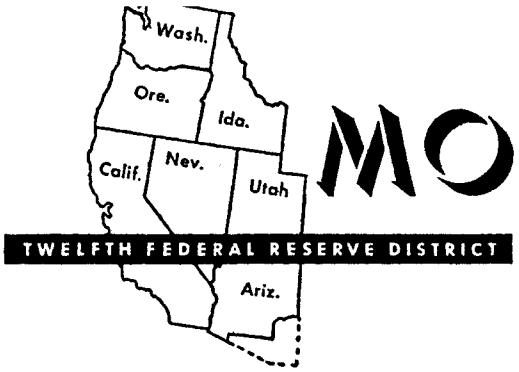

MONTHLY REVIEW

JUNE 1955 FEDERAL RESERVE BANK OF SAN FRANCISCO

REVIEW OF BUSINESS CONDITIONS

GENERAL business activity has reached a new high level in June and most of the major economic indicators will apparently move into even higher ground in the next month or two. Moreover, the six months just ended have been the most active first half year on record for both the District and the nation. The number of people employed, incomes, industrial output, and expenditures have all risen substantially in the first half of the year, in most instances to new record highs. Although complete data are not yet available for the six-month period as a whole, information available through May and preliminary indications for June attest to the record first half.

In the Twelfth District, total nonagricultural employment in the period of January through May averaged 3 percent ahead of the comparable months a year ago and nearly 1.5 percent ahead of the same interval in 1953, the previous most active first five months in the history of the District. A similar pattern of change is evident in the volume of sales at retail establishments. Seasonally adjusted sales at District department stores for the first half of this year were 10 percent above those of the comparable year-ago period and 1 percent above the same interval in 1953. Those data which are available for total retail sales point to an even stronger rise in spending than do department store figures.

As the principal factors behind these developments have been discussed in several previous issues of this *Review,* only brief mention need be made of them at this time. Consumer demand, reflecting expanded incomes and a high degree of confidence, continued high. These factors have also made consumers willing to spend freely out of current income and to increase their indebtedness for the purchase of major durable goods and housing. Stemming in large measure from this behavior on the part of consumers has been the recent upward shift in capital expenditure plans of business firms and the expanded outlays intended to bring inventories into line with current high sales rates. Total government demands have been more stable recently than in 1954, when they declined in the first half of the year. While some shifting in the emphasis placed upon specific types of defense goods has continued to have a favorable impact upon certain segments of the District economy, so far this year total government activity has provided only a modest stimulus to the business situation.

District lumber industry moves ahead despite setbacks

Under the impetus provided by the national construction boom, the District lumber industry has expanded its level of operations sharply. The rates of expansion, however, have been markedly different among the three producing regions of the District, partly reflecting production and shipment difficulties that have affected different areas in varying degrees. Production in the western pine region in the first five months of the year expanded most relative to the same period last year, nearly 13 percent. Output of redwood lumber rose not quite 5 percent, while Douglas fir production increased 1 percent despite production interruptions. Douglas fir production was hampered by late snows which cut logging operations in April and early May. In addition, a strike in the trucking industry, which started May 19 and ended during the second week in June, interfered with the normal flow of product and acted as a further brake on output. With these factors no longer exerting a dampening influence, production should rebound sharply in the Douglas fir region after allowing for seasonal forces. Despite the strong pressure of demand, seasonal forces will place a drag on actual output. Industry vacation shutdowns and summer fire hazards will tend to restrain Douglas fir output during the summer.

While production data, after allowance for seasonal factors and the special influences just mentioned, point to considerable strength in the lumber industry, trends in prices and unfilled orders are perhaps more indicative of the fundamental forces underlying the current market situation. In the first five months of the year, orders received by mills in the western pine region rose nearly 14 percent from the same period a year earlier. For redwood the increase was much larger, 44 percent, while Douglas fir orders actually declined slightly. The de-

cline in orders for Douglas fir reflects in part the fact that traditionally dealers do not order as heavily when production is being hampered in one way or another and there is a temporarily sharp upward pressure on prices. Late storms placed considerable upward pressure on prices. Moreover, in April, before the full effect of the storms had become apparent, Douglas fir prices (using dimension number 1 common 2″ x 4″ as a gauge) were nearly 15 percent above April 1954. The price of ponderosa pine (number 3 common 1″ x 8″—a bellwether grade for the western pine region) in April was more than 9 percent ahead of April last year. In May, prices for redwood lumber were 7 percent greater than in May a year ago. Unfilled order backlogs at the end of May were substantially higher than at that time last year in all three regions—25 percent in western pine, 10 percent in Douglas fir, and 67 percent in the redwood region.

Plywood output and capacity up sharply

Plywood production, reflecting essentially the same demand factors as lumber, has accelerated at a rapid rate in the first half of the year. Cumulative output through the week ended June 25 was almost 30 percent above the comparable year-ago period, and production for the first 25 weeks averaged in excess of 100 million square feet weekly. This rate of production is roughly 4 percent above the industry's normal (5 day-3 shift) weekly capacity of 96.6 million square feet. Prices have responded sharply to the marked increase in demand and in May averaged about 8 percent higher than in May last year. The strong growth trend in the industry has apparently continued unabated and is reflected in the rise in production capacity from 84 million square feet weekly in June last year to nearly 97 million square feet weekly in late June this year.

Department store sales at new high in first half

Reflecting the high levels of employment and income, seasonally adjusted sales at District department stores in June moved up to a level just slightly under the peak reached in January. Despite the relatively slackened rate of sales in February and March, total cumulative dollar volume of transactions for the first half of the year exceeded any previous first-half period. Cumulative sales, seasonally adjusted, for the first six months of this year were nearly 1.5 percent above the previous peak reached in the first half of 1953 and more than 10 percent higher than in the same period last year. All indications suggest that total retail sales, of which department stores are only one component, have expanded even more.

Based upon data for the Western Region supplied by the Department of Commerce, which includes more than the seven District states, total retail sales in the first four months of the year rose 13 percent above the year-ago period. This compares with an 8 percent gain for the comparative period at District department stores. Taxable retail sales in California in the first quarter rose even more sharply relative to department store sales, 18 percent as compared with 9 percent. Much of the difference in sales experience during these periods between the two groups of stores is accounted for by the extremely high sales rate of new automobiles. For example, while total California taxable retail sales rose by 18 percent in the first quarter, new automobile sales increased by 46 percent. Sales of other automotive products and of building materials also played a part in the greater rise in total retail sales compared with department store sales.

Inventories of District department stores, after seasonal adjustment, have tended to decline throughout the first five months of the year. This decline has occurred despite a large rise in the volume of orders placed by District stores. At the end of May the volume of orders outstanding was 20 percent above the volume at the same time last year. This suggests that the dwindling of stocks on hand may well have reflected an inability to increase stocks in the face of the sharp gain in sales volume. The decline in stocks, seasonally adjusted, has not been unduly large, 4 percent, and relative to May last year, stocks were higher by some 3 percent.

TWELFTH DISTRICT COMMODITY TRADE—1950

DATA have become available making possible an analysis in terms of dollar value of a major proportion of the commodities shipped into and out of the Twelfth District in 1950. Information is available with respect both to the District's trade with all other regions, including goods moving through District ports to and from foreign countries, and to its trade with other parts and possessions of the United States. Although brief reference will be made to the District's trade with all other regions, including foreign countries, attention in this article will be concentrated primarily upon trade within the United States, including some discussion of intradistrict trade.

The data show that during 1950 the District incurred a fairly substantial trade deficit with other parts of the nation resulting primarily from receipts of manufactures from the central and eastern parts of the nation. The District paid for a major part of its receipts from other domestic areas by a large surplus of shipments of agricultural products to domestic regions outside its boundaries. The data also reveal that the District has a rather large interregional trade and, therefore, its economy tends to react quickly to changes in national economic conditions.

Until recently, only some isolated ideas and data were in existence on Twelfth District commodity trade with other areas, and they offered little in providing a com-

prehensive view of District external trade. In 1953, the Interstate Commerce Commission provided a price series applicable to its sample data on physical quantities of railroad freight in 1950. The ICC figures, Corps of Engineers statistics for domestic waterborne commodity trade (including trade with offshore possessions), data on foreign trade through District ports from the Bureau of the Census, as well as data from some other sources provide a picture of District trade in 1950 which is fairly comprehensive. The data are not complete nor are they precise. The principal weakness is the absence of data on truck shipments. The methods of computing the trade figures and the limitations to which they are subject are discussed in an appendix to this article. Nevertheless, the available information covers a very high proportion of District trade, especially with regions outside the District, and permits a variety of observations which would otherwise not be possible.

In the interest of brevity, all shipments out of the District will be referred to as exports and all receipts from other areas as imports in the following discussion. References to trade with foreign countries are clearly indicated in the context.

From this study some idea can be obtained of the flow of commodities or trade between the District and various areas, the importance of particular commodities or groups of commodities as imports and exports, and the varying trade characteristics of the several District states. The effect of resources, market size, incomes, prices, distance, and tastes on interregional trade can also be observed. Although gaps in the data and other limitations restrict the precision which can be attached to various conclusions, the clues provided offer a basis for more detailed study of the District's relationship to other parts of the nation. This article summarizes the principal characteristics of District trade.

The Twelfth District has a large merchandise trade flow with other regions

In 1950 combined commodity imports and exports of the Twelfth District with other areas of the United States and the rest of the world totaled $16.8 billion, and imports exceeded exports by almost $600 million. In the same year national foreign merchandise trade amounted to $19.2 billion and consisted of $10.1 billion in exports and $9.1 billion in imports. In recent years the foreign trade of the United States has received considerable attention because of our role in world affairs and the existence of sizable "dollar gaps" at various times. Nevertheless, in discussions of national economic conditions, our foreign trade is sometimes passed over lightly because the foreign commodity trade of the United States accounts for only a relatively small proportion of the total national output of goods. The interregional trade of the District, however, is much more important relative to District total output than foreign trade is to the total output of the nation.

TABLE 1

COMMODITY TRADE OF THE TWELFTH DISTRICT BY MAJOR AREA—1950

(thousands of dollars)

Area	Imports	Exports	Net (Export+ Import−)
Continental United States.....	7,655,440	6,320,414	−1,335,026
Offshore United States possessions	344,010	1,047,329	+ 703,319
Foreign countries	731,988	775,126	+ 43,138
Total	8,731,438	8,142,869	— 588,569

Note: Trade with continental United States and offshore United States possessions does not include shipments or receipts by truck, air freight, parcel post, or private conveyance. Trade with foreign countries includes trade by all methods of transportation. Trade with all areas includes aircraft flown away under own power. Figures may not add to totals because of rounding.
Source: See Appendix.

Precise figures with respect to the total value of output of goods in the Twelfth District are not available. However, if the total value of cash farm marketings, value of mineral output, value of fish catch, and estimated total value of all manufacturing production are combined, it appears that in 1950 the total value of goods produced or processed in the District approximated $20 billion. In the same year District exports which could be measured approximated $8 billion. In effect, measured exports accounted for roughly 40 percent of the District output of goods. Since both the figures for total value of product in the District and the total export figure are subject to various statistical errors[1] and are also incomplete, this ratio of 40 percent is merely a rough approximation.

The volume of District interregional trade demonstrates that the District relies to a considerable extent on other areas for both supplies and markets. The magnitude of the flows suggests, particularly with respect to the District's trade with other areas of the United States, a very strong economic linkage. Through this linkage it may be expected that economic developments elsewhere in the United States will have a marked impact on activity in this District. The lumber industry of the District offers a good example of how important the effects of national developments may be upon District business activity. A considerable part of the District lumber industry's output is utilized in residential and other types of construction, and a major portion of District lumber output is sold outside the seven western states. Fluctuations in construction nationally—particularly residential construction—have a marked effect on lumber output and hence upon business in general in several District states.

The over-all domestic and foreign trade data indicate that a large part of the District's interregional trade—more than 80 percent in 1950—is with other areas of the United States. Offshore possessions and foreign countries shared the remainder, with District foreign trade amounting to slightly more than trade with offshore possessions. The trade deficit accumulated with the continental United States is offset to a large extent by a sizable surplus with offshore possessions and to a minor extent by a small excess of exports in foreign trade. The District serves as a gateway for trade with offshore possessions—primarily Hawaii and Alaska—and some foreign areas. Some products imported into the District

[1] See Appendix for limitations on estimate of exports.

from other parts of the United States flow out as District exports—either in their original form or after some processing—to offshore possessions and foreign countries. Similarly, not all of the imports which come from overseas sources remain in the District. The export and import figures are, therefore, inflated somewhat by these transshipments. In the net balance, however, individual imports that are exported cancel out except to the extent that the imports are processed and enter into exports as higher valued products.

District domestic exports based to significant extent on agriculture and forest products

Attention will now be turned to the District's domestic imports and exports (including offshore possessions). The data in Table 2 provide a picture of the nature of District domestic interregional trade in 1950.[1] The bulk of District exports—almost 80 percent—consisted of manufactures. This heavy concentration, however, conceals the contribution of the raw materials resources to the manufacturing structure of the District. More than 60 percent of District exports were either agricultural products or goods manufactured from basic agricultural or forest resources. In fact the two major manufactured exports—food and lumber—accounted for almost 45 percent of the manufactures shipped out of the District in 1950. In addition, a large part of the chemicals exported consisted of processed agricultural products, and a substantial proportion of the exports of paper was based upon District forest resources.

The mineral resources of the District also made possible a fair amount of manufactured exports, principally of primary nonferrous metals and petroleum. The development of the District's aluminum industry, a supplier of part of the primary metal exports, was largely dependent upon the availability of low-cost power in the Pacific Northwest.

Although a considerable part of the District exports in 1950 was based on agricultural, forest, and mineral resources, the industrial development of the District since 1940 is reflected in the fairly large quantity of goods exported which require a high degree of processing. Aircraft was the principal export in this group and accounted for most of the transportation equipment shipments. Although a net importer of goods which are highly processed, the District exported fair amounts of fabricated metals, electrical equipment, and machinery. Textile and apparel exports offer an interesting example of the District's role as a gateway to offshore possessions. Though a net importer of these items, the District shipped out about 30 percent as much as it received from other areas. A major part of the District exports of textiles and apparel went to offshore possessions; these exports included reshipments of imports as well as District output.

[1] The foreign trade of the District has been discussed in two supplements to this *Review*. See "Waterborne Trade of California Ports," supplement to the *Monthly Review* for May 1951, and "Waterborne Trade of the Pacific Northwest," supplement to the *Monthly Review*, August 1952.

TABLE 2

DOMESTIC COMMODITY TRADE OF THE TWELFTH DISTRICT BY MAJOR PRODUCING INDUSTRY GROUP—1950

(Includes offshore United States possessions)

(thousands of dollars)

	Imports	Exports	Net (Export+ Import—)
Agriculture, forestry, and fisheries	**482,612**	**1,613,987**	**+1,131,375**
Grains	119,830	68,897	— 50,933
Fruits	9,110	497,385	+ 488,275
Vegetables	7,437	447,242	+ 439,805
Fibers	201	166,246	+ 166,045
Miscellaneous	47,751	181,071	+ 133,320
Total farm crops	*184,329*	*1,360,841*	*+1,176,512*
Animals	250,374	59,264	— 191,110
Animal products	26,304	174,789	+ 148,485
Total animals and products	*276,678*	*234,053*	*— 42,625*
Fish and fish products	15,549	16,174	+ 625
Miscellaneous forest products	6,056	2,919	— 3,137
Mining	**95,696**	**49,402**	**— 46,294**
Iron ores and concentrates	....	4,552	+ 4,552
Nonferrous ores and concentrates	7,598	33,017	+ 25,419
Coal	6,165	396	— 5,769
Petroleum and natural gas	72,514	1,400	— 71,114
Clay, sand, stone, rock	3,298	3,499	+ 201
Miscellaneous	6,121	6,538	+ 417
Manufactures and miscellaneous	**7,421,195**	**5,704,353**	**—1,716,842**
Food and kindred products	1,052,084	1,326,703	+ 274,619
Tobacco manufactures	268,123	3,852	— 264,271
Textile mill and apparel products	795,923	223,151	— 572,772
Paper and allied products	156,191	172,194	+ 16,003
Printing, publishing, and allied industries	77,113	....	— 77,113
Chemicals and allied products	417,819	251,921	— 165,898
Petroleum products	20,719	198,653	+ 177,934
Rubber products	146,072	61,111	— 84,961
Leather and leather products	38,924	852	— 38,072
Total nondurables	*2,972,968*	*2,238,437*	*— 734,531*
Stone, clay, and glass products	56,292	21,795	— 34,497
Lumber and wood products (except furniture)	36,219	1,156,942	+1,120,723
Furniture and fixtures	122,457	31,613	— 90,844
Primary metals industries	73,716	429,517	+ 355,801
Fabricated metal products	469,883	126,017	— 343,866
Machinery (except electrical)	253,113	86,802	— 166,311
Electrical machinery, equipment, and supplies	628,394	74,867	— 553,527
Transportation equipment	991,944	526,845	— 465,099
Total durables	*2,632,018*	*2,454,398*	*— 177,620*
Freight forwarder shipments	956,044	70,998	— 885,046
Miscellaneous manufactures	860,165	940,520	+ 80,355
Total—All commodities	**7,999,503**	**7,367,742**	**— 631,761**

Note: Does not include shipments or receipts by truck, air freight, parcel post, or private conveyance. Aircraft flown away under own power are included in the statistics.

Source: See Appendix.

District's domestic trade deficit largely due to excess of manufactured imports

The District's imports were even more highly concentrated in manufactures than its exports, and despite the importance of the District as a food producer, its largest imports consisted of food and kindred items. Because of the very large requirements of California, the District was unable to supply all of its needs in meat. It imported a substantial quantity of livestock, but the value of manufactured meat imports exceeded that of meat animal purchases from other parts of the nation. In addition, the District obtained large quantities of manufactured cereals and alcoholic and malt beverages from the rest of the nation.

Automobiles, apparel and textiles, electrical machinery (including appliances, radios, and television), fabricated metals, chemicals, and machinery follow food in

importance as imports. These imports reflect the variety of different forces which generate interregional trade. The District is deficient in steel and this accounts in part for its imports of many durable goods, particularly of fabricated metals and motor vehicles and parts. Chemical imports probably also reflect some resource differences between the District and other parts of the nation. Economies in scale of operation which favor other parts of the nation are at least as important as resource differences in imports of automotive items, some types of electrical equipment, machinery, and textiles and apparel. Differences in the stage of economic development and in tastes also help to explain why some of these items are imported.

One of the problems presented by the data lies in the existence of two large blocks of manufactured imports and exports which could not be identified. One group consisted of manufactures which the agencies collecting the data were unable to classify. The other group consisted of freight forwarder traffic shipments of less than carload lots of merchandise. The less than carload lot shipments accounted for more than half of the District's domestic trade deficit in terms of manufactured goods. The inability to classify these two groups of shipments by producing industry, while detracting from the detailed analysis, does not alter the fundamental importance of manufactures in District interregional trade.

As is evident from Table 2, the District offset about 70 percent of its domestic deficit on account of manufactures by exports of raw agricultural products. Fresh fruits and vegetables played a major role in District exports and reflected the agricultural pattern of the District. Fibers, consisting almost entirely of cotton, were also important, but domestic shipments alone tended to conceal the importance of cotton to the District because of the large volume of shipments by water to foreign countries. Wool, though popularly considered a fiber, is classified under animal products and accounted for most of these exports. Thus, the District offset most of its deficit in manufactures in 1950 by exporting more agricultural products than it imported.

Pattern of interregional trade reflects a variety of forces

The intent of the following discussion is to indicate briefly some of the general factors influencing the trade of the District with other parts of the United States. No attempt is made to assign quantitative values to the influence of any particular factors nor to analyze in detail the factors affecting trade in particular commodities. A thorough examination of such matters would be a large undertaking which would require delving into far more detail than we have so far attempted. In essence, an undertaking of that type would involve the development and analysis of a large body of factual material with which to fill in the general framework that is merely outlined in this summary discussion.

The forces which generate trade among areas ultimately rest on the differences in the availability of the various factors of production, including raw materials, capital, and labor. Disparities in raw material endowment, capital availability, and the nature of the labor force among areas result in qualitative differences in regional output or the production of similar goods at varying costs among regions. In either case, in the absence of trade, price differentials among regions for a particular commodity may be quite large. The flow of trade reflects the profit opportunities resulting from such price differentials, and in turn trade tends to minimize price inequalities among areas except to the extent that transportation costs or artificial barriers such as trade restrictions interfere with the free flow of trade.

This brief description may be used to help explain the trade of the Twelfth District. For example, exports of citrus, canned fruits and vegetables, lumber, copper, lead, zinc, aluminum, and aircraft reflect various productive advantages possessed by the District. On the other hand, imports of livestock, tobacco, automobiles, and machinery are some of the items which reflect the District's inadequate supply of appropriate factors of production relative to other areas.

Some important characteristics are concealed by this brief explanation of trade forces. The level of economic development is one aspect not mentioned explicitly. It could be included under the availability of capital or under the type of labor force or both. A highly specialized and intensive capital structure and a skilled labor force are in part products of an advanced stage of economic development. Market size, an important consideration for mass produced goods, is another influence not considered directly by the description. Nor are such considerations as differences in taste or climate mentioned explicitly.

An analysis of trade based on differences in the factors of production, even after amendment for the foregoing characteristics, explains the flow of trade generally, but

TABLE 3
REGIONAL PATTERN OF DOMESTIC DISTRICT COMMODITY TRADE—1950
(thousands of dollars)

Region[1]	Imports	Exports[2]	Net (Export+ Import—)
Northeast	2,092,119	1,889,022	— 203,096
New England	351,661	472,271	+ 120,610
Middle Atlantic	1,740,456	1,416,749	— 323,707
North Central	3,796,706	2,037,574	—1,759,132
East North Central	2,982,422	1,275,853	—1,706,568
West North Central	814,280	761,717	— 52,563
South	1,442,725	1,613,879	+ 171,154
South Atlantic	806,953	545,923	— 261,029
East South Central	297,682	230,649	— 67,034
West South Central	338,087	837,302	+ 499,214
Mountain	323,793	304,866	— 18,926
Offshore United States possessions	344,000	1,047,298	+ 703,298

[1] See Appendix for list of states included in these various regions.
[2] Excludes export of aircraft not distributable by regions.
Note: Does not include shipments or receipts by truck, air freight, parcel post, or private conveyance. Aircraft flown away under own power are included in the statistics. Figures may not add to totals because of rounding.
Source: See Appendix.

it does not account directly for different levels of trade between one region—such as this District—and each of several areas. Other factors such as the income of other areas, their self-sufficiency relative to the output of this District, the size of their markets, the types of transportation which can penetrate various areas, and the geographical proximity of other areas to this District tend to modify the trade relationships between this District and other areas. This is not an exhaustive list of the factors affecting trade between this District and other areas, nor is it possible to measure precisely the effect of each of these factors on trade between the District and other areas.

Indications as to how some of these factors influence trade can be judged in an approximate way if the flow of goods between this District and other areas is related to some one element important in determining the trade pattern. For this purpose, income payments were selected as a yardstick. Data on them are readily available; they are a fairly comprehensive economic measure; and they have significance as an indicator of potential demand. If all other regions were alike except for income and if the effects of differences in transportation costs were ignored, then the trade of the District would be distributed among regions in the same pattern as total income payments were distributed. As Table 4 illustrates, there were significant departures from this type of pattern among the regions studied.

TABLE 4
REGIONAL PATTERN OF DOMESTIC DISTRICT COMMODITY TRADE AND UNITED STATES INCOME PAYMENTS—1950

Region[1]	Percent distribution		
	Imports	Exports[2]	Income payments[3]
Northeast	26.2	27.4	37.6
New England	4.4	6.9	8.2
Middle Atlantic	21.8	20.6	29.4
North Central	47.5	29.6	30.6
East North Central	37.3	18.5	19.7
West North Central	10.2	11.1	10.9
South	18.0	23.4	28.5
South Atlantic	10.1	7.9	13.5
East South Central	3.7	3.3	5.6
West South Central	4.2	12.1	9.4
Mountain	4.0	4.4	2.3
Offshore United States possessions	4.3	15.2	1.0[4]

[1] See appendix for list of states included in these various regions.
[2] Excludes export of aircraft not distributable by regions.
[3] Income payments to individuals as published by the United States Department of Commerce.
[4] Rough approximation only. Data not available except for Hawaii.
Note: Does not include shipments or receipts by truck, air freight, parcel post, or private conveyance. Aircraft flown away under own power are included in the statistics.
Source: See Appendix.

The Northeastern United States,[1] comprising New England and the Middle Atlantic states, absorbed a much smaller proportion of District exports than income alone would suggest. This region is relatively remote from the District, and since distance increases the cost of moving commodities, the comparative prices for District products in that area tend to be high. Since there are alternative sources of supply with more favorable delivered prices, District exports to that region tend to fall below the level suggested by income. For example, corresponding District products meet severe competition in that region from southern lumber and fairly strong competition in fresh and canned fruits and vegetables from supplies within the region and nearby areas.

The South also bought less from this District than income would suggest as its share. The South Atlantic states and the East South Central states bought relatively little lumber and less than their indicated share of agricultural products from the Twelfth District. In large measure this reflected distance from the District as well as self-sufficiency of the area so far as items available from the District are concerned. The latter is particularly true of lumber—a major export of the Twelfth District. The West South Central states, in contrast, bought a larger than expected share of District crops, processed foods, lumber, and some other manufactures. Partly a lack of alternative sources and to some extent the shorter distance from this District of these states make them better than average customers.

The North Central region, which the major District exports penetrate without serious freight disadvantages, took almost as many goods as would be expected on an income criterion. Largely because of their proximity, the Mountain states took somewhat more goods than income alone would indicate. Location as an advantage stands out sharply in the trade with offshore areas, which buy more from the District than income would suggest. In this case the District, serving as an exit point, provided goods that are transshipped from other regions as well as its own products. Alaska and Hawaii bought major quantities of foods and manufactures from the District. Puerto Rico, though quite remote geographically, purchased large quantities of rice from the District.

No uniform trade pattern can be noted even if income as a criterion is modified by distance. The effects upon trade of lineal distances from the District vary in importance depending upon the degree of self-sufficiency of an area in items available from the District, alternative sources of supply, and the type of transportation available.

The preceding discussion, largely concerned with the export trade of the District (excluding foreign), has pointed up the major factors determining the pattern of trade between this region and other areas. The same set of factors, although in a sense reversed, are operative in the determination of the composition of District imports. Broadly speaking, imports reflect the relative inadequacy of the over-all resource base in the District. They tend to flow from those areas whose factor endowments give them a relative advantage in the production of those commodities where District demand exceeds the regional ability to produce at competitive costs. For example, food and kindred products, automobile parts and sub-assemblies, textiles and apparel, electrical machin-

[1] See Appendix for list of states and possessions included in the various regions under discussion.

ery, and fabricated metals were among the principal imports of the District. For some of these items, particularly automotive equipment, the North Central area is a leading producer. As a result, the District acquired almost half its imports from that area in 1950. The Northeast region, which produces considerable amounts of textiles and apparel, iron and steel, fabricated metals, and other durables not available in the District, ranked second in importance. The South played an important role, too, because it can supply some of the needs that other areas cannot meet. The principal purchases from this area included tobacco, liquor, textiles, and some foods.

TABLE 5
RATIOS OF INTRADISTRICT AND INTERREGIONAL DOMESTIC EXPORTS AND IMPORTS BY STATE, TWELFTH DISTRICT—1950
(Includes offshore United States possessions)

	Exports		Imports	
	Inter-regional	Intra-district	Inter-regional	Intra-district
Arizona	87.7	12.3	57.4	42.6
California	70.6	29.4	86.2	13.8
Idaho	57.4	42.6	61.8	38.2
Nevada	29.2	70.8	30.9	69.1
Oregon	61.0	39.0	44.7	55.3
Utah	46.1	53.9	59.0	41.0
Washington	78.1	21.9	51.1	48.9
Twelfth District	69.5	30.5	71.2	28.8

Note: Does not include shipments or receipts by truck, air freight, parcel post, or private conveyance. Aircraft flown away under own power are included in the statistics.
Source: See Appendix.

Trade of individual states predominantly interregional

One interesting fact revealed by the trade data under consideration is that the states of the Twelfth District, except Nevada which has a very small volume, traded more with United States areas outside the District than with each other. Almost 70 percent of the District's total domestic trade was with areas outside the District. Since District states are much closer to each other than to most other parts of the United States, the question arises as to why the District's trade falls into such a pattern. Much of the explanation seems to lie in the fact that the degree of specialization of each state requires a much broader market than the District alone supplies. Many District products such as vegetables, fruits, cotton, manufactured foods, lumber, aircraft, and primary metals, to mention some outstanding examples, are produced in quantities that cannot be wholly consumed in the District. In some cases the population is insufficient to absorb the output. In other cases industries using the products are concentrated elsewhere. This is particularly true for primary metals such as copper, lead, zinc, and aluminum which are fabricated in other parts of the nation.

Insofar as imports are concerned, the resources of the District and its industrial structure were inadequate to supply some of its needs. Automobiles, machinery, steel products, electrical equipment, apparel, and even some food must be obtained from other United States areas because the District either has insufficient resources or cannot support an appropriate scale of operations. There was, however, an active trade among the District states in 1950 and their resources and output tended to complement each other in some important respects.

Flow of trade between states demonstrates differences in economic characteristics

The patterns of trade of the seven District states offer important clues to the nature of the economies of each state. California, for example, accumulated a trade deficit with continental regions outside the District and with two states within the District, Idaho and Utah. In its trade with continental regions outside the District, California incurred a deficit because of its excess of imports of manufactured products, livestock, and some food products. California's major imports of manufactured products included automotive equipment, electrical equipment, machinery, textiles, and steel, as well as some other highly processed manufactures. Part of the trade deficit was offset by the large volume of agricultural products California supplies the rest of the nation. Its deficit with Idaho was primarily due to its imports of livestock and some crops. Imports of livestock also contributed to California's deficit with Utah but more important were the steel products which California acquired from Utah in large volume.

TABLE 6
COMMODITY TRADE BALANCES—TWELFTH DISTRICT—1950
(thousands of dollars; Export +, Import —)

Destination	State of origin: Arizona	California	Idaho	Nevada	Oregon	Utah	Washington
Arizona	....	+ 60,276	+ 310	+ 279	+ 15,537	+ 3,593	+ 6,292
California	— 60,276	....	+ 10,696	— 25,471	—269,651	+84,864	—583,207
Idaho	— 310	— 10,696	....	+ 190	— 11,204	—21,118	— 32,652
Nevada	— 279	+ 25,471	— 190	....	+ 632	+ 1,275	— 230
Oregon	— 15,537	+ 269,651	+ 11,204	— 632	....	+ 328	— 69,664
Utah	— 3,593	— 84,864	+ 21,118	— 1,275	— 328	....	— 21,373
Washington	— 6,292	+ 583,207	+ 32,652	+ 230	+ 69,664	+21,373	....
Intradistrict	— 86,288	+ 843,042	+ 75,797	— 26,679	—195,348	+90,316	—700,840
Interregional[1]	+190,205	—1,435,235	+ 77,947	— 12,923	+293,556	—17,920	+272,663
Net domestic[1]	+103,917	— 592,191	+153,744	— 39,602	+ 98,208	+72,396	—428,177
Foreign	— 2,515	+ 64,474	....	....	+ 49,817	....	— 68,638
Net balance[1]	+101,402	— 527,717	+153,744	— 39,602	+148,025	+72,396	—496,815

[1] Includes offshore United States possessions.
Note: Trade with all areas, except foreign, does not include shipments or receipts by truck, air freight, parcel post, or private conveyance. Aircraft flown away under own power are included in the statistics. Figures may not add to totals because of rounding.
Source: See Appendix.

In its trade with offshore possessions, California accumulated a substantial surplus, reshipping some manufactured products imported into California and adding a very substantial amount of its own output, including agricultural products and a varied list of manufactures. Within the District, California had a surplus with four states based largely on its shipment of manufactures, of which assembled automobiles were a principal item.

From the pattern of California's trade, it is apparent that in some cases the state did not have adequate resources and in other cases markets were too limited to permit its industries to produce efficiently some of the important manufactures which it needed. On the other hand, the scale of operations of its industries was large enough so that it could act as a principal supplier of some manufactured products to other District states and to the offshore United States possessions and as an important supplier of agricultural products to other regions.

The trade patterns of Arizona, Oregon, and Washington provided a direct contrast to that of California. Each of these states had a large deficit with California because of purchases of manufactures. Arizona's intradistrict deficit was intensified somewhat because of imports from District states other than California consisting of agricultural products, lumber, and some manufactured items. Washington also ran a deficit with several District states other than California because of imports of agricultural products, livestock, and some manufactured items. Oregon, on the other hand, had a small net surplus with District states other than California.

Each of these states, however, was able to export more to areas outside the District than it imported from them. Arizona's trade surplus reflected very heavy shipments of refined copper, lead, and zinc and agricultural products to the rest of the United States. Oregon accumulated a surplus because of shipments of lumber, plywood, millwork, paper, and some fruits to regions outside the District. Washington also accumulated a surplus with the rest of the nation because of its exports of lumber, plywood, aluminum, aircraft, and some agricultural products. Unlike Arizona and Oregon, Washington's surplus with areas outside the District fell considerably short of offsetting its deficit with other District states.

Idaho was able to earn a surplus in its trade account both with District states and with the remainder of the nation. It provided District states with crops, livestock, and some lumber and the rest of the nation with these items plus lead, zinc, and sugar. Utah presented a somewhat different picture. It had a surplus with the District based partly on livestock and agricultural products and more importantly on the considerable quantities of iron and steel shipped to a number of District states. In its trade with the remainder of the United States, Utah had a deficit because of net imports of electrical equipment, machinery, iron and steel, motor vehicles and parts, and various other manufactures.

APPENDIX

A discussion of the sources of the information underlying this article and of the reliability of the data is essential. The source materials were gathered from a variety of agencies—public as well as private. The movements of commodities by rail were obtained, in physical terms, from the Carload Waybill Analysis (1 percent sample) published each year by the Interstate Commerce Commission. Dollar values of these movements were derived by applying wholesale per-ton prices published by the ICC in January 1953 in a report entitled, "Freight Revenue and Wholesale Value at Destination of Commodities Transported on Class I Steam Railways in the United States, Calendar Year 1950." Data on the physical quantities of goods moved by ship in coastwise and intercoastal trade and to and from offshore possessions were supplied by the United States Corps of Engineers. These data were valued by applying the per-ton commodity prices of the ICC. Foreign trade statistics were drawn from published reports of the United States Bureau of the Census. Figures on the value of aircraft, normally flown to destination, entering the trade of the District were largely obtained from the airframe manufacturers, with some estimation for incomplete coverage. The value of natural gas and petroleum entering the District by pipeline was derived from official reports of the United States Bureau of Mines and from correspondence with private oil and gas firms.

A number of elements of statistical discrepancy are present in the assembled data, but it is not possible to quantify their extent in any strict sense. An element of inexactness enters as a result of the method of pricing the physical quantity data. The prices utilized were national average wholesale values and insofar as regional differences exist the resultant data will not truly reflect the dollar volume of District trade. Also, there was not perfect correspondence as between the ICC and Corps of Engineers commodity classifications so that some approximations had to be made in the pricing process. These involved pricing some CE commodities by the most closely similar ICC prices, and in other instances weighted average prices covering several ICC commodity groups were used to value individual CE classifications. The sample nature of the ICC data on rail movements introduces an additional element of inexactness, but this is probably quite small as the sample was large in a statistical sense.

A further, and perhaps more important, limitation is the significant gap in the data due to incomplete coverage. The principal gap is the absence of District information on the movement of commodities by truck line.

Sufficient suitable data on such interregional shipments are not available from which even a rough approximation of the extent of the gap could be made on a District basis. The importance of trucks on short hauls is probably greater than on longer movements and places a more severe limitation on the data pertaining to trade among the District states than on the interregional figures. Data are also lacking on commodity movements by air-freight lines, railway express, parcel post, and private conveyances. However, these latter movements are likely to be quite small relative to the total dollar volume of District interregional commodity trade.

Despite the above statistical limitations and gaps, the basic information is felt to cover adequately a sufficient proportion of total District trade to provide a general notion of the region's exchange of goods. This represents a substantial advance in an area where little or nothing has been known in the past.

REGIONS AND GEOGRAPHIC DIVISIONS OF THE UNITED STATES

Northeast
- New England
  - Maine
  - Vermont
  - New Hampshire
  - Massachusetts
  - Connecticut
  - Rhode Island
- Middle Atlantic
  - New York
  - Pennsylvania
  - New Jersey

North Central
- East North Central
  - Wisconsin
  - Michigan
  - Ohio
  - Indiana
  - Illinois
- West North Central
  - Minnesota
  - Iowa
  - Missouri
  - North Dakota
  - South Dakota
  - Nebraska
  - Kansas

South
- South Atlantic
  - Delaware
  - Maryland
  - District of Columbia
  - West Virginia
  - Virginia
  - North Carolina
  - South Carolina
  - Georgia
  - Florida
- East South Central
  - Kentucky
  - Tennessee
  - Alabama
  - Mississippi
- West South Central
  - Oklahoma
  - Arkansas
  - Louisiana
  - Texas

West
- Mountain
  - Montana
  - Wyoming
  - Colorado
  - New Mexico
- Twelfth District
  - Arizona
  - California
  - Idaho
  - Nevada
  - Oregon
  - Utah
  - Washington

Offshore Possessions
- Alaska
- Hawaii
- Puerto Rico

Source: Based upon United States Department of Commerce, Bureau of the Census classifications amended to include offshore United States possessions and to separate Twelfth District states from the West.

BUSINESS INDEXES—TWELFTH DISTRICT[1]

(1947-49 average=100)

Year and month	Industrial production (physical volume)[2]								Total nonagricultural employment	Total mf'g employment[4]	Carloadings (number)[2]	Dep't store sales (value)[2]	Retail food prices[5, 6]	Waterborne foreign trade[3, 6]	
	Lumber	Petroleum[3] Crude	Petroleum[3] Refined	Cement	Lead[3]	Copper[3]	Wheat flour[3]	Electric power						Exports	Imports
1929	80	87	78	54	165	105	90	29	....	....	102	30	64	190	124
1931	42	57	55	36	100	49	86	29	....	....	68	25	50	138	80
1933	34	52	50	27	72	17	75	26	....	....	52	18	42	110	72
1935	45	62	56	33	86	37	87	30	....	47	66	24	48	135	109
1937	61	71	65	56	114	88	84	38	....	60	81	30	50	170	119
1939	60	67	63	56	93	80	91	40	....	55	77	31	47	163	95
1940	65	67	63	61	108	94	87	43	....	63	82	33	47	132	101
1941	77	69	68	81	109	107	87	49	....	83	95	40	52	....	....
1942	77	74	71	96	114	123	88	60	....	121	102	49	63	....	....
1943	74	85	83	79	100	125	98	76	100	164	99	59	69	....	....
1944	74	93	93	63	90	112	101	82	101	158	105	65	68	....	....
1945	61	97	98	65	78	90	112	78	96	122	100	72	70	....	....
1946	80	94	91	81	70	71	108	78	95	97	101	91	80	89	57
1947	94	100	98	96	94	106	113	90	99	100	106	99	96	129	81
1948	102	101	100	104	105	101	98	101	102	102	100	104	103	86	98
1949	104	99	103	100	101	93	88	108	99	97	94	98	100	85	121
1950	116	98	103	112	109	115	86	119	103	105	97	105	100	91	137
1951	115	106	112	128	89	115	95	136	111	122	100	109	113	186	157
1952	111	107	116	124	86	112	96	144	118	132	101	114	115	171	200
1953	119	109	123	130	74	111	96	161	122	139	100	116	113	140	308
1954	111	106	119	132	70	101	99	173	120	136	96	113	113	131	260
1954															
April	116	107	119	134	71	98	96	168	120	136	99	111	113	157	232
May	123	107	123	143	67	103	96	174	120	136	97	114	114	158	271
June	97	107	119	140	69	105	96	183	119	137	96	114	114	141	237
July	79	106	118	143	63	91	92	179	119	131	88	115	113	144	331
August	87	104	115	137	73	75	101	174	119	130	90	115	113	96	282
September	109	105	121	138	69	97	108	174	120	136	97	110	113	115	262
October	124	104	116	143	70	110	105	176	120	137	102	116	113	112	277
November	117	104	119	132	73	116	104	177	121	138	98	114	111	118	196
December	130	105	119	132	69	114	101	173	121	139	106	118	111	113	313
1955															
January	135r	105	116	119	74	118	107	173	122	139	106r	124	112	163	287
February	133r	105	122	131	76	130	112	179	122	139	99r	115	112	183	263
March	121r	106	120	137	82	130	108	188	123	140	101r	116	112	....	240
April	120	106	118	149	77	127	97	191	123	139	106	122	113	....	....

BANKING AND CREDIT STATISTICS—TWELFTH DISTRICT

(amounts in millions of dollars)

Year and month	Condition items of all member banks[7]				Bank rates on short-term business loans[9]	Member bank reserves and related items[10]					Bank debits index 31 cities[9, 13] (1947-49=100)[3]
	Loans and discounts	U.S. Gov't securities	Demand deposits adjusted[8]	Total time deposits		Reserve bank credit[11]	Commercial operations[12]	Treasury operations[12]	Coin and currency in circulation[11]	Reserves	
1929	2,239	495	1,234	1,790	.....	− 34	0	+ 23	− 6	175	42
1931	1,898	547	984	1,727	.....	+ 21	− 154	+ 154	+ 48	147	28
1933	1,486	720	951	1,609	.....	− 2	− 110	+ 150	− 18	185	18
1935	1,537	1,275	1,389	2,064	.....	+ 2	− 163	+ 219	+ 14	287	25
1937	1,871	1,270	1,740	2,187	.....	− 1	− 90	+ 157	− 3	549	32
1939	1,967	1,450	1,983	2,267	.....	+ 2	− 192	+ 245	+ 31	584	30
1940	2,130	1,482	2,390	2,360	.....	+ 2	− 148	+ 420	+ 96	754	32
1941	2,451	1,738	2,893	2,425	.....	+ 4	− 596	+1,000	+ 227	930	39
1942	2,170	3,630	4,356	2,609	.....	+ 107	−1,980	+2,826	+ 643	1,232	48
1943	2,106	6,235	5,998	3,226	.....	+ 214	−3,751	+4,486	+ 708	1,462	60
1944	2,254	8,263	6,950	4,144	.....	+ 98	−3,534	+4,483	+ 789	1,706	66
1945	2,663	10,450	8,203	5,211	.....	− 76	−3,743	+4,682	+ 545	2,033	72
1946	4,068	8,426	8,821	5,797	.....	+ 9	−1,607	+1,329	− 326	2,094	86
1947	5,358	7,247	8,922	6,006	.....	− 302	− 510	+ 698	− 206	2,202	95
1948	6,032	6,366	8,655	6,087	.....	+ 17	+ 472	− 482	− 209	2,420	103
1949	5,925	7,016	8,536	6,255	3.20	+ 13	− 930	+ 378	− 65	1,924	102
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	+ 189	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	4.01	+ 2	−2,448	+2,328	− 30	2,505	153
1954											
May	9,001	6,991	10,045	8,306	.....	+ 9	− 148	+ 136	+ 36	2,432	143
June	9,049	6,981	10,087	8,428	4.14	− 21	− 254	+ 277	+ 15	2,413	157
July	8,989	7,190	10,310	8,444	.....	+ 29	− 307	+ 170	+ 3	2,308	145
August	8,977	7,574	10,257	8,501	.....	− 18	+ 28	− 12	+ 7	2,317	154
September	9,054	7,610	10,463	8,555	4.08	+ 16	− 170	+ 196	− 8	2,368	152
October	9,048	8,014	10,749	8,651	.....	+ 9	− 138	+ 142	+ 23	2,364	150
November	9,343	8,089	10,937	8,596	.....	− 1	− 244	+ 342	+ 27	2,440	158
December	9,422	7,973	11,158	8,663	4.01	0	− 127	+ 175	− 23	2,505	173
1955											
January	9,510	7,998	11,246	8,725	.....	− 34	− 150	+ 77	− 79	2,481	161
February	9,612	7,693	10,945	8,765	.....	+ 15	+ 26	− 57	+ 13	2,447	166
March	9,696	7,390	10,733	8,837	3.98	+ 10	− 401	+ 362	− 1	2,418	177
April	9,657	7,756	11,060	8,833	.....	+ 60	− 306	+ 261	+ 15	2,432	165
May	9,810	7,690	10,951	8,885	.....	− 55	− 51	+ 195	+ 50	2,476	170

[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, various lumber trade associations; petroleum, cement, copper, and lead, U.S. Bureau of Mines; wheat flour, U.S. Bureau of the Census; 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] Excludes fish, fruit, and vegetable canning. [5] Los Angeles, San Francisco, and Seattle indexes combined. [6] 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. [7] Annual figures are as of end of year, monthly figures as of last Wednesday in month or, where applicable, as of call report date. [8] Demand deposits, excluding interbank and U.S. Gov't deposits, less cash items in process of collection. Monthly data partly estimated. [9] Average rates on loans made in five major cities during the first 15 days of the month.
[10] End of year and end of month figures. [11] Changes from end of previous month or year. [12] 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. [13] Debits to total deposits except interbank prior to 1942. Debits to demand deposits except Federal Government and interbank deposits from 1942. r—Revised.