a year ago, with the largest relative gain occurring in the construction industry.

Upon the basis of the expanded employment and larger flow of building materials compared with last year, the total volume of new construction put in place in August was valued at 1.8 billion dollars as the seasonal peak of operations for the year was approached. During the first 8 months of this year, new construction has aggregated 11.2 billion dollars or 35 percent more than in the same 1947 period but at the same time building costs have averaged substantially higher.

The durable-goods industries continue relatively more active in comparison with last year than the nondurable-goods industries. This has been generally true so far this year and applies to both manufacturers' output and sales and to sales of retail stores. It is, of course, to be expected that during a period of exceptionally active capital formation, such as the present, durable-goods industries would be more stimulated than nondurables. The most recent survey of plant and equipment expenditures, the preliminary results of which are discussed below, shows that producers are still acquiring new productive facilities from the capital-goods industries at an unprecedented rate.

Because of the increasingly widespread practice of shutting down plants for summer vacations, manufacturers' sales were off about 10 percent in July as compared with the month before. The drop was somewhat sharper than that which occurred last summer as nondurable-goods sales were affected to a greater extent this year. Early indications point to improvement in August.

Seasonal accumulations of raw materials, particularly in food products, helped to lift the book value of manufacturers' inventories nearly half a billion dollars in July. As a result, the value of these inventories moved above the 30-billion dollar mark. Durable-goods inventories showed only a minor increase.

New orders received by manufacturers, which had jumped in June, receded again in July. Since sales declined less than orders, however, backlogs continued upward. Although the pattern of autumn business has not yet emerged from the seasonal lull depicted in most economic statistics, there is little indication of any let-up in the basic upward trend of the national product and income.

Personal income in July aggregated 211.5 billion dollars at a seasonally adjusted annual rate. The nominal decline from 212.3 billions in June was chiefly due to a less-than-seasonal rise in farm income, as total nonagricultural income continued upward.

Latest Plant and Equipment Survey

Expenditures for new plant and equipment by nonagricultural business will continue through the end of 1948 at the peak level reached in the fourth quarter of 1947, according to preliminary estimates of expenditures reported by business for the remainder of the year. Actual business outlays for new producers' capital in the first half of 1948 and those anticipated for the second half of the year, according to the current quarterly survey conducted jointly by the Department of Commerce and the Securities and Exchange Commission, are quite close to the estimated annual total of more than 18.5 billion dollars based upon business reports made at the beginning of the year.

Manufacturers' actual outlays for new plant and equipment in the second quarter of 1948 appear to have been somewhat larger than were anticipated earlier, and outlays at approximately this higher rate are planned for the last half of the year. This represents some increase in expenditures in prospect for the second half of 1948 over those planned at the time of earlier surveys. The electric and gas utilities also spent more than anticipated in the second quarter and forecast moderate gains in the rate of expansion for the second half of 1948. While the railroads look forward to further growth in their outlays for new capital, expenditures actually realized in the second quarter were below expectations and estimates for the second half year may also be scaled down though they probably still will be at record highs. For the commercial and miscellaneous group of business, the rate of outlays planned for the second half of 1948 closely approximates the large new plant and equipment expenditures actually realized in the second quarter.

New Credit Controls

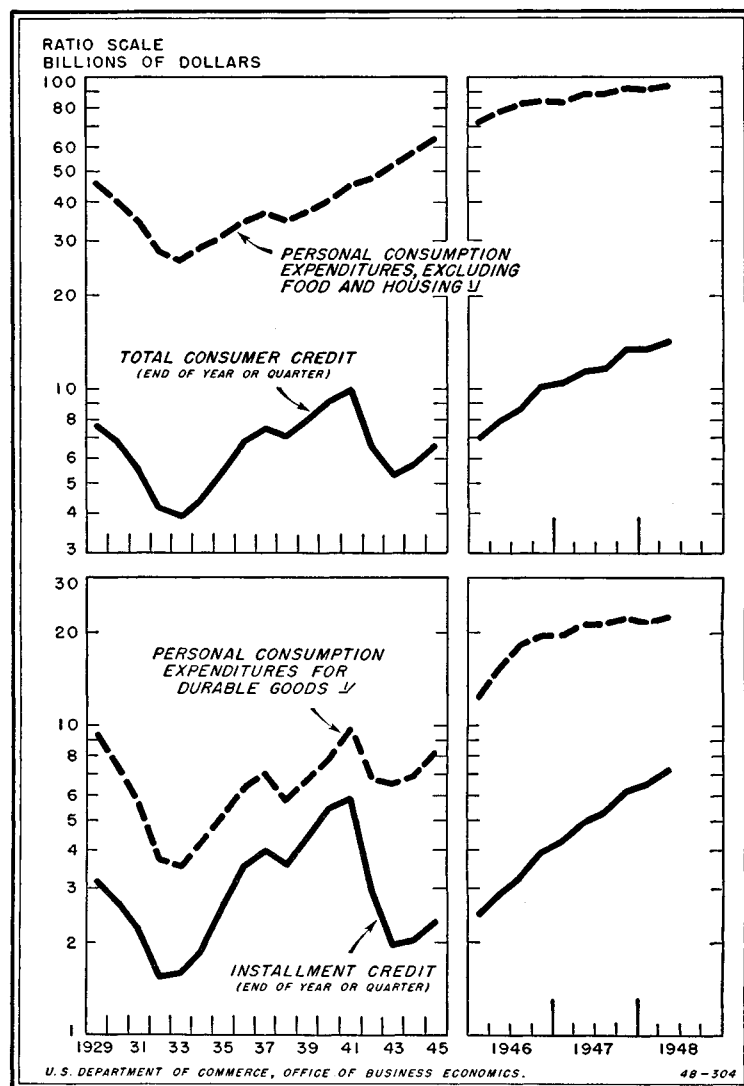
Legislative action taken at the recent special session of Congress permitted the renewal of consumer instalment credit controls and a raising of bank reserve requirements.

The wartime control of consumer credit had been extended in modified form until last November when all remaining restrictions were lifted. The new restrictions, to become effective September 20, are, broadly speaking, similar to those in effect before decontrol last November, except that on nonautomotive instalment credit, required down payments are somewhat lower, being one-fifth under the new Regulation W, as compared with one-third, except in the case of furniture which required one-fifth under the previous regulation. On automotive credit, the minimum down payment is renewed at one-third. On all instalment credit, the maximum maturity terms remain limited to 15 months, except that an 18-month period is permitted where the loan is greater than \$1,000 and monthly payments are at least \$70.

While consumer debt may be expected to continue to increase as the unit sales of consumer durables sold on credit expand, one important effect of renewed credit control will be to eliminate that part of the increase which has been resulting from the liberalizing of terms following decontrol—

a process still under way. The regulation of competition in credit terms will tend to place more emphasis on price and quality competition in some lines, such as in many types of home furnishings and appliances whose sales are approaching a balance with supplies. In other lines where supply conditions are still tight, such as in the case of new automobiles, the new controls will probably not greatly affect the current competitive situation.

Chart 2.—Consumer Spending and Short-Term Credit Outstanding



¹ Data are totals for the year and quarterly totals, seasonally adjusted, at annual rates.

Sources of data: Expenditures, U. S. Department of Commerce, Office of Business Economics; credit, Board of Governors of the Federal Reserve System.

Recent Consumer-Credit Trends

Even if the new credit controls serve only to dampen the rise in aggregate consumer debt, the effect will nevertheless be helpful in restoring a better balance between consumer demand and the still relatively short supplies of various major consumer goods. The changing relation between consumer credit and spending in recent years is made clear in chart 2, where in the upper panel total consumer short-term credit outstanding is compared with consumption expenditures for goods and services, other than food and rentals. These latter groups are excluded because it is believed that no great quantity of credit is involved in their purchase. The lower panel depicts the trend of instalment

credit, the most volatile item in total short-term consumer debt, as compared with expenditures for consumer durables.

The chart shows that early in the postwar period, as civilian-type goods reappeared on the market, consumer credit rose at about the same rate as total consumer outlays exclusive of food and clothing. In the past year, however, the situation has been quite different as the rate of credit expansion has exceeded that of consumer spending. While this rise in consumer credit was only one of the generally rising demand pressures which stemmed from increased incomes and reduced personal taxes, it has nevertheless been a contributory influence in the rising trend of prices.

Consumer Debt Low Relative to Prewar Standards

Notwithstanding the sharp postwar rise in short-term consumer debt, the amount of such credit outstanding is still relatively low if judged by prewar standards. It may be seen from chart 2, for example, that outstanding credit has been less relative to consumer expenditures than generally prevailed before the war. This continuing divergence from the prewar pattern can be explained in part by the still low volume of automobile sales, relative to postwar income levels. Much more important, however, would appear to be the greatly improved financial position of consumers, who hold about 170 billion dollars of liquid assets at the present time in contrast to the prewar situation—for example in 1939, when holdings of assets amounted to less than 50 billion dollars. With this large postwar backlog of assets, consumers have found it possible to finance a larger proportion of their postwar requirements by means of cash payments.

Required Bank Reserves Raised

The legislation permitting the reconrol of consumer credit terms also provides that the Board of Governors of the Federal Reserve System may, up to June 30, 1949, raise the reserve requirements of the System's member banks, as part of a program of tightening commercial bank credit. Since the provisions of the act do not apply to nonmember commercial banks, about 85 percent as measured by deposits of all commercial banks are subject to this new restriction on lending.

On September 8, the Federal Reserve Board of Governors announced that it would require member banks later in the month to increase reserves by about 2 billion dollars, or 2 percent of their net demand deposits and 1½ percent of time deposits. As the situation now stands the Board has the power to raise requirements by an additional 4 percent on net demand deposits at New York and Chicago banks, and by 2 percent at other member banks.

Since many member banks have few reserves in excess of legal requirements, the action taken by the Federal Reserve Board of Governors will probably require sale of Government securities to meet the new requirements. In view of large holdings of these securities by member banks—amounting to over 60 billion dollars on June 30 of this year—and in the light of Government support of the Federal Reserve markets, banks will undoubtedly be able to obtain whatever additional reserves are required under the terms of the new law. Although the recent reserve action is not designed to reduce bank loans, the reserve increase will tend to restrict, in some degree, further expansion in loans to private business as bank holdings of highly liquid assets are reduced and pressure continues to be exerted to raise the cost of short-term borrowing.

In August, the Federal Reserve Board of Governors announced an increase in its rediscount rate—that is, the rate at which member banks can borrow funds from the Federal Reserve Banks. Yields on short-term Treasury securities have also continued to inch upward. The yield

on 3-month Treasury bills, for example, averaged in August 1.05 percent as compared with 0.75 percent a year ago, as can be seen in chart 3.

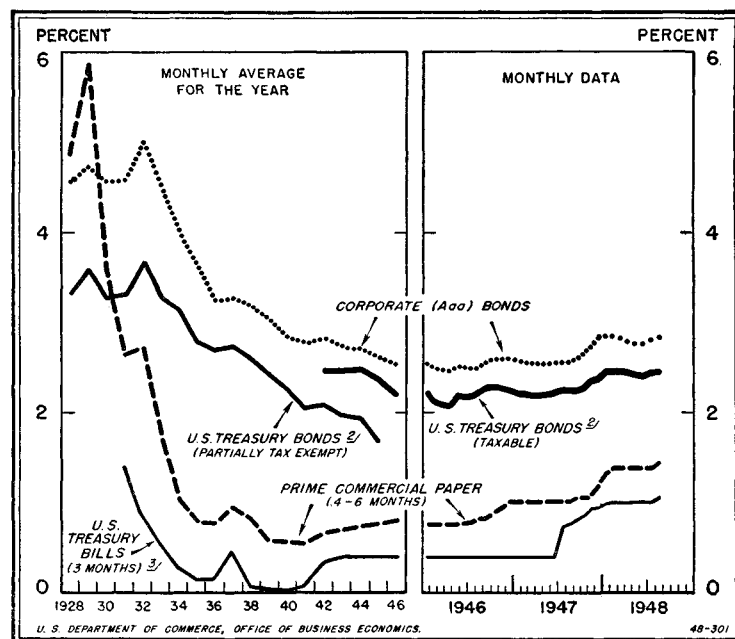
The chief significance of these higher yields on short-term Federal securities lies in the fact that banks may be thereby induced to purchase these securities from the Federal Reserve banks. To the extent that they use their available cash in this manner, banks will reduce the funds available for private loans.

Industrial Prices Continue Advance

The momentum of the August wholesale price rise has been entirely due to the advance of the industrial products. Wholesale prices of industrial (nonfarm, nonfood) products, as measured by the Bureau of Labor Statistics index (1926=100), had risen by the last week of August to 153.2 from 152.1 in the last week of July, while the all-commodities index (including farm products) which dropped during the month, and foods, which remained on about the same level as in July, stood at 168.4 as compared with 168.3 at the end of July. Leading the advances in industrial prices were those in metals and metal products and in building materials, reflecting not only the general strength of the durable-goods sector of the economy but also the rise of costs. In the non-durable-goods sector, declines occurred in textiles and products and in chemicals prices.

At the retail level, higher prices for many consumer goods carried the consumers' price index in July above the June 1948 peak of 174 (1935-39=100). Rises in food prices—which carry the heaviest weight in the index—reflected higher quotations in meat, poultry, and dairy products. As indicated in the following section, the major effect of de-

Chart 3.—Long-Term Bond Yields and Short-Term Money Rates



¹ Bond yields are averages of daily figures. Rates on prime commercial paper are averages of weekly prevailing open-market money rates in New York City. Rates for Treasury bills are averages for new issues offered within the period; tax-exempt bills prior to March 1941, taxable bills thereafter.

² Represents yields on bonds due or callable after 15 years or more with the exception of data prior to November 30, 1935 which include issues due or callable after 12 years. On November 30, 1935 the series were identical. The partially tax-exempt series was discontinued December 15, 1945, because there were no longer bonds of this classification due or callable after 15 years or more.

³ Includes the following maturities: 3 months, to February 16, 1934, and from December 17, 1937 to date; 6 months, from February 23, 1934 to February 23, 1935; 9 months, from March 1, 1935 to October 15, 1937; bills maturing about March 16, 1938, from October 22 to December 10, 1937.

Sources of data: U. S. Treasury Department; Board of Governors of the Federal Reserve System; and Moody's Investors Service.

clining grain prices on prices of animal products will be deferred by the time periods required to produce additional numbers of poultry, hogs, and beef cattle. All other major groups entering into the consumers' price index also rose, with the chief advances being made by fuels (other than gas and electricity) and housefurnishings.

Crop Prices and Farm Income

The principal developments in recent months affecting farm prices have been the excellent growing weather in the United States which is bringing a record domestic harvest and, in the case of wheat, prospect also of improvement in foreign supplies. The effect of these factors on crop prices has more than outweighed the influence exerted by advancing consumer income. Prices of wheat, feed grains, cotton, and oil crops have fallen, and the support programs for these crops have been activated.

The earliest of the adjustments was in wheat, where crop prospects became favorable several months ago. A domestic crop almost as large as last year's, combined with good harvests abroad, has lowered wheat prices about 80 cents a bushel since the beginning of the year. As compared with an average price of \$2.29 per bushel for the 1947 crop, prices received by farmers have been in the neighborhood of \$2 per bushel during the first 2 months of the 1948 marketing season; and temporary gluts have forced prices below support in the Southwestern area at the peak of marketing.

As in the past two seasons, production of wheat in 1948 is geared to the huge import needs of Western Europe. Supplies available for the 1948-49 season (1.5 billion bushels) are about half again as large as the prewar average. In contrast to the demand for most farm products, domestic consumption of wheat is relatively unresponsive to changes in income. Thus, domestic disappearance during the current season is estimated by the Department of Agriculture to be approximately 750 million bushels—only slightly higher than the prewar average—leaving about 725 million bushels available for export and carry-over at the end of the crop year.

In view of Europe's continuing needs and our large supply, storage of which is difficult because of large yields of other crops to be harvested this fall, wheat is being moved abroad at a rapid rate in the third quarter of the year and large shipments are scheduled during the final quarter.

Feed Shortage to End

The prospective bumper crop of feed grains, principally corn and oats, will lead to an abundance of feed during the year ahead. This situation contrasts sharply with the severe shortage last year which forced the liquidation of a part of the livestock on farms.

The increase in the prospective feed-grain supply as compared with that of prewar years is not large in relation to the growth in human population and to the higher demand for livestock and livestock products associated with increased real income. The apparent surplus for the feeding year ahead is due to the fact that the livestock population has been reduced substantially since the end of the war and that the scope for its expansion within the year is very limited. Thus, the number of grain-consuming livestock to be fed during the year beginning in October is about the same as the average in the 5 years 1937-41. At the same time, the total feed-grain supply for the year ahead, estimated by the Department of Agriculture at 141 million tons, is a fifth higher than the average supply for the same prewar years.

Feeding Ratios More Favorable

The bumper feed crops will mean more and cheaper livestock feed. The ratios of the prices of livestock and products to the prices of feed, which have been relatively unfavorable during the past year, are improving as the price of feed declines and prices of livestock and products are not directly affected. Once the corn harvest is in, livestock farmers will have a real incentive to expand numbers and production.

Barring unlikely shifts in inventories, the main outlines of the timing of the expansion in marketings of livestock and products can be indicated because of the fixed biological time factors and the seasonal influences involved. For example, the first improvement in the meat supply will be a small gain next spring and summer from increased corn feeding of steers, but the first substantial increase can come no earlier than the fall and winter of 1949-50 from the marketing of spring-born pigs. Improvement in the beef supply will require at least an additional year because of the longer period required for cattle to reach maturity.

A gain in egg production may be achieved in the late fall of 1949 as pullets hatched in the spring reach laying age. Meanwhile, egg output may continue for several months to lag behind the output in the same period a year earlier, reflecting the 15-percent decline in the number of chickens raised in 1948 and the smaller number of hens on farms on August 1 of this year as compared with a year earlier. An expansion in broiler marketings may show up within a few months, however, as increased hatching of chicks for broiler production may take place at any season of the year.

Dairy production responds very sluggishly. Any substantial increase will be difficult to achieve as long as prices for meat animals, including culls from the dairy herd, remain at or near current levels. As mentioned earlier, expanded marketing of cattle cannot be obtained promptly. Little gain can result from more liberal feeding since cows have already been fed at a high rate throughout the past year.

In summary, the expansion in output of livestock and products resulting from the bumper feed crops will be delayed. However, the incentive to expand livestock production is strong, and such expansion will, in time, benefit consumers. But larger supplies will not in all instances lead to lower prices. As shown in chart 4, egg prices are near support level; consequently, lower egg prices will not result directly from expanded production unless the support price is lowered. The other livestock and product prices are well above support levels.

Changed Outlook for Cotton

Cotton prices have drifted near support level since the announcement that the largest crop since 1937 is expected. This is not a reversal of trend, however, as cotton prices averaged lower from the 1947 crop than from the crop of 1946.

A combination of factors have contributed to the reduction in the price of cotton. Reduced domestic consumption—down to 9.3 million bales in 1947-48 from 10 million the year before—and the lowest peacetime exports in 75 years resulted in an increased carry-over on August 1 instead of the reduction that had been anticipated a year earlier. World production this year is up an estimated 17 percent from last year.

In spite of these factors, the reduction in the price of cotton will be moderate. Cotton averaged 34.6 cents per pound for the year beginning August 1, 1947, which is only about 4 cents per pound higher than the loan rate established for the 1948 crop. In view of the large crop and the moderate price

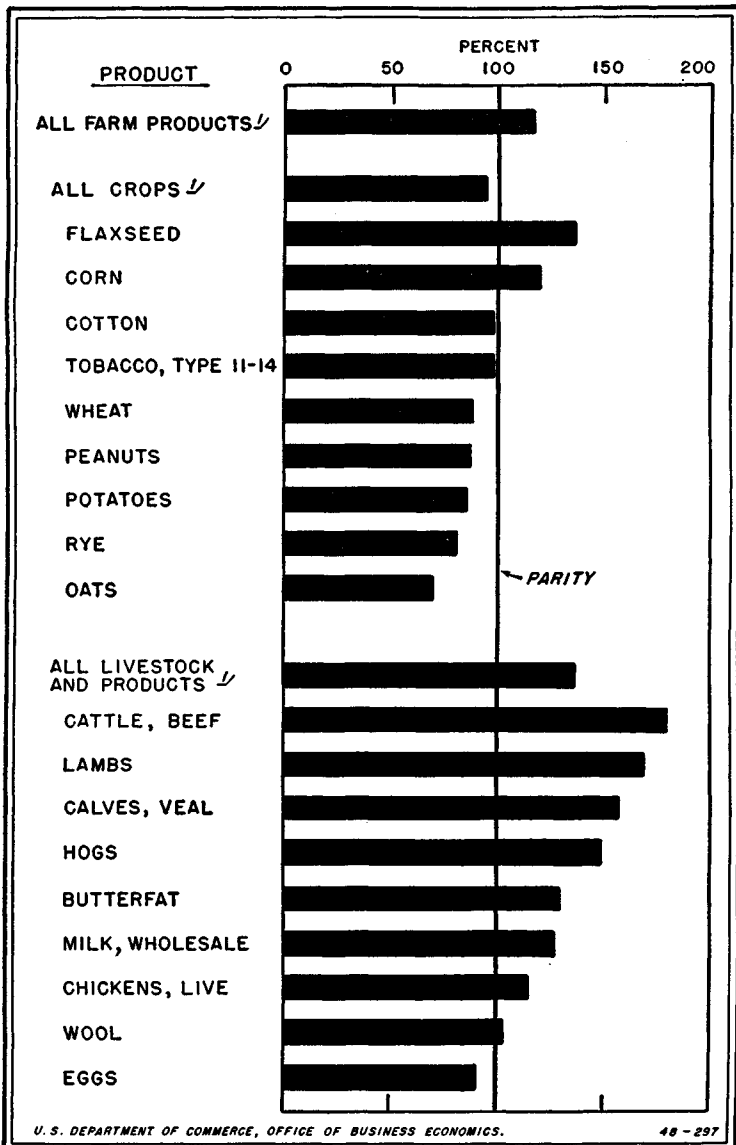
fall which is in prospect, it is likely that the income from cotton from the 1948 crop will exceed that obtained from the 1947 crop.

Farm Income Continues High

In the aggregate, farm income in 1948 continues to show gains over the corresponding months in 1947. The most significant reduction in farm income resulting from the unusually favorable harvests of this season will be in the wheat belt, and this reduction is traceable to improved crops abroad as well as at home. However, income from wheat will still be unusually high. The wheat crop in 1948 is larger than in any year prior to 1947, and the loan rate is only 13 percent lower than the price received by farmers for the 1947 crop and higher than the price received in any other recent year.

The feed grains are mostly used on the farm, but receipts from the grain entering market channels will remain high as the larger volume sold offsets the reduction in price received. On the basis of present crop estimates, increased cotton out-

Chart 4.—Prices Received by Farmers as a Percentage of Parity or Comparable Price, August 15, 1948



put in 1948 will more than offset the lower unit price if farmers receive approximately the support level for the season, and the same is true for oil-bearing crops.

Some reductions may be expected, however, in income received from this year's crop of tobacco, where, in response to reduced exports, output has been curtailed by marketing quotas.

The large feed crops will have little influence upon farm receipts from livestock and products during this year, although feed costs will decline as supplies become more abundant. To date, the small reductions in livestock and products marketed have been more than offset by advancing prices; farm income from livestock has been running ahead of a year ago.

Second-Quarter Corporate Profits

Corporate profits, on a before-tax basis, advanced from \$7.8 billion, to which they had receded in the first quarter of 1948, to \$8.4 billion in the second quarter, according to preliminary estimates of the Department of Commerce. This represents an increase of 7 percent for the period, as compared with a 4-percent increase in corporate sales. Profits before tax in the second quarter were 16 percent above the same quarter of 1947.

Adjustment of the profits estimates to take account of seasonal variations has virtually no effect on the percentage increase from the first to the second quarter. At annual rates on this basis, the advance in profits before taxes is from \$31.4 billion to \$33.4 billion.

The percentage change in profits before taxes from the first to the second quarter is considerably greater, however, when account is taken of the inventory valuation adjustment. This is due to the substantial diminution of the rate of increase in costs as they affected inventory replacement.

Profits after taxes moved in a manner similar to profits before taxes, but at a level approximately 60 percent as high, reflecting an effective income-tax rate of almost 40 percent.

Attention is again directed to the difficulties encountered

Table 1.—Corporate Profits Before and After Taxes, and Corporate Sales: First and Second Quarters of 1948¹

[Millions of dollars]

Industry group	Profits before taxes		Profits after taxes		Corporate sales	
	First quarter	Second quarter	First quarter	Second quarter	First quarter	Second quarter
All industries, total ^{2,3}	7,831	8,371	4,794	5,117	84,144	87,471
Mining.....	253	288	178	202	1,582	1,766
Manufacturing.....	4,862	5,131	2,979	3,138	47,752	48,685
Metal industries ⁴	1,784	1,869	1,056	1,108	16,208	16,643
Other manufacturing.....	3,078	3,262	1,923	2,030	31,544	32,042
Wholesale and retail trade.....	1,232	1,289	727	761	24,707	26,642
Finance, insurance, and real estate ⁵	542	554	320	327
Transportation.....	186	363	111	217	3,951	4,082
Communications and public utilities.....	429	378	261	230	2,570	2,484
All other industries ⁶	327	368	218	242	3,582	3,812

¹ Similar quarterly data for 1947 were given in the July 1948 SURVEY, p. 4. Annual corporate-profits and sales estimates by major industrial groups for 1947, and revised series for 1944, 1945, and 1946 were published in the July 1948 issue of the SURVEY on pp. 20 and 23. For similar data for the years 1929 through 1943, consult the "National Income Supplement" to the SURVEY OF CURRENT BUSINESS for July 1947, pp. 30-32, 41.

² Sales figures exclude the industrial division of finance, insurance, and real estate. Presentation of sales data for these industries would be misleading in view of the large part of their receipts which is in the form of property income.

It should be noted that the corporate sales estimates above are gross; that is, they include inter-business transactions and thus to a large extent represent a duplicated count. This is so since the sales of each firm entering into the corporate total include not only the value added by it, but also the value of the materials purchased from other firms, which is already included in the sales of those other firms.

³ Total profits for all industries include the adjustment for the net flow from abroad of dividends and branch profits.

⁴ Metal industries comprise iron and steel, nonferrous metals, machinery (except electrical), electrical machinery, transportation equipment (except automobiles), and automobiles.

⁵ All other industries comprise agriculture, forestry and fisheries, contract construction, services, and the international-balance adjustment.

Source: U. S. Department of Commerce, Office of Business Economics.

(Continued on page 9)

¹ Includes some farm products not shown separately in chart.

Source of data: U. S. Department of Agriculture, Bureau of Agricultural Economics.

International Transactions of the United States During the Second Quarter of 1948

THE highlight of developments in our international transactions during the second quarter was the passage of the Foreign Assistance Act of 1948 on April 3, and the subsequent appropriation of 6.1 billion dollars for the 12 months ending March 31, 1949, to make the program effective. Actual disbursements under the act amounted to only 200 million dollars during the quarter but authorizations rose to 762 million by the end of June, and to 1,330 million by the end of August. Time is required to set up the administration of a program of this size and importance, and to evolve the rules and procedures under which foreign governments, as well as domestic banks and business enterprises, may be compensated for previously authorized expenditures.

Because this new foreign-aid program was in its initial phase, total Government aid (grants and loans) in the second quarter was lower than in the first 3 months of the year. Some foreign countries, therefore, had to draw more extensively upon their gold and dollar reserves to finance their purchases in the United States. The low levels to which these reserves had fallen in many countries, however, prevented such drawings from being sufficiently large to compensate for the drop in Government aid, with the result that exports from the United States declined.

Decline of Merchandise Exports Continues

Transfer of goods to foreign countries during the second quarter were about 300 million dollars less than during the preceding 3-month period (see table 3). About half of the decline represented reduced transfers of surplus property. Exports from the United States, as recorded by the Bureau of the Census, fell by only 80 million. The remainder repre-

sented decreased shipments of goods, such as sugar, purchased in other countries and shipped directly from there under the civilian-supply or other foreign-aid programs.

The decline of merchandise transfers to other countries involved only transactions through United States Government channels, exports through private trade channels did not change significantly (see table 3). Exports to Europe declined nearly 150 million, on the basis of the recorded statistics, but this was partly offset by increased exports to Canada and southern North America (see chart 1).

Changes in Flow of Good

Changes in the flow of goods from the United States which have taken place during the last year are shown in table 7, where export data for the first 6 months of 1948 are compared with corresponding figures for 1947. Exports declined to all areas except Africa, but relatively and absolutely the greatest decline occurred in exports to Europe. This reduction to a large extent was due to import restrictions necessitated by the loss of financial reserves and the decline in Government aid. However, as industrial production in Europe has continued to rise, the reduction in the outflow of merchandise—evident even in the case of shipments to Switzerland—may also be attributed to smaller needs resulting from the reconstruction of productive facilities, including transport, and the rebuilding of working inventories. The dollar value of exports of grains and grain products, on the other hand, did not change, but the substantially better harvests in Europe this summer should help to improve conditions abroad.

The reduction in our exports to Asia and Oceania was concentrated in foodstuffs and textiles, indicating a similar

Chart 1.—United States Exports and Imports, by Geographic Areas

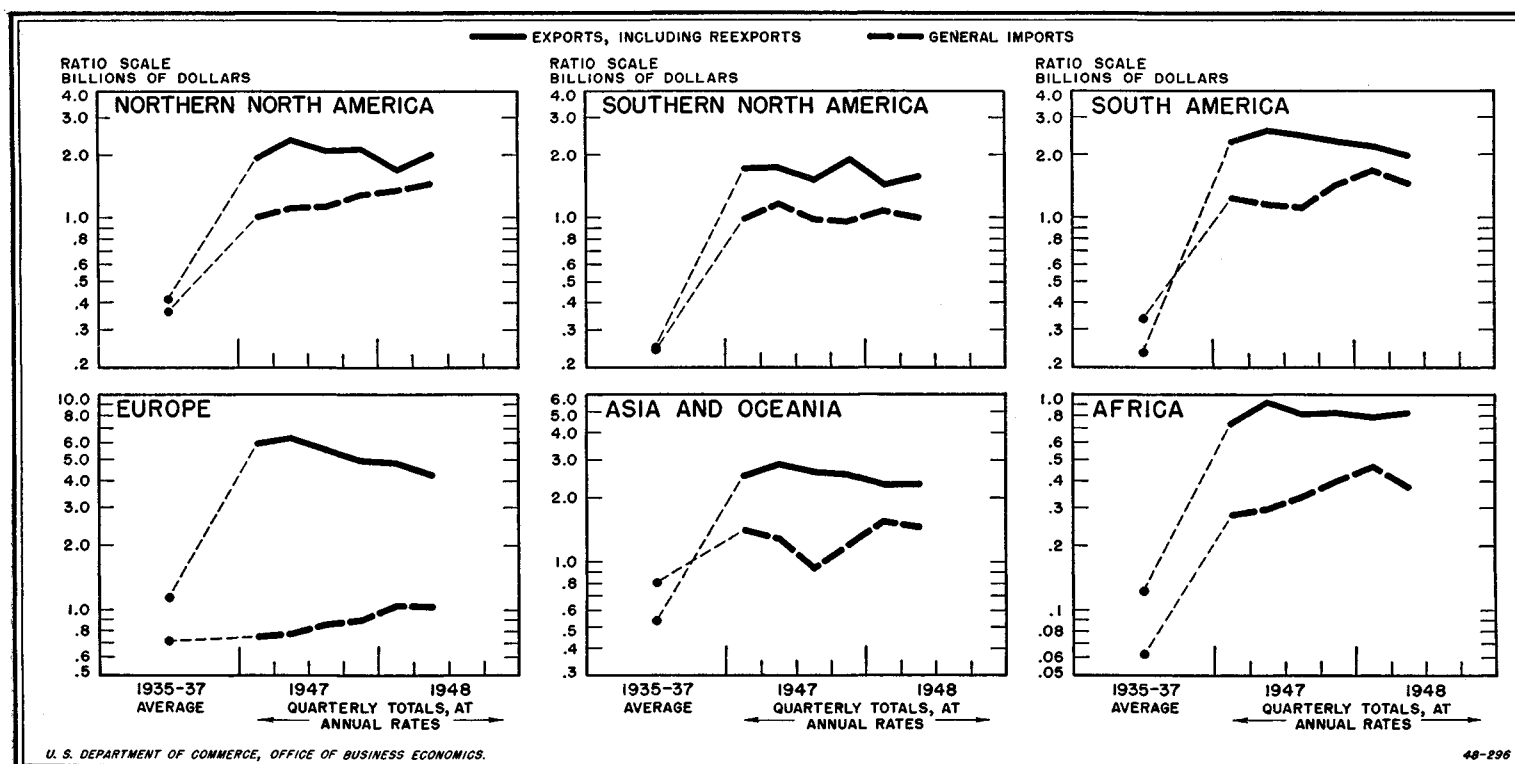


Table 1.—International Transactions of the United States

[Millions of dollars]

Item	1947		1948		
	First half	Second half	First quarter	Second quarter	First half
Receipts:					
Goods and services:					
Goods.....	8,262	7,794	3,658	3,378	7,036
Income on investments.....	455	619	231	263	494
Other services.....	1,376	1,235	555	602	1,157
Total goods and services.....	10,093	9,648	4,444	4,243	8,687
Unilateral transfers.....	379	226	100	124	224
Long-term capital:					
Movements of United States capital invested abroad.....	589	441	184	72	256
Movements of foreign capital invested in United States.....	17	41	5	8	13
Total long-term capital.....	606	482	189	80	269
Total receipts.....	11,078	10,356	4,733	4,447	9,180
Payments:					
Goods and services:					
Goods.....	3,060	3,002	1,935	1,803	3,738
Income on investments.....	106	121	57	68	125
Other services.....	996	1,169	503	617	1,120
Total goods and services.....	4,171	4,292	2,495	2,488	4,983
Unilateral transfers.....	1,544	1,441	1,068	1,153	2,221
Long-term capital:					
Movements of United States capital invested abroad.....	6,054	2,611	841	388	1,229
Movements of foreign capital invested in United States.....	85	79	54	112	166
Total long-term.....	6,139	2,690	895	500	1,395
Total payments.....	11,854	8,423	4,458	4,141	8,599
Excess of receipts (+) or payments (-):					
Goods and services.....	+5,922	+5,356	+1,949	+1,755	+3,704
Unilateral transfers.....	-1,165	-1,215	-968	-1,029	-1,997
Goods and services and unilateral transfers.....	+4,757	+4,141	+981	+726	+1,707
Long-term capital.....	-5,533	-2,208	-706	-420	-1,126
All transactions.....	-776	+1,933	+275	+306	+581
Net flow of funds on gold and short-term capital account:					
Net increase (-) or decrease (+) in gold stock.....	-712	-1,451	-348	-525	-873
Net movement of United States short-term capital abroad.....	-499	+200	-15	+5	-10
Net movement of foreign short-term capital in United States.....	+1,355	-1,054	-145	-148	-293
Net inflow (+) or outflow (-) of funds.....	+144	-2,305	-508	-668	-1,176
Errors and omissions.....	+632	+372	+233	+362	+595

Source: U. S. Department of Commerce, Office of Business Economics.

but perhaps more limited development than in Europe. Shipments of machinery and vehicles to that area did not change materially.

Exports to Western Hemisphere countries showed the greatest reductions in textile manufactures and in food products. The value of machinery and vehicles exported declined only about 50 million dollars, or 5 percent, as compared with the total decline in exports to that area of 324 million or 12.5 percent. The commodity composition of exports and the decline in shipments to Cuba, which is not affected by exchange difficulties, suggest that the over-all decline in exports from the United States to the Western Hemisphere also may be attributed to reduced demand as well as to increased import restrictions. However, it must be recognized that import restrictions may more rapidly affect nondurable goods, such as textiles, than durable goods, such as machinery.

There seems to be some evidence—based on available trade statistics—that the reduced demand for products from the United States was due not so much to a lack of foreign demand as to shifts of foreign buyers to other sources of supply. Such shifts, facilitated by increases in foreign production, may be attributed to the desire of the importing countries to obtain goods abroad without the need for de-

pleting their gold and dollar resources, but may also indicate increased competition for United States products, as in the case of those countries which are not affected by lack of dollar exchange.

Imports Lower

The decline of United States purchases from foreign countries in the second quarter should not obscure the underlying trend in imports, which seems definitely to be rising. Compared to the second quarter of 1947, the value of imports into the United States was about one-sixth larger, and even after adjustment for higher prices, the rise amounted to 10 percent. Larger imports as compared with a year ago were obtained from all geographic areas (see chart 1), except southern North America, particularly Cuba. The greatest percentage increase took place in imports from Europe but two-thirds of the total rise came from the Western Hemisphere. Imports from Canada rose by 88 million and from South America by 73 million dollars.

Our total imports were still considerably below the level that would correspond to our gross national product, if prewar relationships between these economic magnitudes had continued.

However, the rise which took place from the second quarter of 1947 up to the first quarter of this year was largest in the case of South America, imports from which were already above the calculated level, and smaller in the case of the relatively low imports from Europe and Asia. Increased imports from South America, particularly Argentina and Chile, coincided with the intensification of foreign exchange difficulties in these countries. Both countries made efforts to reduce prices of their products to make them more attractive to American purchasers.

Table 2.—Exports of Goods and Services and Means of Financing

[Millions of dollars]

Item	1947		1948		
	First half	Second half	First quarter	Second quarter	First half
Exports of goods and services.....	10,093	9,648	4,444	4,243	8,687
MEANS OF FINANCING					
Foreign resources:					
United States imports of goods and services.....	4,171	4,292	2,495	2,488	4,983
Liquidation of gold and dollar assets ¹	2,341	2,173	307	699	1,006
Collar disbursements by:					
International Monetary Fund.....	56	408	132	22	154
International Bank.....	92	205	103	56	159
United States Government aid:					
Grants (net).....	901	911	807	859	1,666
Long- and short-term loans (net) ²	2,392	1,508	511	44	555
United States private sources:					
Remittances (net).....	264	304	161	170	331
Long- and short-term capital (net) ³	508	219	161	267	428
Errors and omissions.....	-632	-372	-233	-362	-595

¹ Excluding assets held by the International Bank and the International Monetary Fund.
² Excluding the subscriptions to the International Bank and the International Monetary Fund.

³ Excluding the purchase of debentures issued by the International Bank.

Source: U. S. Department of Commerce, Office of Business Economics.

Export Surplus Smaller

During the second quarter about 60 percent of United States exports of goods and services were financed by corresponding imports, compared with 43 percent in 1947 and 48 percent in 1946.

Comparing exports and imports of merchandise only by areas (see chart 1), it will be noticed that changes during the last 18 months generally tended to move in the direction indicated by prewar relationships. During the 3 years 1935 to 1937 our merchandise exports and imports were practically equal; import surpluses from Asia and South America approximately equaled export surpluses to Europe, Northern

North America, and Africa. Trade with Southern North America, including the Caribbean area, was nearly balanced.

During the first 6 months of 1948, the export surplus with South America was smaller than in 1947, and in June 1948 changed into an import surplus of about 14 million. The export surplus to Asia also declined considerably, but economic conditions in that continent were not sufficiently restored to facilitate exports to the United States in the quantity that would restore the import surplus prevailing

would have been reduced from an average of 310 million to 130 million dollars.

In the case of Northern North America the difference in the trade movement has narrowed considerably to the point where exports were only 133 percent of imports during the first half of 1948 as compared with 188 percent during 1947 and 114 percent during the years 1935 to 1937. The difference also became smaller in the case of Europe, mainly because of the decline of our exports.

Government Aid Smaller

The extension of 200 million dollars of aid under the Foreign Assistance Act of 1948 more than offset the decline in disbursements under previous unilateral aid programs, such as Interim Aid and "Post-UNRRA." Net foreign grants increased slightly over the first quarter rate and were nearly twice the quarterly rate during the year 1947. This increase however, did not offset the disappearance of the loan to the United Kingdom and of surplus property credits. Loans to foreign countries were virtually limited to Export-Import Bank loans, which in the second quarter went primarily to Canada and to credits on the sale of surplus vessels.

Table 5.—Gifts and Other Unilateral Transfers

Item	1947		1948		
	First half	Second half	First quarter	Second quarter	First half
Government:					
Payments:					
UNRRA	494	49			
Post-UNRRA	2	243	56	39	95
Interim aid		12	301	195	496
European Recovery Program				205	205
Civilian supplies for occupied countries	459	521	341	300	641
Greek-Turkish aid program		74	91	120	211
War damage payments and other transfers to the Republic of the Philippines	38	58	11	34	45
International Refugee Organization		17	33	25	58
Other transfers	214	91	45	27	72
Total payments	1,207	1,065	878	945	1,823
Receipts:					
Lend-lease settlements	185	21			
Other	121	133	71	86	157
Total receipts	306	154	71	86	157
Net Government payments	901	911	807	859	1,666
Private remittances:					
Payments	337	376	190	208	398
Receipts	73	72	29	38	67
Net private payments	264	304	161	170	331

Source: Department of Commerce, Office of Business Economics.

Gold Imports Continue

As already indicated, foreign countries liquidated approximately 700 million dollars of gold and dollar assets during the second quarter. The principal source of gold and dollar assets transferred to the United States was the United Kingdom, which accounted for more than half of the total. In spite of the very substantial increase of British exports in recent months, the over-all trade deficit during the first half of 1948 still averaged nearly 150 million dollars a month.

Other countries which sold gold were the Union of South Africa, and to a smaller extent Argentina. France and the Netherlands liquidated long-term United States securities in order to meet their obligations without drawing further upon their already very low gold and dollar reserves. The countries in the Western Hemisphere as a group, which during 1947 lost about 1.5 billion dollars of gold and dollar balances, were able to increase their gold and dollar assets during the first half of 1948.

While during most of 1947 foreign countries (with a few exceptions such as Cuba, Venezuela, and Switzerland) in-

Table 3.—Merchandise Transactions With Foreign Countries

Item	1947		1948		
	First half	Second half	First quarter	Second quarter	First half
Transfers to foreign countries:					
Exports including reexports recorded by Bureau of the Census:					
Through private U. S. business	6,510	6,262	2,721	2,704	5,425
Through U. S. Government agencies	1,019	636	1,598	1,535	1,133
Total exports, recorded	7,529	6,898	13,319	13,239	16,558
Other transfers and adjustments:					
Private U. S. trade (net)	63	106	33	41	74
U. S. Government:					
Civilian supplies for occupied countries not included in recorded exports	372	428	45	36	81
Surplus property including ship sales and military sales	219	246	214	39	253
Other (net)	79	116	47	23	70
Total transfers to foreign countries	8,262	7,794	3,658	3,378	7,036
Transfers from foreign countries:					
General imports recorded by Bureau of the Census:					
Through private U. S. business	2,599	2,596	1,757	1,652	3,409
Through U. S. Government agencies	262	276	37	40	77
Total imports, recorded	2,861	2,872	1,794	1,692	3,486
Other transfers and adjustments:					
Private U. S. trade (net)	81	46	28	35	63
U. S. Government:					
Military purchases abroad ¹	69	75	61	40	101
Government corporation purchases not shown in recorded imports ²	44		50	34	84
Miscellaneous adjustments (net)	14	9	2	2	4
Total transfers from foreign countries	3,069	3,002	1,935	1,803	3,738

¹ Includes civilian supplies for occupied areas shipped from the United States. Goods purchased abroad and shipped directly are shown below under "Other transfers."

² Includes offshore purchases for foreign relief programs.

Source: U. S. Department of Commerce, Office of Business Economics.

before the war. Technological changes, such as the replacement of silk by other fibers and of a part of natural rubber by synthetic rubber, are not the basic reasons for the present export surplus. If imports of silk and of 250,000 tons of rubber per annum were omitted from the 1935-37 imports, there would still have been an import surplus, although it

Table 4.—Service Transactions With Foreign Countries

Item	1947		1948		
	First half	Second half	First quarter	Second quarter	First half
Receipts:					
Transportation	920	789	333	347	680
Travel	159	175	63	83	146
Miscellaneous services:					
Private	262	242	127	128	255
Government	35	29	32	44	76
Total receipts	1,376	1,235	555	602	1,157
Payments:					
Transportation	348	353	161	170	331
Travel	224	320	99	151	250
Miscellaneous services:					
Private	129	126	70	69	139
Government	295	370	173	227	400
Total payments	996	1,169	503	617	1,120

Source: Department of Commerce, Office of Business Economics.

curred net losses of gold and dollar reserves, during the second half of 1947 the exceptions had already become more numerous. Some countries—particularly Canada—now show a reversed trend, and have already regained part of the gold and dollar assets which were lost in the postwar period. It is true, of course, that Canada and some other countries were able to do so partly because of special loans or other aid from the United States, but the development indicates that these countries were not inclined to use all the dollars thus obtained to increase their imports but preferred to strengthen their reserves.

On the other hand, recent events indicate that those countries which could not avoid further drawings upon their already insufficient financial reserves slid into an increasingly vulnerable position. Relatively small losses of foreign exchange during the last months forced several countries to devalue their currency outright, to suspend the sales of dollar exchange at official rates, or adopt other measures which have an effect similar to devaluation. Argentina, Mexico, and Colombia are examples.

Even though the total liquidation of foreign financial reserves increased in the second quarter to an annual rate of 2.8 billion dollars, it remained considerably below the 1947 total of 4.5 billion and represented a relatively smaller part in the means of financing imports from the United States. With expanding disbursements under the foreign-aid program and further efforts on the part of some countries to reduce their import surplus from the United States, the net liquidation of foreign monetary reserves can again be expected to decline.

Table 6.—Movements of United States Capital

[Millions of dollars]

Item	1947		1948		
	First half	Second half	First quarter	Second quarter	First half
Long-term capital:					
Government:					
Outflow:					
Lend-lease credits.....		2			
Credits or sales of surplus property.....	47	73	164	13	177
Credits on sales of ships.....	109	45	13	30	43
Export-Import Bank loans.....	529	267	170	145	315
Subscriptions to the:					
International Bank.....	318				
International Monetary Fund.....	2,745				
British loan.....	1,450	1,400	300		300
Other.....	77	3	5	3	8
Total outflow.....	5,275	1,790	652	191	843
Inflow.....	85	89	52	29	81
Net outflow of Government long-term capital.....	5,190	1,701	600	162	762
Private:					
Outflow:					
Purchase of debentures of the International Bank.....		243			
Other.....	779	578	189	197	386
Total outflow.....	779	821	189	197	385
Inflow.....	504	352	132	43	176
Net outflow of private long-term capital.....	275	469	57	154	211
Short-term capital, net inflow (+) or outflow (-):					
Government.....	-265	+193	+89	+118	+207
Private.....	-234	+7	-104	-113	-217

Source: Department of Commerce, Office of Business Economics.

Table 7.—U. S. Exports by Geographic Areas and Commodity Groups,¹ January-June 1947 and 1948

[Millions of dollars]

	Northern North America		Southern North America		South America		Europe		Asia and Oceania		Africa		Total	
	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948
Animals and animal products, edible.....	9	4	44	37	21	24	228	111	40	32	8	3	350	211
Animals and animal products, inedible.....	20	14	12	11	9	5	50	25	9	8	4	3	104	66
Vegetable food products and beverages.....	70	40	104	79	78	36	735	718	251	172	26	24	1,264	1,069
Vegetable products, inedible except fibers and wood.....	24	19	25	21	46	25	195	106	86	80	14	12	390	263
Textile fibers and manufactures.....	136	52	110	88	98	67	327	194	290	206	126	79	1,087	686
Wood and paper.....	29	19	28	28	21	20	54	29	36	29	15	13	183	138
Nonmetallic minerals.....	199	223	48	54	55	60	296	233	81	65	32	30	711	665
Metals and manufactures except machinery and vehicles.....	105	105	81	70	182	157	175	149	86	100	27	34	656	615
Machinery and vehicles.....	328	326	286	258	574	519	740	485	279	269	128	173	2,335	2,030
Chemicals and related products.....	53	53	54	55	69	77	111	106	115	100	14	13	416	404
Miscellaneous.....	66	50	53	47	60	51	107	96	77	83	18	19	381	346
Total.....	1,039	905	845	748	1,213	1,041	3,018	2,252	1,350	1,144	412	403	7,877	6,493

¹ Including civilian supplies exported by the armed forces to occupied countries.

Source: Department of Commerce, Office of International Trade; prepared from basic data supplied by the Bureau of the Census.

Business Situation

(Continued from page 5)

in the measurement of corporate profits and the inventory valuation adjustment on a quarterly basis, as well as to the problem of adjustment for seasonal variation. These limitations of the data should be taken into account in the interpretation of quarter-to-quarter changes.

Table 1 presents preliminary estimates of corporate sales and profits both before and after taxes for the first and second quarters of this year, classified by broad industry groups. The bulk of the second-quarter profit increase occurred in manufacturing (principally in the nonmetal industries) and in transportation (in the railroad industry). The decline in communications and public utilities was largely of a seasonal nature.

The corporate-profits estimates complete the national income calculation for the second quarter. Other parts of the income flow were reviewed in the summary on national product and national income in the August SURVEY. The national-income data are given in the table on page S-1 of this issue. Total national income for the second quarter is estimated at \$221.4 billion compared with \$215.1 billion in the first quarter and \$199.5 billion in the corresponding quarter of 1947. The increase in the dollar flow of income over a year ago was thus 11 percent.

For perspective, corporate profits should be viewed in the framework of the national income as a whole. Discussions of this type have frequently been presented in the SURVEY, most recently in the July issue.

Regional Trends in Income Payments

THIS article on regional trends in income payments consists of three main sections. The first discusses the definition and measurement of regional income trends and outlines a method for analyzing them. The second section presents a summary and general analysis of the regional trends in income payments to individuals. The last part of the article provides a brief summary of income trends for the individual regions.

The development of the text of the article in terms of regional groupings of States is largely a matter of convenient summarization. However, the statistical tables provide State as well as regional data, and in the section containing regional summaries essential detail for individual States has been included.

The seven-region classification of States used by the Department of Commerce in its State income work has proved quite satisfactory. But this is not to infer that this or any other regional classification based on a grouping of States is without rather serious limitations. State lines are not economic boundaries and, moreover, there are significant inter-State economic differences within each of the regions. To be really satisfactory, a system of regional classification would have to allow for numerous small regions that would cut across State lines and take full account of the economic characteristics of local areas.

Attention is called to the latest of the regular annual reports on State income payments, published in the August issue of the *SURVEY*. In this report were included State and regional estimates of total income payments and per capita income payments for the years 1929-47. The text dealt with the nature and significance of recent-period changes in the geographic distribution of income. An appended section on "Technical Notes" provided a brief statement defining State income payments and describing the sources of data and general methodology used in the preparation of the State income estimates.

Definition, Measurement, and Method of Analysis

Probably the most important aspect of interpreting and analyzing changes in the regional distribution of income is to distinguish trends from other types of influences responsible for the changes.

The main purpose of trend analysis is to furnish a guide to the future through a study of the past. This broad generalization can be brought into narrower focus by the

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¹ This regional classification is adapted from that proposed by Prof. Howard W. Odum of the University of North Carolina in his volume on *Southern Regions of the United States*. Professor Odum developed a six-region grouping of the States after an exhaustive study involving their classification as to homogeneity on the basis of about 700 economic and social factors. The only modification made of Odum's classification for use in the State income payments work was to divide his large Northeast region into the traditional New England region and the Middle East region.

qualification that "trend" is a long-term concept. It connotes secular growth or decline. Regularity and persistency are associated with the idea of a trend, whereas frequent and sudden changes are quite inconsistent with it.

Trend analysis, then, involves the attempt to isolate the basic long-term tendency in the past movements of a statistical series to aid in judging the general course it might be expected to follow in the future. Once this main proposition is established, it follows that regional income-trend measures should not reflect either irregular, random factors or changes resulting from movements of the business cycle. These are not trends; they are not long-term elements in the income flow and cannot be of assistance in gauging the general pattern of future changes.

Numerous examples can be cited of irregular, random factors affecting regional income payments. A few are bonuses to war veterans, demobilization of the armed forces, strikes, sharp fluctuations in farm prices, and the reconversion of industry from war production. It is obvious that the short-run income flows stemming from such factors are not of trend significance.

It is also clear that comparisons involving different stages of prosperity, depression, and recovery cannot serve the purpose of trend analysis. Changes in the regional distribution of income from 1929 to 1933 or from 1933 to 1940 are not measures of trend and cannot be used validly to indicate the probable pattern of future long-run developments. Rather, they reflect simply the volatility of income in regions affected most directly by the wide cyclical swings in durable-goods manufactures and in farm prices, and the relative stability of income in regions where there is little agriculture and where nondurable-goods manufactures and other "sluggish" sources of income are comparatively important. Changes in the regional distribution of income between different points of the business cycle are largely measures of regional differences in cyclical sensitivity, stemming from the divergent characteristics of the several regional economies. The basic trends of relative growth or decline are obscured.

Measurement of Regional Income Trends

Now that regional income trends have been defined, at least broadly, the next question concerns the method of measuring them. For such measurement it is possible to use only "current-dollar" estimates of income payments. It would be extremely useful also to have regional estimates of "real" income—which would adjust the current-dollar estimates for geographical differences in price levels and in fluctuations of prices over time. However, any attempt to disentangle the price element from the current-dollar figures would be extremely difficult and could not be done satisfactorily on the basis of present information.

The lack of estimates of "real" income precludes the computation of reliable, meaningful measures of "absolute"

trend for the United States and the several regions. It would be desirable to compute the trend measures in terms of real income and to treat prices as a separate factor. Instead, the general course which must be followed is to derive income trends for the regions relative to the trend for the United States. On the assumption of generally similar price changes in all regions, the trend measurement is developed in terms of the differing tendencies of the regions to receive an increased or decreased percentage share of total income payments in the Nation. The trend for the United States is thereby accepted, without explicit measurement, as the standard of reference or common denominator.

In principle, there are two possible general methods of measuring regional income trends relative to the national trend. One is to measure the income trend for the United States and each region by eliminating from the annual estimates of their income payments the effects attributable to the business cycle and to random fluctuations. For each region a trend line relative to the Nation's can then be obtained by expressing the resulting estimate for each year as a percentage of the comparable estimate for the United States. For this method any one of several formal statistical procedures might be used. But it would require estimates for a very long period of years to permit study of the income effects of business cycle behavior in each region. Official income estimates for the regions have been prepared only for the years from 1929 through 1947. The war years 1941-45 must be omitted according to this or any other method of trend measurement (the war may be viewed as one big random element); and the remaining years—1929 through 1940, 1946, and 1947—provide a quite insufficient basis for separating the trend from the cyclical and random elements of regional income payments.

Given the inability to measure regional trends from a series of annual estimates covering a long period, resort must then be had to the "selected-years" method of basing the trends on comparisons of regional incomes for years believed to represent the same stage of the business cycle and not to reflect major random influences. The years best adapted to this method of measurement, it may be concluded from general economic knowledge, are 1929, 1947, and possibly 1946. The year 1940 is in a somewhat special category and will be discussed presently.

In short, the insufficient length and extreme heterogeneity of the period of years for which there are regional income estimates lead to a very simple method of measuring regional income trends—making use, necessarily, of a limited number of observations. This method involves simply a comparison of each region's percent of total income payments in the Nation in 1929 and 1947—an increased or decreased percentage signifying, of course, an upward or downward income trend relative to the Nation's.

The column on "Percent change in relative income position" in table 1 measures the trend in total income, relative to the Nation's, for individual States and regions. This was obtained by computing the percent increase or decrease from 1929 to 1947 in the percentage of the Nation's total income payments received by each of the States and regions. Alternatively, this trend measure can be computed from the column of data (also in table 1) on "Total income payments in 1947 as percent of 1929." The procedure would be to divide the State and regional percentages by the United States percentage and then subtract 100 from each of the resulting indexes.

For the purpose of measuring regional income trends over the period 1929-47, it might be noted specifically that the selection of the end points as bases of comparison is reasonably satisfactory with respect to the three criteria that have been established. These criteria are that the data upon which trend measures are based should (1) refer to approximately

comparable points on the business cycle, (2) cover a long period of time, and (3) be free from serious distortions of irregular, random influences. Both 1929 and 1947 were prosperous, peacetime years, and they span a 19-year period.

The selection of the years 1929 and 1947, however, is by no means ideally satisfactory. One incongruous element is the considerable degree of price inflation that characterized 1947. It reduces the validity of using 1947 as a reference point for measuring regional income trends. That year, however, is preferable on several counts to 1946, the only alternative. The aftermath of war, such as reconversion of industry, sizable military payments, and labor-management disputes, was imprinted to a lesser degree on the geographic income distribution in 1947 than in 1946. The regional trend picture is much the same, at any rate, whether income data for 1947 or for 1946 are used for the later terminal year. The major exception to this generalization is explained later in the article, where a qualification is introduced concerning the validity of this trend measure for the Northwest region.

Further limitations of the proposed regional trend measure may be noted. One such limitation is that it involves the necessary assumption that for the years in question all regions were on the same point of the business cycle as the Nation. Another is the small number of observations upon which the measure is based. It is unfortunate that it cannot be computed from data for more years in order to reduce the effects of irregularities or abnormalities for individual years. An additional limitation of this income-trend measure is that, since it involves a comparison of cyclical peaks, it tends to accentuate a regional trend which is derived in larger degree than the national trend from cyclically variable income sources. To state the point more generally, this regional trend measure (or a similar one involving a comparison of cyclical troughs) involves the assumption that, over the period in question, *changes* in the amplitude of the business cycle were proportionately the same in each region as in the Nation. A comparison based on middle phases of the business cycle would be preferable.

It is easy to exaggerate the importance of these limitations; but because of them, as well as the very nature of the task of trend measurement and analysis, precision should not be attached to the regional trend measures. These measures, it is believed, are quite valid as indicators of the direction and general magnitude of trends in the regional distribution of income. As such they are valuable regional economic data.

Before this part of the discussion is closed, a principal characteristic—really an additional limitation—of this method of measuring regional income trends should be noted. A comparison of each region's percentage share of the Nation's income in 1947 with what it was in 1929 yields simply a measure of the change in the region's relative position over this period. It is thereby known that relative growth or decline occurred, but nothing is known about the course of its development—whether the growth or decline proceeded at an even, straight-line rate or whether it was curvilinear in pattern. This lack of knowledge rules out completely a simple projection of the past rate of growth or decline into the future—on the assumption, that is, that it was straight-line in nature. It is inadvisable, under any circumstances, to project a past trend without recourse to economic analysis and the exercise of personal judgment, but it would be particularly hazardous to do so in the present instance.

The Method of Analysis

Once the regional trends in income payments have been measured through a comparison of the 1929 and 1947 data, it is desirable to test the validity of the results for use as guides to the future. There are three steps that can be taken. First, the degree of *pervasiveness* of the regional trends can be

Table 1.—Total Income Payments, by States and Regions, Selected Years, 1929–47

State and region	Amount (millions of dollars) ¹				Percent distribution				Total income payments in 1947 as percent of 1929	Percent change in relative income position, 1929 to 1947 ²
	1929	1940	1946	1947	1929	1940	1946	1947		
Continental United States.....	82,617	75,852	171,200	189,734	100.00	100.00	100.00	100.00	230	-----
New England.....	6,792	6,124	12,078	13,194	8.22	8.07	7.05	6.95	194	-15
Connecticut.....	1,459	1,417	2,889	3,299	1.77	1.87	1.69	1.74	226	-2
Maine.....	449	431	998	998	.54	.57	.54	.53	222	-3
Massachusetts.....	3,787	3,309	6,324	6,718	4.58	4.36	3.69	3.53	177	-23
New Hampshire.....	302	269	548	613	.37	.35	.32	.32	203	-12
Rhode Island.....	579	511	1,016	1,133	.70	.67	.59	.60	196	-15
Vermont.....	216	187	385	433	.26	.25	.22	.23	200	-13
Middle East.....	27,840	24,319	48,765	53,938	33.70	32.06	28.49	28.42	194	-16
Delaware.....	218	239	435	479	.26	.31	.25	.25	220	-4
District of Columbia.....	638	905	1,739	1,795	.77	1.19	1.02	.95	281	+23
Maryland.....	1,106	1,222	2,728	2,934	1.34	1.61	1.59	1.55	265	+15
New Jersey.....	3,268	3,138	6,228	6,740	3.96	4.14	3.64	3.55	206	-10
New York.....	14,479	11,830	23,271	25,624	17.53	15.60	13.60	13.50	177	-23
Pennsylvania.....	7,338	6,225	12,712	14,426	8.88	8.21	7.43	7.60	197	-14
West Virginia.....	793	760	1,652	1,940	.96	1.00	.96	1.02	245	+6
Southeast.....	8,681	9,043	23,609	25,723	10.51	11.92	13.79	13.56	296	+29
Alabama.....	802	763	2,089	2,371	.97	1.00	1.22	1.25	296	+29
Arkansas.....	562	493	1,334	1,358	.68	.65	.78	.72	242	+5
Florida.....	695	900	2,462	2,571	.84	1.19	1.44	1.36	370	+61
Georgia.....	956	986	2,529	2,778	1.16	1.30	1.48	1.46	291	+27
Kentucky.....	964	880	2,173	2,364	1.17	1.16	1.27	1.25	245	+7
Louisiana.....	862	847	2,036	2,270	1.04	1.12	1.19	1.20	263	+15
Mississippi.....	544	444	1,202	1,382	.66	.58	.70	.73	254	+11
North Carolina.....	966	1,131	3,023	3,290	1.17	1.49	1.77	1.72	341	+48
South Carolina.....	438	545	1,407	1,517	.53	.72	.82	.80	346	+51
Tennessee.....	905	927	2,558	2,830	1.10	1.22	1.49	1.49	313	+36
Virginia.....	987	1,127	2,796	2,992	1.19	1.49	1.63	1.58	303	+32
Southwest.....	4,153	3,908	9,938	11,435	5.03	5.15	5.80	6.03	275	+20
Arizona.....	245	237	631	721	.30	.31	.37	.38	294	+28
New Mexico.....	161	190	492	575	.19	.25	.29	.30	358	+56
Oklahoma.....	1,079	829	1,897	2,124	1.31	1.09	1.11	1.12	197	-14
Texas.....	2,668	2,652	6,914	8,014	3.23	3.50	4.03	4.23	300	+31
Central.....	24,226	21,664	48,055	53,699	29.32	28.56	28.08	28.30	222	-3
Illinois.....	7,036	5,740	12,101	13,636	8.52	7.57	7.08	7.19	194	-16
Indiana.....	1,877	1,858	4,398	4,936	2.27	2.45	2.57	2.60	263	+15
Iowa.....	1,348	1,233	2,948	2,963	1.63	1.63	1.72	1.56	220	-4
Michigan.....	3,543	3,425	7,443	8,641	4.29	4.51	4.35	4.55	244	+6
Minnesota.....	1,443	1,424	3,123	3,450	1.75	1.88	1.82	1.82	239	+4
Missouri.....	2,210	1,914	4,374	4,671	2.67	2.52	2.55	2.46	211	-8
Ohio.....	4,920	4,448	9,851	11,061	5.95	5.86	5.76	5.83	225	-2
Wisconsin.....	1,849	1,622	3,817	4,341	2.24	2.14	2.23	2.29	235	+2
Northwest.....	3,927	3,363	8,477	10,143	4.75	4.44	4.95	5.35	258	+12
Colorado.....	633	589	1,398	1,695	.77	.78	.82	.89	268	+17
Idaho.....	230	232	595	677	.28	.31	.35	.36	294	+28
Kansas.....	997	757	2,009	2,531	1.20	1.00	1.16	1.33	254	+11
Montana.....	325	321	668	801	.39	.42	.39	.42	246	+7
Nebraska.....	764	569	1,478	1,589	.92	.75	.86	.84	208	-10
North Dakota.....	264	237	634	908	.32	.31	.37	.48	344	+50
South Dakota.....	288	242	664	779	.35	.32	.39	.41	270	+18
Utah.....	272	265	696	773	.33	.35	.41	.41	284	+24
Wyoming.....	154	151	335	390	.19	.20	.20	.21	253	+11
Far West.....	6,998	7,431	20,278	21,602	8.47	9.80	11.84	11.39	309	+34
California.....	5,217	5,606	15,164	16,121	6.31	7.39	8.86	8.51	309	+35
Nevada.....	74	92	239	256	.09	.12	.14	.13	346	+50
Oregon.....	603	633	1,753	1,936	.73	.84	1.02	1.02	321	+40
Washington.....	1,104	1,100	3,122	3,289	1.34	1.45	1.82	1.73	298	+30

¹ For definition and general methodology and sources of data, see notes 3 and 6 of section on "Technical Notes" in article on State income payments in the August 1948 SURVEY.

² Obtained by computing the percent increase or decrease from 1929 to 1947 in the percentage of total income payments in the United States received by each State and region. To avoid appreciable rounding errors for the smallest States, the computations were based on percentages carried to three places beyond the decimal, rather than on the figures shown in this table. Alternatively, this measure can be computed from the column of data showing "Total income payments in 1947 as percent of 1929." The percentage for each State and region should be divided by the United States percentage and 100 subtracted from each of the resulting indexes.

Source: U. S. Department of Commerce, Office of Business Economics.

determined. Is there a tendency for the individual State trends of which the regional trends are composed to be uniform in direction? Or are the regional trends merely a conglomerate averaging of differing State trends?

Secondly, this long, heterogenous period can be divided at 1940 and comparisons made for 1929, 1940, and 1947 in order to measure *continuity* of trend. (Nineteen forty-one is ruled out for this purpose because of the perceptible effects of rising armament expenditures in that year on the regional income flows.) It is not completely valid to use 1940 for such comparisons, because it was not so prosperous a year as either 1929 or 1947. The advantages otherwise, however, very probably justify bending, if not breaking, the rule about restricting the comparisons to comparable points on the business cycle. It is obviously of first-rate importance to compare the performances of the several regions over the 1929–40 period of prosperity, depression, and recovery and over the 1940–47 period embracing armament, war, readjust-

ment, and two full postwar years. More confidence can be placed in the 1929–47 trends if it is found that they developed and prevailed over each of these two fundamentally different periods.

The third appraisal of the significance of the measured trends in total income which can be made is to study their *nature*. This requires analyzing the sources of the relative gains or declines in regional incomes—manufacturing, agriculture, trade and service, property returns, government flows, population, and so forth. Did the relative income growth in a particular region reflect increased population and larger-than-average expansion in nearly all sources of income, or was it concentrated mainly in one segment of the economy? This and other such relevant questions can be answered by such an analysis.

The knowledge to be gained from this analysis is particularly valuable for use in conjunction with one's judgments as to the probable course of future economic developments,

both nationally and for particular regions. And it should be emphasized that the information on past regional income trends, while extremely useful and valuable, should be supplemented by personal judgments as to the bearing of forecasted future developments on the regional economies. For example, it is important for this purpose to have a considered opinion as to the future long-term role of agriculture in the Nation's income flow, and even to evaluate its implications for the several regions. If a region's upward trend in total income in the past has stemmed mainly from agriculture, that trend would be modified or discarded if there was good reason to believe that the long-term prospects for the region's agriculture were unfavorable.

It has been stressed that trend is a long-term concept and that the way to measure regional income trends is to compare data for years which are approximately "comparable" and span a sufficiently long period of time. The desire thereby is to minimize the chance of rapid, short-run developments obscuring the picture. Nevertheless, trends can change direction because of the interjection of new elements or the withdrawal of old ones; and it is useful to appraise short-term alterations in the regional distribution of income in terms of their trend significance. Such an appraisal, as made on a limited scale in the August 1948 SURVEY, may spot developing strengths or weaknesses in the regional income flows, and it serves as a continuing check on the validity of the long-term observations as guides to the nature of future changes in the regional distribution of income.

It will be appreciated that it is a difficult matter to analyze the trend element of short-term regional income changes. Such an analysis is particularly difficult to make for periods in which the business cycle is running its course, but it may be somewhat promising when applied to years of full employment. The general method to be followed is one of "partial analysis"—abstracting or eliminating from the total income flow those components which are known to be most directly influenced by short-run, random factors and subjecting to detailed study the patterns of change indicated by those components which are presumed to be free from the direct influence of such factors. The procedure becomes quite hypothetical and meaningless, however, if the portion of income which must be eliminated from consideration is large. For, though not discernible, the trend element which this portion contains is eliminated, and the basis for drawing significant conclusions is thereby reduced. Furthermore, the remaining portion of income assumed to have trend significance includes the indirect effects of the portion directly affected by the irregular, random factors. Personal judgment and qualitative analysis are important throughout the study of long-run regional income changes, but they are at a premium in the study of the possible longer-run significance of short-run changes.

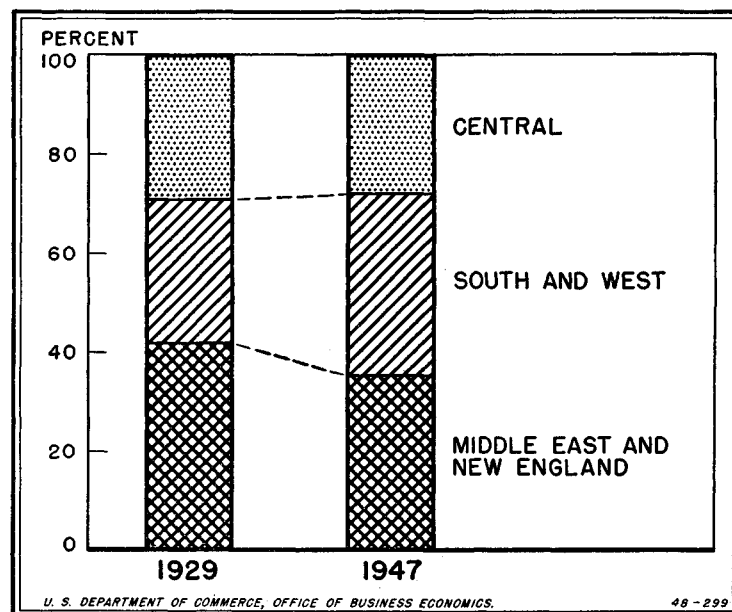
Summary and General Analysis of Regional Trends

Changes in the geographic distribution of income since 1929 have been quite substantial. Pronounced trends are clearly evident. As already noted, the State and regional trends are shown in table 1, in the column on "Percent change in relative position." This column of figures shows for each State and region the extent of the 1929-47 gain or decline, relative to the Nation, in total income payments.

For the regions the 1929-47 trends include relative declines in New England and the Middle East and relative gains in the Southeast, Southwest, Northwest, and Far West. The large Central region tended to receive an approximately constant—or perhaps slightly declining—share of the Nation's income.

Chart 1 portrays this relative shift of income from New England and the Middle East to the South and West. From 1929 to 1947 the share of the Nation's income payments received by the New England and Middle Eastern regions declined one-sixth, from 42 percent to 35 percent. The proportion of all income received by the four Southern and Western regions increased one-fourth, from 29 percent to 37 percent. The Central States' share changed little—from 29 percent in 1929 to 28 percent in 1947.

Chart 1.—Percentage Distribution of United States Income Payments, 1929 and 1947



Source of data: U. S. Department of Commerce, Office of Business Economics.

The 1929-47 percentage increases in total income payments for the United States and each of the seven regions are shown in chart 2. As compared with the Nation-wide increase of 130 percent in the dollar volume of individual incomes, there were expansions of 209 percent in the Far West, 196 percent in the Southeast, 175 percent in the Southwest, and 158 percent in the Northwest. The combined rates for these four regions of the South and West, 190 percent, was twice as large as the 94-percent increase in income payments recorded for each of the Middle Eastern and New England regions. However, despite the long-term relative declines of the Middle East and New England, these two populous, high average-income areas accounted for more than one-third of the Nation's total income in 1947. The 11 Southeastern States received only 14 percent of all income payments last year, the Far West 11 percent, and the Southwest and Northwest 6 percent and 5 percent, respectively.

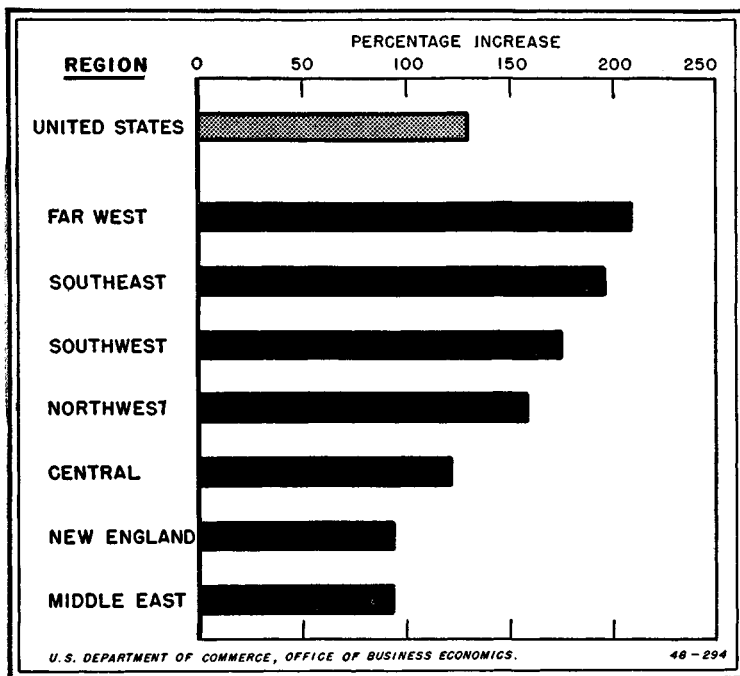
The foregoing is a general picture of the 1929-47 regional trends in total income payments. In accordance with the plan of analysis outlined above, the "pervasiveness" of the regional income trends among the States may be tested first.

Pervasiveness of Regional Trends

There has been a strong tendency for the direction of income trends in the individual States to conform with the regional pattern. All of the New England States sustained reduced shares of the Nation's total income between 1929 and 1947. In the Middle East the trend of income in three of the seven States—Maryland, West Virginia, and the District of Columbia—ran counter to the region's relative decline. All of the Southeastern States improved their rel-

ative positions over this period. Each of the four Southwestern States except Oklahoma received a larger share of total income in 1947 than in 1929. In all of the Northwestern States except Nebraska, the relative trend in total income was upward. All four States in the Far West had larger income shares in 1947 than in 1929.

Chart 2.—Percentage Increase in Total Income Payments, by Regions, 1929 to 1947



Source of data: U. S. Department of Commerce, Office of Business Economics.

In summary, of the 41 States comprising the regions with declining or rising income trends, all but five are shown to have trends in the same direction as the trend for the particular region in which they are located. And of the eight Central States—the “no-trend” region—only in Illinois and Indiana are pronounced trends in evidence. Moderate trends are to be noted for Missouri and Michigan. In view of the considerable degree of economic heterogeneity characterizing the States comprising the regional classification—and this must characterize any regional classification of States—this degree of uniformity of pattern is a striking result. It is surely one which attests to the pervasiveness of the regional trends in income payments.

Continuity of Regional Trends

The general analysis of the 1929–47 regional trends in total income involves next determining the continuity of pattern as between the 1929–40 and 1940–47 periods. Comparison of the percentage shares of the Nation’s income received by each of the regions in 1940 with those in 1929 and 1947 (see table 1) reveals continuity of trend between the two periods for six of the seven regions. New England and the Middle East had relatively declining trends from 1929 to 1940 and also from 1940 to 1947. Larger income shares accrued to the Southeast, Southwest, and Far West in both the earlier and later periods. Furthermore, the Central States received approximately the same share of all income payments in 1940 as in 1929 and 1947. Only the Northwest furnishes an exception to the generalization that the regional trends in total income over the span from 1929 to 1947 were the product of developments during the two periods 1929–40

and 1940–47. This region’s income share declined from 1929 to 1940 but rose markedly in the later period.

The use of 1940 as a reference point for trend comparisons is somewhat invalid for any of the regions, but it is least valid for the agricultural Northwest. In 1940, a year in which about 9 million persons were unemployed (nearly one-sixth of the labor force), farm prices and income were at much lower points in relation to 1929 and 1947 than were nonfarm prices and income. Northwestern agriculture was still in a state of comparative depression in 1940. Therefore, the region’s relative decline in total income from 1929 to 1940 and its larger-than-average income growth from 1940 to 1947 are not to be viewed as measures of trend. As will be noted later in the article, even the trend measure based on a comparison of 1929 and 1947 is subject to considerable qualification for the Northwest because of the uncertainty that those two years afford valid reference points with respect to the region’s volatile farm income.

Main Sources of Regional Trends

Following the analysis of the regional trends in total income payments in terms of their pervasiveness among the States and their continuity between the 1929–40 and 1940–47 periods, attention is focused next on the principal sources of the relative gains or declines in regional incomes. Anything more than a summary appraisal is not possible here. Nevertheless, much can be learned about the general nature of the pronounced regional changes in total income through a brief examination of the changes in such important components as government income payments, manufacturing pay rolls, trade and service income, and agricultural income. In combination these components accounted for three-fourths of all income payments in the Nation in 1947. Additional knowledge of this type can be gained through examination of the long-term regional trends in population. There is sufficient independence among all these factors to make their separate study of significance, but it must be realized that to some extent they are mutually interacting and that they have different degrees of primacy as determinants of total income. Following is a digest of the main facts about the roles of government, manufacturing, trade and service, and agriculture in the long-term regional flow of income payments. This is based on data shown in table 2.

Government income payments (comprising all income payments from Federal, State, and local governmental agencies and social insurance funds directly to individuals).—Over the 1929–47 period the percentage shares of all government income payments in the Nation received by New England and the Middle East declined, whereas increased shares accrued to the Southeast, Southwest, and Far West. In each of these regions changes in the share of government income payments were in the same direction as—and indeed contributed to—changes in the share of total income payments. Particularly large were the contributions of government income payments to the upward trends of total income in the Southeast and Southwest.

World War II and its aftermath have resulted in the considerably greater influence of government on regional income payments. The dollar volume of income payments by Federal and State and local governments amounted to 27.5 billions in 1947—as compared with totals of 6.1 billions in 1929 and 11.0 billions in 1940. Government played a significant role in the regional shifts in total income from 1929 to 1947, but it falls far short of accounting for them fully. The relative trends in income payments from the private sectors of the regional economies did not differ markedly from the relative trends in total income payments.

Manufacturing pay rolls.—The manufacturing industry is of obvious and basic importance in conditioning both short-

term and long-term changes in the regional distribution of income. The pattern of regional changes in factory pay rolls from 1929 to 1947 was much the same as that in total income payments. New England and the Middle East accounted for declining shares of all factory pay rolls; and the Southeast, Southwest, and Far West accounted for increasing shares. The share of the Central States was virtually unchanged.

Table 2.—Percent Distribution of Major Components of Total Income Payments, by States and Regions, 1929 and 1947

State and region	Government income payments ¹		Manufacturing pay rolls		Trade and service income ²		Agricultural income ³	
	1929	1947	1929	1947	1929	1947	1929	1947
Continental United States.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
New England.....	8.16	6.63	11.34	9.67	7.53	6.40	2.43	1.96
Connecticut.....	1.41	1.32	2.74	2.83	1.40	1.39	.47	.40
Maine.....	.60	.59	.56	.63	.52	.48	.66	.47
Massachusetts.....	4.75	3.52	5.99	4.61	4.46	3.51	.62	.55
New Hampshire.....	.44	.31	.56	.46	.31	.30	.17	.16
Rhode Island.....	.67	.69	1.20	.92	.60	.51	.07	.05
Vermont.....	.29	.20	.29	.22	.24	.21	.44	.33
Middle East.....	31.22	27.50	34.62	31.91	33.77	29.88	7.84	6.78
Delaware.....	.21	.17	.30	.34	.17	.21	.19	.14
District of Columbia.....	3.16	3.01	.16	.13	.88	1.00
Maryland.....	1.38	1.72	1.17	1.52	1.30	1.60	.80	.68
New Jersey.....	3.92	3.17	5.49	5.41	3.56	3.23	.79	.80
New York.....	14.72	11.83	15.84	13.58	18.95	16.07	2.86	2.43
Pennsylvania.....	6.94	6.69	10.83	10.07	8.16	6.99	2.41	2.13
West Virginia.....	.89	.91	.83	.86	.75	.78	.79	.60
Southeast.....	12.20	16.53	7.77	10.16	10.67	13.02	25.87	23.16
Alabama.....	1.04	1.54	.79	1.10	.91	1.13	2.54	2.01
Arkansas.....	.77	.85	.31	.31	.71	.72	2.49	1.91
Florida.....	1.16	1.85	.46	.46	1.03	1.60	.99	1.66
Georgia.....	1.24	1.74	.91	1.21	1.30	1.55	2.88	2.03
Kentucky.....	1.21	1.36	.66	.74	1.05	1.12	2.85	2.38
Louisiana.....	1.16	1.34	.74	.78	1.06	1.23	2.07	1.46
Mississippi.....	.77	.98	.34	.36	.57	.62	3.06	2.29
North Carolina.....	1.32	1.81	1.27	1.85	1.10	1.44	2.84	3.77
South Carolina.....	.74	1.01	.53	.92	.54	.66	1.53	1.50
Tennessee.....	1.19	1.69	.90	1.28	1.17	1.49	2.49	2.27
Virginia.....	1.60	2.36	.86	1.15	1.23	1.46	2.13	1.88
Southwest.....	5.32	6.97	1.94	2.46	5.10	6.00	11.79	11.87
Arizona.....	.49	.50	.10	.09	.31	.41	.48	.64
New Mexico.....	.33	.41	.03	.06	.16	.29	.67	.60
Oklahoma.....	1.34	1.53	.45	.38	1.26	1.06	2.88	2.32
Texas.....	3.16	4.53	1.36	1.93	3.37	4.24	7.76	8.31
Central.....	26.92	24.35	36.60	36.42	28.79	26.67	29.26	28.03
Illinois.....	6.58	6.06	9.89	8.90	8.96	7.07	4.70	5.09
Indiana.....	2.35	1.87	3.36	3.74	1.93	2.34	2.68	3.09
Iowa.....	1.73	1.40	.87	.92	1.50	1.46	5.95	4.52
Michigan.....	4.66	4.42	6.72	7.84	3.85	3.94	2.00	2.38
Minnesota.....	2.01	1.76	1.19	1.24	1.83	1.76	3.72	3.78
Missouri.....	2.39	2.43	2.24	2.06	3.25	2.74	3.26	2.84
Ohio.....	5.03	4.66	9.26	8.80	5.56	5.32	3.55	2.92
Wisconsin.....	2.17	1.75	3.07	2.92	1.91	2.04	3.40	3.41
Northwest.....	6.27	5.41	1.90	1.72	4.57	4.69	14.19	17.74
Colorado.....	1.03	1.09	.37	.36	.86	.88	1.27	1.86
Idaho.....	.38	.33	.15	.12	.24	.33	.95	1.16
Kansas.....	1.57	1.29	.51	.52	1.14	1.03	3.43	4.65
Montana.....	.62	.39	.17	.11	.35	.36	.71	1.50
Nebraska.....	.97	.84	.35	.30	.87	.84	3.59	2.50
North Dakota.....	.48	.35	.06	.03	.33	.33	1.43	2.90
South Dakota.....	.51	.37	.07	.07	.34	.34	1.76	1.99
Utah.....	.42	.56	.17	.16	.31	.40	.56	.60
Wyoming.....	.29	.19	.05	.05	.13	.18	.49	.58
Far West.....	9.91	12.61	5.83	7.66	9.57	13.34	8.62	10.46
California.....	7.07	9.29	3.84	5.41	7.25	10.21	5.72	7.04
Nevada.....	.15	.13	.01	.02	.07	.16	.12	.18
Oregon.....	.95	.97	.69	.94	.82	1.12	1.10	1.25
Washington.....	1.74	2.22	1.29	1.29	1.43	1.85	1.68	1.99
Addendum: U. S. totals (millions of dollars).....	6,063	27,508	16,299	42,456	20,146	50,881	6,938	18,220

¹ Consist of pay of State and local and of Federal civilian employees, net pay of the armed forces, family-allowance payments to dependents of enlisted military personnel, voluntary allotments of military pay to individuals, mustering-out payments to discharged servicemen, interest payments to individuals, public assistance and other direct relief, veterans' pensions and benefits, and benefit payments from social insurance funds.

² Includes wages and salaries and proprietors' income.

³ Comprises net income of farm operators (including value of change in inventories of crops and livestock), farm wages, and net rents to landlords living on farms.

Source: U. S. Department of Commerce, Office of Business Economics.

The substantial progress in industrialization by the Far West, Southeast, and Southwest from 1929 to 1947 was a key factor in their large relative gains in total income payments. The percentage of the Nation's factory pay rolls

disbursed in these three regions rose from 15.5 in 1929 to 20.3 in 1947—an increase, in relative terms, of nearly one-third. But, despite this progress, the Far Western and Southern areas are by no means "industrialized." Of the 19 States comprising the Far West, Southeast, and Southwest, in only two—North Carolina and South Carolina—were factory pay rolls as important a source of income payments in 1947 as in the country at large (see table 5).

Trade and service income.—Income from trade and service activities also exhibited a regional pattern of relative shifts from 1929 to 1947 very similar to that in total income payments. Relative to the Nation-wide experience, there were declines in New England and the Middle East and gains in the Southeast, Southwest, Northwest, and Far West. Also, it may be noted, there was a strong tendency for the States to follow the regional pattern. Nine of the 13 States in New England and the Middle East sustained reduced shares of the Nation's trade and service income from 1929 to 1947 (all four exceptions to pattern are Middle Eastern States); and 24 of the 28 States in the four Southern and Western regions received larger shares.

Agricultural income.—Over the 1929–47 period, as shown by data in table 2, smaller shares of the Nation's agricultural income accrued to the New England, Middle East, Southeast, and Central regions and larger shares to the Southwest, Northwest, and Far West. The net result was a sizable relative shift of farm income to the Northwest and Far West, which from 1929 to 1947 increased their combined share of total farm income from 23 percent to 28 percent.

As to their direction, these 1929–47 regional trends in farm income were not at variance with the trends in total income except in the Southeast. In this region, however, the lag behind the Nation-wide growth in farm income was not of large proportion and had only a moderate effect in dampening its above-average rate of gain in total income payments. In the New England and Middle Eastern regions, where agriculture accounts for an extremely small part of total income, the relative decline in farm income between 1929 and 1947 was a negligible factor in the relative decline in total income. It was only in the Far West and Northwest, particularly the latter, that the trend in agricultural income had a substantial effect on the trend in total income.

The foregoing summary is incomplete. To have assayed the precise roles of government, manufacturing, trade and service, and agriculture in contributing to the relative shifts in regional income payments would have necessitated taking account not only of the changes in the distribution of each of those major sources of income, but also of their differing rates of increase on a Nation-wide basis and of their differing weights, or importance, in the income flows of the Nation and of the several regions. Carrying the analysis that far, however, would have unduly lengthened and complicated it, and would not have altered the principal fact to which it points. This is, that government, manufacturing, trade and service, and agriculture each contributed materially to the regional shifts in total income between 1929 and 1947. The regional shifts in income from each of these major sources were substantially similar, as to direction, to the regional shifts in total income payments. The further generalization follows that the broad regional trends in total income payments have considerable underlying strength and pattern, stemming both from the profound changes in governmental institutions since 1929 and from developments in the major industrial segments of the private economy. With this knowledge greater confidence can be placed in past trends as indicators of the direction of future changes in the regional distribution of total income payments.

Population.—Changes in population are always a factor—though immeasurable—influencing changes in total income. This summary analysis of the factors underlying the regional

trends in total income will conclude with a brief examination of the regional trends in total population.

From 1929 to 1947 the population of the continental United States rose 18 percent. In New England, Middle East, Southeast, Southwest, and Central States the increase in population ranged from 12 to 18 percent (see chart 3). It would not appear that in these five regions differences in population change had a major influence on the relative trends in total income.

In the Northwest, total population was virtually the same in 1947 as in 1929. (But note from table 3 the wide variation in the experience of individual States.) Relative to the Nation-wide population advance of nearly one-fifth, this stability of the Northwest's population must be viewed as a factor dampening the region's relative growth in total income payments. Nevertheless, there probably is a less direct relationship between changes in population and changes in total income in the Northwest than in any other region. In this agricultural area, changes in farm prices and in crop yields are the crucial factors affecting changes in total income payments.

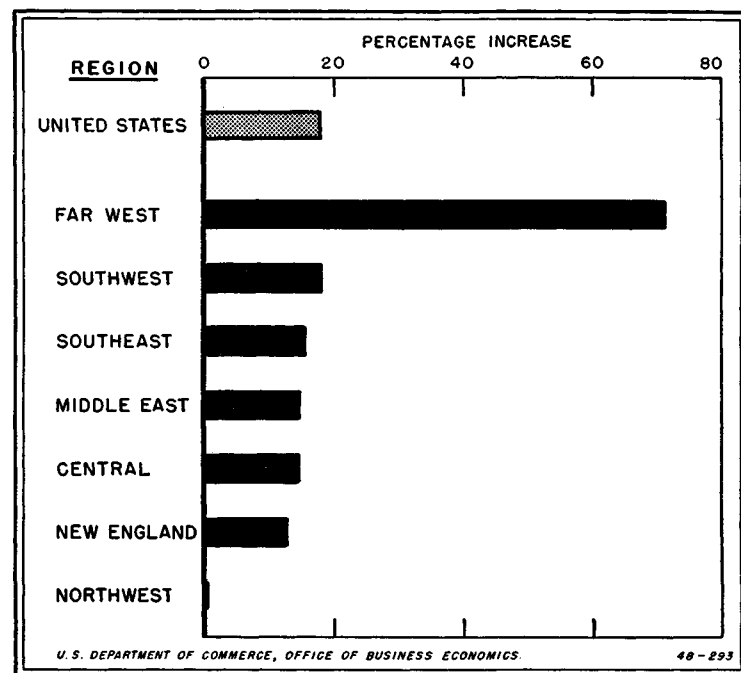
Table 3.—Total Population, by States and Regions, 1929, 1940, and 1947

State and region	Total (thousands)			Percent change		
	1929	1940	1947	1929-40	1940-47	1929-47
Continental United States...	121,770	131,954	143,415	+8	+9	+18
New England.....	8,130	8,449	9,139	+4	+8	+12
Connecticut.....	1,594	1,714	1,974	+8	+15	+24
Maine.....	797	847	885	+6	+4	+11
Massachusetts.....	4,229	4,321	4,635	+2	+7	+10
New Hampshire.....	467	493	534	+6	+8	+14
Rhode Island.....	684	715	745	+5	+4	+9
Vermont.....	359	359	366	0	+2	+2
Middle East.....	29,941	32,239	34,477	+8	+7	+15
Delaware.....	236	267	291	+13	+9	+23
District of Columbia.....	483	685	861	+42	+26	+78
Maryland.....	1,621	1,827	2,139	+13	+17	+32
New Jersey.....	3,989	4,166	4,627	+4	+11	+16
New York.....	12,172	13,474	14,165	+11	+5	+16
Pennsylvania.....	9,723	9,912	10,512	+2	+6	+8
West Virginia.....	1,717	1,908	1,882	+11	-1	+10
Southeast.....	25,435	28,359	29,372	+11	+4	+15
Alabama.....	2,644	2,842	2,834	+7	(1)	+7
Arkansas.....	1,852	1,953	1,913	+5	-2	+3
Florida.....	1,445	1,912	2,328	+32	+22	+61
Georgia.....	2,903	3,130	3,138	+8	(1)	+8
Kentucky.....	2,606	2,852	2,780	+9	-3	+7
Louisiana.....	2,086	2,371	2,544	+14	+7	+22
Mississippi.....	1,998	2,190	2,096	+10	-4	+5
North Carolina.....	3,133	3,583	3,698	+14	+3	+18
South Carolina.....	1,739	1,910	1,951	+10	+2	+12
Tennessee.....	2,604	2,925	3,091	+12	+6	+19
Virginia.....	2,425	2,691	2,999	+11	+11	+24
Southwest.....	8,984	9,793	10,579	+9	+8	+18
Arizona.....	430	502	644	+17	+28	+50
New Mexico.....	420	534	547	+27	+2	+30
Oklahoma.....	2,372	2,333	2,284	-2	-2	-4
Texas.....	5,762	6,424	7,104	+11	+11	+23
Central.....	33,841	35,804	38,605	+6	+8	+14
Illinois.....	7,606	7,905	8,397	+4	+6	+10
Indiana.....	3,226	3,435	3,835	+6	+12	+19
Iowa.....	2,460	2,540	2,591	+3	+2	+5
Michigan.....	4,795	5,275	6,069	+10	+15	+27
Minnesota.....	2,572	2,797	2,888	+9	+3	+12
Missouri.....	3,622	3,788	3,903	+5	+3	+8
Ohio.....	6,626	6,920	7,675	+4	+11	+16
Wisconsin.....	2,934	3,144	3,247	+7	+3	+11
Northwest.....	7,316	7,400	7,390	+1	(1)	+1
Colorado.....	1,008	1,125	1,144	+12	+2	+13
Idaho.....	447	527	525	+18	(1)	+17
Kansas.....	1,867	1,791	1,925	-4	+7	+3
Montana.....	524	559	488	+7	-13	-7
Nebraska.....	1,375	1,313	1,284	-5	-2	-7
North Dakota.....	674	641	541	-5	-16	-20
South Dakota.....	690	642	578	-7	-10	-16
Utah.....	508	553	640	+9	+16	+26
Wyoming.....	223	249	265	+12	+6	+19
Far West.....	8,123	9,910	13,853	+22	+40	+71
California.....	5,531	6,964	9,812	+26	+41	+77
Nevada.....	90	110	139	+22	+26	+54
Oregon.....	947	1,094	1,545	+16	+41	+63
Washington.....	1,555	1,742	2,357	+12	+35	+52

¹ Less than five-tenths of 1 percent.

Source: U. S. Department of Commerce, Bureau of the Census (percent changes computed by Office of Business Economics).

Chart 3.—Percentage Increase in Population, by Regions, 1929 to 1947



Source of data: U. S. Department of Commerce, Office of Business Economics, based upon estimates of the U. S. Bureau of the Census.

It was in the Far West that population was a really important factor in the trend of total income payments. Between 1929 and 1947 the population of this region expanded more than two-thirds. A major and obvious reason, therefore, for the Far West's top-ranking advance in total income since 1929 is the large growth in its population.

Regional Trends in Per Capita Income

It is convenient at this point, following the discussion of population, to summarize the regional trends in per capita income. Unlike total income, per capita income makes adjustment for geographic differences in size of population and population change.

Table 4 contains estimates of per capita income by States and regions for 1929, 1940, 1946, and 1947, together with relevant percentage data. The column on "Percent change in relative position" measures for each State and region the trend in per capita income, relative to the national trend, from 1929 to 1947. The method of computation is explained in the footnote to the column. The regional trend measure of per capita income is directly comparable to that of total income.

There are two main differences between the regional trends in per capita income and the regional trends in total income. As may be surmised from the discussion of population changes, these related to the Northwest and Far West. The Northwest, where total population changed very little from 1929 to 1947, ranked fourth among the regions in respect to relative growth in total income, but first (along with the Southeast) as to relative gain in per capita income. The per capita income of this area advanced from a point 21 percent below the national average in 1929 to 4 percent above it in 1947. The Far West, where population expanded more than two-thirds from 1929 to 1947, experienced the largest relative gain in total income of any region; but its increase in per capita income, as shown in chart 4, was less than the national average.

Table 5.—Major Sources of Income Payments in Each State and Region: Selected Components as a Percent of Total Income, 1947

State and region	Agricultural income ¹	Government income payments ¹	Manufacturing pay rolls	Trade and service income ¹	All other income
Continental United States.....	9.6	14.5	22.4	26.8	26.7
New England.....	2.7	13.8	31.1	24.6	27.8
Connecticut.....	2.2	11.0	36.4	21.4	29.0
Maine.....	8.5	16.4	26.7	24.6	23.8
Massachusetts.....	1.5	14.4	29.1	26.6	28.4
New Hampshire.....	4.9	13.8	31.7	24.5	25.1
Rhode Island.....	.8	16.7	34.3	22.9	25.3
Vermont.....	14.1	12.8	21.5	24.1	27.5
Middle East.....	2.3	14.0	25.1	28.2	30.4
Delaware.....	5.4	9.5	30.2	22.1	32.8
District of Columbia.....		46.1	3.0	28.3	22.6
Maryland.....	4.2	16.2	21.9	27.8	29.9
New Jersey.....	2.2	12.9	34.1	24.4	26.4
New York.....	1.7	12.7	22.5	31.9	31.2
Pennsylvania.....	2.7	12.8	29.6	24.6	30.3
West Virginia.....	5.7	12.9	18.8	20.5	42.1
Southeast.....	16.4	17.7	16.8	25.8	23.3
Alabama.....	15.4	17.9	19.8	24.3	22.6
Arkansas.....	25.6	17.3	9.8	26.8	20.5
Florida.....	11.8	19.8	7.7	31.7	29.0
Georgia.....	13.3	17.3	18.5	28.3	22.6
Kentucky.....	18.4	15.8	13.3	24.1	28.4
Louisiana.....	11.7	16.3	14.6	27.5	29.9
Mississippi.....	30.2	19.4	11.1	23.0	16.3
North Carolina.....	20.9	15.1	23.9	22.3	17.8
South Carolina.....	18.0	18.3	25.8	22.3	15.6
Tennessee.....	14.6	16.4	19.2	26.8	23.0
Virginia.....	11.5	21.7	16.3	24.9	25.6
Southwest.....	18.9	16.8	9.2	26.7	28.4
Arizona.....	16.2	19.0	5.5	29.1	30.2
New Mexico.....	18.9	19.7	4.8	25.3	31.3
Oklahoma.....	19.9	19.8	7.7	25.3	27.3
Texas.....	18.9	15.5	10.2	26.9	28.5
Central.....	9.5	12.5	28.8	25.3	23.9
Illinois.....	6.8	12.2	27.7	26.4	26.9
Indiana.....	11.4	10.4	32.2	24.1	21.9
Iowa.....	27.8	13.0	13.2	25.1	20.9
Michigan.....	5.0	14.1	38.5	23.2	19.2
Minnesota.....	20.0	14.0	15.2	26.0	24.8
Missouri.....	11.1	14.3	18.7	30.0	25.9
Ohio.....	4.8	11.6	33.8	24.5	25.3
Wisconsin.....	14.3	11.1	28.6	24.0	22.0
Northwest.....	31.8	14.7	7.2	23.5	22.8
Colorado.....	19.9	17.7	9.1	26.4	26.9
Idaho.....	31.2	13.5	7.7	24.6	23.0
Kansas.....	33.5	14.0	8.8	20.6	23.1
Montana.....	34.1	13.5	6.0	23.0	23.4
Nebraska.....	28.7	14.5	8.0	26.9	21.9
North Dakota.....	58.2	10.7	1.5	18.4	11.2
South Dakota.....	46.5	13.0	3.6	22.3	14.6
Utah.....	14.1	20.0	8.7	26.4	30.8
Wyoming.....	27.2	13.4	5.1	22.9	31.4
Far West.....	8.8	16.1	15.1	31.4	28.6
California.....	8.0	15.9	14.2	32.2	29.7
Nevada.....	12.5	13.7	3.9	32.7	37.2
Oregon.....	11.7	13.7	20.7	29.5	24.4
Washington.....	11.0	18.5	16.6	28.6	25.3

¹ For definition see footnotes to table 2.

Source: U. S. Department of Commerce, Office of Business Economics.

New England's relative decline in income payments since 1929 can be traced to below-average records in respect to manufactures, trade and service, government, and nearly every other source of income. Probably the key factor is its lag in manufacturing. The proportion of total income received from manufactures is larger in New England than any other region. But from 1929 to 1947 its percentage increase in factory pay rolls was the smallest of any region. Its increase of 122 percent was markedly below the country-wide average of 161 percent, and little more than half as large as the percentage gains scored by the Far West and the two Southern regions. As in the case of total income, the dominant, depressive influence of Massachusetts upon the regional trend in factory pay rolls is clearly evident. The doubling of such pay rolls in this State from 1929 to 1947, while impressive in absolute terms, was one of the smallest gains in the country and much below those of other large industrial States.

The relative decline in New England manufactures was a product of developments over the recent war period, as well

as over the prewar period from 1929 to 1940. The region's expansion in total factory pay rolls from 1940 to 1947 was less than that of any other region. And the detailed compilations published in the August 1947 SURVEY show that in 13 out of 19 principal types of manufacturing industries New England accounted for a smaller share of the Nation's pay rolls in postwar 1946 than in prewar 1940.

Middle East

New York, Pennsylvania, and New Jersey receive about nine-tenths of total income payments in the Middle East. Therefore, they almost completely determine the regional trend, with New York, which accounts for about half of the regional total, having by far the largest weight. All three of these large States received a materially smaller share of the Nation's income in 1947 than in 1929. Of the other four States—Delaware, District of Columbia, Maryland, and West Virginia—all except Delaware ran counter to the regional trend in that their income shares increased from 1929 to 1947.

The income record of the District of Columbia furnishes a useful, though extreme, example of the inadvisability of using the 1929-47 change in a State's or region's income share for projection into the future without some consideration of developments occurring within the period. From 1929 to 1940 total income payments in the District of Columbia expanded by two-fifths, in contrast to the Nation-wide decline of nearly one-tenth. But after 1940 the rate of income growth in the District was considerably below the national average. This irregularity stemmed from unusual movements of both population and per capita income in the District, which were heavily influenced by the uneven rate of growth of the Federal establishment there and the comparative stability of its rates of pay.

Total income payments in the Middle East expanded 94 percent from 1929 to 1947. This rate of growth was only three-fifths as large as the composite average for the other six regions. The per capita income of the Middle East declined from a point 36 percent above the national average in 1929 to 18 percent above it in 1947. Despite this substantial decrease, the region last year shared top ranking in per capita income with the Far West. Five States of the Middle East—New York, Delaware, District of Columbia, New Jersey, and Maryland—were among the 14 States in the country having the highest per capita incomes in 1947.

The statistical picture of the Middle East's relative decline in the Nation's income scale from 1929 to 1947 is generally similar to that of New England's decline. As already noted, the extent of relative decline in both total income and per capita income was virtually the same in the two regions. Both regions are found to have lagged behind Nation-wide increases in each of the four major types of income—wages and salaries, proprietors' income, property income, and "other" income—and also in nearly every industrial source of income. In the important sectors of manufacturing and trade and service their lags were of generally similar proportions and are the main factors in their relative declines in total income.

There are numerous other parallels between the two regions in respect to their relatively declining trends of income payments. One is their comparatively large dependence on property income—a type of income of sharply decreased importance in the Nation's income flow. Another is the less-than-average impetus they have received from government income payments. However, the most fundamental characteristic they have in common is simply their age, or their comparative economic maturity. The declining income positions of the Middle East and New England reflect, in large measure, the industrial, commercial, and

population growth of the newer and less developed parts of the country. A tapering in this rate of growth would make the forces underlying the relative shift of income to the South and West less strong in the future than they were in the past.

Southeast

The Southeastern region considerably improved its relative income position over the 1929-47 period. As to total income, its improvement was only slightly less than that achieved by the Far West. And as to per capita income, the Southeast's relative gain was matched only in the Northwest. From 1929 to 1947 the Southeast's share of all income payments in the Nation rose from 10.5 percent to 13.6 percent, and the ratio of its per capita income to the national average rose from 51 percent to 67 percent. Each of these represents a relative gain of nearly one-third. These striking gains stemmed from every part of the region. In each of the 11 Southeastern States the relative growth in both total income and per capita income from 1929 to 1947 exceeded the Nation-wide average.

A full perspective on income in the Southeast, however, requires recognition that, despite this considerable progress, the region still has a comparatively low average-income level. Its per capita income in 1947, the lowest of any region, was only two-thirds of the national average. It was less than three-fifths as large as the per capita incomes of the Middle East and Far West.

The substantial relative income growth of the Southeast from 1929 to 1947 stemmed from above-average gains in each of the four major types of income and in every industrial source of income except agriculture. The role of government was largest. Government income payments contributed more to income expansion in the Southeast than in any other region.

Continuing a long uptrend, strides in industrialization by the Southeast also were a significant factor in its relative income growth from 1929 to 1947. Over this span the region's percentage of manufacturing pay rolls in the United States rose nearly one-third. This rise was a product of developments over both the pre-1940 and the post-1940 periods. In the latter period (from 1940 to 1946) the region experienced larger-than-average pay roll gains in 16 out of 19 principal types of manufactures. These pervasive gains were shared by nearly all States of the region.

As already mentioned, agriculture is the only industrial source of income in which the Southeast's relative expansion from 1929 to 1947 did not exceed the Nation's. Agricultural income formed one-fifth of total income in the region in 1929, whereas it was only one-sixth of the total in 1947. This decline of agriculture in the income structure of the Southeast, together with its advance in industrialization, will be viewed quite generally as salutary. For the large dependence of the region on agriculture—an industry yielding comparatively low monetary returns—is the main reason for the lowness of its per capita income. Not only does the Southeast have a larger part of its labor force engaged in agriculture than any other region, but the average income of Southeastern farms is the lowest in the country.

Many of the economic ills of the Southeast have been traced to its emphasis on cotton farming, and for a long time Southern economists have been urging greater emphasis on livestock production. In light of these facts, the large decline since 1929 in the importance of cotton farming in the Southeast is noteworthy. From 1929 to 1947 Southeastern farmers' gross cash income from the production of cotton lint and cottonseed dropped from 43 percent to 25 percent of their gross cash income from the production of all farm commodities. Gross cash income from livestock and

livestock products, on the other hand, advanced from less than one-fourth to one-third of the total.

Southwest

The Southwest's share of total income payments in the Nation increased one-fifth from 1929 to 1947. Each of the four States in the region except Oklahoma scored substantial gains in total income relative to the country as a whole. As compared with the one and one-third increase nationally, total income payments expanded two-fold in Texas and Arizona and two and one-half times in New Mexico. But in Oklahoma the doubling of income payments from 1929 to 1947 fell short of the Nation-wide advance and was the smallest increase of any State in the four Southern and Western regions.

In an evaluation of the past trends of income payments in the Southwestern region, special attention should be focused on population. Although from 1929 to 1947 the rate and course of population change in the region were similar to those in the Nation, there were wide differences among the individual Southwestern States. As shown in table 3, Arizona's population expanded by one-half between 1929 and 1947, with two-thirds of the expansion occurring after 1940. New Mexico's population increased one-third but nearly all of the increase was concentrated in the years before 1940. The population of Texas rose one-fourth from 1929 to 1947, with the increase being about evenly divided between the two periods. In Oklahoma, however, population declined slightly, both from 1929 to 1940 and in the later period.

The Southwest, an area of relatively low average incomes, raised its per capita income from two-thirds of the national average in 1929 to slightly more than four-fifths of it in 1947. This relative improvement (about one-fifth) was the same as in total income. But, as might be expected from the foregoing sketch of population movements, the relative trend of the individual Southwestern States in per capita income varied considerably from their trends in total income. Arizona's rise in per capita income only equaled the national average, and the relative gains by Texas and New Mexico, while substantial, were less than their relative gains in total income. On the other hand, Oklahoma's actual decline in population, combined with its below-average gain in total income, yielded the State a somewhat larger-than-average increase in per capita income.

As in the Southeast, growth of manufactures and expansion of government income payments were two of the main factors in the region's upward trend of income payments from 1929 to 1947. And, as in the Southeast, farm income declined, though slightly, as a percentage of the region's total income. In all five regions outside the South, farm income formed a larger proportion of total income payments in 1947 than in 1929. A feature of the slightly reduced role of agriculture in the Southwest, moreover, was the same sort of major change in the region's farm economy as was observed for the Southeast—a sharp decrease in the importance of cotton and a commensurate shift to other types of crops and to livestock production. In the Southwest, cotton lint and cottonseed formed 44 percent of farmers' gross cash income from current production in 1929, but only 26 percent in 1947.

The Southwest is less industrialized than any other region except the Northwest. As measured by changes in factory pay rolls, the Southwest made only moderate progress toward industrialization in the prewar period from 1929 to 1940. From 1940 through 1947, however, the region experienced the largest relative growth of manufactures in the Nation. Underlying this growth were a sweeping expansion of war production in the area from 1942 through 1944 and the

capacity of the region to integrate much of the war-period expansion into its postwar economy. The Southwest's share of the Nation's factory pay rolls in postwar 1946 was higher than in 1940 in 15 out of 19 lines of manufactures. These striking gains were heavily weighted by the outstanding record of Texas. The 1940-47 percentage increase in factory pay rolls in Texas was one of the largest in the country. Oklahoma's increase, on the other hand, was slightly less than the national average.

Central State.

The large Central region receives more than one-fourth of total income payments in the United States. It includes both highly industrialized and primarily agricultural states. Manufacturing and agriculture together contribute two-fifths of all income in the Central States, as compared with one-third nationally (see table 5). On the other hand, government income payments are in relatively small volume in the Central region, and there is a comparatively lesser dependence upon investments and trade and service activities as sources of individual incomes.

The industrialized States of the Central region are Illinois, Indiana, Michigan, Ohio, and Wisconsin. In all of them manufacturing accounts for a much larger proportion of total income than in the country at large. However, two of these five states, Indiana and Wisconsin, also derive a larger-than-average share of total income from agriculture; and in Illinois the importance of farming is not appreciably less than on a Nation-wide basis. In all five of these industrial States of the Central region, agriculture is much more important as a source of income than in the industrial States of New England and the Middle East.

Five of the Central States receive a larger percentage of total income from agriculture than the Nation generally. These are Iowa, Minnesota, Missouri, Wisconsin, and Indiana. But only two of these, Iowa and Minnesota, may be termed primarily agricultural. In the other three, manufacturing accounts for a very much larger part of total income than agriculture.

This brief summary reveals an unusual and significant general reliance by the Central States upon both manufacturing and agriculture as sources of income payments. But the two sources vary widely in relative importance throughout the region. For this reason, it is possible to make few generalizations about past trends of income payments that will be applicable to the individual States. Also to be noted in this connection are the wide differences among the Central States in population growth, which over the 1929-47 period ranged from 5 percent in Iowa to 27 percent in Michigan.

One significant generalization, however, is the composite tendency for the Central States to receive an approximately constant—or perhaps slightly declining—share of the Nation's total income payments. Over the 1929-47 span, the region's share of all income payments declined 3 percent. Its per capita income moved almost identically with the national average and remained about 5 percent above it.

In only two of the eight Central States were there marked trends in total income payments from 1929 to 1947. These are Illinois, whose income share dropped one-sixth, and Indiana, where there was an increase of one-seventh.

As in the large Eastern States of New York, Pennsylvania, and Massachusetts, the relative decline of income payments in Illinois is attributable mainly to less-than-average growth in trade and service and manufacturing. The 1929-47 rates of expansion in trade and service income of these four States were the smallest in the country. An additional factor is that population increase in Illinois after 1929 proceeded at a rate only three-fifths that in the Nation generally.

In Indiana the up-trend of total income payments stemmed from larger-than-average expansion in income from trade and service, manufacturing, and agriculture. The State's growth in trade and service—the largest, in relative terms, in the region—was most important.

Northwest

The Northwest's share of the Nation's total income increased one-eighth from 1929 to 1947—the fourth largest regional gain. Nebraska is the only Northwestern State which did not show an upward trend in total income.

In per capita income the Northwest, together with the Southeast, scored the largest relative gain of any region. In 1929 its per capita income was one-fifth below the national average, but in 1947 it was 4 percent above it. This gain was a relative improvement of one-third. In all States of the region, per capita incomes in 1947 were substantially higher in relation to the national per capita income than they were in 1929. It will be recalled, in this connection, that the region's population was no larger in 1947 than in 1929, whereas on a national basis population increased nearly one-fifth over the period.

The key to an understanding of trends and fluctuations of income payments in the Northwest is the region's agriculture. One fact of relevance is simply its importance in the Northwestern economy. Last year agricultural income formed one-third of all income payments in this region, as compared with one-tenth for the Nation and one-sixth for the South. Not only is agriculture, a naturally volatile source of income, more important in the Northwest than elsewhere, but it has exhibited greater volatility in this region than in any other. This volatility is due in part to the fact that relatively "fixed" expenses—such as depreciation, interest, taxes, and rent—constitute a markedly higher proportion of gross farm income there than in other areas.

Because of the varying fortunes of Northwestern agriculture, fluctuations in total income are more irregular and less subject to pattern in the Northwest than in any other region. Developments during 1947 were no exception to this generalization. In this region farmers' net income rose more than one-third from 1946 to 1947, and total income payments one-fifth—in comparison with Nation-wide increases of only about one-tenth. Northwestern agriculture leans heavily on wheat and meat animals, and the region's large gains in farm income and total income during 1947 reflect the critical demand for food, the steep advance in food prices after the removal of price controls, and the unusually good growing conditions that helped produce a record crop of wheat.

To sum up: the Northwest places a primary reliance on agriculture, a naturally volatile source of income; its farm income is extremely volatile, more so than in other areas; for these reasons, its total income tends to fluctuate more than the Nation's; and income payments in the Northwest increased substantially in 1947 on the strength of rather special factors affecting its farm income. All of these facts have direct bearing on the measure of trend in income payments for the Northwest. It must be concluded that the trend measures presented in this article, based on the change in relative income position between 1929 and 1947, are very probably less reliable for the Northwest than for any other region. From 1929 to 1947 the Northwest experienced an improvement of 12 percent in its relative position in respect to total income payments. But had the regional trend measure been based on comparisons between 1929 and 1946—for which a good case can be made—the Northwest's improvement would be only 4 percent. For all other regions, it is important to note, the trends indicated by the two sets of comparisons are similar.

It has been stressed that judgment about future income trends for the several regions should be based on qualitative analysis as well as on measures of their past trends. This point is applicable with particular force to the Northwest.

Far West

Over the period 1929-47 the share of the Nation's total income received by the Far West advanced from 8.5 percent to 11.4 percent. This represents a relative gain of nearly one-third, the largest scored by any region. A gain of large proportion was experienced by each of the four States in the region. All of them were among the 11 States in the Nation registering the largest percentage increases in total income payments from 1929 to 1947.

The Far West's top-ranking advance in total income from 1929 to 1947 resulted from substantially larger-than-average gains in nearly every type of income. Of greatest importance were those stemming from the manufacturing, government, and trade and service sectors. In all four States, but particularly in California, large population growth was a fundamental factor. Whereas in other sections of the country, population increased on the average by one-seventh between 1929 and 1947, the population of this rapidly developing area expanded by more than two-thirds.

Particularly noteworthy is the substantial progress in industrialization made by the Far West since 1929. In the 1929-40 period, total factory pay rolls declined 6 percent on a Nation-wide basis, but rose 7 percent in the Far West. From 1940 to 1947, when factory pay rolls increased one and three-fourths in the country as a whole, they expanded two and one-quarter times in the Far West.

Attesting to the pervasiveness of the Far West's prewar-to-postwar industrial gains is the fact that between 1940 and 1946 the region increased its share of the Nation's pay rolls in 15 out of 19 principal types of manufactures. The four Far Western States entered the postwar period with substantial relative gains in a number of lines of manufacturing in which they are not major centers of production. These include nonferrous metals, iron and steel, furniture, chemicals, leather, and stone, clay, and glass.

Although the Far West experienced the largest relative growth in total income of any area from 1929 to 1947, its rise in per capita income was less than the national average. This relative decline was concentrated in the 1940-47 period. From 1929 to 1940 the region improved its per capita income slightly in relation to the national average. But from 1940 to 1947, when a two-fifths increase in population accompanied the upsurge of total income payments in the Far West, the region's per capita income declined from 130 percent to 118 percent of the national average. Since 1941, nevertheless, per capita income in the Far West has matched or exceeded that in any other region of the country.

One precaution is suggested concerning any appraisal of the Far West's prospective trend in total income. This should take explicit account of the region's past phenomenal growth in population in relation to that which may be assumed for the future. Failure to evaluate population changes as a crucial, independent factor may lead to serious error regarding the region's share of total income at some future point. It seems likely that the really dynamic expansion in the Far West's population has tapered, and that the region has entered a period in which its rate of population growth, relative to the Nation's, will be materially smaller than in the past.

Revision of Monthly Business Statistics, pages S1-S40

THE tables of Monthly Business Statistics from page S-1 through page S-40 have been revised in this issue to conform with the presentation in the 1947 Statistical Supplement to the Survey of Current Business which is now available from the Superintendent of Documents, Washington 25, D. C., and in Field Offices of the Department of Commerce. Some new series have been included and a few substitutions for series that are no longer available; other series have been revised since completion of copy for the 1947 Statistical Supplement. The new series are marked with an asterisk () and the revised series by a dagger (†), with accompanying notes indicating where the new or revised data may be found. Some series included in the Statistical Supplement have been dropped from this issue, in practically all cases because collection of data either has been discontinued by the compiling agency or has been placed on an annual—or less frequent—basis.*

New or Revised STATISTICAL SERIES



Revised Estimates of Retail Sales

THE revision of the estimates of retail sales follows the policy outlined in the SURVEY OF CURRENT BUSINESS for January 1948 and affects, for the most part, the year 1947 and the current months of 1948. As previously indicated, the estimates prepared each month are necessarily of a preliminary nature. They are based primarily on sales reports collected by the Bureau of the Census from a sample of independent and chain retail stores, and on department-store sales data reported to the Board of Governors of the Federal Reserve System. As other information becomes available at a later period, the preliminary estimates are reviewed. The later data include current tax-collection statistics from States which have sales taxes and estimates of changes in the retail-store population prepared in the Office of Business Economics, as well as Bureau of Internal Revenue and Census compilations of bench-mark data.

In addition to the changes in the current estimates, revisions for a few of the groups—grocery and combination stores, motor-vehicle and farm-equipment dealers, furniture

and house-furnishing and variety stores—have been carried back to the war years. The greater part of the changes for these groups reflects revisions in the estimates for the war years, with relatively little modification in the movements for the postwar period.

This completes the program initiated early this year of revising in the light of the latest available data all of the statistical series on business sales and inventories published by this office. The present revisions in the sales estimates, it should be pointed out, have already been incorporated in the estimates of consumption expenditures given in the July issue of the SURVEY.

Below is a table showing annual sales of retail stores by kinds of business for the years 1929, 1933, and 1935 to 1947. No revisions were made for any years prior to 1942. Current monthly data for the year 1948 are found on pages S-7 and S-8. Data by months from 1935 on are available and may be obtained on request from the Office of Business Economics.

Table 1.—Sales of Retail Stores by Kinds of Business, Selected Years, 1929-47

[Millions of dollars]

Kind of business	1929	1933	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
All retail stores.....	48,459	24,517	32,791	38,338	42,150	38,053	42,042	46,388	55,490	57,639	63,721	69,573	76,644	100,787	118,325
Durable-goods stores.....	14,180	4,844	7,626	9,863	11,071	8,591	10,379	12,418	15,604	10,271	9,755	10,468	11,960	21,761	30,392
Automotive group.....	7,043	2,368	4,237	5,559	6,067	4,366	5,549	6,862	8,544	3,265	3,142	3,315	3,805	8,808	13,778
Motor-vehicle dealers.....	6,444	2,142	3,863	5,102	5,568	3,909	5,025	6,286	7,794	2,596	2,394	2,465	2,741	7,145	12,100
Parts and accessories.....	599	226	374	457	499	457	524	576	750	669	748	850	1,064	1,663	1,678
Building-materials and hardware group.....	3,846	1,342	1,864	2,392	2,811	2,436	2,735	3,108	3,862	3,799	3,391	3,717	4,271	6,750	9,092
Building materials.....	2,621	854	1,105	1,463	1,739	1,530	1,761	2,000	2,435	2,326	2,079	2,171	2,508	4,137	5,695
Farm implements.....	519	177	292	353	421	343	345	399	524	493	410	539	586	787	1,180
Hardware.....	706	311	467	576	651	563	629	709	903	980	902	1,007	1,177	1,826	2,217
Home-furnishings group.....	2,755	959	1,290	1,615	1,846	1,490	1,733	2,022	2,611	2,454	2,258	2,454	2,813	4,860	6,213
Furniture and housefurnishings.....	1,813	646	852	1,082	1,254	1,014	1,200	1,392	1,787	1,821	1,785	1,951	2,145	3,175	3,746
Household appliances and radios.....	942	313	438	533	592	476	533	630	824	633	473	503	668	1,685	2,467
Jewelry.....	536	175	235	297	347	299	362	426	587	753	964	982	1,071	1,343	1,309
Nondurable-goods stores.....	34,279	19,673	25,165	28,475	31,079	29,462	31,663	33,970	39,886	47,368	53,966	59,105	64,684	79,026	87,936
Apparel group.....	4,241	1,930	2,656	3,102	3,323	2,998	3,259	3,441	4,157	5,193	6,323	6,869	7,685	8,981	9,413
Men's clothing and furnishings.....	1,358	542	727	855	878	765	840	886	1,096	1,296	1,497	1,618	1,806	2,227	2,414
Women's apparel and accessories.....	1,480	754	1,026	1,205	1,325	1,211	1,323	1,413	1,690	2,175	2,893	3,193	3,589	4,033	4,141
Family and other apparel.....	596	209	392	456	484	431	479	503	605	739	907	986	1,093	1,262	1,325
Shoes.....	807	425	511	586	636	591	617	639	766	983	1,026	1,072	1,197	1,459	1,533
Drug stores.....	1,690	1,066	1,233	1,409	1,527	1,474	1,563	1,637	1,821	2,185	2,588	2,811	3,023	3,520	3,659
Eating and drinking places.....	2,125	1,430	2,391	2,742	3,284	3,181	3,520	3,874	4,796	6,173	8,034	9,351	10,809	12,362	12,485
Food group.....	10,967	6,776	8,362	9,013	9,708	9,512	10,165	10,906	12,576	15,417	17,075	18,540	19,727	25,005	29,584
Grocery and combination.....	7,353	5,004	6,352	6,850	7,266	7,187	7,722	8,317	9,604	11,803	12,901	14,062	14,863	19,144	23,164
Other food.....	3,614	1,772	2,010	2,163	2,442	2,325	2,443	2,589	2,972	3,614	4,174	4,478	4,864	5,861	6,420
Filling stations.....	1,787	1,532	1,968	2,318	2,641	2,696	2,822	2,954	3,454	3,021	2,453	2,604	3,016	4,065	5,193
General-merchandise group.....	9,015	4,982	5,730	6,366	6,673	6,145	6,475	6,847	7,931	9,015	9,977	10,890	11,689	14,611	16,003
Department, including mail order.....	4,350	2,538	3,311	3,766	3,993	3,692	3,975	4,266	5,027	5,566	6,132	6,764	7,428	9,621	10,615
General, including general merchandise, with food.....	2,710	1,176	1,110	1,142	1,136	968	922	910	991	1,158	1,301	1,388	1,417	1,676	1,858
Dry goods and other general merchandise.....	1,051	590	528	588	619	568	601	636	738	943	1,119	1,208	1,249	1,463	1,536
Variety.....	904	678	781	870	925	917	977	1,035	1,175	1,348	1,425	1,530	1,595	1,851	1,992
Other retail stores.....	4,454	1,957	2,825	3,525	3,923	3,456	3,859	4,311	5,151	6,364	7,516	8,040	8,735	10,482	11,599
Liquor.....	17	17	328	475	558	539	586	650	767	1,037	1,234	1,485	1,688	1,912	1,874
All other.....	4,454	1,940	2,497	3,050	3,365	2,917	3,273	3,661	4,384	5,327	6,282	6,555	7,047	8,570	9,725

Source: U. S. Department of Commerce, Office of Business Economics.

Monthly BUSINESS STATISTICS



THE DATA here are a continuation of the statistics published in the 1947 Supplement to the SURVEY OF CURRENT BUSINESS. That volume contains monthly data for the years 1941 to 1946, and monthly averages for earlier years back to 1935 insofar as available; it also provides a description of each series and references to sources of monthly figures prior to 1941. Series added or revised since publication of the 1947 Supplement are indicated by an asterisk (*) and a dagger (†), respectively, the accompanying footnote indicating where historical data and a descriptive note may be found. The terms "unadjusted" and "adjusted" used to designate index numbers refer to adjustment of monthly figures for seasonal variation.

Data subsequent to July for selected series will be found in the Weekly Supplement to the Survey.

Unless otherwise stated, statistics through 1946 and descriptive notes may be found in the 1947 Supplement to the Survey	1947						1948						
	July	August	September	October	November	December	January	February	March	April	May	June	July
GENERAL BUSINESS INDICATORS													
NATIONAL INCOME AND PRODUCT†													
Seasonally adjusted quarterly totals at annual rates:													
National income, total..... bil. of dol.			200.6			212.8			215.1				221.4
Compensation of employees, total..... do.			127.6			132.2			133.7				133.9
Wages and salaries, total..... do.			122.5			127.1			128.8				129.1
Private..... do.			105.3			109.5			111.1				111.0
Military..... do.			3.7			3.6			3.5				3.6
Government civilian..... do.			13.5			14.0			14.2				14.5
Supplements to wages and salaries..... do.			5.1			5.0			4.9				4.9
Proprietors' and rental income, total..... do.			44.4			48.6			50.6				51.9
Business and professional..... do.			23.0			24.7			25.0				25.4
Farm..... do.			14.3			16.5			18.0				18.9
Rental income of persons..... do.			7.1			7.4			7.5				7.6
Corporate profits and inventory valuation adjustment, total..... bil. of dol.			24.3			27.5			26.2				30.9
Corporate profits before tax, total..... do.			29.1			32.4			31.4				33.4
Corporate profits tax liability..... do.			11.4			12.7			12.2				13.0
Corporate profits after tax..... do.			17.7			19.7			19.2				20.4
Inventory valuation adjustment..... do.			-4.8			-4.9			-5.3				-2.5
Net interest..... do.			4.4			4.5			4.6				4.7
Gross national product, total..... do.			227.9			243.8			243.8				248.2
Personal consumption expenditures, total..... do.			165.6			171.1			172.0				175.1
Durable goods..... do.			21.1			22.1			21.4				22.3
Nondurable goods..... do.			96.8			100.2			101.0				102.4
Services..... do.			47.7			48.8			49.6				50.4
Gross private domestic investment..... do.			25.6			35.4			38.5				37.2
New construction..... do.			11.6			14.0			14.3				14.3
Producers' durable equipment..... do.			17.6			18.9			19.6				20.6
Change in business inventories..... do.			-3.5			2.5			4.6				2.3
Net foreign investment..... do.			8.4			8.2			3.9				3.9
Government purchases of goods and services, total..... bil. of dol.			28.3			29.0			29.4				32.1
Federal (less Government sales)..... do.			15.7			15.5			16.0				17.9
State and local..... do.			12.6			13.5			13.4				14.2
Personal income, total..... do.			196.7			203.1			207.3				208.8
Less: Personal tax and nontax payments..... do.			21.7			22.2			23.6				21.6
Equals: Disposable personal income..... do.			175.0			180.9			183.7				187.3
Personal savings§..... do.			9.4			9.7			11.7				12.2
PERSONAL INCOME BY SOURCE †													
Seasonally adjusted, at annual rates:													
Total personal income..... bil. of dol.	193.2	190.8	206.2	200.0	201.4	207.7	209.4	206.8	205.6	207.4	207.2	* 212.3	211.5
Wage and salary receipts, total..... do.	119.4	120.1	121.9	122.7	125.5	127.4	127.5	126.9	125.7	125.0	126.8	* 129.7	130.5
Employer disbursements, total..... do.	121.4	122.2	123.9	124.7	127.3	129.4	129.7	128.9	127.8	127.0	128.8	* 131.9	132.7
Commodity-producing industries..... do.	53.6	54.3	55.4	55.9	57.4	59.2	59.3	58.0	57.0	56.3	57.2	* 59.6	59.5
Distributive industries..... do.	35.2	35.4	36.0	36.0	37.1	37.4	37.5	37.8	37.5	37.2	37.9	* 38.2	38.5
Service industries..... do.	15.5	15.3	15.2	15.2	15.2	15.2	15.3	15.4	15.4	15.6	15.6	* 15.8	16.1
Government..... do.	17.1	17.2	17.3	17.6	17.6	17.6	17.6	17.7	17.9	17.9	18.1	* 18.3	18.6
Less employee contributions for social insurance..... bil. of dol.	2.0	2.1	2.0	2.0	1.8	2.0	2.2	2.0	2.1	2.0	2.0	* 2.2	2.2
Other labor income..... do.	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	* 2.0	2.1
Proprietors' and rental income..... do.	45.3	42.8	45.0	47.5	47.1	51.3	52.4	50.0	49.3	51.9	50.7	* 52.8	50.8
Personal interest income and dividends..... do.	15.6	15.6	16.2	15.9	16.1	16.2	16.5	16.6	16.6	16.7	* 16.8	* 16.8	17.0
Total transfer payments..... do.	11.1	10.5	21.2	12.0	10.8	10.9	11.1	11.3	12.1	11.8	10.9	* 11.0	11.1
Total nonagricultural income..... do.	172.9	173.1	187.4	179.7	181.4	184.2	184.7	184.5	184.1	183.7	184.4	* 187.7	188.2
NEW PLANT AND EQUIPMENT EXPENDITURES													
All industries, total..... mil. of dol.													
Electric and gas utilities..... do.			4,140			4,960			4,170			1,4,690	2,609
Manufacturing..... do.			500			620			500			1,610	1,129
Mining..... do.			1,870			2,290			1,800			1,2,010	1,480
Railroad..... do.			180			210			180			1,180	1,480
Other transportation..... do.			230			310			270			1,350	446
Commercial and miscellaneous..... do.			200			190			180			1,210	745
			1,160			1,340			1,240			1,1,330	258

* Revised.

† Estimates based on anticipated capital expenditures of business.

§ Personal savings is excess of disposable income over personal consumption expenditures shown as a component of gross national product above.

† Revised series. Estimates of national income, gross national product, and personal income have been revised beginning 1944; see pp. 27-29 of the July 1948 Survey for the revised figures.

Unless otherwise stated, statistics through 1946 and descriptive notes may be found in the 1947 Supplement to the Survey

EMPLOYMENT CONDITIONS AND WAGES—Continued

Table with columns for years (1947: July-December; 1948: January-July) and rows for various employment categories like Production workers, Unadjusted index, etc.

Revised. Preliminary. Estimates of production worker employment (p. S-10), employment indexes, and pay roll indexes (p. S-12) for all manufacturing, total durable and nondurable goods industries, and the industry groups, have been revised beginning January 1946 to adjust the series to levels indicated by Federal Security Agency data for 1946; revisions through April 1947 for the manufacturing industry groups and the totals will be shown later. Data for individual manufacturing industries, with the exception of those in the transportation equipment group, have been adjusted to Federal Security Agency data through 1945 or have been found to need no general revision. The industries in the transportation equipment group have been adjusted to 1939 Census of Manufactures data only. The mining industries have been adjusted to Federal Security Agency data through 1946; revisions through April 1947 will be published later. Total includes State engineering, supervisory, and administrative employees not shown separately. Revised series. Indexes for machinery and machine-shop products have been revised to adjust the series to Federal Security Agency data through 1945; revisions through March 1947 will be shown later.

Unless otherwise stated, statistics through 1946 and descriptive notes may be found in the 1947 Supplement to the Survey

Table with columns for years 1947 (July-December) and 1948 (January-July)

FINANCE-Continued

SECURITY MARKETS-Continued

Bonds-Continued

Table for Bonds-Continued with rows: Value, issues listed on N. Y. S. E.; Face value, total, all issues; Domestic; Foreign; Market value, total, all issues; Domestic; Foreign; Yields: Domestic corporate (Moody's); By ratings: Aaa, Aa, A, Baa; By groups: Industrial, Public utility, Railroad; Domestic municipal; Bond Buyer (20 cities); Standard and Poor's Corp. (15 bonds); U. S. Treasury bonds, taxable

Stocks

Table for Stocks with rows: Cash dividend payments publicly reported; Total dividend payments; Finance; Manufacturing; Mining; Public utilities; Communications; Heat, light, and power; Railroad; Trade; Miscellaneous; Dividend rates, prices, yields, and earnings, 200 common stocks, Moody's; Dividend rate per share (200 stocks)*; Industrial (125 stocks); Public utility (25 stocks); Railroad (25 stocks); Bank (15 stocks); Insurance (10 stocks); Price, per share, end of month (200 stocks)*; Industrial (125 stocks); Public utility (25 stocks); Railroad (25 stocks); Yield (200 stocks)†; Industrial (125 stocks); Public utility (25 stocks); Railroad (25 stocks); Bank (15 stocks); Insurance (10 stocks); Earnings per share, quarterly: Industrial (125 stocks); Public utility (25 stocks); Railroad (25 stocks); Dividend yields, preferred stocks, high-grade, 15 stocks (Standard and Poor's Corp.)... percent.; Prices: Average price of all listed shares (N. Y. S. E.); Dec. 31, 1924=100; Dow-Jones & Co. (65 stocks); Industrial (30 stocks); Public utility (15 stocks); Railroad (20 stocks); Standard and Poor's Corporation: Industrial, utility, and railroad;\$ Combined index (416 stocks)...1935-39=100; Industrial (365 stocks); Capital goods (121 stocks); Consumers goods (182 stocks); Public utility (31 stocks); Railroad (20 stocks); Banks, N. Y. C. (19 stocks); Fire and marine insurance (18 stocks); Sales (Securities and Exchange Commission): Total on all registered exchanges: Market value; Shares sold; On New York Stock Exchange: Market value; Shares sold; Exclusive of odd lot and stopped sales (N. Y. Times); Shares listed, New York Stock Exchange: Market value, all listed shares; Number of shares listed

* Revised. * Preliminary.
† Total includes bonds of the International Bank for Reconstruction and Development not shown separately.
‡ Number of stocks represents number currently used; the change in the number does not affect the continuity of the series.
§ New series. The new series on dividend rates for 200 common stocks, which replace similar data formerly shown for 600 stocks, price per share, and earnings and the revised series for yields of 200 common stocks are for an identical list of companies. Dividends are at annual rates and are determined at the end of the month on the basis of the most recent declarations. Yields are obtained by dividing per share dividends by per share prices. Earnings are net after taxes and contingencies less preferred dividend requirements (whether actually paid or not) and are quarterly earnings (partly estimated) at annual rate; for utilities only they are for the 12 months ended each quarter. The number of shares used to obtain per share figures represents number outstanding per companies' balance sheets adjusted for stock splits, etc., so as to be comparable with number outstanding December 31, 1946. A more complete description of the series and data beginning 1929 will be published later.
‡ Revised series. The yield series for utility stocks has been revised to include only operating utilities beginning 1946 and earlier data have been revised back through 1942. There have been minor revisions in the yield series for industrial and insurance stocks and revisions in the railroad series beginning in 1946. All revisions will be shown later.

Unless otherwise stated, statistics through 1946 and descriptive notes may be found in the 1947 Supplement to the Survey

Table with columns for months (July, August, September, October, November, December, January, February, March, April, May, June, July) and rows for various foodstuffs and tobaccos under the heading 'FOODSTUFFS AND TOBACCO'. Sub-sections include Alcoholic Beverages, Dairy Products, and Fruits and Vegetables.

Revised. 1 Dec. 1 estimate. 2 Aug. 1 estimate.

Beginning in the April 1948 Survey, export figures include Army civilian supply shipments; see note marked "†" on p. S-21.

New series. The new price series for cheese has been substituted for the price of twins on the Wisconsin Cheese Exchange; data beginning 1928 will be shown later. The price of U. S. No. 1 potatoes has been substituted for Long Island No. 1, previously shown; data are available beginning March 1947 and figures not shown above are as follows (dollars per 100 pounds): Mar., 4.021; Apr., 3.992; May, 4.054; June, 4.080.

Fluid milk, utilization in manufactured dairy products revised for 1946; data are as follows (mil. of pounds): Jan. 2,550; Feb., 2,498; Mar., 3,029; Apr., 3,703; May, 4,679; June, 4,846; July, 4,752; Aug., 4,270; Sept., 3,769; Oct., 3,437; Nov., 2,853; Dec., 3,032; monthly average, 3,618. Revised 1947 data not shown above for carlot shipments are as follows (number of cars): Apples—Jan., 5,933; Feb., 5,273; Mar., 3, 673; Apr., 2,385; May, 1,700; June, 637. Citrus fruits—Jan. 21,219; Feb., 17,225; Mar., 21, 558; Apr., 18,213; May, 17,938; June, 13,980. Potatoes—Jan., 20,957; Feb., 22,036; Mar. 30, 546; Apr. 27,076; May, 23,850; June, 25,088.

Unless otherwise stated, statistics through 1946 and descriptive notes may be found in the 1947 Supplement to the Survey

1947

1948

Table with 13 columns: July, August, September, October, November, December, January, February, March, April, May, June, July

PAPER AND PRINTING-Continued

WOOD PULP

Table of wood pulp production and stocks, including categories like Bleached sulphate, Unbleached sulphate, Soda, and Groundwood. Includes columns for production and stocks for all grades, exports, imports, and various grades.

PAPER AND PAPER PRODUCTS

Table of paper and paper products, including categories like Paper and paperboard production, Printing paper, Coarse paper, Newsprint, and Paperboard. Includes sub-categories for orders, production, shipments, and stocks.

* Revised. † Revised series. The series for coarse paper (bag, wrapping, shipping sack, converting, and glassine, greaseproof and vegetable parchment) represent the series formerly shown as wrapping paper revised to exclude special industrial paper; data beginning January 1947 are shown on p. S-35 of the May 1948 Survey; earlier data will be published later. ‡ Data for January-June 1947 revised to exclude screenings are as follows (short tons): Unbleached sulphite-52,377; 54,014; 47,601; 43,595; 58,535; 88,137; groundwood-19,222; 18,603; 20,155; 24,392; 24,461; 26,499.

Unless otherwise stated, statistics through 1946 and descriptive notes may be found in the 1947 Supplement to the Survey	1947						1948					
	July	August	September	October	November	December	January	February	March	April	May	June

TEXTILE PRODUCTS—Continued

COTTON—Continued													
Cotton (exclusive of linters)—Continued													
Exports \$..... bales..	83,918	37,066	123,545	134,190	164,665	229,553	214,098	163,498	261,062	155,080	204,811	132,898	
Imports..... do.....	8,163	4,984	95,526	97,946	11,750	15,319	9,454	19,014	10,398	14,668	7,846	3,090	
Prices received by farmers..... dol. per lb.....	.359	.332	.312	.307	.319	.341	.331	.307	.318	.341	.353	.352	.330
Prices, wholesale, middling, 1 5/16", average, 10 markets..... dol. per lb.....	.375	.343	.316	.317	.336	.358	.352	.328	.342	.372	.376	.370	.340
Cotton linters:													
Consumption..... thous. of bales..	83	81	91	103	99	102	102	98	104	97	99	95	86
Production..... do.....	23	32	105	203	188	175	166	129	104	66	47	36	32
Stocks, end of month..... do.....	346	289	206	364	420	476	511	516	520	500	459	403	361
COTTON MANUFACTURES													
Cotton cloth:													
Cotton broad woven goods over 12 inches in width, production, quarterly..... mil. of linear yards.....													
Exports \$..... thous. of sq. yd.....	129,216	140,711	128,921	142,285	123,480	2,569	93,907	82,410	75,614	80,070	79,889	73,129	2,539
Imports..... do.....	1,076	883	1,624	1,196	718	4,161	2,308	3,461	2,364	2,760	3,813	3,912	
Prices, wholesale:													
Mill margins..... cents per lb.....	49.49	56.12	60.05	60.96	63.82	64.70	64.31	63.65	58.26	51.01	47.86	45.34	45.58
Denims, 28-inch..... dol. per yd.....	.338	.338	.338	.338	.338	.338	.338	.338	.338	.338	.338	.338	.338
Print cloth, 38 1/2-inch, 64 x 60..... do.....	.242	.251	.255	.268	.277	.285	.261	.239	.208	.205	.198	.183	.177
Sheeting, unbleached, 36-inch, 56 x 60..... do.....	.232	.232	.232	.232	.234	.239	.240	.240	.240	.230	.230	.208	.195
Cotton yarn, Southern, prices, wholesale, mill:													
22/1, carded, white, cones..... dol. per lb.....	.700	.706	.706	.708	.720	.725	.765	.804	.804	.804	.804	.796	.757
40/1, twisted, carded, skeins..... do.....	.890	.921	.921	.926	.951	.960	1.019	1.098	1.098	1.098	1.098	1.088	1.044
Spindle activity (cotton system spindles):													
Active spindles, last working day, total*..... thous.....	22,551	22,371	22,612	22,818	22,728	22,786	22,798	22,856	23,077	23,042	23,055	22,787	22,675
Consuming 100 percent cotton..... do.....	21,415	21,197	21,410	21,563	21,432	21,412	21,450	21,489	21,708	21,694	21,723	21,479	21,328
Spindle hours operated, all fibers, total*..... mil. of hr.....	8,975	9,552	9,982	11,130	10,146	10,132	11,423	10,441	11,684	11,318	10,993	10,953	8,482
Average per spindle in place*..... hours.....	.377	.401	.419	.466	.426	.427	.480	.440	.492	.475	.450	.461	.356
Consuming 100 percent cotton..... mil. of hr.....	8,531	9,034	9,427	10,802	9,530	9,544	10,802	9,819	11,005	10,667	10,080	10,320	7,923
Operations as percent of capacity†.....	107.0	119.4	121.0	127.0	134.8	121.3	139.0	137.6	133.6	136.1	134.0	130.9	101.3
RAYON AND MANUFACTURES AND SILK													
Rayon yarn and staple fiber:													
Consumption:													
Filament yarn..... mil. of lb.....	62.3	62.6	61.5	65.3	62.2	62.1	68.8	60.6	67.8	67.9	68.6	70.4	72.6
Staple fiber..... do.....	18.4	18.6	20.3	23.1	20.3	22.2	22.7	20.6	22.7	22.9	22.1	22.4	22.3
Stocks, producers', end of month:													
Filament yarn..... do.....	9.2	8.4	8.6	9.5	9.3	7.7	8.6	8.8	9.4	8.7	9.3	9.2	9.4
Staple fiber..... do.....	7.7	6.4	6.4	5.7	5.3	4.0	4.7	4.8	4.8	3.8	4.0	4.3	4.0
Imports..... thous. of lb.....	2,327	2,428	3,265	1,342	1,674	1,369	2,711	4,588	5,219	4,599	3,975	5,323	
Prices, wholesale:													
Yarn, viscose, 150 denier, first quality, minimum filament..... dol. per lb.....	.670	.670	.670	.670	.670	.726	.740	.740	.740	.740	.740	.740	.740
Staple fiber, viscose, 1 1/2 denier..... do.....	.320	.320	.320	.320	.320	.352	.360	.360	.360	.360	.360	.360	.360
Rayon broad woven goods, production, quarterly..... thous. of linear yards.....													
Imports..... do.....	479	193	175	294	124	379	128	397	829	417	470	1,349	
Price, wholesale, raw, Japan, 13/15 (N. Y.)..... dol. per b.....	4.01	4.03	(*)	4.40	4.40	4.40	2.60	2.60	2.60	2.60	2.60	2.60	2.60
WOOL													
Consumption (scoured basis):‡													
Apparel class..... thous. of lb.....	38,840	38,008	37,988	40,210	37,652	43,830	41,700	42,900	51,680	42,632	41,620	48,100	
Carpet class..... do.....	12,685	14,056	13,708	17,850	14,008	16,175	15,948	15,524	20,265	17,024	16,972	19,870	
Imports..... do.....	48,942	35,974	41,511	51,412	48,388	36,234	110,302	79,997	86,749	62,324	48,703	74,300	
Prices, wholesale, Boston:													
Raw, territory, 64s, 70s, 80s, scoured..... dol. per lb.....	1.225	1.220	1.220	1.227	1.255	1.255	1.255	1.255	1.255	1.296	1.310	1.446	1.480
Raw, bright fleece, 56s, greasy..... do.....	.565	.565	.565	.554	.510	.510	.510	.510	.510	.510	.510	.550	.560
Australian, 64s, 70s, good topmaking, scoured, in bond..... dol. per lb.....	1.040	1.040	1.108	1.165	1.254	1.240	1.240	1.370	1.292	1.399	1.652	1.820	1.820
WOOL MANUFACTURES													
Machinery activity (weekly average):‡													
Looms:													
Woolen and worsted:													
Pile and Jacquard..... thous. of active hours.....	61	72	70	68	83	79	92	103	100	98	91	80	
Broad..... do.....	1,864	2,171	2,223	2,282	2,324	2,256	2,565	2,572	2,495	2,497	2,513	2,416	
Narrow..... do.....	39	45	47	45	49	45	52	51	40	42	37	35	
Carpet and rug:													
Broad..... do.....	98	124	124	134	142	132	163	163	163	164	167	166	
Narrow..... do.....	92	110	112	129	129	119	146	146	144	141	141	129	
Spinning spindles:													
Woolen..... do.....	71,267	91,891	93,585	93,931	92,662	90,474	103,677	102,527	98,429	99,272	98,572	95,495	
Worsted..... do.....	88,899	109,789	118,720	122,410	121,971	117,489	132,418	132,666	129,269	125,437	124,760	116,992	
Worsted combs..... do.....	179	189	198	218	222	214	247	252	250	245	248	239	
Wool yarn:													
Production, total †..... thous. of lb.....	57,335	59,164	61,796	76,760	60,900	71,705	67,108	67,304	82,550	65,876	65,588	78,170	
Knitting †..... do.....	5,760	6,316	7,052	9,235	7,024	8,785	8,084	7,940	9,610	7,488	7,512	8,885	
Weaving †..... do.....	39,210	39,704	41,244	49,580	39,732	47,460	43,760	43,872	53,730	42,092	41,668	49,680	
Carpet and other †..... do.....	12,365	13,144	13,500	17,945	14,144	15,460	15,264	15,492	19,210	16,296	16,408	19,605	
Price, wholesale, worsted yarn, 2/32s (Boston)..... dol. per lb.....	1.950	1.950	2.000	2.020	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)

* Revised. * Data not available. † Preliminary. § Beginning in the April 1948 Survey, export figures include Army civilian supply shipments; see note marked "§" on p. S-21. ¶ Included in data for broad and narrow looms prior to April 1947. ‡ Data for July, October, and December 1947 and March and June 1948 are for 5 weeks; other months, 4 weeks. § New series. The new series for cotton spindle activity and the revised series for operations as a percent of capacity relate to all cotton system spindles, including data for spindles spinning synthetic and blended fibers as well as those consuming 100 percent cotton. The series designated "100 percent cotton" continue the data on active spindles and spindle hours shown in the 1947 Supplement and in previous issues of the monthly Survey. The figures for average spindle hours per spindle in place and operations as a percent of capacity for cotton consuming spindles for August 1945-January 1948, as shown in the Supplement and in previous issues of the monthly Survey, are not strictly comparable with earlier data because the figures for spindles in place collected beginning August 1945 and used in the computations include all cotton system spindles while the "in place" figures used in earlier computations related to spindles used exclusively for spinning cotton. Data for August 1945-June 1947 for the revised series on operations as a percent of capacity and for the new series on spindles and spindle hours are available in the May and August 1948 issues, p. S-39 and the note for cotton spindle activity at the bottom of p. S-34 in each of those issues. † Revised series. See note marked "†" on p. S-39.

Unless otherwise stated, statistics through 1946 and descriptive notes may be found in the 1947 Supplement to the Survey	1947						1948						
	July	August	September	October	November	December	January	February	March	April	May	June	July
TEXTILE PRODUCTS—Continued													
WOOL MANUFACTURES—Continued													
Woolen and worsted woven goods, except woven felts:													
Production, quarterly, total.....thous. of lin. yd.			113,536			129,382			131,978				131,414
Apparel fabrics, total.....do.			99,133			114,063			116,258				115,549
Government orders†.....do.			3,122			5,659			3,141				2,247
Other than Government orders, total.....do.			96,011			108,404			113,117				113,302
Men's and boys'†.....do.			44,908			51,331			55,113				55,529
Women's and children's†.....do.			41,054			48,020			49,384				48,374
Unclassified†.....do.			10,049			9,053			8,620				9,399
Blanketing.....do.			6,482			6,845			5,496				5,166
Other nonapparel fabrics.....do.			7,921			8,474			10,224				10,699
Prices, wholesale, f. o. b. mill:													
Suiting, unfinished worsted, 13 oz., dol. per yd.	2,945	3,118	3,118	3,118	3,118	3,316	3,366	3,440	3,465	3,465	3,465	3,465	3,465
Women's dress goods, flannel, 7-7½ oz. do.	1,732	1,732	1,732	1,732	1,732	1,732	1,782	1,832	1,930	2,113	2,113	2,113	2,113
MISCELLANEOUS													
Fur sales by dealers.....thous. of dol.	4,000	4,337	3,678	3,804									

TRANSPORTATION EQUIPMENT

	July	August	September	October	November	December	January	February	March	April	May	June	July
AIRCRAFT													
Shipments, total.....number	1,102	1,140	1,351	1,041	867	790	607	622	863	931	953	1,186	
For U. S. military services.....do.	104	211	323	239	252	288	136	155	278	165	141	227	
Civil aircraft.....do.	998	929	1,028	802	615	502	471	467	585	766	812	959	
Exports.....do.	222	156	184	183	218	240	116	187	165	229	257	333	
MOTOR VEHICLES													
Factory sales, total.....number	379,192	349,409	420,269	436,001	394,175	469,957	405,663	383,002	492,034	438,090	338,538	431,046	474,556
Coaches, total.....do.	1,806	1,765	1,607	1,667	1,416	1,449	1,382	1,101	1,430	1,056	1,288	1,068	1,012
Domestic.....do.	1,694	1,570	1,412	1,527	1,141	1,087	1,080	763	1,217	910	1,168	892	947
Passenger cars, total.....do.	279,631	261,158	307,942	315,969	305,148	366,939	305,081	274,847	349,998	308,071	225,461	312,406	356,764
Domestic.....do.	257,881	240,358	285,590	295,099	284,730	344,110	285,373	256,753	327,198	288,356	209,591	293,582	334,736
Trucks, total.....do.	97,755	86,486	110,720	118,365	87,611	101,569	99,200	107,054	140,606	128,963	111,789	117,572	116,780
Domestic.....do.	78,444	66,382	89,724	94,307	71,161	85,971	83,893	88,889	118,572	111,911	96,909	101,755	98,249
Exports, total.....do.	40,652	50,273	42,157	47,599	39,522	39,007	33,643	30,366	40,071	44,854	34,180	29,514	
Passenger cars.....do.	24,068	24,317	21,839	22,345	20,480	21,362	19,458	16,422	20,493	22,570	16,477	14,988	
Trucks.....do.	16,584	25,956	20,318	25,254	19,087	17,645	14,185	13,944	19,578	22,284	17,703	14,526	
Truck trailers, production, total.....do.	2,994	3,110	3,158	3,962	3,241	3,287	3,373	3,454	4,137	4,116	3,688	4,047	3,429
Complete trailers.....do.	2,820	2,894	2,944	3,451	2,988	3,121	3,196	3,239	3,878	3,898	3,541	3,901	3,232
Vans.....do.	1,354	1,226	1,269	1,587	1,406	1,530	1,548	1,688	2,094	2,081	1,876	2,144	1,657
All other.....do.	1,466	1,668	1,675	1,864	1,582	1,591	1,648	1,551	1,784	1,817	1,665	1,757	1,575
Chassis shipped as such.....do.	174	216	214	511	253	166	177	215	259	218	147	146	197
Registrations:													
New passenger cars.....do.	263,167	264,866	251,655	281,428	258,934	312,263	274,978	249,781	311,650	330,555	255,638	246,926	
New commercial cars.....do.	71,647	75,912	69,899	87,167	73,737	67,690	69,486	74,326	94,806	108,168	100,614	87,324	
RAILWAY EQUIPMENT													
American Railway Car Institute:													
Shipments:													
Freight cars, total.....number	6,399	6,085	7,826	8,523	9,013	10,091	9,254	8,502	9,321	9,367	9,712	10,476	
Equipment manufacturers, total.....do.	5,366	4,410	5,749	6,401	6,964	7,914	6,866	6,345	6,959	7,041	7,171	7,826	
Domestic.....do.	4,846	4,346	5,668	6,242	6,889	7,661	6,561	6,306	6,940	6,726	6,651	7,731	
Railroad shops, domestic.....do.	1,033	1,675	2,077	2,122	2,049	2,177	2,388	2,157	2,362	2,326	2,541	2,650	
Passenger cars, total*.....do.	114	24	32	76	107	85	83	74	94	121	64	46	
Equipment manufacturers, total.....do.	53	20	29	74	69	71	57	54	74	107	64	46	
Domestic.....do.	45	20	29	74	55	71	57	54	74	67	60	46	
Railroad shops, domestic*.....do.	61	4	3	2	38	14	26	20	20	14	0	0	
Association of American Railroads:													
Freight cars, end of month:													
Number owned.....thousands	1,732	1,730	1,730	1,725	1,728	1,731	1,735	1,738	1,740	1,743	1,744	1,747	1,747
Undergoing or awaiting classified repairs.....thousands	81	81	78	72	73	72	76	79	80	83	86	84	85
Percent of total on line.....do.	4.9	4.9	4.7	4.3	4.4	4.3	4.5	4.7	4.8	4.9	5.1	5.0	5.0
Orders, unfilled.....number	94,232	97,392	97,645	103,086	104,788	99,216	101,662	103,061	105,120	109,567	103,786	103,565	102,389
Equipment manufacturers.....do.	70,578	71,826	73,416	76,713	78,857	74,635	74,008	75,482	80,772	86,947	81,067	79,866	75,226
Railroad shops.....do.	23,654	25,566	24,229	26,373	25,931	24,581	27,654	27,579	24,348	22,620	22,719	23,699	27,169
Locomotives, end of month:													
Steam, undergoing or awaiting classified repairs.....number	2,778	2,709	2,706	2,646	2,612	2,483	2,581	2,702	2,873	2,879	2,887	2,803	2,774
Percent of total on line.....do.	7.8	7.6	7.6	7.5	7.5	7.1	7.4	7.8	8.3	8.4	8.5	8.3	8.2
Orders unfilled:													
Steam locomotives, total.....number	29	40	46	45	33	30	96	108	119	117	111	123	119
Equipment manufacturers.....do.	29	40	36	35	23	20	76	89	89	89	86	101	99
Railroad shops.....do.	0	0	10	10	10	10	20	19	30	28	25	22	20
Other locomotives, total.....do.	786	811	795	922	1,147	1,196	1,417	1,488	1,431	1,455	1,485	1,572	1,509
Equipment manufacturers.....do.	785	810	794	921	1,146	1,195	1,416	1,487	1,431	1,454	1,485	1,572	1,509
Railroad shops.....do.	1	1	1	1	1	1	1	1	0	1	0	0	0
Exports of locomotives, total.....do.	133	98	62	78	110	87	150	71	153	133	135	109	
Steam.....do.	57	9	17	18	36	20	67	12	30	28	33	28	
Other.....do.	76	89	45	60	74	67	83	59	123	105	97	81	
INDUSTRIAL ELECTRIC TRUCKS AND TRACTORS													
Shipments, total.....number	305	365	352	375	337	394	316	358	338	337	331	292	259
Domestic.....do.	271	339	262	303	273	317	270	258	288	318	286	243	230
Export.....do.	34	26	90	72	64	77	46	100	50	19	45	49	29

*Revised. †Data for January-June 1947: Total, 7,708; 8,084; 9,260; 9,507; 7,207; 6,540; railroad shops, 717; 509; 444; 634; 798; 1,297.

1 Quotations for 7-7½ oz. flannel discontinued; data are estimated from changes indicated by U. S. Department of Labor index of prices of 8-8½ oz. flannel.

*New series. Data for total passenger car shipments and shipments by railroad shops for January-June 1947 are as follows: Total—Jan., 65; Feb., 87; Mar., 74; Apr., 90; May, 63; June, 70; railroad shops—Jan., 7; Feb., 18; Mar., 21; Apr., 17; May, 3; June, 3. Production of passenger cars by railroad shops was insignificant prior to 1947; the small number delivered in 1942-46 is given in note 2 for p. 180 in the 1947 Supplement to the Survey.

†Revised series. See note on woolen and worsted apparel fabrics in the May 1948 Survey or in the 1947 Supplement to the Survey for explanation of changes in the classifications in the second quarter of 1947. A further change was made in the last quarter of 1947. Beginning that quarter the unclassified item consists entirely of fabrics containing 25 percent or more wool reported by cotton and rayon weavers, and all apparel fabrics produced by woolen and worsted manufacturers are distributed to the separate classifications for men's and boys' and women's and children's fabrics; for the second and third quarters of 1947, the unclassified item includes also 3,340,000 and 1,489,000 linear yards, respectively, which were reported by woolen and worsted manufacturers as "all other apparel fabrics." Apparel fabrics produced for Government orders were combined with other production prior to 1947. Blankets produced for Government orders are not available separately.

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