TEXAS BUSINESS REVIEW

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BUREAU OF BUSINESS RESEARCH

THE BUSINESS SITUATION IN TEXAS

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Even though a feeling of optimism pervades the air and the belief is becoming prevalent that the worst of the slowdown in business is over, statistical data on the performance of business do not point with certainty to this conclusion, for either Texas or the United States. Some of the business barometers for Texas and for the country as a whole show definite signs of improvement, but many uncertainties persist and the balance is still rather precarious.

The most comprehensive measure of total economic activity in Texas is provided by the estimates of changes in personal income to individuals. The average level of this index for the first eight months of 1970 was 6 percent above that of the same period last year. The last four months, however, registered an increase of only .3 percent over the first four months of 1970. Out of these eight months, four showed an increase over the previous month, three decreased, and one month was unchanged. The latest month, August, was 1.1 percent below the level of December 1969. The only conclusion from this barometer that seems tenable is that very little change occurred in the economy of the state during the first eight months of 1970.

Industrial production is one of the most sensitive indicators of changes in the economy, and this series shows essentially the same trend in Texas as the income data. The average for the last four months was 1.2 percent below the

average for the first four months, although the August value was 1.2 percent above the value for December 1969. Four of the months in 1970 have registered increases over the previous month and four have declined. The August index increased 2 percent over July, to the highest point reached since February of this year.

The index of industrial production for the United States also has been fluctuating within a rather narrow range. The August index declined .1 percent from July, dampening the hopes of many observers that the July increase would continue and could be interpreted as a signal that a definite upward trend had been established. Four out of the last five months have shown a decline. All of the decline in August occurred in the manufacture of durable goods and the output of utilities. The output of consumer goods changed very little in August.

The value of new construction authorized in Texas declined 6 percent in August, and the average value for the first eight months of this year was 3 percent below the same period of last year. Since the cost of housing has increased during this time, the figures represent an even greater percentage of decline in the physical volume of construction. The only major category of construction to show any appreciable increase in August was multiple-family dwellings, with an increase of 9 percent over July. The year-to-date figure for this category, however, was 12

ESTIMATED PERSONAL INCOME, TEXAS
Index Adjusted for Seasonal Variation — 1957-1959=100
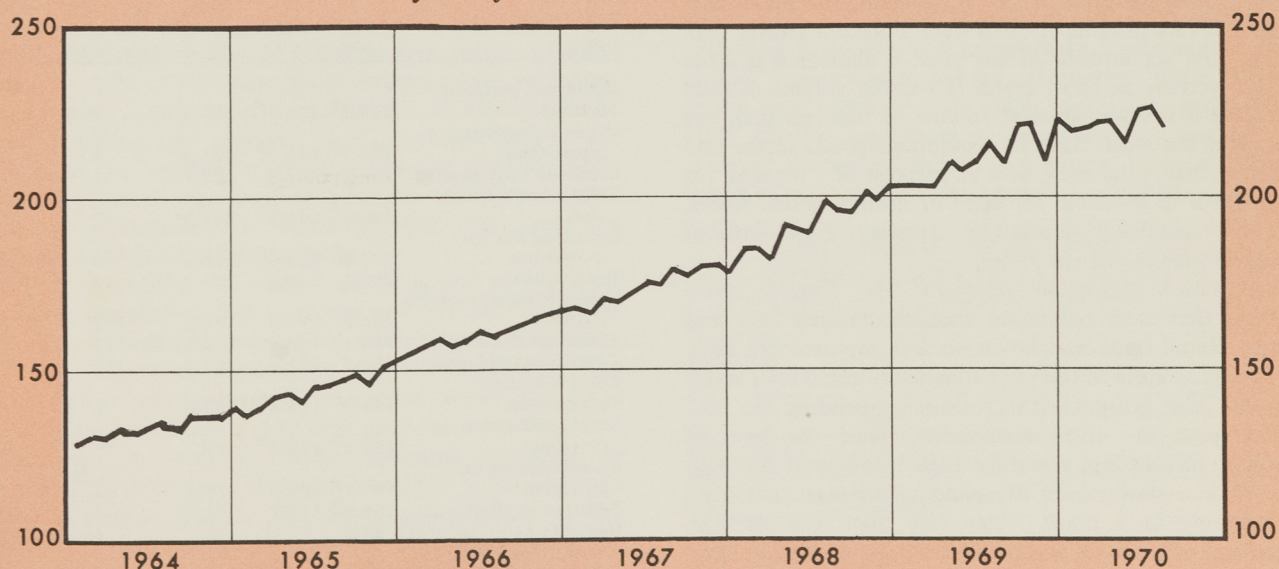
SOURCE: Quarterly measures of Texas personal income made by the Office of Business Economics, U.S. Department of Commerce. Monthly allocations of quarterly measures, and estimates of most recent months, made by the Bureau of Business Research with regression relationships of time, bank debits, and manufacturing employment.

percent below the value for the same period of 1969.

It appears that the only hope for the construction industry is a loosening of credit. The recent cut in the prime rate has raised hopes that more money will be available for housing. Homebuilders are becoming more optimistic as the tight money situation eases. The Council of Housing Producers says members expect to build about one third more houses in 1970 than in 1969. However, builders of expensive houses have reported difficulties in finding buyers.

The construction industry is one of the most strategic factors in the business situation at the present time. It employs an important segment of the labor force and furnishes the demand for great quantities of materials. A sound construction industry is an essential part of the basis for any sustained growth in the economy. The price inflation and the shortage of credit have been felt by this industry more than by other portions of the economy. A strong recovery in construction is dependent on an increase in the supply of funds, and the Texas economy is as vulnerable to the problems of the construction industry as any region.

Consumer spending for goods and services represents the largest portion of the total income generated by the economy, but is the area of the economy for which satisfactory current data are most difficult to obtain. Though total consumer spending is subject to less violent changes than other segments, particularly industrial production and construction, consumer purchases of non-durable goods and services tend to maintain their volume better than purchases of durable goods. Information on retail sales in Texas is provided by the United States Department of Commerce, but no current information is available on expenditures for services. Furthermore, the data on retail sales are two months later than information on most other portions of the Texas economy. Retail sales for the first six months of 1970 were 3 percent greater than for the first six months of last year. If allowance is made for the increase in retail prices this dollar volume of sales represents a smaller physical volume of business than was transacted last year. Sales of nondurable-goods stores held up better than total sales, with an increase of 7 percent. No information is available for sales of durable-goods stores, but they probably showed a decrease even without adjustment for the rise in prices.

Information on retail sales for the United States indicates that sales continued sluggish through July and August. Retail trade has shown no real improvement since last spring. In spite of the poor showing of retail sales so far this year, the prospects for consumer spending are considered good by many economists, since the level of consumer income has remained high throughout 1970 to date. With a slower rate of spending, savings have been accumulating at a much faster rate than is usual. The percentage of personal income saved is at the highest level in nearly twenty years. These accumulated savings are available for consumer spending, and businessmen are hoping that consumers will lead the way to an upturn in business activity.

The survey of consumer buying intentions published by the Commerce Department shows anticipated automobile purchases increasing 4 percent in the third quarter of 1970. It is hoped that this improvement will continue into 1971. Unless the strike against General Motors is settled soon, however, this increase is not likely to materialize. Another view of the future demand for automobiles is found in the survey of consumer attitudes released by the Research Center of the University of Michigan, which found that more families in August than in May felt that the present was a bad time to buy a car. As with many economic indicators, the prospects for future car sales are not very clearly indicated.

The slowdown in business has inevitably affected government revenues, with the result that the federal deficit continues to grow in spite of the attempts to reduce expenditures. The easier money policy of the Federal Reserve has begun to be felt as more money has been funneled into the market; so some easing of interest rates was not unexpected. The timing of the reductions in interest rates, however, was something of a surprise, but in spite of the uncertain character of the recovery of business to date, it appears that some increase in the supply of credit was due.

The easing of credit should furnish a healthful climate for the nurturing of whatever mild upturn in business may have developed. However, in the early stages of a recovery movement it does not take much bad news to turn a

SELECTED BAROMETERS OF TEXAS BUSINESS
(Indexes—Adjusted for seasonal variation—1957-1959=100)

Index	Aug 1970	July 1970	Year-to-date average 1970	Percent change Aug 1970 from July 1970	Percent change Year-to-date average 1970 from 1969
Estimated personal income	219.1^P	226.8^P	221.3	− 3	6
Crude-petroleum production	124.7^P	119.3^P	121.2	5	7
Crude-oil runs to stills	134.3	135.0	133.7	− 1	− 1
Total electric-power use	280.2^P	279.2^P	261.0	**	5
Industrial electric-power use	231.9^P	222.4^P	226.9	4	5
Bank debits	297.1	339.9	303.7	− 13	10
Urban building permits issued	201.5	197.9	188.0	2	− 2
New residential	144.1	163.0	143.5	− 12	− 8
New nonresidential	292.5	261.6	261.6	12	3
Total industrial production	179.3^P	175.3^P	177.8	2	4
Total nonfarm employment	150.3^P	150.3^P	150.2	**	4
Manufacturing employment	149.1^P	150.3^P	152.9	− 1	**
Total unemployment	109.5	115.1	94.4	− 5	29
Insured unemployment	89.8	85.6	71.0	5	69
Average weekly earnings—manufacturing	150.4^P	148.2^P	149.1	1	4
Average weekly hours—manufacturing	97.8^P	98.0^P	99.0	**	− 2

^{P} Preliminary.
** Change is less than one half of 1 percent.

BUSINESS-ACTIVITY INDEXES FOR TWENTY SELECTED TEXAS CITIES
(Adjusted for seasonal variation—1957-1959=100)

Index	Aug[p] 1970	July 1970	Year-to-date average 1970	Percent change Aug 1970 from July 1970	Year-to-date average 1970 from 1969
Abilene	136.0	149.4	142.0	− 9	**
Amarillo	199.5	208.6	202.9	− 4	6
Austin	298.6	341.3	336.9	− 13	− 6
Beaumont	169.9	178.3	179.8	− 5	− 7
Corpus Christi	143.5	166.8	160.1	− 14	1
Corsicana	170.0	170.8	164.9	**	5
Dallas	329.3	372.5	334.7	− 12	7
El Paso	159.5	176.2	158.9	− 9	4
Fort Worth	172.5	192.1	184.9	− 10	4
Galveston	118.5	129.0	130.8	− 8	4
Houston	257.8	301.0	275.2	− 14	7
Laredo	268.2	271.9	256.6	− 1	8
Lubbock	200.6	200.3	171.5	**	− 2
Port Arthur	116.9	123.9	119.6	− 6	1
San Angelo	163.2	177.4	173.1	− 8	4
San Antonio	217.7	251.4	219.3	− 13	7
Texarkana	224.5	221.1	217.7	2	− 11
Tyler	174.3	179.8	177.6	− 3	− 1
Waco	203.4	210.4	200.7	− 3	8
Wichita Falls	131.5	149.0	132.0	− 12	− 6

[p] Preliminary.
** Change is less than one half of 1 percent.

prospective upturn into a sharp decline. It is to be hoped that nothing serious interferes with the favorable developments beginning to appear in the business news. The effects of a major strike on the overall business situation can easily be exaggerated, but developments in the international situation can have substantial effect. Any forecast of the development abroad is always subject to a high risk of error.

Expenditures of business concerns for new plants and equipment have been scaled down from earlier expectations. In spite of this downward revision of the estimates, total capital expenditures for 1970 are now expected to be $80.56 billion, an increase of 6.6 percent over 1969. Although this expansion would be smaller than the 11.5-percent increase registered in 1969, it would make this year's expenditures the largest amount ever spent for capital items by American business.

The expenditure on capital goods is one of the most dynamic segments of the economy and in recent years this steadily increasing investment has contributed substantially to the inflationary pressures on the economy. The expenditures of businesses on capital goods are more stimulating to business than the same amount spent by consumers. As long as capital spending continues to increase, the total level of business activity is not likely to show a serious decline. The downward revisions of the figures for capital expenditures that have occurred as the year 1970 has progressed have not been surprising, since commitments are necessarily made considerably in advance and are subject to revision as the outlook for business changes. Projected capital increases for 1970 over 1969 had

been 7.75 percent in May and 9.75 percent in February. Actual capital outlays in the second quarter of 1970 were .5 percent lower than expected in May and scheduled outlays for the second half have been revised downward about 2 percent. The decline in the economy can be traced in the successive reductions in these anticipated expenditures, but the relative strength of this portion of the economy is an important factor in the mildness of the decline in total business to date.

In August 1970, 3.9 percent of the Texas labor force was unemployed, compared with 2.8 percent a year earlier. This August percentage, however, was an improvement over the 4.1 percent unemployed in July and the 4.5 percent in June. These figures are definitely encouraging indicators of a slight improvement in the business situation during the summer. The rate of unemployment of the labor force is one of the simplest and most direct measures of the state of the economy.

The growing concern about declining business activity has somewhat shifted attention from the problem of inflation, but for most of 1970 the continual rise in the price level in spite of the slowdown in business has been a source of worry to economists. The Consumer Price Index for August was still rising, but the increase of .2 percent was the smallest month-to-month change since December 1968. With adjustment for seasonal variation in prices it was the smallest increase in three years. For the past three months the rate of increase in prices has been slowing down, giving a sound basis for concluding that the worst of the inflation might be past.

A summary of all of the measurements of business for August provides a basis for cautious optimism. The decline seems to be fairly well stabilized, although no indication of a strong rise appears for the immediate future. A modest rate of recovery should be generally satisfactory; it is important that nothing interrupt the upward movement now under way before it gathers enough momentum to withstand bad news and unfavorable developments. If the present improvement can be maintained, while the price level is kept simultaneously under control, the prospects for 1971 can be considered to be noticeably brighter. The recovery movement is still not strong, however, and the threat of inflation has not completely subsided.

INDUSTRIAL PRODUCTION TOTAL MANUFACTURES, TEXAS
Index Adjusted for Seasonal Variation—1957-1959 = 100

NOTE: Shaded areas indicate periods of decline of total business activity in the United States.
SOURCE: Federal Reserve Bank of Dallas.
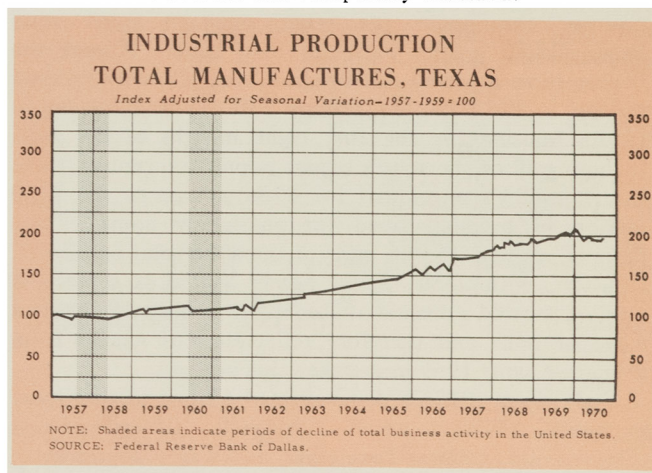
Although the adjusted index of urban building permits for new residential construction fell off 12 percent in August for the second straight month, the index of total construction in Texas was buoyed 2 percentage points above the July level by the second straight rise in urban nonresidential permit issues and by a disaster-stimulated surge in additions, alterations, and repairs. The relatively healthy urban nonresidential sector is running 3 percent ahead of January-August 1969, but sluggish 1970 home-building has depressed the index of the first eight months 2 percent below that for January-August 1969—even with consideration of seasonal influences.

The tailing-off of new-construction urban permit values by $11.2 million from July levels was not necessarily significant. The decline of almost $6 million in residential construction authorized, however, ran counter to the seasonal norm, as indicated by the slump in the seasonally adjusted index of 11.6 percent. The $5.2-million dip in permits covering new nonresidential construction, on the other hand, failed to equal the usual decline at this time of year. Besides the strength of nonresidential building activity, the category of additions, alterations, and repairs rose $2.4 million, further offsetting the decline of more than 4 percent in the unadjusted total and accounting for the seasonally adjusted rise of almost 2 percent in the index of total construction authorized in the state during August.

The most striking trend in urban residential construction apparent in a comparison of January-August 1970 with the same period last year is the performance of housing construction outside the standard metropolitan statistical areas, which contain all but about 3 million Texans. Throughout the state both the value and the number of dwelling units declined: the single exception was one-family dwelling units, which increased in number. Outside the metropolitan areas, however, both the number and the value of single-family houses gained over the first eight months of 1969.

The trend toward more but less expensive housing was uniform throughout the state, although some areas demonstrated greater extremes than others. Among the twenty-three reported metropolitan areas, fifteen exhibited a drop in the indicated average cost per unit for single-family housing for the first eight months of the year. Including all of the state's largest population centers, these fifteen SMSA's accounted for $236 million of the $350 million in permits issued for one-family homes. Their permits covered 15,925 units of the state total of 22,432. Houston, with about 2,300 homes valued at some $48 million, showed a decline of 20 percent in both number and value of units and therefore reflected little change from January-August 1969 in average value per unit.

Only seven SMSA's demonstrated a trend toward more expensive housing: Abilene, Amarillo, Galveston-Texas City, Laredo, Odessa, Texarkana, and Waco. Representing about 821,000 persons, these areas recorded only 695 single-family homes valued at $12,338,000 during January-August 1970, an indicated average value per unit of roughly $17,800. This figure compares with an average of about $20,500 for Houston and $14,800 for the fifteen areas which reflected declining average values.

Across the state about 34 percent of the number of units and 55 percent of the value of all housing authorized during the first eight months of 1970 were attributable to one-family homes. Multiple-family units accounted for approximately 67 percent of the number and 45 percent of the value of building permits issued during January-August 1970.

Although the January-August 1970 growth of urban nonresidential construction, compared to the same period last year, has been erratic, the nonresidential sector has blunted to a considerable extent the yawn-provoking homebuilding activity. These differences have rarely been considerable. For example, both residential and non-residential indexes have risen in eight of the last twelve months, although the index of total construction activity—

ESTIMATED VALUES OF BUILDING AUTHORIZED IN TEXAS*

Classification	Aug 1970	Jan-Aug 1970	Percent change Aug 1970 from July 1970	Percent change Jan-Aug 1970 from Jan-Aug 1969
	(thousands of dollars)			
ALL PERMITS	194,899	1,562,226	− 4	− 2
New construction	170,586	1,392,167	− 6	− 3
Residential (housekeeping)	83,325	689,066	− 7	− 8
One-family dwellings	46,329	379,155	− 16	− 4
Multiple-family dwellings	36,996	309,911	9	− 12
Nonresidential buildings	87,261	703,101	− 6	4
Hotels, motels, and tourist courts	645	26,424	− 87	42
Amusement buildings	1,259	40,963	− 40	215
Churches	2,130	24,873	− 22	3
Industrial buildings	16,370	79,337	94	− 10
Garages (commercial and private)	1,450	11,911	− 19	10
Service stations	933	9,514	− 39	− 22
Hospitals and institutions	6,675	79,644	− 26	20
Office-bank buildings	22,026	147,307	52	65
Works and utilities	2,875	30,722	164	24
Educational buildings	10,071	99,584	− 57	− 35
Stores and mercantile buildings	20,300	132,536	− 2	− 2
Other buildings and structures	2,527	20,286	12	− 52
Additions, alterations, and repairs	24,313	170,059	11	1
SMSA vs. NON-SMSA				
Total SMSA†	178,577	1,394,863	− 2	− 3
Central cities	105,392	993,581	− 17	− 1
Outside central cities	73,185	401,282	33	− 6
Total non-SMSA	16,322	167,363	− 24	1
10,000 to 50,000 population	8,539	88,952	− 23	− 6
Less than 10,000 population	7,783	78,411	− 26	12

* Only buildings for which permits were issued within the incorporated area of a city are included.
** Change is less than one half of 1 percent.
† Standard metropolitan statistical area as defined in 1960 Census and revised in 1968.
Source: Bureau of Business Research in cooperation with the Bureau of the Census, U.S. Department of Commerce.

which includes additions, alterations, and repairs—has risen only half the time. During the last three months, the nonresidential index has risen twice in contrast to declines in two of the last three months in both residential and total construction indexes.

The structure of planned expenditures in the non-residential sector exhibited no broad changes from 1969 over the first eight months of this year. The same five categories led in values authorized in both instances: office-bank buildings (which rose to first place from third); stores and mercantile buildings (second); educational buildings (which dropped to third from first in 1969); hospitals and other institutional buildings (which rose from fifth to fourth); and industrial buildings.

Although the nonresidential values through August gained only about 4 percent this year (some $24 million), the distribution of values was considerably different. The largest increase—$58 million in office-bank buildings—was almost precisely offset by a $54-million drop in school buildings. Works and utilities construction picked up $28 million, in addition to another $26 million or so in hospitals, amusements buildings, hotels, and churches. These gains were partially offset by various declines, the most significant of which were $9 million in industrial buildings and $2.6 million in stores. Remarkably, however, the five leading nonresidential sectors accounted for almost precisely identical totals in both eight-month periods: $533 million in 1969 and $538 million in 1970.

A pair of natural disasters, twelve weeks and five hundred miles apart, have measurably affected the construction economy of the state during 1970. An estimated $135 million in damage has been attributed to the May 11 tornado in Lubbock, with a metropolitan-area population of about 176,000. A study recently completed by the Lubbock Economic Council sets out some remarkable facts concerning the effects of this tornado.

The real-property loss in Lubbock came to about $64 million, on a total real-property base of $786 million. The number of business firms damaged or destroyed was set at 513. The Council estimates that $55-60 million will be spent on rebuilding, a sum equivalent to about two years' building permits at the 1969 rate. Most of the smaller repair projects ought to be completed this year. With the time involved in completing plans, settling insurance claims, and making financial arrangements, the larger rebuilding projects will begin in 1971. The entire rebuilding program is projected over five to eight years.

Since the storm, building permits have been issued at the rate of about $1 million per week. The 1970 total is projected at $40 million, or about 37 percent over the 1969 total of $29 million. For 1971 the estimate is $50 million, 72 percent above that for 1969.

A comparison of the May-August 1969 and May-August 1970 figures for additions, alterations, and repairs in Lubbock provides a striking measure of the significance of the tornado. This category of construction permits amounted to less than $100,000 in May 1969 (in the Lubbock SMSA); the May 1970 figure was $1.7 million. The June figures were about $104,000 in 1969 and about $2.5 million in 1970. In July 1969 the permits for

additions, alterations, and repairs fell to about $46,000; the July 1970 total was $2 million. The August 1970 figure was more than $2.1 million, considerably more than the $436,000 for August of last year.

The Lubbock SMSA, ranging in May-August 1969 from a low of 0.07 percent to a high of less than 2 percent of the total state authorization for additions, alterations, and repairs, accounted for 8.2-9.1 percent of this category of building permit values during the same four months this year.

During May-August 1970, therefore, Lubbock SMSA permits for additions, alterations, and repairs amounted to about $8.3 million. Although some of this work is not

TOTAL BUILDING AUTHORIZED, TEXAS *
Index Adjusted for Seasonal Variation—1957-1959 = 100

* Includes additions, alterations, and repairs.
NOTE: Shaded areas indicate periods of decline of total business activity in the United States.

RESIDENTIAL BUILDING AUTHORIZED, TEXAS *
Index Adjusted for Seasonal Variation—1957-1959 = 100

* Excludes additions, alterations, and repairs.
NOTE: Shaded areas indicate periods of decline of total business activity in the United States

NONRESIDENTIAL BUILDING AUTHORIZED, TEXAS *
Index Adjusted for Seasonal Variation—1957-1959 = 100

* Excludes additions, alterations, and repairs.
NOTE: Shaded areas indicate periods of decline of total business activity in the United States.

related to the storm, most of it clearly is. The 1970 four-month total increased almost 13 times over the 1969 total, from $654,000 to $8.3 million, and the ratio of the Lubbock SMSA value to that of the entire state rose from less than 0.8 percent to 8.8 percent.

On August 3 Hurricane Celia invaded the Texas coast at Corpus Christi, the center of a population concentration of close to 300,000. Housing especially was hard hit by the storm. In Portland, for example, a relatively small community adjacent to Corpus Christi in San Patricio County, about 1,700 homes were damaged or demolished, along with 26 businesses. During August the city authorized almost $700,000 in additions, alterations, and repairs, a type of permit which normally is not even applied for in this relatively new community.

Through September 13 the Small Business Administration office in Aransas Pass had accepted applications for 623 home loans totaling $3.7 million and 141 business loans aggregating $3.1 million. This office also served Ingleside and Port Aransas.

For the communities of Sinton, Taft, Odem, and Edroy, and adjacent rural areas, all affected by the hurricane, the Small Business Administration, through September 5, handled 1,335 loan applications totaling almost $4 million.

In the Corpus Christi SMSA, which does not include quite all of the area affected by the storm, the additions, alterations, and repairs category in July 1969 amounted to considerably more ($560,000) than in July 1970 ($412,000), whereas in August 1970, the month of Hurricane Celia's visit, this sector rose to almost $800,000 over the figure of $265,000 for August of 1969. New construction, on the other hand, which amounted to $1.8 million in July 1969 and $1.7 million in August 1969, dropped from almost $2 million in July 1970 to $931,000 in August 1970.

One of every twenty-three or twenty-four persons in the state were affected by these two disasters. The economies of two areas holding close to half a million persons will be altered noticeably for the next several years by the pattern of reconstruction and recovery which follows all major disasters. From the point of view of economic observers, these misfortunes occurred in a year in which the construction industry was already affected by a welter of shifting and contradictory influences. Although some, at least, of the rebuilding programs in the Lubbock and Corpus Christi areas will stimulate the construction economy, the outlook for this sector still is uncertain throughout the state.

ONE-FAMILY, TWO-FAMILY, AND APARTMENT BUILDING DWELLING UNITS AUTHORIZED IN STANDARD METROPOLITAN STATISTICAL AREAS, AUGUST 1970†

(Values in thousands of dollars)

Standard metropolitan statistical area	One-family dwelling units Aug 1970 Value	Aug 1970 No. of units	Jan-Aug 1970 Value	Jan-Aug 1970 No. of units	Percent change Jan-Aug 1970 from Jan-Aug 1969 Value	Percent change No. of units	Two-family Aug 1970 Value	Aug 1970 units	Jan-Aug 1970 Value	Jan-Aug 1970 No. of units	Percent change Value	Percent change No. of units	Apartment Aug 1970 Value	Aug 1970 No. of units	Jan-Aug 1970 Value	Jan-Aug 1970 No. of units	Percent change Value	Percent change No. of units
Abilene	81	4	645	25	− 34	− 40	..	..	47	4	68	**	..	..	..	..	−100	−100
Amarillo	709	29	3,319	116	− 28	− 36	..	..	..	..	−100	−100	..	..	100	20	− 92	− 86
Austin	3,318	168	24,269	1,185	− 18	− 10	395	26	2,577	188	3	2	340	28	19,658	1,904	− 50	− 47
Beaumont-Port Arthur-Orange	650	43	3,992	241	− 36	− 31	..	..	59	6	− 73	− 63	..	..	2,913	367	17	8
Brownsville-Harlingen-San Benito	237	29	1,561	198	37	50	..	..	..	..	−100	−100	4	3	1,902	221	− 44	− 26
Corpus Christi	187	18	7,228	617	− 5	10	..	..	103	12	164	200	..	..	1,963	268	− 5	− 25
Dallas	8,801	604	102,618	6,883	− 2	11	147	8	2,880	210	− 28	− 31	14,286	1,321	87,878	11,599	− 2	− 8
El Paso	1,916	128	17,732	1,227	− 3	10	85	10	100	14	− 84	− 77	260	32	8,004	894	− 3	− 16
Fort Worth	3,900	245	35,863	2,224	− 10	− 7	131	8	2,566	306	47	87	597	77	16,498	1,968	− 61	− 66
Galveston-Texas City	292	16	2,382	136	− 18	− 23	..	..	..	..	−100	−100	386	84	1,089	222	− 53	− 35
Houston	5,876	287	47,553	2,315	− 20	− 20	230	16	1,128	108	39	35	7,770	1,105	85,212	10,788	− 22	− 34
Laredo	289	34	1,579	185	113	59	..	..	..	..	..	..	91	8	1,663	52	..	..
Lubbock	949	43	6,704	310	− 10	2	130	10	273	20	− 51	− 64	592	63	3,660	378	1,198	779
McAllen-Pharr-Edinburg	355	30	3,169	329	− 2	11	20	8	111	24	..	..	..	..	411	47	116	81
Midland	155	6	1,610	60	19	25	..	..	40	2	− 33	**	..	..	50	4	− 93	− 96
Odessa	122	5	1,186	49	15	9	..	..	200	20	82	150	..	..	1,306	128	..	..
San Angelo	186	15	1,513	121	− 18	− 6	..	..	17	2	− 51	− 80	..	..	2,544	449	287	410
San Antonio	2,600	213	19,857	1,915	14	25	..	..	350	44	− 37	− 19	2,241	216	7,882	759	− 18	− 40
Sherman-Denison	535	31	3,391	213	− 15	− 7	..	..	102	12	− 92	− 83	..	..	3,571	309	86	23
Texarkana	99	11	917	85	43	15	..	..	..	..	..	..	..	..	75	22	− 94	− 87
Tyler	540	30	3,811	186	24	31	..	..	130	8	..	..	..	..	1,080	113	38	47
Waco	242	12	2,310	99	− 27	− 32	110	8	290	20	31	11	1,965	200	6,147	594	303	179
Wichita Falls	345	28	2,712	216	22	60	..	..	..	..	−100	−100	..	..	2,070	334	367	486
Total SMSA's	32,383	2,029	295,920	18,935	− 8	2	1,248	94	10,973	1,000	− 15	− 4	28,532	3,138	255,676	31,440	− 19	− 27
Outside SMSA's	7,440	470	53,783	3,497	6	11	347	42	1,444	192	− 2	− 17	885	112	16,053	1,821	16	− 12
State Total	39,823	2,499	349,703	22,432	− 6	4	1,595	136	12,417	1,192	− 13	− 6	29,417	3,249	271,729	33,261	− 17	− 26

† Metropolitan areas are listed in accordance with 1968 Bureau of the Census definition. This table includes only the cities reporting in metropolitan areas.
** Change is less than one half of 1 percent.
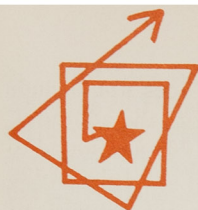
9. A NEW ERA FOR FORESTRY

Nelson T. Samson*

The decade of the seventies will usher in a completely new era in Texas forestry. Forest practices will become more intensive, wood-using industries will expand in size and diversify in output, smaller, locally owned units will be absorbed by larger, national, multiproduct complexes, wood procurement will become more difficult, new products will appear, environmental management and recreational planning will influence policies, harvesting systems will be revolutionized, and perhaps most important will be a change in forest-management policies.

An increased national demand for forest products is expected in the next decade. While some forest products will increase in demand, others will continue to lose rank in the marketplace, with a resulting steady but not spectacular expansion. Figure 1 indicates that forest-product consumption has not shown dramatic growth since the peak of the virgin-timber cutting in the first decade of this century.

The 1907 peak in apparent consumption[1] of timber products, 13,380 million cubic feet, was followed by a steady decline, which reached bottom in the depression year of 1932, when the apparent consumption dropped to 8,380 million cubic feet. The 1907 level of consumption has never been reattained, but hopefully it will be reached in the seventies. To properly evaluate this historical trend one must look at the product mix, which has shown significant changes.

Logs for lumber production have made up approximately 50 percent of apparent consumption for the past seventy years with the exception of the depression years, when building was sharply curtailed. In 1900 fuelwood, a major product of our forests, made up about 40 percent of total consumption, but now its share of demand has dwindled to below 6 percent. Plywood and pulpwood, which were hardly measurable at the turn of the century, have picked up fuelwood's loss and now constitute 9 percent and 31 percent respectively of apparent consumption. Miscellaneous forest products[2] have declined in

importance until they now make up only about 4 percent of consumption. It seems evident that increases in the use of some forest products will come at the expense of others, thus tending to restrain the net increase in demand. With very little volume left to squeeze out of fuelwood and miscellaneous forest products, it appears that lumber will suffer relatively from the expected expansion of plywood and pulpwood. Some regions and states will benefit more than others because of their proximity to markets, the condition of their forest land, or other related characteristics.

The rate of increase in Texas wood-products production should be greater than that of the country as a whole or that of the South as a region. Since World War I Texas forests have received little pressure for production of wood crops. The demands of local industries were small in relation to the volume of wood available, the eastern markets were being supplied by timber closer at hand, and the westward thrust of industry did not begin until the fifties, when much of the industrial holdings were looked upon as future reserves. The increased demand on the forests in the fifties was cushioned by the upsurge in the use of residues, which bought more growing time for the forests of the state. Changes in the tempo of demand for forest land and forest products became evident in the sixties, with the beginning of the pine-plywood industry, the great expansion of the pulp and paper industry, and the influx of large, nationally oriented wood-products corporations.

Texas has a big stake in the products of her forests. Wood-using industries add more than $750 million to the state's economy each year, give employment to more than 40,000 people, and have invested more than $0.5 billion in plant and equipment and another $0.5 billion in land. According to a 1965 survey conducted by the Texas Forest Service[3] the industry is composed of:

141 pineywoods sawmills
46 chipping plants
45 wood-treating plants

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[1] Apparent consumption is domestic production plus or minus the difference between imports and exports.

[2] Miscellaneous forest products include cooperage logs, poles and piling, fence posts, hewn ties, round mine timbers, box bolts, excelsior bolts, chemical wood, shingle bolts, and miscellaneous items.

[3] H. B. Sorenson and W. A. Smith, "Texas Wood—A Surging Industry," *Texas Agricultural Progress*, Vol. 12, No. 3 (March 1966), p. 4.

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23   post- and pole-processing plants
 9   building-felt mills
 8   charcoal plants
 5   container-veneer plants
 5   hardwood-plywood plants
 5   paper mills
 3   pine-plywood plants
 2   cooperage plants
 2   particleboard plants
 1   fiberboard plants
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Figure 1
APPARENT CONSUMPTION OF TIMBER PRODUCTS
By Volume

SOURCE: U.S. Forest Service, Demand and Price Situation for Forest Products.

Figure 2
APPARENT CONSUMPTION OF TIMBER PRODUCTS
By Percentage

SOURCE: U.S. Forest Service, Demand and Price Situation for Forest Products.
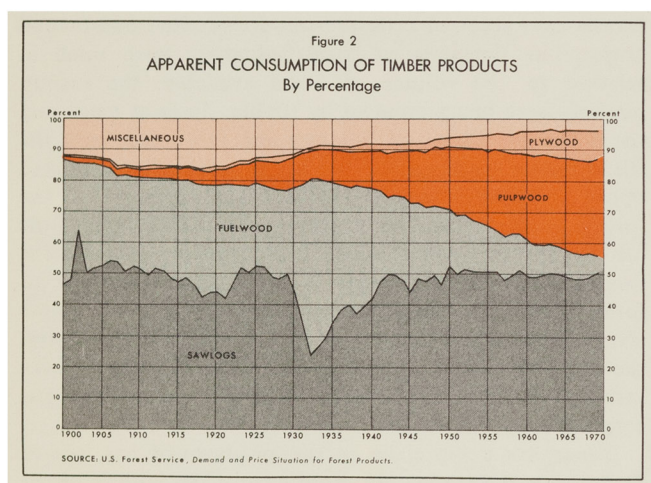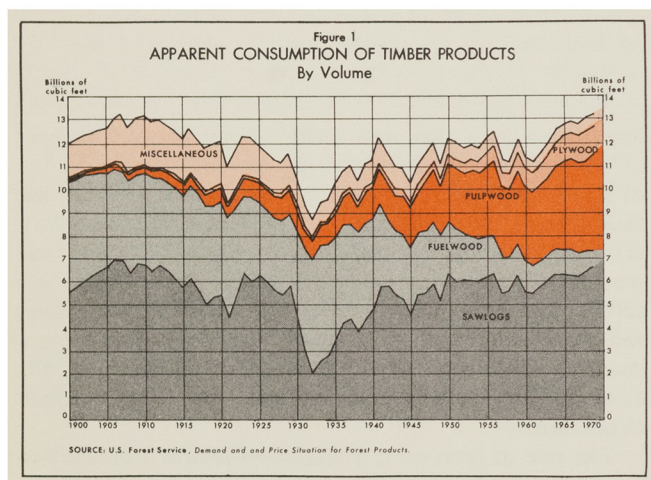
In addition, there are 500 furniture and fixture plants, 125 paper-converting establishments, and over 700 miscellaneous small industries which use wood as a raw material.[4]

The lumber industry, which has been the mainstay of the forest-products industry in Texas since the turn of the century, has been dwindling in importance. From a peak production of 2,197,233,000 board feet in 1907 it has declined to an average of less than 1 billion board feet during the sixties.

In 1909, 799 sawmills were operating in Texas, but by 1968 this number had dropped to fewer than 160.

Nationally the per capita use of lumber dropped from 526 board feet in 1906 to a low of 102 board feet in 1932. From 1932 to 1950 it steadily climbed back to 269 board feet, but has been declining ever since to an estimated 1969 figure of 211 board feet. The increase in population has not been sufficient to offset the drop in per capita use. Much of the decline in lumber usage has been associated with replacement by substitute materials, some forest-based, like plywood and particleboard, and some nonforest-based, such as steel and cement. Also contributing to the decline in the use of lumber are changes being made in building methods. Lumber has been strongly dependent upon residential housing. In 1962 new residential construction was the most important market for lumber, making up about 38 percent of total use.[5] The amount of lumber needed for future demand, however, will depend upon the type of dwellings being built. Some types of residential construction require larger quantities of lumber than others. In 1962 the U.S. Forest Service estimated that one- and two-family units required 11,190 board feet of lumber per dwelling on the average, while multifamily units averaged 4,500 board feet and mobile homes 1,800 board feet.[6] In recent years the trend has been away from one- and two-family homes toward multifamily dwellings and mobile homes. In 1962 multifamily units constituted 29 percent of residential construction. By the first half of 1969, however, this proportion had increased to 45 percent. Many reasons explain the swing toward multifamily units: rising land costs in urban areas often make the investment in land too great for the construction of single-family residences, the cost of apartment renting has been rising less than the cost of home ownership, and the increased difficulties encountered in commuting have been causing many people to live in city apartments, offsetting the higher rental cost by elimination of commuting. The increase in older-age groups is also leading to more apartment living, since they cherish their freedom of movement, have little need for large quarters, and dislike house and yard maintenance. Mobile homes have made an even more dramatic impact upon the housing industry and thereby upon the lumber industry. In 1969 mobile homes accounted for 92 percent of the sales of all housing units under $15,000. An estimated total of 428,000 mobile homes were sold that year. The popularity of mobile homes can be attributed to their low cost in relation to a single-family home, their ease and simplicity of financing, and the deficit of desirable housing of other types in price ranges which low or medium-income families can afford. Young married couples buy almost half of all mobile homes sold. Mobile homes have special appeal to this group because they cannot afford a single-family house, own little or no furniture, do

4 Information compiled by the author.

5 Dwight Hair and Alice H. Ulrich, *The Demand and Price Situation for Forest Products, 1964* (Forest Service, U.S. Department of Agriculture, Miscellaneous Publication No. 983, 1965), p. 6.

6 *Timber Trends in the United States, 1965* (Forest Service, U.S. Department of Agriculture, Forest Resource Report No. 17, February 1965), p. 19. All forest-resource data used, unless otherwise specified, should be credited to the U.S. Forest Service.

not want time taken up with housework, or have limited need for space and like the compactness.

These trends in housing demands will tend to moderate the demand for lumber, but should strengthen the demand for other wood products, such as plywood, particleboard, and composition board. Most of the large-scale replacement opportunities have already been completed, and this, together with the release of pent-up demands for housing in the seventies, will strengthen the position of lumber in the marketplace. The remaining permanent mills should strengthen their economic position, while the smaller, portable mills without debarking and chipping facilities will disappear from the scene. Lumber production in the seventies should stabilize at about 1 billion board feet annually. The sixties also witnessed in Texas the addition of multiproduct, nationally oriented corporations, such as Owens-Illinois, in Orange, Jasper, and Keltys; International Paper Company, in Nacogdoches; Georgia-Pacific, in New Waverly; and U.S. Plywood, in Diboll and Camden. These companies, plus some progressive local organizations, brought a more competent level of forest management to the state, with results which will become more evident in the decade to follow.

Softwood plywood production came to the South in December 1963 and tended to crowd into the West Gulf region, since this area had the most suitable timber supply. Until this time the industry had been concentrated in the Northwest, where large, high-quality timber could still be found in abundance. With the development of high-speed lathes capable of operating on smaller-diameter, woods-run logs and with breakthroughs in glueing techniques the industry headed south. Since its beginning in December 1963 it has grown at a rapid rate and now accounts for almost 20 percent of national production.

Figure 3
TEXAS LUMBER PRODUCTION

SOURCE: Texas Forest Service.
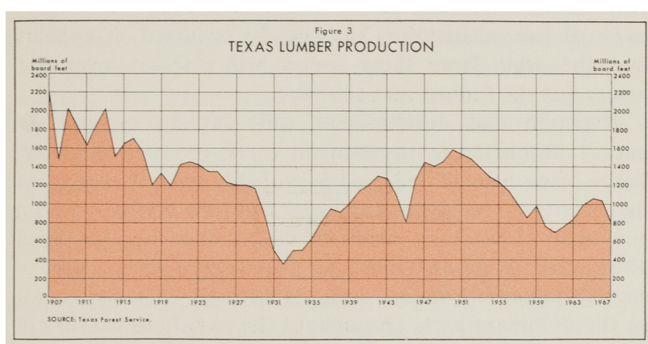
Many factors favor the South over the West for future expansion: the way in which the industry developed favored consolidation of many mills under large corporations with well-established distribution channels and competent administrative management; the more favorable shipping costs encouraged growth to the southeastern and southcentral markets, which provide approximately 30 percent of the nation's population, lower wage scales, lower fuel costs, and lower mill-construction costs. Texas should be a leader in future plywood expansion in the South. Between 1955 and 1965, according to the U.S. Forest Service study of timber trends, Texas softwood volume rose

40 percent. In 1955 trees above fifteen inches in diameter totaled about 1.1 billion cubic feet, or 24 percent of the softwood inventory. In 1965 trees of these sizes made up 29 percent, or 1.8 billion cubic feet. These are the sizes of trees needed by the Southern Pine plywood industry, which makes Texas the logical location for the next jump in softwood-plywood production. Texas has three pine-plywood plants operating, with an annual capacity of around 210 million square feet. An additional three mills, representing an investment of over $11 million, are under construction. By 1971, when the current construction is completed, over 1,200 employees will be working in softwood plants and capacity should reach 550 million square feet annually. New uses for plywood in shipping, manufacturing, and construction plus completely new products developed by the combination of plywood with plastics, aluminum, and paper will open up entirely new fields in the seventies.

Texas pulp and paper production has been steadily increasing from a 1950 capacity of 970 tons per day to a 1968 figure of 5,500 tons per day, or an increase of almost six times in a period of less than twenty years.[7] Pulpwood production in Texas has likewise been increasing at a rapid rate, having quadrupled since World War II. Almost half of the increase has been brought about by the use of hardwoods and residues which were formerly considered waste material from the production of lumber.

The impact of residue use on the raw-material needs of the pulp and paper industry nationwide can be seen from the accompanying graph.

Figure 4
TEXAS PULPWOOD PRODUCTION

RESIDUES
HARDWOOD
PINE

SOURCE: U.S. Forest Service, Southern Pulpwood Production.
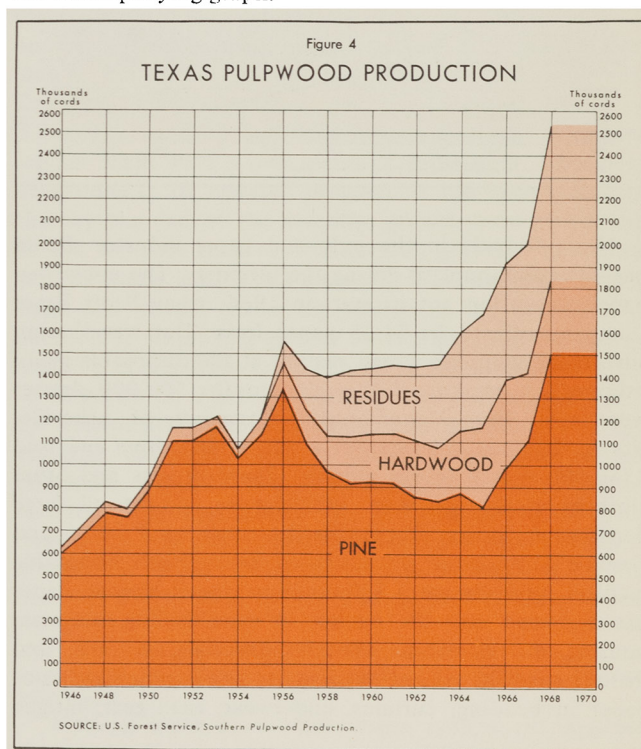
[7] R. C. Beltz, *Southern Pulpwood Production, 1968* (Forest Service, U.S. Department of Agriculture, Forest Service Resource Bulletin, SO-18, 1969), p. 21.

The nationwide production of pulp chips from residues in 1969 amounted to 18,500,000 cords. Texas forests are growing at the rate of 0.6 cords per acre annually. This means that the use of chips preserved from cutting the equivalent of the growth on over 30 million acres of forest land. Stated another way, it is the equivalent of clearcutting almost 3 million acres of Texas timberland. During the past three years Texas has been in the forefront in appropriation of expansion funds for the pulp and paper industry.[8] The raw-material outlook for the industry is excellent. Softwood growing-stock volume has increased 40 percent during the last decade and 55 percent of it is in trees six to twelve inches in diameter, which are highly suitable for intensive management. Hardwood growing stock over the last decade has decreased slightly, but a considerable volume of sound wood is available in rough and rotten hardwood which was not tallied. According to the U.S. Forest Service annual growth exceeds annual drain by 202.3 million cubic feet. The wood fiber available is greatly in excess of the current demand and should provide all that is needed for the expansion plans of the next ten years.

New products in the pulp and paper industry should

Figure 5
PULPWOOD CONSUMPTION IN THE UNITED STATES

SOURCE: U.S. Forest Service, Demand and Price Situation for Forest Products.
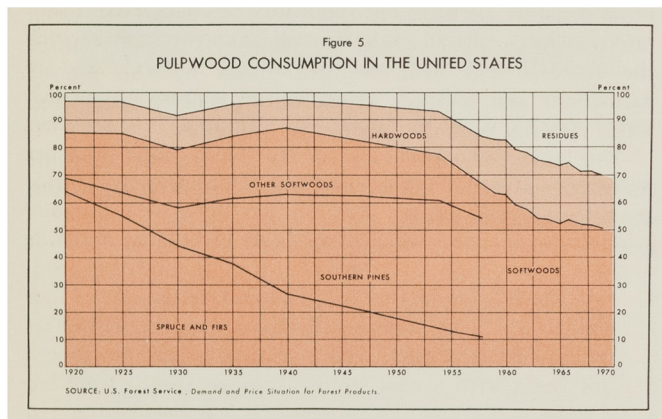
New products in the pulp and paper industry should become commonplace during the seventies. The nonwoven paper revolution got its start in 1966, when Scott Paper Company offered its $1.25 paper dress "Duraweve" as an advertising gimmick aimed mainly at the disposable medical-products market. Within six months 500,000 dresses were sold. Mars Manufacturing Company, of Asheville, North Carolina, brought out a paper shift dress and sold $750,000 worth in six months. Paper dresses and other clothing items are now available in almost all large department stores. Paper diapers such as Proctor and Gamble's "Pampers" are accepted items. Paper disposable medical products are a $300-million annual market. Paper has exploded into the market of mass feeding and mass housing in restaurants, hotels, hospitals, schools, and institutions. The Armed Services are researching the use of paper in bedding, curtains, underwear, field gear, fatigue

uniforms, and assorted medical products. You can buy paper garbage bags, paper furniture (widely used by the Bureau of the Census), paper houses, and paper with a life expectancy of four hundred years. The overall market for paper disposables in 1969 exceeded a billion dollars. The seventies should witness an explosion in new paper products. As a result of increased operating rates, the higher selling price of paper, the improved rate of worker productivity, and the favorable rate of capital investment the capacity of Texas mills should increase to over 8,500 tons a day during the seventies. The industry should also achieve added stability as a result of new sources of earnings based on land development, mineral utilization, real-estate ventures, and increased merger activity.

Associated with the pulping expansion has been a strong trend toward a greater use of residues for pulping. From a negligible amount in 1955 residue use has grown to a 1968 production of 701,400 cords, which made up almost 28 percent of the pulpwood production for that year.[9] Despite the fact that most of the large producers of residues are already selling all they can produce and lumber production is not expected to increase markedly it is well within reason to anticipate an annual residue production of 1 million cords by 1980. Increased plywood production, changes in utilization standards, and greater salvage of chippable material currently being left in the woods will make larger contributions to residue production. Because of the increased installation of continuous digesters huge quantities of sawdust will also become economically usable for pulping.

Miscellaneous wood products, such as poles, piling, posts, and fuelwood, have been declining rather steadily over the years as a result of their susceptibility of replacement by substitute materials. They now constitute only about 4 percent of the timber cut each year. Since most of the substitution has already occurred, it appears that the drain from these souces will stabilize around 5 percent of the timber cut each year.

Research and development will play an increasingly important role in the future of the forest-products industry. It has often been stated, and is probably true, that most of the profits in the pulp and paper industry ten years from now will come from products which have not yet been discovered. While an increasing population plays a part in market demand, evidence suggests strongly that it may not be the dominant part. Throughout the twentieth century in America the great expansion of the pulp and paper industry has been mostly the result of an increased use of paper by each individual rather than the result of an increase in population. During the period from 1925 to 1968 population growth accounted for only 18 percent of the increased consumption with the remaining 82 percent attributed to the increase in per capita use. Choosing other time periods will yield results of different magnitude, but in almost every case population expansion will be found to be the minor element in the growth of this industry. In the seventies research will be essential for continued growth,

[8] F. Gantzhorn, "Texas, Alabama, Louisiana—A Billion-Dollar Triumvirate," *Pulp and Paper,* November 27, 1967, p. 46.

[9] R. C. Beltz, *Southern Pulpwood Production, 1968,* p. 6.

new-product development will become an integral part of any research program, advertising will take on added importance, and merchandizing will require greater attention. The policies developed in the seventies must give more consideration to per capita use and place less emphasis upon an anticipated population explosion. Lumber is a good example to examine. In the short period from 1950 to 1960 lumber lost 26 percent of its market because of a decreasing per capita use. About 53 percent of the loss was offset by consumption from an increasing population, but even the high population growth of that period was not sufficient to make up the loss arising from a smaller use of lumber by each individual. Without more research, better advertising, new products, and enlightened merchandizing the population growth in the decade ahead may not be great enough to offset the losses to substitutes and changing technologies.

All of the rosy predictions enumerated above are also dependent upon a strong upsurge in management policies. Business as usual will not be sufficient to meet the needs of the seventies. The problems from an industrial standpoint are twofold: more wood fiber must be grown; the wood fiber produced must be available to industry.

For all practical purposes, forestry to support these industries must be practiced within the Piney Woods of East Texas, which extend along the eastern edge of the state in a strip from 80 to 120 miles in width from the Red River on the north to the prairies of the Gulf on the south. They comprise an area larger than the states of Massachusetts and Vermont combined and their daily growth is sufficient to build 5,000 average single-family homes. Forests cover 61 percent of the land area of East Texas, almost all of which is available for timber growing. The total acreage of commercial forest land today (11.5 million acres) is about the same as it was a decade ago.

In recent decades the loss of commercial forest land to expanding cities, highways, water impoundments, and airports has been offset by the reversion of abandoned agricultural land to forest use. Abandonment has slowed down, however, and since little more agricultural reversion is likely to occur more wood must be grown on less land. This is true for Texas as well as for most of the other areas of the East.

To the outright loss of timber-growing land must be added the loss due to economic unavailability. As cities and towns expand, the forested areas surrounding them take on new value for real-estate development and their value increases accordingly. The consequent increase in tax assessments ultimately makes the practice of forestry uneconomical. A similar phenomenon occurs in areas in the vicinity of large water impoundments. Not only is the submerged area lost to timber growing, but owners in the surrounding areas begin to view their holdings as sources of income from recreation, which is generally considered incompatible with timber harvesting.

Texas is not making full use of its forest land. In fact, it is not growing more than one third of its potential. The average growth rate in East Texas is 0.6 cords per acre annually after deducting for mortality.[10] A reasonable goal would be an average growth rate of 1 cord per acre annually by 1980 for the East Texas area. Achievement would require better fire, insect, and disease protection, the use of genetically superior tree stock for planting, a realistic thinning program, the use of fertilizers on the better sites, and an enlightened utilization program aimed at recovering more of the fiber which is grown and harvested. Mortality from uncontrolled fires accounts for about 100 million cubic feet of wood annually. This loss combined with other losses from fire—a slowing down of the growth rate of trees that survive, the ill effect upon wildlife production, and the deteriorating influence upon the soil, the air, and the water affords a more realistic estimate of the loss. Currently the cost-benefit ratio of fire protection is estimated at 1:4, which should justify added expenditures in the seventies. As long as the cost of control plus the value of the loss is less than the value of the material gained it will pay to protect the forest from fires. More intensive control of insect and disease losses also can add to the wood available for use. The timber-trends study estimated annual mortality from insects at 95 million cubic feet and from disease at 58 million cubic feet.[11] The addition of associated losses would greatly enlarge these figures. Unknown causes which make up more than half of all mortality losses are principally made up of crowding and suppression, which could be greatly reduced by thinning and other management techniques. The production of more wood per acre would result from a wider use of genetically superior planting stock. Genetic research has developed progeny from superior trees, which have been planted in orchards and are now producing large quantities of improved seed. One of the leaders in this program is International Paper Company, which has announced that it is going to harvest 3.8 million acres of their land in nine Southern states and replant them with a new strain of super-trees it has been developing in its research program. It has been estimated that by the end of the seventies growth from plantations should be more than one tenth of all growth.[12] Fertilization of forest land is just emerging from the experimental stage and should make big strides in the seventies. In addition to improving growth by manipulating the genetic make-up of our trees and by changing the species which are to be grown on a particular site, we can also increase yields by manipulating the site itself. The addition of a few essential elements, such as nitrogen, phosphorus, and potassium, which are commonly deficient in land which has reverted from agricultural use, will normally yield good results. As the economics of fertilization becomes better known the practice should become widespread on the better sites. The need for more wood from less land should

[10] H. D. Sternitzke, *East Texas Pineywoods* (Forest Service, U.S. Department of Agriculture, Forest Service Resource Bulletin SO-10, 1967), p. 7.

[11] *Timber Trends in the United States, 1965,* p. 182, Appendix Table 35.

[12] *The South's Third Forest,* A Report of the Southern Forest Resource Analysis committee, 1969, p. 17.

hasten the use of this silvicultural tool. All of this know-how is already available, but until now the need has not been sufficiently acute to stimulate foresters into concerted action. This intensive program should become reality in the seventies.

The wood fiber that is produced must be available to industry. This need will be one of the most acute forest-industry problems to be solved in the seventies. Conflicting use desires and changing ownership patterns will make wood procurement a test of managerial skill and resourcefulness. The demand for outdoor recreation has been growing rapidly as a result of the trend to greater affluence, more leisure time, longer vacations, shorter work weeks, greater retirement income, more dependable means of travel, and better facilities. As the urban population grows, the pace of day-to-day activities increases and living becomes more congested, pressure is generated to get away from it all, to relax in the woods, or to forget troubles by hunting, fishing, or picnicking.

The public lands in Texas are feeling this pressure and many areas have been set aside for recreational use only. The remaining public acreage, including that retained in multiple use, is experiencing policy modification which will cause an estimated 10- to 13-percent drop in its productive capacity. These same pressures are beginning to be felt by private forest holdings in Texas and the eventual impact may be substantial. Some 22 million acres of pulp-and-paper-company forest in the South are now open to hunting and fishing. Many more millions of acres of private woodlands in other industrial, farm, and miscellaneous ownerships are also open to the public. The number of acres of forest land set aside for single-purpose use, such as recreation, will increase in the seventies as a result of the Supreme Court's "one person-one vote" ruling. City residents will have a widening influence on public policies and if they desire public land to be set aside for recreational use they now have the vote with which to obtain their wish. Similar restrictions on harvesting of timber crops will result from the urgent need for water conservation and environmental planning. The time has come when forestry decisions must be based upon total environmental management instead of only sound silvicultural techniques.

Pulp mills in the South will not be able to obtain sufficient wood from their own holdings to meet their needs in the foreseeable future. Mill requirements have been expanding more rapidly than land acquisition and development, a situation which will require the purchase of more wood from outside sources. In 1968 pulp companies in the South were growing 45 percent of their requirements, but were actually obtaining only 25 to 30 percent of their mill requirements from their own lands. It is estimated that they will be able to obtain about 38 percent of their requirements from their own lands by 1980, still leaving a large amount to be obtained on the open market.

The economic and social conditions of the past two decades have influenced the ownership pattern of forest land in the South. In 1952 farm ownership in the South accounted for 46.7 percent of the commercial forest land, but by 1962 only 29.2 percent was farmer-owned. Miscel-

laneous private ownership in 1952 accounted for 27.4 percent of the acerage but by 1962 it had risen to 33.8 percent. During this time Texas followed the trend of the South. Following 1962, however, the forest industry in Texas began a serious program of land acquisition which temporarily slowed down the trend toward miscellaneous private ownership of forest lands. It is anticipated that the seventies will witness an acceleration in the rate of acquisition by miscellaneous private owners and a slowdown in fee simple acquisition by forest industries.

The characteristics of this new ownership class are different from those of former owners. In 1967 a study was conducted in East Texas covering the sales of forest land made during 1965 and 1966.[13] Information obtained by questionnaires from both the buyer and the seller of each tract provided interesting information. The educational level attained by the new owners was found to be significantly higher than that of the sellers. Educationally, at least, it may be assumed that the new owners are better equipped to evaluate alternative users of their land, tend to have a better knowledge of its true value, and should be more prone to listen to management advice.

The income level of the buyers also was found to be higher than that of the sellers. While 61 percent of the sellers had incomes exceeding $6,000, the buyers' incomes exceeded that figure in 97 percent of the cases. The new owners are not under the same financial pressure to sell their timber. This more affluent group includes a greater percentage of absentee owners, who normally will not be as concerned about property-tax increases as are local residents. Such nonresident ownership tends to create an atmosphere conducive to higher taxes, which could add to the cost of growing timber on all private lands.

The reasons given for ownership also varied. The sellers generally had owned the land for a considerable period of time and had acquired it by inheritance or as an adjunct to their main occupation. To many of them the woodlot was an occasional source of ready cash for the purchase of a washing machine or a car, or for an addition to the house. The new owners, in most cases, purchased the land not as a source of primary income, but for other reasons, such as esthetics, the joy of ownership, a tax write-off, or for other objectives which were not related to timber production. Current income from the land was often not sought or desired.

How will these changes affect management in the seventies? Over 65 percent of the commercial forest land in East Texas is owned by private landowners, many of whom know little about forestry, have no interest in selling forest crops, and feel that timber harvesting and their main reason for owning the land are not compatible. In order to obtain the timber on these holdings industry may have to control their logging more closely, make lighter and more frequent cuts, lop the tops so that the logging residue is less visible and will deteriorate more rapidly, use smaller equipment so

[13]L. Levens, "An Analysis of Changes in Forest Land Use Intention in Southeast Texas," unpublished master's thesis, Stephen F. Austin State University, Nacogdoches, Texas, 1967.

that damage to the residual stand will be kept to a minimum, reinstitute the practice of having Conservation Foresters who work directly with the landowner and inform the landowner of the income-tax implications of his cutting. All of these things will increase the cost of the wood to the company, but it seems the only choice is between higher-cost wood or no wood.

For many years foresters have dealt unsuccessfully with the problem of the small woodlot owner. He is constantly pointed out as the main problem in producing the wood fiber deemed essential. Free advice has been heaped upon him, extension-services assistance has been widespread, governmental subsidies have been handed out, college programs in farm forestry have been made available, short courses, symposiums, seminars, demonstrations, farm forties, and innumerable other schemes have been tried and the problems still remain. The seventies will hopefully witness significant progress in handling these properties as industry finally decides that the only solution is industrial management of the lands for the small owner. Industry is well equipped for the job, having the trained personnel, the organization, and most of all, the need for the wood.

RADIO STATIONS
AIRING TEXAS BUSINESS REVIEW INTERVIEWS

Alpine – KVLF	Denison – KGCC	Odessa – KOYL
Amarillo – KIXZ	Fort Worth – WBAP	Odessa – KQIP
Austin – KNOW	Freeport – KBRZ	Pecos – KIUN
Austin – KOKE	Galveston – KGBC	San Angelo – KPEP
Austin – KVET	Gonzales – KCTI	San Antonio – KEEZ
Ballinger – KRUN	Henderson – KGRI	Sherman – KDSX
Big Spring – KBST	Henderson – KWRD	Shreveport – KEEL
Big Spring – KHEM	Houston – KILT	Stephenville – KSTV
Bowie – KBAN	Houston – KLEF	Texarkana – KATQ
Brownsville – KBOR	Houston – KODA	Tyler – KDOK
Brownwood – KBWD	Houston – KTHT (now KULF)	Uvalde – KVOU
Carrizo Springs – KBEN	Huntsville – KSAM	Victoria – KNAL
Conroe – KMCO	Kermit – KERB	Victoria – KVIC
Cuero – KCFH	La Grange – KVLG	Waco – KAWA
Dalhart – KXIT	Lampasas – KCYL	Weatherford – KZEE
Dallas – KBOX	Lufkin – KRBA	Weslaco – KRGV
Dallas – KRLD	Monahans – KVKM	Wichita Falls – KWFT
	Navasota – KWBC	

TEXAS CONSTRUCTION

(Concluded)

Construction remains at the mercy of forces ranging, at one extreme, from the quite deliberate adjustments to the mechanism controlling interest rates to the wholly mindless occurrence of natural catastrophes at the other extreme. The downward adjustment of prime interest rates in late September, like several other recent tendencies in the state and national economies, is too recent and too tentative to be said to imply an early upswing in either residential building or urban construction generally.

Fiscal 1970 marked the first decline in the volume of securities certified for sale by the State Securities Commissioner since 1963. The decline came as no surprise, since the market for securities during the year was extremely depressed. As a matter of fact, it is surprising that the volume remained above the $1-billion mark. While the decrease was expected, an analysis of the various components of the total reveals some major changes that were quite unexpected.

The data in Table 1 reveal that the total dollar volume of all types of securities offered for sale during 1970 decreased $330 million, a drop of 21.5 percent. Of the two types of securities approved for sale, original applications or renewal applications, renewals will ordinarily increase in volume at a more rapid rate during a depressed market than during a bull market. This trend prevailed during 1970, when renewals rose not only in dollar volume but relatively as well. In fact, the size of the relative increase was unusually large, for example, 33 percent of all applications in 1970 as compared to only 22 percent in fiscal 1969. Renewals resulting from all corporations except mutual investment companies increased 90.2 percent, while renewals from mutual investment companies increased only 16.5 percent. The increase for corporations other than mutual investment companies was not unusual, but the scant increase in applications by mutual investment companies was wholly unexpected, since as a general rule the volume of renewals in these organizations rises rapidly in a depressed market. The year 1969, when the market was depressed most of the time, illustrates this concept, since renewals in mutual investment companies increased that year 62.1 percent over renewals in 1968.

There is sufficient reason to believe that the worst is over insofar as the market is concerned. If this is true the relative importance of renewals should decrease again during 1971; however, because of the time lag between recovery in the general market and its effect upon renewal applications, we should not expect a major reversal in renewals. In other words, if the market continues to recover we should not see a decline in the relative status of renewals until the third or fourth quarter of 1971.

Total applications approved declined $393.4 million during 1970, a drop of 32.8 percent. An examination of the activity by quarters reveals that the decline in subsequent quarters was at an increasing rate except in the last quarter (Figure 1). For example, decreases of 5.2 percent, 14.7 percent, and 10.7 percent occurred in the second, third, and fourth quarters--the activity of each quarter declining in comparison to the activity of the preceding quarter. It may be significant that the decrease in the fourth quarter was not as great, in volume or in percentage, as that of the third quarter. While it is too early to make a prediction, it is believed that the downward movement has been reversed and that improvement should develop during the rest of 1970 and 1971.

An examination of the various components of the total reveals that original applications approved for sale (by Texas companies as well as foreign companies) experienced the greatest relative decline, accounting for $331.2 million, or 84 percent of the total. It is also interesting to note that 59 percent of this decrease came in the second half of the year; but since the decrease in the fourth quarter was only slightly less than that of the third quarter, it appears that companies are beginning to go back into the market for funds.

Table 1

SECURITIES REGISTRATION IN TEXAS, 1969-1970

(Millions of dollars)

	First half		Percent change	Second half		Percent change	Full year		Percent change
	1968-1969	1969-1970		1968-1969	1969-1970		1968-1969	1969-1970	
Original applications									
Mutual investment companies	203.3	215.7	6.1	217.5	142.9	− 34.3	420.8	358.6	− 14.8
Other corporate securities									
Texas companies	149.2	71.7	− 51.9	161.8	72.5	− 55.2	310.9	144.2	− 53.6
Other companies	222.0	163.0	− 26.5	244.2	138.6	− 43.2	466.2	301.6	− 35.3
Subtotal	371.2	234.8	− 36.7	406.0	211.1	− 48.0	777.1	445.9	− 42.6
Total original applications	574.5	450.5	− 21.6	623.5	354.0	− 43.2	1197.9	804.5	− 32.8
Renewal applications									
Mutual investment companies	176.4	190.1	7.7	146.1	185.7	14.8	322.5	375.8	16.5
Other corporate securities									
Texas companies	1.5	1.0	− 33.3	5.4	8.3	53.7	6.9	9.3	34.8
Other companies	2.1	2.6	23.8	2.2	9.4	327.3	4.3	12.0	179.0
Subtotal	3.6	3.6	0	7.6	17.7	132.9	11.2	21.3	90.2
Total renewals	180.0	193.7	7.6	153.7	203.4	32.3	33.7	397.1	19.0
GRAND TOTAL	754.4	644.2		777.2	557.4	− 28.3	1531.6	1201.6	− 21.5

The data indicate that approved applications of Texas companies, which fell 53.6 percent, decreased substantially more than those from other corporations, which declined only 35.3 percent. One explanation of this difference is that the stock of smaller companies, such as most of the Texas corporations, is not as acceptable generally as that of larger corporations. As a consequence, small corporations are more hesitant about going to the market. In all likelihood, the volume of stock submitted for approval by Texas companies will be greater than that of other corporations once the market rights itself.

A paradox seems to exist in the relationship between the volume of securities approved for sale and the number of licenses issued. That is to say, while volume was declining, licences increased 1,287 or 14 percent in 1970 as compared to 1969. It should be pointed out, however, that the increase in 1970 was approximately one half of that experienced in 1969.

The data in Table 4 reveal that the number, as well as the dollar value, of withdrawals showed a sizable growth during 1970, reaching their highest level of the past ten years. While the reason why each request was withdrawn cannot be ascertained, it can be assumed that the depressed market played a major role. Rather than continue to offer

the securities at depressed prices, companies presumably withdrew them, with the idea that they could be reoffered at a better price at a later date.

It is important to note that general market conditions govern the characteristics of the securities market in Texas. Though the volume of securities offered for sale in Texas is off, the Texas market continues to be relatively strong. In spite of definite evidence that the volume of securities approved for sale will increase during 1971, we should not expect a major recovery until the last half of fiscal 1971.

Table 4

NUMBER AND DOLLAR VOLUME
OF APPLICATIONS WITHDRAWN
FISCAL 1969-1970

	1969 Withdrawals		1970 Withdrawals	
	Number	Amount	Number	Amount
Amendment	0	0	0	0
Coordination	142	$62,386,599	293	$169,999,571
Notification	0	0	2	825,000
Qualification	23	5,901,180	26	7,778,213
Renewals	1	271,450	3	241,094
	166	$68,559,229	324	$178,843,878

Table 2

SECURITIES REGISTRATION IN TEXAS
RENEWALS, FISCAL YEARS 1960-1970

Years	All applications (Millions of dollars)	Renewals (Millions of dollars)	Renewals as percent of total
1960	264.1	70.1	26.5
1961	351.6	83.1	23.6
1962	357.3	100.5	28.1
1963	249.3	97.9	39.3
1964	321.1	104.7	32.6
1965	385.1	101.8	26.4
1966	539.9	146.8	27.2
1967	624.2	162.0	26.0
1968	1,087.7	214.3	19.7
1969	1,531.6	333.7	21.8
1970	1,201.6	397.1	33.0

Table 3

DOLLAR VALUE AND PERCENT INCREASE
OF ALL APPLICATIONS AND ORIGINAL APPLICATIONS
AUTHORIZED FOR SALE DURING FISCAL 1960-1970

(Millions of dollars)

Year	Total applications		Original applications	
	Dollar value	Percent increase over previous year	Dollar value	Percent increase over previous year
1970	1,201.6	− 21.5	804.5	− 32.8
1969	1,531.6	40.8	1,197.9	37.2
1968	1,087.7	74.3	873.4	90.0
1967	642.2	15.6	462.2	17.6
1966	540.1	40.2	393.1	38.8
1965	385.1	19.9	283.3	30.9
1964	321.1	28.8	216.4	42.9
1963	249.3	− 30.2	151.4	− 41.0
1962	357.3	1.6	256.8	− 4.4
1961	351.6	33.1	268.5	38.4
1960	264.1		194.0	

Figure 1
SECURITIES REGISTRATION IN TEXAS
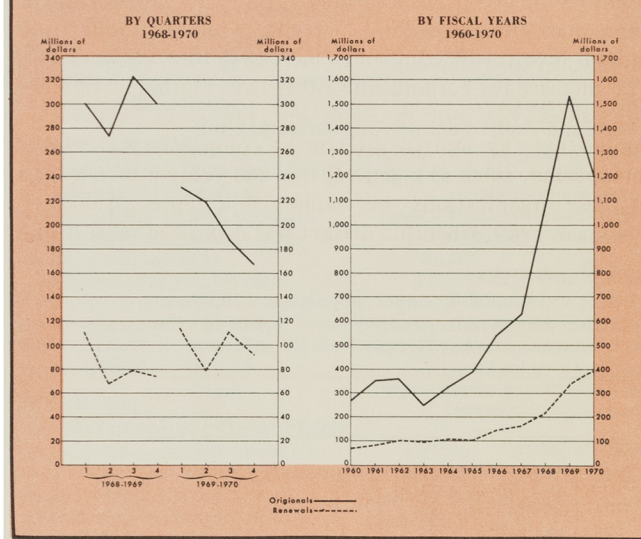
Correction of Errata

The *Texas Business Review* regrets two errors which appeared in the August 1970 issue, p. 200:

In the last stub in both divisions (senior and junior colleges) of the table relative to "Texas Biennial Legislative Appropriations" for higher education the first year in the biennium should be 1969 instead of 1960.

In the table on "Expenditures for Texas Public Schools" the footnote on projections should have included the phrase, "using current trends."

LOCAL BUSINESS CONDITIONS

Statistical data compiled by Mildred Anderson, statistical associate, Constance Cooledge and Glenda Riley, statistical assistants, and Kay Davis and Lydia Gorena, statistical technicians.

The indicators of local business conditions in Texas which are included in this section are statistics on bank debits, urban building permits, and employment. The data are reported by metropolitan areas in the first table below and by municipalities within counties in the second table.

Standard metropolitan statistical areas (SMSA's) in Texas are defined by county lines; in the first table the counties included in the area are listed under each SMSA. Since the Bryan-College Station area and the Longview-Kilgore-Gladewater area are functioning as significant metropolitan complexes in their regions, although not officially designated as SMSA's by the Bureau of the Census, data for these areas have been included in the table for SMSA's. In both tables the populations shown for the SMSA's and for the counties are the preliminary population counts of the 1970 census. In the second table the population values for individual municipalities are also preliminary counts of the 1970 census, unless otherwise indicated. Population estimates made for municipalities in noncensus years are commonly based on utility connections, and these estimates are subject to the errors inherent in a process dependent on base ratios derived in 1960.

The values of urban building permits have been collected from participating municipal authorities by the Bureau of Business Research in cooperation with the Bureau of the Census of the U.S. Department of Commerce. Inasmuch as building permits are not required by county authorities, it must be emphasized that the reported permits reflect construction intentions only in incorporated places. Permits are reported for residential and nonresidential building only, and do not include public-works projects such as roadways, waterways, or reservoirs; nor do they include construction let under federal contracts.

The values of bank debits for all SMSA's and for most central cities of the SMSA's have been collected by the Federal Reserve Bank of Dallas. Bank debits for the remaining municipalities have been collected from cooperating banks by the Bureau of Business Research.

Employment estimates are compiled by the Texas Employment Commission in cooperation with the Bureau of Labor Statistics of the U.S. Department of Labor.

INDICATORS OF LOCAL BUSINESS CONDITIONS
FOR STANDARD METROPOLITAN STATISTICAL AREAS
AUGUST 1970

Reported area and indicator	Aug 1970	Percent change from July 1970	Percent change from Aug 1969
ABILENE SMSA			
Jones and Taylor Counties; population 112,168			
Urban building permits (dollars)	138,437	− 95	− 56
Bank debits, seas. adj. ($1,000)	181,985	2	10
Nonfarm employment	41,350	**	2
Manufacturing employment	5,510	1	5
Unemployed (percent)	4.1	11	46
AMARILLO SMSA			
Potter and Randall Counties; population 140,876			
Urban building permits (dollars)	1,580,550	33	− 61
Bank debits, seas. adj. ($1,000)	476,837	− 3	5
Nonfarm employment	63,400	**	4
Manufacturing employment	8,360	**	34
Unemployed (percent)	3.4	− 17	− 11
AUSTIN SMSA			
Travis County; population 289,490			
Urban building permits (dollars)	14,296,741	− 13	123
Bank debits, seas. adj. ($1,000)	736,949	5	5
Nonfarm employment	123,500	1	3
Manufacturing employment	12,160	1	11
Unemployed (percent)	2.6	− 13	53
BEAUMONT-PORT ARTHUR-ORANGE SMSA			
Jefferson and Orange Counties; population 313,099			
Urban building permits (dollars)	1,175,531	− 34	− 31
Bank debits, seas. adj. ($1,000)	495,977	− 4	3
Nonfarm employment	119,400	1	**
Manufacturing employment	37,600	1	**
Unemployed (percent)	4.6	− 6	39
BROWNSVILLE-HARLINGEN-SAN BENITO SMSA			
Cameron County; population 137,506			
Urban building permits (dollars)	1,717,062	194	122
Bank debits, seas. adj. ($1,000)	103,128	− 39	9
Nonfarm employment	39,750	3	**
Manufacturing employment	6,100	− 3	− 5
Unemployed (percent)	6.8	**	24
BRYAN-COLLEGE STATION METROPOLITAN AREA			
Brazos County; population 56,079			
Urban building permits (dollars)	897,382	..	60
Bank debits ($1,000)	77,811	− 14	10
(Monthly employment reports are not available for the Bryan-College Station Metropolitan Area.)			
CORPUS CHRISTI SMSA			
Nueces and San Patricio Counties; population 278,410			
Urban building permits (dollars)	1,723,240	− 27	− 11
Bank debits, seas. adj. ($1,000)	383,339	− 5	5
Nonfarm employment	98,200	7	7
Manufacturing employment	11,840	− 1	2
Unemployed (percent)	6.6	32	61
DALLAS SMSA			
Collin, Dallas, Denton, Ellis, Kaufman, and Rockwall Counties; population 1,539,350			
Urban building permits (dollars)	37,428,401	− 31	− 15
Bank debits, seas. adj. ($1,000)	9,792,136	− 10	12
Nonfarm employment	723,200	− 1	6
Manufacturing employment	156,825	− 3	− 11
Unemployed (percent)	3.2	− 6	78
EL PASO SMSA			
El Paso County; population 347,103			
Urban building permits (dollars)	4,695,039	− 28	2
Bank debits, seas. adj. ($1,000)	619,825	1	15
Nonfarm employment	117,000	**	1
Manufacturing employment	24,570	− 1	3
Unemployed (percent)	5.1	− 7	34
FORT WORTH SMSA			
Johnson and Tarrant Counties; population 757,105			
Urban building permits (dollars)	22,670,018	63	115
Bank debits, seas. adj. ($1,000)	1,887,064	4	10
Nonfarm employment	302,600	**	6
Manufacturing employment	90,300	− 1	− 2
Unemployed (percent)	3.7	− 18	61

Reported area and indicator	Aug 1970	Percent change from July 1970	Aug 1969
GALVESTON-TEXAS CITY SMSA			
Galveston County; population 165,669			
Urban building permits (dollars)	1,035,905	21	− 40
Bank debits, seas. adj. ($1,000)	225,977	− 2	5
Nonfarm employment	66,500	− 1	13
Manufacturing employment	12,100	− 1	7
Unemployed (percent)	4.6	− 12	− 6
HOUSTON SMSA			
Brazoria, Fort Bend, Harris, Liberty, and Montgomery Counties; population 1,957,688			
Urban building permits (dollars)	44,512,035	10	− 4
Bank debits, seas. adj. ($1,000)	8,546,943	− 4	11
Nonfarm employment	868,100	**	5
Manufaturing employment	147,000	**	2
Unemployed (percent)	2.7	− 10	29
LAREDO SMSA			
Webb County; population 69,024			
Urban building permits (dollars)	1,091,873	− 29	666
Bank debits, seas. adj. ($1,000)	82,877	3	22
Nonfarm employment	24,850	**	1
Manufacturing employment	1,550	**	15
Unemployed (percent)	8.7	− 6	34
LONGVIEW-KILGORE-GLADEWATER METROPOLITAN AREA			
Gregg County; population 73,510			
Urban building permits (dollars)	..	..	..
Bank debits ($1,000)	115,493	− 8	2
Nonfarm employment	35,100	− 1	**
Manufacturing employment	10,070	− 2	− 1
Unemployed (percent)	4.2	11	56

(Building permits and bank debits are included for those portions of Kilgore and Gladewater in Rusk County and Upshur County.)

Reported area and indicator	Aug 1970	Percent change from July 1970	Aug 1969
LUBBOCK SMSA			
Lubbock County; population 175,757			
Urban building permits(dollars)	7,171,085	109	324
Bank debits, seas. adj. ($1,000)	446,877	4	15
Nonfarm employment	62,100	1	− 3
Manufacturing employment	6,880	**	− 2
Unemployed (percent)	4.7	− 24	38
McALLEN-PHARR-EDINBURG SMSA			
Hidalgo County; population 172,469			
Urban building permits (dollars)	1,779,025	47	225
Bank debits, seas. adj. ($1,000)	118,678	− 18	11
Nonfarm employment	41,800	1	2
Manufacturing employment	3,730	− 13	− 7
Unemployed (percent)	6.5	− 8	3
MIDLAND SMSA			
Midland County; population 64,168			
Urban building permits (dollars)	325,750	− 37	− 55
Bank debits, seas. adj. ($1,000)	156,216	− 9	2
Nonfarm employment	61,600	**	− 1
Manufacturing employment	5,190	− 1	1
Unemployed (percent)	3.9	− 13	30

(Employment data are reported for the combined Midland and Odessa SMSA's since employment figures for Midland and Ector Counties, composing one labor-market area, are recorded in combined form by the Texas Employment Commission.)

** Absolute change is less than one half of 1 percent.
.. No data, or inadequate basis for reporting.

Reported area and indicator	Aug 1970	Percent change from July 1970	Aug 1969
ODESSA SMSA			
Ector County; population 90,132			
Urban building permits (dollars)	278,266	− 53	− 57
Bank debits, seas. adj. ($1,000)	136,453	8	1
Nonfarm employment	61,600	**	− 1
Manufacturing employment	5,190	− 1	1
Unemployed (percent)	3.9	− 13	30

(Employment data are reported for the combined Midland and Odessa SMSA's since employment figures for Midland and Ector Counties, composing one labor-market area, are recorded in combined form by the Texas Employment Commission.)

Reported area and indicator	Aug 1970	Percent change from July 1970	Aug 1969
SAN ANGELO SMSA			
Tom Green County; population 70,852			
Urban building permits (dollars)	242,888	− 90	− 71
Bank debits, seas. adj. ($1,000)	101,434	1	10
Nonfarm employment	23,950	1	1
Manufacturing employment	3,980	2	12
Unemployed (percent)	3.5	− 19	− 3
SAN ANTONIO SMSA			
Bexar and Guadalupe Counties; population 863,669			
Urban building permits (dollars)	10,925,778	31	48
Bank debits, seas. adj. ($1,000)	1,510,907	− 5	16
Nonfarm employment	290,200	**	2
Manufacturing employment	34,250	− 1	10
Unemployed (percent)	5.6	− 3	30
SHERMAN-DENISON SMSA			
Grayson County; population 80,847			
Urban building permits (dollars)	703,836	− 78	− 39
Bank debits, seas. adj. ($1,000)	87,801	− 9	3

(Monthly employment reports are not available for the Sherman-Denison SMSA.)

Reported area and indicator	Aug 1970	Percent change from July 1970	Aug 1969
TEXARKANA SMSA			
Bowie County, Texas and Miller County, Arkansas; population 100,000			
Urban building permits (dollars)	143,119	− 19	− 61
Bank debits, seas. adj. ($1,000)	118,878	**	− 2
Nonfarm employment	40,800	**	− 8
Manufacturing employment	10,670	**	− 29
Unemployed (percent)	7.1	− 5	115

(Since the Texarkana SMSA includes Bowie County in Texas and Miller County in Arkansas, all data, including population, refer to the two-county region.)

Reported area and indicator	Aug 1970	Percent change from July 1970	Aug 1969
TYLER SMSA			
Smith County; population 93,081			
Urban building permits (dollars)	687,702	− 66	− 88
Bank debits, seas. adj. ($1,000)	188,931	2	6
Nonfarm employment	40,700	**	7
Manufacturing employment	13,100	**	16
Unemployed (percent)	3.1	− 18	24
WACO SMSA			
McLennan County; population 142,772			
Urban building permits (dollars)	2,726,406	41	88
Bank debits, seas. adj. ($1,000)	253,753	− 4	9
Nonfarm employment	59,300	− 1	1
Manufacturing employment	12,830	− 1	− 2
Unemployed (percent)	3.8	− 17	**
WICHITA FALLS SMSA			
Archer and Wichita Counties; population 124,238			
Urban building permits (dollars)	1,557,799	− 39	111
Bank debits, seas. adj. ($1,000)	195,428	− 1	5
Nonfarm employment	48,600	1	− 3
Manufacturing employment	5,490	**	6
Unemployed (percent)	3.1	− 3	41

COUNTY City	Population*	Urban building permits			Bank debits			Nonfarm placements		
		Aug 1970 (dollars)	Percent change from July 1970	Percent change from Aug 1969	Aug 1970 (thousands of dollars)	Percent change from July 1970	Percent change from Aug 1969	Aug 1970	Percent change from July 1970	Percent change from Aug 1969
ANDERSON	26,593									
Palestine	14,518	118,625	− 37	95	19,212	− 15	10	32	23	− 55
ANDREWS	10,217									
Andrews	..	52,450	− 24	71	8,010	− 12	9	..	..	..
ANGELINA	49,153									
Lufkin	23,739	470,990	430	279	..	..	..	49	123	− 30
ARANSAS	8,468									
Aransas Pass (1960)	6,956	..	..	..	7,378	− 14	..	..	..	..
ATASCOSA	18,360									
Pleasanton (1969)	6,000	61,650	65	69	5,824	− 11	19	..	..	..
AUSTIN	13,243									
Bellville (1960)	2,218	50,000	933	− 15	7,546	− 1	15	..	..	..
BAILEY	8,172									
Muleshoe (1969)	4,945	..	..	..	14,766	− 14	19	..	..	..
BASTROP	16,828									
Smithville (1969)	2,935	49,289	..	721	..	..	..	..	..	..
BEE	22,161									
Beeville	13,080	12,995	− 57	− 81	18,121	− 8	7	155	158	85
BELL	117,242									
Bartlett (1960)	1,540	..	..	..	2,034	69	− 6	..	..	..
Belton	8,476	151,400	133	208	..	..	..	..	..	..
Killeen	34,953	482,108	− 23	− 5	35,117	− 2	3	..	..	..
Temple	32,645	550,150	− 31	39	61,269	− 2	16	287	61	24
BEXAR	830,656									
(In San Antonio SMSA)										
San Antonio	648,189	10,409,487	31	53	1,416,735	− 13	12	..	..	..
BOWIE	66,926									
(In Texarkana SMSA)										
Texarkana (1969)	50,006	110,450	− 11	− 67	119,656	3	4	..	..	..
BRAZORIA	106,230									
(In Houston SMSA)										
Angleton	9,469	2,000	− 98	− 94	16,767	− 9	2	..	..	..
Clute	5,871	42,180	− 90	− 27	3,695	− 35	4	..	..	..
Freeport	11,953	3,000	− 94	− 99	27,323	− 9	7	..	..	..
Pearland (1960)	1,430	295,440	− 61	− 48	7,846	13	24	..	..	..
BRAZOS	56,079									
Bryan	32,489	737,400	..	103	68,228	− 13	14	437	73	51
College Station	17,283	159,982	99	− 19	9,583	− 21	− 13	..	..	..
BREWSTER	7,534									
Alpine (1960)	4,740	192,167	242	..	4,993	− 9	9	..	..	..
BROWN	24,397									
Brownwood	16,277	157,550	− 7	− 60	..	..	..	137	46	59
BURLESON	9,721									
Caldwell (1969)	2,204	..	..	..	4,043	− 13	− 5	..	..	..
BURNET	10,655									
Marble Falls	1,979	..	..	..	4,998	− 18	15	..	..	..
CALDWELL	20,694									
Lockhart	6,444	16,590	− 52	− 26	8,278	− 1	4	..	..	..
CAMERON	137,506									
(Constitutes Brownsville-Harlingen-San Benito SMSA)										
Brownsville	51,080	1,624,216	253	130	56,101	− 24	11	530	58	− 7
Harlingen	34,005	20,480	− 78	− 54	82,296	− 1	2	357	26	− 5
La Feria (1969)	3,740	0	..	..	2,215	− 23	− 24	..	..	..
Los Fresnos (1960)	1,289	..	..	..	2,904	− 9	9	..	..	..

COUNTY City	Population*	Urban building permits Aug 1970 (dollars)	Percent change from July 1970	Aug 1969	Bank debits Aug 1970 (thousands of dollars)	Percent change from July 1970	Aug 1969	Nonfarm placements Aug 1970	Percent change from July 1970	Aug 1969
Port Isabel (1960)	3,575	..	..	..	2,181	8	− 17	..	..	..
San Benito	14,909	72,366	554	212	8,120	− 13	− 5	..	..	..
CASTRO	10,292									
Dimmitt (1969)	4,500	..	..	..	19,445	− 4	22	..	..	..
CHEROKEE	31,041									
Jacksonville	9,411	13,500	− 96	193	21,819	− 11	− 4	..	..	..
COLLIN	65,355									
(In Dallas SMSA)										
McKinney	14,773	96,350	− 75	96	13,908	− 14	8	63	57	− 38
Plano	17,600	1,142,233	− 16	− 52	..	..	..	..	..	..
COLORADO	17,155									
Eagle Lake (1960)	3,565	..	..	..	5,703	18	6	..	..	..
COMAL	23,601									
New Braunfels	17,610	492,127	22	50	23,301	− 4	5	..	..	..
COOKE	22,856									
Gainesville	13,565	75,000	− 21	− 78	18,123	− 10	..	..	..	..
Muenster (1960)	1,190	11,000	83	450	2,923	− 11	− 19	..	..	..
CORYELL	34,761									
Copperas Cove	10,608	87,467	− 79	162	3,779	2	16	..	..	..
Gatesville (1969)	5,180	..	..	..	9,534	− 9	16	..	..	..
CRANE	4,132									
Crane	3,447	0	..	..	2,382	− 4	22	..	..	..
DALLAS	1,316,222									
(In Dallas SMSA)										
Carrollton	13,701	2,113,504	393	− 3	11,238	− 7	19	..	..	..
Dallas	836,093	13,480,085	− 56	− 50	9,410,967	− 7	15	..	..	..
Farmers Branch	27,177	802,753	38	− 77	22,104	8	63	..	..	..
Garland	80,659	3,685,218	− 26	113	61,025	− 11	1	..	..	..
Grand Prairie	52,409	6,482,868	102	239	33,528	10	4	..	..	..
Irving	97,457	4,705,701	− 13	340	78,442	− 2	10	..	..	..
Lancaster	10,612	632,440	..	238	8,413	**	− 18	..	..	..
Mesquite	55,134	2,045,716	..	88	22,569	2	14	..	..	..
Richardson	47,596	3,562,058	254	126	50,302	− 2	7	..	..	..
Seagoville	4,253	19,143	− 83	195	11,012	9	61	..	..	..
DAWSON	16,231									
Lamesa	12,348	1,100	..	− 69	22,527	− 5	25	81	23	− 1
DEAF SMITH	18,533									
Hereford	13,092	418,600	26	167	..	..	..	..	..	..
DENTON	73,533									
(In Dallas SMSA)										
Denton	38,865	906,469	23	− 31	53,758	− 9	15	124	28	− 13
Justin (1960)	622	0	..	..	1,163	2	12	..	..	..
Lewisville	9,146	2,274,785	48	983	11,399	− 14	70	..	..	..
Pilot Point (1969)	1,603	66,500	40	171	2,519	− 4	22	..	..	..
DE WITT	17,872									
Yoakum (1960)	5,761	50,210	− 85	..	11,789	4	..	..	..	..
EASTLAND	17,527									
Cisco	3,817	..	..	..	3,921	− 11	− 9	..	..	..
ECTOR	90,132									
(Constitutes Odessa SMSA)										
Odessa	76,617	278,266	− 53	− 57	132,454	− 2	1	605	54	− 47
ELLIS	45,693									
(In Dallas SMSA)										
Ennis	10,904	..	..	..	8,852	− 12	− 4	..	..	..
Midlothian (1969)	1,580	64,000	..	8	2,267	2	17	..	..	..
Waxahachie	13,147	29,145	− 93	− 83	18,099	− 4	9	67	49	− 32
EL PASO	347,103									
(Constitutes El Paso SMSA)										
El Paso	317,462	4,695,039	− 27	2	561,570	− 10	11	..	..	..
ERATH	17,527									
Stephenville	9,297	103,100	− 49	− 32	14,452	− 8	12	..	..	..

COUNTY City	Population*	Urban building permits Aug 1970 (dollars)	Percent change from July 1970	Percent change from Aug 1969	Bank debits Aug 1970 (thousands of dollars)	Percent change from July 1970	Percent change from Aug 1969	Nonfarm placements Aug 1970	Percent change from July 1970	Percent change from Aug 1969
FANNIN	22,018									
Bonham (1969)	9,506	145,180	61	− 55	12,403	− 6	13	..	..	..
FORT BEND	51,410									
(In Houston SMSA)										
Richmond (1969)	4,500	3,450	− 95	− 97	7,341	− 5	− 5	..	..	..
Rosenberg	11,960	163,396	**	40	..	..	..	..	..	..
GAINES	11,575									
Seagraves (1960)	2,307	1,000	..	..	3,045	− 12	8	..	..	..
Seminole (1960)	5,737	2,195	− 93	− 46	6,304	− 11	8	..	..	..
GALVESTON	165,669									
(Constitutes Galveston- Texas City SMSA)										
Dickinson (1960)	4,715	..	..	..	13,900	2	− 2	..	..	..
Galveston	60,714	633,950	33	68	141,543	− 8	6	..	..	..
La Marque	15,984	93,658	16	− 21	19,719	− 2	11	..	..	..
Texas City	38,393	401,955	34	− 68	40,386	2	8	..	..	..
GILLESPIE	10,277									
Fredericksburg	5,240	29,335	..	− 98	18,105	4	21	..	..	..
GONZALES	16,766									
Nixon	1,893	4,500	96	− 61	..	..	..	..	..	..
GRAY	26,273									
Pampa	21,239	52,700	217	..	32,950	− 9	− 1	154	52	− 4
GRAYSON	80,847									
(Constitutes Sherman- Denison SMSA)										
Denison	24,436	158,717	− 47	239	27,702	− 11	− 9	254	135	30
Sherman	28,352	477,119	− 83	− 57	51,657	− 20	**	132	326	− 52
GREGG	73,510									
(Constitutes Longview- Kilgore-Gladewater Metropolitan Area)										
Gladewater	5,290	..	..	..	6,383	− 23	− 6	..	..	..
Kilgore	9,120	44,255	− 79	88	17,077	− 8	− 1	..	..	..
Longview	44,397	721,000	− 36	− 77	92,033	− 7	3	..	..	..
GUADALUPE	33,013									
(In San Antonio SMSA)										
Schertz	3,980	400	..	..	801	− 5	16	..	..	..
Seguin	15,569	208,980	8	124	20,668	− 3	5	..	..	..
HALE	33,374									
Hale Center (1960)	2,691	24,000	..	..	..	..	..	..	..	..
Plainview	18,664	63,200	57	73	67,046	16	52	223	105	2
HARDEMAN	6,649									
Quanah	4,564	0	..	..	5,466	− 22	− 11	..	..	..
HARDIN	28,618									
Silsbee (1969)	8,447	..	..	..	10,521	− 5	− 22			
HARRIS	1,722,533									
(In Houston SMSA)										
Baytown	43,606	3,004,473	398	− 64	57,460	− 2	5	..	..	..
Bellaire	18,978	14,875	− 96	− 44	..	..	..	..	..	..
Deer Park	12,690	181,454	36	− 62	12,027	1	15	..	..	..
Houston	1,212,928	35,043,113	6	2	7,584,438	− 10	7	..	..	..
Humble (1960)	1,711	153,300	− 4	..	10,076	− 2	41	..	..	..
La Porte	6,152	70,075	− 85	24	4,840	− 12	− 3	..	..	..
Pasadena	89,291	4,669,254	89	920	107,454	− 7	24	..	..	..
South Houston	11,465	133,880	− 38	97	..	..	..	..	..	..
Tomball	2,707	..	..	..	17,322	16	34	..	..	..
HARRISON	44,073									
Hallsville (1969)	1,015	..	..	..	1,229	− 5	− 24	..	..	..
Marshall	22,656	116,345	− 74	− 12	27,215	− 12	5	159	99	− 48
HASKELL	8,236									
Haskell	3,602	11,000	..	..	5,158	− 14	28	..	..	..
HAYS	26,977									
San Marcos	18,566	294,300	63	− 39	13,847	− 17	..	..	..	..

COUNTY City	Population*	Urban building permits Aug 1970 (dollars)	Percent change from July 1970	Aug 1969	Bank debits Aug 1970 (thousands of dollars)	Percent change from July 1970	Aug 1969	Nonfarm placements Aug 1970	Percent change from July 1970	Aug 1969
HENDERSON	25,703									
Athens	9,554	57,820	370	− 38	15,133	− 9	2	..	..	..
HIDALGO	172,469									
(Constitutes McAllen-Pharr- Edinburg SMSA)										
Alamo (1960)	4,121	..	..	..	3,647	1	59	..	..	..
Donna (1969)	7,612	36,925	..	236	4,144	− 5	3	..	..	..
Edinburg	16,748	1,231,900	275	970	24,338	− 16	− 1	197	40	22
Elsa (1960)	3,847	12,998	877	250	4,514	− 22	− 7	..	..	..
McAllen	36,761	259,250	− 56	31	44,748	− 8	7	238	20	13
Mercedes	9,116	35,547	9	19	7,023	**	− 41	..	..	..
Mission	12,065	123,115	80	394	15,736	− 31	12	..	..	..
Pharr	15,269	15,995	− 65	− 63	5,890	− 40	− 1	..	..	..
San Juan (1960)	4,371	2,700	− 83	− 49	2,912	− 20	− 5	..	..	..
Weslaco	14,562	60,595	− 48	− 45	15,474	− 19	22	..	..	..
HOCKLEY	20,199									
Levelland	11,386	97,325	621	94	21,020	3	33	..	..	..
HOOD	6,182									
Granbury (1960)	2,227	..	..	..	2,782	− 12	− 15	..	..	..
HOPKINS	20,334									
Surlpur Springs	10,447	203,170	66	54	25,013	− 4	10	..	..	..
HOWARD	37,136									
Big Spring	28,165	95,120	44	172	52,509	− 13	− 4	137	30	− 6
HUNT	46,602									
Greenville	21,867	86,860	− 81	− 87	28,271	− 13	− 12	84	47	− 38
HUTCHINSON	23,980									
Borger	13,928	31,740	9	..	..	..	..	84	211	− 3
JACKSON	12,597									
Edna (1960)	5,038	16,426	21	− 19	10,156	26	18	..	..	..
JASPER	24,149									
Jasper (1969)	5,120	25,800	..	198	14,869	− 11	− 5	..	..	..
Kirbyville (1969)	2,021	..	..	..	3,001	4	3	..	..	..
JEFFERSON	242,719									
(In Beaumont-Port Arthur- Orange SMSA)										
Beaumont	115,716	699,241	− 41	− 29	292,209	− 9	− 3	..	..	..
Groves	18,012	62,462	9	− 55	14,600	− 7	8	..	..	..
Nederland	16,647	..	..	..	11,168	**	18	..	..	..
Port Arthur	56,552	150,197	− 20	− 28	87,573	− 9	− 4	..	..	..
Port Neches	10,611	170,077	− 5	438	18,229	− 4	16	..	..	..
JIM WELLS	32,100									
Alice	19,682	131,901	343	38	39,763	− 20	16	..	..	..
JOHNSON	45,718									
(In Fort Worth SMSA)										
Cleburne	16,950	88,300	− 11	1	21,930	− 8	15	..	..	..
KARNES	13,147									
Karnes City (1969)	3,000	76,245	141	63	4,349	− 19	− 5	..	..	..
KAUFMAN	31,666									
(In Dallas SMSA)										
Terrell	13,985	221,410	158	− 4	16,154	− 8	11	..	..	..
KIMBLE	3,845									
Junction	2,654	26,700	968	..	3,211	17	32	..	..	..
KLEBERG	32,172									
Kingsville	27,809	663,662	289	60	22,614	− 8	11	..	..	..
LAMAR	35,564									
Paris	23,194	131,603	− 9	− 12	..	..	..	177	27	6
LAMB	17,427									
Littlefield (1960)	7,236	28,200	33	− 32	10,818	13	23	..	..	..
LAMPASAS	9,140									
Lampasas	5,773	11,950	87	− 52	10,288	− 12	6	..	..	..

COUNTY / City	Population*	Urban building permits Aug 1970 (dollars)	Percent change from July 1970	Percent change from Aug 1969	Bank debits Aug 1970 (thousands of dollars)	Percent change from July 1970	Percent change from Aug 1969	Nonfarm placements Aug 1970	Percent change from July 1970	Percent change from Aug 1969
LAVACA	17,483									
Hallettsville (1960)	2,808	75,800	165	391	4,573	1	11	..	..	..
Yoakum (1960)	5,761	50,210	− 85	..	11,789	4	..	..	..	..
LEE	7,776									
Giddings (1960)	2,821	25,415	− 66	364	6,823	1	4	..	..	..
LIBERTY	30,565									
(In Houston SMSA)										
Dayton (1960)	3,367	1,500	− 72	..	5,729	− 3	10	..	..	..
Liberty (1960)	6,127	..	..	..	12,107	− 5	− 4			
LIMESTONE	17,581									
Mexia (1969)	7,621	34,000	6	− 51	8,402	− 22	9	..	..	..
LLANO	6,583									
Kingsland (1969)	1,200	..	..	..	4,372	− 9	18	..	..	..
Llano	2,575	1,700	− 85	− 76	6,555	8	27	..	..	..
LUBBOCK	175,757									
(Constitutes Lubbock SMSA)										
Lubbock	146,379	7,155,185	109	323	340,004	− 8	8	..	..	..
Slaton (1960)	6,568	1,150	− 77	..	6,424	− 5	28	..	..	..
LYNN	8,829									
Tahoka (1969)	3,600	0	..	..	7,218	41	17	..	..	..
McCULLOCH	8,422									
Brady	5,571	74,710	57	31	8,764	− 12	− 5	..	..	..
McCLENNAN	142,772									
(Constitutes Waco SMSA)										
McGregor (1960)	4,642	10,800	620	113	5,652	9	45	..	..	..
Waco	92,600	2,697,650	40	91	225,492	− 11	5	..	..	..
MATAGORDA	27,630									
Bay City	12,196	41,000	− 72	− 63	24,284	10	6	53	121	− 27
MAVERICK	17,919									
Eagle Pass	15,277	166,152	6	59	12,867	− 15	28	..	..	..
MEDINA	19,123									
Castroville (1969)	1,800	..	..	..	1,698	18	19	..	..	..
Hondo (1960)	4,992	114,250	53	248	..	..	..			
MIDLAND	64,168									
(Constitutes Midland SMSA)										
Midland	58,199	325,750	− 37	− 55	151,399	− 10	4	778	72	21
MILAM	19,600									
Cameron (1960)	5,640	333,764	704	751	7,983	**	− 3	..	..	..
Rockdale (1960)	4,481	35,460	− 81	825	7,671	− 22	**	..	..	..
MILLS	4,047									
Goldthwaite	1,653	..	..	..	6,714	− 7	10	..	..	..
MITCHELL	8,878									
Colorado City	4,915	..	..	..	6,092	− 18	**	..	..	..
MONTGOMERY	46,850									
(In Houston SMSA)										
Conroe	10,931	164,500	− 35	− 11	40,418	12	32	..	..	..
MOORE	13,323									
Dumas (1969)	10,547	74,950	92	25	..	..	..	..	..	..
NACOGDOCHES	35,693									
Nacogdoches	22,316	630,235	24	193	32,946	− 14	1	64	64	7
NAVARRO	30,294									
Corsicana	19,839	475,116	521	158	35,149	5	33	198	32	29
NOLAN	15,403									
Sweetwater	11,317	11,465	− 58	− 67	18,045	− 29	6	79	52	− 9
NUECES	233,965									
(In Corpus Christi SMSA)										
Bishop (1969)	4,180	..	..	..	3,229	− 3	− 2	..	..	..
Corpus Christi	205,548	1,006,150	− 56	− 2	325,463	− 14	**	..	..	..
Port Aransas (1960)	824	..	..	..	932	..	− 37	..	..	..
Robstown	11,047	14,168	− 59	− 81	21,572	− 12	4	..	..	..

COUNTY City	Population*	Urban building permits Aug 1970 (dollars)	Percent change from July 1970	Aug 1969	Bank debits Aug 1970 (thousands of dollars)	Percent change from July 1970	Aug 1969	Nonfarm placements Aug 1970	Percent change from July 1970	Aug 1969
ORANGE (In Beaumont-Port Arthur- Orange SMSA)	70,380									
Orange	24,112	86,679	− 48	− 63	46,760	**	17	107	81	8
PALO PINTO	28,505									
Mineral Wells	17,109	104,330	− 85	122	31,569	− 7	6	102	46	36
PANOLA	15,554									
Carthage	5,389	362,000	412	783	5,381	− 5	5	. .	. .	. .
PARKER	32,542									
Weatherford	12,742	70,375	− 64	− 9	23,628	− 7	. .	. .	. .	. .
PARMER	10,374									
Friona (1969)	3,149	47,600	11	40	24,981	3	18	. .	. .	. .
PECOS	12,987									
Fort Stockton	7,773	20,600	− 98	− 62	. .	. .	. .	. .	. .	. .
POTTER (In Amarillo SMSA)	87,985									
Amarillo	123,973	1,515,605	34	− 62	435,478	− 13	5	. .	. .	. .
RANDALL (In Amarillo SMSA) Amarillo (See Potter County)	52,891									
Canyon (1969)	9,296	64,945	14	− 12	10,896	12	33	. .	. .	. .
REEVES	16,263									
Pecos	12,492	33,250	− 61	− 4	18,719	− 23	− 12	76	49	10
REFUGIO	9,089									
Refugio (1960)	4,944	2,600	. .	− 95	5,599	3	− 3	. .	. .	. .
RUSK	32,773									
Henderson	10,003	59,000	− 91	− 55	18,479	− 1	9	. .	. .	. .
Kilgore	9,120	44,255	− 79	88	17,077	− 8	− 1	. .	. .	. .
SAN PATRICIO (In Corpus Christi SMSA)	44,445									
Aransas Pass (1960)	6,956	. .	. .	. .	7,378	− 14	. .	. .	. .	. .
Sinton	5,085	. .	. .	. .	10,545	− 16	**	. .	. .	. .
SAN SABA	5,431									
San Saba	2,529	27,000	350	89	7,073	− 16	− 2	. .	. .	. .
SCURRY	15,115									
Snyder	10,722	30,500	− 69	− 68	. .	. .	. .	. .	. .	. .
SHACKELFORD	3,233									
Albany	1,959	0	. .	. .	3,297	− 12	2	. .	. .	. .
SHERMAN	3,603									
Stratford (1969)	2,500	0	. .	. .	13,082	− 30	7	. .	. .	. .
SMITH (Constitutes Tyler SMSA)	93,081									
Tyler	56,301	674,702	− 67	− 88	170,544	− 8	3	572	97	50
STEPHENS	8,205									
Breckenridge	5,873	40,480	. .	31	. .	. .	. .	. .	. .	. .
SUTTON	3,051									
Sonora	2,076	1,300	− 91	− 48	3,861	− 18	17	. .	. .	. .
TARRANT (In Fort Worth SMSA)	711,387									
Arlington	88,385	14,489,450	138	590	115,558	− 10	8	. .	. .	. .
Euless	18,771	251,566	− 45	− 43	15,661	− 12	8	. .	. .	. .
Fort Worth	388,225	5,127,977	14	23	1,563,404	− 6	7	. .	. .	. .
Grapevine	7,513	120,515	− 25	208	6,870	− 10	− 16	. .	. .	. .
North Richland Hills	16,365	1,073,700	222	328	19,283	70	41	. .	. .	. .
White Settlement	13,461	191,625	156	− 88	6,205	− 17	− 36	. .	. .	. .
TAYLOR (In Abilene SMSA)	96,463									
Abilene	88,433	129,337	− 95	− 54	139,907	− 9	6	. .	. .	. .
TERRY	14,239									
Brownfield	9,701	139,050	− 72	3	25,551	− 17	23	. .	. .	. .

COUNTY City	Population*	Urban building permits			Bank debits			Nonfarm placements		
		Aug 1970 (dollars)	Percent change from		Aug 1970 (thousands of dollars)	Percent change from		Aug 1970	Percent change from	
			July 1970	Aug 1969		July 1970	Aug 1969		July 1970	Aug 1969
TITUS	16,486									
Mount Pleasant	8,654	57,460	60	− 12	19,378	− 11	8	..	..	..
TOM GREEN	70,852									
(Constitutes San Angelo SMSA)										
San Angelo	63,928	242,888	− 90	− 71	99,280	− 11	9	..	..	..
TRAVIS	289,490									
(Constitutes Austin SMSA)										
Austin	246,799	14,259,371	− 14	123	756,793	10	**	..	..	..
UPSHUR	20,468									
Gladewater	5,290	..	..	..	6,383	− 23	− 6	..	..	..
UPTON	4,564									
McCamey	2,589	..	..	..	1,812	− 16	− 23	..	..	..
UVALDE	16,619									
Uvalde	10,403	38,473	− 66	− 43	..	..	..	..	..	..
VAL VERDE	26,984									
Del Rio	20,928	108,734	9	23	19,430	− 4	10	..	..	..
VICTORIA	52,776									
Victoria	39,349	811,800	− 47	34	85,813	− 10	− 4	664	173	31
WALKER	24,885									
Huntsville	15,367	..	..	..	19,558	− 11	− 1	..	..	..
WARD	13,056									
Monahans (1969)	9,476	206,900	..	509	12,940	9	17	..	..	..
WASHINGTON	18,378									
Brenham (1960)	7,740	187,825	79	37	19,096	− 13	3	..	..	..
WEBB	69,024									
(Constitutes Laredo SMSA)										
Laredo	65,491	1,091,873	− 29	666	77,546	− 4	18	339	55	− 18
WHARTON	36,234									
El Campo	8,442	80,199	184	− 55	25,549	46	18	..	..	..
WICHITA	118,501									
(In Wichita Falls SMSA)										
Burkburnett	9,148	68,576	679	− 40	9,136	− 12	12	..	..	..
Iowa Park	5,741	172,130	117	..	3,702	− 12	− 9	..	..	..
Wichita Falls	94,976	1,317,093	− 47	113	164,445	− 11	4	..	..	..
WILBARGER	15,051									
Vernon	11,204	86,200	− 60	− 64	19,812	− 12	− 8	55	120	− 52
WILLACY	15,432									
Raymondville	7,988	2,000	− 64	− 89	16,035	− 28	17	47	96	− 11
WILLIAMSON	36,020									
Bartlett (1960)	1,540	..	..	..	2,034	69	− 6	..	..	..
Georgetown (1960)	5,218	123,100	..	− 15	8,364	− 13	15	..	..	..
Taylor	9,253	127,460	− 31	800	15,030	4	− 11	30	88	15
WINKLER	9,453									
Kermit	7,685	60,085	..	88	..	..	..	..	..	..
WISE	18,830									
Decatur (1960)	3,563	27,000	..	− 54	5,092	− 7	7	..	..	..
YOUNG	15,343									
Graham	7,383	22,050	− 88	− 33	11,776	− 21	4	..	..	..
Olney (1969)	4,200	4,000	..	..	5,825	− 20	− 2	..	..	..
ZAVALA	11,239									
Crystal City (1960)	9,101	78,600	− 10	22	5,984	− 7	19	..	..	..

* For 1970 unless otherwise indicated.
** Absolute change is less than one half of 1 percent.
.. No data, or inadequate basis for reporting.

BAROMETERS OF TEXAS BUSINESS

(All figures are for Texas unless otherwise indicated.)

All indexes are based on the average months for 1957-1959 except where other specification is made; all except annual indexes are adjusted for seasonal variation unless otherwise noted. Employment estimates are compiled by the Texas Employment Commission in cooperation with the Bureau of Labor Statistics of the U.S. Department of Labor. The symbols used below impose qualifications as indicated here: p—preliminary data subject to revision; r—revised data; *—dollar totals for the fiscal year to date; ‡—employment data for wage and salary workers only.

	Aug 1970	July 1970	Aug 1969	Year-to-date average 1970	Year-to-date average 1969
GENERAL BUSINESS ACTIVITY					
Estimates of personal income (millions of dollars, seasonally adjusted)	$ 3,144^p	$ 3,255^p	$ 3,001^r	$ 3,178	$ 2,987
Income payments to individuals in U.S. (billions, at seasonally adjusted annual rate)	$ 807.4^p	$ 803.3^p	$ 758.5^r	$ 795.2	$ 738.4
Wholesale prices in U.S. (unadjusted index)	117.2^p	117.7^p	113.4^r	116.8	112.3
Consumer prices in U.S. (unadjusted index)	136.0	135.7	128.7	134.1	126.5
Newspaper linage (index)	131.8	139.3	119.7	125.9	126.5
Sales of ordinary life insurance (index)	254.9	270.8	236.2	251.7	235.6
PRODUCTION					
Total electric-power use (index)	280.2^p	279.2^p	280.4^r	261.0	247.8
Industrial electric-power use (index)	231.9^p	222.4^p	221.7^r	226.9	216.3
Crude-oil production (index)	124.7^p	119.3^p	117.0^r	121.2	113.3
Average daily production per oil well (bbl.)	17.5	16.4	15.9	17.0	15.5
Crude-oil runs to stills (index)	134.3	135.0	136.7	133.7	135.4
Industrial production in U.S. (index)	169.0^p	169.2^p	174.3^r	169.8	172.2
Texas industrial production—total (index)	179.3^p	175.3^p	175.7^r	177.8	171.3
Texas industrial production—total manufactures (index)	198.0^p	196.8^p	199.2^r	199.2	192.7
Texas industrial production—durable manufactures (index)	203.6^p	204.3^p	208.2^r	213.8	216.6
Texas industrial production—nondurable manufactures (index)	194.3^p	191.8^p	183.4^r	189.5	178.8
Texas industrial production—mining (index)	137.7^p	128.7^p	127.3^r	132.3	124.7
Texas industrial production—utilities (index)	260.0^p	260.1^p	253.9^r	258.3	246.3
Urban building permits issued (index)	201.5	197.9	174.0	188.0	191.6
New residential building authorized (index)	144.1	163.0	120.7	143.5	155.2
New nonresidential building authorized (index)	292.5	261.6	254.4	261.6	252.9
AGRICULTURE					
Prices received by farmers (unadjusted index, 1910-14=100)	280	272	272	276	264
Prices paid by farmers in U.S. (unadjusted index, 1910-14=100)	389	389	374	387	371
Ratio of Texas farm prices received to U.S. prices paid by farmers	72	70	73	71	71
FINANCE					
Bank debits (index)	297.1	339.9	270.4	303.7	276.9
Bank debits, U.S. (index)	364.0	352.2	326.7	346.1	313.4
Reporting member banks, Dallas Federal Reserve District					
Loans (millions)	$ 6,126	$ 6,042	$ 6,032	$ 6,033	$ 6,083
Loans and investments (millions)	$ 8,785	$ 8,617	$ 8,499	$ 8,626	$ 8,707
Adjusted demand deposits (millions)	$ 3,336	$ 3,190	$ 3,366	$ 3,277	$ 3,341
Revenue receipts of the state comptroller (thousands)	$313,904	$225,634	$274,906	$275,913	$235,749
Federal Internal Revenue collections (thousands)	$512,789	$299,651	$510,757	$812,440*	$735,564*
Securities registrations—original applications					
Mutual investment companies (thousands)	$ 8,555	$ 42,124	$ 46,772	$358,594*	$420,808*
All other corporate securities					
Texas companies (thousands)	$ 10,714	$ 24,007	$ 51,647	$144,211*	$310,905*
Other companies (thousands)	$ 10,466	$ 27,675	$ 18,736	$301,713*	$466,169*
Securities registrations—renewals					
Mutual investment companies (thousands)	$ 30,305	$ 38,521	$ 23,770	$375,779*	$322,537*
Other corporate securities (thousands)	$ 0	$ 841	$ 522	$ 21,359*	$ 11,184*
LABOR					
Total nonagricultural employment in Texas (index)‡	150.3^p	150.3^p	147.3^r	150.2	145.1
Manufacturing employment in Texas (index)‡	149.1^p	150.3^p	157.0^r	152.9	153.6
Average weekly hours—manufacturing (index)‡	97.8^p	98.0^p	99.8^r	99.0	100.9
Average weekly earnings—manufacturing (index)‡	150.4^p	148.2^p	145.8^r	149.1	143.2
Total nonagricultural employment (thousands)‡	3,733.0^p	3,732.0^p	3,657.5^r	3,706.2	3,580.1
Total manufacturing employment (thousands)‡	727.7^p	732.5^p	766.2^r	740.8	744.5
Durable-goods employment (thousands)‡	397.1^p	402.0^p	435.5^r	410.9	422.2
Nondurable-goods employment (thousands)‡	330.6^p	330.5^p	330.7^r	329.9	322.3
Total civilian labor force in selected labor-market areas (thousands)	3,505.2	3,519.9	3,339.4	3,488.9	3,357.8
Nonagricultural employment in selected labor-market areas (thousands)	3,292.0	3,285.4	3,163.6	3,286.4	3,111.6
Manufacturing employment in selected labor-market areas (thousands)	620.1	627.5	632.7	635.2	617.7
Total unemployment in selected labor-market areas (thousands)	135.4	146.1	92.8	118.9	91.3
Percent of labor force unemployed in selected labor-market areas	3.9	4.1	2.8	3.4	2.7

ATLAS OF MEXICO

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One of the best mediums for telling the story of a country graphically is maps. This concept has motivated the Bureau of Business Research at The University of Texas at Austin in establishing its series of atlases, the first of which was the *Atlas of Texas*, an attractive and comprehensively informative book. No. 2 in the series is the *Atlas of Mexico*, just off the press, equally enjoyable to look at, and equally comprehensive in its range of facts.

The currency of this collection of maps is symbolized by the covers, which reproduce an official Apollo 9 space photograph (Number 3012), on the front, and, on the back, a contour diagram of the photo which provides names of the salient physical features and cities caught in the picture. Inside, the *Atlas* presents 193 easily readable maps—many in color—which tell in rich detail the story of Mexico as it is today.

This description of our neighbor south of the Rio Grande includes information on practically all segments of her economy: the physical setting (location, political divisions, physiography, topography, geology, climate); population (distribution of both urban and rural populations in various decades; projections; marriage, birth, and mortality rates; literacy; homes according to amenities; student populations; educational institutions; educational status; languages); agriculture (areas cultivated, production, irrigation, separate crops, pest damage, fertilization); transportation, services, and commerce (highways, railways, air routes and flights, automobiles and trucks, truck freight, number and kind of establishments for theaters, sports, hostelries, medical and other professional services, commercial activities, construction, trade); industry (petroleum products, mining, manufacturing).

This comprehensive array of graphically presented information is concluded by an Appendix, with seven charts, which summarizes verbally and statistically the basic economic facts relative to Mexico, and by a helpful selective Bibliography.

The Bureau believes that the *Atlas of Mexico* is a fitting expression of the strong and continuing interest in Mexico prevalent at The University of Texas at Austin, and that it will fill a frequently expressed need among geographers, historians, anthropologists, economists, other academicians, businessmen, and all those with a special interest in Mexico.

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