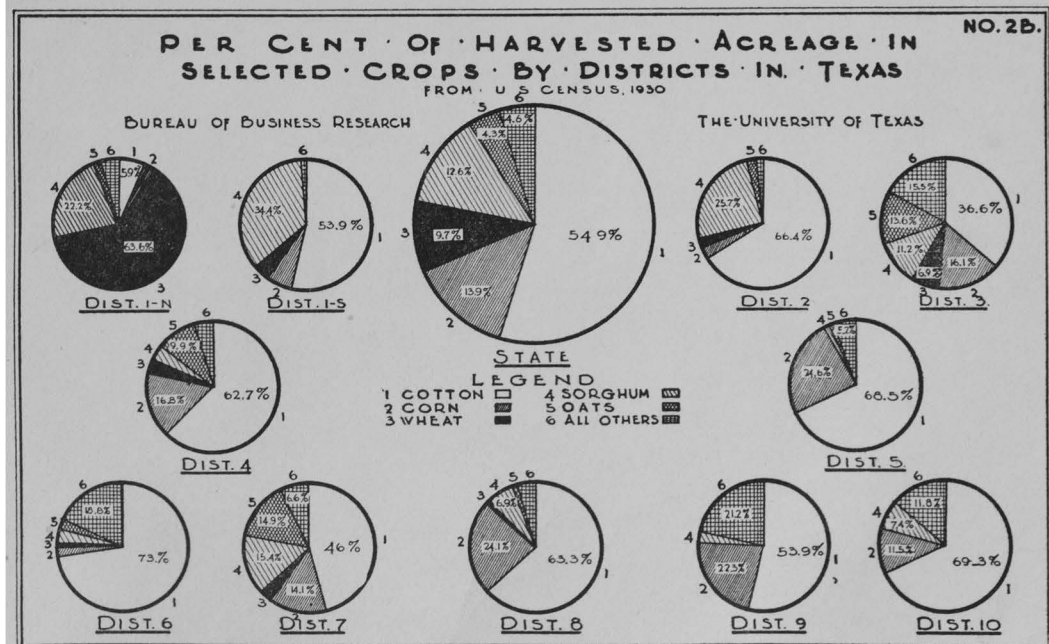
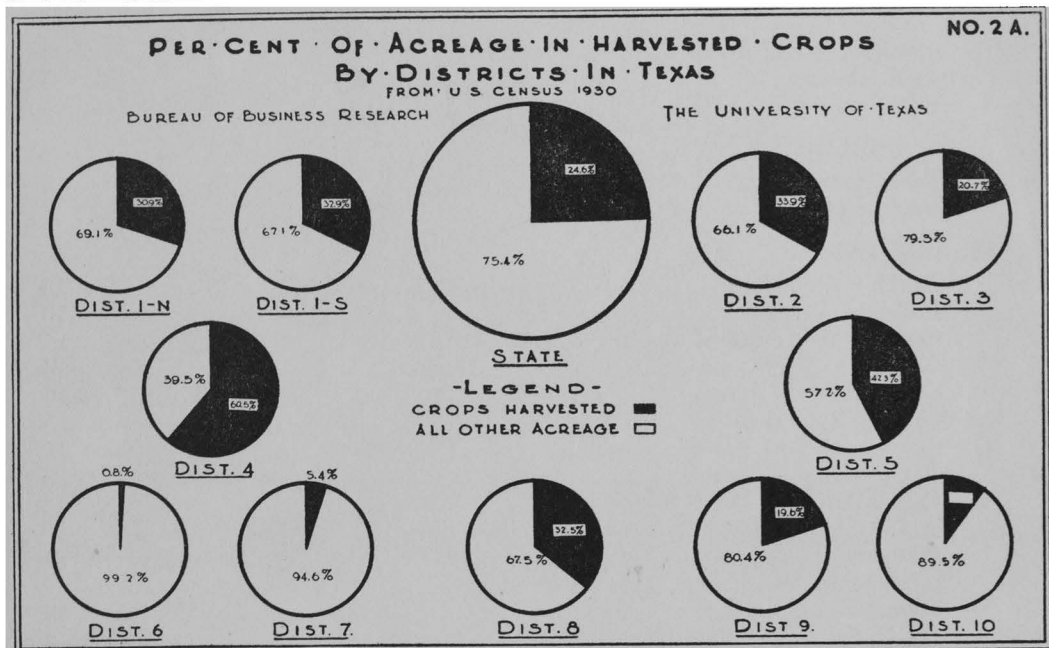


TEXAS BUSINESS REVIEW

Bureau of Business Research
The University of Texas

Vol. XI, No. 1

February, 27, 1937



NOTE:—See map, page 12, showing the crop reporting districts.

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TEXAS BUSINESS REVIEW

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CONTENTS

	PAGE
<i>Business Review and Prospect</i> , F. A. Buechel.....	3
<i>Cotton</i> , A. B. Cox.....	5
<i>Texas in Perspective</i> , Elmer H. Johnson.....	6

LIST OF CHARTS

Acreage in Harvested Crops in Texas.....	1
Indexes of Business Activity.....	4

LIST OF TABLES

Banking Statistics	15
Building Permits	13
Carload Movement of Poultry and Eggs.....	14
Charters	14
Commercial Failures	14
Commodity Prices	15
Consumption of Electric Power.....	15
Cotton Balance Sheet.....	15
Credit Ratios of Retail Stores.....	13
Employment and Pay Rolls Classified by Cities and Employment Groups.....	16
Lumber	14
Petroleum	14
Postal Receipts	13
Retail Sales of Independent Stores.....	11, 12
Shipments of Livestock Converted to a Rail-Car Basis.....	14
Stock Prices	15

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Business Review and Prospect

Industrial activity and trade in the country at large compare favorably with a year ago in spite of labor disturbances, record breaking floods, and reports of extreme political tension in Europe. Moreover, the President's recent proposal for reorganizing the Federal courts has had surprisingly little effect on business so far as can be determined by inspection of business indexes. These facts seem to suggest that there are powerful underlying economic forces which adverse circumstances have not been able seriously to retard and indicate that, given a favorable outlook, further substantial progress may be expected.

Among the reasons for expecting a much further extension of business recovery than has thus far been attained is the fact that after seven years of subnormal conditions, industrial activity and trade as a whole, when computed on a per capita basis, are still 25 per cent below the level attained during 1925-30 and nearly 15 per cent below the trend line established during 1899-1931. This situation suggests a vast back-log of potential demand if we may assume that the trend line established during the first three decades of this century will be reached again.

Some of the major activities such as building construction, which involves a multitude of industries, are still far below normal. According to the February number of the *Survey of Current Business*, construction contracts awarded during 1936 were less than half those of 1929, notwithstanding the huge expenditures for public construction and the increase in population of more than 8,000,000. Another setback, however, could be given this industry similar to that which occurred in 1933 and 1934 when building costs advanced far more rapidly than the national income. Freight carloadings in 1936 were still 30 per cent below the 1929 level; and even steel ingot and automobile production, which rose so sharply during 1936, were still about 13 per cent and 17 per cent, respectively, below their 1929 levels.

Texas Business

General business in Texas during January was at a level about 14 per cent above that of January last year, although the composite index of 94.1 represented a decline of a fraction of a point from December. Each component in the composite index registered an improvement over last year, but some of the indexes dropped quite sharply from the preceding month.

The employment index dropped from 91.7 to 88.7; pay rolls, from 86.2 to 83.9; miscellaneous freight, from 87.6 to 81.0; and department stores sales, from 99.7 to 92.0. The two indexes showing a rise were runs of crude oil to stills, from 152.8 to 172.0, and electric power consumption, from 101.9 to 113.0.

Index of Farm Cash Income

An increase of over 20 per cent occurred in the index of farm cash income of Texas from December to January, but the January index was 5.6 per cent below that of the corresponding month last year.

Normally the farm cash income for January is 48.2 per cent of the average month. The average monthly income during the base period 1928-32 was \$41,000,000. Therefore, the January income during this period averaged \$19,762,000. The index of farm cash income during January this year was exactly equal to that of the base period. The indexes for the individual districts, as well as for the State, are shown in the following table:

District	Index of Agricultural Cash Income		
	January 1937	January 1936	December 1936
1-N	95.9	84.1	92.7
1-S	103.6	128.0	92.6
2	37.2	101.6	32.5
3	110.2	141.1	124.4
4	72.4	98.8	74.2
5	74.0	111.4	79.6
6	117.8	56.8	129.8
7	107.3	126.7	89.6
8	109.7	99.6	107.0
9	291.3	104.3	111.2
10	224.5	136.8	157.3
State	100.0	105.9	82.7

NOTE: See map, page 12, showing the crop reporting districts.

As usual, the indexes for the various districts show wide variations in comparison with the two comparable periods. Attention is especially directed to comparisons of the current monthly indexes with those of January last year.

The increase in the indexes in districts 1-N and 6 over January last year was caused by the greater income from cattle, while the decrease in the indexes in districts 1-S, 2, 3, 4, 5, and 7 was the result of general declines in shipments of the principal products from these districts.

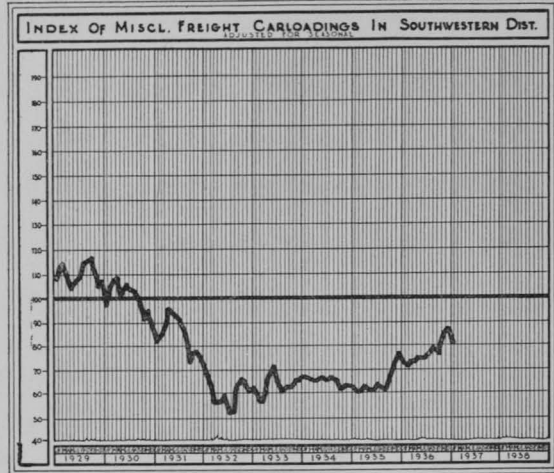
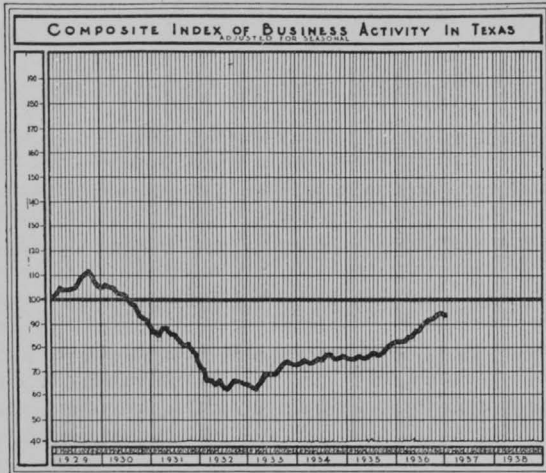
The sharp rise in the index of district 9 was caused by the unusually heavy marketings of rice. Receipts at rice mills constitute our basis for computing income from rice, and these were abnormally large in January. It is presumed that rice farmers held their product for a higher price, which fact, combined with the huge increase in shipments, resulted in the marked rise in the index.

District 10 also showed a sharp rise in the index in comparison with January 1937. Fruits and vegetables accounted for most of this increase. The volume of shipments greatly exceeded that of January last year, and toward the end of the month prices rose substantially because of the freezing temperature and damage to citrus fruit in California.

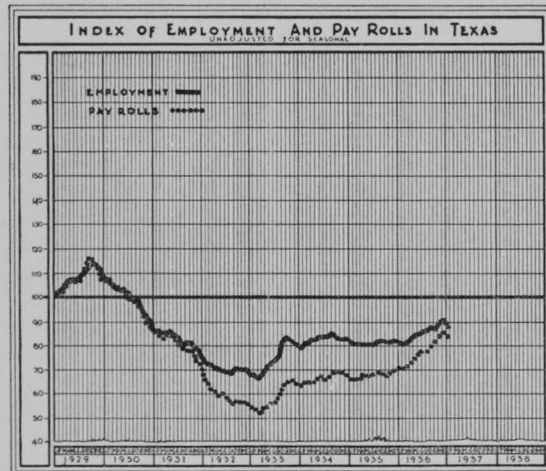
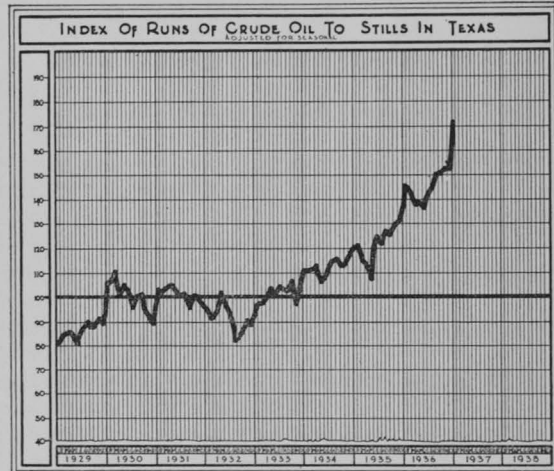
F. A. BUECHEL.

For Other Texas Data, See Statistical Tables at the End of This Publication

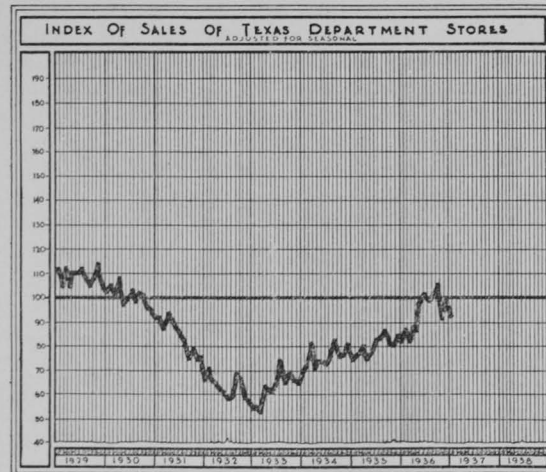
INDEXES OF BUSINESS ACTIVITY IN TEXAS



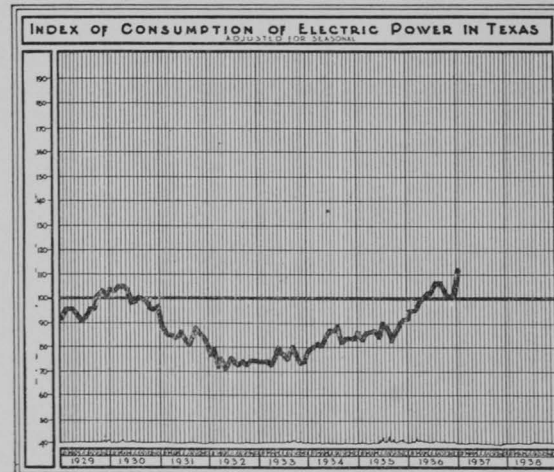
WEIGHT IN COMPOSITE INDEX = 20%

WEIGHT IN COMPOSITE INDEX
EMPLOYMENT = 35% PAY ROLLS = 35%

WEIGHT IN COMPOSITE INDEX = 5%



WEIGHT IN COMPOSITE INDEX = 10%



WEIGHT IN COMPOSITE INDEX = 10%

AVERAGE MONTH OF 1930=100%

BUREAU OF BUSINESS RESEARCH

THE UNIVERSITY OF TEXAS

Cotton

How much are customers worth? What are necessary conditions to retain them, and what are the possibilities of finding new ones? Three questions were never more to the point and more urgent than these are to the cotton industry of the United States at this time.

How much is a cotton market worth? That depends on the amount and quality of cotton the market takes.

Prior to the depression, the United States furnished about 57 per cent of the world's cotton for consumption. If we had furnished that percentage of this year's consumption, it would have meant the farmers would have sold 16,500,000 bales instead of 12,500,000; or it means a loss of markets to the extent of about 4,000,000 bales. The South has developed land and facilities to produce and market at least 15,500,000 to 16,500,000 bales of cotton. This means the South has lost markets for cotton to the extent of at least 3,000,000 bales. What is a market for 3,000,000 bales of cotton worth? Let us illustrate it this way. The average cotton production per farm family in the South in normal times was about eight bales. Loss of markets, then, for 3,000,000 bales means the loss of employment for over 375,000 farm families, about 3,000 ginners, and a proportionate number of cotton merchants, cotton classifiers, railroad employees, bank clerks, cottonseed crushers, and many others on down the line. What is a market for 3,000,000 bales of cotton worth to the South and the Nation? Who knows? Who can vision the full import of the consequences of it? The economic life of the South is largely built around the cotton industry. The South is adapted to its production, and the great mass of the people are trained to its cultivation and harvest. A loss of markets for cotton means a far-reaching adjustment in southern economy, education, and social life, and that will be tremendously expensive.

One thing seems certain: The effects of a loss of markets for cotton cannot be localized in the South, for the cotton industry of the South has been historically the mainspring of the specialized regional system of large scale production of the United States. It has been the enormous sum of six to eight hundred million dollars received annually for cotton exported and spent for food in the Corn Belt and other specialized food producing areas, and for manufactured products in the North and East, which has been a big factor in enabling these regions to develop specialization to the degree they have. It is possible that a loss of markets for cotton may cost the Nation a large part of this highly efficient system of specialized regional production for market. If the South cannot find markets for cotton, it will be forced into food production and into manufacturing. The Southwest has advantages for the production of livestock and livestock products equal to those of any region in the Nation, and, in addition, has superior advantages for certain types of industry. The Southeast is certainly destined for greater industrial development and a greater production of fruits and vegetables; but, even so, the Southeast will probably find it more difficult to adjust its agriculture to a drastic loss of cotton markets than the Southwest.

How much is a market for 3,000,000 bales of cotton worth and who will eventually pay the price of it is yet to be determined. Some say we do not want the market at six cents. No, but that is beside the point, for there is now a market for 29,000,000 bales at above 12 cents. The trouble is, we gave our customers to our competitors when the price was low. Should it seem strange to us that our competitors are loathe to give the markets back now that the price of cotton is advancing?

If the cotton markets are unquestionably so vital to the South and to the highly efficient system of specialized regional production, what steps are necessary to regain and retain them? To describe the necessary conditions is simplicity itself. It is necessary to produce a dependable quantity of the qualities of cotton the world demands, and offer it freely at competitive price levels. Trade is essentially exchange of goods and services. If a part of that market is foreign, as in the case of cotton, then some means must be found for the foreign buyer to get dollar exchange. Give the cotton growers of the South as free a market in which to buy their supplies as that in which they are forced to sell their cotton, and they will regain their markets and prosper. If they are to continue to be denied the right to exchange freely their cotton for the goods of their customers, then does not justice demand that the cotton growers should receive a bonus which will fully offset the tariff, the thing that prevents the free exchange? Does not the denial of this compensation to offset tariff burdens subject the cotton growers to special taxes for the special benefit of other groups?

It is necessary to produce the type of cotton the customers want, but that is not enough. The cotton must always be available to the buyer at a competitive price, especially when there is an alternate seller. This means the market must be free from monopoly control and price manipulation. At the present time, southern cotton growers are losing foreign customers because the United States Government owns the major share of the unsold stock of American cotton and has priced it out of the market by setting the price relatively higher than competing foreign growths. For example, the price of Fair Pernambuco, which according to the New York Cotton Exchange service has for ten years averaged 99.6 per cent of the price of middling $\frac{7}{8}$ -inch American, is now only 94.2 per cent. The price of Number 1 Fine Oomra, which over the past ten years averaged 79.1 per cent of American, is now 74 per cent; and, thus without exception, foreign cottons are priced relatively cheaper than American. How much is a customer worth? Is not our Government selling the cotton growers' customers at a ridiculously low price when it prices its 3,000,000 bales out of their reach in terms of competing growths and virtually forces them to buy other cottons than ours? Would it not be a wise policy and good business for the Federal Government to take an additional loss of two or three million dollars now to save a million-bale market for the cotton growers for the future, and in doing so take the weight of the 3,000,000 bales off the market for new crop cotton so the farmers

will get more for that? Incidentally, the Government would save at least \$5,000,000 in carrying charges by following this policy. The February *Monthly Review* of Lloyds Bank of England had this to say: "The estimates for the current season give the American production as 12,396,000 running bales in a total world production of commercial cotton of approximately 30,000,000 bales. In Liverpool the imports of American have for some months past been insufficient to prevent premiums on the near deliveries, and a position of some difficulty has arisen. The advisability of discontinuing the present American 'futures' contract and substituting a new contract, against which several growths could be tendered, is being considered." Is the cotton market worth saving? If not, what will be the substitute?

The interest now developing in discovery of new uses for cotton to regain lost markets is constructive. A well directed, well manned, and well financed effort along this line is long overdue. A sound program should be developed with vigor and without delay. It should be realized, on the other hand, that large sums are already being spent in both private and public research to discover new uses and expand markets for cotton, not only in this country but in many foreign countries as well. Therefore, the only sort of a laboratory that will be of any appreciable value is one pitched in proportion to the size of the problem, one that has the best equipment available and manned with internationally known scientists who can command the respect and coöperation of other scientists in the field.

Regardless of how much money is spent in a laboratory to discover new uses for cotton, it will not solve the cotton problem of the South. The job is too big for that; it can help. It is significant to note that thus far those discussing new uses for cotton have almost invariably used as examples uses requiring low price cotton. That is not accidental. It is necessary, and thus serves to call attention to the seriousness of the problem. Does it not suggest also that a strong effort to restore lost markets would yield best results in that, in the main, they are already established and represent quality uses? Regardless of how markets are restored, this central fact must always be remembered and policies developed accordingly. That is, regardless of its

good intentions, it was the policy of the Federal Government which was largely responsible for the loss of foreign cotton markets of the South. Does it not follow from this that the Federal Government owes to the cotton growers the obligation to adjust tariffs and other restrictions to give them at least an equal chance?

A. B. Cox.

COTTON BALANCE SHEET Total supplies of cotton in the United States February 1 were approximately 10,593,000 bales, compared with 10,935,000 bales February 1 last year, 11,994,000 two seasons ago, and an all time high of 15,749,000 bales February 1, 1932.

Stocks of cotton in the United States have decreased 342,000 bales from February last year, but stocks of American cotton in European ports and afloat to Europe increased 19,000 bales. The net decrease of these items of supply is 323,000 bales.

During the past seven years an average change of 100,000 bales in the supply on February 1 from the previous February has caused an average change in the index price of 15.88 points. If that ratio should hold good now, the index price based on these changes in supply should be 51 points higher than last year. When this calculated index price is adjusted for changes in the price level, the price of New Orleans spot middling $\frac{7}{8}$ -inch cotton is 12.63 cents; but, when further adjusted by the spinners margin, the calculated price is 14.28 cents. When the price is calculated in terms of average percentage changes in relation of supply to price, the indicated price is 12.70 cents.

SPINNERS MARGIN Spinners ratio margin on American cotton based on the price of 32's twist yarn in Manchester and the price of middling $\frac{7}{8}$ -inch cotton in Liverpool was 181 in January. In December the ratio margin was 175, and in January 1936 it was 172.

The pence margin in January averaged 5.62d, compared with 5.24d in December and 4.44d in January 1936. The pence margin of the English spinners is one of the largest on record. It indicates increased cotton consumption.

Texas—In Perspective

In the nature of the country lies the destiny of its people

SOME DISTINCTIVE CHARACTERISTICS OF TEXAS

Texas, east of the Pecos and the New Mexico boundary, is made up of a greatly diversified series of plains, each series of which from west to east comprises topographically a down-step from the higher Western Plains to sea-level along the Gulf of Mexico. Most of these down-steps are indicated by the occurrence of rather sharp topographic breaks designated as escarpments. In contrast with the lack of continuity associated with the irregular and eccentric relief forms characterizing Trans-Pecos Texas, there is a marked degree of

continuity associated with the various plains regions of the State.

Texas—A Land of Distinctive Plains Regions

Considered from a broad perspective, these series of more or less homogenous plains comprising the greater part of the State include: (a) Mesa plains and tablelands—the Llano Estacado or High Plains, and the Edwards Plateau; (b) Dissected plains—such as the Red Beds or Permian Plains and the Lampasas Cut Plain; (c) Cuesta Plains, such as the Grand Prairies and the Black Prairies; and (d) Dip Plains, such as the various elongated units of the belted Coastal Plains.

Several other striking topographic features characterize portions of these diversified plains regions, such as the bordering persistent escarpments like the Balcones Escarpment, the Cap Rock Escarpment, the Goodland Escarpment, or the Austin Chalk Escarpment. Too, there are the "scalped" areas from which the sedimentary strata have been removed by erosion exposing the basement complex of ancient rocks such as the Llano basin district; there are the flat-topped mountains characterizing the landscape of central Texas from Comanche Peak in Hood County to the rim rock escarpment of the High Plains, including such well-known landmarks as Round Mountain, Santa Anna Mountain, the many flat-topped areas and peaks comprising the Callahan Divide country, Double Mountain in Stonewall County, and the numerous, flat-topped, solitary eminences just east of the Cap-rock of the High Plains.

Also, the drainage and the stream characteristics of each of the main plains regions possess individualities all their own. The Pecos at the west is a groove in the earth's surface more like a great canal than a river. The Canadian, the Red, the Brazos and the Colorado, and their larger tributaries are sand rivers—a type characteristic of the Western Plains north to the Platte, and which form a characteristic feature of the drainage ways throughout the Southwest. Other stream characteristics of the various plains regions include such features as intrenched meanders—as in the Grand Prairies and southward and southwestward to the lower Pecos and the Rio Grande along the southern margin of the Edwards Plateau—the different sorts of stream terraces, and the wide flood plains of the master streams extending across the "soft" materials of the Coastal Plain.

Each feature of these various plains is closely associated with the regional history of the area concerned. Each feature is not only part and parcel of the geographic geology, the physiography, the plant geography and ecology of the region, but every one of these features has played, and will continue to play, an important part in man's occupation of these regions, whether in determining prehistoric assemblage places, Indian trails, or Spanish settlements, or in the adjustments concerned in Anglo-American settlement and subsequent occupation, whether these embrace railways or highways, the location of towns or cities, patterns of land utilization, either farm or range, industrial plant location, or other things.

Perhaps most expressive, however, of the environmental features of the various regions, or of the contrasts between them, are the major vegetation formations of the State—forested East Texas, the tall-grass Prairies with the cross-timber strips within the Prairies or the bordering timbered margins, the short-grass plains of Western Texas, and the chaparral lands and cactus plains in the southern portion of the Texas Gulf Plain, as that physiographic region merges into the environment dominating the Southwest Border country. Closely associated with the vegetative expression of the various portions of the State are the soils—which in turn are to be considered as the result of atmospheric factors acting upon the surface geologic materials and the subsequent modifications induced by the presence and action of the vegetation. That is, every element comprising the surface

environment is interrelated and interdependent, owing to inherent factors concerned in the origin of these various elements. And every element, in the sum-total of the regional environment, is of consequence to the adjustments or maladjustments concerned in the human occupation of the area.

Owing to the interactions of these various physical factors and the large areas over which these interdependent features are geographically dispersed, the Texas environment comprises a distinctive section—perhaps the most distinctive section—of the American continent.

Other than the distinctiveness characterizing the Texas regional environment itself—a distinctiveness with which is unmistakably associated what may be termed the spirit of Texas—there is the further important situation that Texas is the meeting ground of a large number of different and distinct continental regions—the Coastal Plains and the Great Plains, the tall grass Prairies and the sub-humid short-grass plains, the Gulf Timber Belt, the Cordilleran or Western Mountains, and the always-different aspects of the Southwest Border country, not to mention the various major structural trends of the continent that meet and cross within the boundaries of the State.

The features of the geographic geology of Texas have been admirably summed up in a masterful way by Robert T. Hill in his classic *Physical Geography of the Texas Region* published nearly 40 years ago: "Nowhere is there a more intimate relation between geologic formation and physiography than in the Texas region. Nearly all topographic conditions which influence human environment, except climate, depend on the composition and arrangement of the various rock sheets. Each formation has peculiarities of stratification, consolidation, cohesion, friability, and porosity which, when the formation is reacted upon by climatic factors, result in various relief forms.

"The induration or hardness of the rock sheet is the chief factor influencing the character of the relief. All hills, scarps, plateaus, mountains, and other relief features of Texas are manifestations of the survival of the hardest in the denuding processes of land degradation; correspondingly the minute configuration of the stream valleys, valley plains, escarpments, and many of the level prairies bordered or surrounded by scarps also depend upon the relative hardness of the rocks.

"The inclination of the rock sheets is an important factor in producing relief. Where these are horizontal or but gently inclined, the tendency is toward plane surfaces with vertical cliffs bordering the drainage grooves; where steeply inclined, ragged mountainous forms are the resultant relief.

"Consolidation, friability, cohesion, solubility, and porosity modify the relief in various ways. Loose sands are heaped by the wind into low hills or dunes; unconsolidated clays weather into rounded hills and flat surfaces; soluble rocks produce sink holes and other irregular surfaces, with caverns and bluffs, and the degree of porosity facilitates or retards decay."

Climate and Location

Climatically, the humid environment of Southeastern United States extends well into East Texas; and from

the sub-tropical Rio Grande country at the south, with its citrus production, the temperature conditions range through regions well suited to cotton growing and merge in the Texas Panhandle with conditions excellently adapted to hard winter wheat production.

In addition, Texas contains more of the Coastal Plain territory than any other State, more of the High Plains country, and besides contains distinctive regions of its own. The black soil Prairies of Texas, although akin to the Corn Belt Prairies of the Middle West, are distinct regions, owing to the geographic geology and the climate environment; the Red Beds of North-central Texas and Western Oklahoma are in their environmental characteristics peculiar to the Gulf Southwest; and no other section of the continent offers anything like a counterpart to the Edwards Plateau region. Along the Balcones Escarpment, the Edwards Plateau, a region of the Great Plains, lies adjacent to the interior portion of the Coastal Plains; the Balcones zone is the one meeting place on the continent of these two great physiographic regions. The Great Plains is an attendant feature of and lies eastward from the Rocky Mountains; the Gulf Coastal Plain is a recent annex to the continent. North of the Colorado at Austin these two great physiographic divisions diverge from each other, to encircle partially, as it were, the great Mid-Continent section of the United States with its many and varied geologic and topographic features.

The section of the Gulf Coastal Plain lying between the Balcones Escarpment and the coast presents a landscape quite different from the forested lands of the Gulf and Atlantic Timber Belt, which occupy humid portions of the Coastal Plain. In these South Texas Plains, owing to the climatic aspects of lessened rainfall and increased evaporation and also to differences in the geographic geology, there occurs a variety of environmental features, which reflects the drier aspects of the sub-tropical conditions of the Southwest Border country. Outstanding among these features are such things as the large areas of thorny chaparral, the wide extent of thick accumulation of indurated caliche and the great apron-like deposits of overwash transported from the westward; these land-deposited materials have since been greatly modified by dissection and erosion and by caliche accumulation. Owing to their inherent physical characteristics, the South Texas Plains constitute another one of the distinct regions of Texas, and a region without counterpart elsewhere in the country.

In this brief sketch of things, distinctive in the physical environment of Texas, attention is centered primarily upon the environmental conditions characterizing the surface of the State and its diverse natural regions. The subsurface features are just as truly distinctive of the environment of Texas and of the Gulf Southwest section. These distinctive features include the extremely deep deposits of geologic strata, composed of layer upon layer, all arranged in a series of great couplets of layers of sands alternating with layers of clay, which are characteristic of, and responsible for, the distinctly belted arrangement of the entire section margining the Gulf Coast of Texas and Louisiana, and which provide the vast reserves actually known, and the still greater potential reserves of petroleum and natural gas, of salt and

sulphur, and of other non-metallic resources of this section of the Nation; too, there is the combination of structural conditions that have resulted in the great supplies of petroleum in the gigantic East Texas Field, and of the interior Coastal Salt Dome section as well, all in the Coastal Plains territory. West Texas has the great Permian Basin—a vast geo-syncline—underlying the High Plains, or Llano Estacado, the lateral margins of the syncline having been uncovered by erosion and now comprising on either side of the trough of the basin, the Red Beds country of Texas and a portion of the Pecos Lowland in New Mexico. Also, there are the extensive but buried mountain structures in the Panhandle with the associated petroleum accumulations and the very large natural gas reserves of the great Panhandle field. And, a mere outline of the structures and structural relations of the Trans-Pecos would in itself comprise a good-sized monograph.

A most significant fact pertaining to Texas is, obviously, from any point of view the manifestations pertaining to its size—its spacial extent. The fact that Texas includes one-twelfth the area of continental United States is, in itself, impressive. Within the borders of Texas could be placed the entire extent of Pennsylvania, New York, Indiana, Massachusetts, Connecticut, Vermont, New Hampshire, Rhode Island, Delaware, and New Jersey, and still have 91,234 square miles to spare—or an area almost equal to the combined areas of Illinois and Ohio. The area of the High Plains of Texas is about equal to that of Ohio. The area of Trans-Pecos Texas and the Edwards Plateau combined is about equal to that of Oklahoma. The area of the Texas Coastal Plains is almost equal to the combined area of Michigan and Wisconsin.

Reflections of the attributes of size include such features as outstanding leadership of Texas in the production of raw materials—of raw cotton, of cattle, of wool and mohair—of vast areas devoted to cotton, of wide stretches of ranch country, and of large ranches—of leadership in petroleum and natural gas production, and of reserves of these mineral resources, of reserves of salt and sulphur, of the raw materials for Portland cement, and of gypsum products. Size is reflected in still another way—by mileage in railways and highways, and the costs therein involved. Texas production and the resources upon which this production is based are inseparably associated with the natural regions of the State—with the distinctive environments of these regions, their natural resources, and the availability of these natural resources. The agricultural wealth of the United States is founded very largely upon the utilization of the vast Prairie regions and the still larger expanses of the Western Plains. Texas possesses a good-sized share of the extent and the agricultural wealth of both these major divisions of the North American continent.

It is not to be assumed that only qualities pertaining to mere size are worthy of consideration, even though the attributes of size in the various lines of Texas production play a part in national economy—a feature which has not been accorded to these lines of production. For instance, without the vast quantity of Texas oil production—which for several years has been around 40 per cent of the national output—the United States

would perhaps already be a large importer of crude petroleum and consequently the structure of the American oil industry would be greatly changed; and one reflection of such a change would undoubtedly be higher prices for petroleum products. Although Texas is outstanding in oil reserves, these reserves will not last forever. This consideration leads directly to the question of the whole problem of the future of Texas production.

The migration of the pulp and paper industry into the Southern pines country of the Gulf Timber Belt is already well under way; this is a major industry which undoubtedly will continue to expand not only in volume of production but also in quality of products; its coming into the South constitutes perhaps the most important economic factor in the economic development of the piney woods upland regions that has occurred in seventy-five years. This development, based upon raw materials which replenish themselves, assures to Southeastern United States a permanent industry of substantial proportions. What permanent industries can Texas look forward to as the distinctive features of its great petroleum industry begin to fade within, say, the next fifteen years? What, it should be asked, may be regarded as permanent, or long-lived, resources and attributes of Texas? For upon these physical conditions depend, in very large measure, the future of the State, agriculturally, industrially, and otherwise.

Forested East Texas

The forests of East Texas may be regarded as permanent resources, that is, if they are given proper care. A lumbering industry still remains in East Texas; the new pulp plant of the Champion Paper and Fiber Company, now ready to start the production of bleached sulfate pulp at Houston is indicative of a new and important industry for East Texas. And the time may come when properly cared for forests in East Texas will be given the aesthetic consideration such landscapes merit.

The Texas Prairies

West and south of the humid forested lands of East Texas occur two great groups of plains—the Prairies and the sub-humid Plains. Climatically, the Prairies may be regarded as moderately humid and the sub-humid Plains grade westward into lands of still less rainfall.

That the Texas Black Land Prairies merit careful attention is obvious. These Texas Prairies are somewhat akin to the Corn Belt Prairies but owing to climatic and geologic factors the Texas Prairies are marked by distinctive characteristics of their own.

The Black Lands of the Texas Prairies are founded upon calcareous materials; and the great calcareous-bearing materials of the State are the numerous formations of the Cretaceous sediments, which in regard to areal extent, and to most other characteristics, may be regarded as the master geologic formations of the State. Nearly a half century ago Robert T. Hill summed up in his own masterful way the outstanding features of the Cretaceous as follows: "To these strata the State owes a large part of her agricultural and general prosperity, for they are the foundation of the rich black waxy and other calcareous soils of those regions. In addition to

their agricultural features they are the most productive source of building material, while adjacent to the parting between them [between the Upper and the Lower Cretaceous], extending the entire length of the State and dependent upon their stratigraphy, is a remarkable area of natural and artesian wells, as seen at Fort Worth, Austin, Waco, Taylor, San Marcos, and elsewhere. That these formations are of great economic value to the State is also shown by the fact that they are the site of our principal inland cities, and the rich agricultural soils which surround them.

"This is in general a chalky country, and uniquely Texan, so far as the United States are concerned, constituting a distinct geographic region, in every topographic, economic, and cultural aspect, and one which should not be confused with other portions of our country. . . .

"This region, with its many different prairies, each covered by its peculiar vegetation, its sweeping plains and diverse valleys, its undulating slopes clad with motts of live oak, its narrow strips of cross-timbers, its ragged buttes and mesas, presents a landscape varied, yet possessing as a whole an individuality peculiarly its own. All these features, with their different tints and tones of soil and vegetation, with their varied conditions for human habitation, are but the surface aspects of the system of chalky rocks (chalky sands, chalky clays, and chalky limestones) upon which it is founded, and to which is primarily due every physical quality of the country. In fact it is the great chalky region of the United States."

Concerning the productivity of Prairies soils the late Dr. Marbut wrote, that, excepting alluvial lands, "As a whole the soils of this region [the Prairies of the United States] have a producing capacity higher than that of the soils in any of the other soil regions of the United States, and, probably of the world. These soils are characterized by all those features which give soils their high productivity. In addition, these soils occupy a region in which climatic conditions are highly favorable to plant growth." Prairie soils are unique in that they occur over large areas only in the United States; of the rest of the world, only Argentina has an area of such soils, but the Argentine area is small in extent.

The Prairies, characterized by their rolling landscapes and dark to black colored soils, originally supported a rather dense growth of tall grasses. All of the Texas Prairies occur on limestones, marly, or limy clay areas. Under the conditions of the prevailing climatic factors and the existing stage in topographic development, the processes of rock disintegration work so rapidly on these calcareous geologic materials that the weathered products become very finely divided (clays, highly colloidal) before the climatic forces have had time to leach the calcium carbonate out of them. Under these circumstances the presence of lime becomes the predominant factor in determining the characteristics of the soils of such areas and regions. The heavy textured and deep soils accumulations are not suited to forest growth and particularly not to temperate zone forest vegetation; but conditions of the Prairies are ideal for grass vegetation. Again quoting from Dr. Marbut: "The grass accumulated considerable organic matter and because of the

high content of calcium carbonate and the heavy texture of the soil material, from which the calcium was removed very slowly, the organic colloids were fixed, through saturation by the calcium, and were not removed from the soil by solution [such as occurs generally in humid forested areas]. The resulting accumulation of organic matter up to a relatively high percentage gave the soil its dark color."

It is interesting to compare the preceding statement with one written about 40 years previously by Robert T. Hill on the "Cretaceous Rocks of Texas" and published in the First Annual Report of the Geological Survey of Texas. With reference to the "black waxy," Dr. Hill wrote: "It in general is the residuum of the underlying clays, and contains an excess of lime, which acting upon the vegetation by complicated changes, causes the black color."

Concerning the geologic factors, these Prairie soils are always derived from "soft" limestones ("rotten" limestones, as they are designated by farmers) or from unconsolidated highly calcareous materials, such as marls, limy clays, or wind deposited loess. The largest region of Prairie soils in Texas is that of the Black Prairies. Again quoting an almost forgotten statement of Robert T. Hill on this region: "It is exceedingly productive, and nearly every foot of its area is susceptible of a high state of cultivation, constituting one of the largest continuous agricultural regions of the United States." Other Prairie regions of Texas include the Coastal Prairies and the interior strip of black soils occurring partly in Washington and Fayette counties. In representative Prairie soils in Texas the soils generally have enough lime in them to effervesce freely (when hydrochloric acid is applied) from the surface downward. The geographic extent of the Black Prairies is generally well known; that they are distinctly Texan may not be so well recognized. The Coastal Prairies may be regarded as Texan also, for in coastal Louisiana these Prairies are pinched out and there is nothing corresponding to them east of the Mississippi River.

Of the fertility of lands, on what are now termed the Taylor Marls of the Black Prairies, Robert T. Hill wrote in 1890: "The economic value of these chalky clay marls is in that they are the foundation and the source of the rich soil of the main Black Waxy Prairie of Texas, the largest continuous area of residual agricultural soil in the United States, apparently inexhaustible in fertility; for as the farmer plows deeper and deeper he constantly turns to light the fertile marls which renew the vitality."

The Short-Grass Plains

Westward and southward from the moderately humid black soil Prairies of Texas occur the sub-humid Plains in which the moisture content of the soils is less than that characteristic of the Prairies. Large areas in this sub-humid zone are rough enough to have an actively erosional surface. But also large flattish areas occur which are physiographically stable; and in these areas occur moderately deep to deep accumulations of soil materials, which originally supported a dense sod of short grasses; the soils of these areas and regions are highly productive except in seasons of reduced rainfall.

In those areas and regions of the Western and Southern Plains where physiographically stable conditions have existed for some time, there have developed the characteristics of the so-called Black Earth soils—the geographic analogue of the great zone of Black Earth of the Steppes of southern European Russia and southwestern Siberia. These Black Earth soils are, the world over, owing to their inherent soil characteristics and the sub-humid environment, the great surplus producing lands of the hard wheats. Owing to the temperature conditions, however, the Black Earth regions of most of western and southern Texas and of southwestern Oklahoma are well adapted to the growing of cotton and of grain sorghums.

The distinctive features of the sub-humid lands of Texas are associated with the facts of geographic geology and of climate. Practically all of these lands are underlain by geologic materials high in lime. Owing to the sub-humid climate the readily soluble substances which support plant growth are not as a rule leached out of these materials; instead, the dominating characteristic of these lands is that instead of constant leaching there has been, on account of the climate, an accumulation of such soluble compounds in the soils and particularly in the subsoils; this accumulation is represented most strikingly in the accumulated layer of lime in the subsoil which characterizes such sub-humid areas the world over. In the sub-humid areas of Texas and in the old terrace materials beyond the Pecos in the Southwest Border country of New Mexico and Arizona, this accumulation of lime often appears as indurated caliche. This caliche often appears at the surface in erosional areas, but in physiographically stable areas such as most of the High Plains of Texas, the flatter portions of the Permian Red Beds country, the summit areas of the Edwards Plateau, and in most of the calcareous belts of the South Texas Plains and the Rio Grande Embayment, the lime layer is unconsolidated, and it may be regarded as a reserve of plant food materials for decades to come.

Both cotton and grain sorghums are drought resistant and drought enduring crops. Methods of farm management, in which power machinery plays an important part, in these sub-humid lands, have proven important in conserving the seasonal supply of moisture; no doubt these methods will be continuously improved upon.

The Black Prairies and those sections of the Coastal Prairies characterized by black soils are devoted chiefly to cotton growing; they will, however, produce successfully a number of other crops including corn and forage plants. Cotton and grain sorghums, cattle and other livestock and their products all serve to give the sub-humid plains as a whole a high degree of diversified agricultural interests; in addition, wheat is successfully grown in the northern sections of these lands in Texas—which form the southern extension of the hard winter wheat belt that centers in the sub-humid regions of Kansas.

The diversity in agricultural interests in Texas—a diversity already achieved—constitutes in itself a distinctive attribute of the State. In the light of both physical conditions and of economic interests, it is to be expected not only that this diversity will continue, but

that, owing to trends already operating, it may be expected that an increasing diversity of these interests will be attained for the State as a whole and for the various major sections of the State.

In conclusion, it may be asked—it is no mere academic question—why so many apparently try to read into Texas the deadening uniformity of things which undoubtedly does characterize some portions of the American continent. For more than a century commentators and observers from outside the State have been struck by the distinctiveness and the individuality of the features which comprise Texas and of its varied sections; and not a few have commented on what they term the spirit of Texas. In closing this brief sketch it may not be amiss to quote from one who in the perspective of nearly a century of time seems in so many ways to have been endowed with prophetic insight regarding Texas and things Texan. Ferdinand von Roemer of the University of Bonn on sailing from Galveston in April, 1847, wrote:

“When the stronger rocking of the boat indicated that we had passed the harbor-bar, and when soon thereafter the land of the narrow island appeared only as a low streak, I felt that it was time to say farewell to Texas. During my stay of more than a year, I had developed

interest in and love for the beautiful land of rolling prairies which faces a bright future; and it filled my heart with sadness to be compelled to bid it farewell forever. However, there remain with me agreeable and rich memories and I will always follow from the distance the further development of this country with keen interest. May its wide, green prairies become the home of a large and happy population.”

ELMER H. JOHNSON.

Announcements

Convention dates have been announced for the following Texas organizations:

Texas and Southwestern Cattle Raisers Association, March 16-18, Fort Worth.

Lumbermen's Association of Texas, April 13, Houston.

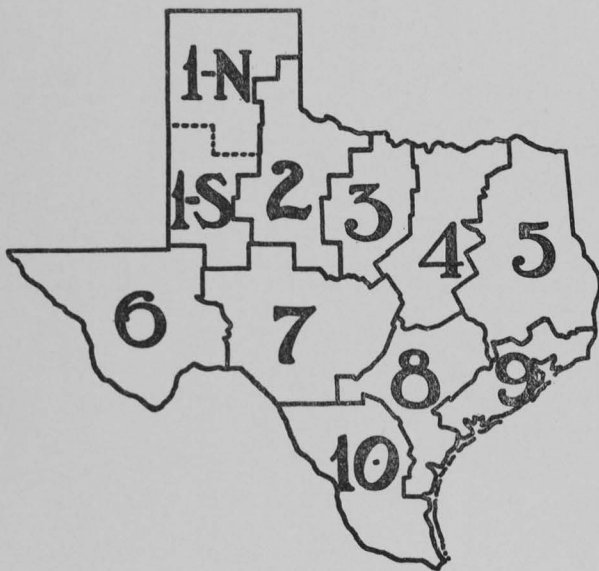
RETAIL SALES OF INDEPENDENT STORES IN NEW MEXICO, OKLAHOMA, AND TEXAS

	Number of Firms Reporting	January 1937	
		Dollar Sales	Percentage Change in Dollar Sales from Jan. 1936 to Dec. 1936
TOTAL (New Mexico, Oklahoma, and Texas Combined)	997	\$12,108,780	+ 5.7 - 41.7
NEW MEXICO	61	568,064	+ 17.1 - 26.2
OKLAHOMA	230	1,219,227	- 7.2 - 32.9
TEXAS	706	10,321,489	+ 6.9 - 43.3
TEXAS STORES GROUPED BY LINE OF GOODS CARRIED:			
APPAREL	100	1,544,347	+ 17.1 - 47.3
Family Clothing Stores	28	261,953	+ 6.7 - 51.9
Men's and Boys' Clothing Stores	38	607,550	+ 22.8 - 46.2
Shoe Stores	12	70,676	+ 10.3 - 49.3
Women's Specialty Shops	22	604,168	+ 17.4 - 46.0
AUTOMOTIVE	110	2,717,490	- 0.7 - 27.3
Filling Stations	30	106,713	+ 5.4 - 8.1
Motor Vehicle Dealers	80	2,610,777	- 1.0 - 27.9
COUNTRY GENERAL AND FARMERS' SUPPLIES	83	466,529	+ 7.2 - 21.2
DEPARTMENT STORES	48	3,295,927	+ 9.3 - 57.7
DRUG STORES	141	435,500	+ 4.4 - 24.0
FOOD	119	791,198	+ 9.4 - 5.9
Grocery	31	165,114	+ 4.5 - 12.4
Grocery-and-Meat Stores	88	626,084	+ 10.7 - 4.0
FURNITURE AND HOUSEHOLD	30	362,520	+ 8.0 - 43.3
Furniture Stores	19	284,514	+ 3.6 - 45.3
Household Appliance Stores	5	43,945	+ 28.0 - 33.1
Other Home Furnishings Stores	6	34,061	+ 27.5 - 36.9
JEWELRY	9	39,665	+ 15.8 - 86.8
LUMBER, BUILDING, AND HARDWARE	47	561,235	+ 2.3 - 18.9
Farm Implement Stores	3	14,741	- 31.5 - 49.2
Hardware Stores	20	251,114	+ 18.4 - 14.0
Lumber and Building Material Dealers	24	295,380	- 6.2 - 20.5
RESTAURANTS	14	63,297	+ 2.7 + 3.8
ALL OTHER STORES	5	43,781	+ 46.0 + 1.1
TEXAS STORES GROUPED ACCORDING TO POPULATION OF CITY:			
All Stores in Cities of—			
OVER 100,000 POPULATION	166	5,911,642	+ 12.4 - 47.5
50,000-100,000 POPULATION	62	861,933	+ 6.7 - 50.6
2,500-50,000 POPULATION	309	2,716,863	- 0.2 - 34.4
LESS THAN 2,500 POPULATION	169	831,051	- 4.2 - 21.6

NOTE: Prepared from reports from independent retail stores to the Bureau of Business Research, cooperating with the United States Department of Commerce.

JANUARY SALES OF INDEPENDENT STORES IN TEXAS

	Total Number of Firms Re- porting	Percentage Change in Dollar Sales	
		Jan. 1937	Jan. 1937
		from Jan. 1936	from Dec. 1936
TOTAL TEXAS.....	706	+ 6.9	- 43.3
TEXAS STORES GROUPED BY PRODUCING AREAS:			
DISTRICT 1-N.....	39	+ 6.0	- 16.1
Amarillo.....	10	+ 27.2	- 8.6
Pampa.....	3	- 23.2	- 15.9
Plainview.....	6	+ 4.9	- 24.2
All Others.....	20	+ 8.1	- 24.9
DISTRICT 1-S.....	17	+ 31.2	- 16.5
Lubbock.....	10	+ 28.7	- 23.4
All Others.....	7	+ 41.3	+ 25.8
DISTRICT 2.....	62	- 10.8	- 37.1
Abilene.....	8	+ 20.0	- 48.2
Vernon.....	5	- 16.6	- 38.6
Wichita Falls.....	8	- 20.5	- 39.0
All Others.....	41	- 14.7	- 28.9



	Total Number of Firms Re- porting	Percentage Change in Dollar Sales	
		Jan. 1937	Jan. 1937
		from Jan. 1936	from Dec. 1936
DISTRICT 3.....	17	- 7.1	- 27.0
Brownwood.....	3	- 13.3	- 30.9
All Others.....	14	- 3.3	- 24.6
DISTRICT 4.....	182	+ 5.8	- 50.7
Cleburne.....	8	+ 4.6	- 49.9
Corsicana.....	8	+ 2.6	- 52.2
Dallas.....	47	+ 12.3	- 50.0
Denison.....	3	+ 33.7	- 41.2
Fort Worth.....	23	+ 4.2	- 55.6
Greenville.....	4	+ 0.4	- 7.8
Paris.....	3	+ 5.5	- 38.9
Sherman.....	5	+ 5.1	- 26.3
Taylor.....	10	- 23.3	- 42.5
Temple.....	7	+ 1.8	- 42.5
Waco.....	13	+ 1.4	- 57.2
All Others.....	51	- 26.1	- 43.3
DISTRICT 5.....	71	- 4.3	- 42.8
Bryan.....	9	- 21.9	- 50.0
Longview.....	6	- 2.7	- 45.3
Marshall.....	4	+ 12.3	- 57.7
Nacogdoches.....	4	- 14.3	- 37.2
Tyler.....	8	- 9.0	- 43.0
All Others.....	40	+ 1.7	- 39.3
DISTRICT 6.....	36	+ 24.9	- 38.5
El Paso.....	26	+ 26.9	- 40.8
All Others.....	10	+ 11.2	- 12.2
DISTRICT 7.....	28	+ 13.7	- 34.8
San Angelo.....	16	+ 13.7	- 36.0
All Others.....	12	+ 13.6	- 30.2
DISTRICT 8.....	102	+ 6.0	- 36.8
Austin.....	16	- 3.8	- 50.4
Corpus Christi.....	7	+ 12.7	- 23.8
Lockhart.....	5	- 20.2	- 26.2
San Antonio.....	23	+ 16.0	- 35.6
All Others.....	51	- 0.5	- 27.7
DISTRICT 9.....	106	+ 6.9	- 44.5
Beaumont.....	8	+ 13.2	- 56.1
Galveston.....	11	+ 16.3	- 35.3
Houston.....	47	+ 9.2	- 44.9
Port Arthur.....	14	+ 25.8	- 47.5
All Others.....	26	- 25.1	- 32.5
DISTRICT 10.....	46	+ 10.5	- 18.4
Brownsville.....	15	+ 20.1	- 27.2
Harlingen.....	8	- 4.6	- 28.1
All Others.....	23	+ 12.4	- 8.8

NOTE: Prepared from reports from independent retail stores to the Bureau of Business Research, cooperating with the United States Department of Commerce.

BUREAU OF BUSINESS RESEARCH

THE UNIVERSITY OF TEXAS

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JANUARY CREDIT RATIOS IN TEXAS RETAIL STORES

(Expressed in Per Cent)

	Number of Stores Reporting	Ratio of Credit Sales to Net Sales		Ratio of Collections to Outstandings		Ratio of Credit Salaries to Credit Sales	
		1937	1936	1937	1936	1937	1936
All Stores	54	64.3	62.4	39.2	38.1	1.6	1.8
Stores Grouped by Cities:							
Abilene	4	57.1	53.0	41.0	40.2	2.3	2.8
Austin	3	60.3	60.3	42.8	41.6	1.6	1.4
Dallas	8	71.9	69.9	37.3	34.8	1.3	1.5
Fort Worth	6	59.8	56.8	32.4	34.4	1.8	2.0
Galveston	3	76.5	73.0	47.4	40.5	4.1	2.4
Houston	7	64.0	63.0	44.4	42.9	1.6	2.2
Waco	4	62.9	60.5	36.4	35.9	1.8	1.8
All Others	19	55.7	53.9	43.1	42.6	2.1	2.3
Stores Grouped According to Type of Store:							
Department Stores (Annual Volume Over \$500,000)	16	62.2	60.4	39.9	38.9	1.6	1.8
Department Stores (Annual Volume Under \$500,000)	13	59.4	56.8	39.8	36.4	2.4	2.6
Dry Goods-Apparel Stores	4	63.3	59.7	30.2	30.0	2.5	2.8
Women's Specialty Shops	8	69.3	68.5	37.3	36.7	1.1	1.4
Men's Clothing Stores	13	72.0	70.2	38.5	37.7	1.8	1.7
Stores Grouped According to Volume of Net Sales During 1936:							
Over \$2,500,000	8	67.2	66.0	44.2	41.8	1.4	1.5
\$2,500,000 down to \$1,000,000	7	62.6	60.5	35.7	34.4	1.7	1.8
\$1,000,000 down to \$300,000	17	58.8	60.6	41.9	41.5	2.0	1.9
Less than \$300,000	22	63.0	58.9	37.3	36.9	3.2	4.0

NOTE: The ratios shown for each year, in the order in which they appear from left to right, are obtained by the following computations: (1) Credit sales divided by net sales. (2) Collections during the month divided by the total accounts unpaid on the first of the month. (3) Salaries of the credit department divided by credit sales.

The data are reported to the Bureau of Business Research by Texas retail stores.

BUILDING PERMITS

	Jan. 1937	Jan. 1936	Dec. 1936
Abilene	\$ 35,721	\$ 10,390	\$ 84,310
Amarillo	45,978	43,334	39,607
Austin	220,092	265,124†	214,526
Beaumont	42,260	219,838	174,075
Big Spring	5,553	4,925	8,920
Brownsville	19,925	11,063	2,710
Brownwood	2,600	275	1,675
Corpus Christi	278,638	125,530	141,635
Corsicana	7,300	4,166	10,747
Dallas	911,986	1,221,095	2,146,304
Del Rio	8,950	2,200	1,500
El Paso	119,349	43,093	50,601
Fort Worth	280,231	582,400	614,760
Galveston	150,917	25,561	32,765
Graham	15,050†	6,600	35,200
Harlingen	14,725†	1,570	9,425†
Houston	2,906,605	793,921	1,649,370
Jacksonville		7,610	200
Laredo	11,350	4,125	38,900
Lubbock	73,412	40,355	61,465†
McAllen	45,350	7,450	7,300
Marshall	18,765	12,425	22,520
Palestine	7,105	10,095	8,552
Pampa	29,000†	9,940	16,600
Paris	1,555	10,740	6,355
Plainview	2,410		10,000
Port Arthur	52,124	25,409	58,802
San Angelo	27,818	5,625	51,760
San Antonio	320,009†	244,389†	262,809†
Sherman	12,846	7,915	6,552
Snyder	5,350	3,500	500
Sweetwater	10,556	1,913	4,548
Tyler	79,210	81,553	76,285
Waco	39,046	27,753	144,150
Wichita Falls	8,950	12,995	547,577
TOTAL	\$5,805,736	\$3,874,877	\$6,543,005

POSTAL RECEIPTS

	Jan. 1937	Jan. 1936	Dec. 1936
Abilene	\$ 16,680	\$ 15,011	\$ 21,069
Amarillo	27,182	27,258	37,479
Austin	54,781	49,504	65,382
Beaumont	23,160	21,645	30,930
Brownsville	6,094	5,575	9,076
Brownwood	5,894	5,513	6,728
Cleburne	3,257	2,723	4,749
Corpus Christi	19,558	15,525	24,471
Dallas	332,817	326,527	457,614
Del Rio	5,718	4,286	5,050
Denison	4,444	4,640	6,941
El Paso	44,216	40,060	63,603
Fort Worth	131,783	117,710	184,567
Galveston	24,860	24,015	37,182
Graham	2,168†	2,027†	\$
Harlingen	5,065	4,686	7,671
Houston	212,022	194,878	275,249
Jacksonville	3,184	3,388	3,583
Longview	10,055	8,942	31,282
Lubbock	13,053	12,839	17,528
McAllen	3,989	3,348	7,514
Marshall	5,444	5,679	8,560
Palestine	5,247	4,860	5,551
Pampa	6,923	6,727	8,674
Paris	5,462	5,914	7,332
Plainview	4,024	3,745	4,965
Port Arthur	11,097	10,047	17,655
San Angelo	10,992	10,905	14,077
San Antonio	108,610	108,967	159,357
San Benito	2,585	2,371	3,783
Sherman	6,930	6,439	9,674
Snyder	1,406	1,412	1,500
Sweetwater	5,208	4,249	5,814
Tyler	16,093	17,350	22,233
Waco	31,100	31,017	39,030
Wichita Falls	22,356	19,813	27,225
TOTAL	\$1,191,289	\$1,127,568	\$1,633,098

†Does not include public works.

NOTE: Compiled from reports from Texas chambers of commerce to the Bureau of Business Research.

†Not included in total.

†Not available.

NOTE: Compiled from reports from Texas chambers of commerce to the Bureau of Business Research.

TEXAS CHARTERS

	Jan. 1937	Jan. 1936	Dec. 1936†
Domestic Corporations:			
Capitalization	\$1,980	\$1,690	\$1,717
Number	129	141	113
Classification of new corporations:			
Banking-Finance	5	7	2
Manufacturing	27	17	18
Merchandising	27	38	24
Oil	31	37	28
Public Service	—	2	1
Real Estate-Building	10	13	10
Transportation	4	5	4
All Others	25	22	26
Number capitalized at less than \$5,000	38	50	44
Number capitalized at \$100,000 or more	3	3	4
Foreign Corporations (Number)	42	35	42

†Revised.

||In thousands.

NOTE: Compiled from records of the Secretary of State.

JANUARY CARLOAD MOVEMENT OF POULTRY AND EGGS

	Cars of Poultry						Cars of Eggs	
	Live		Dressed					
	Chickens	Turkeys	Chickens	Turkeys	Chickens	Turkeys		
	1937	1936	1937	1936	1937	1936	1937	1936
Shipments from Texas Stations								
TOTAL	11	6	3	—	42	21	35	4
Intrastate	1	1	—	—	—	—	—	4
Interstate	10	5	3	—	42	21	35	4
Receipts at Texas Stations								
TOTAL	—	—	—	—	—	—	—	4
Intrastate	—	—	—	—	—	—	—	4
Interstate	—	—	—	—	—	—	—	—

NOTE: These data are furnished the U. S. Department of Agriculture, Division of Crop and Livestock Estimates, by railway officials through agents at all stations which originate and receive carload shipments of poultry and eggs. The data are compiled by the Bureau of Business Research.

LUMBER

(In Board Feet)

	Jan. 1937	Jan. 1936	Dec. 1936
Southern Pine Mills:			
Average Weekly Production per Unit	291,979	280,715	279,902
Average Weekly Shipments per Unit	336,607	277,576	324,086
Average Unfilled Orders per Unit, End of Month	1,209,892	830,914	1,096,529

NOTE: From Southern Pine Association.

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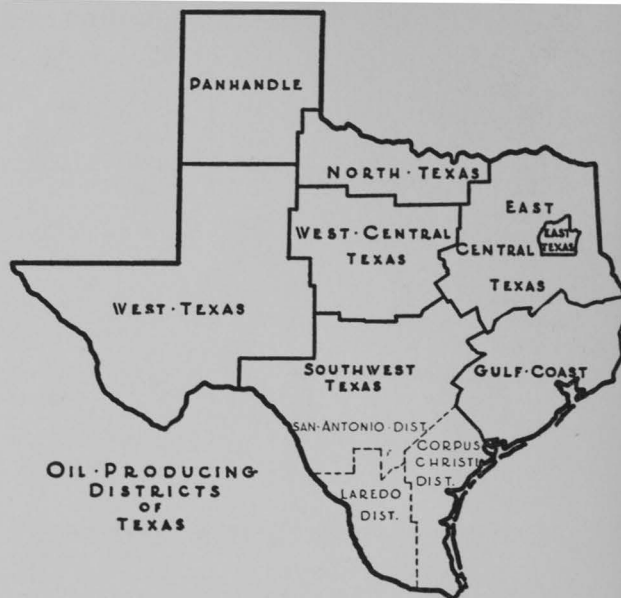
JANUARY SHIPMENTS OF LIVESTOCK CONVERTED TO A RAIL-CAR BASIS§

	Cattle		Calves		Hogs		Sheep		Total	
	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936
Total Interstate Plus Fort Worth	3,305	3,450	776	661	736	598	369	263	5,186	4,972
Total Intrastate Omitting Fort Worth	524	804	199	134	70	8	65	28	858	974
TOTAL SHIPMENTS	3,829	4,254	975	795	806	606	434	291	6,044	5,946

§Rail-car Basis: Cattle, 30 head per car; calves, 60; hogs, 80; and sheep, 250.

||Fort Worth shipments are combined with interstate forwardings in order that the bulk of market disappearance for the month may be shown.

NOTE: These data are furnished the United States Bureau of Agricultural Economics by railway officials through more than 1,500 station agents, representing every livestock shipping point in the State. The data are compiled by the Bureau of Business Research.



PETROLEUM

Daily Average Production
(In Barrels)

	Jan. 1937	Jan. 1936	Dec. 1936
East Central Texas	101,900	45,490	88,140
East Texas	448,500	433,270	445,540
Gulf Coast†	179,600	205,910	166,590
North Texas	65,350	56,700	64,530
Panhandle	67,750	58,810	62,770
Southwest Texas	185,850	67,540	178,200
West Central Texas	32,750	25,370	33,180
West Texas	170,700	149,690	165,110
STATE	1,252,400	1,042,780	1,204,060
UNITED STATES	3,175,400	2,816,510	3,104,010
Imports	105,143	120,857	136,457

†Includes Conroe.

NOTE: From American Petroleum Institute.

See accompanying map showing the oil producing districts of Texas.

Gasoline sales as indicated by taxes collected by the State Comptroller were: December 1936, 95,358,000 gallons; December 1935, 78,406,000 gallons; November 1936, 92,794,000 gallons.

TEXAS COMMERCIAL FAILURES

	Jan. 1937	Jan. 1936†	Dec. 1936†
Number	13	28	11
Liabilities	\$ 56	\$294	\$130
Assets	\$ 19	\$104	\$ 35
Average Liabilities per Failure	\$ 5	\$ 10	\$ 12

†Revised.

||Includes one failure which is not included in the other January figures because assets and liabilities data for the firm are not available.

NOTE: From Dun and Bradstreet, Inc.

COMMODITY PRICES

	Jan. 1937	Jan. 1936	Dec. 1936
WHOLESALE PRICES:			
U. S. Bureau of Labor Statistics (1926 = 100)	85.9	80.6	84.2
The Annalist (1913 = 100)	138.4	128.3	134.0
	81.7¶	75.8¶	79.1¶
FARM PRICES:			
U. S. Department of Agriculture (1910-14 = 100)	131.0	109.0	126.0
U. S. Bureau of Labor Statistics (1926 = 100)	91.3	78.2	88.5
RETAIL PRICES:			
Food (U. S. Bureau of Labor Statistics, 1923-25 = 100)	84.6	81.7	82.9
Department Stores (Fairchild's Publications, Jan. 1931 = 100)	93.0	88.3	91.7

¶In old gold dollar.

STOCK PRICES

	Jan. 1937	Jan. 1936	Dec. 1936
Standard Indexes of the Securities Markets:			
419 Stocks Combined	126.4	100.1	123.1
347 Industrials	146.8	114.5	143.0
32 Rails	55.9	43.8	54.4
40 Utilities	113.8	97.0	110.6

NOTE: From Standard Statistics Co., Inc.

CONSUMPTION OF ELECTRIC POWER IN TEXAS

	Power Consumed (In Thousands of K.W.H.)			Percentage Change	
	Jan. 1937	Jan. 1936	Dec. 1936	Jan. 1937 from Jan. 1936	Jan. 1937 from Dec. 1936
Commercial	33,348	29,160	32,856	+14.4	+1.5
Industrial	81,984	67,395	79,273	+21.6	+3.4
Residential	25,965	22,539	24,268	+15.2	+7.0
All Other	24,990	20,271	20,556	+23.3	+21.6
TOTAL	166,287	139,365	156,953	+19.3	+5.9

NOTE: Prepared from reports from 15 electric power companies to the Bureau of Business Research.

COTTON BALANCE SHEET IN THE UNITED STATES AS OF FEBRUARY 1

(In Thousands of Bales)

	Carryover Aug. 1	Imports to Feb. 1¶	Government Estimate as of Dec. 1§	Total	Consumption to Feb. 1§	Exports to Feb. 1§	Total	Balance Feb. 1
1929-1930	2,313	192	14,919	17,424	3,314	4,891	8,205	9,219
1930-1931	4,530	30	14,243	18,803	2,460	4,479	6,939	11,864
1931-1932	6,369	47	16,918	23,334	2,626	4,957	7,583	15,751
1932-1933	9,682	59	12,727	22,468	2,812	5,040	7,852	14,616
1933-1934	8,176	68	13,177	21,421	2,923	4,919	7,842	13,579
1934-1935	7,746	56	9,731	17,533	2,685	2,865	5,550	11,983
1935-1936	7,138	56	10,734	17,928	3,014	4,004	7,018	10,910
1936-1937	5,397	72	12,407	17,876	3,435	3,848	7,283	10,593

The cotton year begins August 1. ¶In 500-pound bales. §In running bales, counting round bales as half bales.

NOTE: The figures have been revised in accordance with the revisions made by the United States Bureau of the Census.

BANKING STATISTICS

(In Millions of Dollars)

	Jan. 1937		Jan. 1936		Dec. 1936	
	Dallas District	United States	Dallas District	United States	Dallas District	United States
DEBITS to individual accounts	1,048*	49,906*	688	35,011	827	43,363
Condition of reporting member banks on—	Feb. 3, 1937		Jan. 29, 1936		Dec. 30, 1936	
ASSETS:						
Loans and investments—total	497	22,579	435	20,995	521	22,931
Loans to brokers and dealers:						
In New York City		964		893		1,047
Outside New York City	3	240	2	171	3	242
Loans on securities to others (except banks)	43	2,034	40	2,064	44	2,037
Acceptances and commercial paper bought	2	392	2	360	2	351
Loans on real estate	23	1,151	21	1,142	24	1,156
Loans to banks		60	1	65		66
Other loans	140	4,100	123	3,304	159	4,290
U. S. Government direct obligations	200	9,149	146	8,655	197	9,241
Obligations fully guaranteed by U. S. Government	30	1,214	52	1,172	39	1,238
Other securities	56	3,275	48	3,169	53	3,263
Reserve with Federal Reserve Banks	108	5,330	79	4,843	105	5,163
Cash in vault	9	375	9	353	11	433
Due from Domestic banks	178	2,249	182	2,366	179	2,345
Other assets—net	28	1,349	28	1,336	29	1,378
LIABILITIES:						
Demand deposits—adjusted	384	15,493	326	14,017	380	15,571
Time deposits	121	5,077	119	4,888	121	5,067
U. S. Government deposits	31	476	23	604	40	702
Inter-bank deposits:						
Domestic banks	201	5,988	184	5,621	216	6,009
Foreign banks		417		427	1	427
Borrowings				2	1	23
Other liabilities	5	867	5	829	7	902
Capital account	78	3,564	76	3,505	79	3,549

*Five weeks.

NOTE: From Federal Reserve Board.

JANUARY EMPLOYMENT AND PAY ROLLS IN TEXAS CLASSIFIED BY CITIES AND EMPLOYMENT GROUPS

Pay Rolls Ending Nearest Fifteenth of Month

	No. of Estab- lish- ments	Workers			Pay Roll			Average Weekly Wage per Worker		
		Number	Percentage from	Change from	Dollars	Percentage from	Change from	Jan. 1937	Jan. 1936	Dec. 1936
		Jan. 1937	Jan. 1936	Dec. 1936	Jan. 1937	Jan. 1936	Dec. 1936			
Abilene	19	261	+13.0	-1.9	\$ 5,379	+4.0	0.0			
Amarillo	46	1,025	+18.1	+0.9	24,356	+27.7	+2.8			
Austin	24	633	-3.4	+0.8	11,834	-22.1	-9.5			
Beaumont	31	3,172	+3.6	+1.1	82,340	+15.1	+2.4			
Dallas	172	9,224	+6.4	-13.0	204,967	+13.9	-11.8			
Denison	8	909	+13.3	+0.7	12,437	+11.7	+9.0			
El Paso	71	2,579	+19.8	+4.2	50,255	+25.3	+2.1			
Fort Worth	78	2,975	+20.9	-0.6	60,084	+28.0	-1.9			
Galveston	16	664	+13.7	+1.4	15,779	+9.7	-7.1			
Houston	160	11,025	+14.2	-6.1	245,860	+18.9	-6.8			
Laredo	9	214	+8.1	-4.9	2,969	+22.7	+6.7			
Port Arthur	9	7,389	-10.3	+1.6	199,075	+1.1	-1.1			
San Angelo	9	147	+0.7	-5.2	2,310	-7.6	-8.2			
San Antonio	139	3,966	+10.6	-8.5	76,675	+14.7	-4.0			
Sherman	12	578	+9.7	-5.1	7,907	+17.3	-13.4			
Waco	38	1,489	+13.8	-11.2	26,157	+19.4	-7.3			
Wichita Falls	28	881	+6.5	-1.6	19,340	+3.7	-4.9			
All Other Cities	708	29,876	+11.4	-0.5	743,958	+17.4	+0.9			
STATE	1,577	77,007	+8.8	-3.3	1,791,682	+14.9	-2.6	\$23.27	\$22.04	\$23.10
BUILDING MATERIALS	86	8,236	+18.7	-0.1	144,413	+21.9	-1.1	17.53	17.07	17.71
Brick, Tile, Terra Cotta	11	515	+25.6	-2.6	4,719	+2.1	-23.0	9.16	11.27	11.58
Cement	7	1,306	+43.7	+6.1	23,011	+24.8	-7.4	17.62	20.28	20.19
Foundries, Machine Shops	28	2,083	+29.9	+2.1	46,973	+26.7	+0.8	22.55	23.12	22.83
Millwork	17	610	+36.5	+1.2	11,216	+40.4	+0.4	18.39	17.87	18.52
Saw Mills	16	3,143	+0.8	-5.4	44,382	+6.5	-5.5	14.12	13.37	14.14
Structural Iron Works	7	579	+28.1	+11.8	14,112	+63.2	+37.5	24.37	19.13	19.82
CHEMICALS†	23	432	-5.3	+3.3	7,728	+4.2	+5.3	17.89	16.26	17.56
CLOTHING AND TEXTILES	37	3,316	+13.8	-1.4	39,642	+25.8	+3.4	11.95	10.82	11.40
Cotton Textile Mills	6	1,466	+36.1	+2.0	19,718	+81.2	+7.7	13.45	10.11	12.74
Men's Work Clothing Manufacturing	14	1,110	-7.8	-10.8	10,291	-15.7	-9.4	9.27	10.14	9.13
Women's Clothing Manufacturing	6	106	-15.2	+17.8	1,031	-28.4	+21.9	9.73	11.51	9.40
Other Clothing and Textile Manufacturing	11	634	+25.0	+7.5	8,602	+23.1	+9.9	13.57	13.79	13.27
COTTON	37	1,924	+0.7	-20.7	27,994	-3.5	-25.7	14.55	15.17	15.54
Cotton Compresses	6	960	-4.3	-28.9	15,803	-5.9	-34.0	16.46	16.75	17.73
Cotton Oil Mills	31	964	+6.2	-10.2	12,191	0.0	-11.2	12.65	13.43	12.78
DISTRIBUTION	532	14,663	+9.5	-13.7	319,171	+13.2	-10.9	21.77	21.05	21.10
Retail Trade	339	9,865	+8.8	-18.1	197,722	+13.8	-14.7	20.04	19.16	19.24
Wholesale Trade	193	4,798	+10.8	-2.8	121,449	+12.3	-4.1	25.31	24.98	25.64
FOOD PRODUCTS	99	4,133	+10.5	+0.6	76,420	+15.8	-0.6	18.49	17.63	18.72
Bakeries	19	608	+15.2	-2.9	11,909	+20.8	-4.4	19.59	18.68	19.91
Beverages	15	300	+4.5	+1.4	6,710	+2.8	-5.9	22.37	22.74	24.10
Confectioneries	9	247	+13.8	-10.2	3,258	+9.2	-18.6	13.19	13.75	14.55
Flour Mills	6	490	+7.5	+1.4	11,194	+24.6	-0.3	22.84	19.70	23.25
Ice Cream Factories	7	257	+7.1	+7.1	5,382	+27.4	+10.3	20.94	17.60	20.33
Meat Packing, Slaughtering	6	654	+3.8	+0.8	12,480	+4.9	-3.3	19.08	18.88	19.88
All Other Food Products	37	1,577	+14.0	+2.5	25,487	+18.6	+5.1	16.16	15.54	15.77
FOREST PRODUCTS	22	854	+0.2	-3.0	14,311	+9.7	-6.8	16.76	15.31	17.45
FURNITURE MANUFACTURING	7	495	+21.9	+3.1	8,508	+31.2	-5.7	17.19	15.98	18.80
PETROLEUM	52	20,613	+3.6	+0.5	626,790	+16.4	+2.6	30.41	27.05	29.78
Crude Petroleum Producing	20	4,122	+5.9	+0.8	151,062	+16.0	+8.5	36.65	33.48	34.04
Petroleum Refining	32	16,491	+3.0	+0.4	475,728	+16.6	+0.9	28.85	25.48	28.72
PRINTING AND PUBLISHING	48	1,537	+5.7	-3.6	48,112	+7.0	-10.6	31.30	30.92	33.75
Commercial Printing	29	446	+8.0	-1.8	10,480	+5.5	-6.6	23.50	24.06	24.70
Newspaper Publishing	19	1,091	+4.8	-4.4	37,632	+7.5	-11.7	34.49	33.64	37.35
PUBLIC UTILITIES	402	13,559	+11.1	+1.3	350,966	+13.9	-1.3	25.88	25.25	26.57
Power and Light	289	6,781	+12.7	+3.4	179,528	+14.9	+0.5	26.48	25.98	27.24
Steam Railroad Car Shops	18	2,985	+11.2	+2.2	75,926	+15.3	-3.0	25.44	24.53	26.82
All Other Public Utilities	95	3,793	+8.3	-3.0	95,512	+11.0	-3.3	25.18	24.56	25.26
QUARRYING & NON-METALLIC MINING	18	769	-14.3	-4.5	17,339	-25.8	-9.4	22.55	26.04	23.76
SERVICE	124	3,914	+9.1	+1.5	55,397	+10.3	+0.7	14.15	14.00	14.26
Business and Personal Service	20	304	+19.2	-1.9	7,108	+39.5	+3.8	23.38	19.98	22.03
Hotels	25	1,838	+14.7	+5.3	20,175	+11.6	0.0	10.98	11.28	11.56
Ice	43	517	-8.3	-3.2	9,789	-12.5	-1.4	18.93	19.83	18.59
Laundries, Dyeing and Cleaning	26	1,135	+7.4	-0.9	15,355	+13.6	+0.9	13.53	12.79	13.28
All Other Service Industries	10	120	+10.1	-2.4	2,970	+26.7	+4.8	24.75	21.50	23.03
ALL OTHER INDUSTRIES	90	2,562	+21.0	+0.5	54,891	+33.7	-1.0	21.43	19.39	21.77

†Chemical and Allied Industries not elsewhere classified.

NOTE: Prepared from reports from Texas industrial establishments to the Bureau of Business Research, cooperating with the United States Bureau of Labor Statistics.