

Monthly Review



TWELFTH FEDERAL RESERVE DISTRICT

FEDERAL RESERVE BANK OF SAN FRANCISCO

August 1958

100 Years of Canning	114
Pacific Coast Waterborne Foreign Trade, 1953-56	118
Twelfth District Steel Production— a New Index	126

100 Years of Canning

THIS year the canning industry in California celebrates its 100th anniversary. At ceremonies commemorating the occasion, industry leaders have pointed out the important role of canning in the economy of the state and as a part of the national industry. Fruit and vegetable canning is the major component of the state's second largest industry, food processing.¹ It is important as an employer and as a customer of other industries such as steel (tinplate) and transportation. It is also one of the biggest customers of farmers who grow fruits and vegetables, some of whom have entered the processing business themselves.

The industry was born in 1858 when Francis Cutting, a pioneer Californian, established the first cannery in the western states on a San Francisco street near the present location of the Federal Reserve Bank. The first canned foods were sold in local markets, but with the coming of the transcontinental railroad the market became nationwide. Volume grew, and by 1915 California produced more canned food than any other state, a position it continues to hold. California canners annually put up about 80 percent of the Twelfth District's canned fruits and vegetables; the District, in turn, produces about two-thirds of the nation's canned fruit and over 40 percent of its canned vegetables. In addition, most of the nation's frozen fruits and vegetables are produced in this district.

Growing and processing are closely allied

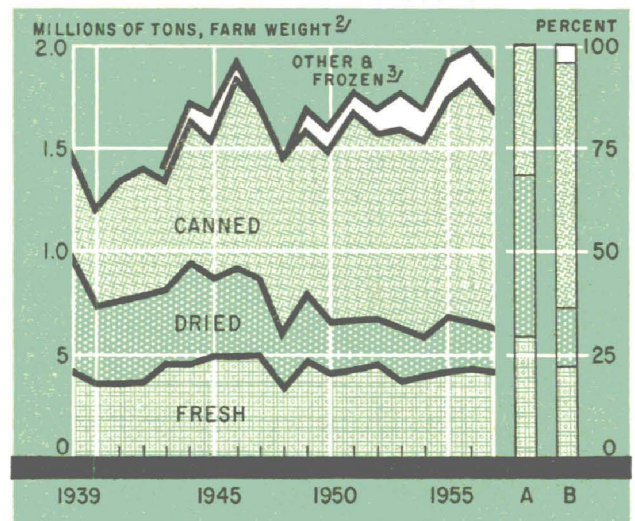
One hundred years is a long time in the life of any industry, especially in the West, and many changes have occurred in that time. For example, today's automatic assembly

¹ According to the 1954 *Census of Manufactures*, value added by manufacturing in the "food and kindred products" industry was \$1.4 billion in that year, second only to transportation equipment, with a value added of \$2.2 billion. The largest segment was "fruit and vegetable canning," contributing \$235.4 million. Frozen fruits and vegetables added another \$36 million. By the same measure, food processing is the second largest industry in the Twelfth District as a whole.

lines are far removed from the days when lines of workers filled handmade tin cans individually. Companies have become fewer and larger. In this centennial year it is of interest to note one of the most important developments in the industry, that of integration between processors and growers. Integration has a long tradition in canning, although it is a relatively new phenomenon to other enterprises dependent on farming (e.g., the broiler industry).

Nearly all fruits and vegetables sold to processors in this district are sold under contract. Independent growers or growers' associations bargain over tonnage, acreage, and price with canners or canners' associations. Horizontal integration of growers into bargaining associations is one of the oldest types of integration in the industry, although these organizations control only part of each crop for processing. Vertical integration also has

CHART 1
CALIFORNIA GROWERS SALES OF
DECIDUOUS FRUIT - 1939-57^{1/}



Note: A, 1939; B, 1957.

¹ Includes the major deciduous tree fruits: apples, apricots, cherries, figs, cling peaches, freestone peaches, Bartlett pears, other pears, and plums.

² Apples converted from bushels to tons on the basis of 48 pounds per bushel.

³ Strawberries are not a deciduous tree fruit, but are included to show their importance. In recent years, strawberries have accounted for three-fourths of the frozen fruit pack.

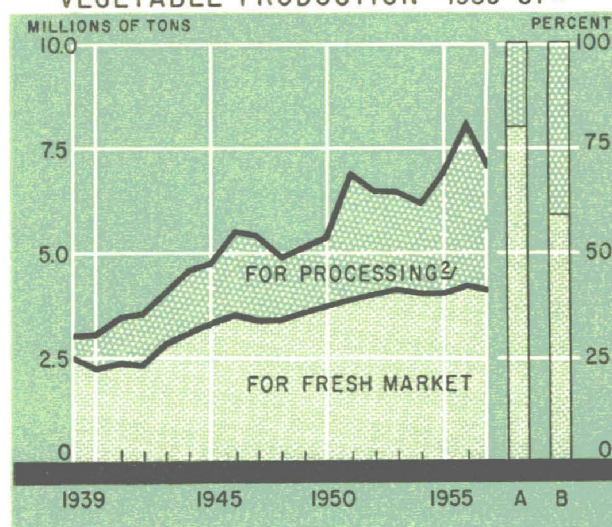
Source: California Crop and Livestock Reporting Service and United States Department of Agriculture, *California Fruit and Nut Crops, 1909-1955*. United States Department of Agriculture, *Fruits, Noncitrus, by States*, annual. (These data are not available on an historical basis for all District states.)

a long history in the canning industry. In some cases canners finance growers, and may even provide seed, technical supervision, and actually harvest the crop. Vertical integration also extends to single ownership of growing and processing facilities. There are canners who grow part of their own produce, and some growers who operate their own canneries. Each of these functional mergings appears to be on the upswing. It has always been customary among some canners to grow a portion of their own raw product requirements, but for economic reasons they have preferred to purchase most of it. Expanding cannery-owned acreage in recent years indicates that they are modifying this policy. Grower-owned cooperative canneries have been in existence for some time and the movement has achieved new prominence in 1958. This year a new cooperative was formed by growers' associations representing every major canning crop in California. It acquired two of the leading independent canneries, and is now the state's fourth largest canning enterprise. Other cooperatives have since taken steps to enlarge their facilities also.

Increased interest in integration can be partially explained by the fact that the rise of the modern supermarket chain has revolutionized the retail food business, leaving canners with fewer and fewer buyers for their products. Price uncertainty has increased in this situation, and grower-processor integration offers the possibility of reallocating risks, greater product uniformity, more orderly and efficient marketing, as well as more control over production. Whatever the reasons, and whatever the implications for the canning industry, this trend shows every sign of becoming even more important in the future. Here is a large area where the distinction between what is agriculture and what is industry grows increasingly less meaningful.

Aside from the impact of integration on growers' activities, the processing industry is also a market which is of prime importance

CHART 2
TWELFTH DISTRICT
VEGETABLE PRODUCTION - 1939-57^{1/2}



Note: A, 1939; B, 1957.

¹ Includes principal vegetables grown for fresh market and for processing, which account for over 90 percent of total vegetable production.

² Includes vegetables grown for canning and freezing.

Source: United States Department of Agriculture, *Commercial Vegetables for Fresh Market*, Statistical Bulletin nos. 126, 212, and annual issues; *Commercial Vegetables for Processing*, Statistical Bulletin nos. 132, 210, and annual issues.

to California fruit growers, and which is also absorbing a rising share of vegetable production in the District. Freezing, as well as canning, is on the increase. The accompanying charts show that fruit production has increased very little over the past two decades, but the share sold to canners has doubled at the expense of other outlets. Processing also has been gaining in importance as an outlet for vegetables. Although District vegetable producers still send the major portion of their produce to fresh market, most of the increased output has been channeled into processing.

District production follows changing consumption patterns

The western canning area, particularly California, is expanding its dominant position in the industry. This is, in part, because its production patterns fit in with changes in fruit and vegetable consumption. The whole industry is benefiting from a long-run shift in food consumption patterns — the trend toward greater use per person of canned and frozen fruits and vegetables, including citrus juice—

while fresh and dried forms have lost favor. (Table 1) The most dynamic factor is the increase in per capita consumption of vegetables in canned and particularly in frozen form. Perhaps even more striking is the fact that over one-third of the per capita increase in canned vegetable consumption between 1939 and 1956 was accounted for by tomatoes and tomato products. And California has grown and canned about 90 percent of the additional tomatoes involved. Largely because of this single crop, the District canning industry has grown faster than the industry as a whole. In 1939, this area grew 19 percent of the vegetables for processing; by 1957 our share was 44 percent. Productivity is higher here than elsewhere; as output rose 3½ times while acreage under cultivation rose only 1½ times, and the District's share of total acreage rose from 17 to only 28 percent. Changes in the utilization of deciduous fruit crops also follow the trend to consumption in processed, rather than other forms. This is true in the Pacific Northwest states as well as in California. Citrus fruits, too, are being processed in greater proportions. Between

TABLE 1

CHANGES IN PER CAPITA CONSUMPTION OF FRUITS AND VEGETABLES UNITED STATES, 1939-56

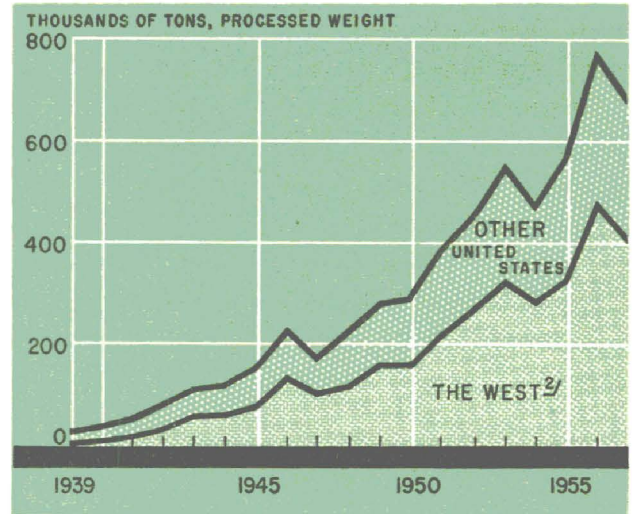
Fruits	1939 (pounds)	1956 (pounds)	Percent change
Canned	16.1	21.6	+ 34
Frozen	1.1	4.0	+ 264
Fresh	151.6	99.5	- 34
Dried	6.4	3.6	- 44
Total	165.2	128.7	- 22
Fruit Juice			
Canned, noncitrus	2.9	6.0	+ 107
Canned, citrus	3.0	7.0	+ 133
Frozen, citrus	0.0	4.9	
Total	5.9	17.9	+ 203
Vegetables			
Canned	31.1	43.9	+ 41
Frozen	0.5	7.2	+ 1340
Fresh ¹	116.6	104.0	- 11
Total	148.2	155.1	+ 5

¹ Excludes melons.

Source: United States Department of Agriculture, Agricultural Marketing Service, Supplement for 1956 to *Consumption of Food in the United States*, Agricultural Handbook No. 62, Washington, D. C., September 1957.

CHART 3

FROZEN VEGETABLE PACK - 1939-57¹



¹ West includes small amount packed in states outside the Twelfth District.

Source: *Western Canner and Packer*, May 1957 and 1958.

one-fourth and one-third of California's orange, grapefruit, and lemon crops are currently processed, whereas the proportion of oranges and grapefruit marketed in this form two decades ago was less than 10 percent.¹

Frozen fruits and vegetables: it's the future that counts

Although deciduous fruits and vegetables are frozen in small amounts, this operation is rapidly increasing. Frozen fruits and vegetables began to appear in 1939, but most of the growth has occurred since 1950. Some established canners have freezing operations, and many small new processors have entered the field. For several years production fluctuated erratically, and the past two years have been characterized by heavy supplies and depressed prices. The growth of marketing is inhibited at present by the limited freezer space available in retail stores and homes. Large scale consumption of frozen fruits and vegetables, as well as of other frozen foods, awaits expanded storage facilities.

This type of processing centers in the Pacific Coast states. Over 60 percent of the

¹ Citrus crop reports do not indicate the percentage utilized for canning and freezing. However, pack statistics indicate that freezing takes most of the California citrus for processing. See *Western Canner and Packer*, May 1958.

United States' frozen fruit and vegetable supply is currently produced in this region. However, as Charts 1 and 3 show, the volume is small in relation to other forms in which these foods are utilized. In the District, freezing claims only about 6 percent of vegetables grown for processing and a negligible quantity of deciduous tree fruit. Among other fruits, about two-thirds of the western strawberry crop reaches consumers in frozen form, and this represents most of the national supply. However, the West is a less important producer of frozen citrus juices, supplying less than one-fifth of the total.

1957-58 season: inventories pruned slightly

Expansion in food processing has not taken place at an even pace. During the past two years, canners and freezers as a group have found themselves in possession of more inventories than were desirable from the viewpoint of prices and profits.

Fruit and vegetable canners carried large inventories when the 1957 marketing season began in June. The presence of bulging warehouses had a depressing effect on prices and earnings prospects. Poor weather helped industry efforts to reduce the 1957 pack; but when added to inventories, supplies were only fractionally below those of the previous year. (Table 2) However, a high level of demand helped canners whittle these down to more comfortable levels by the end of the season. Consumer demand has stayed high, despite the recession, and has probably been strengthened as a result of wintertime shortages and high prices for fresh produce caused by crop failures in the East. Also, reductions in the eastern canned tomato pack benefited California shippers. Price cuts for several fruits contributed to a stepped-up sales pace. By June 1958, sales had increased 4 percent (excluding Pacific Northwest vegetables, for which data are not available) over the previous year, warehouse stocks were down, and prices of

TABLE 2
SUPPLY AND DISTRIBUTION OF
PRINCIPAL PACKS 1956-57 AND
1957-58 SEASONS

	(millions of cases ¹)		Total
	FRUITS ² 12th District	VEGETABLES ³ California	
1956-57			
Beginning Inventories	7.8	7.7	15.5
Pack	55.2	72.3	127.5
Supply	63.0	80.0	143.0
Movement	49.7	61.0	110.7
1957-58			
Beginning Inventories	13.3	19.0	32.4
Pack	49.1	59.3	108.3
Supply	62.4	78.3	140.7
Movement	52.6	62.4	115.0
1958-59			
Beginning Inventories	9.8	14.9	24.7

¹Vegetables are in terms of actual cases; fruits in terms of 24 No. 2½ cans per case.

²Fruits include California and Pacific Northwest packs of peaches, fruit cocktail, fruits for salad, mixed fruits, pears, apricots, purple plums, sweet cherries, and figs. These usually account for 90 percent of the total deciduous fruit pack.

³Vegetables include California packs of asparagus, spinach, tomatoes and tomato products. These usually account for over two-thirds of total District vegetable pack. Inventory data are not available for the Pacific Northwest. Marketing season for the industry is considered the period June-June. However, inventories for asparagus and spinach are as of March 1; tomatoes as of July 1.

Note: Details may not add to totals because of rounding.

Source: Canners League of California; Northwest Canners and Freezers Association.

many fruit items had begun to spring back from what were for some the lowest levels in several years. Freezers also had lighter inventories of vegetables by the end of the season, although large supplies of strawberries brought frozen fruit stocks up.

1958-59 pack: some ups, some downs

At the time of this writing indications are that total supplies of canned fruits and vegetables in the District will be at least as large as in the 1957-58 season. Canners' beginning inventories are slightly smaller; acreage planted to processing vegetables totals 4 percent less than last year; and production of several fruits will be reduced because of poor weather earlier in the season. On the other hand, steel industry spokesmen reportedly expect western canners to consume 5 percent more tinplate than last year. The two biggest District packs—cling peaches and tomatoes

—are expected to be larger, although they may fall short of the 1956 record. Large peach and tomato crops are expected elsewhere, too. This might be interpreted as a renewal of the heavy inventory problem, but there is a mitigating factor in anticipated reductions in supplies of most other products.

The District outlook for deciduous fruit packs includes increases in peaches, both clingstone and freestone varieties, but decreases in apricots, cherries, pears, and plums. The latest estimate of the Cling Peach Advisory Board is that enough tonnage will be canned from the 12 percent larger crop this year to yield a pack in excess of 20 million cases, close to the record 21.3 million packed in 1956, and substantially above last year's 18.5 million cases. When added to this year's reduced inventories, cling peach supplies should be about the same as last year. The bigger crop may also mean increases in other packs using large amounts of peaches, such as fruit cocktail.

Large tomato crops will probably provide the biggest boost to canned food packs this year. District acreage planted is estimated at 152,000 acres, compared with 136,000 last year. Tomato plantings in the rest of the United States are up in the same ratio, 12 per-

cent. If good weather continues, and yields are the same as in recent years, tonnage available for canning should be second only to that of 1956. But packs of most other vegetables will be reduced, including the important pea pack. Frozen peas and other frozen vegetables are also expected to be curtailed in volume. With stocks of frozen vegetables smaller than last year, supplies should be lighter this year.

In view of these changes, some trade and Government analysts report expectations of a general price improvement in most canned fruits and vegetables in 1958. However, the prospect of an enlarged tomato pack, added to the substantial carryover from last year, leads observers to expect lower prices for some tomato products.

As in past years, the level of canners' costs continued upward last year and again in 1958, with increases in the price of tinplate, labor costs, and other materials pressing on profit margins. Raw materials costs for the current season were higher for fruits in short supply, and changed little for other crops. Reported earnings of processors have been low this year. In view of increased costs, improved profits may depend upon price increases in the coming months.

Pacific Coast Waterborne Foreign Trade, 1953-56¹

FROM 1953 to 1956 foreign trade was conducted under worldwide boom conditions, and was governed more by commercial considerations than by the exigencies of war and the emergency requirements of the immediate

postwar period. The pressing problems of reconstruction, recovery, and rehabilitation of the early postwar period had been resolved and the distorting effects of the Korean War virtually dissipated. This period also witnessed some significant changes in Pacific Coast waterborne foreign trade, as shown by statistics obtained from the United States Bureau of the Census. Examination of these detailed

¹ This article attempts to give only the broad general outlines of developments in Pacific Coast waterborne foreign trade from 1953 to 1956, without going into a detailed examination of the factors responsible for the changes. A succeeding article will discuss more fully the factors underlying the year-to-year changes in Pacific Coast foreign trade.

records of Pacific Coast waterborne trade, nowhere else available, may also be of some use in assessing future developments although, like most detailed figures, they are out-of-date when they finally become available.¹

The importance of exports has occasionally been played down because they constitute only 4 to 5 percent of United States gross national product. Total current export values, however, are as large as or larger than other economic indicators considered highly significant, such as the value of nonfarm residential construction. Entirely apart from its dollar volume, foreign trade makes a contribution to the economy by facilitating the most efficient use of resources. By providing additional markets, exports help producers realize the economies of specialization and large-scale production. They provide, moreover, needed foreign exchange for imports.

It is difficult to compare the relative importance of exports in the Twelfth District and in the United States because there are no income accounts for the District similar to gross national product statistics. But a rough estimate was made of the total output of goods and services in the District by using

¹This bank has been compiling statistics on Pacific Coast waterborne foreign trade since 1953, on the basis of records furnished by the Bureau of the Census of the United States Department of Commerce. At the present time, data for 1953-56 have been assembled showing the commodity composition and country distribution of exports and imports; statistics for 1957 are not yet available.

In using these Pacific Coast waterborne trade statistics, some limitations in their coverage should be kept in mind. The figures cover only vessel shipments in and out of West Coast customs districts; movements by air and land are excluded. This omission affects primarily the customs districts of San Diego and Washington, which carry on a significant portion of their foreign trade with Mexico and Canada, respectively, by these other forms of transportation. As a result, the waterborne trade value figures in 1953-56 accounted for slightly more than four-fifths of total recorded foreign trade movements of the Pacific Coast customs districts by all methods of transportation. The Census Bureau does not have a detailed regional breakdown of trade by all methods of transportation. In addition, there is no indication in the export data of where the exported commodities originated—inside or outside the Pacific Coast customs district area—or of the final destination of imported merchandise. Some commodities produced in the Twelfth District are transhipped to other United States ports for shipment abroad and thus are not credited to the Pacific Coast customs districts. Similarly, merchandise from other parts of the United States often passes through Pacific Coast ports on its way to foreign markets and appears in the waterborne trade statistics as Pacific Coast exports. The waterborne import data are much the same. Imports unladen at Pacific Coast ports do not necessarily remain in the District, while the Pacific Coast states may be the final destination of commodities imported through ports located elsewhere in the United States. Nevertheless, a significant proportion of the Pacific Coast's foreign trade transactions is probably represented in the waterborne trade statistics used in this article.

personal income data. On this basis, the ratio of waterborne exports to total output of goods and services averaged around 4.25 percent for the United States in 1953-56, and about 2.2 percent for the District. Exports by ship, therefore, are generally more important to the nation than to this area. But the Pacific Coast has been increasing its share of United States vessel export value since World War II. Pacific Coast export value has risen faster than that of the United States, with the result that the Pacific Coast's share improved from 7.7 percent in 1946 to 12.4 percent in 1957.

Exports of producers' supplies and materials and capital equipment are the two major economic categories (Table 1) that are most directly responsive to changes in the level of industrial production abroad. As industrial activity abroad rises, foreign demand for United States industrial materials and capital equipment increases, but usually only after

TABLE 1
PACIFIC COAST WATERBORNE EXPORTS
BY MAJOR END-USE ECONOMIC
CATEGORIES, 1953-56

(In millions of dollars)

	1953	1954	1955	1956
Producers' supplies and materials	\$400.8	\$ 568.5	\$ 549.9	\$ 672.9
Agricultural	125.6	246.2	165.8	195.6
Nonagricultural	275.2	322.3	384.1	477.3
Capital equipment	129.2	111.8	125.3	144.8
Food and drugs	365.8	317.2	390.4	520.7
Agricultural	355.5	309.1	382.8	513.2
Nonagricultural	10.3	8.1	7.6	7.5
Finished consumer goods	28.7	40.3	28.8	39.6
Total	\$924.5	\$1,037.8	\$1,094.4	\$1,378.1

Note: Because the commodity classifications used by the Census Bureau for their shipping statistics do not follow functional lines, new tabulations of the data were made. The commodity statistics were reclassified into the major end-use economic categories employed in the January 1958 *Survey of Current Business* article on United States foreign trade. Again, since the Census statistics on Pacific Coast waterborne foreign trade did not provide the same amount of commodity detail as figures for the United States as a whole, some of the broader commodity groupings in the Pacific Coast data were arbitrarily assigned to one or the other of the major categories. In addition, parts of the export and import shipments were collected on a sample basis only from 1954 to 1956; these estimates are not included in the Pacific Coast figures. The percentage distributions by economic categories and trade areas for the United States and the Pacific Coast are not strictly comparable, moreover, since the Pacific Coast data include only vessel shipments, while the United States data cover all shipments of domestic merchandise.

Source: United States Department of Commerce, Bureau of the Census.

the upswing in production has been under way for some time and domestic and neighboring sources of supply are exhausted. Because of the dominance of producers' supplies and capital equipment in Pacific Coast and United States exports (they constituted three-fourths of United States export value and three-fifths of the Pacific Coast total in 1953-56), total exports reveal a strong tendency to parallel movements in industrial production abroad.

The rise in exports of producers' supplies and materials between 1953 and 1956 was particularly noteworthy. Pacific Coast exports in this category increased 68 percent or \$272 million, three-fifths of the over-all gain in export value. Its share of District exports rose from 43 percent in 1953 to 49 percent in 1956. The rise in United States exports of industrial materials was somewhat smaller, 54 percent or \$2,563 million, and comprised half of the total increase in exports. Nonagricultural producers' materials, such as lumber and wood products, iron and steel products, copper, and chemicals, were among the Pacific Coast exports recording the largest percentage gains. Iron and steel scrap exports alone jumped from \$1.5 million in 1953 to \$53 million in 1956. With the exception of exports of gas oil and distillate fuel oil, exports of other petroleum products fell sharply as the District became a net importer of petroleum. Cotton continued to rank as the principal agricultural producers' material export although shipments from the Pacific Coast of raw hides and inedible animal fats also rose.

Because producers of industrial materials are scattered throughout the United States, not all sections of the nation were equally affected by the upsurge of exports in this category. In the Twelfth District, for example, cotton producers, fabricators of iron and steel products, the chemical industry, and the lumber, paper, and pulp industry profited from the increase in exports of producers' materials. Outside the District, exports sustained or helped to expand output in additional in-

dustries such as coal mining, synthetic rubber, synthetic fibers and cloth, and plastics and related chemicals.

The increase in Pacific Coast exports of capital equipment from 1953 to 1956 was smaller than the rise in United States exports in this group—12 percent compared to 32 percent. Capital equipment exports, moreover, were only about 11 percent of District export value during this period, while they accounted for almost one-third of the nation's total. (Chart 1) General electrical machinery and apparatus and construction and mining machinery were among the District's outstanding exports in this category. Other types of industrial machinery and parts exports grew substantially, but exports of vehicles and parts fell.

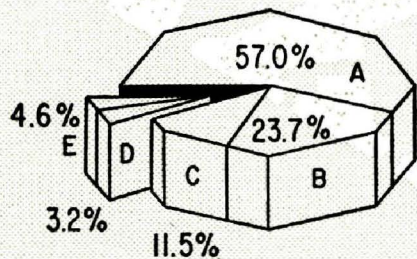
Food and drug exports

Shipments of food and drugs to foreign countries are dependent less on the level of industrial production abroad than on other factors such as the level of income, population growth, crop conditions, the balance of payments situation of individual countries, and the presence or absence of special intergovernmental programs. As a result, the composition of our food and drug exports shifted from year to year, mainly in response to short-run developments.

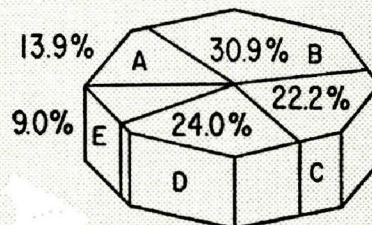
Exports of food and drugs accounted for a larger percentage of the Twelfth District's export value in 1953-56 than of the United States'—36 percent as opposed to 16 percent. United States food exports, however, rose 46 percent during this period while District exports rose 42 percent. The increase in Pacific Coast food exports constituted the second largest dollar increase of any category, although food declined in relative importance. The principal commodities responsible for the \$155 million rise in Pacific Coast shipments between 1953 and 1956 were barley, evaporated milk, fruits, wheat, and wheat flour. Corn, nuts and preparations, edible

WATERBORNE FOREIGN TRADE, 1956

PACIFIC COAST

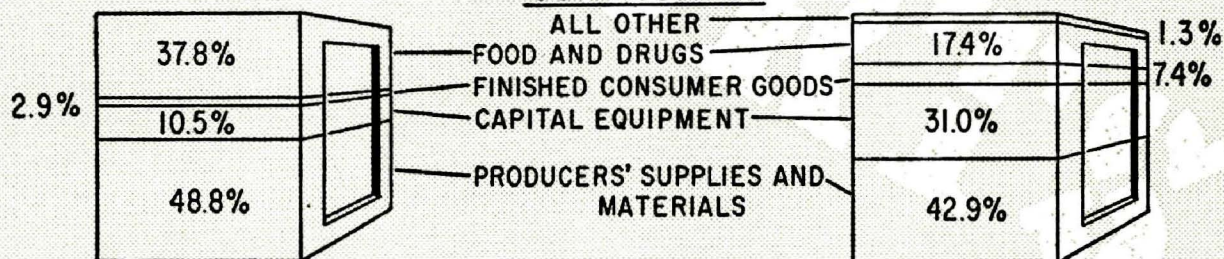


UNITED STATES

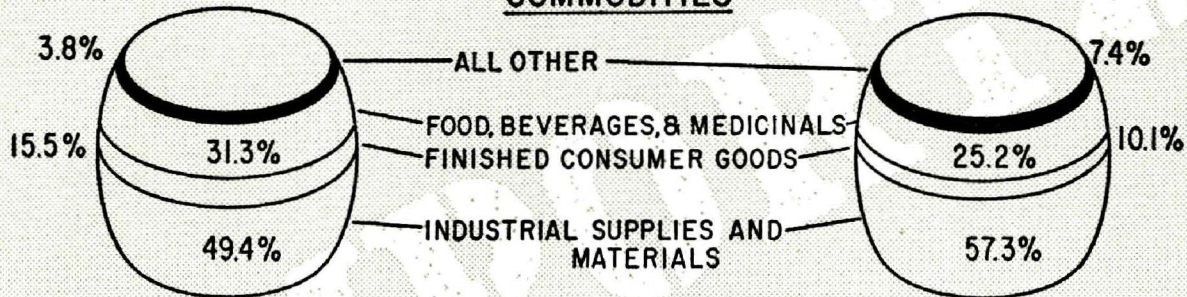


AREAS

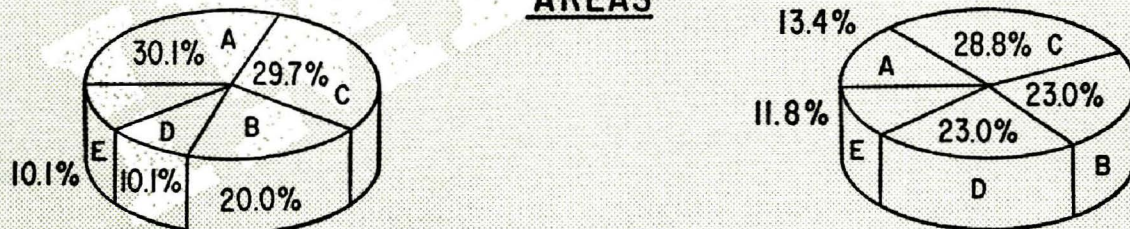
COMMODITIES



COMMODITIES



AREAS



Note: A Asia B Western Europe C Latin America D Canada E All other

vegetable oils and fats, and dried milk and solids also registered substantial gains.

Export markets are important to District farmers. Especially in recent years since the inauguration of intergovernmental agreements, exports have been instrumental in reducing existing surplus stocks at home and in slowing down accumulation from current production. Cotton exported through Pacific Coast customs districts disposed of 20 percent of the District's output in 1953, 50 percent in 1954, and 35 percent in 1955 and 1956. These figures do not include District cotton sent overseas from other United States ports. Wheat exports from Pacific Coast ports averaged one-fifth of the value of total wheat sales of District states plus Montana in 1953-55; the ratio rose to 48 percent in 1956 when the Public Law 480 program (agricultural surplus disposal) was most active. California rice exports accounted for 43 to 59 percent of the state's total rice sales in 1953-55, while 40 percent of the District's barley was shipped overseas in 1955-56. Slightly more than 10 percent of the District's total fruit sales was made to foreigners (excluding rail and truck movements from the Washington customs district to Canada), while 25 percent of the dried fruit, and 15 percent of marketings of dry edible beans and dry field peas were sent abroad. The contribution of exports to Twelfth District agriculture is significant, but this is counterbalanced to some extent by the unstable nature of much of the demand.

Exports of finished consumer goods, which are largely determined by income levels abroad and foreign exchange availabilities, constituted only about 3 percent of Pacific Coast exports in 1953-56. Their share of total exports declined over this period because of the more rapid rise in other export categories.

Trade area distribution of the District's export trade

The relative importance of the various commodity categories in the export totals is

a reflection of the trade area pattern of the District's export trade. Despite a fairly close correspondence between the general direction of total United States and Pacific Coast exports, however, there are some marked differences in the distribution of their exports by foreign trade areas. (Chart 1)

Shipments to Asian countries averaged more than half of Pacific Coast total export value in 1953-56. (Table 2) In 1956, more than 50 percent of the exports of producers' supplies, capital equipment, and food were destined for Asian markets and almost three-fourths of the finished consumer goods. Exports of industrial materials to Asia doubled in value from 1953 to 1956 and were responsible for four-fifths of the gain in exports to this area. Commodities showing the largest increases were iron and steel scrap, raw cotton, refined copper in crude forms, and chemical specialties. Japan and the Philippine Republic were the two leading District export markets in Asia, with exports to Japan increasing by 50 percent in line with its rapid strides in industrial production.

Western European countries comprised the second largest outlet for Pacific Coast exports, accounting in 1956 for more than one-fifth of total District exports, one-fifth of industrial

TABLE 2
PACIFIC COAST WATERBORNE EXPORTS
BY TRADE AREA, 1953-56

	(In millions of dollars)			
	1953	1954	1955	1956
Canada	\$ 75.2	\$ 46.5	\$ 41.6	\$ 44.6
Latin America	108.8	122.8	143.5	158.5
Other Western Hemisphere	4.3	4.8	9.0	4.3
Western Europe	176.5	264.2	267.8	326.1
Other Europe	*	0.1	0.8	0.4
Near East	10.6	7.2	8.9	11.8
Asia	504.4	543.2	566.1	786.0
Oceania	21.1	31.1	37.6	31.2
Africa	23.6	17.9	19.1	15.2
Total	\$924.5	\$1,037.8	\$1,094.4	\$1,378.1

*Less than \$50,000.

Source: United States Department of Commerce, Bureau of the Census.

materials exports, and one-third of food exports. Their share of total exports rose from 20 to 24 percent, mostly because of a three-fold increase in food shipments. Almost half the gain in food consisted of fruits, vegetables, and nuts, in contrast to the grains and staple commodities shipped to Asia. The composition of the increase testifies to the strengthening in the dollar positions of European countries during this period. Exports of District industrial materials to Europe, on the other hand, did not rise as fast as exports of these products to Asia.

The western hemisphere countries (mainly Latin America and Canada) were only third and fourth, respectively, among District markets, while they ranked near the top as United States customers. This is due to the fact that these two areas are large purchasers of capital equipment, and capital equipment exports are less important to the District than to the nation. Latin American countries averaged 12.5 percent of the District's total export value in 1953-56, and Canada, 5 percent. Exports to Latin America rose by almost half from 1953 to 1956, with the largest rise occurring in nonagricultural industrial materials. Cuba, Mexico, Chile, Venezuela, Colombia, and Brazil were numbered among the leading destinations. Mexico registered the greatest gain—from \$11 million to \$30 million—as industrialization proceeded in a stable political situation. Exports to Canada declined mainly because of a drop in petroleum shipments.

Pacific Coast Imports

The value of Pacific Coast waterborne imports, like that of exports, rose faster than United States import value from 1953 to 1956. As a result, the District's share of the national total rose from 9.2 percent in 1953 to 11.2 percent in 1956. The level of economic activity in the United States is the most influential factor affecting the behavior of imports. But the correlation between industrial production and imports is not always precise

because of the intrusion of other factors such as Government stockpiling programs, changes in private inventory practices and in commercial trade policies. Food imports, moreover, are characteristically insensitive to short-run changes in the domestic economic scene. Nevertheless, both United States and Pacific Coast imports tend to follow the ups and downs of business activity although there are dissimilarities between the import trade patterns of the District and the nation.

Producers' supplies and materials were the most important category dollarwise for both the Pacific Coast and the United States in 1953-56. (Chart 1) Industrial materials imports accounted for an average of 45 percent of District imports and 56 percent of national imports. From 1953 to 1956, however, the District's imports of these commodities rose 52 percent while the increase for the United States was only 20 percent. The principal classes of industrial supplies and materials imported into the Pacific Coast during 1953-56 are listed in Table 3. Imports of petroleum products, largely crude petroleum, recorded the greatest relative gain of the four sub-categories, jumping \$74 million from 1953 to 1956. Imports of industrial supplies and materials used mostly in durable goods production (the "all other" category) were responsible for the second largest expansion in percentage terms and the largest absolute gain. The eight leading commodities in this subgroup¹ constituted more than three-fourths of the import value of durable goods materials in both 1953 and 1956, and accounted for 80 percent of the net increase between the two years. Sizable gains were also made, however, by imports of manganese, other nonferrous metal products, and miscellaneous nonmetallic minerals manufactures. Imports of materials associated with nondurable goods output, on the other hand, declined during the same period. Increased imports of semimanu-

¹ Crude rubber, copra, copper ores, lead ores, rolled and finished steel mill products, box materials and plywood, lumber and shingles, and crude and semi-fabricated tin.

factured and manufactured wool products were insufficient to offset a substantial contraction in imports of miscellaneous inedible animal products, raw wool, and miscellaneous textile products (mostly silk).

Food and beverage imports figured much more prominently in the District than in the nation, accounting for about 38 percent of import value in 1953-56 for the Pacific Coast and 29 percent for the United States. In both cases, the share of food imports in the total fell rather sharply during this period because imports of all other categories except farm production materials rose while the dollar value of food imports declined almost imperceptibly. The failure of food imports to rise over the four years was due primarily to a smaller physical volume of coffee imports, which dominate the over-all movements of the food and beverage category. Gains in imports of other food commodities did not compensate for the \$23 million loss in coffee imports.

The third ranking import category for the Pacific Coast was finished consumer goods, which were relatively more important for the District than for the United States. Their share of total Pacific Coast dollar imports rose steadily from 1953 to 1956 as imports of these commodities increased by 91 percent. Among the major commodity imports in this category, imports of automobiles, trucks, and buses showed a more than three-fold increase. By 1956, these vehicle imports accounted for more than one-third of the Pacific Coast's consumer goods imports.

The remaining import categories were relatively minor items in Pacific Coast trade from 1953 to 1956. Farm equipment imports were the only category other than food to record a dip during these years. The value of capital equipment imports in 1956, on the other hand, was more than two and a half times higher than in 1953. Its share of import value also nearly doubled between the two years, rising from 1.4 percent to 2.7 percent. Im-

ports of general electrical machinery and apparatus advanced by 422 percent to \$9.5 million in 1956, while imports of metalworking machinery and parts, textile, sewing, and shoe machinery, and other types of industrial machinery also contributed to the gain.

TABLE 3
**PACIFIC COAST WATERBORNE IMPORTS
 BY MAJOR ECONOMIC CATEGORIES, 1953-56**
 (In millions of dollars)

	1953	1954	1955	1956
Industrial supplies	\$328.4	\$306.6	\$389.3	\$ 499.1
Petroleum products	51.9	38.3	57.7	126.3
Newsprint and paper base stocks	49.7	48.0	58.6	71.1
Other nondurable goods materials	33.3	26.2	24.9	21.5
All other	193.5	194.1	248.1	280.2
Food and drugs	320.9	309.0	309.3	316.2
Farm equipment and materials	16.0	16.3	13.4	11.2
Consumer goods	87.0	74.0	113.1	156.5
Capital equipment	10.9	10.4	16.5	27.5
Total	\$763.2	\$716.3	\$841.6	\$1,010.5

Source: United States Department of Commerce, Bureau of the Census.

Imports by foreign trade areas of origin

In contrast to the United States pattern, in which each of the major trading areas accounts for approximately the same proportion of both imports and exports, the Pacific Coast's trading partners vary rather markedly in importance depending upon whether imports or exports are under consideration. For the Pacific Coast, Asia is much less important as a source of imports than as an export market, while Latin America and Canada assume greater importance as sellers than as buyers of our products. Only Western Europe's share of our imports is approximately equal to that of our exports.

With the exception of 1956, Latin America was the Pacific Coast's leading supplier of imports in the period 1953-56, averaging 35 percent of import value. (Table 4) In 1956, the shrinkage in coffee imports cut this area's share of imports to 30 percent. Because of coffee, Brazil and Colombia are included

among the top five foreign countries making shipments to District ports. Imports from Colombia in 1956, however, were down \$18 million or 25 percent from 1953. El Salvador, Guatemala, and Nicaragua also shipped less to the West Coast in 1956 than in 1953. Rising imports of crude petroleum, copper ore, and lead ores have been a significant factor in maintaining Latin America's position as an important source of supply. Ore imports boosted Peru's shipments by \$9.5 million or 44 percent above 1953, and Chile's by \$3.8 million or 51 percent. Venezuela moved up to become the District's tenth most important supplier in 1956 as crude petroleum imports contributed to the five-fold increase in shipments to the Pacific Coast.

Asia is the second largest source of Pacific Coast imports. Its share of total import value changed very little from 1953 to 1956, however, despite a 29 percent increase in dollar volume. Larger imports from Japan (which were 90 percent or \$63 million above 1953), Indonesia, and British Malaya were only slightly offset by smaller imports from the Philippines and India. Notable gains were scored in imports of all types of industrial supplies and materials except those for non-durable goods production, food, beverages, and medicinals, finished consumer goods, and

capital equipment. Copra, crude rubber, crude petroleum, and fish products were among the leading commodity imports. Plywood shipments from Japan showed a phenomenal increase, with 1956 imports more than four times the 1953 value.

Western European countries supplied a steadily increasing share of Pacific Coast imports from 1953 to 1956. District imports from Europe rose by 81 percent during this period and Europe's share grew from 14 percent of the total in 1953 to 20 percent by 1956. Imports from the United Kingdom and West Germany expanded by 53 and 283 percent, respectively, and accounted for more than two-thirds of the increase in imports from Western Europe. More than half of the over-all gain in European trade stemmed from increased imports of finished consumer goods, mainly automobiles. Increases in imports of capital equipment, industrial materials for durable goods production (about half of which consisted of steel mill products), food, and newsprint and paper base stocks also occurred.

Pacific Coast imports from Canada rose by almost two-thirds from 1953 to 1956. Consequently, Canada's share of District import value rose from 8.3 percent in 1953 to 10.1 percent in 1956. Most of the \$38 million gain was concentrated in larger imports of petroleum, newsprint, and industrial supplies for durable goods production such as lead and copper ores and aluminum ingots.

Export and import developments, 1953-56

Examination of the Pacific Coast waterborne foreign trade statistics from an over-all viewpoint reveals several points of similarity in developments on the import and export side. Producers' materials and supplies became relatively more important in export and import trade from 1953 to 1956 while food shipments in either direction decreased in importance. Among the other leading com-

TABLE 4

PACIFIC COAST WATERBORNE IMPORTS BY TRADE AREA, 1953-56

(In millions of dollars)

	1953	1954	1955	1956
Canada	\$ 63.5	\$ 69.7	\$ 80.3	\$ 102.4
Latin America	292.5	272.1	281.6	300.5
Other Western Hemisphere	1.7	3.3	8.2	6.5
Western Europe	110.3	109.7	147.9	200.1
Other Europe	2.2	0.1	3.5	7.1
Near East	21.1	6.8	11.1	30.9
Asia	235.5	219.8	266.4	304.1
Oceania	27.5	23.1	30.8	39.4
Africa	8.9	11.7	11.8	19.5
Total	\$763.2	\$716.3	\$841.6	\$1,010.5

Source: United States Department of Commerce, Bureau of the Census.

modity categories, capital equipment exports lost some ground while imports of finished consumer goods increased their share of the total. Western Europe was the fastest growing export market and source of import supplies for the District during this period. Asian countries, on the other hand, accounted for only slightly higher shares of export and im-

port value in 1956 compared to 1953, while trade with Latin American nations rose more slowly than the Pacific Coast average so that their share declined. Exports to Canada showed a sharp drop from 1953 to 1956, but total trade fell by a smaller percentage as imports from our northern neighbor increased both relatively and absolutely.

Twelfth District Steel Production A New Index

THERE was substantial expansion in Twelfth District steel capacity and output during World War II,¹ continuing through the decade of the 1940's and into the 1950's. Steel ingot production capacity of 6.1 million tons on January 1, 1958, was almost 70 percent greater than in 1947, compared with a national expansion of 55 percent in the same period. The industry is widely dispersed throughout the District, but most of the tonnage is concentrated in California, which has 3.3 million tons of ingot capacity, and Utah, where capacity totals 2.3 million tons. The largest plants are the mills of the Columbia-Geneva Steel Division of United States Steel Corporation at Geneva, Utah, and Pittsburg, California, and the Kaiser mill at Fontana, California; the Bethlehem Pacific Coast Steel Corporation operates sizable mills at Los Angeles and San Francisco, California, and Seattle, Washington. Steel is also produced at Emeryville, Niles, and Torrance, California, and at Portland, Oregon. At the beginning of 1958, more than 1.5 million tons of capacity were under construction in the District, compared with an estimated 4 to 5 million tons for the nation.

Actual production of steel ingots increased 80 percent between 1947 and 1957, the year which marks the all-time high in District output. National production showed a 45 percent rise between 1947 and its 1955 peak. While the Twelfth District steel industry is still small, accounting for less than 5 percent of national ingot capacity as of January 1958, it now supplies about 60 percent of the finished steel consumed in this region, compared with 30 percent prewar. A number of District steel products, particularly large diameter pipe used in oil and gas transmission, are competitive in national markets.

The regional steel industry is confronted by a demand for its production different from that of the nation as a whole. At times, therefore, the changes in national output are not duplicated in the Twelfth District. This was most pronounced in 1956 and 1957, partly due to the absence of any significant output of automobile steel in the District. The relative importance of construction steel, which accounts for 50 percent of District steel consumption (and 30 percent of the nation's) is another important difference. Moreover, the fairly stable demand of container producers accounts for about 20 percent of District steel use, but only 6 to 8 percent of national con-

¹ For a detailed discussion of the growth in the Twelfth District steel industry, see "Twelfth District Steel: A 'War Baby' Grows Up," *Monthly Review*, September 1953.

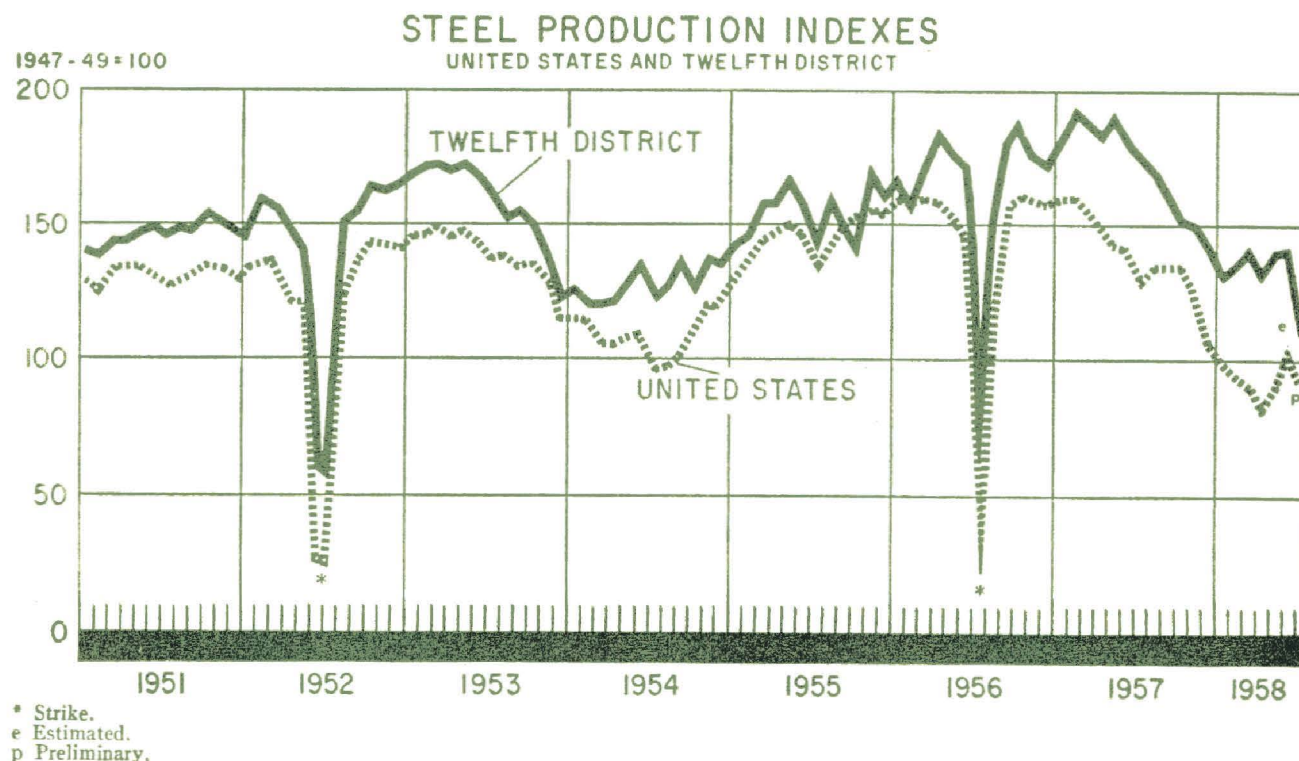
sumption. In 1956, a strike in the industry and some weakness in the demand for automobile steel led to lower output for the country as a whole than in the preceding year. The general weakness in steel demand after the first quarter of 1957, as well as lower use by the auto industry, resulted in a further reduction. Because of a large expansion in Twelfth District construction, however, demand was sufficiently strong so that steel output for the year increased in 1956. And despite the decline after the early months of the year, a further annual rise was recorded in 1957.

Because of the growing importance of the steel industry in the District, this bank has maintained a monthly District production index for several years, as well as the annual index published since 1939. Data published by the Department of Commerce and figures made available by major producers have heretofore provided the basis for monthly computations. These data, however, were available only after a time lag of about three months.

Recently the American Iron and Steel Institute, in addition to providing annual data for the District, reorganized its reports so that monthly District production figures are available more promptly. In addition, preliminary estimates are feasible from data currently supplied by a sample of firms; consequently, it will now be possible to publish each month the index depicted in Chart 1 either on a preliminary or on a final basis. Back data are available by month starting with 1951.¹

The monthly index is a simple daily average on the 1947-49 base. Production totals are divided by the number of days in the month, since steel ingot production is a continuous operation, and the result is expressed as a ratio of the daily average in the base period. Neither the national figures, as published in the *Federal Reserve Bulletin*, nor the District data are adjusted for seasonal variation.

¹ The monthly lead production index, which is being replaced in the statistical table by the steel index, will be available upon request.



FEDERAL RESERVE BANK OF SAN FRANCISCO

BUSINESS INDEXES — TWELFTH DISTRICT¹

(1947-49 average = 100)

Year and month	Industrial production (physical volume) ²							Total nonagricultural employment	Total mfg employment	Car-loadings (number) ³	Dep't store sales (value) ⁴	Retail food prices ^{5, 6}	Waterborne foreign trade ^{7, 8}	
	Lumber	Petroleum ⁹		Cement	Steel ¹	Copper ¹	Electric power						Exports	Imports
		Crude	Refined											
1929	95	87	78	54	...	105	29	....	....	102	30	64	190	124
1933	40	52	50	27	...	17	26	....	....	52	18	42	110	72
1939	71	67	63	56	24	80	40	....	55	77	31	47	163	95
1949	100	99	103	100	97	93	108	99	97	94	98	100	85	121
1950	113	98	103	112	125	113	119	103	105	98	107	100	91	137
1951	113	106	112	128	146	115	136	112	120	100	112	113	186	157
1952	116	107	116	124	139	113	144	118	130	100	120	115	171	200
1953	118	109	122	130	158	111	161	121	137	100	122	113	140	308
1954	116	106	119	132	128	101	172	120	134	96	122	113	131	260
1955	121r	106	122	145	154	118	192	127	143	104	132	112	164	308
1956	120r	105	129	156	163	129	210	134	152	104	141	114	195	443
1957	107r	101	132	149	172	126	224	138	157	96	141	118	230	575
1957														
June	110r	101	131	152	181	130	239	139	159	100	148	118	252	511
July	104r	101	133	162	174	113	238	138	159	94	141	118	188	770
August	105r	101	137	160	169	115	233	138	158	97	144	119	210	572
September	102r	102	135	169	161	127	217	138	156	93	141	119	173	607
October	102r	101	132	161	152	126	223	138	155	84	134	119	199	684
November	103r	101	131	146	149	125	222	137	152	95	139	118	210	582
December	100r	101	124	139	143	125	216	137	151	93	139	119	178	610
1958														
January	107r	100	122	135	132	123	223	137	150	94	132	121	163	393
February	105r	97	114	112	134	125	221	136	149	86	135	121	149	358
March	102r	95	119	112	139	123	226	136	148	87	137	123	161	...
April	96r	94	119	129	132	117	218	135	147	87	142	125	171	...
May	103r	93	124	176	139	104	...	135	147	90	142	124	...	...
June	99	93	123	178	140	...	...	136	148	90	144	124	...	...

BANKING AND CREDIT STATISTICS — TWELFTH DISTRICT

(amounts in millions of dollars)

Year and month	Condition Items of all member banks ¹				Bank rates on short-term business loans ²	Member bank reserves and related items					Bank debits Index 31 cities ^{3, 12} (1947-49 = 100) ¹
	Loans and discounts	U.S. Gov't securities	Demand deposits adjusted ⁷	Total time deposits		Factors affecting reserves:				Reserves ¹¹	
						Reserve bank credit ⁸	Commercial ¹⁰	Treasury ¹⁰	Money in circulation ⁹		
1929	2,239	495	1,234	1,790	....	- 34	0	+ 23	- 6	175	42
1933	1,486	720	951	1,609	....	- 2	- 110	+ 150	- 18	185	18
1939	1,967	1,450	1,983	2,267	....	+ 2	- 192	+ 245	+ 31	584	30
1950	7,093	6,415	9,254	6,302	3.35	+ 39	-1,141	+1,198	- 14	2,026	115
1951	7,866	6,463	9,937	6,777	3.66	- 21	-1,582	+1,983	+ 139	2,269	132
1952	8,839	6,619	10,520	7,502	3.95	+ 7	-1,912	+2,265	+ 132	2,514	140
1953	9,220	6,639	10,515	7,997	4.14	- 14	-3,073	+3,158	+ 39	2,551	150
1954	9,418	7,942	11,196	8,699	4.09	+ 2	-2,448	+2,328	- 30	2,505	154
1955	11,124	7,239	11,864	9,120	4.10	+ 38	-2,685	+2,757	+ 100	2,530	172
1956	12,613	6,452	12,169	9,424	4.50	- 52	-3,259	+3,274	- 96	2,654	189
1957	13,178	6,619	11,870	10,679	4.97	+ 31	-4,164	+3,903	- 83	2,686	203
1957											
July	12,912	6,319	11,407	10,188	....	- 49	- 426	+ 320	+ 6	2,457	205
August	12,945	6,313	11,329	10,220	....	+ 50	- 175	+ 322	+ 39	2,592	197
September	13,178	6,293	11,561	10,301	5.21	- 109	- 424	+ 470	- 30	2,581	204
October	13,064	6,433	11,570	10,417	....	+ 76	- 322	+ 159	- 8	2,517	200
November	13,185	6,357	11,770	10,304	....	+ 14	- 298	+ 447	+ 37	2,652	202
December	13,178	6,619	11,870	10,679	5.13	- 18	- 454	+ 480	- 23	2,686	217
1958											
January	13,106	6,573	11,601	10,761	....	- 16	- 258	+ 180	- 137	2,662	211
February	13,002	6,884	11,305	10,992	....	+ 12	- 427	+ 298	+ 17	2,520	203
March	12,860	7,075	11,225	11,183	4.95	- 62	- 180	+ 253	+ 11	2,530	198
April	12,979	7,605	11,570	11,406	....	+ 43	- 391	+ 371	- 2	2,574	206
May	12,977	7,546	11,292	11,530	....	+ 11	- 203	+ 154	+ 90	2,456	193
June	13,197	7,632	11,278	11,724	4.81	- 59	- 409	+ 531	+ 22	2,494	212
July	13,142	7,670	11,744	11,779	....	+ 52	- 384	+ 302	+ 4	2,474	...

¹ Adjusted for seasonal variation, except where indicated. Except for department store statistics, all indexes are based upon data from outside sources, as follows: lumber, California Redwood Association and U.S. Bureau of the Census; petroleum, cement, copper, and lead, U.S. Bureau of Mines; electric power, Federal Power Commission; nonagricultural and manufacturing employment, U.S. Bureau of Labor Statistics and cooperating state agencies; retail food prices, U.S. Bureau of Labor Statistics; carloadings, various railroads and railroad associations; and foreign trade, U.S. Bureau of the Census.
² Daily average. ³ Not adjusted for seasonal variation. ⁴ Los Angeles, San Francisco, and Seattle indexes combined. ⁵ Commercial cargo only, in physical volume, for Los Angeles, San Francisco, San Diego, Oregon, and Washington customs districts; starting with July 1950, "special category" exports are excluded because of security reasons. ⁶ Annual figures are as of end of year, monthly figures as of last Wednesday in month. ⁷ Demand deposits, excluding interbank and U.S. Gov't deposits, less cash items in process of collection. Monthly data partly estimated. ⁸ Average rates on loans made in five major cities. ⁹ Changes from end of previous month or year. ¹⁰ Minus sign indicates flow of funds out of the District in the case of commercial operations, and excess of receipts over disbursements in the case of Treasury operations. ¹¹ End of year and end of month figures. ¹² Debits to total deposits except interbank prior to 1942. Debits to demand deposits except U.S. Government and interbank deposits from 1942. p—Preliminary. r—Revised.