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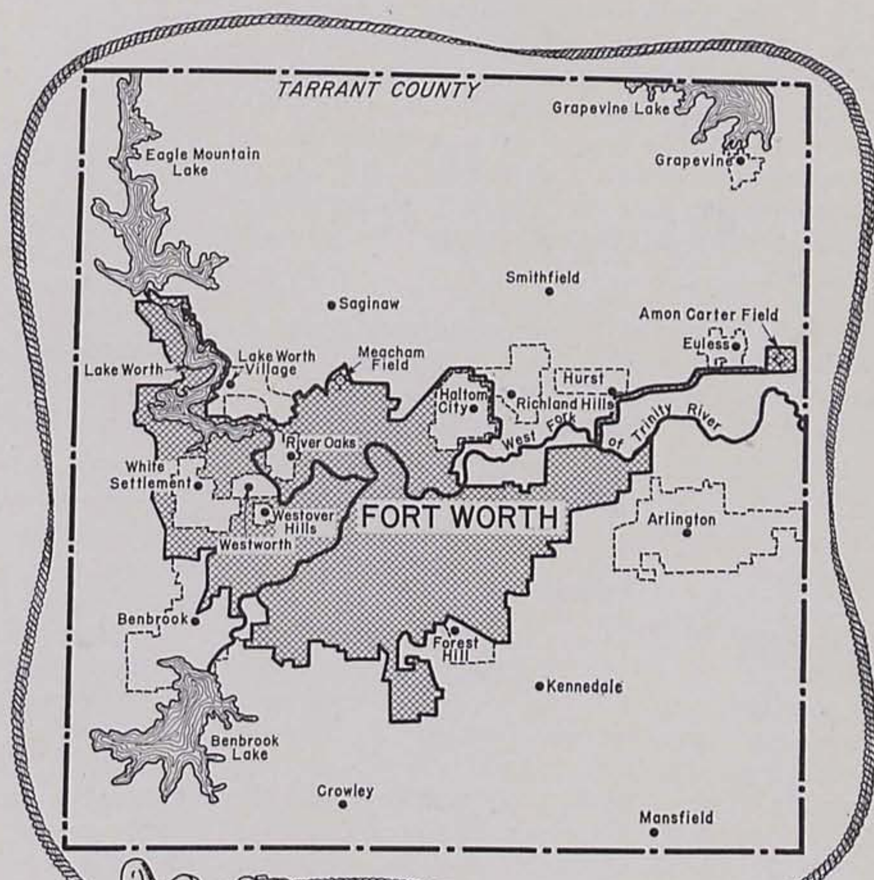
FORT WORTH



FEDERAL RESERVE BANK OF DALLAS
DALLAS, TEXAS

FORT WORTH

In a little over a century, Fort Worth has grown from an infant military outpost into a modern and progressive city. The location of Fort Worth in the transitional area between the southern cotton empire and the western cattle kingdom permitted the city to absorb the romance and tradition of two cultures. Early in the city's growth, however, the romance of the West predominated; and the excitement of the western frontier became a permanent part of the character of Fort Worth.

The early westward orientation of Fort Worth probably resulted from the interrelationship of various historical, locational, economic, and leadership factors. Dallas — a few miles to the east — was already a sizable, well-established center, but to the west lay a virtually unexploited agricultural expanse. It was this potentially rich western farming and ranching area that Fort Worth early sought to serve. From these efforts, agriculturally related meatpacking and flour-milling industries rapidly became an integral part of the city. However, the excellent transportation network, together with the variety and richness of the natural and human resources, in Fort Worth and the surrounding area permitted the early development of additional industries, which broadened the city's economic base.

The discovery of oil in north and west Texas, the establishment of the aircraft and automotive industries, the development of irrigated agriculture in western trade areas, and the evolution of Fort Worth as a light manufacturing and wholesale and retail trade center have created a metropolitan area with well-recognized commercial and industrial activities.

Early History

Fort Worth began as a military camp established in 1849 on the banks of the Trinity River. The camp was one of several outposts set up along the Texas frontier as protection for settlers who were pushing westward. It was named after William Jenkins Worth, an Army general in charge of military affairs in Texas and New Mexico. Also in 1849, the state legislature established Tarrant County and designated Birdville, a community a few miles from present downtown Fort Worth, as the county seat. The county — named for General E. H. Tarrant, a member of the state legislature — was created from then-existing Navarro County.

In 1856 the residents of the small hamlet of Fort Worth were successful in winning an election which moved the county seat from Birdville to their city. Because of the closeness of the vote, the permanent location for the county seat of Tarrant County was not decided until 1860, when a group of Fort Worth citizens agreed to pay the cost of constructing a courthouse. The persistent and successful efforts to get the county seat moved to Fort Worth were an early indication of the resourcefulness and spirit of the residents. Even after becoming the county seat, Fort Worth showed little growth and was barely more than a stopover on the northward cattle trails to the railhead at Abilene, Kansas.

The entry of the Texas and Pacific Railroad into Fort Worth in 1876 — 3 years after the city was incorporated — marked an important milestone in the city's growth. With Fort Worth becoming the eastern terminus of a vast, undeveloped area, the city's early western orientation began. Local leaders provided assistance and incentives to the Texas and Pacific and other railroads to come into Fort Worth, and the city rapidly became a major rail center. The Missouri-Kansas-Texas Railroad came into the city in 1880; the Santa Fe, in 1881; and the Cotton Belt, in 1887. Connections with the Fort Worth and Denver (now the Burlington) were completed in 1890, and the Rock Island entered Fort Worth in 1893.

In view of the importance of cattle to the early development of Fort Worth, it is only logical that the first major industry was related to livestock. The network of railroads made Fort Worth a convenient shipping point for cattle, and the city became a major rest stop for cattle on their way to northern and eastern markets. Texas cattlemen and local leaders became eager to develop a packing center in the State. A small local firm was begun in the early 1880's but was unsuccessful. About 1890, a permanent stockyard was completed, opening the way for future success in the meat-processing field. When two major packing houses began to investigate possible sites for expanding their operations, Fort Worth leaders offered a sizable financial inducement for the companies to locate in the city.

Consequently, the establishment of these meatpacking firms—as well as another plant of a nationally known firm, which later closed — provided the beginning of what now constitutes a major source of income to Fort Worth and the Southwest.

During World War I, the establishment of Camp Bowie and various flying fields within and adjacent to Fort Worth made the city a major military center. Of more lasting benefit, however, was the influence of the Ranger and Burkburnett oil discoveries to the north and west of Fort Worth in 1917 and 1918, respectively. The city's position as an oil center was enhanced by its rail facilities and its proximity to the oil fields.

By the mid-1920's, nine refineries, served by an extensive network of pipelines from the oil fields, were operating in the city. Although only one refinery is in operation today, pipeline transmission of petroleum products remains important; and the early concentration of oil activity in the city prompted the establishment of many head offices and branches of oil companies, which contribute to the city's economy. In addition, Fort Worth is a major manufacturing and distributing center for oil field equipment and supplies.

Although Fort Worth led all other cities in the State in the total value added by manufacture at the beginning of the 1920's, it experienced little additional growth in manufacturing until the 1940's. During the 1920's, however, population gains continued, wholesale and retail trade flourished, and service establishments expanded. The depression of the 1930's limited Fort Worth's opportunities to attract industry or to broaden its economic base, and the severe drought in western trade areas during that period further dampened the city's development.

Reminiscent of a quarter of a century earlier, the outbreak of World War II resulted in Fort Worth's becoming a major military and defense center. Unlike the minor influence of World War I military installations upon the city, the establishment of a major aircraft assembly plant and Carswell Air Force Base in 1942 ushered in a new era of expansion and development affecting the entire Fort Worth and north Texas area. These major installations prompted the growth of numerous supporting industries in aircraft parts manufacturing, machine tooling, and metal casting and fabrication of all types. In 1951, another aircraft corporation located in nearby Hurst to manufacture helicopters; and, in the same year, a major motorcar company established an automobile assembly plant near Arlington. The manufacture of house trailers, special motorized equipment, boats, and aquatic accessories also has become significant.

Thus, railways, highways, and airways have been major factors, directly or indirectly, in the growth and development of the Fort Worth metropolitan area. As in the case of the railways in early years, the leadership of the city has been very active in encouraging the location of many transportation manufacturing concerns in metropolitan Fort Worth.

Resources

AREA AND CLIMATE

The metropolitan Fort Worth area — which, for the purposes of this article, is synonymous with Tarrant County — contains 561,280 acres. There are over 30 different municipalities in the area, including Fort Worth proper and such cities as Arlington, Haltom City, River Oaks, White Settlement, Euless, Hurst, and Grapevine. The topography is gently to strongly rolling, and there are some steep slopes and hilly areas. The soils are largely Grand Prairie and Cross Timbers types, with only a relatively small section of Blacklands soils along the eastern border of the county. Most of the county is subject to considerable erosion by gullying and, consequently, is best adapted for grazing, although farming is practiced in the bottom lands and in areas having deeper soils.

Fort Worth's climate is moderate; the temperature averages about 46° in January and 84° in July, with an annual mean temperature of about 66°. The growing season is approximately 251 days, and annual precipitation averages around 32 inches. Mineral resources consist primarily of shale, sand, gravel, limestone, and materials suitable for cement production, although an extensive oil-producing territory extends to the west and northwest of the county.

WATER

Underground water supplies and the numerous streams in the north Texas area, coupled with the availability of suitable dam sites, have enabled the Fort Worth metropolitan area to obtain an adequate supply of high-quality water. Most of the water used by the city of Fort Worth comes from three lakes on the West Fork of the Trinity River; water used in adjacent towns and in other sections of the metropolitan area is supplied mainly by wells drawing primarily from the Paluxy and Trinity sands.

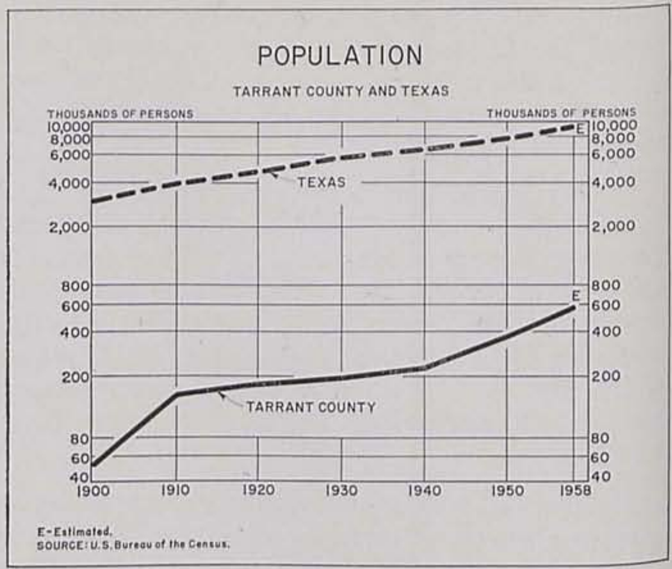
Lake Bridgeport, Eagle Mountain Lake, and Lake Worth — the major surface reservoirs — have a combined drainage area of over 4,000 square miles and a total storage capacity of around 500,000 acre-feet. In addition, Benbrook Lake on the Clear Fork of the Trinity River has a storage capacity of 72,500 acre-feet. This reservoir is owned and controlled by the Federal Government for navigation and recreation, but water from the lake is available to Fort Worth in an emergency. Grapevine Reservoir, also under the jurisdiction of the Army Corps of Engineers, has a storage capacity of 101,250 acre-feet; and Lake Arlington, on Village Creek, has a storage capacity of 46,000 acre-feet.

Daily average consumption of water in Fort Worth is approximately 45 million gallons, with a peak summer usage of around 100 million gallons. Filtration facilities, which will handle about 129 million gallons a day, and filtered water storage of almost 50 million gallons provide an ample margin for satisfying maximum water demands. Almost 1,300 miles of water mains and six booster pump stations maintain service and adequate water pressure for the more than 100,000 meters served by Fort Worth.

Civic leaders are making plans for water supplies to meet the city's needs until the year 2000 at least. An agreement with the Brazos River Authority provides that Fort Worth may obtain water from the Brazos River. Also, preliminary plans point toward the eventual construction of reservoirs in Freestone and Navarro Counties on Richland and Cedar Creeks — tributaries of the Trinity River. The contemplated reservoirs would have a storage capacity of 1,814,000 acre-feet, with a yield of around 343 million gallons a day.

POPULATION

Metropolitan Fort Worth is the fourth most populous center in the State; and, in each decade since 1900, its rate of population gain has outstripped that of either Texas or the Nation. The continuous and rapid growth in the area's population is indicative of the employment opportunities made possible by the expansion in manufacturing and trade. From 1940 to 1950, the Fort Worth metropolitan population increased 60 percent, or three times the rate for the State as a whole. The rate of gain has not been as great since 1950, but, in terms of absolute numbers, population growth during the current decade is likely to exceed that in the 1940-50 decade.



The growth rate of the labor force in the Fort Worth area has paralleled that of the population. Most of the labor force gain has resulted from the in-migration of persons formerly engaged in agriculture. The large reservoir of labor in Texas has been one of the favorable factors for the expansion of industry in both the State and Tarrant County. About one-third of the labor force in the area is women.

A tradition of hard work and independence and the ability to learn and adjust to a wide range of situations made the rural immigrant an excellent training subject for nonfarm jobs. Almost 41 percent of the population in Tarrant County in 1950 had finished high school, compared with about 30 percent for the State. The favorable climate and living conditions in Fort Worth, coupled with the steadily increasing range of job opportunities, have made it possible for the city to hold its present work force and to attract additional workers.

Recreational and Cultural Advantages

Fort Worth has many recreational, educational, and cultural advantages. Numerous nearby lakes and streams encourage fishing, boating, swimming, water skiing, and similar aquatic sports virtually the year round. Besides the five major lakes located less than 15 miles from downtown Fort Worth, eight other lakes are located within a 100-mile radius. The city contains 48 parks, including the widely recognized Fort Worth Botanic Garden and Forest Park Zoo. Municipally owned baseball diamonds, golf courses, swimming pools, and tennis courts are located in most sections of the city. Professional AAA minor-league baseball and Southwest Conference and Class AAAA high school athletics offer a wide variety of indoor and outdoor sports activities. The Colonial National Invitational Golf Tournament is an annual attraction attended by a large gallery of golf enthusiasts.

Fort Worth has excellent public, private, and parochial school systems, with a total enrollment of over 71,000 students. The location of Texas Christian University, Texas Wesleyan College, Southwestern Baptist Theological Seminary, and Fort Worth Christian School and College in Fort Worth, plus Arlington State College at nearby Arlington, makes the area a center for higher education. The Texas Legislature recently granted senior college status to Arlington State College, thus providing opportunities for further educational growth, especially in engineering, science, and business administration.

Moreover, six major business schools and 26 vocational and technical schools furnish training in skills for those not enrolled in a formal 4-year educational program. A fine public library, an aquarium, an art museum and school, a planetarium, and a children's museum offer further opportunities for educational and personal development. A full opera season, numerous concerts, and a summer-long program of top Broadway musicals in Casa Manana — one of the Nation's outstanding theaters-in-the-round — provide many cultural offerings in Fort Worth.

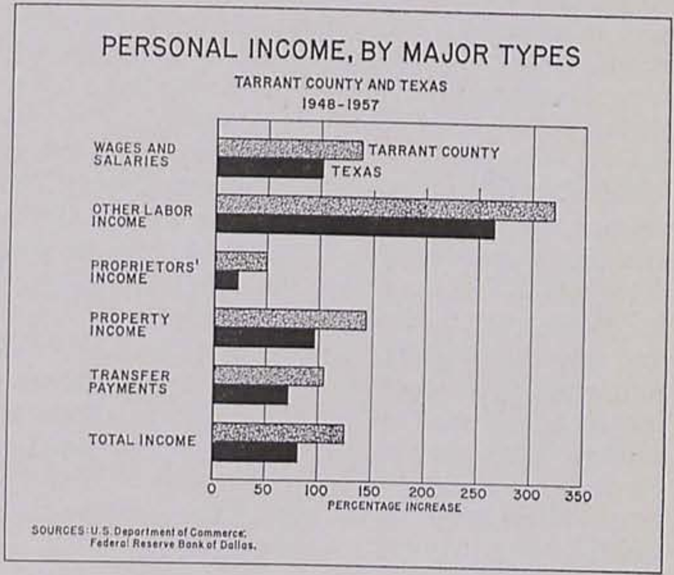
The Southwestern Exposition and Fat Stock Show, the oldest of its kind in the Southwest, furnishes entertainment and educational opportunities for thousands of residents and visitors each year. The exposition was begun as an outdoor event in 1896 at the stockyards, but, for many years, the show has been held at multimillion-dollar Amon Carter Square. The Will Rogers Memorial Coliseum, Tower, and Auditorium and the permanent exhibit buildings comprise a year-long, all-weather cultural and recreational center.

Over 600 churches and synagogues representing 35 denominations permit most residents to worship with others of the same faith within a short distance of their homes. Twelve general hospitals and seven hospitals for specialized treatment serve the immediate Fort Worth area. The United States Public Health Service Hospital, Carswell Air Force Base Hospital, and the city-county John Peter Smith Hospital also afford general hospital services to eligible patients. Recently, a hospital district has been created which will permit expansion of John Peter Smith Hospital and other health services. In addition, 76 private clinics and 30 public and private nursing homes and sanitariums provide health care to the area's residents.

Employment and Income

The vigorous growth of Tarrant County and the breadth of the area's economy are illustrated by the trends and distribution of the employment and income of its residents. The decade beginning in 1940 was one of the periods of greatest growth in metropolitan Fort Worth. The outbreak of World War II and the concurrent demands for war production provided a sharp impetus to nonagricultural employment, particularly in aircraft and related manufacturing.

Nonagricultural employment rose rapidly between 1940 and 1950, with the largest gains occurring in manufacturing and construction. Employment in wholesale and retail trade and in other types of business also showed substantial growth. Since 1950, nonagricultural employment in the Fort Worth metropolitan area has grown at a more moderate rate — 31 percent — than in the 1940-50 decade but has increased more rapidly than such employment in the State. Manufacturing employment in the Fort Worth area since 1950 has increased 35 percent, also slightly more than in the State. Currently, Tarrant County accounts for about 11 percent of the State's total manufacturing work force. In the case of some other broad types of employment, gains in Fort Worth have not been as great as those for Texas.



The distribution of wage and salary employment in Tarrant County points up the importance of manufacturing to the economy of metropolitan Fort Worth. Workers in manufacturing comprised about 28 percent of the total nonagricultural work force in the metropolitan area in March 1959, compared with 26 percent in 1950 and 18 percent in 1940. In the State, manufacturing employment constituted 17 percent of total nonagricultural employment — a fractionally larger proportion than in 1950 and only moderately larger than in 1940. Consequently, in terms of occupational distribution, a larger proportion of workers was employed in manufacturing in the Fort Worth area than in the State even before the outbreak of World War II, when the Southwest began its greatest industrial expansion. Construction employment, however, currently is proportionately less important in metropolitan Fort Worth than in the State, and larger percentages of workers are engaged in trade and other employment in Texas than in Fort Worth.

The varying impact of World War II industrial developments upon the Texas and Fort Worth economies accounts for a major part of the differential rates at which the principal employment categories advanced between 1940 and 1950. The rapid rise of the aircraft industry in Fort Worth during World War II was the major influence triggering the sharp increase in manufacturing employment in Tarrant County. The location and growth of this industry in the Fort Worth area provided the impetus for an increase in all types of manufacturing and for expansion in trade and service employment. Fort Worth ranks first in the Southwest and thirteenth in the Nation in the number of employees in transportation equipment manufacturing, such as aircraft, automobile, boat, mobile home, and specialized mobile equipment manufacturing. The demands for new plants for war production purposes furnished the basis for the rapid rise in construction, which closely followed manufacturing in the rate of gain in employment.

Moreover, Carswell Air Force Base, which was located in Fort Worth at about the same time as the aircraft industry, added further to the work force needed in construction and allied trades and services. The widespread gains in population sharply boosted housing requirements, as well as the need for industrial and commercial buildings of all kinds.

Population growth has continued to exceed that in the 1940's; however, most other broad economic indicators have risen at a somewhat slower pace. Many of the industries established during World War II have consolidated their positions and have made orderly adjustments from the high wartime needs without major dislocations, although defense orders have remained very important to manufacturers. New industry, which has broadened and expanded employment and reduced slightly the reliance upon the ebb and flow of military aviation contracts, has been added to the economic base of Tarrant County.

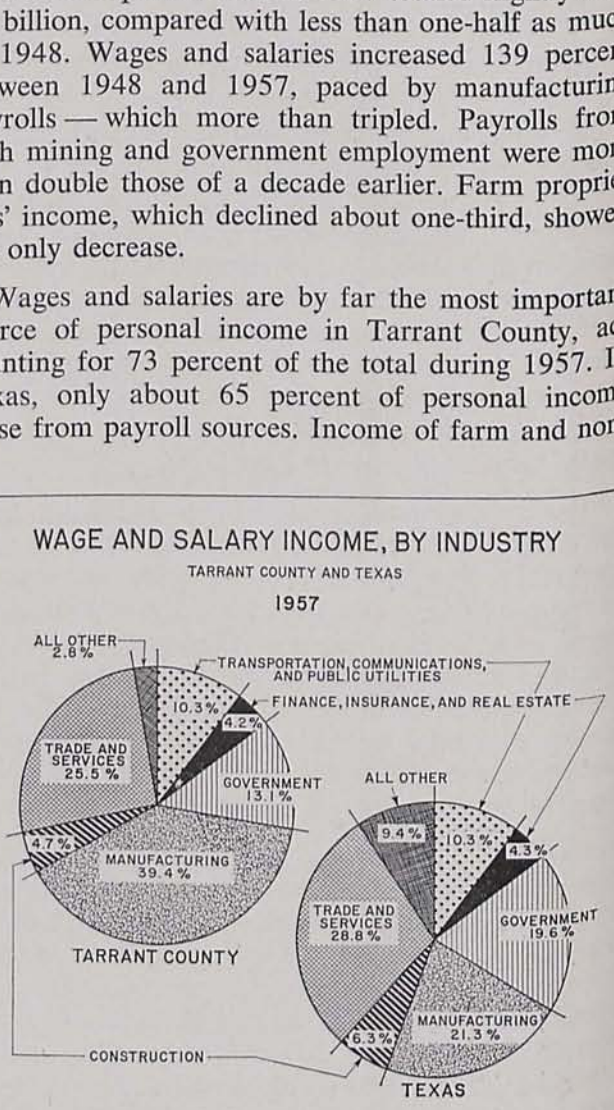
Further insight into the growth and structure of metropolitan Fort Worth's economy is afforded by an analysis of the changes and composition of the sources of income in the area. Personal income in the Fort Worth metropolitan area in 1957 totaled slightly over $1 billion, compared with less than one-half as much in 1948. Wages and salaries increased 139 percent between 1948 and 1957, paced by manufacturing payrolls — which more than tripled. Payrolls from both mining and government employment were more than double those of a decade earlier. Farm proprietors' income, which declined about one-third, showed the only decrease.

Wages and salaries are by far the most important source of personal income in Tarrant County, accounting for 73 percent of the total during 1957. In Texas, only about 65 percent of personal income arose from payroll sources. Income of farm and non-

WAGE AND SALARY INCOME, BY INDUSTRY

TARRANT COUNTY AND TEXAS

1957



SOURCES: U.S. Department of Commerce. Federal Reserve Bank of Dallas.

farm proprietors in the Fort Worth metropolitan area comprised 9 percent of gross income; property income accounted for 10 percent; and transfer payments and miscellaneous income made up the remainder. Both proprietors' income and property income were relatively less important in Fort Worth than in the State.

Even though the proportional contribution of wages and salaries to total personal income in Fort Worth was greater than in the State, only manufacturing and transportation payrolls exceeded, in relative importance, those types of income to the State. Government wages and salaries, although important, were not as significant for the area as for the State as a whole.

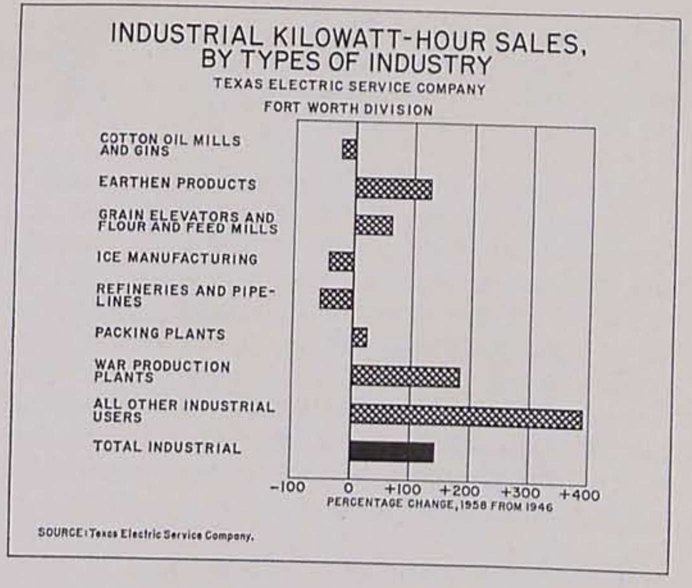
Manufacturing payrolls accounted for over 39 percent of the total wages and salaries in metropolitan Fort Worth in 1957, compared with 21 percent in the State. As a percentage of total personal income from all sources, manufacturing accounted for 29 percent, or double the proportion in the State. Part of the variance in the proportional structure of wages and salaries for manufacturing in Fort Worth and in Texas results from the relatively greater importance of manufacturing employment in Fort Worth. Moreover, average weekly earnings of manufacturing workers in the Fort Worth area are higher than the state average.

Income from wholesale and retail trade is of about the same relative importance in metropolitan Fort Worth as in the State. Since the city is a trade center for a large area, the contribution of trade income to Fort Worth's economy may seem to be understated. Actually, wage and salary payments in wholesale and retail trade are the second most important source of personal income in Tarrant County. Consequently, it is not that trade payrolls are unimportant in Fort Worth but, rather, that manufacturing wages are relatively much more important.

Principal Economic Activities

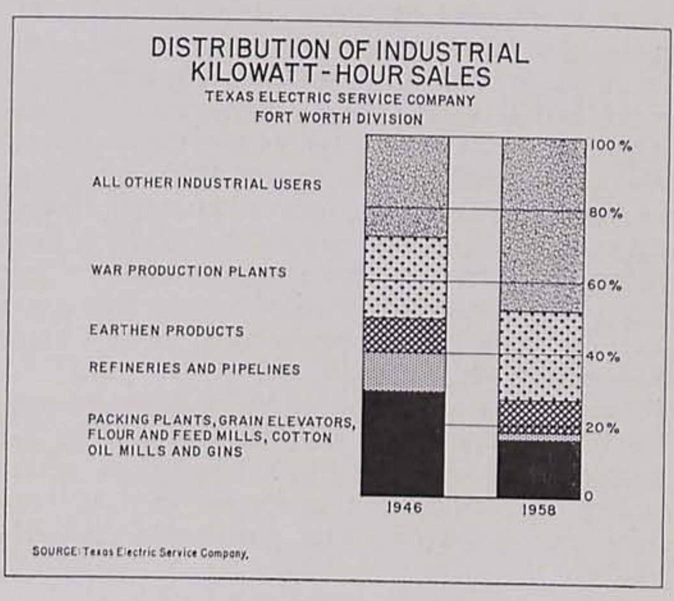
In terms of employment and income, the principal economic activities in metropolitan Fort Worth are manufacturing and trade. Government, service, and transportation employment also makes substantial contributions to the area's economic base. Many other supporting types of activity — such as construction, finance, public utilities, and agriculture — provide further diversification and income.

The distribution and trend in kilowatt-hour sales of electricity to various types of industrial concerns provide partial insight into the broad industrial structure



of metropolitan Fort Worth. Total industrial sales of electricity have increased almost 2½ times since World War II, and current trends indicate that usage will continue upward at a rapid rate.

The largest proportion of the electricity consumed by industrial concerns is utilized by such diverse businesses as food-processing industries, plastics manufacturers, automobile and trailer assembly plants, and a multitude of other manufacturing concerns not directly related to defense production and for which separate data are not available. Kilowatt consumption by this group rose from 23 percent of total industrial usage in 1946 to almost 47 percent in 1958. Elec-



tricity usage by this group of consumers showed a greater absolute increase than usage by any other group of industrial concerns, rising almost 400 percent during the past 13 years.

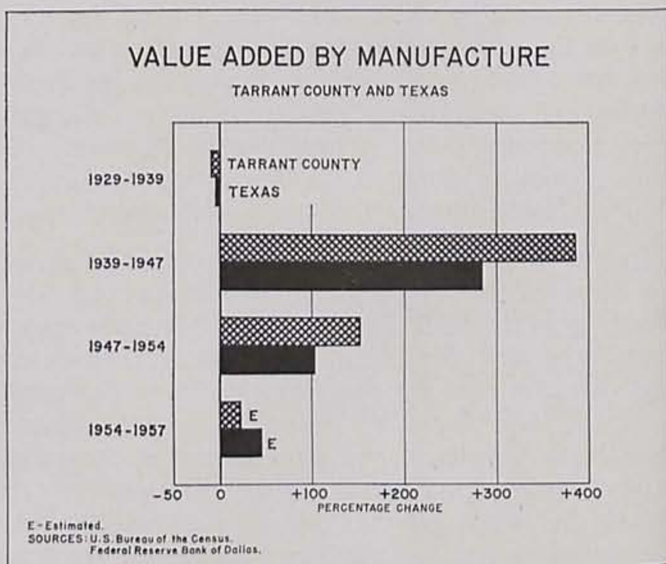
Defense plants are major consumers of electricity in the industrial complex of Fort Worth and accounted for about 26 percent of the total kilowatt-hour sales in metropolitan Fort Worth in 1958, or only slightly higher than the 22 percent consumed in 1946. Concerns dealing in earthen products consumed about 9 percent of total industrial kilowatt-hour sales, and packing plants and such businesses as grain elevators and flour and feed mills accounted for about 8 percent and 6 percent, respectively, of the total industrial consumption of electricity in 1958.

Although the consumption of electricity by most types of businesses has shown a gradual uptrend, a few broad categories have experienced absolute declines in power usage. Among industrial concerns having smaller electricity requirements than a decade or so ago are cotton oil mills and gins, ice manufacturers, and oil and gasoline refineries. Refining operations have declined in importance in Fort Worth, but power requirements for pipeline pumping have shown a tremendous growth and have offset, to a large extent, the decline in electricity usage by refineries. Between 1957 and 1958, power usage for pipeline pumping dropped sharply, reflecting the curtailment in oil allowables.

MANUFACTURING

Fort Worth has long been a southwestern manufacturing center, although the greatest expansion has occurred since 1940. The evolutionary manufacturing growth had its origin and early orientation in the agricultural resources of the city's western trade territory. Meatpacking, which began around 1900, was one of the first industries and was followed by cotton ginning and cottonseed crushing. Around World War I, flour milling and grain storage became important since Fort Worth was a railroad junction between gulf coast ports and grain areas in northwestern Texas, eastern New Mexico and Colorado, and western Oklahoma. These activities were bolstered by oil-oriented manufacturing in the 1920's with the discovery of the Ranger and Burkburnett Fields. Finally, the manufacture of transportation equipment, primarily aircraft, assumed a dominant position in the early 1940's.

The growth in manufacturing in Tarrant County is indicated by changes in the value added by manufacture. The Census of Manufactures shows that both employment and the value added by manufacture were relatively stable in Tarrant County in 1919, 1929, and 1939. The value added by manufacture ranged from $30 million to $34 million, and employment varied from 8,000 to a little over 9,000. The value added reached over $146 million in 1947 but, by 1957, had more than tripled. The fifteenfold increase in the value added by manufacture in Tarrant County between 1939 and 1957 compares with an elevenfold increase for the State. The rate of growth in manufacturing after World War II was more moderate in both Fort Worth and Texas, but the gains for metropolitan Fort Worth continued to outpace those for the State in both the value added and the number of manufacturing establishments.



Manufacturing payrolls in Tarrant County in 1957 totaled $315 million, or 39 percent of total wages and salaries in the county and almost 29 percent of total gross personal income. Metropolitan Fort Worth accounted for about 14 percent of total manufacturing wages in Texas. Although the range of manufacturing is quite diverse, the bulk of the activity is in durable manufactures, primarily transportation equipment — which accounted for one-half the value added in 1954. The value added by food manufacturing was 22 percent of the total.

Payroll data indicate that manufacturing activity in Tarrant County is concentrated heavily in a few major industries. One-fifth of total manufacturing payrolls for Tarrant County in 1957 was provided by three major manufacturers of transportation equipment. These employers and the military installations in the area accounted for over one-tenth of total direct wages and salaries from all sources in metropolitan Fort Worth.

During early 1959, after the readjustment to the 1957-58 recession and the cutbacks in aviation defense orders, approximately 71 percent of the manufacturing work force in Tarrant County was in the durable goods sector; and almost 72 percent of these workers were in the transportation equipment field. Prior to the recession and defense stretch-outs, three-fourths of the workers in durable goods manufacturing were in the transportation equipment sector.

Aircraft production began in Fort Worth early in 1942 on a site adjacent to Lake Worth, and the scope of the industry's operations has permeated the entire economic life of the community. The need for dispersing aircraft production centers from coastal areas in the northeast and Pacific coast sections to interior points during World War II focused attention upon a suitable location in the central part of the United States. An abundance of clear weather and moderate winters made north Texas an excellent place for aircraft production, maintenance, and testing. Large areas of relatively flat and inexpensive land were available for the extensive type of buildings and hangars needed for efficient aircraft manufacturing. A pool of easily trained labor also was available from the cities, small towns, and farms in north Texas.

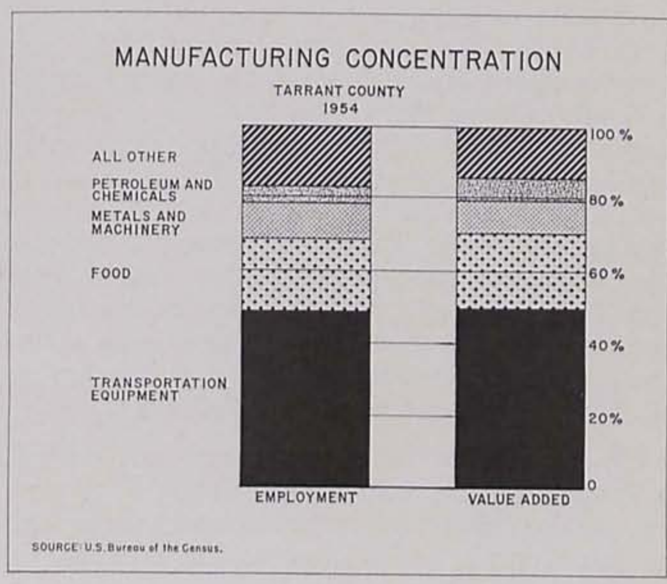
Once initial aircraft production facilities were located in the area, a large number of allied industries were attracted to Tarrant County, adding further to the importance of transportation equipment manufacturing. Subcontracting by major aircraft manufacturers contributed to the growth of numerous small industries which are now engaged in nondefense-related production. During the past few years, one of the most important helicopter plants in the Nation started operating in the county, and employment in air-borne equipment manufacturing has expanded. It is conservatively estimated that the aircraft and aircraft parts industries currently employ 25,000 persons and have annual payrolls in excess of $165 million.

Transportation equipment manufacturing was augmented further in 1954, when full-time operations began at a major automobile assembly plant near Arlington. As if to add to the stature of metropolitan Fort Worth as a city on wheels — as well as one with wings — specialized truck and bus bodies, truck trailers and beds, motor vehicle and trailer parts and accessories, and numerous makes of mobile homes are manufactured in the area. The manufacture of boats and light marine goods is becoming increasingly important in Tarrant County.

The presence of three or four large manufacturing industries in metropolitan Fort Worth should not overshadow or minimize the contribution made by the many small manufacturing plants operating in the area. These smaller industries provide both diversity and stability to the economy of the city, and their activities both complement and supplement those of the larger manufacturers. The generally favorable business climate has made it possible for many of these smaller businesses to grow into substantial industries.

The manufacture of food and kindred products is the second most important manufacturing activity in Tarrant County in terms of employment and the value added. Food manufacturers in metropolitan Fort Worth employ approximately 8,500 workers. Among the most important types of food manufacturing are meatpacking and grain milling, both of which were pioneer industries in Fort Worth.

Meatpacking is the most important segment of the food industry, and Fort Worth has remained the leading livestock marketing and processing center in the Southwest. Two nationally known packing plants



have operated continuously in the Fort Worth area since the turn of the century, and another major concern is beginning operations. Many smaller packers who have developed national and international markets now process packing-house products. A considerable volume of the fresh, processed, and specialty meats packaged in Fort Worth is shipped by these manufacturers.

Quite early, the family-owned and -operated grist mills in Fort Worth became major flour and feed milling concerns. Furthermore, national companies constructed milling facilities in the city in order to capitalize on locational advantages. Today, flour milling is of relatively little significance, and commercially mixed feed processing and grain storage have gradually taken over as the primary activities of the milling and elevator trade.

Candymaking is a long-established and widely recognized part of the food industry in Fort Worth, and the city's sweets are marketed nationwide and in many foreign countries. Other important food manufacturing includes dairy product processing, cake and bread baking, and food canning, preserving, and freezing. Practically all of the establishments engaged in such activities serve a wide area around Fort Worth. National markets also are served by the food-conserving manufacturers.

Machinery manufacturing contributes substantially to the economic welfare of the city. The production of windmills was important in Fort Worth for many years when wind power was used almost exclusively in the ranching country for pumping water. When oil was discovered in the Fort Worth trade area during World War I, the manufacture of oil drilling and pumping equipment began, and a new industry started to flourish. Many major manufacturers of oil well supplies have located in the area. The reputation of these concerns is such that their trade names are as familiar in the Middle East and in South America as they are in domestic oil-producing areas. In addition to oil machinery and equipment, other products from Fort Worth's versatile manufacturers include industrial hoists, generators and power transmission equipment, conveying and elevating machinery, cotton oil mill equipment, and feed-milling machines.

The manufacture of central heating and cooling equipment, together with the fabrication of window and mobile cooling units, is an important segment of the Fort Worth industrial structure. The expansion in population and the increase in industrial and residential construction in the north Texas area have made Fort Worth an excellent choice as a manufacturing center for air-conditioning equipment. Adequate transportation facilities provide easy access to most sections of the South and Southwest, where interest in temperature control and regulation has been especially strong.

Primary and fabricated metal industries are a relatively small but fairly important part of total industry in the city. A steel mill was begun in Fort Worth in the early 1900's, and this plant and related concerns are providing employment for about 4,000 workers. Metropolitan Fort Worth has plants for ferrous and nonferrous castings and forgings (mainly nonferrous), electroplating, metal stamping, galvanizing, and metal milling.

Printing and publishing and the manufacture of apparel, paperboard boxes and containers, furniture, boots and other leather goods, chemicals and fertilizers, roofing materials, drugs and medicines, cement, brick, and plastics are just a few of the other major types of manufacturing carried on in Tarrant County. These types of manufacturing activity accounted for approximately 15 percent of both the number of manufacturing employees and the value added by manufacture in 1954.

Fort Worth is the largest work clothes manufacturing center in the Southwest and is internationally known as a western boot and leather goods fabricator and as the home of fine southwestern furniture. Many of the firms manufacturing such items began as small family enterprises, and a large number are now major employers. The diversity of the products and the world-wide scope of the markets served by the Fort Worth-based firms attest to the favorable business climate in the area.

The future of manufacturing growth in metropolitan Fort Worth appears to be fairly bright, although expansion probably will be at a more moderate rate than during and immediately following World War II. A significant part of the growth in manufacturing is likely to be consumer-oriented. Prospective population growth in the area and in the Southwest points to gains in food processing, particularly of highly prepared convenience foods.

Light metal fabrication and assembly of such items as cooling and heating equipment and other household

AVERAGE WEEKLY AND HOURLY EARNINGS OF MANUFACTURING WORKERS, OCTOBER 1958

Tarrant County and Texas

Type of manufacturing	Average weekly earnings		Average hourly earnings	
	Tarrant County	Texas	Tarrant County	Texas
Total	$ 99.72	$85.48	$2.45	$2.09
Durable goods	105.56	85.70	2.60	2.07
Nondurable goods	85.27	85.46	2.09	2.11

SOURCE: Texas Employment Commission.

durables might offer possibilities for growth. Prospective increases in the manufacture of plastics, electronic equipment, and packaging materials are favorable. Relatively high wage rates in the area may discourage the expansion of certain types of manufacturing, but industries requiring skilled workers should find the Fort Worth area an attractive location.

The future of the aircraft industry is interwoven with the defense needs of the country and with the ability of individual companies to obtain their share of the available contracts. It seems probable that, in the future, more emphasis will be placed upon upgrading workers' skills in aircraft production to meet the needs of the space age. Modern weapons production is placing greater reliance upon engineering and electronics training, which may necessitate a larger proportion of technicians to assembly workers than has been the case in the past. Such changes in types of employment suggest higher average wages and salaries for any given level of employment and a larger value added by manufacture.

The area's dependence upon transportation equipment manufacturing is probably somewhat greater than is desirable, especially the reliance upon defense-oriented aircraft production. Employment in transportation equipment manufacturing during early 1957 comprised almost 18 percent of total nonagricultural employment, although cutbacks in aircraft employment currently have reduced the proportion to around 14 percent. However, if employment in industries dependent upon transportation equipment manufacturing could be accurately assessed, the total work force directly or indirectly dependent upon such manufacturing would be considerably higher.

TRADE

Almost from the time the city was established, but particularly since the railroads from the East reached it in the late 1870's, Fort Worth has been a major distribution and trade center. Despite the growth in manufacturing and other types of economic activity, trade is the second most important broad economic feature of metropolitan Fort Worth in terms of both employment and wage and salary incomes.

Employment in trade currently comprises about one-fourth of the total nonagricultural work force in Tarrant County and a little over one-third of the workers engaged in nonmanufacturing activities. Approximately three-fourths of the trade employees work in retail establishments. Of the total wages and salaries received in the metropolitan area, about 17 percent arises from trade employment.

Retail sales in metropolitan Fort Worth more than quadrupled between 1939 and 1948 and rose 42 percent between 1948 and 1954. Subsequently, sales have shown further gains, despite slight weakening as a result of the small rise in unemployment in the area during the latter part of 1957 and in 1958. Reflecting the growth in the area, the number of retail establishments in Tarrant County rose one-third between 1939 and 1954; the sales volume per store increased at an even faster rate.

A substantial retail trade sector is required to serve the needs of the large and well-paid work force in the immediate area. In addition, Fort Worth continues to be the shopping center for a wide area in northern and western Texas, southwestern Oklahoma, and eastern New Mexico. Charge accounts at local department and specialty stores are, of course, heavily concentrated in Tarrant County and its periphery counties, but a significant portion of the retail accounts belongs to customers who live throughout the western sections of Texas and in neighboring states.

The composition of employment in retail trade is similar to that expected in any large metropolitan center. The major concentration of retail trade employees is in stores handling general merchandise, primarily department stores. Eating and drinking establishments, automotive agencies, service stations, and food stores account for the bulk of the remaining trade employment.

As Fort Worth grew and new housing developments were built, shopping centers were established to serve the suburban consumer, and the pattern of retail trade shifted somewhat. During the past few years, 64 shopping centers, with more than 3 million square feet of floor space, have been built in the metropolitan area, and many other large shopping centers are either under way or proposed.

Retail sales in the Central Business District of Fort Worth showed a 12-percent gain between 1948 and 1954, while sales in the rest of the city rose 71 percent. Despite the relatively larger growth in sales in outlying areas, the Fort Worth Central Business District still accounted for over three-fourths of the city's retail sales of stores handling general merchandise, apparel, and accessories and for 71 percent of the sales in jewelry stores. Further expansion of retail outlets outside the Central Business District since 1954 probably has resulted in additional gains in suburban area sales relative to sales in the downtown stores.

Wholesale trade in metropolitan Fort Worth provides employment for almost 12,000 workers, or about 6 percent of the nonagricultural labor force. The wholesale trade territory is similar to that of retail trade, as a major part of the trade has a westerly orientation. On the other hand, the pattern of wholesale trade reflects, to some extent, the importance of the various kinds of manufacturing which predominate in the area. Consequently, the markets are broader in scope, and wholesaling — as manufacturing — is international in character.

In 1954 the number of wholesalers in Tarrant County, at 725, had increased 39 percent from 1948, and their payrolls had risen 57 percent to a total of over $32.5 million annually. Sales by wholesalers in the Fort Worth area increased $85 million to reach almost $722 million. Merchant wholesalers are the most numerous type of wholesaler in Tarrant County, accounting for 74 percent of the establishments and 59 percent of the sales in 1954. The most important types of merchant wholesalers are those dealing in machinery, equipment, and supplies; edible farm products, groceries, and food specialties; and motor vehicles and automotive equipment.

WAGE AND SALARY EMPLOYMENT, OCTOBER 1958, AND INCOME, 1957, FROM SELECTED ECONOMIC ACTIVITIES

Tarrant County

Activity	WAGE AND SALARY WORKERS			WAGE AND SALARY INCOME		
	Number	Percent of county total	Percent of Texas activity	Amount (In thousands of dollars)	Percent of county total	Percent of Texas activity
Manufacturing	52,032	29.2	11.0	315,000	39.3	13.7
Trade	39,273	22.0	6.3	136,800	17.1	6.5
Government	29,193	16.3	7.0	105,000	13.1	5.0
Agriculture[1]	6,500	9.8	1.5	6,200	.8	.6
Services	17,454	7.8	6.1	67,000	8.3	6.6
Mining	3,789	4.8	3.1	20,000	2.5	2.8
Construction	8,643	4.4	5.4	37,200	4.6	5.4
Transportation, communications, and utilities	14,004	3.6	6.2	82,000	10.2	7.4
Finance, insurance, and real estate	7,787	2.1	6.9	33,300	4.1	7.3
Total	178,675	100.0	6.0	802,500	100.0	7.0

[1] Includes farm proprietors' employment and income, with percentages of county totals based on wage and salary and proprietor components combined.
SOURCES: Texas Employment Commission.
Federal Reserve Bank of Dallas.

Merchandise agents and brokers represent the second largest group of wholesalers in Fort Worth, with approximately one-fourth of the sales in 1954 and 12 percent of the wholesale business establishments. Proportionately, merchandise agents and brokers are about twice as numerous in Tarrant County as in the State. The relatively greater importance of this type of wholesaler in the area probably results from the fact that large numbers of commission agents and order buyers operate on the livestock and grain markets in Fort Worth. Of the other types of wholesalers, manufacturers' sales branches and offices are important in the city, accounting for about 11 percent of the sales.

Tarrant County is quite likely to show further growth as a major distribution and trade center. One of the largest concentrations of population not on a navigable stream lies within Tarrant County and its neighboring counties. The large west Texas trade area has increased in economic importance, and the continued growth of population in this area alone would be sufficient to assure the future of Fort Worth's trade. The major efforts of local businessmen and nonresident investors, with an eye to both the present and the future potential of the north Texas area, have given a boost to an early and rapid expansion of distribution services in the Fort Worth area, particularly in the eastern sections.

Large numbers of well-planned industrial sites are available to manufacturing and distribution concerns in virtually every quadrant within the city limits of Fort Worth, as well as in adjacent areas. One extensive development of around 5,000 acres near Arlington, east of Fort Worth, is making excellent progress and has attracted several nationally prominent concerns in recent months. This development, located astride major highway and toll-road arteries and excellent railroad facilities, is one of the more promising planned sites. A large warehousing facility is being constructed to serve as a distributional focal point for a multiplicity of goods for the entire north Texas area.

Industrial development departments of the Chamber of Commerce, utility companies, and commercial banks are available for advice and consultation on locational problems of new industries and the expansion plans of existing businesses. The efforts of these concerns, with their trained personnel, and the energetic work and assistance of civic and business leaders have been influential in encouraging firms to locate in the Fort Worth area.

Secondary Economic Features

GOVERNMENT

Government employment and income in the Fort Worth area are quite significant, comprising about 16 percent and 13 percent, respectively, of wage and salary employment and income. However, in terms of employment and income, direct governmental activities are less important in metropolitan Fort Worth than in the State. Civilian and military government employment in Tarrant County is around 29,000, and the annual payroll totals about $105 million.

Federal Government employment and payrolls are relatively larger in Tarrant County than are state and local government employment and payrolls. Carswell Air Force Base and the Fort Worth General Depot are the two largest Federal Government installations in the area. The Fort Worth Quartermaster Market Center, the Army Corps of Engineers, and various Army, Air Force, and Naval Reserve training units are other important military units. Among the more significant local Federal civilian agencies in Fort Worth are the Post Office, Department of Agriculture, Federal Aviation Agency, Federal Power Commission, and Weather Bureau.

Carswell Air Force Base — formerly known as Fort Worth Army Air Field — was named after Major Horace S. Carswell, a Fort Worth Congressional Medal of Honor winner. The base began operating in 1942, and over 4,000 bomber pilots received their training here during World War II. Subsequently, Carswell was designated a permanent installation; and, as a vital part of the Strategic Air Command, the base is charged with the responsibility of retaliating in case of an enemy attack.

More than 8,500 officers, airmen, and civilians are employed at Carswell, which has an annual payroll in excess of $27.5 million. Over 3,000 of the men are living off the base with their families, and approximately 1,500 single men are renting rooms or apartments from private sources. In addition to the base's payrolls, purchases of local goods and services (such as machinery, equipment, utilities, transportation, and similar items) total about $10 million annually.

The Fort Worth General Depot is responsible for the storage and distribution of supplies and equipment to major Army bases in the Fourth Army Area, which includes Texas, Arkansas, Louisiana, Oklahoma, and New Mexico. Moreover, many ROTC, Reserve, and National Guard organizations and Air Force and Naval installations are served by the depot. Manned primarily by civilians, the depot has an annual payroll of around $6 million for its approximately 1,400 employees.

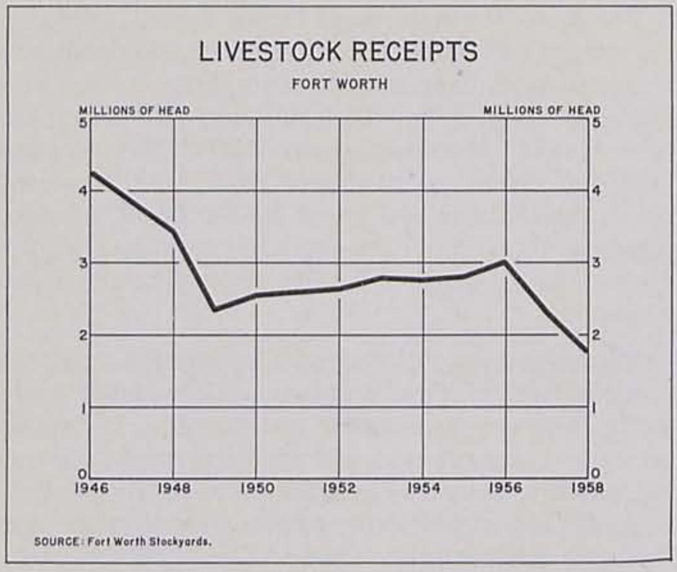
The impact of the Federal Government upon the economic life of Fort Worth is understated if based solely on direct employment and payrolls. The rather substantial aircraft and aircraft parts manufacturing industries in the county are affected by decisions of the Federal Government with respect to orders to meet changing defense requirements. The purchase of locally supplied materials for use in these defense-related activities provides an income of considerable importance.

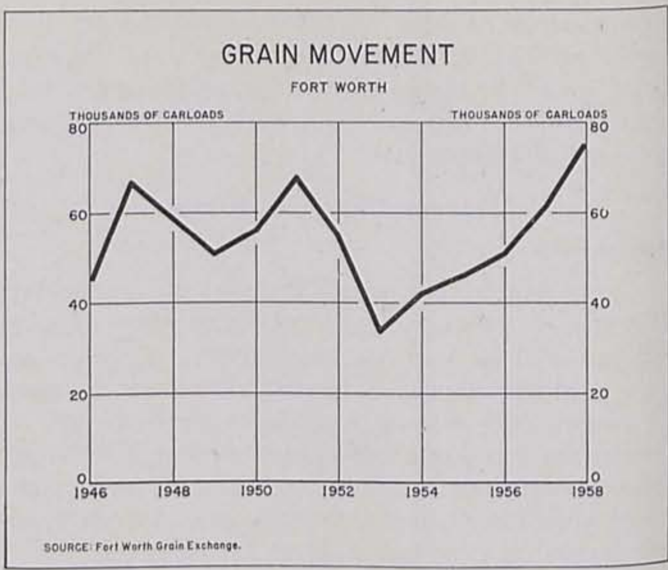
Employment and payrolls of local school districts and municipalities in Tarrant County comprise most of the remaining sources of government employment and payrolls. A small but important group of state employees in Fort Worth is connected with the usual divisional offices found in major cities, including the Texas Employment Commission, Texas Department of Public Safety, and the State Department of Public Welfare.

AGRICULTURE

Direct employment in agriculture accounts for about 2 percent of the total work force in Tarrant County, and total agricultural wages and salaries and farm proprietors' income contribute only about $6.2 million to personal income. The significance of agriculture to metropolitan Fort Worth does not lie primarily in the output of its neighboring farms and ranches but, rather, centers upon the crops and livestock from the large agricultural areas to the west and northwest. These areas are the sources of raw products for the city's stockyards, trucking and railroad interests, merchants, and some important manufacturers.

For example, the Fort Worth market has varied from eighth to tenth in the Nation in terms of cattle and calf marketings during the past few years and is second in the Nation in terms of sheep and lamb receipts. Fort Worth remains the Southwest's top livestock marketing and processing center, and the livestock supplies upon which it depends are drawn from





a wide area. The Fort Worth Stockyards consist of about 80 acres containing over 3,000 pens, over 2,500 of which have watering and feeding equipment. The area is dominated by two major packing houses and seven smaller plants, the Livestock Exchange Building, hotels, and eating places and is crisscrossed with railroads and truckways. This industrial area is a city within a city, the lifeblood of which is drawn from the farms and ranches throughout the Southwest. Annual purchases of about 10,000 tons of hay, as well as other feeds, make the stockyards a half-million-dollar "farm customer" in the midst of the city.

Livestock receipts at Fort Worth have trended downward during the past few years as a result of drought and shifts in marketing practices, with an increasing portion of the livestock being sold at local auctions or at county points rather than at central markets. Nevertheless, the 100-millionth animal passed through the Fort Worth Stockyards in 1946; and, since that time, more than 33 million additional livestock have been handled at the yards.

Similarly, metropolitan Fort Worth depends upon the large wheat and grain sorghum areas to the west to maintain its position as a major grain milling and storage center. Currently, Fort Worth has a storage capacity of around 70 million bushels and is the fifth most important central grain market in the Nation. The flour mills have a daily capacity of 15,200 hundredweight, and the daily capacity of the feed mills is 6,772 tons. Receipts of grain at Fort Worth tend to vary from year to year with crop conditions, but, in 1958, almost 82,000 carloads of grain — the largest amount of record — were moved into and out of Fort Worth.

Agriculture in Tarrant County has experienced much the same general trends as in the State. To some extent, the trend toward fewer farms and less land in farms has been accelerated as a result of the urbanization of the county. Subdivisions for residences and industrial developments, diversion for roadways and waterways, and similar uses have rapidly removed much of the better agricultural land from production.

Land use in Tarrant County has gradually shifted out of crop production into pastures and hay production. Consequently, of the $10.3 million of farm products sold in Tarrant County in 1954, approximately 78 percent was for livestock and livestock products. In recent years, dairy and poultry farms, in particular, have risen in importance. Reflecting the decreasing importance of crops, cotton production dwindled from 7,560 bales in 1940 to 1,560 bales in 1957. On the other hand, the numbers of cattle and calves have gradually risen and, by 1954, totaled over 57,000 head, or 17 percent more than in 1940.

Relative to total economic activity in the area, primary agricultural production in Tarrant County likely will become even less important in the future. Although the commercial farmer and rancher may be a vanishing segment of the county's productive work force, the impact of agricultural production outside the county upon the economy of Fort Worth in terms of processing, storing, and assembling will remain a substantial influence. In addition, the business of meeting the needs of commercial farms and ranches in the city's trade territory will continue to be important to persons engaged in distribution and services.

SERVICES

About 17 percent of the nonagricultural work force is employed in the highly developed and well-diversified service industries in metropolitan Fort Worth. Over 8 percent of total wage and salary income in Tarrant County and a substantial part of the nonfarm proprietors' income are derived from services.

Among the various types of service businesses, those providing personal services—barber and beauty shops, dry cleaners and laundries, and similar establishments — are the most numerous and account for the largest proportion of receipts from the major types of services. The United States Bureau of the Census compiled a list of 2,651 selected service establishments in Tarrant County in 1954 and indicated that their volume of business was over $68 million annually. Businesses providing personal services accounted for 41 percent of these establishments and 29 percent of the total receipts.

Combined receipts from amusement and recreation centers and from hotels and similar lodging places were about 27 percent of the total. One-fifth of the total receipts of service establishments was reported by those concerns offering business services, and 15 percent each of the receipts was for automobile repair services and parking garages and for miscellaneous businesses repairing such items as watches, television sets, and other home appliances.

Employment and income from services in Tarrant County will continue to expand as the population and income of the area grow. This growth is contingent upon the further development of the city's basic sources of income. The extent to which metropolitan Fort Worth maintains its position as a major trade and convention center also will affect the trend in service industries.

MINING

Tarrant County proper does not have any crude oil or natural gas production, but mining employment and income have made significant contributions to the economy of Fort Worth since the discovery of oil northwest of the city. Mention has been made in an earlier section of the considerable amount of manufacturing activity which is oil-related. Only one major refinery remains in Fort Worth, but oil storage and pipeline pumping have grown in importance. In addition, increasing oil industry employment and income stimulated the construction of many of Fort Worth's major multistoried buildings, and income from oil production provides a substantial part of the purchasing and investment potential of the city's residents.

Currently, about 3,900 workers — around 2 percent of the nonagricultural work force — are directly engaged in oil and mining in the Fort Worth area. A large part of the direct employment in the oil industry is in activities associated with the many oil companies and oil production and servicing concerns headquartered in the area. A few hundred of those employed in mining are working the abundant sand and gravel deposits in Tarrant County. Direct wages and salaries of workers engaged in mining in 1957 are estimated at $20 million, or a little over 2 percent of the wages and salaries in Fort Worth at that time.

CONSTRUCTION

Employment in construction in metropolitan Fort Worth increased 2½ times between 1940 and 1950, reflecting the rapid growth of the area during the decade. Construction employment has shown little change since 1950 and currently totals around 11,000, or about 5 percent of the nonagricultural work force. Wages and salaries of workers in contract construction during 1957 advanced to $37 million, which is almost double the 1948 figure, and accounted for 3 percent of total gross income in Tarrant County.

The growth in construction activities in Fort Worth is indicated by the more than fourteenfold increase in the value of nonresidential construction contract awards between 1940 and 1958. The peak in nonresidential awards — almost $43 million — was reached in 1956, but, in 1958, awards still totaled $36 million. Residential building has shown an equally impressive gain during the past several years, and the 1958 awards were approximately double those 12 years earlier. In 1958, contract awards in Tarrant County for residential building totaled over $62 million, or about 57 percent of the total value of residential and nonresidential building awards.

General contractors, who primarily construct residential and commercial buildings, predominate in metropolitan Fort Worth. Almost as important, in terms of employee numbers, are specialty contractors, such as those engaged in plumbing, heating, air-conditioning, electrical, masonry, or similar types of construction. Contractors concentrating on highway, sanitary sewer, or parallel types of work are the least numerous in the Fort Worth area. Many of the general contractors operate throughout the Southwest and maintain their headquarters in Fort Worth.

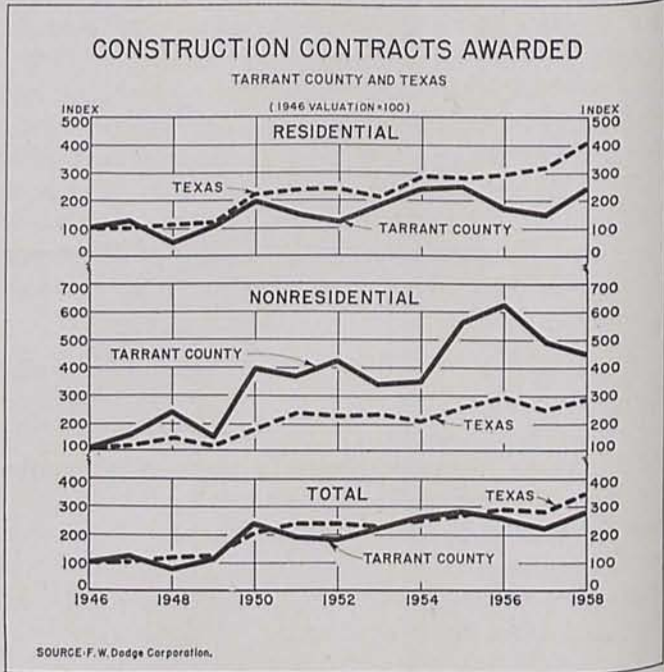
Paralleling trends in most rapidly growing cities, the largest portion of the residential construction in Fort Worth during the past several years has been in periphery areas of the city. Much of the land utilized was largely undeveloped areas which, in many cases, were annexed only a few years ago. Residential construction has been relatively largest in the eastern and southern sections of the city, although activity in the southwestern section also has been moderately strong.

Commercial construction during the past few years has been paced by the transportation industry, but banks, churches, shopping centers, feed companies, military bases, and colleges have all played an important part in adding to the total construction picture. In downtown Fort Worth, the recent opening of a large new bank building, the nearly completed telephone building, and the beginning of another major bank building are providing new landmarks. Plans at the colleges in the city and at nearby Arlington indicate further expansion of construction at the higher-education centers.

A new 5,000-acre industrial area east of Fort Worth, near Arlington, is being developed. Construction plans call for integrated industrial plant sites, as well as establishments which would complement industrial operations, including shopping and recreational facilities and hotels. Approximately $20 million has been spent on this facility at the present time; four major industrial plants have been constructed in the area, and a 32-lane bowling center, a restaurant, and a club have been completed.

Public works and utilities construction has been quite significant during the past several years as a result of population growth and the consequent need for expanding services to new areas. Continued population gains and increased urbanization in metropolitan Fort Worth point toward further needs for public improvements. The city of Fort Worth in late 1958 authorized a $22,875,000 expenditure for streets and through ways and $400,000 for fire stations. In early 1958, the Texas Highway Department allotted $19,367,780 for highway projects in Tarrant County and committed an additional $29,692,000 for projects during the next few years.

The Federal Aviation Agency has acquired a 26-acre site in Tarrant County and has announced plans for early construction of a multimillion-dollar air traffic control center. The center will control air traffic in an area bounded approximately by Shreveport, Oklahoma City, Abilene, and Waco. Toward the end of 1958, six new schools of the Fort Worth Independent School District were under construction, and sites were purchased for two high schools, two junior high schools, and an elementary school.



A factor which may influence construction in Fort Worth in the future is the extent to which the Gruen Plan is implemented. This plan has been proposed by some leaders as a means of revitalizing the downtown area. In its more detailed form, the Gruen Plan envisions — over a 15-year period — a Central Business District relatively free of surface vehicular traffic, with underground freight delivery facilities. The construction of a freeway loop around the downtown area and six large parking garages is included in the early stages of the plan. The center of the city would provide a park-like atmosphere, with trees, greenery, benches, and statuary interspersed with shopping, professional, and service facilities.

TRANSPORTATION, COMMUNICATIONS, AND UTILITIES

Fort Worth is the center of a major transportation network — one of the principal factors in the city's early growth, as well as its continuing progress. Nine trunk-line railroads have connections in the city, providing 16 outlets to all sections of the North American Continent. Eight major state and United States highways and a modern toll road serve the city. Bus transportation is afforded by three major lines, one of which is headquartered in the city, and 35 common-carrier motor freight lines permit nationwide door-to-door service. Fort Worth has seven radio stations and two television stations, and daily and Sunday newspaper coverage is provided by two major newspapers.

The Greater Fort Worth International Airport (Amon Carter Field) furnishes transcontinental and international passenger and airfreight service. In addition, the air field provides service for local, itinerant, and executive flights. Amon Carter Field, located east of the city, was completed in 1953 at a cost of approximately $12 million, exclusive of hangar facilities of major airlines operating from the field. Runway construction and approach clearances are adequate for the largest jet aircraft, and the field is strategically located to serve a large section of the north Texas area. Six major airlines offer direct or connecting service to domestic and international points.

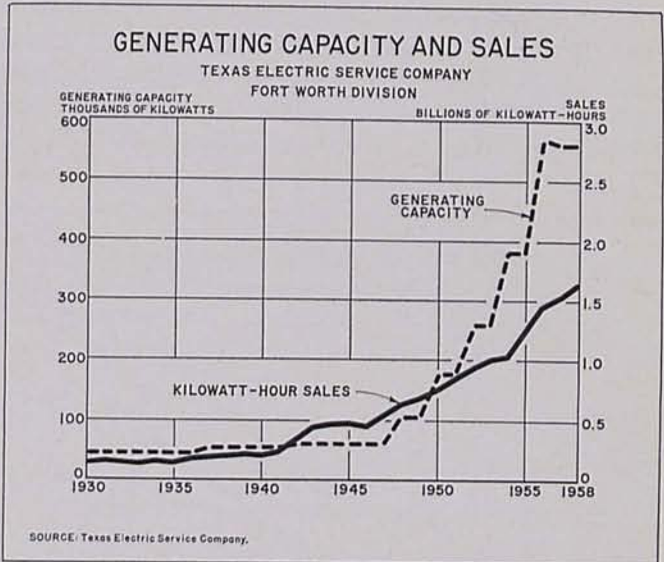
Meacham Field, located in the northern part of the city, provides outstanding service for local and itinerant aircraft. In 1958 the field ranked first in all types of itinerant operations in an 11-state region in the southern and southeastern parts of the Nation. The Federal Aviation Agency has estimated that traffic volume will increase about three-fourths in the next 5 years at both Fort Worth International Airport and Meacham Field.

The city and its suburbs are served by a modern local bus system. In Fort Worth proper, 184 buses operate daily over 32 separate lines. Furthermore, the transit company operates 56 school buses over 1,200 miles daily during the school year. The city's bus system served over 14.1 million passengers and covered 6.7 million miles during 1958.

Commercial warehousing space in Fort Worth totals about 750,000 square feet, and plans are under way by several firms to add almost a million square feet. This warehousing space would be exclusive of that planned in the industrial tract near Arlington, where extensive facilities are proposed. Cold storages in the city contain 285,000 square feet, and a large amount of storage is available for household goods and general merchandise.

Metropolitan Fort Worth is adequately served with the usual utilities. Natural gas was provided to approximately 146,000 customers in 1958, or almost double the number a decade earlier. The number of telephones in the city has more than doubled since 1949, and, at the beginning of 1959, totaled more than 214,000. By late 1960, Fort Worth telephone users will be able to dial long-distance calls direct; thus, Fort Worth will be the first large city in the Southwest to receive this new communications system.

An almost continuous process of expansion has been required to provide electrical service to the Fort Worth area. Total sales in the area in 1958, at over 1.6 billion kilowatt-hours, were 2⅓ times larger than a decade earlier; and the number of customers, almost 172,000, was 85 percent greater. During this time, the generating capacity increased almost 5½ times to nearly 564,000 kilowatts. In addition, power is available through the North Texas Interconnected Power Pool by a network of lines operated by automatic remote-control switching equipment.



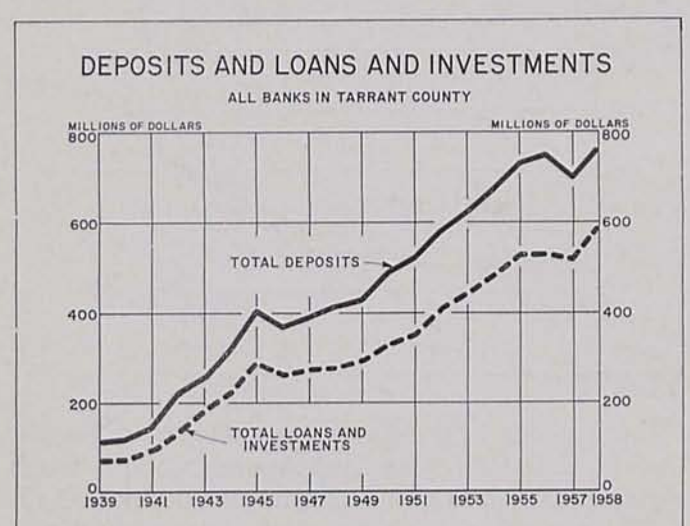
Employment in transportation activities in Tarrant County is about 9,800, and around 5,000 workers are employed in communications and utilities. Combined employment for these groups comprises 8 percent of the total nonagricultural work force in Tarrant

County. Wages and salaries paid to transportation, communications, and utilities workers during 1957 were about $82 million, or approximately 10 percent of total wages and salaries in the county. Wages and salaries for the group have almost doubled since 1948, but total wage payments comprise a slightly lower percentage of the total than a decade ago.

FINANCE, INSURANCE, AND REAL ESTATE

The rapid growth and diversification of the economy of Fort Worth are reflected in the variety and strength of its financial institutions and services. Furthermore, the city's past growth, as well as its prospects for future expansion, has depended, in large measure, upon the leaders in the financial community. The confidence of the financial leaders in the future of Fort Worth is indicated by the emphasis upon the physical quarters of the banks, savings and loan associations, insurance companies, and real-estate agencies. Many of these quarters have been built or remodeled recently, or plans are under way to improve them.

The number of commercial banks in Tarrant County has increased from 9 in 1939 to 20 in 1959. Most of the growth in the number of institutions has occurred within Fort Worth, reflecting the rapid development of suburban housing and shopping centers. Total deposits rose from $113 million in 1939 to over $768 million in 1958. Capital accounts increased about sevenfold during the past two decades and presently total over $58 million. Loans during this period rose from $41 million to almost $369 million.



The changes in the loan portfolios of the banks have mirrored the growth and diversification of the area's economy during the past 20 years. Real-estate loans, commercial and industrial loans, and loans to individuals have shown larger gains relative to other types of loans. Loans to farmers have declined significantly, paralleling the reduction in primary agricultural production in the area.

Reflecting the relative economic underpinnings of the area, loans to manufacturing establishments are the most important segment of commercial and industrial borrowings, comprising over one-third of the total. Loans to businesses engaged in oil production and the manufacture of petroleum products are particularly significant. Transportation equipment manufacturers, grain millers, and food processors are also active borrowers. The most important types of nonmanufacturing businesses receiving accommodations at Tarrant County banks include wholesale and retail trade establishments, sales finance companies, and construction firms.

The savings and loan associations have progressed as the area has grown, and, at present, there are six associations in Fort Worth. Total assets of these associations in 1958 were almost $112 million, with total loans in excess of $92 million. Fort Worth is the home of 32 life insurance firms, with assets of over $81 million, and 12 fire and casualty companies, having assets totaling more than $63 million. Moreover, numerous other fire and life insurance companies that are headquartered in other cities maintain large offices in Fort Worth.

The rapid expansion of housing, the development of shopping centers, and the increase in industrial activity have resulted in parallel growth for real-estate offices and services. Many real-estate firms are actively providing leadership and planning in the development of downtown Fort Worth, as well as encouraging the establishment of industrial sites within the city and county.

Employment in finance, insurance, and real estate during 1959 totals about 8,700, or around 4 percent of the nonagricultural labor force in Tarrant County. Employment at financial institutions has risen about 40 percent since 1950. Wages and salaries paid to workers in finance, insurance, and related fields totaled over $33 million in 1957.

Problems

The north Texas area continues to expand and develop, and the entire section is rapidly evolving into a manufacturing and distributing complex which is quite independent of local political subdivisions. In large measure, Fort Worth's future is integrally tied to the prospects for the entire north Texas area specifically and for the Southwest generally. Despite this interdependence, Fort Worth has a number of problems that will, to some extent at least, determine whether it will share equally in the growth expected in the larger area of which the city is a part.

Some of the problems are the result of rapid growth, which has strained local services and made it difficult to keep abreast of even the most pressing needs. The problems associated with growth are not unique to Fort Worth but are shared by other southwestern municipalities that have experienced similar growth. Other problems to be faced by Fort Worth's citizenry are related to the composition of the city's industrial base and, to a lesser extent, the topographic features shaping the directional expansion of its population and businesses.

None of the problems are of such a nature as to halt the growth of Fort Worth, but they are of sufficient importance that, unless they are solved, they may inhibit the city's achieving its maximum potentialities. Effective and purposeful leadership, a vital part of the past accomplishments of the city, would be able to resolve most of the current difficulties. The task of leadership will be to develop a unified and selfless program which will be supported by the community. A broadly based and representative leadership is needed to formulate the programs if they are to be widely accepted by the residents. As many of the city's current problems are resolved, change will produce new and perhaps more perplexing situations; consequently, continuous leadership will be required to meet the future needs that change brings.

The heavy dependence of the Fort Worth economy upon defense-related employment, particularly in aircraft manufacturing, provides both an element of strength and a possible source of weakness. The demands of a "cold war" existence in an uneasy world point up the necessity for a strong military posture in the forseeable future; however, the unstabilizing effects of stretch-outs, modifications, or terminations of Government contracts upon employment and payrolls also have been demonstrated recently. The differential impact of periodic cancellations, stretch-outs, or speedups in defense aircraft production upon the economy of Fort Worth seems more serious at this time than the possibility of a long-time decline in the over-all economic contribution of the aircraft industry itself. Thus, the aircraft industry may remain a bulwark in the Fort Worth economy for some time. Coupled with payrolls of military installations, income from defense-oriented sources probably will continue to be large.

The shift from conventional manned aircraft to missiles may result in some significant changes in the aircraft industry. Manned aircraft, however, is likely to remain a major part of the defense structure for some time to come, since many aviation authorities feel that ballistic missiles alone cannot meet the total requirements of a well-rounded and efficient aerial striking force. The aircraft industry in Fort Worth is in a favorable position to compete for the Nation's manned-bomber needs because of the industry's competence in the concept, design, and building of advanced types of manned aircraft.

The emphasis upon instrumentation, electronic devices, and similar space-age gadgetry could reduce aircraft production employment in the Fort Worth area if locally based firms are not able to supply the needed components. However, any decrease in total employment which might occur as a result of the assembly of component parts elsewhere may be largely offset, in terms of total payrolls, by higher average wages from the upgrading of skills needed in the fabrication of missiles as compared with conventional aircraft. It is also possible that total manpower requirements could rise, despite the out-of-area assembly of components, merely because of the increasing complexity of assembling more sophisticated types of missiles. Since the aircraft industry is very important to Fort Worth, the direction, extent, and rate of change could have a lasting effect upon the future of the city.

Nondefense-related industries are not immune to the ebb and flow of general business activity or the changing desires of the capricious consumer. However, diversified and evenly balanced industrial and business employment will minimize the effects of reduced activity resulting from temporary adjustments which may affect specific types of industries. For example, food processing, which is highly important to Fort Worth, has provided the city with a large measure of stability of employment and income. Further industrial diversification would contribute to economic stability.

The lack of mineral resources limits the possibilities for industrial expansion or diversification from these sources, but the locational advantages of Tarrant County and its ability to attract an easily trained labor force — if economic opportunities are available — make the county suitable for a wide range of new businesses, as well as for expanding current enterprises. Perhaps the greatest possibilities for future growth lie in light manufacturing, mainly of consumer-type goods. Continued efforts also should be made to strengthen the city's ties with its western trade territory, especially to maintain Fort Worth as a major distribution center for west Texas areas.

Another problem of concern to civic leaders is the impression that the casual or itinerant visitor obtains of the city. Fort Worth, as is the case in most major cities, is faced with the task of improving and renovating portions of the Central Business District. In addition, there is a need to eliminate the substandard housing found in some of the older residential areas. Steps which are under way will both revitalize the downtown area and correct some of the deficiencies in residential housing.

Current freeway and street improvement programs are aimed at providing quick and convenient access to the downtown areas. The clearance of older buildings and the renovation of other structures are rapidly eliminating some of the more unattractive sites. Much remains to be done, as in most cities, if the deterioration of the heart of the city is to be checked and if the more severely blighted areas are to be improved.

The nexus of Fort Worth and Dallas and the cities that lie between is promoting the development of the entire land area into an almost inseparable economic unit. The proximity of these two major economic centers and the rapidity with which they and their satellite cities are merging may create problems of considerable magnitude. A multiplicity of taxing units that provide essential but often overlapping and expanding services may indicate the need for coordination or consolidation of functions. Combined or coordinated action may be particularly desirable if the costs of tax-supported services seem to be increasing at a faster rate than revenues.

The acceptance of some semblance of systematic planning and zoning is desirable if optimum utilization of the entire area is to be realized. Many services — such as provision for sewage disposal, water supplies, health care, and public transportation — transcend established political boundaries and can often be provided more feasibly through unified efforts. A large part of the north Texas area shares a common drainage basin, draws upon much the same sections for its labor, and seeks recreation at many of the same places. In fact, Tarrant and Dallas Counties, as well as the periphery counties, are rapidly becoming a socioeconomic entity.

The directional growth of metropolitan Fort Worth in the future could critically affect the planning of businessmen in downtown Fort Worth and could influence the location of new industries in the area or affect the expansion plans of existing businesses. Lakes, potential flood areas, and other features currently encourage growth in a southerly and easterly direction from downtown Fort Worth. Much of this area lies outside the corporate limits of Fort Worth and within the boundaries of other cities. The magnitude of some of the problems facing Fort Worth will be determined by the extent to which businesses and people locate outside the city limits. If Fort Worth proper is able to attract a significant portion of the new or expanding businesses desiring to locate in the north Texas area, additional municipal services will be required, but the burden of the cost will be spread upon a broader base.

As mentioned earlier, the future of Fort Worth is bright, and the problems facing the city are related to growth rather than decay. Consequently, the challenge to Fort Worth's leaders is the development of a coordinated plan to improve the city which will capture the imagination and support of all progressive-minded individuals. An additional challenge to responsible leadership lies in furthering the interests of the entire north Texas area. An early goal should be the organization of an effective group representing all cities and towns to plan and initiate mutually beneficial projects. The north Texas area is in the heart of the great Southwest, and the possibilities for growth are unlimited if the potentialities of the area are fully exploited.

This is the fourth of a series of articles on the four largest cities in the Eleventh Federal Reserve District — Houston, Dallas, San Antonio, and Fort Worth. Additional copies of this article may be obtained by addressing a request to:

Research Department
Federal Reserve Bank of Dallas
400 South Akard Street, Dallas 2, Texas

BUSINESS REVIEW

BUSINESS, AGRICULTURAL, AND FINANCIAL CONDITIONS

DISTRICT SUMMARY

Mounting stocks of refined products continue to be a disturbing element in the oil industry outlook. Eleventh District crude oil production and crude runs to refinery stills declined during June, and the Texas production schedule for July has been set at 9 days, compared with 10 days in the previous month.

Industrial production in Texas rose during May to a new record high, partly as a result of substantial increases in oil production and refining. Nonfarm employment in the District states reflected another seasonal gain, while unemployment in Texas declined to 4.3 percent of the labor force.

The seasonally adjusted index of department store sales in the District reached a new high in May, partially reflecting the opening of new stores. Inventories on hand, after seasonal adjustment, were also slightly higher at the end of May, and an increase in new orders placed indicates a further build-up in coming months. Registrations of new cars during May in the four most populous areas in the District were down slightly from April but were substantially above a year ago.

Loan demand at the District's weekly reporting member banks remained strong through mid-June. Reserve positions of member banks in the District tightened in May, and borrowings from the Federal Reserve Bank almost doubled. The Bank's discount rate was advanced to 3½ percent, effective May 29.

Agricultural conditions in the District are favorable, except in a few areas. Feed grain and early cotton crops are unusually promising. Improved range conditions have brightened the outlook for livestock, prices for which remain above a year earlier; however, crop prices are lower.

Construction contract awards decreased modestly in the District states during April but were 12 percent higher than a year earlier. Nonresidential construction awards in Texas showed a further decline during May.

TRADE

Department store sales in the Eleventh Federal Reserve District during May increased 10 percent over a month earlier to boost the seasonally adjusted index to a new high. Sales in May were 4 percent larger than in May 1958, despite the fact that there was one less trading day in the month. The seasonally adjusted index was 173 percent of the 1947-49 average, compared with 169 in April and 161 in May last year. The May index was 1 point above the previous high recorded in August 1958. Part of the gain over a year ago resulted from the opening of new department stores in the District. Sales in early June continued strong, showing a 3-percent gain over the comparable period in 1958. By the end of the second week in June, cumulative sales for 1959 were 8 percent above sales in the corresponding period last year.

Department store sales for individual metropolitan areas in the District showed month-to-month gains during May, and most of the areas registered increases over a year earlier. The April-May gains ranged from a 2-percent rise in El Paso to a 21-percent advance in Waco. The largest year-to-year increase was 8 percent in the Houston area. In El Paso, sales were the same as

INDEXES OF DEPARTMENT STORE SALES AND STOCKS

Eleventh Federal Reserve District

(1947-49 = 100)

	SALES (Daily average)		STOCKS (End of month)	
Date	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted
1958: May	159r	161r	162r	164r
1959: March	151	166	178	169
April	157	169	181	174
May	172	173	173p	174p

r — Revised.
p — Preliminary.

DEPARTMENT STORE SALES AND STOCKS

(Percentage change in retail value)

Area	NET SALES: May 1959 from April 1959	NET SALES: May 1959 from May 1958	NET SALES: 5 mos. 1959 comp. with 5 mos. 1958	STOCKS (End of month): May 1959 from April 1959	STOCKS (End of month): May 1959 from May 1958
Total Eleventh District	10	4	9	—5	6
Corpus Christi	10	—1	3	—5	3
Dallas	6	5	11	—5	11
El Paso	2	0	6	—4	7
Fort Worth	14	3	9	—4	2
Houston	8	8	10	—1	11
San Antonio	19	—2	6	—3	5
Shreveport, La.	6	6	8	—4	9
Waco	21	5	10	—1	4
Other cities	24	6	10	2	2

a year ago, while sales in Corpus Christi and San Antonio were down 1 percent and 2 percent, respectively.

Even though May had one less trading day this year, gains over May 1958 were recorded in sales of most major items at the reporting department stores in the District. Soft goods and apparel sales were generally good, with gains of 8 percent in sales of men's clothing, 7 percent in women's and misses' dresses, and 3 percent in women's and men's accessories. In the homefurnishings lines, sales of furniture and bedding increased 6 percent; and sales of radios, television sets, and musical equipment rose slightly. On the other hand, major household appliance sales were down 13 percent from a year earlier.

Department store inventories at the end of May declined slightly less than seasonally in the District to a level 5 percent below a month earlier but were 6 percent above May 1958. Inventories at the department stores probably have been built up to accommodate the rising volume of sales, but stocks still remain below the high levels reached in the summer of 1957. Both new orders placed during May and orders outstanding at the end of the month were substantially above those a month earlier and a year ago. Thus, indications are that merchants are expecting continued strong sales throughout the summer and fall and are accumulating inventories in order to meet anticipated demands.

New car registrations in the District's four most populous areas during May declined slightly from April but remained 40 percent above a year ago. The greatest gain over May 1958 occurred in the Houston area, where registrations rose 51 percent — followed by the San Antonio area with a 40-percent gain. Registrations in the Dallas and Fort Worth areas were 33 percent and 31 percent, respectively, more than in May last year. For the first 5 months of 1959, cumulative registrations in the four areas were 28 percent ahead of a year earlier and were above those in the same period in all previous years except 1955.

AGRICULTURE

Agricultural developments in the District during the past month were generally favorable. However, in a few eastern sections, notably Louisiana, excessive rainfall was a problem, while in some western areas moisture shortages have persisted. In most regions, well-spaced thundershowers and accompanying warm, humid weather have promoted rapid development of crops and forage. In a few local areas, especially in northwestern Texas, severe thundershowers and hail damaged some crops, and replanting was necessary.

The development of the cotton crop was relatively good during the past month. Most of the cotton acreage destroyed by hail and rains in the High Plains has been replanted, and fields that escaped damage are making exceptional growth. In the Lower Valley of Texas, the crop has overcome much of the effects of unfavorable growing conditions early in the season and now looks unusually promising. In other early areas, particularly in south Texas and the Coastal Bend, cotton is making good growth. Insect-control measures are being stepped up in the early areas; damage has remained relatively light thus far.

Harvesting of wheat is well advanced, and the bulk of the crop has been combined from the eastern section of the District westward into the Texas Cross Timbers. Harvesting is nearing its peak in the High Plains of Texas and New Mexico. Winter wheat production in the District states totaled, as of June 1, almost 135 million bushels, reflecting a slight improvement from the month-earlier forecast but a 31-percent decline from the bumper 1958 crop. Virtually all of the decline from

WINTER WHEAT

Five Southwestern States

Area	ACREAGE SEEDED (In thousands of acres): Crop of 1959	ACREAGE SEEDED: Crop of 1958	ACREAGE SEEDED: Crops of 1948–57	PRODUCTION (In thousands of bushels): Crop of 1959[1]	PRODUCTION: Crop of 1958	PRODUCTION: Crops of 1948–57
Arizona	98	122	31	3,332	3,904	903
Louisiana	55	42	[2]45	1,210	672	[2]806
New Mexico	178	191	192	3,026	3,724	1,652
Oklahoma	4,396	4,440	4,924	79,128	115,440	64,925
Texas	3,320	3,320	3,136	48,300	73,040	35,358
Total	8,047	8,115	8,328	134,996	196,780	103,644

[1] Indicated June 1.
[2] Short-time average.
SOURCE: United States Department of Agriculture.

a year ago results from the reduction in yields per acre, since acreage seeded for harvest this year was only slightly below that in 1958.

Growing conditions for feed grains are favorable. Harvesting of sorghums is under way in the Lower Valley, and early fields in the Coastal Bend and south Texas are maturing rapidly. In the Blacklands, sorghums are making rapid growth, and the bulk of the crop has been seeded in the Texas High Plains and New Mexico. Moisture conditions have been favorable for corn, and early plantings in the Blacklands and south-central Texas are in the roasting-ear stage.

Developments in the more specialized crop areas also have remained favorable. In south Texas, harvesting of flax is virtually complete, and broomcorn is heading. Early peanuts are well advanced in south Texas, and most of the crop has been seeded in the important Cross Timbers peanut area. Along the Upper Coast, irrigation and fertilizing of rice are under way, and a good crop is in prospect. Haymaking continues in most sections of the District; alfalfa hay yields in the irrigated sections of the High Plains, New Mexico, and Arizona have been fairly high. The condition of the hay crop as of June 1 was better than average in each of the District states.

Vegetables have generally made good growth; in the Texas Panhandle, however, damage to potatoes and onions by rains and hail was severe. Harvesting of potatoes and onions is under way in northern and northwestern Texas. The 1959 production of Irish potatoes in the State is indicated at 15 percent above the 1958 output. Although the Texas production of early spring onions was below a year earlier as a result of unfavorable weather conditions, early summer output is expected to be 54 percent larger.

Tomato harvesting is progressing in east Texas; and in south-central Texas, harvesting of sweet corn, squash, cucumbers, peas, and tomatoes has begun. Shipment of watermelons continues from early areas, and increasing movement is expected in the next few weeks as harvesting gets under way in later areas. Total Texas production of spring and early summer vegetables and melons (excluding potatoes) is estimated to be 11 percent below output in 1958. Smaller acreages, particularly of watermelons and tomatoes, are mainly responsible for the decline in production.

The livestock situation continues favorable in most sections of the District. Widespread rains over much of the District in mid-June provided moisture for the development of native ranges and pastures. In many areas, calves are heavier this year than calves of similar ages were under the excellent grazing conditions last year. The condition of ranges at the beginning of June was the same as or better than a year earlier in each of the District states except Arizona. In this State, lack of rainfall has resulted in deterioration of range conditions for the past 7 months. Livestock throughout the District are in good condition.

CASH RECEIPTS FROM FARM MARKETINGS

Five Southwestern States and United States

(Dollar amounts in thousands)

Area	January—March		Percentage change
	1959	1958	
Arizona	$ 93,461	$ 108,272	—14
Louisiana	64,416	65,976	—2
New Mexico	46,306	39,669	17
Oklahoma	105,544	98,668	7
Texas	438,045	449,990	—3
Total	$ 747,772	$ 762,575	—2
United States	$7,294,299	$6,959,893	5

SOURCE: United States Department of Agriculture.

The index of prices received by Texas farmers and ranchers for all commodities declined 3 percent during the month ended May 15. The all-crops index was down 6 percent from mid-April, and the livestock and livestock products index was 1 percent lower. The price index for all farm commodities, at 278 percent of the 1910-14 base, was 1 point higher than a year earlier, as a 2-percent increase in livestock products prices more than offset a decline in crop prices. Virtually all the gain in livestock prices resulted from higher quotations for meat animals.

FINANCE

Gross loans at weekly reporting member banks in the Eleventh District registered a strong increase of $79.4 million during the 4 weeks ended June 17. This gain, which was considerably larger than the $54.4 million increase during the comparable period of 1958, reflected a continuation of the vigorous loan demand that has been the dominant characteristic of District banking activity since last fall. Business loans provided the principal expansive influence on loan accounts during the recent 4-week period, accounting for slightly more than 60 percent of the total loan expansion. Construction firms and sales finance companies showed the largest gains in borrowings.

THE FEDERAL FUNDS MARKET

The Board of Governors of the Federal Reserve System has just published a booklet entitled **The Federal Funds Market — A Study by a Federal Reserve System Committee.** The primary purpose of this study, which was made at the request of the Conference of Presidents and the Board of Governors, was to obtain information on the structure of the market for Federal funds, the volume of operations, and the use of the market by banks and others — to give a cross-section view of the structure and operation of the market rather than to determine its behavior over a period of time.

Information developed in the study shows that the Federal funds market has become an important segment of the short-term money market. Since the focus of the study was on fact finding covering a limited period, no attempt has been made to draw broad conclusions concerning the efficiency of the Federal funds market as a means of redistributing the supply of bank reserve funds, the effect of the market on the loan and investment policies of the institutions that use it most frequently, or the implication of Federal funds transactions for credit regulation.

Copies can be obtained from the Division of Administrative Services, Board of Governors of the Federal Reserve System, Washington 25, D. C., at $1.00 each up to 10 copies and 85 cents each for 10 or more copies in single shipment.

Consumer-type loans, as reflected in the residual category "all other loans," also continued to demonstrate strength. These loans rose $17.4 million during the 4 weeks, compared with an increase of $3.4 million at the same time last year. Real-estate loans and interbank loans increased more moderately, while agricultural loans and securities loans declined. On June 17, gross loans at all weekly reporting member banks in the District were almost 12 percent above the year-earlier level.

Weekly reporting banks in the District reduced investment accounts by $67.6 million during the 4 weeks ended June 17, reflecting principally the sale of Treasury bills acquired in the Treasury's May financings. The banks also reduced their holdings of Treasury notes, Treasury certificates of indebtedness, and non-Government securities. Part of the combined decrease in these categories was offset, however, by moderate expansion in Government bond holdings. The over-all decline lowered investments to a level 5 percent below a year ago.

Both time and demand deposits at the weekly reporting banks rose substantially between mid-May and mid-June, producing a total deposit increase of $107.3 million. The gain in demand accounts stemmed primarily from expansion in interbank balances and balances of individuals and businesses. In contrast, demand deposits of the Federal Government and of state and local governments registered declines. The increase in time deposits reflected gains in all major time deposit categories. On June 17, total deposits at the weekly reporting banks were approximately 2 percent above the total recorded for June 18, 1958.

Reserve positions of member banks in the District tightened in May, as reserve drains occasioned increased borrowings from the Federal Reserve Bank. Daily average borrowings rose from $21.4 million in April to $41.9 million in May, reflecting larger borrowings by both reserve city banks and country banks. Average free reserves of country banks declined from $43.1 million in April to $37.7 million in May, while net borrowed reserves of reserve city banks advanced from $16.9 million to $28.3 million.

Earning assets of the Federal Reserve Bank of Dallas rose $51.0 million between May 20 and June 17, as holdings of Government securities increased $1.6 million and discounts for member banks expanded $49.4 million. The Bank's gold certificate reserves

CONDITION STATISTICS OF WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES

Eleventh Federal Reserve District

(In thousands of dollars)

Item	June 17, 1959	May 20, 1959	June 18, 1958
ASSETS			
Commercial and industrial loans	$1,752,944	$1,703,616	$1,522,222
Agricultural loans	32,172	35,416	28,983
Loans to brokers and dealers in securities	17,435	16,390	35,557
Other loans for purchasing or carrying securities	180,671	182,834	184,461
Real-estate loans	227,791	223,925	217,969
Loans to banks	25,606	12,410	22,411
All other loans	708,459	691,067	630,171
Gross loans	2,945,078	2,865,658	2,641,774
Less reserves and unallocated charge-offs	49,579	48,999	45,150
Net loans	2,895,499	2,816,659	2,596,624
U. S. Treasury bills	39,548	88,830	71,101
U. S. Treasury certificates of indebtedness	85,266	97,784	87,357
U. S. Treasury notes	261,602	263,617	268,503
U. S. Government bonds (inc. gtd. obligations)	923,240	913,154	1,001,632
Other securities	341,100	355,006	315,397
Total investments	1,650,756	1,718,391	1,743,990
Cash items in process of collection	513,984	504,180	460,322
Balances with banks in the United States	495,965	477,091	576,056
Balances with banks in foreign countries	2,628	2,048	1,415
Currency and coin	49,013	48,603	49,070
Reserves with Federal Reserve Bank	598,759	555,881	607,436
Other assets	165,636	164,208	165,863
TOTAL ASSETS	6,372,240	6,287,061	6,200,776
LIABILITIES AND CAPITAL			
Demand deposits			
Individuals, partnerships, and corporations	2,979,455	2,920,367	2,830,435
United States Government	86,258	156,119	136,886
States and political subdivisions	215,626	265,432	200,616
Banks in the United States	1,015,946	888,466	1,070,722
Banks in foreign countries	15,552	15,845	15,119
Certified and officers' checks, etc.	82,206	64,590	73,213
Total demand deposits	4,395,043	4,310,819	4,326,991
Time deposits			
Individuals, partnerships, and corporations	1,101,912	1,095,196	1,040,668
United States Government	7,055	7,055	12,125
Postal savings	421	421	411
States and political subdivisions	193,919	178,826	228,939
Banks in the U. S. and foreign countries	2,903	1,643	1,794
Total time deposits	1,306,210	1,283,141	1,283,937
Total deposits	5,701,253	5,593,960	5,610,928
Bills payable, rediscounts, etc.	79,350	94,565	28,500
All other liabilities	63,119	69,262	75,524
Total capital accounts	528,518	529,274	485,824
TOTAL LIABILITIES AND CAPITAL	6,372,240	6,287,061	6,200,776

RESERVE POSITIONS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. In thousands of dollars)

Item	May 1959	April 1959	May 1958
RESERVE CITY BANKS			
Reserve balances	$ 549,077	$ 550,359	$550,834
Required reserves	540,789	547,068	528,327
Excess reserves	8,288	3,291	22,507
Borrowings	36,586	20,198	3,863
Free reserves	—28,298	—16,907	18,644
COUNTRY BANKS			
Reserve balances	452,299	457,045	430,929
Required reserves	409,322	412,765	378,263
Excess reserves	42,977	44,280	52,666
Borrowings	5,294	1,187	2,049
Free reserves	37,683	43,093	50,617
MEMBER BANKS			
Reserve balances	1,001,376	1,007,404	981,763
Required reserves	950,111	959,833	906,590
Excess reserves	51,265	47,571	75,173
Borrowings	41,880	21,385	5,912
Free reserves	9,385	26,186	69,261

declined slightly during the 4 weeks, but Federal Reserve notes in actual circulation showed a gain of \$11.6 million, reaching a level 9 percent higher than a year earlier.

Discount rates at all Federal Reserve banks were advanced from 3 percent to 3½ percent in late May and early June. At the Federal Reserve Bank of Dallas, the higher rate became effective on May 29.

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS

(In thousands of dollars)

Item	June 17, 1959	May 20, 1959	June 18, 1958
Total gold certificate reserves	$ 711,068	$ 714,766	$763,244
Discounts for member banks	61,605	12,200	13,800
Other discounts and advances	884	884	0
U. S. Government securities	1,035,547	1,033,955	966,099
Total earning assets	1,098,036	1,047,039	979,899
Member bank reserve deposits	997,947	954,771	980,597
Federal Reserve notes in actual circulation	776,091	764,468	713,050

NEW PAR BANK

The First State Bank, Poteet, Texas, an insured nonmember bank located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, was added to the Par List on June 1, 1959. The officers are: T. S. Dean, President; A. F. Sasser, Vice President (inactive); R. L. Cook, Vice President (inactive); E. O. Mangum, Cashier; and Helen G. Franklin, Assistant Cashier.

Demand for petroleum products declined seasonally during May and early June, but crude runs to refinery stills remained large. As a result, stocks of refined products continued to mount, and wholesale and retail prices displayed further weakness. The comparatively low level of crude oil production in the District in June mainly reflected the reduction in allowables and the large inventories of finished products.

Demand for major petroleum products during the 5 weeks ended June 12 decreased 4 percent to a level about 6 percent higher than a year earlier. Kerosene and distillate fuel oil demand declined; demand for residual fuel oil also decreased seasonally but averaged 17 percent above a year ago. Gasoline demand rose only 4 percent in the 5-week period, instead of showing the normal seasonal rise of 6 percent. The year-to-year increase in gasoline demand was only 2 percent, compared with industry-forecasted gains of 3 to 5 percent.

FOUR MAJOR REFINED PRODUCTS: DAILY AVERAGE PRODUCTION

United States

(In thousands of barrels)

Product	January—May 1959	January—May 1958	Percentage increase
Gasoline	4,010	3,680	9
Kerosene	329	314	5
Distillate fuel oil	1,960	1,683	16
Residual fuel oil	1,032	1,015	2
Total	7,331	6,692	10

SOURCES: American Petroleum Institute.
United States Bureau of Mines.

DAILY AVERAGE IMPORTS

United States

(In thousands of barrels)

Type of imports	January—May 1959	January—May 1958	Percentage change
Crude oil	905	935	—3
Residual fuel oil	739	561	32
Other products	234	158	48
Total	1,878	1,654	14

SOURCES: American Petroleum Institute.
United States Bureau of Mines.

Imports of refined products declined 11 percent in the 5 weeks ended June 12, but crude oil imports increased 12 percent. Consequently, total imports advanced 3 percent to a level of 1,342,000 barrels per day and averaged only slightly lower than a year earlier.

Crude runs to refinery stills were 3 percent higher in the first half of June than during May, and they were 8 percent higher than a year ago. District crude runs, at 2,324,000 barrels per day in the first part of June, were 2 percent below the preceding month but were 14 percent above May 1958.

Heavy crude runs, coupled with the seasonal decline in product demand, resulted in appreciable increases in stocks of refined products during May and the first part of June. Stocks of refined products on June 12 totaled 388,776,000 barrels, or 4 percent more than a year earlier. Strong demand kept residual fuel oil stocks low; but gasoline stocks, at 201,508,000 barrels, were 6 percent greater than the year-earlier supplies. Distillate stocks registered a year-to-year gain of 10 percent.

Stocks of refined products, which were widely considered by the industry to be excessive at the middle of June, were cited as the basis for the curtailment in refinery operations and the relatively low level of crude oil output in June. Large product stocks were also a major factor in the weakness in product prices during the first half of the month. Gasoline prices, in particular, have declined or shown weakness in major market areas at a time when prices normally advance seasonally. Crude oil stocks in the United States on June 13, which totaled 263,164,000 barrels, were 1 percent above a year earlier. Generally, crude oil stocks are not considered to be excessive.

Crude oil production in the Nation during the first half of June averaged 2 percent lower than in May but was 11 percent greater than a year ago. In the District, production declined 6 percent in June, principally because Texas production schedules were limited to 10 days. District crude oil production in the first part of June averaged 3,042,000 barrels per day, compared with 2,641,000 barrels per day in June 1958.

District crude oil output is scheduled for another decline in July. Texas production during the month, which will be limited to 9 days, will decline 8 percent on a daily average basis; and allowable production in New Mexico will be 3 percent lower than the June average. Louisiana allowable production in July will be virtually unchanged from the June level.

Recently announced mandatory import quotas for the last half of 1959 will permit allowable imports to average 1,450,362 barrels per day, compared with about 1,420,000 barrels per day in the first half of the year. Import quotas for the eastern two-thirds of the Nation will be decreased 6 percent, but quotas will be increased 15 percent on the West Coast. Total imports, exclusive of imports from Canada and Mexico, will continue to average about 9 percent of demand.

INDUSTRY

Industrial production in Texas during May advanced 5 index points to a record 175 percent of the 1947-49 average. The previous record high was 173 percent in May 1957. The May 1959 rise in industrial activity was led by substantial increases in crude oil production and petroleum refining. Manufacturing employment expanded modestly. The sharp reversal in allowable oil production probably caused a setback in total industrial output during June.

Nonagricultural employment in the District states showed a further seasonal advance during May, as unemployment in Texas declined. The employment total rose 23,400 workers to reach 4,281,800, with the largest gains in trade and construction. Smaller increases were registered in the other major employment categories. All District states except Arizona participated in

INDUSTRIAL PRODUCTION

(Seasonally adjusted indexes, 1947-49 = 100)

Area and type of index	May 1959p	April 1959	March 1959	May 1958
TEXAS				
Total industrial production....	175	170	171r	150r
Total manufactures..........	209	206	207r	189r
Durable manufactures.......	244	239	242	214r
Nondurable manufactures....	193	192	188r	178r
Minerals..................	142	135	136	112r
UNITED STATES				
Total industrial production....	152	150	147	128
Total manufactures..........	155	153	150	130
Durable manufactures.......	168	164	160	134
Nondurable manufactures....	143	142	140r	126
Minerals..................	126	123	123r	108

p — Preliminary.
r — Revised.
SOURCES: Board of Governors of the Federal Reserve System.
Federal Reserve Bank of Dallas.

NONAGRICULTURAL EMPLOYMENT

Five Southwestern States[1]

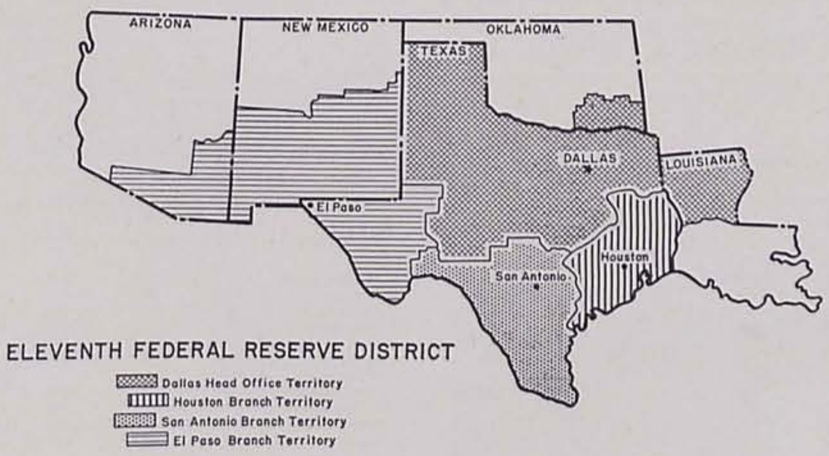
Type of employment	Number of persons			Percent change May 1959 from	
	May 1959p	April 1959	May 1958r	Apr. 1959	May 1958
Total nonagricultural wage and salary workers..	4,281,800	4,258,400	4,195,600	0.6	2.1
Manufacturing...........	773,500	770,200	753,900	.4	2.6
Nonmanufacturing........	3,508,300	3,488,200	3,441,700	.6	1.9
Mining...............	253,900	252,500	253,500	.6	.2
Construction...........	322,200	316,300	302,600	1.9	6.5
Transportation and public utilities............	392,200	390,600	395,300	.4	—.8
Trade................	1,036,300	1,029,000	1,020,600	.7	1.5
Finance...............	189,300	188,900	184,600	.2	2.6
Service...............	502,100	499,800	494,900	.5	1.5
Government...........	812,300	811,100	790,200	.2	2.8

[1] Arizona, Louisiana, New Mexico, Oklahoma, and Texas.
p — Preliminary.
r — Revised.
SOURCE: State employment agencies.

the over-all employment gains. Service employment, particularly in hotels, was seasonally lower in Arizona. Total unemployment in Texas decreased 5 percent during May to reach 154,300, which is only 4.3 percent of the civilian labor force. Total outstanding claims for unemployment compensation in the State declined 6 percent from mid-May to mid-June to a level of about 48,900.

Construction contracts awarded in the District states decreased moderately during April but — at $386 million, a record for the month — were 12 percent higher than a year earlier. The modest contraseasonal decline was centered in nonresidential construction contracts, which were down 2 percent from the unusually high March level. Residential awards also were down slightly from March but were one-third more than a year ago. Total contract awards in the District states in the first 4 months of 1959 exceeded awards in the same months of 1958 by 22 percent. During May, nonresidential construction awards in Texas showed a further decline of about 6 percent.

The value of building permits issued during May decreased in most major District cities. The decline in reporting cities totaled 9 percent, with the sharpest reductions occurring in San Antonio, El Paso, and Corpus Christi. Average discounts on FHA-insured home mortgages in the Southwest increased to an estimated 3.0 percent on June 1, compared with 2.9 percent on May 1 and 2.7 percent on April 1.



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

(Dollar amounts in thousands)

	Debits to demand deposit accounts[1]			Demand deposits[1]			
		Percentage change from			Annual rate of turnover		
Area	May 1959	April 1959	May 1958	May 31, 1959	May 1959	April 1959	May 1958
ARIZONA							
Tucson	$ 214,567	—2	21	$ 129,037	19.7	20.4	20.0
LOUISIANA							
Monroe	76,338	3	20	50,267	18.2	17.9	15.1
Shreveport	291,100	—4	3	195,157	17.9	18.6	18.4
NEW MEXICO							
Roswell	34,615	—7	8	31,590	13.4	14.6	14.0
TEXAS							
Abilene	94,625	—2	19	64,315	17.9	18.2	16.3
Amarillo	208,954	—5	22	114,405	22.0	22.9	18.8
Austin	208,679	—3	15	152,554	15.7	16.1	16.8
Beaumont	155,048	1	7	102,959	18.0	17.8	16.0
Corpus Christi	188,371	—2	4	107,431	20.2	20.0	19.4
Corsicana	15,129	0	1	20,362	8.9	8.9	8.4
Dallas	2,483,293	2	11	1,118,634	26.4	25.8	26.4
El Paso	335,417	0	12	161,668	24.5	24.2	23.4
Fort Worth	767,803	1	13	375,673	24.5	23.8	22.6
Galveston	78,733	—16	—6	64,526	14.9	17.8	15.2
Houston	2,456,111	—1	8	1,232,729	23.8	23.9	23.0
Laredo	29,729	2	0	22,203	16.2	15.8	16.8
Lubbock	176,846	—4	26	109,815	18.8	18.4	16.4
Port Arthur	64,864	1	—3	43,183	17.4	16.9	18.4
San Angelo	49,187	—12	0	45,487	13.0	14.5	14.9
San Antonio	593,893	—3	7	393,551	18.1	18.7	18.6
Texarkana[2]	21,887	2	11	16,255	16.2	15.6	14.9
Tyler	86,694	—1	14	61,744	16.9	16.8	15.1
Waco	108,994	—1	15	67,882	19.0	18.8	17.2
Wichita Falls	119,426	2	24	102,422	13.9	13.6	11.3
Total—24 cities	$8,860,303	—1	10	$4,783,849	22.1	22.1	21.4

[1] Deposits of individuals, partnerships, and corporations and of states and political subdivisions.
[2] These figures include only one bank in Texarkana, Texas. Total debits for all banks in Texarkana, Texas-Arkansas, including one bank located in the Eighth District, amounted to $46,944,000 for the month of May 1959.

VALUE OF CONSTRUCTION CONTRACTS AWARDED

(In thousands of dollars)

				January—April	
Area and type	April 1959	March 1959	April 1958	1959	1958
FIVE SOUTHWESTERN STATES[1]	$ 385,833	$ 390,154	$ 343,470	$ 1,378,906	$1,127,495
Residential	178,748	180,001	134,520	666,655	465,613
All other	207,085	210,153	208,950	712,251	661,882
UNITED STATES	3,778,419	3,314,284	2,881,011	11,702,374	9,594,356
Residential	1,830,787	1,536,037	1,240,217	5,453,863	3,806,279
All other	1,947,632	1,778,247	1,640,794	6,248,511	5,788,077

[1] Arizona, Louisiana, New Mexico, Oklahoma, and Texas.
SOURCE: F. W. Dodge Corporation.

CRUDE OIL: DAILY AVERAGE PRODUCTION

(In thousands of barrels)

				Change from	
Area	May 1959[1]	April 1959[1]	May 1958[2]	April 1959	May 1958
ELEVENTH DISTRICT	3,222.9	3,148.5	2,577.7	74.4	645.2
Texas	2,847.1	2,776.0	2,220.0	71.1	627.1
Gulf Coast	531.2	517.2	428.9	14.0	102.3
West Texas	1,294.9	1,237.2	937.0	57.7	357.9
East Texas (proper)	158.9	153.3	117.1	5.6	41.8
Panhandle	107.7	107.8	98.0	—.1	9.7
Rest of State	754.5	760.5	639.0	—6.0	115.5
Southeastern New Mexico	258.8	257.3	237.4	1.5	21.4
Northern Louisiana	117.0	115.2	120.3	1.8	—3.3
OUTSIDE ELEVENTH DISTRICT	3,962.7	3,978.5	3,655.0	—15.8	307.7
UNITED STATES	7,185.6	7,127.0	6,232.7	58.6	952.9

SOURCES: [1] Estimated from American Petroleum Institute weekly reports.
[2] United States Bureau of Mines.

CONDITION STATISTICS OF ALL MEMBER BANKS

Eleventh Federal Reserve District

(In millions of dollars)

Item	May 27, 1959	April 29, 1959	May 28, 1958
ASSETS			
Loans and discounts	$ 4,596	$ 4,593	$ 4,202
United States Government obligations	2,645	2,665	2,597
Other securities	822	831	717
Reserves with Federal Reserve Bank	961	953	882
Cash in vault[e]	142	142	123
Balances with banks in the United States	992	954	1,186
Balances with banks in foreign countries[e]	2	3	1
Cash items in process of collection	512	507	407
Other assets[e]	249	241	238
TOTAL ASSETS[e]	10,921	10,889	10,353
LIABILITIES AND CAPITAL			
Demand deposits of banks	1,054	1,029	1,126
Other demand deposits	6,627	6,654	6,261
Time deposits	2,159	2,153	2,018
Total deposits	9,840	9,836	9,405
Borrowings[e]	84	67	15
Other liabilities[e]	94	91	98
Total capital accounts[e]	903	895	835
TOTAL LIABILITIES AND CAPITAL[e]	10,921	10,889	10,353

e — Estimated.

GROSS DEMAND AND TIME DEPOSITS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. In millions of dollars)

	GROSS DEMAND DEPOSITS			TIME DEPOSITS		
Date	Total	Reserve city banks	Country banks	Total	Reserve city banks	Country banks
1957: May	$7,199	$3,502	$3,697	$1,565	$ 831	$ 734
1958: May	7,402	3,654	3,748	1,992	1,088	904
1959: January	8,106	3,952	4,154	2,090	1,106	984
February	7,858	3,808	4,050	2,117	1,119	998
March	7,794	3,827	3,967	2,129	1,119	1,010
April	7,800	3,797	4,003	2,151	1,133	1,018
May	7,674	3,751	3,923	2,156	1,125	1,031

BUILDING PERMITS

	NUMBER		VALUATION (Dollar amounts in thousands)				
					Percentage change		
					May 1959 from		5 mos. 1959 comp. with 5 mos. 1958
Area	May 1959	5 mos. 1959	May 1959	5 mos. 1959	Apr. 1959	May 1958	
ARIZONA							
Tucson	981	2,932	$ 3,997	$ 10,827	32	88	47
LOUISIANA							
Shreveport	507	2,272	2,454	11,972	7	41	11
TEXAS							
Abilene	229	1,263	2,003	11,732	—9	21	66
Amarillo	290	1,543	3,586	16,679	9	58	46
Austin	347	1,626	4,532	23,779	—11	—26	23
Beaumont	374	1,822	1,264	6,995	—30	—4	13
Corpus Christi	78	445	931	8,281	—62	—48	—24
Dallas	2,424	11,434	14,308	79,375	—18	11	38
El Paso	494	2,933	3,666	24,921	—36	—30	0
Fort Worth	987	4,318	4,188	20,354	—12	15	4
Galveston	117	571	440	1,471	55	—23	—9
Houston	1,570	7,834	17,824	90,469	—7	—10	—2
Lubbock	411	1,697	7,508	26,538	42	94	74
Port Arthur	247	978	717	3,337	—4	—16	—50
San Antonio	1,453	7,285	4,692	26,844	—33	—21	10
Waco	241	1,102	1,955	6,960	37	83	38
Wichita Falls	182	761	1,273	5,974	86	142	126
Total—17 cities	10,932	50,816	$75,338	$376,508	—9	5	17