

# MONTHLY BUSINESS REVIEW



FEDERAL RESERVE BANK OF DALLAS

Vol. 41, No. 12

DALLAS, TEXAS

December 1, 1956

## INDUSTRIAL GROWTH IN THE SOUTHWEST

ROBERT B. WILLIAMSON, *Industrial Economist*  
*Federal Reserve Bank of Dallas*

Industrialization—the growth and development of new and expanding industries—has been the most outstanding change in the economy of the Southwest in the postwar period. It has provided a dynamic new element of growth, stimulating new and enlarged trade and commerce, significantly altering the pattern of basic sources of income, and supplying a needed diversification from the traditional economy built on cotton, cattle, and oil. The development of new industries has provided the means to absorb large increments of manpower which have come from the mechanization and consolidation of farms and from the rapid growth in the labor force through an expanding population.

The impact of industrial growth has spread throughout the region, although industrialization has been concentrated largely in a few widely separated areas in close proximity to principal cities. In providing alternative sources of employment and encouraging a wider range of commuting distances, industrial growth has supplied the smaller towns, and even the rural areas, an opportunity to participate in the expanding economy of the Southwest. Along with industrialization have come problems, particularly those connected with a concentrating population, greater reliance upon an individual employer, and the risks attendant upon cyclical movements in the economy.

The acceleration in industrial growth in the Southwest dates primarily from the defense plant construction during World War II. Although some of these plants were closed following the war, the influx of industrial workers and the advantages of the regional area for manufacturing construction began to attract both resource-based and market-oriented industries.

At irregular intervals, the United States Bureau of the Census makes a comprehensive survey of manufacturing establishments, which provides the basis for a study of the industrial position of individual areas and of the Nation. This article is based primarily upon the reports of the Census of Manufactures for 1947 and 1954 and covers the five District states of Arizona, Louisiana, New Mexico, Oklahoma, and Texas. It should be recognized that there are important limitations on the use of these reports. The comparison between the two census years understates, to some extent, the postwar trend, because in 1947 the economy was in a period of strong cyclical expansion while in 1954 an economic readjustment was under way. In contrast, the expansion in industrial growth in dollar terms is overstated, since general price increases raised the level of the wholesale price index by 14 percent over the 7-year period.

Industrial growth in the Southwest and in the Nation, which slowed down in 1954, accelerated again in 1955 and 1956. The year 1955 showed a great advance in the utilization of existing capacity, while 1956 has witnessed a strong movement toward expanding existing plants and building new capacity. There is little question that industrial activity in the Southwest during the 1954-56 period has been at a record level.

### Changes in Total Manufacturing

Prior to World War II, the Southwest was primarily a producer of raw materials—such as oil, copper, sulfur, cotton, wool, and other agricultural products—which were shipped out for processing in other areas. While the Southwest continues to be an important producer of raw materials, its manufacturing has become increasingly important since the early 1940's.

### MAJOR INDICATORS OF NATIONAL ECONOMIC ACTIVITY, 1956, 1954, AND 1947

(Dollar amounts in billions)

Economic indicator	1956 <sup>e</sup>	1954	Percent change, 1956 from 1954	1947	Percent change 1954 from 1947
Total gross national product..	\$411.5	\$360.7	14.1	\$232.2	55.3
Total industrial production (annual average index)....	143	125	14.4	100	25.0
Nonagricultural employment..	51,480,000	48,431,000	6.3	43,462,000	11.4
Expenditures for new manu- facturing plant and equipment.....	\$15.25	\$11.04	38.1	\$8.70	26.9
Wholesale prices—all com- modities (1947-49=100)...	114.2	110.3	3.5	96.4	14.4
Wholesale prices—industrial products (1947-49=100)...	122.2	114.5	6.7	95.3	20.1

<sup>e</sup>—Estimated.

SOURCE: Joint Committee on the Economic Report.



Between 1939 and 1947, manufacturing employment in the Southwest increased 68 percent. Value added by manufacture—a measure of net product computed by subtracting costs of materials and supplies from the value of shipments—showed a gain of 270 percent. The region's share of the national total increased from 3.2 percent to 3.9 percent.

The location of war industries in this area resulted primarily from the Nation's need for new war production capacity, the Government policy of industrial dispersion, and the presence in the Southwest of many raw materials vital to war production. Another incentive was locational advantages of the area—such as access to coastal and ocean shipping, a mild climate, and available labor supplies. Oil refineries and industries serving the oil industry were expanded, and new plants were established to produce textiles and apparel, synthetic rubber, chemicals, ordnance, metal, machinery, aircraft, and ships.

After World War II, many southwestern industrial plants which had been producing defense materials converted to civilian products, accentuating the rapid development of the peacetime industrial segment of the economy. Value added by manufacture in the Southwest almost doubled from 1947 to 1954, increasing from \$2,878,652,000 to \$5,604,458,000, and the region's share of the national total rose from 3.9 percent to 4.8 percent. Over the same period, manufacturing employment increased 35 percent, compared with a gain of only 10 percent in the Nation.

This growth was aided by a continued increase in the raw material supplies of the region, an increasing market potential, and the new defense build-up during the Korean conflict. The value of total mineral production increased 98 percent between 1947 and 1954 in the major producing states of the region.

The increasing market potential was based on a substantial population gain and rising levels of personal income. Between 1947 and 1954, total population in the region increased 14 percent, compared with a gain of 12 percent for the Nation. The important rural-to-urban shift in population underscores the development of new nonagricultural employment opportunities and the resulting increase in personal income for these workers. Total personal income in the Southwest increased nearly two-thirds over the period 1947-54, and the region's

share of total personal income in the Nation increased from 7.5 percent to 8.0 percent. This gain in personal income reflected not only a larger population but also higher levels of per capita income. Cash receipts from farm marketings in the Southwest also rose at a faster rate than in the Nation.

It should be noted that defense activities remained an important stimulant to industrial growth in the Southwest in the 1947-54 period. Military prime contracts awarded in the southwestern states between 1950 and 1954 comprised 5.4 percent of the national total, or an amount greater than the region's relative share of manufacturing capacity as indicated by value added. These data do not include small contracts and subcontracts, which are of great importance to the Southwest. During the initial expansion of capacity for the Korean War effort, from October 1950 to August 1951, the Southwest received 13 percent of the certificates of necessity issued by the Government to encourage defense construction. New facilities begun under this program which added greatly to the region's industrial potential included oil refineries, chemical plants, primary aluminum plants, steel mills, fabricated metal products establishments, and a large copper smelter.

Other factors which encouraged southwestern industrialization after World War II were (1) high levels of general business activity in the United States, (2) technical progress in the development and production of new petrochemical products, and (3) the self-generation of rapid industrial growth.

One result of the sharp expansion in manufacturing during the postwar period was a continued gain in the relative importance of manufacturing compared with other sectors of the southwestern economy. Manufacturing wages and salaries rose from 17.8 percent of total wages and salaries in 1947 to 18.6 percent in 1954. Manufacturing ranked below only the trades and government as a source of wages and salaries. Available data for total personal income and manufacturing wages and salaries indicate further improvement of the relative position of manufacturing in 1955 and 1956.

### Manufacturing Characteristics

Manufacturing in the five southwestern states in 1954 was characterized by a relatively large number of small establishments and a high value added per worker. Of the 15,551 manufacturing establishments in the region, nearly three-fourths employed less than 20 employees. Average employment of all establishments was 44 workers, compared with a national average of 54 workers. This characteristic of manufacturing in the Southwest results mainly from the large number of small food-processing, printing, and lumber and wood products establishments in the area.

The high value added per employee, which was \$8,226 compared with \$7,445 in the Nation, stems from the region's possession of a significant share of the Nation's oil refineries and chemical plants. Both types of establishments turn out products of large value with relatively few employees. Wage scales in these industries also reflect the high productivity. However, the average pay per employee in all manufacturing

MANUFACTURING VALUE ADDED AND EMPLOYMENT, 1954 and 1947  
Five Southwestern States and United States  
(Dollar amounts in thousands)

Area	Value added		Employment		Percentage change	
	1954p	1947	1954p	1947	Value added	Employment
Arizona.....	\$ 191,387	\$ 83,829	26,050	14,188	128	84
Louisiana.....	1,182,485	694,062	146,460	132,463	70	11
New Mexico.....	127,052	32,136	14,984	6,696	295	124
Oklahoma.....	595,401	341,149	79,698	55,441	75	44
Texas.....	3,508,133	1,727,476	414,113	297,054	103	39
Southwest....	\$ 5,604,458	\$ 2,878,652	681,305	505,842	95	35
United States..	\$116,759,421	\$74,342,411	15,683,317	14,294,304	57	10

p—Preliminary.

SOURCE: United States Bureau of the Census.



CHARACTERISTICS OF SELECTED MANUFACTURING INDUSTRY GROUPS, 1954<sup>P</sup>  
Five Southwestern States<sup>1</sup>

Industry group	Number of establishments	PER ESTABLISHMENT				PER EMPLOYEE		
		Employees	Payroll	Value added	New capital expenditures	Payroll	Value added	New capital expenditures
Food and kindred products.....	3,642	34	\$ 110,825	\$ 246,903	\$ 14,690	\$3,289	\$ 7,328	\$ 436
Machinery, except electrical. . .	1,198	38	166,737	337,740	19,107	4,410	8,932	505
Chemicals and products.....	847	75	363,486	1,263,783	266,989	4,846	16,850	3,560
Transportation equipment.....	350	238	1,116,017	1,499,026	<sup>2</sup> 90,821	4,691	6,031	<sup>2</sup> 302
Primary metal industries.....	222	154	679,149	1,383,162	<sup>2</sup> 178,065	4,420	9,001	<sup>2</sup> 1,225
Petroleum and coal products....	202	311	1,636,594	3,771,317	1,170,871	5,255	12,110	3,760
All other <sup>3</sup> .....	9,090	—	—	—	—	—	—	—
All industries.....	15,551	44	170,562	360,392	46,646	3,893	8,226	1,065

<sup>1</sup> Arizona, Louisiana, New Mexico, Oklahoma, and Texas.

<sup>2</sup> Based on available data for Texas.

<sup>3</sup> Includes small number not reported for industries listed above.

p—Preliminary.

SOURCE: United States Bureau of the Census.

establishments in the Southwest, at \$3,893 in 1954, was below the national average of \$4,023.

Capital expenditures for manufacturing plants and equipment are also high in the Southwest, partly as a result of the very large investments required in the petroleum and chemical industries. The expenditures for all types of manufacturing in the region during 1954 were \$46,646 per establishment and \$1,065 per manufacturing employee, exceeding the national averages by 72 percent and 114 percent, respectively. Another reason for these expenditures being relatively more important in the region was the faster rate of growth in the general industrialization of the area.

### Major Industries

A review of the characteristics of southwestern manufacturing in terms of major industry groups shows that in 1954, food and kindred products continued to account for the largest number of manufacturing employees, with 122,712 of the 681,305 total. This group also provided the largest payroll of any industry. However, by 1954, chemicals production had surpassed food processing in the amount of value added, contributing 19 percent of the total. Petroleum and coal products manufacturing, which had ranked second in value added in 1947, fell to third place.

The fastest growing of the major industry groups was transportation equipment, which ranked second in 1954 in both employment and payroll and fourth in value added. Over the 1947-54 period, this industry—led by gains in aircraft manufacture—increased its employment by 164 percent and nearly tripled the value it added in manufacturing. Other major industries showing exceedingly rapid gains were primary metals and chemicals. Nonelectrical machinery and fabricated metal products manufacturing also expanded at above-average rates.

### Chemicals and Petroleum Products

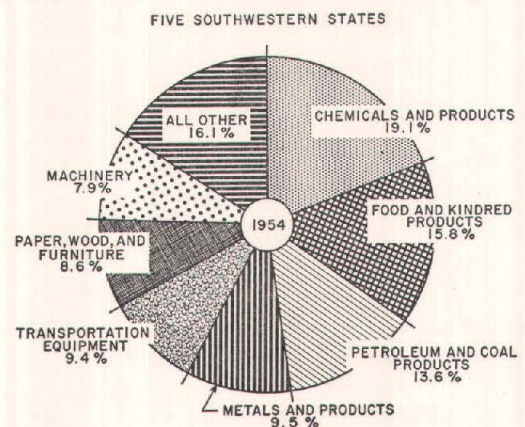
Together, the related chemicals and petroleum products industries accounted for nearly one-third of the value added and nearly two-thirds of the expenditures for new plant and equipment in manufacturing during 1954. The petroleum

industry has grown at a slower rate than total manufacturing, but value added by chemicals production nearly tripled between 1947 and 1954.

Crude oil produced in the Southwest represents approximately two-thirds of the national total. With the availability of pipelines and water transportation to other parts of the country, it would be possible for this crude oil to be refined elsewhere. However, approximately 40 percent of the Nation's crude oil refining capacity is located here, mainly along the Gulf Coast. Oil refining in this area had its first impetus and initial expansion during World War I; the chemical industry concentration along the coast received its real start during the Second World War.

The manufacture of both chemicals and petroleum products has flourished in the gulf coast area, largely because of the plentiful supply of oil, sulfur, and other raw materials in the immediate vicinity; the existence of trunk pipelines from other oil-producing areas; cheap water transportation to major markets of the Nation; the availability of low-cost natural gas as a raw material and for fuel; the mild climate, suitable for the open plants typical of the industries; a supply of skilled

### VALUE ADDED BY TYPE OF INDUSTRY, 1954



Preliminary.  
SOURCE: U.S. Bureau of the Census.



# MANUFACTURING VALUE ADDED AND EMPLOYMENT, BY INDUSTRY GROUP, 1954 AND 1947

## Five Southwestern States<sup>1</sup>

(Dollar amounts in thousands)

Industry group	Valued added		Employment		Percentage change	
	1954p	1947	1954p	1947	Value added	Employment
Chemicals and products.....	\$1,070,424	\$ 368,875	63,528	38,952	190	63
Food and kindred products.....	883,333	579,605	122,712	106,164	55	16
Petroleum and coal products.....	761,806	561,553	62,909	57,842	36	9
Transportation equipment.....	524,659	132,364	83,264	31,595	296	164
Machinery, except electrical.....	404,612	172,862	45,297	31,308	134	45
Primary metal industries.....	307,062	102,228	34,113	19,281	200	77
Printing and publishing.....	256,179	155,471	36,411	29,071	65	25
Pulp, paper, and products.....	234,871	134,203	25,471	19,212	75	33
Stone, clay, and glass products.....	230,424	102,292	25,749	19,583	125	32
Fabricated metal products.....	225,245	106,650	31,781	21,185	111	50
Lumber and wood products.....	177,060	209,328	47,006	66,615	-15	-29
Apparel and related products.....	135,804	92,794	39,667	29,139	46	36
Furniture and fixtures.....	68,704	33,434	12,949	8,790	106	47
Textile mill products.....	45,249	37,676	10,966	10,785	20	2
Electrical machinery.....	38,181	12,163	5,229	1,946	214	169
All other <sup>2</sup> .....	240,845	77,154	34,253	14,374	212	138
All industries.....	\$5,604,458	\$2,878,652	681,305	505,842	95	35

<sup>1</sup> Arizona, Louisiana, New Mexico, Oklahoma, and Texas.<sup>2</sup> Includes small amounts not published for industries listed above.

p—Preliminary.

SOURCE: United States Bureau of the Census.

labor, provided by the long-established petroleum industry; and expanding local markets. The existence of oil refineries in the area is a special attraction to the chemical industry since refinery gases are an important raw material for many chemical products.

Industrial organic chemicals constitute the largest segment of the southwestern chemical industry, with the production of chemicals used in plastics and synthetic rubber showing significant growth in recent years. Industrial inorganic chemicals, including sulfuric compounds; vegetable and animal oils; paints; and soaps and related products are also of importance. Some of the major chemicals produced in the Southwest are ammonia, butadiene, ethylene, polyethylene, styrene, and synthetic rubber.

### Food and Kindred Products

Food and kindred products manufacturing, with its many small establishments, ranked a close second to chemicals in value added in 1954. The food industry is relatively more important in the Southwest than in the Nation, accounting for 16 percent of total value added compared with 12 percent in the Nation. While chemicals and other major industries are growing rapidly, food processing has expanded very little during the postwar period. The lack of growth in food processing reflects, in part, the severe drought in the area in recent years and the severe freezes in the Lower Rio Grande Valley which greatly reduced citrus production.

The major types of food processing in the Southwest reflect, in large degree, the character of the region's agricultural economy, with grain mill products and meat being two of the most important food products. Vegetable and fruit canning, preserving, and freezing are of more than average importance, with citrus production in the Rio Grande Valley accounting

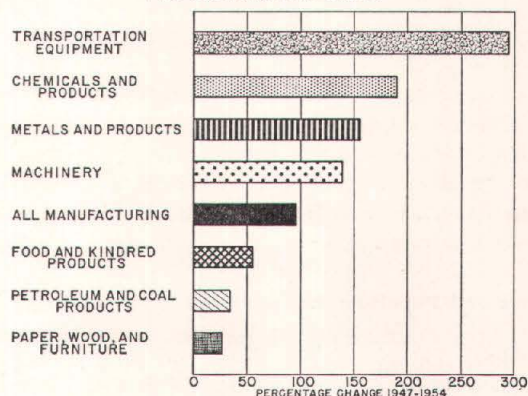
for a significant part of this activity. Other types of food produced in the area — such as bakery, beverage, and dairy products — reflect the small local market characteristics of the industry and are types found in most areas of the Nation.

### Transportation Equipment

Transportation equipment manufacturing received its first major expansion during World War II, when shipbuilding on the gulf accelerated and military aircraft production was located in the region. Total employment in the industry amounted to approximately 5,000 workers in the five southwestern states before the war. In 1947, even after the peacetime adjustment, there were 31,595 workers; and by 1954, total employment in the industry had increased to 83,264 workers. Aircraft manufacturing has fluctuated widely since

### PERCENT CHANGE IN VALUE ADDED BY MAJOR TYPES OF INDUSTRY, 1947-1954

FIVE SOUTHWESTERN STATES



Preliminary.

SOURCE: U.S. Bureau of the Census.



1947, the principal movements being a sharp expansion induced by the Korean War, a moderate decline in 1953 and 1954, and renewed growth in 1955 and 1956. The other segments of the transportation equipment industry generally followed a similar pattern, except that substantial growth in automobile assembly operations was evident throughout the period.

The aircraft industry of the Southwest is located inland, with important concentrations in north Texas, Arizona, and Oklahoma. In Texas, manufacturers of complete aircraft and establishments performing modifications on complete aircraft accounted for 70 percent of the total value added by transportation equipment manufacturing in 1954. A relative newcomer in the industry, the State accounted for over 7 percent of the value added by the aircraft industry of the Nation.

The fast-growing aircraft industry in the Southwest has derived considerable stimulus from its central location and inland production sites — factors which are considered important in the location of military aircraft plants — and from the mild, clear weather, which provides ideal conditions for flight testing. Numerous military and other airfields are located throughout the area, and a sizable number of skilled production workers are now concentrated within the region.

Characteristically, aircraft establishments are large, and the seven located in Texas during 1954 employed an average of 5,878 workers per establishment. Pay in this industry is high, with the average per employee being \$4,961 — compared with an average of \$4,747 for all transportation equipment workers and \$3,949 for all manufacturing employees in the State.

Other transportation equipment manufacturers in the region include small manufacturers of aircraft components, automotive equipment and assembly plants, railroad shops, and shipbuilders. Operations at the region's shipyards declined sharply after the Korean War; but, recently, activity has increased, particularly in connection with the building of platforms and barges used in sulfur mining and in drilling and servicing oil wells in the Tidelands. The shipyards also have been providing "vessels," or containers, for the chemical industry. Since 1954, several plants manufacturing automotive trailer equipment have been established in the region.

#### **Metals and Machinery**

The metals and machinery industries represent a major and steadily growing segment of southwestern industry. This group accounted for 13 percent of total value added by manufacture in 1939 and 14 percent in 1947. By 1954, its share had risen to over 17 percent, or nearly the same as the value added by chemicals production. The metal and metal products industries contributed over 9 percent of total value, or about the same as transportation equipment manufacture, and machinery accounted for 8 percent.

Primary metals production in District states — based on copper, zinc, and other nonferrous metals — was concentrated

mainly in Arizona and Oklahoma prior to World War II. Reflecting the rapid growth in the production of aluminum and steel, total value added by primary metals production more than tripled between 1947 and 1954. Most of this growth was in Texas, which accounted for almost two-thirds of the region's metals production by the end of the period.

Steelmaking in the region is centered in Houston and in the northeastern part of Texas. Before World War II, Texas had an annual steelmaking capacity of less than 5,000 tons; by 1954, this capacity had risen to nearly 1,800,000 tons. In addition, Oklahoma has a steelmaking capacity of 71,000 tons. Despite this large relative growth for the region, its share of the Nation's total steel capacity was only 1.5 percent in 1954. The continued growth trend in the primary steel industry is indicated by the new expansions being planned by major establishments in the northeastern and coastal areas of Texas.

Much of the region's steel production has been tailored to meet a specific market, particularly the needs of the oil and gas industry for pipe and tubular goods. Aiding the development of the industry has been the existence of iron ore, coking coal, and limestone deposits within the region.

Primary aluminum production in the Southwest was a postwar development, the first plant being established in 1950. By 1954, there were four primary aluminum plants and one major alumina plant located in Texas and Louisiana, with an annual capacity totaling over 400,000 tons of primary aluminum — or nearly 30 percent of the national total. Including two plants in the adjoining State of Arkansas, this west south-central area accounted for over 40 percent of the value added by primary aluminum production in the United States during 1954. Continued growth is indicated, as all three of the companies operating in the region have major expansion programs under way.

The aluminum industry has been attracted to the Southwest by several locational advantages. The process of reducing the primary metal from alumina requires enormous amounts of electricity — approximately 10 kilowatt-hours for every pound of aluminum, and the region possesses cheap electric power. One plant in Louisiana and two in Texas use local supplies of natural gas to generate electricity, while another in Texas uses local lignite supplies. Close proximity to supplies of bauxite is also important, as approximately 5 tons of this material is required to produce 1 ton of aluminum. Most of the bauxite supply is imported from the Caribbean area, and practically all of the remainder is produced in Arkansas. Conversion of bauxite to alumina for use in the primary aluminum plants is performed in Texas, Arkansas, and other southern states. Lime and sodium carbonate, other materials used by the aluminum industry, are available within the region. In addition, a growing regional market for aluminum is provided by the transportation equipment and construction industries.

Magnesium, another light metal, is produced from sea water at a gulf coast location. This facility, a wartime development, accounts for most of the magnesium produced within



the United States and all of the domestic commercial production. The Nation's only tin smelter was established on the Texas Gulf Coast in 1942 and has continued to operate, but at rates well below capacity.

Fabricated metal products account for a smaller value added by manufacture than do primary metals and have grown less rapidly. Nevertheless, recent trends indicate a faster rate of growth in the future. Most of the fabricated metal plants are small, with an average of 33 workers per establishment in 1954 compared with an average of 154 in primary metal plants. Structural, ornamental, and boiler-shop products for use in the construction and oil industries have been the most important products. Production of heating, plumbing, and air-conditioning equipment also has shown significant gains.

Machinery production expanded at an above-average rate over the 1947-54 period. In the latter year, nonelectrical machinery, comprising principally oil field machinery and oil tools, was the fifth ranking industry in the Southwest. Electrical machinery is the smallest industry in the metals and machinery group but has had the most rapid growth, increasing 214 percent from 1947 to 1954. Electronics (automatic control and communications equipment) is a segment of the industry which has begun to show considerable promise in the Southwest, and sizable concentrations of electronics and instruments manufacturing have already developed in several centers.

#### Other Major Industries

Another important group within the region consists of pulp and paper, lumber and wood products, and furniture manufacturers. Located mainly in the pine belt of Louisiana and east Texas, these manufacturers accounted for nearly 9 percent of total value added by manufacture in 1954. The pulp, paper, and products industry, which is the largest industry within this group, has utilized modern equipment and new pulping techniques adapted to the area's forest resources to increase its value added relative to the industry throughout the Nation.

Activity in the lumber and wood products and the furniture and fixtures industries is related to the level of construction, which expanded rapidly between 1947 and 1954. Value added by furniture and fixtures manufacturing in the region more than doubled over the period. On the other hand, value added by the lumber and wood products industry declined 15 percent between 1947 and 1954, compared with a gain of 26 percent in the Nation; recent data indicate that the decline in the region has continued. These declines reflect a long-run downward trend in the demand for the region's lumber and wood products because of the increasing use of other materials and western softwoods in residential construction.

The stone, clay, and glass products industry, which accounted for 4 percent of value added by manufacture in the Southwest, is closely linked to general construction activity. Cement plants, the major segment of the industry, and manu-

facturers of structural clay products (bricks, tile, and pipe) locate near the areas of construction activity because of heavy shipment costs. The high level of construction in the Southwest during the postwar period was responsible for the 125-percent increase in value added by the industry.

Printing and publishing — the seventh ranking industry — accounted for nearly 5 percent of total value added in 1954. This activity, which engages a large number of small establishments, is found in all but the smallest towns; however, the greatest portion of the output is concentrated in the major cities of the area, where magazines and daily newspapers with wide circulation are published. The expansion of advertising in the postwar period, combined with the rapid increase in circulation, has accelerated growth in this type of activity.

Apparel and related products and textile mill products accounted for 3 percent of total manufacturing value added in the Southwest. Although this type of manufacturing has increased less rapidly than others in the region, it has grown relative to the Nation's apparel and textile industries.

#### The Recent Trend

The Southwest has continued to show rapid industrial growth since the 1954 census. The estimated 8-percent gain in manufacturing employment between 1954 and 1956 is equal to the average rate of gain occurring between 1947 and 1954 and compares with an estimated increase of 5.6 percent for the Nation.

The region's more rapid growth in manufacturing activity during the past 2 years was foreshadowed by its high level of investment reported for 1954. Whereas the Southwest accounted for less than 5 percent of total value added by manufacture in 1954, its \$725,390,000 expenditures for new manufacturing facilities comprised over 9 percent of the Nation's total. The amount of manufacturing investment in the region has risen still further, and the value of construction contracts awarded for manufacturing buildings in Texas during 1956 is expected to be nearly three times the 1954 total. Construction awards for factory buildings in the Nation are expected to show a substantially lower rate of gain, and estimates of expenditures for new manufacturing plants and equipment in the Nation reflect an increase of only 38 percent over the 2-year period.

The greatest expansion in the Southwest since 1954 has occurred in transportation equipment, nonelectrical machinery, and fabricated metal products manufacturing. Available data for Texas show that over the past 2 years, employment in each of these industries has increased around 18 to 20 percent. Other major increases have occurred in chemicals and primary metals, with each of these showing employment gains of around 13 percent. These recent trends reflect a slight tapering off in the 1947-54 rates of growth for transportation equipment, chemicals, and primary metals and accelerated growth for machinery and fabricated metals.



Current and planned additions of production capacity indicate further growth in manufacturing activity for the Southwest. The high level of construction awards for factory buildings is evidence of this over-all expansion. Examples of major expansions under way or planned include increased production capacity for ammonia, butadiene, perchlorethylene, polyethylene, rocket fuels, synthetic rubber, and styrene in the chemical industry; for alumina, aluminum, and steel in the primary metals industry; and for numerous other products, such as air conditioners, cement, electronic instruments, and oil field equipment.

Although its rate of expansion has slowed, the chemical industry probably continues to account for the largest absolute amounts of new investment in manufacturing facilities in the Southwest. A survey by the Manufacturing Chemists' Association reveals that privately financed chemical plants completed during 1955 in the southwestern states were valued at \$259,075,000, or one-third of the nationwide total. The survey shows that additional projects costing an estimated \$269,063,000 were under construction in these states in early 1956, and there were firm plans for projects costing \$89,425,000 to be started before the end of 1957. Texas had the largest indicated new investment of any state in the Nation for the 1955-57 period and accounted for more than 17 percent of the national total. Within Texas, organic chemical production was scheduled to receive the largest investment, followed by plastics and resins, inorganic chemicals, and synthetic rubber.

### Summary

The preceding review of industrial growth in the Southwest has revealed great progress in the economic development of the region. Manufacturing and economic activity in general have expanded at rates exceeding those of the Nation. The agricultural and mineral resources of the area, its growing markets, and other locational advantages have provided the foundation for the industrialization which was stimulated by wartime needs and postwar prosperity.

The region has emerged from a predominantly oil, cotton, and cattle economy, with petroleum refining, chemicals production, and related heavy industry based on the mineral production in the area leading the way. These industries are expected to hold a paramount position for some time, but the rapid population and income growth within the region points to increasing emphasis upon production of consumer goods.

The momentum of rapid industrialization can be expected to bring new manufacturing activities to existing industrial centers and to other areas as well. If the citizens of the region can meet the problems created by this transition to an industrial economy — if necessary water supplies, transportation and power facilities, modern municipal facilities, and other conditions favorable to industry can be maintained — the prospects are good for continued growth of this trend toward industrialization and a beneficent diversification of the southwestern economy.



## REVIEW OF BUSINESS, AGRICULTURAL, AND FINANCIAL CONDITIONS



The Middle East crisis has interrupted the normal marketing of oil from that area, creating a deficiency in the supplies of Western Europe and reducing United States imports. Therefore, demand for southwestern crude oil has increased, bringing about higher allowables in Louisiana, New Mexico, and Texas; a moderate increase in refinery runs; and firmer prices for crude oil and refined products.

Consumer buying at department stores in the Eleventh District increased less than seasonally from September to October and was slightly less than in October 1955. Homefurnishings sales continued weak, while the soft goods departments as a whole showed a slight sales increase over a year earlier. Furniture store sales rose 10 percent over September but were down 2 percent from October last year.

Seeding of small grains and winter legumes is being speeded in the eastern half of the District. Prospective production of cotton and grain sorghums improved slightly from early season estimates. No major improvement has occurred in moisture conditions in range areas, and forage supplies remain critically low.

Employment of nonagricultural workers in the District states during October totaled 4,166,100, a record high for the third consecutive month. Most of the 15,700 gain over September resulted from seasonal increases in government, trade, and manufacturing.

The value of construction contracts awarded in the District during October showed a sharp decline of 30 percent from September and was 16 percent below the level of a year earlier. A continued decline in residential awards accounted for most of these decreases.

Gross loans at weekly reporting member banks in the District declined slightly during the 5 weeks ended November 21, although commercial and industrial loans rose \$19,074,000. Investments, which increased \$55,318,000, were strongly influenced by Treasury financing operations. Average reserve balances of member banks declined in October. The annual rate of turnover of deposits, which was 19.0 in September, rose to 21.8 in October.



Primarily because of more trading days during October this year, retail sales at Eleventh District department stores were up 10 percent from September. However, total sales were slightly below a year earlier. Since the increase over September was less than normal, the index of department store sales, after adjustment for seasonal variations and the number of business days, declined to 134 in October from 139 in September and 141 in October 1955. Cumulative sales for the January-October period reflected a year-to-year increase of 3 percent.

Sales in the important homefurnishings departments increased from September to October; compared with a year ago, sharp declines occurred in some of the departments, amounting to 14 percent for housewares, 16 percent for domestic floor coverings, and 18 percent for major household appliances. Total sales of the homefurnishings departments showed a year-to-year loss of 9 percent.

In the soft goods departments, sales of small wares led the percentage gains with an increase of 3 percent over October 1955, while sales of women's and misses' ready-to-wear accessories were up 1 percent. Sales of men's and boys' wear continued to show weakness, being down 2 percent from a year ago.

The increase in department store sales from September to October reflected marked gains in all types of sales. Instalment accounts outstanding decreased slightly in October but were 1 percent larger than a year earlier. Collections on these accounts in October amounted to 15 percent of the first-of-month balances, or 1 point above both a month ago and a year ago. Charge accounts outstanding, increasing 6 percent

## RETAIL TRADE STATISTICS

(Percentage change)

Line of trade by area	NET SALES			STOCKS <sup>1</sup>	
	Oct. 1956 from		10 mo. 1956 comp. with 10 mo. 1955	Oct. 1956 from	
	Oct. 1955	Sept. 1956		Oct. 1955	Sept. 1956
DEPARTMENT STORES					
Total Eleventh District.....	-1	10	3	4	5
Corpus Christi.....	-3	9	6	-1	3
Dallas.....	-4	6	1	-2	5
El Paso.....	3	16	4	4	5
Fort Worth.....	9	24	6	14	5
Houston.....	-2	8	5	8	3
San Antonio.....	-3	18	0	-2	9
Shreveport, La.....	-11	-3	2	-1	-2
Waco.....	0	9	4	4	-1
Other cities.....	3	8	6	11	7
FURNITURE STORES					
Total Eleventh District.....	-2	10	1	5	3
Amarillo.....	-25	-4	—	5	3
Austin.....	-15	5	-3	18	5
Dallas.....	-17	5	-20	-6	5
Houston.....	15	45	11	4	-6
Lubbock.....	-4	17	—	—	—
San Antonio.....	-4	10	-4	-3	0
Shreveport, La.....	17	6	11	12	7
Wichita Falls.....	-29	-12	—	1	-4
Other cities.....	-3	8	5	2	5
HOUSEHOLD APPLIANCE STORES					
Total Eleventh District.....	4	25	—	—	—
Dallas.....	-6	21	—	—	—

<sup>1</sup> Stocks at end of month.



## INDEXES OF DEPARTMENT STORE SALES AND STOCKS

(1947-49 = 100)

Area	UNADJUSTED				ADJUSTED <sup>1</sup>			
	Oct. 1956	Sept. 1956	Aug. 1956	Oct. 1955	Oct. 1956	Sept. 1956	Aug. 1956	Oct. 1955
SALES—Daily average								
Eleventh District.....	142	139r	138	149r	134	139r	148	141r
Dallas.....	129	132r	126	139r	121	125r	143	130
Houston.....	155	155	152	165	151	152	162	160
STOCKS—End of month								
Eleventh District.....	174p	166	158	167r	158p	156	159	151r

<sup>1</sup> Adjusted for seasonal variation.

r—Revised.

p—Preliminary.

from September to October, showed somewhat less than the usual seasonal rise but were up 2 percent from a year earlier. The charge account collection ratio, at 47 percent, was 5 points above September but the same as in October last year.

The District's department stores continued to accumulate inventories in preparation for the Christmas trade, with stocks rising 5 percent from September to October; compared with October 1955, stocks were 4 percent higher. The seasonally adjusted index of department store stocks, at 158 percent of the 1947-49 average, was 2 points higher than in September and 7 points above October 1955. Orders outstanding, which had increased moderately from August to September, decreased 9 percent in October and fell 8 percent under those of a year earlier.

Total dollar sales of reporting furniture stores in the District during October rose sharply, as usual, and were 10 percent above those of September but 2 percent lower than in October 1955. Total accounts receivable showed virtually no change from August and September and were up 3 percent from a year earlier. Furniture store inventories increased 3 percent during October and 5 percent over a year ago.

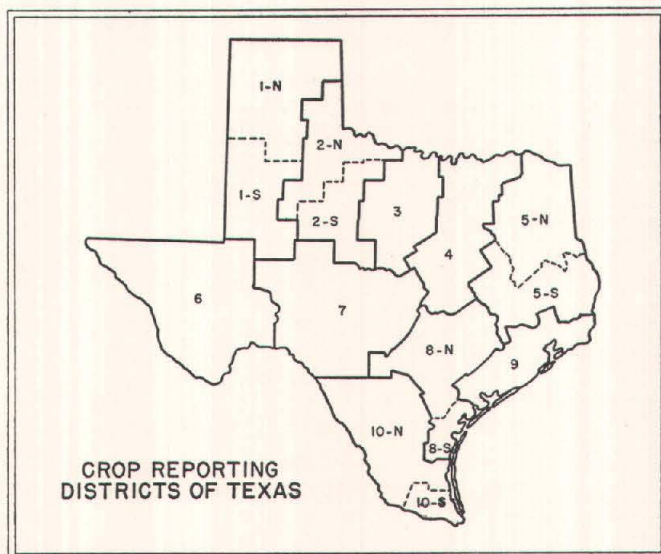
New car registrations in Dallas, Fort Worth, Houston, and San Antonio, after declining 22 percent from August to September (the low point of the year), rose 5 percent during October, with 1957 models accounting for approximately 18 percent of the registrations. October registrations were down 22 percent from a year earlier, compared with a 38-percent decrease for September. New car sales for the first 10 months of 1956 were 22 percent under the comparable period of 1955.



Following excellent rains over the eastern half of the District during the last week in October, the weather has generally remained dry and cool.

Planting of small grains and winter

legumes was active in early November in eastern sections; seedings made prior to the rains are up to a good stand and are making good development. Light to heavy frosts on November 9 ended the summer growing season over most of the northern and northwestern portions of the District. Additional moisture is needed throughout the District, particularly in western range areas and in the High Plains winter wheat area of New Mexico and Texas.



Combining of the 1956 grain sorghum crop is complete, and yields in northwestern irrigated areas are higher than earlier expectations. Output of grain sorghums in the District states is placed, as of November 1, 1956, at 112,529,000 bushels, which is 5 percent over the previous month's estimate but is a third less than the 1955 crop. Corn production prospects also are better than previously indicated; outturn in the District states is estimated at 50,346,000 bushels, or 6 percent higher than on October 1 but more than a third below last year's production. The output of all major feed grains in the District states is below that in 1955, and severe drought reduced hay outturn one-fifth. As a result of the short forage crop, the price of baled hay in Texas increased 36 percent between October 15, 1955, and mid-October this year.

Harvesting of cotton is active in the western portions of the District. The crop in the District states is estimated, as of November 1, to be 2 percent higher than the month-earlier forecast but 9 percent smaller than the outturn in 1955. Reduced prospects in Arizona, Louisiana, and Oklahoma were more than offset by improved prospects in New Mexico and, particularly, in Texas. In the Nation, cotton production is

## COTTON PRODUCTION

## Texas Crop Reporting Districts

(In thousands of bales — 500 lb. gross wt.)

Crop reporting district	1956 Indicated November 1	1955	1954	1956 as percent of 1955
1-N.....	505	379	512	133
1-S.....	1,185	1,024	1,097	116
2-N.....	170	273	221	62
2-S.....	95	264	179	36
3.....	8	23	21	35
4.....	355	642	447	55
5-N.....	85	145	76	59
5-S.....	75	94	75	80
6.....	295	269	261	110
7.....	8	33	26	24
8-N.....	83	163	142	51
8-S.....	135	69	217	196
9.....	160	238	192	67
10-N.....	48	40	67	120
10-S.....	393	383	407	103
State.....	3,600	4,039	3,940	89

SOURCE: United States Department of Agriculture.



CROP PRODUCTION

Texas and Five Southwestern States

(In thousands of bushels)

Crop	TEXAS			FIVE SOUTHWESTERN STATES <sup>1</sup>		
	Estimated Nov. 1, 1956	1955	Average 1945-54	Estimated Nov. 1, 1956	1955	Average 1945-54
Cotton <sup>2</sup> .....	3,600	4,039	3,518	5,550	6,078	5,256
Corn.....	28,365	48,288	44,209	50,346	77,273	78,089
Winter wheat....	28,275	14,326	50,722	95,129	41,204	131,765
Oats.....	21,998	23,590	27,090	39,052	40,518	44,837
Barley.....	2,480	2,072	2,040	17,023	17,181	10,589
Rye.....	184	124	244	910	691	822
Rice <sup>3</sup> .....	11,048	14,880	11,837	22,623	28,030	23,476
Sorghum grain...	98,534	148,309	82,103	112,529	175,296	97,420
Flaxseed.....	95	96	911	147	174	1,293
Hay <sup>4</sup> .....	1,541	2,261	1,660	4,921	6,255	4,951
Peanuts <sup>5</sup> .....	88,550	239,235	252,600	140,675	374,055	366,517
Irish potatoes <sup>6</sup> ...	1,286	1,760	71,474	3,155	3,787	73,382
Sweet potatoes <sup>6</sup> ...	594	1,914	71,397	5,049	7,932	76,369
Pecans <sup>7</sup> .....	27,500	38,000	30,565	51,500	99,460	65,595

1 Arizona, Louisiana, New Mexico, Oklahoma, and Texas.  
2 In thousands of bales.  
3 In thousands of bags containing 100 pounds each.  
4 In thousands of tons.  
5 In thousands of pounds.  
6 In thousands of hundredweight.  
7 Average, 1949-54.  
SOURCE: United States Department of Agriculture.

indicated at 13,153,000 bales, or 1 percent lower than a month ago and 11 percent below output in 1955.

Texas cotton production is placed at 3,600,000 bales, or 140,000 bales above the previous forecast but 11 percent below 1955 output. Outturn of irrigated High Plains cotton is exceeding preharvest expectations as a result of the extended frost-free period and relatively light insect damage throughout the growing season. Yields on some dry-land acreages in the area are also higher than previously anticipated. The yield per harvested acre in Texas, at 276 pounds, is 5 pounds below a year ago but is still one of the highest of record. This yield is an average of extremes, as record-high output per acre is indicated for all irrigated areas while below-average yields are in prospect for most dry-land sections, except a few coastal and northeastern Texas counties.

The United States Department of Agriculture recently announced a total national acreage allotment of 17,585,463 acres for the 1957 crop of upland cotton, including 100,000 acres in the reserve for allocation to small farms. The allotment for extra-long staple cotton is 89,357 acres. In the District states, allotments for 1957-crop upland cotton total 9,543,954 acres, or about 2 percent larger than in 1956. Allotments for extra-long staple cotton are 84,162 acres, which is almost double the 1956 total.

Moisture is below needs in nonirrigated south Texas vegetable areas, and the shortage of irrigation water in the Lower Valley is diminishing vegetable prospects. The frost during the

LIVESTOCK RECEIPTS

(Number)

Class	FORT WORTH MARKET			SAN ANTONIO MARKET		
	Oct. 1956	Oct. 1955	Sept. 1956	Oct. 1956	Oct. 1955	Sept. 1956
Cattle.....	108,824	72,407	102,862	32,577	39,036	24,312
Calves.....	35,673	22,346	31,847	28,538	28,517	27,544
Hogs.....	53,978	60,022	44,147	4,918	3,826	3,222
Sheep.....	97,733	58,903	84,875	129,675	124,845	139,807

1 Includes goats.

FARM COMMODITY PRICES

Top Prices Paid in Local Southwest Markets

Commodity and market	Unit	Comparable		
		Week ended Nov. 20, 1956	week, previous month	week, previous year
COTTON, Middling 15/16-inch, Dallas....	lb.	\$ .3280	\$ .3280	\$ .3405
WHEAT, No. 1 hard, Fort Worth.....	bu.	2.60½	2.52¾	2.39¼
OATS, No. 2 white, Fort Worth.....	bu.	1.04½	1.01¼	.88
CORN, No. 2 yellow, Fort Worth.....	bu.	1.71	1.64	1.52
SORGHUMS, No. 2 yellow, Fort Worth....	cwt.	2.48	2.45	2.12
HOGS, Choice, Fort Worth.....	cwt.	15.25	16.50	13.25
SLAUGHTER STEERS, Choice, Fort Worth...	cwt.	23.50	24.50	21.00
SLAUGHTER CALVES, Choice, Fort Worth...	cwt.	18.50	19.00	19.00
STOCKER STEERS, Choice, Fort Worth....	cwt.	18.00	19.00	19.00
SLAUGHTER LAMBS, Choice, Fort Worth...	cwt.	19.00	20.00	17.25
BROILERS, south Texas.....	lb.	.19	.19	.24

early part of November extended into the Lower Valley, but little damage to tender vegetables occurred. Peppers, tomatoes, and lettuce are being harvested in parts of south Texas. Prospective production of commercial vegetables for fall harvest in Texas is estimated, as of November 1, to be below a year earlier for all crops except carrots.

Small grain fields in the eastern half of the District are providing much-needed livestock forage, but grains planted after the late-October rains have not developed sufficiently to provide grazing. Range forage conditions in Oklahoma and Texas, improving slightly as a result of rains in mid-October and early November, remain critical. In Arizona and New Mexico, range conditions showed less improvement between October and November than they did in the other range states of the District. Livestock marketings slackened in parts of Texas following the precipitation, but poor range feed conditions in Arizona and New Mexico continue to exert pressure on ranchers to reduce basic herds.

The index of prices received by Texas farmers and ranchers at mid-October was almost 1 percent below the month-earlier level, according to the Department of Agriculture. The index — at 246 percent of the 1910-14 average — was nearly 3 percent lower than a year earlier. Compared with mid-September, higher prices were received for all grains, cotton lint, cottonseed, and hay; but these gains were more than offset by a decline in the meat animal index, which reflected a sharp decrease in prices received for beef cattle and calves. A seasonal increase in egg prices contrasted with lower prices received for chickens and turkeys.

Cash receipts from farm marketings in the District states totaled \$1,722,808,000 during January-August this year, or 5 percent more than in the corresponding period in 1955.

CASH RECEIPTS FROM FARM MARKETINGS

Five Southwestern States

(In thousands of dollars)

Area	August		January—August	
	1956	1955	1956	1955
Arizona.....	\$ 8,320	\$ 8,066	\$ 186,104	\$ 199,719
Louisiana.....	32,852	26,914	159,431	148,721
New Mexico.....	5,419	5,491	74,210	70,771
Oklahoma.....	66,010	45,712	328,892	274,557
Texas.....	182,147	191,573	974,171	941,884
Total.....	\$294,748	\$277,756	\$1,722,808	\$1,635,652

SOURCE: United States Department of Agriculture.



Receipts from crops were 11 percent higher, and those from livestock were 1 percent larger.



Changes in accounts at District weekly reporting member banks in the 5 weeks ended November 21 reflected the combined impact of seasonal factors and Treasury borrowing. Deposits rose \$45,275,000, an increase which was more than accounted for by growth in the demand deposit accounts of the United States Government. In large part, the increase in Government balances reflected bank subscriptions to a special issue of Treasury bills, for which payment was made by credit to Government Tax and Loan Accounts. The special bill issue, amounting to \$1,750,000,000, was dated November 16.

Although gross loans showed a small decline during the 5 weeks ended November 21, the expansive influence of seasonal

#### CONDITION STATISTICS OF WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES

Eleventh Federal Reserve District

(In thousands of dollars)

Item	Nov. 21, 1956	Nov. 23, 1955	Oct. 17, 1956
<b>ASSETS</b>			
Commercial, industrial, and agricultural loans...	\$1,535,711	\$1,578,987	\$1,518,445
Commercial and industrial loans <sup>1</sup> .....	1,506,045	—	1,486,971
Agricultural loans <sup>1</sup> .....	29,666	—	31,474
Loans to brokers and dealers in securities.....	29,883	18,992	28,657
Other loans for purchasing or carrying securities..	142,884	115,751	145,190
Real-estate loans.....	216,808	214,384	218,221
Loans to banks.....	899	12,679	25,832
All other loans.....	589,603	529,710	579,530
Gross loans.....	2,515,788	2,470,503	2,515,875
Less reserves and unallocated charge-offs..	35,904	25,161	35,821
Net loans.....	2,479,884	2,445,342	2,480,054
U. S. Treasury bills.....	126,464	55,528	87,148
U. S. Treasury certificates of indebtedness.....	76,568	53,169	70,949
U. S. Treasury notes.....	225,283	257,569	220,303
U. S. Government bonds (inc. gtd. obligations)...	798,390	832,979	796,930
Other securities.....	245,668	244,048	241,725
Total investments.....	1,472,373	1,443,293	1,417,055
Cash items in process of collection.....	423,460	395,585	442,123
Balances with banks in the United States.....	474,871	414,496	523,437
Balances with banks in foreign countries.....	1,444	1,670	1,704
Currency and coin.....	47,050	46,914	47,523
Reserves with Federal Reserve Bank.....	593,738	560,494	524,651
Other assets.....	181,181	143,475	162,703
<b>TOTAL ASSETS.....</b>	<b>5,674,001</b>	<b>5,451,269</b>	<b>5,599,250</b>
<b>LIABILITIES AND CAPITAL</b>			
Demand deposits			
Individuals, partnerships, and corporations....	2,848,652	2,809,406	2,862,962
United States Government.....	186,124	100,242	127,928
States and political subdivisions.....	166,537	202,137	155,435
Banks in the United States.....	956,556	887,746	953,287
Banks in foreign countries.....	19,565	17,602	19,807
Certified and officers' checks, etc.....	55,145	70,831	70,307
Total demand deposits.....	4,232,579	4,087,964	4,189,726
Time deposits			
Individuals, partnerships, and corporations....	727,141	708,718	724,229
United States Government.....	12,240	11,874	12,240
Postal savings.....	452	452	452
States and political subdivisions.....	130,532	132,684	130,745
Banks in the U. S. and foreign countries.....	7,005	2,025	7,282
Total time deposits.....	877,370	855,753	874,948
Total deposits.....	5,109,949	4,943,717	5,064,674
Bills payable, rediscounts, etc.....	23,950	30,300	19,700
All other liabilities.....	103,884	68,213	83,216
Total capital accounts.....	436,218	409,039	431,660
<b>TOTAL LIABILITIES AND CAPITAL.....</b>	<b>5,674,001</b>	<b>5,451,269</b>	<b>5,599,250</b>

<sup>1</sup> Prior to January 4, 1956, agricultural loans were not reported separately. Comparable year-earlier figures will be shown as they become available.

#### CONDITION STATISTICS OF ALL MEMBER BANKS

Eleventh Federal Reserve District

(In millions of dollars)

Item	Oct. 31, 1956	Oct. 26, 1955	Sept. 26, 1956
<b>ASSETS</b>			
Loans and discounts.....	\$3,949	\$3,782	\$3,893
United States Government obligations.....	2,357	2,373	2,312
Other securities.....	605	572	600
Reserves with Federal Reserve Bank.....	945	968	940
Cash in vault <sup>e</sup> .....	149	142	109
Balances with banks in the United States.....	1,088	950	1,158
Balances with banks in foreign countries <sup>e</sup> .....	2	2	2
Cash items in process of collection.....	447	402	506
Other assets <sup>e</sup> .....	231	195	218
<b>TOTAL ASSETS<sup>e</sup>.....</b>	<b>9,773</b>	<b>9,386</b>	<b>9,738</b>
<b>LIABILITIES AND CAPITAL</b>			
Demand deposits of banks.....	1,122	1,001	1,179
Other demand deposits.....	6,376	6,315	6,309
Time deposits.....	1,387	1,267	1,388
Total deposits.....	8,885	8,583	8,876
Borrowings <sup>e</sup> .....	38	34	28
Other liabilities <sup>e</sup> .....	102	74	101
Total capital accounts <sup>e</sup> .....	748	695	733
<b>TOTAL LIABILITIES AND CAPITAL<sup>e</sup>.....</b>	<b>9,773</b>	<b>9,386</b>	<b>9,738</b>

e—Estimated.

factors produced an increase of \$19,074,000 in commercial and industrial loans, and "all other loans" — principally consumer loans — showed an increase of \$10,073,000. Primarily responsible for the decline in gross loans was a \$24,933,000 reduction in loans to banks. Smaller declines occurred in loans to finance securities transactions, real-estate loans, and agricultural loans.

Largely reflecting bank participation in the special issue of Treasury bills, investments of weekly reporting member banks rose \$55,318,000 between October 17 and November 21. Increased bill holdings accounted for \$39,316,000 of this amount. Changes in other investment categories were considerably smaller, although all types of investment holdings increased.

Reflecting seasonal deposit gains and bank credits to Government Tax and Loan Accounts in payment for the Treasury's special bill issue, daily average gross demand deposits at all member banks in the District rose \$16,294,000 in October. The growth in demand deposits was limited to country banks, however, as deposits at reserve city banks decreased moderately. Both reserve city banks and country banks experienced time deposit withdrawals. Daily average time deposits registered the first monthly decline of the year, approximately two-thirds of which occurred at reserve city banks.

#### GROSS DEMAND AND TIME DEPOSITS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. In thousands of dollars)

Date	COMBINED TOTAL		RESERVE CITY BANKS		COUNTRY BANKS	
	Gross demand	Time	Gross demand	Time	Gross demand	Time
Oct. 1954....	\$7,259,916	\$1,109,374	\$3,591,134	\$622,569	\$3,668,782	\$486,805
Oct. 1955....	7,304,808	1,260,749	3,589,745	736,233	3,715,063	524,516
June 1956....	7,150,377	1,369,915	3,493,663	767,137	3,656,714	602,778
July 1956....	7,271,859	1,380,093	3,579,411	770,067	3,692,448	610,026
Aug. 1956....	7,210,443	1,381,338	3,529,320	764,026	3,681,123	617,312
Sept. 1956....	7,388,782	1,388,777	3,641,972	764,478	3,746,810	624,299
Oct. 1956....	7,405,076	1,385,718	3,613,334	762,475	3,791,742	623,243



## MONTHLY BUSINESS REVIEW

RESERVE POSITIONS OF MEMBER BANKS  
Eleventh Federal Reserve District  
(Averages of daily figures. In thousands of dollars)

Item	October 1956	October 1955	September 1956
<b>RESERVE CITY BANKS</b>			
Reserve balances.....	\$ 558,009	\$ 569,574	\$ 564,133
Required reserves.....	549,668	557,310	551,721
Excess reserves.....	8,341	12,264	12,412
Borrowings.....	20,184	20,381	14,420
Free reserves.....	-11,843	-8,117	-2,008
<b>COUNTRY BANKS</b>			
Reserve balances.....	446,876	440,031	444,119
Required reserves.....	400,366	392,965	395,818
Excess reserves.....	46,510	47,066	48,301
Borrowings.....	3,303	4,627	5,356
Free reserves.....	43,207	42,439	42,945
<b>MEMBER BANKS</b>			
Reserve balances.....	1,004,885	1,009,605	1,008,252
Required reserves.....	950,034	950,275	947,539
Excess reserves.....	54,851	59,330	60,713
Borrowings.....	23,487	25,008	19,776
Free reserves.....	31,364	34,322	40,937

At \$1,004,885,000 in October, member bank reserves averaged \$3,367,000 lower than in the previous month. Reductions in the reserve balances of reserve city banks more than accounted for this decrease, as country banks showed a \$2,757,000 increase in reserves. Net borrowed reserves of reserve city banks increased \$9,835,000 in October to an average of \$11,843,000, reflecting larger borrowings and reductions in excess reserves. Conversely, country banks reduced their borrowings from the Federal Reserve bank, and their free reserves rose slightly to \$43,207,000. For all member banks in the District, free reserves declined to a level of \$31,364,000.

Treasury operations contributed \$124,513,000 to member bank reserves during the 5 weeks ended November 21; and smaller reserve gains stemmed from currency transactions, expansion of local Federal Reserve credit, and a decline in other Federal Reserve accounts. A \$45,373,000 excess of payments over receipts in connection with interdistrict commercial and financial transactions created the only sizable reserve drain during the 5-week period. Reflecting these changes, member bank reserve balances rose \$97,004,000 to a total of \$1,021,554,000 on November 21.

Earning assets of the Federal Reserve Bank of Dallas rose \$6,714,000 during the 5 weeks ended November 21. The overall change featured a decrease in discounts for member banks, but this decline was more than offset by an increase in other

CHANGES IN FACTORS AFFECTING MEMBER BANK RESERVE BALANCES  
Eleventh Federal Reserve District  
(In thousands of dollars)

FACTORS	CHANGE <sup>1</sup>	
	5 weeks ended Nov. 21, 1956	Dec. 28, 1955— Nov. 21, 1956
Federal Reserve credit—local.....	+\$ 3,676	+\$ 14,721
Interdistrict commercial and financial transactions....	— 45,373	— 958,830
Treasury operations.....	+ 124,513	+ 962,086
Currency transactions.....	+ 13,283	+ 43,213
Other deposits at Federal Reserve Bank.....	— 2,517	— 2,467
Other Federal Reserve accounts.....	+ 3,422	+ 15,771
<b>RESERVE BALANCES</b>		
November 21, 1956.....	\$1,021,554	
October 17, 1956.....	\$ 924,550	

<sup>1</sup> Sign of change indicates effect on reserve balances.

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS  
(In thousands of dollars)

Item	Nov. 21, 1956	Nov. 23, 1955	Oct. 17, 1956
Total gold certificate reserves.....	\$ 792,498	\$744,431	\$720,217
Discounts for member banks.....	8,700	32,545	10,361
Other discounts and advances.....	102	376	0
U. S. Government securities.....	956,562	957,869	948,289
Total earning assets.....	965,364	990,790	958,650
Member bank reserve deposits.....	1,021,554	964,254	924,550
Federal Reserve notes in actual circulation.....	717,163	728,977	718,531

discounts and advances and increased holdings of United States Government securities. Gold certificate reserves rose \$72,281,000. On November 21, Federal Reserve notes in actual circulation totaled \$717,163,000, reflecting declines of \$1,368,000 since October 17, 1956, and \$11,814,000 since November 23, 1955.

The annual rate of deposit turnover rose to 21.8 in October, compared with 19.0 in September and 19.2 in October 1955. In line with this development, bank debits to demand deposits showed a monthly increase of 15 percent in the District's 24 reporting centers.

In addition to the special offering of Treasury bills dated November 16, a Treasury refunding operation also was conducted during the month. New 3¼-percent Tax Anticipation certificates of indebtedness maturing June 24, 1957, and 3¼-percent certificates of indebtedness maturing October 1, 1957, were offered, on an exchange basis, to holders of \$9,083,000,000 of 2½-percent certificates of indebtedness maturing December 1.

BANK DEBITS, END-OF-MONTH DEPOSITS  
AND ANNUAL RATE OF TURNOVER OF DEPOSITS

(Amounts in thousands of dollars)

Area	DEBITS <sup>1</sup>			DEPOSITS <sup>2</sup>			
	October 1956	Percentage change from		Annual rate of turnover			
		Oct. 1955	Sept. 1956	October 31, 1956	Oct. 1956	Oct. 1955	Sept. 1956
<b>ARIZONA</b>							
Tucson.....	\$ 167,402	21	20	\$ 97,065	20.5	17.4	17.0
<b>LOUISIANA</b>							
Monroe.....	68,852	10	7	50,620	16.3	16.2	15.7
Shreveport.....	260,235	7	6	186,874	16.7	15.5	15.8
<b>NEW MEXICO</b>							
Roswell.....	34,285	21	31	29,402	14.8	12.7	11.9
<b>TEXAS</b>							
Abilene.....	80,271	17	14	58,700	16.4	13.9	14.6
Amarillo.....	175,523	9	21	106,989	19.9	17.9	16.7
Austin.....	161,239	16	9	114,401	17.0	14.3	15.7
Beaumont.....	148,385	19	11	108,663	16.9	14.9	15.6
Corpus Christi.....	174,328	6	1	108,525	19.2	18.2	18.8
Corsicana.....	16,427	—4	—1	21,375	9.1	9.4	9.2
Dallas.....	2,216,910	6	17	971,714	27.1	24.8	23.3
El Paso.....	273,257	20	27	132,414	24.7	21.0	19.9
Fort Worth.....	717,146	20	14	372,113	23.2	19.9	20.3
Galveston.....	97,878	25	15	74,233	15.8	13.2	13.9
Houston.....	2,411,590	20	14	1,210,965	23.6	19.9	20.6
Laredo.....	22,169	8	6	19,716	13.8	12.7	13.3
Lubbock.....	182,088	39	51	99,495	23.2	17.6	16.6
Port Arthur.....	58,017	8	12	43,562	16.0	14.2	14.0
San Angelo.....	48,517	10	9	46,258	12.6	11.6	11.6
San Antonio.....	492,736	9	14	353,341	17.0	15.6	15.0
Texarkana <sup>3</sup> .....	20,236	3	8	15,947	15.0	13.3	13.4
Tyler.....	76,720	11	3	61,251	15.4	14.8	15.5
Waco.....	91,745	0	9	67,214	16.7	15.8	15.6
Wichita Falls.....	99,771	6	9	100,900	11.8	10.8	10.7
<b>Total—24 cities.....</b>	<b>\$8,095,727</b>	<b>14</b>	<b>15</b>	<b>\$4,451,737</b>	<b>21.8</b>	<b>19.2</b>	<b>19.0</b>

<sup>1</sup> Debits to demand deposit accounts of individuals, partnerships, and corporations and of states and political subdivisions.

<sup>2</sup> Demand deposit accounts of individuals, partnerships, and corporations and of states and political subdivisions.

<sup>3</sup> These figures include only one bank in Texarkana, Texas. Total debits for all banks in Texarkana, Texas-Arkansas, including two banks located in the Eighth District, amounted to \$42,758,000 for the month of October 1956.



## NEW PAR BANKS

*The Commercial State Bank, Andrews, Texas, an insured, nonmember bank located in the territory served by the El Paso Branch of the Federal Reserve Bank of Dallas, was added to the Par List on its opening date, November 2, 1956. The officers are: John E. Smith, President; William C. Young, Executive Vice President; R. J. Ream, Cashier; and L. P. Alexander, Assistant Cashier.*

*The Enloe State Bank, Enloe, Texas, an insured, nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, was added to the Par List on November 6, 1956. The officers are: B. B. Viles, President; C. E. Adams, Active Vice President; and Ralph Moore, Cashier.*



The conflict in the Middle East has caused a major disruption of the normal marketing patterns for petroleum and, to some extent, has interrupted the flow of Middle Eastern

crude oil into the markets of the world. During the first week in November, the Suez Canal, through which a major portion of this oil had been moving, was totally blocked by the sinking of a number of small- and medium-sized ships. At the same time, a number of pumping stations along the Iraq Petroleum Company pipelines were dynamited, and parts of the pipelines were destroyed. The major effect of these events has been a disruption of the movement of oil from the Middle East to Europe, which has necessitated a rerouting of shipments. With a tight tanker situation, the need for moving oil around the Cape of Good Hope instead of through the Suez Canal means a sizable delay, as well as a sharply increased cost.

While the United States is not directly involved in this Middle East crisis, the effects upon the marketing patterns of oil have also been felt in the United States and its relationship with the other major markets of the world. Normally, the Middle East supplies approximately 300,000 barrels of crude oil per day to the East Coast, much of which has been

## CRUDE OIL: DAILY AVERAGE PRODUCTION

(In thousands of barrels)

Area	October 1956 <sup>1</sup>	October 1955 <sup>2</sup>	September 1956 <sup>1</sup>	Change from	
				October 1955	September 1956
ELEVENTH DISTRICT.....	3,292.7	3,155.8	3,318.9	137.0	-26.2
Texas.....	2,932.1	2,815.0	2,959.6	117.2	-27.5
Gulf Coast.....	584.5	583.9	591.7	.6	-7.2
West Texas.....	1,221.3	1,101.4	1,224.5	119.9	-3.2
East Texas (proper).....	202.1	212.9	202.1	-10.8	.0
Panhandle.....	102.3	90.2	100.8	12.1	1.5
Rest of State.....	821.9	826.6	840.6	-4.7	-18.7
Southeastern New Mexico..	240.5	225.0	237.9	15.5	2.6
Northern Louisiana.....	120.1	115.8	121.4	4.3	-1.3
OUTSIDE ELEVENTH DISTRICT.	3,704.5	3,575.6	3,727.4	128.9	-22.9
UNITED STATES.....	6,997.2	6,731.4	7,046.3	265.8	-49.1

SOURCES: <sup>1</sup> Estimated from American Petroleum Institute weekly reports.  
<sup>2</sup> United States Bureau of Mines.

## NATURAL GAS: MARKETING PRODUCTION

(In millions of cubic feet)

Area	Second quarter 1956	Second quarter 1955	First quarter 1956
Louisiana.....	418,800	355,200	479,500
New Mexico.....	139,800	123,300	149,000
Oklahoma.....	168,900	173,000	195,700
Texas.....	1,239,400	1,143,700	1,324,700
Total.....	1,966,900	1,795,200	2,148,900

SOURCE: United States Bureau of Mines.

delayed or stopped. Total imports for the Nation averaged 1,220,000 barrels per day during the week ended November 9, reflecting a decrease of 231,000 barrels from the preceding 5-week period. In consequence, there has been an increased demand for southwestern crude as a replacement for the declining imports.

This increased demand, in turn, has stimulated an increase in allowables for three of the southwestern states — Texas, Louisiana, and New Mexico. The Louisiana Conservation Commissioner issued an emergency order, effective November 12, increasing that State's production allowables by 75,000 barrels per day and providing for an additional 25,000 barrels per day in the December allowables. The Texas Railroad Commission increased the number of operating days from 15 to 16 in December, which raises allowables by 75,503 barrels per day. The commission rejected requests for a larger increase in allowables because of the currently high levels of stocks of crude oil and gasoline. Other reasons cited for the moderate increase in Texas allowables were the problems of tanker transportation and the fact that the Federal Government had not suggested any emergency action up to the time of the hearings. Crude oil production in the District, averaging 3,352,000 barrels per day in early November, showed a 2-percent increase over October, and the Nation's crude production also increased slightly. With new well allowables, District production in December is expected to reach a new record.

The Middle East situation also caused a reversal in the trend of refinery runs, with both the District and the Nation showing moderate increases. Increased refinery activity, however, was insufficient to handle the renewed demand, as crude oil stocks declined. The demand for southwestern crude oil and refined products firmed prices throughout the structure and, coupled with the usual seasonal pressures, caused an increase in the price of heating oils. On November 20, heavy fuel oil prices rose for the second time in less than 2 weeks as foreign demand exerted greater pressure on gulf coast supplies.



For the third consecutive month, nonagricultural employment in the District states during October reached a new record, the total of 4,166,100 being 148,400 above a year earlier. The gain of 15,700 workers from September resulted mainly from seasonal increases in government, trade, and manufacturing employment, although gains also occurred in most other types of employment.



### NONAGRICULTURAL EMPLOYMENT

Five Southwestern States<sup>1</sup>

Type of employment	Number of persons			Percent change Oct. 1956 from	
	October 1956e	October 1955r	September 1956	Oct. 1955	Sept. 1956
Total nonagricultural					
wage and salary workers..	4,166,100	4,017,700	4,150,400	3.7	0.4
Manufacturing.....	772,900	747,100	767,600	3.5	.7
Nonmanufacturing.....	3,393,200	3,270,600	3,382,800	3.7	.2
Mining.....	252,900	246,500	257,600	2.6	-1.8
Construction.....	301,400	282,100	302,500	6.8	-4.4
Transportation and public utilities.....	400,800	402,000	403,700	-.3	-.7
Trade.....	1,068,000	1,032,100	1,061,600	3.5	.6
Finance.....	175,700	166,700	175,600	5.4	.1
Service.....	482,900	466,800	481,200	3.4	.4
Government.....	711,500	674,400	700,600	5.5	1.6

<sup>1</sup> Arizona, Louisiana, New Mexico, Oklahoma, and Texas.

e—Estimated.

r—Revised.

SOURCES: State employment agencies.  
Federal Reserve Bank of Dallas.

Manufacturing employment, which increased 5,300 over September, also reached a new record of 772,900 workers. Hirings by aircraft manufacturers and shipbuilders and recall of workers by automobile assembly plants provided the significant month-to-month gains in the manufacturing sector. Settlement of a labor-management dispute within the District's steel industry more than offset the effects of a new work stoppage in the apparel industry.

Unemployment in Texas showed a seasonal decline of 3,300 to reach an October level of 104,200, which is 3.4 percent of the labor force — or the same percentage as a year earlier.

The value of construction contracts awarded in the District during October showed a sharp decline of 30 percent from September and was 16 percent below the level of October 1955. Residential awards decreased 42 percent from the previous month and 33 percent from a year ago. "All other" construction awards contributed to the over-all decline with decreases of 24 percent from September and 6 percent from October last year. Reduced levels of nonresidential building accounted for most of the decline in "all other" construction; public works and utility construction totals were up from September and a year ago.

### VALUE OF CONSTRUCTION CONTRACTS AWARDED

(In thousands of dollars)

Area and type	October 1956p	October 1955	September 1956	January—October	
				1956p	1955
ELEVENTH DISTRICT... \$	103,572	123,602	148,725	1,621,499	1,455,783
Residential.....	31,995	47,768	54,663	659,214	627,924
All other.....	71,577	75,834	94,062	962,285	827,859
UNITED STATES <sup>1</sup> ....	1,706,406	1,862,692	2,024,794	21,147,472	20,027,736
Residential.....	656,464	782,791	763,817	8,751,101	8,748,341
All other.....	1,049,942	1,079,901	1,260,977	12,396,371	11,279,395

<sup>1</sup> 37 states east of the Rocky Mountains.

p—Preliminary.

SOURCE: F. W. Dodge Corporation.

### BUILDING PERMITS

Area	October 1956		Percentage change in valuation from		10 months 1956		Percentage change in valuation from 10 months 1955
	Number	Valuation	Oct. 1955	Sept. 1956	Number	Valuation	
ARIZONA							
Tucson.....	421	\$ 3,003,860	507	212	4,025	\$ 20,469,656	107
LOUISIANA							
Shreveport....	453	3,224,074	34	134	4,393	24,155,370	-24
TEXAS							
Abilene.....	150	1,523,092	-14	51	1,744	19,703,520	15
Amarillo.....	236	1,413,071	31	-3	2,286	17,005,921	-10
Austin.....	248	4,858,714	2	-7	2,624	41,167,784	13
Beaumont.....	363	2,566,556	389	42	2,841	13,959,068	80
Corpus Christi..	351	2,215,588	40	131	3,381	17,571,288	-33
Dallas.....	1,849	7,011,063	-49	-35	20,724	124,438,694	-18
El Paso.....	513	2,881,883	1	51	4,172	23,987,835	-20
Fort Worth.....	622	3,261,094	-47	-12	6,560	37,751,124	-26
Galveston.....	111	139,746	-47	-81	998	4,165,391	-6
Houston.....	820	11,739,825	16	3	8,932	132,179,046	7
Lubbock.....	234	3,546,757	42	108	2,276	20,869,345	-16
Port Arthur....	195	561,146	-12	2	1,837	4,496,694	-5
San Antonio....	1,655	4,206,816	-4	16	16,809	52,730,697	6
Waco.....	268	2,131,930	92	-8	2,964	15,221,598	15
Wichita Falls..	173	836,319	-18	56	1,483	8,094,712	-30
Total—17 cities..	8,662	\$55,121,534	0	10	88,049	\$577,967,743	-6

In the Nation, construction contract awards during October were down 16 percent from September and 8 percent from the level of a year ago. Both residential and "all other" construction shared in the declines, although residential awards showed the greater year-to-year decrease. Cumulative construction awards from January through October remained above the totals for the corresponding period of 1955 in both the Nation and the District.

Building materials production and sales in the District have been affected by the slowdown in construction during recent months. Southern pine production in Arkansas, Louisiana, Oklahoma, and Texas declined 12 percent from August to September and was 18 percent below a year ago. New orders during September reflected declines of 11 percent from August and 20 percent from September 1955. Retail lumber sales in the same states during August were down 25 percent from a year earlier. Brick production and shipments during September showed year-to-year declines of 14 percent and 12 percent, respectively.

Industrial expansion plans provide potential support to future levels of construction. The backlog of proposed industrial building projects in the Nation rose \$2,300,000,000 during the first 10 months of this year to reach \$16,600,000,000 at the end of October. According to the *Engineering News-Record*, the \$2,600,000,000 backlog in Texas was the largest for any state. Proposed manufacturing plant expansions in the District showed an increase during October, with at least 15 major expansions — to cost \$138,000,000 — being announced during the month. More than \$118,000,000 of this amount represented the proposal of a gulf coast establishment to enlarge its existing steel plant.