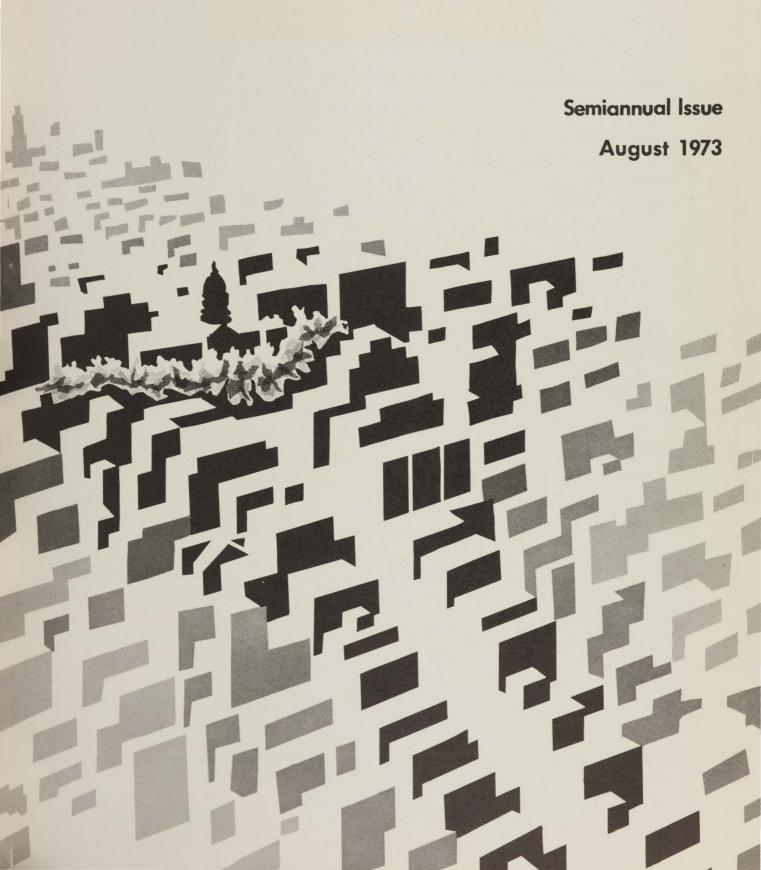
TEXAS BUSINESS REVIEW

Bureau of Business Research • The University of Texas at Austin



TEXAS BUSINESS REVIEW

VOL. XLVII, NO. 8, AUGUST 1973

Editor, Robert H. Ryan

Managing Editor, Kathleen Luft

Editorial Board: Robert H. Ryan, Chairman; Stanley A. Arbingast; John R. Stockton; Francis B. May; Robert B. Williamson; Kathleen Luft.

CONTENTS

ARTICLES

- 173: The Business Situation in Texas, by Robert H. Ryan
- 176: Energy Consumption in Texas, by Robert M. Lock-wood
- 182: Texas Construction, by Mildred Anderson and Connie Cooledge

TABLES

- 174: Business-Activity Indexes for Twenty Selected Texas
 Cities
- 175: Selected Barometers of Texas Business
- 176: Increasing Use of Fuel Oil in Texas Power Plants, July-December 1972
- 177: Crude Oil Reserves/Production Ratios, Texas, by Railroad Commission District, 1960-1972
- 179: Estimated Gross Energy Input, Texas, 1970
- 179: Estimated Proved Reserves of Petroleum Fluids in Texas, by Regions, as of December 31, 1970
- 180: Estimated Consumption of Energy in Texas, by Region and Sector, 1970
- 181: Estimated Consumption of Energy by Energy-Processing Industries in Texas, by Region and Subsector, 1970
- 182: Estimated Values of Building Authorized in Texas
- 183: Building Authorized in Texas
- 183: Number and Value of New Housing Units Authorized, January-June 1963-1973
- 184: Local Business Conditions
 Barometers of Texas Business (inside back cover)

CHARTS

- 173: Texas Business Activity
- 174: Prices Received by Farmers, All Farm Products, Texas
- 174: Comparison of Consumer Prices and Wholesale Prices, United States
- 175: Index of Income Adequacy
- 175: Estimated Personal Income, Texas

MAP

179: Energy in Texas

PHOTOGRAPHS

- 177: A diesel-electric unit serves as standby capacity in a small steam-electric plant.
- 180: This multistory office building is an example of the many modern structures dependent on the fuel base of the artificial environment.
- 181: These fuel-oil storage tanks will contain 10,000 barrels of fuel oil.

Published monthly by the Bureau of Business Research, Graduate School of Business, The University of Texas at Austin, Austin, Texas 78712. Second-class postage paid at Austin, Texas. Content of this publication is not copyrighted and may be reproduced freely, but acknowledgment of source will be appreciated. The views expressed by authors are not necessarily those of the Bureau of Business Research. Subscription, \$4.00 a year; individual copies 35 cents.

BUREAU OF BUSINESS RESEARCH

Business Research Council: Vernon M. Briggs, James R. Bright, Robert T. Green, Darwin D. Klingman, George Kozmetsky, George M. Scott, Lee A. Tavis

Director: Stanley A. Arbingast

Assistant Directors: Florence Escott, David L. Karney

Statistician: John R. Stockton

Consulting Statistician: Francis B. May

Cooperating Faculty: C. P. Blair, Charles T. Clark, Lawrence L. Crum, Clark C. Gill, Robert K. Holz, David L. Huff, Lorrin G. Kennamer, Charles H. Smith, H. K. Snell, Jerry Todd, Ernest W. Walker, Robert B. Williamson

Administrative Assistant: Margaret Robb

Energy Specialist and Coordinator of Radio Programs: Robert M. Lockwood

Transportation Specialist: Charles P. Zlatkovich

Coordinator of Special Projects and of Television Programs: Robert H. Ryan

Research Associates: J. Bryan Adair, Connie Cone, Gary Cunningham, Robert Easterwood, Christine Fox, Ida M. Lambeth, Mary Leonard, Kathleen Luft, Carlos Marin, Maureen Meehan, Eugene Robinson, Barbara Terrell, James S. Wilson

Computer Programmer: Marilyn Turnbull Statistical Associate: Mildred Anderson Statistical Assistant: Constance Cooledge

Statistical Technician: Kay Davis

Cartographers: James Buchanan, Alice Lo

Librarian: Merle Danz

Administrative Clerk: Karin Meyer

Senior Secretaries: Jennifer Brewster, Clintsy Sturgill

Senior Clerk Typists: Susan Cox, Geraldine Edwards, Agnes

Marie Sullivan

Senior Clerks: Robert Jenkins, Salvador B. Macias

Printing Coordinator: Daniel P. Rosas Print Shop Foreman: Robert L. Dorsett

COVER DESIGN BY MARY LANGRIDGE

Reprints of feature articles are available from the Bureau at ten

The Bureau of Business Research is a member of the Association for University Business and Economic Research.

THE BUSINESS SITUATION IN TEXAS

Robert H. Ryan

Texas business activity declined by 3 percent in June, perhaps partly in response to a sharp cutback in plans for new construction. Most economic indicators except those in the building industry maintained their high levels of earlier months, though there were no important advances.

The record for the first half of 1973 indicates 7-percent increases in both business activity and personal income from the first half of 1972. The January-June comparisons show favorable movement of all major Texas business barometers other than residential construction authorizations and the manufacturing workweek. (Average weekly earnings in manufacturing, however, were up by 5 percent.)

Among the twenty cities for which business-activity indexes are prepared by the Bureau of Business Research, only three failed to register gains from January-June 1972 to January-June 1973. The largest increases were in Lubbock (+18 percent), Amarillo (+14 percent), Corsicana (+13 percent), and Laredo (+11 percent). The only declines occurred in Fort Worth (-2 percent) and Austin (-1 percent); Texarkana showed no significant change.

Texas industrial production inched upward from May to June, and employment remained steady; unemployment did advance substantially but remained well below the general levels of 1971 and 1972.

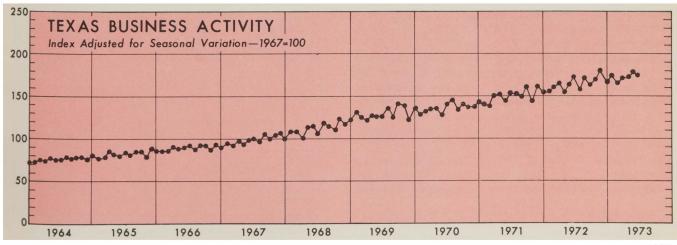
Residential construction permits statewide dropped 19 percent from May to June, enough to bring the total for the first six months of this year to a point 5 percent below the January-June 1972 total. Among the major nonresidential construction categories, plans for new industrial and office buildings and hospitals have continued at a higher rate than last year; other types of building have generally weakened.

Among all economic indicators nationwide, the focus of sharpest and most apprehensive attention has been the consumer price index, the best overall measure of inflation. Even though Texans' total personal income is estimated to have advanced by 7 percent from January-June 1972 to the

same months this year, the number of nonfarm workers has increased by 5 percent, which suggests that the average worker's income has increased by about 2 percent. That increase is by no means enough to offset the 4.8-percent rise in consumer prices. In other words, there exists convincing evidence that the average Texas family is not as well off in 1973, in terms of buying power, as in 1972. Ominously the U.S. wholesale price index has been rising even faster than consumer prices, which indicates a potential for acceleration of inflation in the second half of 1973. As August progresses, some of the price increases in the wholesale market are being translated into dramatically higher retail foods costs, and the effects of the serious dislocations in the meat industry have yet to be fully realized.

Public concern with living costs is calling attention to statistical measures of personal income and its adequacy to meet the needs of the typical family. Family needs and budgets vary in so many details that it is impossible to say with any assurance what constitutes an "adequate income." For some time, though, the U.S. Bureau of Labor Statistics has been publishing estimates of the cost of living for an urban four-person family in selected standard metropolitan statistical areas. Three family budget levels are offered: the lowest at which decent living conditions can be maintained; an intermediate level, modest but distinctly removed from poverty; and a higher level that allows for more discretionary spending.

For the national average, the low-budget family was given \$7,386 to spend in 1972; the intermediate family, \$11,446; and the more affluent family, \$16,558. Estimates are also made for consumption expenditures for other family types. At the intermediate level a single person younger than 35 is expected to make do with 65 percent less money than the four-person family. A husband and wife, both under 35, with no children are permitted about



BUSINESS-ACTIVITY INDEXES FOR TWENTY SELECTED TEXAS CITIES (Adjusted for seasonal variation—1967=100)

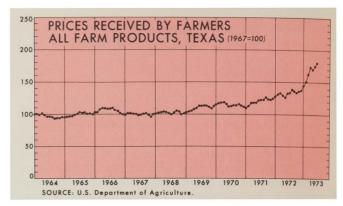
				Percent	change
City	Jun 1973	May 1973	Year-to- date average 1973	Jun 1973 from May 1973	Year-to- date average 1973 from 1972
Abilene	131.5	135.2	131.0	- 3	8
Amarillo	177.0	162.5	162.7	9	14
Austin	217.2	210.9	217.1	3	- 1
Beaumont	101.6	102.4	103.6	- 1	5
Corpus Christi	151.9	159.3	158.0	- 5	2
Corsicana	129.5	139.9	138.1	- 7	13
Dallas	201.6	198.6	185.9	2	9
El Paso	161.1	150.5	158.6	7	5
Fort Worth	135.5	152.4	154.3	- 11	- 2 5
Galveston	107.6	105.3	120.7	2 .	5
Houston	168.5	187.1	179.0	- 10	8
Laredo	172.8	172.8	167.8	**	11
Lubbock	158.0	159.1	157.6	- 1	18
Port Arthur	99.6	102.9	103.8	- 3	2
San Angelo	188.8	166.9	167.9	13	10
San Antonio	160.7	167.6	161.5	- 4	7
Texarkana	110.8	114.6	115.1	- 3	**
Tyler	129.1	131.3	140.3	- 2	5
Waco	150.8	152.3	157.6	- 1	5 2
Wichita Falls	128.7	128.1	125.1	**	2

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

half the four-person-family income to maintain the same standard of living. A single person 65 or older is expected to get by with only 28 percent as much for consumption expenditures, or \$2,520.

Of course living costs vary significantly from place to place, and so do incomes. Per capita personal income levels, as estimated by the U.S. Commerce Department's Bureau of Economic Analysis, range from a 1971 high of \$5,900 in the New York SMSA and \$5,633 in the San Francisco SMSA to low extremes where per capita incomes are less than half as much as in the richest cities. The nation's three lowest-income SMSA's are all in Texas: Brownsville-Harlingen-San Benito, McAllen-Pharr-Edinburg, and Laredo. In these three, incomes range between \$2,136 and \$2,651. On the other hand, some Texas metropolitan areas, most importantly the Dallas and Houston SMSA's, top the national average in per capita income. Nevertheless, Texas per capita income statewide remains about 10 percent below the national average.

The argument is familiar that Texans do not really need as much money as persons living elsewhere because of low living costs in this region. To a degree the argument has some truth. BLS family budget estimates are available for three Texas metropolitan areas, Austin, Dallas, and Houston. In all three, living costs are shown to be significantly lower than the average of the thirty-nine U.S. metropolitan areas sampled. In Austin, however, per capita personal income is even farther below the national average than are living costs.* An accompanying chart shows synthetic

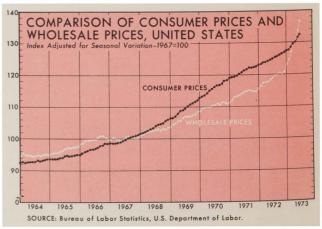


indexes of income adequacy for selected SMSA's, based on 1971 data. With 100 established as the national average, each index value shows how well per capita personal income in the city serves to meet family needs, as indicated by the intermediate-level four-person-family budget for the city, published by the Bureau of Labor Statistics.

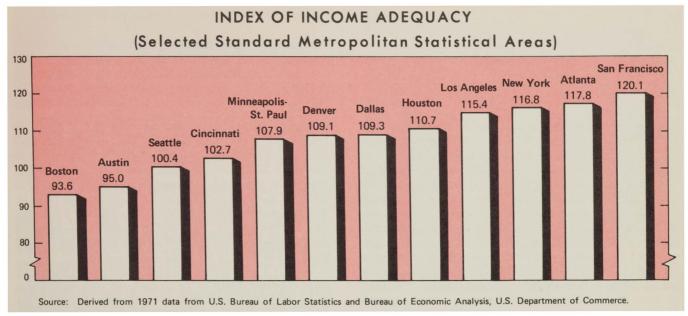
For example, the figures suggest that personal income in San Francisco is high enough that residents are relatively very well off, even in their admittedly expensive city. On the other hand, Boston has the highest living costs, at the intermediate budget level, of any city studied in the "Lower 48" states, and incomes there are somewhat above the national average but not by enough to offset high family expenses. (Personal income taxes in the Boston SMSA are 41 percent above the urban U.S. average.)

Residents of Atlanta, Dallas, and Houston are clearly among the fortunate of the nation. Their cities are less expensive than most in living costs, yet the average incomes in those cities are well above the national average. City dwellers in the South generally benefit from relatively low housing costs and distinctly lower income tax burdens than are faced by most Americans.

The lower-cost cities are not necessarily lower in every category of family expenditure. Clothing, for example, is evidently more expensive in Austin than in Philadelphia, Washington, Dallas, Houston, and some other cities. Because of differences in family living patterns, as determined by BLS statisticians, restaurant meals take more of the family budget in Austin than in most cities. Members of the typical Austin family are found to eat away from home a



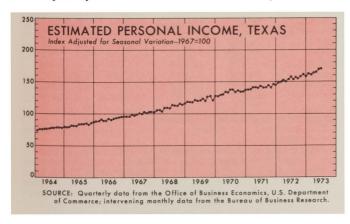
^{*}Austin may well be a special case, for its large population of students and institutional inmates, with low earnings or none, tends to depress its per capita income level.



little more often than do most urban dwellers. Not surprisingly, Hawaii and Alaska appear to have higher living costs than any of the "Lower 48" states, which is a particularly appropriate term in this regard.

In the rapidly changing American economy, shifts in income and living costs can be expected to erase some local advantages and perhaps generate others. Inflation is anything but equitable, and price increases do not develop at the same rate for all goods or in all places. The growth and rapid urbanization of Texas tend to raise living costs more rapidly here than in states already heavily urbanized. In 1974 Texas may likely become the third-largest state in population, passing slower-growing Pennsylvania and also passing the 12-million mark. Most of this population increase in Texas is taking place in cities, which tend to become more expensive as they grow. Living costs in nonmetropolitan areas are generally close to 20 percent lower than costs in SMSA's.

Inflation is also shifting cost-of-living patterns. The consumer price index for gasoline and motor oil was up 11.5 percent from June 1972 to June 1973, and families that must depend heavily upon automobile transportation are especially hard hit. This factor is certainly relevant in



Texas, where public transportation is underdeveloped and underused. By contrast the price index for public transportation rose only 1.3 percent over the same period.

In all, Texans are still fortunate in the stability of their economy and in many of the geographic advantages that favor this region.

SELECTED BAROMETERS OF TEXAS BUSINESS	
(Indexes-Adjusted for seasonal variation-1967=100)	

				Percent	change
Index	Jun 1973	May 1973	Year-to- date average 1973	Jun 1973 from May 1973	Year-to- date average 1973 from 1972
Estimated personal					
income	170 1P	169.8 ^p	165.7	**	7
Business activity	174.5	179.5	173.4	- 3	7
Crude-petroleum	171.5	1,7.0	170.1		
production	118 2P	115.3 ^p	116.0	3	3
Crude-oil runs to stills	123.4	121.8	121.5	1	5
Total electric-power	120.4	121.0	121.0		
use	156 8P	151.9 ^p	154.5	3	5
Industrial electric-	130.0	131.7	134.3	3	3
power use	143 3P	141.3 ^p	139.7	1	5
Bank debits	238.6	239.6	226.1	**	19
Urban building permits	230.0	237.0	220.1		17
issued	166.9	191.2	188.0	- 13	**
New residential	147.8	182.0	196.2	- 19	- 5
New nonresidential	147.0	102.0	190.2	- 19	_ 3
(unadjusted)	181.0	202.9	183.9	-11	4
Total industrial	101.0	202.9	103.9	- 11	-
	140 oP	138.0 ^p	136.2	1	6
production Total nonfarm em-	140.0	130.0	130.2	1	0
	122 oP	123.9 ^p	123.4	**	5
ployment	123.9	123.9	123.4		3
Manufacturing em-	115 AP	115.3 ^p	115.3	**	5
ployment		126.0	129.9	5	- 14
Total unemployment					
Insured unemployment	156.1	143.4	141.1	9	- 18
Average weekly earn-	127 cp	135.7 ^p	134.5	•	
ings-manufacturing	137.8	135.7	134.5	2	5
Average weekly hours— manufacturing	99.1 ^p	98.6 ^p	98.2	1	- 1

Preliminary.

175 **AUGUST 1973**

Change is less than one half of 1 percent.

ENERGY CONSUMPTION IN TEXAS

Robert M. Lockwood

An analysis of energy consumption in Texas refutes two widely held misconceptions. First, the energy industries, not transportation, account for the largest single bloc of energy demand. Second, no arithmetic shortage of energy materials exists in Texas. The large surplus of primary energy goods in the state—roughly five eighths of the total production in 1970—is effectively wiped out by long-standing contractual arrangements and by geographic imbalances.

Rapid changes in the structure of the energy economy in the state have been underway since 1970. For example, the use of lignite in Texas in 1970 was limited to two locations, in one of which lignite was used as a raw material. Statistically, the contribution of lignite to the energy supply of Texas was inconsequential, amounting to less than 1 percent. Lignite production in 1973 amounts to the energy equivalent of at least 25,000 barrels per day of crude oil, perhaps three times the 1970 level. The lignite input will probably double again by 1974 or 1975.

As a further example of the changes which have occurred since 1970, only about 150,000 barrels of fuel oil were used in power plants in Texas in 1970, the equivalent of some 330 b/d COE (barrels per day of crude-oil equivalent). An accompanying table demonstrates the extent to which natural-gas curtailments in the last half of 1972 forced the use of fuel oil in utility plants. In equivalent b/d COE, fuel-oil use increased from 64 in July to 18,269 in December 1972. On an annual basis, the December figure represents a level of use more than fifty times that of 1970.

July 1973 is the sixteenth consecutive month in which the Texas Railroad Commission has maintained the market demand factor at 100 percent. It is generally acknowledged, in fact, that prorationing to market demand is a dead issue. With Oklahoma and Louisiana, Texas has reached the point at which only a few larger oil fields are not producing at maximum capacity.

During the last couple of years, Texas has entered a period of rapid and sometimes violent change, a transition from the traditional, petroleum-based economy to a new energy economy which cannot yet be confidently described. Some of the strains of this transition are common to the nation as a whole, and even to the world, but some of them are peculiar to Texas.

One of the accompanying tables illustrates the extent to which the crude-oil-reserves position of Texas has deteriorated during the last dozen years. The crude-oil reserves/production ratio (year-end estimated proved reserves

divided by annual production) fell from 16.6 at the end of 1961 to 9.7 at the end of last year. The ratios for individual Railroad Commission districts necessarily ignore the absolute levels of reserves, although these levels are significant. Districts 6, 8, and 8A, for example (see map), include two thirds of the reserves of crude oil as of the end of 1972. The reserves/production (R/P) ratio in District 6 fell from 34.4 in 1960 to 13.3. The ratio in District 8 has remained roughly constant, but the R/P ratio in District 8A plunged from 21.8 in 1960 to 9.1 at the end of last year.

District 3 is significant not only because it accounted for more than one eighth of Texas crude-oil reserves as late as the end of 1972, but also for its location. District 3, the most populous of the twelve districts, has the largest energy demand and the largest energy-materials-processing capacity. From its end-1960 R/P of 20.4, District 3 has fallen off rapidly to a low last year of 8.9.

In 1972 the American Oil Company began importing Libyan crude oil for processing in its Texas City (District 3) plant. Further demolishing the pattern of the past, American Petrofina, Inc. in April 1973 reversed the flow in its pipeline between Corpus Christi and the Petrofina refinery at Big Spring (District 8), in order to ship imported Iraqi crude to the Permian Basin, long one of the world's leading net exporting regions of crude oil.

These and other developments since 1970 have lent that year a significance as a benchmark which goes beyond its choice as a base year for an analysis of energy consumption in Texas. Certain patterns characteristic of the Texas energy economy began disappearing in 1970, and some of these will not appear again.

INCREASING USE OF FUEL OIL IN TEXAS POWER PLANTS, JULY-DECEMBER 1972

Month	Distillate oil no. 2 (bbls.)	Distillate oil no. 6 (bbls.)	Total barrels	Total barrels per day of crude-oil equivalent ²	
July	1,920		1,920	64	
August	2,300	20,830	23,130	828	
September	920	22,310	23,230	864	
October	80,290	23,930	104,220	3,547	
November	193,460	31,740	225,200	7,866	
December	501,430	41,750	543,180	18,269	

1 Steam-electric plants of 25 megawatts or larger.

2 For definitions and conversion factors, see note accompanying this article.

Sources: Bureau of Power, Federal Power Commission, Monthly Report of Cost and Quality of Fuels for Steam-Electric Plant (FPC Form No. 423 data for 3rd quarter of 1972) (Washington, D.C.: Federal Power Commission, 1973), p. 15; Monthly Report of Cost and Quality of Fuels for Steam-Electric Plant (FPC Form No. 423 data for 4th quarter of 1972) (Washington, D.C.: Federal Power Commission, 1973), p. 19.

Based on preliminary data from studies in progress for a forthcoming publication of the Bureau of Business Research: Francis B. May and Robert M. Lockwood, *Energy Resources in Texas*.

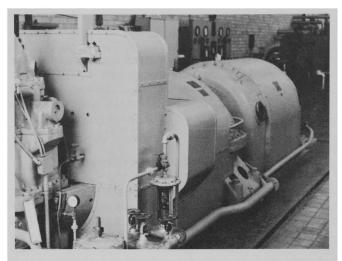
Commodity Structure of Energy Economy

The gross input to the energy system of Texas in 1970 probably amounted to some 8.3 million b/d COE. Almost all of these energy materials comprised the various forms of petroleum: crude oil, natural gas, and natural-gas liquids. Lignite and hydroelectricity, then as now, were of little consequence in Texas. Uranium, wood and wood waste, and other peripheral energy substances were not considered in this analysis, partly on account of conceptual difficulties and partly because their role cannot be estimated with any degree of accuracy.

For example, the theoretical maximum heat content of uranium depends in part on the technology of its utilization. In the case of natural-gas liquids, at least three problems arise. First, no general agreement exists as to whether natural-gas liquids ought to be considered primary or secondary forms of energy. Second, the difference between the theoretical heat content of processed gas and that of unprocessed gas is not equal to the heat value of the liquids recovered by the processing. Further, some natural-gas liquids are collected without processing natural gas. Third, estimated proved reserves of natural-gas liquids are reported as a single figure. This total quantity can be converted to thermal units only by the use of a weighted average, based, for example, on the production pattern of individual products.

Crude oil contributed 41 percent of the primary energy-materials production in 1970. Natural gas, in this analysis, accounted for 51 percent of the total. Despite problems surrounding the statistical handling of various substances, the basic structure of the 1970 primary energy supply is immune to eccentricities of measurement. The supply consisted about half and half of liquid and gaseous petroleum.

Net exchanges of primary and secondary energy materials with other states and Mexico effectively amounted to about five eighths of indigenous production of primary



Energy-processing is the largest single energy-using sector. One fifth of Texas energy production is consumed in processing the other four fifths for market. The diesel-electric unit pictured here serves as standby capacity in a small steam-electric plant.

energy commodities in 1970. The actual figure must have been about 5 million b/d COE.

Because the structure of these net exports is undergoing considerable pressure for alteration, 1970 may mark the end of the rather traditional movements of energy materials into and out of the state. Net exports of crude oil amounted to 500-600 thousand b/d COE. Because of the way stocks are reported, crude movements between states cannot be estimated more closely. Net exports of naturalgas liquids, which are even more difficult to determine, may have amounted to 400-500 thousand b/d COE. Thus perhaps one fifth of the 5 million b/d COE net exports consisted of crude oil and natural-gas liquids.

Natural-gas movements can be estimated with fair accuracy. Net exports from Texas in 1970 probably approached 1.9 million b/d COE. The remainder of the roughly 5 million b/d COE-about 2 million b/d COE-

CRUDE OIL RESERVES/PRODUCTION RATIOS,¹ TEXAS, BY RAILROAD COMMISSION DISTRICT, 1960-1972

					Rail	road Comn	nission dis	trict					
Year	1	2	3	4	5	6	7B	7C	8	8A	9	10	Total
1960	8.1	18.1	20.4	18.0	18.2	34.4	6.4	9.9	12.7	21.8	7.3	7.9	16.5
1961	7.8	26.1	20.4	17.0	19.4	33.5	6.3	10.1	12.3	21.1	7.2	7.5	16.6
1962	8.2	24.7	19.8	15.7	18.9	33.4	6.1	9.7	12.5	21.1	6.9	7.2	16.4
1963	8.5	22.8	18.2	13.5	17.6	34.2	5.9	9.7	13.0	20.3	6.6	6.7	15.9
1964	8.1	21.8	17.8	12.2	16.9	34.0	5.9	9.3	12.3	20.1	6.5	6.3	15.4
1965	8.5	21.6	18.1	10.8	15.9	34.1	6.0	9.0	11.9	20.5	6.3	8.9	15.3
1966	7.9	18.9	16.6	8.2	15.1	30.0	7.0	8.1	11.0	18.2	6.1	8.6	14.1
1967	8.7	16.4	14.6	7.8	13.1	25.7	6.8	7.3	12.7	15.7	6.5	8.4	13.5
1968	8.4	14.0	13.5	7.4	11.9	24.4	6.4	7.4	12.0	14.4	5.9	8.2	12.7
1969	9.2	12.4	12.8	7.0	9.9	21.7	6.4	7.9	11.2	12.4	5.9	8.2	11.8
1970	9.0	10.8	10.4	6.8	7.8	16.4	6.3	7.4	10.8	12.3	6.7	8.1	11.0
1971	7.3	10.7	10.6	6.2	7.1	15.9	5.7	7.0	12.4	11.3	6.9	8.1	11.0
1972	6.2	8.0	8.9	5.9	4.9	13.3	6.4	6.9	11.8	9.1	6.6	7.8	9.7

Year-end estimated proved reserves divided by calendar-year production.

Source: American Gas Association, American Petroleum Institute, and Canadian Petroleum Association, Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada and United States Productive Capacity as of December 31, 1972 (American Gas Association, et al., 1973), pp. 54-66.

represented net exports of refined products. About half of this total apparently was attributable to gasoline. Perhaps three fourths of the remainder consists of distillate and residual fuel oil. Some of this fuel oil is used for bunkering foreign-trade vessels at various ports and is not, properly speaking, either an "export" or an element of "domestic demand." Published data suggest that this market may have amounted, in 1970, to some 10-15 thousand b/d COE.

Sectoral Analysis of Consumption

One of the most striking demonstrations of the expense of a fluid-fuel economy is contained in the fact that, in Texas in 1970, the energy industries themselves consumed about 20 percent of their gross production to make the remaining 80 percent available for consumption by other sectors. Of the estimated consumption of energy materials within Texas, the energy-processing industries accounted for 55 percent. In general, the energy cost of transporting and distributing finished energy commodities is not included in the energy-processing industries share of consumption. Of the roughly 1.7 million b/d COE consumed by the energy industries in 1970, almost all was attributable to production and processing functions. Some of the energy expended in pipeline transportation is included in this total, and some production costs are not included.

A significant share of this cost occurs in the form of thermal and mechanical losses in conversion systems, notably steam-electric power generation. The theoretical energy input of steam-electric generating capacity in Texas during 1970 amounted to some 530 thousand b/d COE. The theoretical energy-equivalent of the output amounted to about 40 percent of the input: 210 thousand b/d COE. This output figure represents net generation and makes no allowance for further line and other losses which intervene between power plant and consumer. The difference of some 320 thousand b/d COE—the "cost" of thermal-electric power in Texas—includes thermal and mechanical losses and plant use of power.

For perhaps the last time, steam-electric power plants in Texas in 1970 relied almost exclusively on natural gas. That the delivered electricity equivalent of a cubic foot of natural gas should require the consumption of perhaps three cubic feet of natural gas is a striking and sobering fact of present resource utilization.

The largest share of the energy cost of energy is borne by the natural gas industry, which accounted for some 52 percent of the energy-industry consumption of energy potential in 1970. Of the 870 thousand b/d COE attributable to energy consumption in the natural gas industry, 45 percent comprised fuel use at producing leases and gas-processing plants. The extraction loss accompanying natural-gas processing—the shrinkage in volume attributable to the removal of liquids—is a statistically thorny issue. The quantity is significant: some 230 thousand b/d COE, or about 27 percent of the energy-cost expenditure of the natural gas industry. Statistically, however, this quantity is

CONVERSION FACTORS EMPLOYED IN THIS STUDY

The equivalent barrel of crude oil is used in this study in those instances in which it is necessary to convert quantities of different energy materials to the same basis. The British Thermal Unit (Btu) is far too small for convenience and is essentially meaningless to most readers. As the principal and traditional basis of the Texas energy economy, crude oil has a legitimate claim to be employed as a common unit of measure. The equivalent barrel of crude oil, in this study, refers to the energy potential, the theoretical heat content, of the material in question. A barrel of crude oil was set at the value established by the U.S. Bureau of Mines in its 1970 energy-balance calculations: 5,620,900 Btu. The barrel is the 42-gallon barrel, the unit of measurement traditionally employed in the oil industry.

Both thermal and hydroelectricity were converted on the basis of their theoretical energy equivalent (3,412.76 Btu/kilowatt-hour) and not according to the quantity of fuel required to generate that same amount of electricity. The latter method, widely used by the U.S. Bureau of Mines and others, badly understates the hydroelectric component of electric-power production and is conceptually inconsistent with the use of theoretical heat contents for other energy commodities.

Following are the conversion factors employed in this study, most of them published by the U.S. Bureau of Mines in the *Monthly Petroleum Statement* and elsewhere:

crude oil (1970) refined products, average (1970) natural gas, unprocessed (1970) natural gas, processed (1970) natural gasoline liquefied gases gasoline (including aviation) special naphtha jet fuel, naphtha jet fuel, kerosine kerosine distillate fuel oil residual fuel oil still gas **lubricants**

waxes petroleum coke

asphalt and road oil purchased steam (refineries) lignite coke 5,620,900 Btu/barrel

5,520,400 Btu/barrel

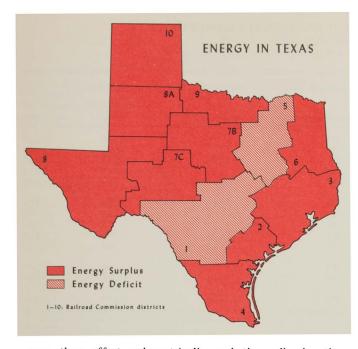
1,102 Btu/cu. ft.

1,031 Btu/cu. ft. 4,620,000 Btu/barrel 4,011,000 Btu/barrel

5,248,000 Btu/barrel 5,248,000 Btu/barrel 5,355,000 Btu/barrel 5,670,000 Btu/barrel 5,670,000 Btu/barrel 5,825,000 Btu/barrel 6,287,000 Btu/barrel 6,000,000 Btu/barrel 990 Btu/cu. ft. 6,065,000 Btu/cu. ft. 5,537,000 Btu/barrel 6,024,000 Btu/barrel 30,120,000 Btu/barrel

1,200 Btu/lb. 15,000,000 Btu/short ton 24,800,000 Btu/short ton

6,636,000 Btu/barrel



more than offset—volumetrically and thermally—by the natural-gas liquids recovered from the processed gas. The recovered liquids, in this analysis, are considered to be part of the primary-energy production.

Refining crude oil also presents certain anomalous features which make statistical analysis difficult and subjective. In the aggregate, refining in the United States and in Texas, which generally seeks maximum gasoline output, has yielded for many years a larger volume of liquids than the total input. This circumstance arises through the various cracking processes, which alter the molecular structure and increase the volume of certain fluids. Thus individual

ESTIMATED GROSS ENERGY INPUT, TEXAS, 1970 (Thousand b/d COE¹)

Energy material	Production	Net interstate movements ²	Net available supply
Primary			
Crude oil ³	3,424	- 579	2,845
Natural-gas liquids ³	602	- 477	125
Subtotal, liquids	4,026	-1,056	2,970
Natural gas	4,250	- 1,881	2,369
Subtotal, petroleum	8,276	- 2,937	5,339
Lignite	27		27
Hydroelectricity	2		2
Total	8,305	- 2,937	5,368
Secondary			
Refined products	3,140	-2,000	1,140
Coke	(4)	12	12
Electricity	209	(4)	209
Total	3,349	- 1,988	1,361

Barrels per day of crude-oil equivalent. See note accompanying this article.

plants, or regional totals including significant cracking capacity, almost always yield a net volumetric gain. Nonetheless, losses occur, as in any thermal process, and refineries also have to satisfy their fuel needs, partly from their own production. Crude-oil refining accounted in 1970 for about 450 thousand b/d COE, or some 27 percent of the total energy consumed by the energy-processing industries. This quantity represented perhaps one seventh of the total refinery input. About 290 thousand b/d of this total, or almost two thirds, was consumed in the form of natural gas. The remainder was consumed largely as refinery gas, petroleum coke, and purchased electricity and steam.

Of the 1.7 million b/d COE used in the energy industries in Texas in 1970, at least 90 percent was consumed in the form of natural gas, and half of *that* was attributable to the gas industry itself.

To the extent that specific sectors can be identified, transportation uses of energy appear roughly equal to those attributable to industrial (excluding energy) and miscellaneous uses. Together these sectors used about 84 percent of the 1.3 million b/d COE attributable to nonenergy sectors in Texas in 1970.

About 375 thousand b/d COE, or two thirds of the transport category consumption, was identified with motorfuel consumption in 1970. Refined products and naturalgas liquids, largely liquefied petroleum gases, consumed in the transport sector in addition to gasoline and closely related fuels include kerosine and jet fuel, distillate and residual fuel oil, and liquefied petroleum gases. The share of the Texas transport market held by these products in 1970 ranged between 6 and 10 percent. The 550 thousand b/d COE identified as transportation might legitimately be increased by about one tenth to include some 50 thousand

ESTIMATED PROVED RESERVES OF PETROLEUM FLUIDS IN TEXAS, BY REGIONS, AS OF DECEMBER 31, 1970

Railroad Commission district	Crude oil (million bbls.)	Natural- gas liquids (million bbls.)	Total liquids (million bbls.)	Natural gas (billion cu. ft.)	Total energy equivalent (million bbls. COE ¹)
1	153	29	182	1,955	533
2	845	133	978	10,060	2,787
3	1,687	686	2,373	22,814	6,373
4	528	598	1,126	29,287	6,336
5	128	84	212	1,393	445
6	2,498	424	2,922	5,831	3,877
7B	239	59	398	752	420
7C	299	173	473	3,603	1,086
8	3,107	500	3,607	16,104	6,426
8A	3,130	272	3,402	2,597	3,805
9	363	68	431	1,864	755
10	218	304	522	10,093	2,291
	13,195	3,330	16,525	106,353	35,134

¹ Crude-oil equivalent. See note.

² Including stock changes, when known.

³ Discrepancies in these totals and those in regional tables are explained in the note accompanying this article.

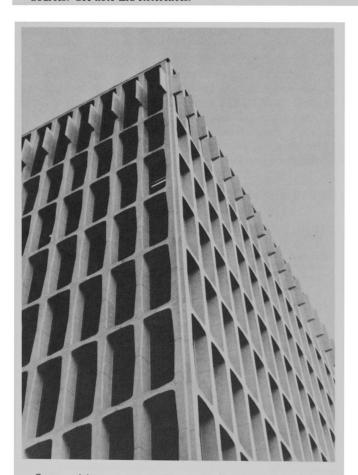
Negligible or unknown. Sources: See note and References.

Source: American Gas Association, American Petroleum Institute, Canadian Petroleum Association, Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada and United States Productive Capacity as of December 31,1972 (American Gas Association, et al., 1973), pp. 54-66, 150-162.

ESTIMATED CONSUMPTION OF ENERGY IN TEXAS, BY REGION AND SECTOR, 1970 (Thousand b/d COE¹)

			Others	sectors		
Railroad Commission district	Energy- processing industries	Household and commercial	Transportation	Industrial and miscellaneous	Total	Total
1	24	24	83	89	196	220
2	67	4	10	9	23	90
3	678	43	138	161	342	1,020
4	273	13	39	45	97	370
5	83	42	137	138	317	400
6	85	10	32	43	85	170
7B	24	6	19	21	46	70
7C	37	2	7	4	13	50
8	178	10	31	36	77	255
8A	34	5	19	22	46	80
9	25	5	20	25	50	75
10	155	5	15	25	45	200
Total	1,663	169	550	618	1,337	3,000

Barrels per day of crude-oil equivalent. Sources: See note and References.



Commercial energy use in Texas rested traditionally on natural gas, although most of this energy has been consumed in the form of electricity. The multistory office building shown here is a good example of the many modern structures erected in Texas and elsewhere on the implicit assumption that the fuel base of the artificial environment would always be available.

b/d COE consumed as natural-gas pipeline fuel. This element of demand was tabulated, however, with the energy industries, of which it represents less than 3 percent.

Geographic Analysis of Consumption

The Texas Railroad Commission districts were used as the basis for a preliminary regional analysis of Texas energy consumption merely because certain production and reserves data are available below the state level only for these districts. The final data in the study on which this article is based will include regional information on energy consumption in Texas down to the county level.

The map accompanying this article conveys information which, though simple, can be misleading. According to this map, only Railroad Commission Districts 1 and 5 experienced a deficit of energy materials in 1970. All other regions—even District 3—enjoyed a surplus. The theoretical sum of the primary energy materials produced in District 8, for example, is greater than the sum of those energy materials—in whatever form—which are consumed in District 8.

This notion of surplus and deficit in terms of indigenous supplies is misleading because it fails to consider energy movements between one region and another and between one region and another state. District 8, for example, which represents Trans-Pecos Texas, probably enjoys a larger "surplus" of energy materials than any other region in the state. The production of primary energy in 1970 in District 8 probably amounted to about seven times the consumption. Because District 8 is traditionally a net-exporting region, however, the surplus has made possible long-term supply commitments for oil and gas. These are "exported" to other regions and other states. A "domestic" supply

ESTIMATED CONSUMPTION OF ENERGY BY ENERGY-PROCESSING INDUSTRIES IN TEXAS, BY REGION AND SUBSECTOR, 1970 (Thousand b/d COE¹)

Railroad Commission district	Petroleum refining	Natural-gas processing	Electric- power generation	Carbon- black manufacture	Total
1	1	14	9		24
2	(2)	53	14		67
3	352	181	140	5	678
4 5	45	213	13	2	273
5	2	24	57		83
6	7	54	24		85
7B	1	17	6		24
7C		35	2		37
8	20	119	34	5	178
8A		25	6	5 3	34
9		16	9		25
10	18	117	10	10	155
Total	446	868	324	25	1,663

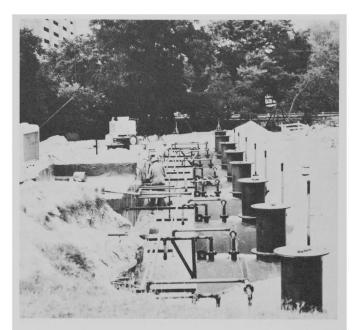
Barrels per day of crude-oil equivalent. See note.

originally adequate for District 8 may no longer satisfy needs within the region. In this respect, the position of District 8, or any other "surplus" region, is similar to that of Texas and Louisiana and other traditional net exporters of energy materials. As the "surplus"—the difference between "domestic" needs and "export" requirements—dries up, more and more pressure is brought on contract and marketing arrangements whereby energy materials continue to be exported in the face of a growing domestic deficit.

Considering net movements between regions of the state, to which precise numbers cannot yet be assigned, District 3, the upper Gulf coast, is almost certainly a region with a growing deficit. In fact, the probable level of consumption is approaching the quantity of production. Even with the clumsy analysis necessarily employed in this preliminary study, District 3 obviously is rapidly approaching the time when its own production will fall below its consumption.

In Texas as elsewhere, energy-materials shortages have dramatized a fundamental ambiguity and conflict associated with the economic system of the United States. Respect for the sanctity of contracts and other agreements is basic to this system. Many existing contract and marketing arrangements, however, involve "exports" of energy materials from regions beginning to suffer shortages of these very commodities. In such circumstances, pressure inevitably begins to build against the traditional exporting arrangements.

These and other conflicts and ambiguities will increasingly characterize the months and years immediately ahead, as Texas works its way through the transition to a new energy economy.



Fuel-oil storage is under construction at many locations throughout the state in 1973. These projects are characteristic of the energy crisis of 1972-1973 and symptomatic of the transition to a new energy economy. Increased fuel-oil storage is a requisite of natural-gas curtailments. Most of this energy is used for production of electric power and process and utility steam. The tanks shown here will store 10,000 barrels of fuel oil.

REFERENCES

The most frequently used statistical references for the preliminary data published in this study are those of the Texas Railroad Commission and the U.S. Bureau of Mines. A few other materials of particular interest are included, though some of them were employed only for a single bit of data or a conversion factor.

American Gas Association, American Petroleum Institute, Canadian Petroleum Association. Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada and United States Productive Capacity as of December 31, 1972. American Gas Association, et al., 1973.

Railroad Commission of Texas. Annual Report of the Oil and Gas Division: 1970. Austin: Railroad Commission of Texas.

U.S. Department of Commerce, Bureau of the Census. Statistical Abstract of the United States: 1972. 93rd ed. Washington, D.C.: Government Printing Office, 1972.

U.S. Department of the Interior, Bureau of Mines. Minerals Yearbook 1970. Vol. 1. Metals, Minerals, and Fuels. Washington, D.C.: Government Printing Office, 1973.

. Minerals Yearbook 1971. Vol. 1. Metals, Minerals, and Fuels Washington, D.C.: Government Printing Office, 1972.

U.S. Department of Transportation, Federal Highway Administration. *Highway Statistics* 1970. Washington, D.C.: Government Printing Office.

U.S. Federal Power Commission. Statistics of Privately Owned Electric Utilities in the United States, 1970. Classes A and B Companies. Washington, D.C.: Government Printing Office, 1971.

Statistics of Publicly Owned Electric Utilities in the United States in 1970. Washington, D.C.: Government Printing Office, 1972.

² Less than 500.

Sources: See accompanying note and References.

TEXAS CONSTRUCTION*

Mildred Anderson and Connie Cooledge

The seasonally adjusted index of total construction authorized for reporting urban places in Texas dropped to 166.9 in June, the lowest level for that month since 1970 and 24 points below the May index of 191.2. For the January through June period the index averaged 188.0, less than .5 percent below the average of 187.8 for the same period of 1972.

Total construction authorized for the first six months of 1973 in the state's twenty-five standard metropolitan statistical areas declined in eight SMSA's, in comparison with the same period last year: Texarkana (-48), Odessa (-47), Galveston-Texas City (-36), Dallas (-18), Corpus Christi (-15), Sherman-Denison (-9), Midland (-7), Austin (-6), and El Paso (-3). Total building-permit issues, in terms of estimated value, declined 14 percent from the May index level, a net loss of \$43.5 million. The estimated value for January through June was down by \$5.8 million from the same period last year.

The seasonally adjusted index of residential construction authorized during June declined 19 percent from May 1973 and 29 percent from June 1972. At 147.8 percent of its 1967 base value, the June index was the lowest since January 1971.

Residential building activity for the first six months of 1973 declined 5 percent from its level during the first six months of 1972. Total value of permits for single-family dwellings authorized in the first half of 1973 was \$553.9 million, down 8 percent from the value authorized in the same period of 1972. Authorizations for multiple-family dwellings—\$334.4 million—in the first six months of 1973 were relatively unchanged from the first six months of 1972. Value of authorizations in the apartment-complex category—\$309.8 million—sustained the multifamily-dwelling sector with an increase of 3 percent for January-June 1973.

According to permits for construction of new dwellings units in the Texas SMSA's, ten areas registered declines in total value during the first six months and fifteen experienced increases. Percentage decreases in the January-June total value of permits authorized ranged from 51 percent for Laredo to 2 percent for Houston. Percent increases in the January-June value ranged from 178 percent for Abilene to 5 percent for Beaumont-Port Arthur-Orange.

In Texas, as in the nation, potential homeowners are discouraged from building or buying new homes by scarce money, high interest rates, and rising costs of labor, materials, land, and taxes. The consumer price index places home-ownership in May 1973 at 144.2 percent of the 1967 base period. The costs that go into calculating the home-

*Data used in this article come only from building-permitissuing urban places.

ownership index-reported by the Bureau of Labor Statistics-include purchase prices, mortgage interest, taxes, insurance, and upkeep. Homeowners may respond to the rise in costs and short supply of money by shifting further toward apartments, prefabricated houses, and mobile homes.

The unadjusted index of nonresidential construction authorized in Texas fell to 181.0, the lowest June level since 1970 and almost 22 points below the May index of 202.9. The January through June average of the index stands at 183.9, slightly above the average of 176.2 for the same period of 1972.

During the first six months of 1973, in comparison with that period last year, substantial decreases occurred in five major categories of nonresidential construction in the state: commercial garages (-79), public works and utility buildings (-46), educational buildings (-34), service stations and repair garages (-28), and private garages (-17).

ESTIMATED VALUES OF BUILDING AUTHORIZED IN TEXAS*

			Percent	change
Classification	Jun 1973 (thousands	Jan-Jun 1973 of dollars)	Jun 1973 from May 1973	Jan-Jun 1973 from Jan-Jun 1972
All permits	278,151	1,869,944	- 14	**
New construction Residential	246,358	1,692,168	- 15	- 1
(housekeeping)	114,520	888,303	- 20	- 5
One-family dwellings Multiple-family	78,297	553,912	- 17	_ 8
dwellings	36,223	334,391	- 25	**
Nonresidential buildings Hotels, motels, and	131,838	803,865	- 11	4
tourist courts	4,881	46,196	- 15	49
Amusement buildings	3,196	17,194	35	28
Churches	4,564	26,058	- 26	43
Industrial buildings Garages (commercial	13,715	66,115	13	23
and private)	2,018	9,063	50	- 71
Service stations Hospitals and	314	5,340	- 58	- 28
institutions	16,687	96,636	238	125
Office-bank buildings	32,993	168,132	3	**
Works and utilities	3,155	30,103	- 13	- 46
Educational buildings Stores and mercantile	10,784	83,203	- 55	- 34
buildings Other buildings and	35,444	218,326	- 25	10
structures Additions, alterations,	4,087	37,499	- 42	59
and repairs SMSA vs. non-SMSA	31,793	177,776	3	5
Total SMSA [†]	257,912	1,712,054	- 11	**
Central cities	198,070	1,280,316	- 4	6
Outside central cities	59,842	431,738	- 28	- 15
Total non-SMSA 10,000 to 50,000	20,239	157,889	- 37	**
population Less than 10,000	10,250	85,489	- 32	- 6
population	9,989	72,400	- 42	8

^{*} Only building for which permits were issued within the incorporated area of a city is included. Federal contracts and public housing are not included.

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

[†] As defined in 1970 Census.

Source: Bureau of Business Research in cooperation with the Bureau of the Census, U.S. Department of Commerce.

BUILDING AUTHORIZED IN TEXAS

(Top thirty cities ranked in descending order of total value)

	Total	construction	*		1	New dwe	lling units			New	nonresidenti	al
	Va (thousands Jan-		- n-	Value (thousands of dollars) Jan-Jun		Dan	Number Jan-Jun			Value (thousands of dollars) Jan-Jun		
City	1973	1972	Per- cent chng	1973	1972	Per- cent chng	1973	1972	Per- cent chng	1973	1972	Per- cent chng
Houston	387,017	328,894	18	127,851	117,585	9	9,434	12,998	- 27	196,860	151,891	30
Dallas	157,557	238,384	- 34	52,135	66,833	- 22	4,380	5,147	- 15	86,777	155,757	- 44
Austin	124,138	130,942	- 5	73,859	83,460	- 12	5,404	6,070	- 11	45,907	41,230	11
San Antonio	121,785	122,358	**	67,918	36,012	89	6,671	3,413	95		72,427	- 38
El Paso	91,907	94,275	- 3	53,363	58,017	- 8	3,774	4,353	- 13	32,659	30,726	6
Fort Worth	64,998	38,580	68	20,004	18,701	7	867	1,078	- 20		14,800	145
Arlington	55,306	57,471	- 4	36,219	36,913	- 2	1,538	1,698	- 9	18,033	19,643	- 8
Lubbock	44,328	28,804	54	24,512	18,016	36	1,474	985	50		8,944	104
Amarillo	31,777	13,268	140	16,123	8,492	90	833	339	146		3,233	325
Corpus Christi	30,068	34,777	- 14	16,148	21,615	- 25	1,087	1,494	- 27	9,894	8,462	17
Irving	28,562	17,128	67	10,937	12,857	- 15	846	1,175	- 28		3,155	429
Carrollton	25,251	24,598	3	19,269	22,057	- 13	857	1,182	- 27	5,681	2,220	156
Richardson	20,344	n.a.		8,786	n.a.		470	n.a.			n.a.	
Waco	20,257	17,528	16	5,648	7,278	- 22	375	574	- 35		8,283	52
Beaumont	19,754	16,275	21	10,764	8,971	20	783	715	10		5,805	28
Grand Prairie	18,481	22,887	- 19	8,802	17,359	- 49	384	798	- 52	7,544	4,644	62
Brownsville	18,473	6,972	165	9,745	2,992	226	1,094	313	250	6,993	3,395	106
Abilene	17,159	8,933	92	10,780	3,868	179	625	199	214	5,705	4,607	24
Pasadena	17,096	25,916	- 34	6,006	19,789	- 70	552	1,811	- 70	10,461	5,553	88
Denton	14,373	12,715	13	5,165	9,373	- 45	301	590	- 49	8,753	3,205	173
Temple	14,299	6,737	112	6,543	4,523	45	455	164	177	7,415	2,030	265
Tyler	13,912	6,817	104	5,791	4,024	44	356	218	63	7,268	1,950	273
Longview	13,366	9,649	39	8,671	6,331	37	444	258	72	3,854	2,428	59
McAllen	11,671	10,349	13	6,643	5,559	20	439	378	16	4,376	3,524	24
Wichita Falls	11,325	7,600	49	5,119	4,512	13	226	365	- 38	4,504	2,359	91
Laredo	10,918	10,493	4	2,966	5,992	- 51	286	474	- 40	7,556	4,403	72
Midland	10,104	10,862	- 7	4,181	3,633	15	215	119	81	3,726	5,889	- 37
College Station	9,847	5,532	78	5,092	4,110	24	633	580	9	4,673	1,339	249
Odessa	9,045	16,953	- 47	3,723	3,410	9	289	240	20	4,440	12,384	- 64
Killeen	8,849	7,585	17	5,523	4,181	32	473	348	36	2,615	2,320	13

- * Includes additions, alterations, and repairs.
- ** Change is less than one half of 1 percent.
- n.a. Not available.
- ... No data, or inadequate basis for reporting.

One category in the nonresidential sector—hospitals and other institutional buildings—recorded a large increase of 125 percent for the first six months of 1973 in comparison with the same period last year. Some of the larger permits issued in June for hospitals and related buildings were recorded in El Paso (\$4.5 million), Temple (\$3.5 million), and Deer Park (\$1.7 million). These large contracts, along with numerous smaller permits, helped to bolster nonresidential building in the state by \$53.7 million in comparison with the first six months of 1972.

Of the state's twenty-five SMSA's, seven showed declines in the nonresidential sector: Odessa (-64), Texarkana (-59), Galveston-Texas City (-48), Midland (-37), San Antonio (-37), Sherman-Denison (-33), and Dallas (-18). Nonresidential building-permit issues, in terms of estimated value, declined 11 percent from May, a net decrease of \$16.0 million.

Additions, alterations, and repairs registered gains in both the month-to-month and year-to-year comparisons—+3 and +5, respectively. These gains were due largely to increases in the category of additions, alterations, and repairs on nonresidential buildings. The June index level increased 12 percent from May and the 1973/1972 sixmonths comparison showed a gain of 6 percent.

With the exception of additions, alterations, and repairs, the declines in the construction sector of the economy can be attributed in part to a shortage of inventories of steel, mainly reinforcing bars. With little likelihood of foreign supplies, steel price boosts in the United States could increase sharply this summer. The possibility of fuel shortages this summer also poses a serious threat to the construction industry nationwide.

NUMBER AND VALUE OF NEW HOUSING UNITS AUTHORIZED, JANUARY-JUNE 1963-1973 (Value in thousands of dollars)

One-f	amily	Multi-	family	Total		
Value	Number	Value	Number	Value	Number	
297,186	22,732	129,647	21,877	426,833	44,609	
306,518	22,336	123,264	19,227	429,782	41,563	
298,187	20,772	78,173	11,921	376,360	32,693	
301,499	19,290	91,380	14,046	392,879	33,336	
294,393	18,594	104,724	15,717	399,117	34,311	
300,075	18,654	209,043	30,436	509,118	49,090	
294,548	16,928	242,976	33,233	537,524	50,161	
261,287	16,883	220,601	26,652	481,888	43,535	
426,337	25,125	284,649	35,478	710,986	60,603	
550,394	27,945	314,858	36,808	865,252	64,753	
525,812	22,571	326,258	35,501	852,070	58,072	
	Value 297,186 306,518 298,187 301,499 294,393 300,075 294,548 261,287 426,337 550,394	297,186 22,732 306,518 22,336 298,187 20,772 301,499 19,290 294,393 18,594 300,075 18,654 294,548 16,928 261,287 16,883 426,337 25,125 550,394 27,945	Value Number Value 297,186 22,732 129,647 306,518 22,336 123,264 298,187 20,772 78,173 301,499 19,290 91,380 294,393 18,594 104,724 300,075 18,654 209,043 294,548 16,928 242,976 261,287 16,883 220,601 426,337 25,125 284,649 550,394 27,945 314,858	Value Number Value Number 297,186 22,732 129,647 21,877 306,518 22,336 123,264 19,227 298,187 20,772 78,173 11,921 301,499 19,290 91,380 14,046 294,393 18,594 104,724 15,717 300,075 18,654 209,043 30,436 294,548 16,928 242,976 33,233 261,287 16,883 220,601 26,552 426,337 25,125 284,649 35,478 550,394 27,945 314,858 36,808	Value Number Value Number Value 297,186 22,732 129,647 21,877 426,833 306,518 22,336 123,264 19,227 429,782 298,187 20,772 78,173 11,921 376,360 301,499 19,290 91,380 14,046 392,879 294,393 18,594 104,724 15,717 399,117 300,075 18,654 209,043 30,436 509,118 294,548 16,928 242,976 33,233 537,524 261,287 16,883 220,601 26,652 481,888 426,337 25,125 284,649 35,478 710,986 550,394 27,945 314,858 36,808 865,252	

LOCAL BUSINESS CONDITIONS

Statistical data compiled by Mildred Anderson, statistical associate, Constance Cooledge, statistical assistant, and Kay Davis, statistical technician.

Business conditions are reported in the following tables first by metropolitan areas, second by counties and cities. Standard metropolitan statistical areas (SMSA's) are defined by county lines and include the counties listed. All SMSA's are designated as such by the U.S. Bureau of the Census except one, the Longview-Marshall area, which is now a significant metropolitan node.

Population figures represent the 1970 Census counts except where otherwise noted. The population estimates not taken from the Census are generally based on utility connections and are subject to substantial error.

Building-permit values are collected from municipalities by the Bureau of Business Research in cooperation with the Bureau of the

Census. They represent only building intentions within city limits, since construction permits are not issued except by incorporated cities in Texas. The building data also exclude federal contracts and public works projects, such as highways, waterways, and reservoirs.

The bank debit statistics for SMSA's and most central metropolitan cities are collected by the Federal Reserve Bank of Dallas. Most other bank debits figures shown are collected from cooperating banks by the Bureau of Business Research.

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

Footnote symbols are explained on pages 187 and 197.

		Percent	change			Percent chang
Departed one and indicates	Jun 1973	fro May	om Jun	Jan-Jun 1973	Jan-Jun 1972	1973 from
Reported area and indicator	1973	1973	1972	1973	1972	1972
ABILENE SMSA						
Jones and Taylor Counties; population 113,959						
Jrban building permits (dollars)	2,582,507	- 35	167	17,558,649	9,262,073	90
Bank debits, seas. adj. (\$1,000)	267,892	3	22	1,503,412	1,267,091	19
Nonfarm employment	40,800	**	2	40,392	39,667	2
Manufacturing employment	5,990	2	7	5,851	5,466	7
Inemployed (percent)	3.2	10	- 20	2.81	3.3 1	- 15
MARILLO SMSA						
Potter and Randall Counties; population 144,396						
rban building permits (dollars)	9,120,140	106	30	32,904,419	18,629,897	77
ank debits, seas. adj. (\$1,000)	921,124	17	32	4,637,419	3,658,604	27
onfarm employment	60,600	**	1	59,967	60,523	- 1
Manufacturing employment	8,340	1	3	8,230	8,147	î
Inemployed (percent)	3.5	17	- 31	3.1	4.3	- 28
, , , , , , , , , , , , , , , , , , , ,	0.0					
USTIN SMSA						
Travis County; population 295,516						
rban building permits	15,490,608	- 14	- 51	124,565,141	131,773,622	- 5
ank debits, seas. adj. (\$1,000)	1,181,909	8	16	6,887,787,	6,199,486,	11
onfarm employment	156,300	- 1	4	155,733	147,367	6
Manufacturing employment	13,960	3	7	13,533	12,893	5
Jnemployed (percent)	3.1	48	- 3	2.2	2.3	- 4
EATHORN BORN ARMININ OR AND						
EAUMONT-PORT ARTHUR-ORANGE SMSA						
Jefferson and Orange Counties; population 315,943						
rban building permits	6,445,453	2	42	28,449,872	24,535,169	16
ank debits, seas. adj. (\$1,000)	673,511	5	14	3,918,695	3,424,109	14
onfarm employment	123,400	**	**	123,183	121,583	1
Manufacturing employment	38,600	**	2	38,200	37,183	3
Inemployed (percent)	5.5	15	**	5.01	5.4	- 7
ROWNSVILLE-HARLINGEN-SAN BENITO SMSA						
Cameron County; population 140,368						
rban building permits (dollars)	3,507,669	- 37	53	26,707,712	11,547,861	131
ank debits, seas. adj. (\$1,000)	284,683	9	37	1,514,746	1,240,302	22
Manufacturing employment	46,050	1	7	45,392	42,492	7
Jnemployed (percent)	8,160	**	6	8,085 [†] 7.2 [†]	7,192	12
nemployed (percent)	8.2	21	- 11	7.2	7.7 1	- 6
RYAN-COLLEGE STATION SMSA						
Brazos County; population 57,978						
Jrban building permits (dollars)	1,354,830	- 69	- 2	15,563,669	9,776,166	59
Bank debits, seas. adj. (\$1,000) Monthly employment reports are not available for	125,572	- 10	15	707,165	622,294	14
	. 41. T					

			change			Percent char
	Jun	fro May	om Jun	Jan-Jun	Jan-Jun	1973 from
Reported area and indicator	1973	1973	1972	1973	1972	1972
CORPUS CHRISTI SMSA	0.22					
Nueces and San Patricio Counties; population 284, Urban building permits	2,611,904	- 58	- 46	35,080,982	11 051 592	1.5
Bank debits, seas. adj. (\$1,000)	695,178	- 38 1	14	4,090,229,	41,054,582 3,612,458,	- 15 13
Nonfarm employment	102,400	1	**	101,350	100,795	1
Manufacturing employment Unemployed (percent)	11,390	1 31	- 10	11,192 4.3	10,752 5.0	4 - 14
DALLAS SMSA Collin, Dallas, Denton, Ellis, Kaufman, and Rockwall Counties; population 1,555,950 Urban building permits	20 422 222					
Bank debits, seas. adj. (\$1,000)	38,422,375 17,298,574	- 41 8	- 61 35	315,444,006 88,644,281	451,478,626 73,219,745	-30 21
Nonfarm employment	789,500	1	. 5	776,467	740,367	5
Manufacturing employment	165,850	2	7	161,308	150,705	7
Unemployed (percent)	3.0	43	- 17	2.21	2.9	- 24
FORT WORTH SMSA						
Johnson and Tarrant Counties; population 762,086			2.4	125 205 016	432 002 074	
Urban building permits (dollars) Bank debits, seas. adj. (\$1,000)	15,398,240 2,698,752	14	- 24 - 1	125,295,016 15,939,151,	132,882,964 14,332,468,	- 6 11
Nonfarm employment	310,200	1	2	306,017	298,440	3
Manufacturing employment Unemployed (percent)	74,100	1	2	73,492	71,783	2
onemployed (percent)	3.8	19	- 27	3.3	4.7	- 30
SOUTHWEST METROPLEX: DALLAS/FORT WORT Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Rockwall, and Tarrant Counties; population 2,3	18,036					
Urban building permits (dollars) Bank debits, seas. adj. (\$1,000)	53,820,615	- 32 7	- 54	440,739,022	584,361,500	- 25
Nonfarm employment	19,997,326 1,099,700	1	28	104,583,432	87,552,213 1,038,807	19 4
Manufacturing employment	239,950	2	6	234,800	222,488	6
Unemployed (percent)	2.4	- 4	- 41	2.4	3.4	- 29
EL PASO SMSA						
El Paso County; population 359,291						
Urban building permits (dollars) Bank debits, seas. adj. (\$1,000)	18,185,047 979,270	- 7 11	10 24	91,907,279 5,418,019 ₊	94,274,704 4,584,874	- 3 18
Nonfarm employment	133,400	**	3	132,583	127,317	4
Manufacturing employment	28,250	1	6	27,667	26,475	5
Unemployed (percent)	6.5	48	5	4.81	4.7	2
GALVESTON-TEXAS CITY SMSA						
Galveston County; population 169,812						
Urban building permits (dollars) Bank debits, seas. adj. (\$1,000)	1,221,998 282,299	- 35 4	29 9	11,462,023 1,736,648 ₊	17,831,872 1,501,018 ₊	- 36 16
Nonfarm employment	65,200	1	5	62,917	61,492	2
Manufacturing employment	11,100	1	**	11,000	11,167	- 1
Unemployed (percent)	5.9	20	- 14	4.81	6.4	- 25
HOUSTON SMSA						
Brazoria, Fort Bend, Harris, Liberty, and Montgomery Counties; population 1,985,031						
Urban building permits (dollars)	66,961,795	- 7	- 3	453,622,764	399,891,863	13
Bank debits, seas. adj. (\$1,000)	13,570,352	- 2	14	80,206,064	67,303,182	19
Nonfarm employment Manufacturing employment	934,500 158,900	**	3	923,183 155,200	898,617 150,667	3 3
Unemployed (percent)	4.0	48	- 9	2.8	3.3	- 15
KILLEEN-TEMPLE SMSA						
Bell and Coryell Counties; population 159,794				20.242.22	20.402.712	
Urban building permits (dollars) Bank debits, seas. adj. (\$1,000)	7,450,346 211,904	61	155 30	29,349,957 1,198,599	20,480,510 951,269	43 26
(Monthly employment reports are not available for		3	30	1,170,377	201,207	20
Temple SMSA.)						
LAREDO SMSA						
Webb County; population 72,859		1336			Section III.	
Urban building permits (dollars) Bank debits, seas. adj. (\$1,000)	689,515 124,828	- 70 9	- 83 31	10,918,328 683,681 _±	10,492,580 553,814 _±	23
Nonfarm employment	25,100	1	**	25,092	24,885	1
Manufacturing employment	1,600	5	3	1,618	1,527	6
Unemployed (percent)	11.3	23	- 14	11.0	12.8	- 14

<u> </u>		Percent				Percent change
	Jun	fro May	Jun	Jan-Jun	Jan-Jun	1973 from
Reported area and indicator	1973	1973	1972	1973	1972	1972
LONGVIEW-MARSHALL METROPOLITAN AREA						
Gregg and Harrison Counties; population 120,770 Urban building permits (dollars)	821,259	- 81	- 44	17,555,401	13,846,542	27
Bank debits (\$1,000)	196,776	- 5	13	1,188,815 51,000	1,026,915	16
Nonfarm employment	51,000 15,640	- 1 **	1 2	15,508	14,455	7
Manufacturing employment Unemployed (percent)	4.6	24	- 16	3.8	5.0 1	- 24
LUBBOCK SMSA						
Lubbock County; population 179,295	5,329,455	- 19	- 15	44,743,533	29,032,215	54
Urban building permits (dollars) Bank debits, seas. adj. (\$1,000)	673,514	5	49	3,729,325+	2,778,795+	34
Nonfarm employment	74,600	- 2 2	6 8	75,467 8,487	70,477 † 7,923 ‡	7
Manufacturing employment Unemployed (percent)	8,810 3.1	48	- 21	2.2	2.8	- 21
McALLEN-PHARR-EDINBURG SMSA Hidalgo County; population 181,535						
Urban building permits (dollars)	5,720,698	62	47	28,865,096	17,001,450	70 30
Bank debits, seas. adj. (\$1,000)	285,315 45,800	- 1 - 2	43 8	1,590,353 46,542	1,225,813 43,788	6
Nonfarm employment Manufacturing employment	5,040	- 1	10	4,982	4,228	18
Unemployed (percent)	8.2	28	- 11	7.61	8.1	- 6
MIDLAND SMSA						
Midland County; population 65,433 Urban building permits (dollars)	1,685,661	- 36	139	10,104,358	10,861,706	- 7
Bank debits, seas. adj. (\$1,000)	224,665	7	6	1,249,705	1,102,236	13 - 3
Nonfarm employment	60,600 5,830	**	- 2 7	60,333 5,629	61,915 5,331	- 3
Manufacturing employment Unemployed (percent)	4.2	45	- 25	3.0	4.1	- 27
(Employment data are reported for the combined M Odessa SMSA's since employment figures for Midland Counties, composing one labor-market area, are recombined form by the Texas Employment Commission.	and Ector ecorded in					
ODESSA SMSA						
Ector County; population 91,805			202	8,849,477	16,952,853	- 48
Urban building permits (dollars) Bank debits, seas. adj. (\$1,000)	2,603,076 213,389	156 4	283 33	1,100,486,	925,410+	19
Nonfarm employment	60,600	**	- 2 7	60,333 t 5,629 t	61,915 5,331	- 3 6
Manufacturing employment Unemployed (percent)	5,830 4.2	3 45	- 25	3.0	4.1	- 27
(Employment data are reported for the combined Modessa SMSA's since employment figures for Midland Counties, composing one labor-market area, are recombined form by the Texas Employment Commission	and Ector ecorded in					
SAN ANGELO SMSA						
Tom Green County; population 71,047 Urban building permits (dollars)	504,390	- 49	- 17	5,420,495	3,777,704	43
Bank debits, seas. adj. (\$1,000)	202,947	19	40	1,008,148	818,569	23
Nonfarm employment Manufacturing employment	24,750 4,610	- 1 2	3	24,750 4,454	24,020 4,231	5
Unemployed (percent)	4.5	29	- 10	3.7	3.9 [†]	- 5
SAN ANTONIO SMSA Bexar and Guadalupe Counties; population 864,014						
Urban building permits (dollars)	20,875,008	- 7	- 4	128,630,317	126,587,189 10,986,541 ₊	2 18
Bank debits, seas. adj. (\$1,000) Nonfarm employment	2,296,514 320,800	2 **	26 2	13,003,459 317,350	304,317	4
Manufacturing employment Unemployed (percent)	35,975 5.6	** 65	- ² ₅	35,767	35,267 t 4.2 t	1 - 17
	3.0	0.5				
SHERMAN-DENISON SMSA Grayson County; population 83,225						
Urban building permits (dollars)	524,939	- 51	- 30	5,785,507	6,282,663	- 8 12
Bank debits, seas. adj. (\$1,000) Nonfarm employment	123,783 33,150	4	15 1	717,983 32,908	640,069 32,192	2
Manufacturing employment	10,570	1	- 1	10,633	10,442	2 - 10
Unemployed (percent)	4.3	30	- 12	3.6	4.01	- 10

186 TEXAS BUSINESS REVIEW

		Percent	change			Percent change
			om			1973
Reported area and indicator	Jun 1973	May 1973	Jun 1972	Jan-Jun 1973	Jan-Jun 1972	from 1972
TEXARKANA SMSA						
Bowie County, Texas, and Miller County, Arkansas population 101,198	;					
Urban building permits (dollars)	518,931	52	- 8	2,625,859	4,954,818	- 47
Bank debits, seas. adj. (\$1,000)	174,504	8	7	987,859,	884,139	12
Nonfarm employment	40,400	**	1	40,675	39,832	2
Manufacturing employment	9,070	1	2	9,247	8,867	4
Unemployed (percent)	6.4	28	- 10	5.4	6.1	- 11
(Since the Texarkana SMSA includes Bowie County Miller County in Arkansas, all data, including popula the two-county region.)						
TYLER SMSA						
Smith County; population 97,096						
Urban building permits (dollars)	1 567 147	- 39	0.5	14 004 666	7.052.976	111
Bank debits, seas. adj. (\$1,000)	1,567,147 252,840	- 39	85	14,884,666	7,052,876	17
Nonfarm employment	42,100	**	10	1,525,994	1,308,089	
Manufacturing employment	13,890	1	6	13,568	12,730	4 7
Unemployed (percent)	5.0	25	4	4.0	3.7	8
	3.0	23	7	4.0	3.7	0
WACO SMSA McLennan County; population 147,553						
Urban building permits (dollars)	2,778,407	47	- 38	22,541,917	18,158,461	24
Bank debits, seas. adj. (\$1,000)	370,462	- 1 **	6	2,237,682	1,820,269	23
Nonfarm employment	63,000		3	62,850	60,575	4
Manufacturing employment Unemployed (percent)	13,600	1	1	13,840	12,805	8
onemployed (percent)	4.2	31	- 11	3.1 †	3.9	- 21
WICHITA FALLS SMSA						
Archer and Wichita Counties; population 127,621						
Urban building permits (dollars)	1,078,367	- 71	- 35	12,548,631	8,201,540	53
Bank debits, seas. adj. (\$1,000)	298,783	8	20	1,640,096,	1,439,515,	14
Nonfarm employment	45,350	**	2	45,258	44,145	3
Manufacturing employment	5,800	3	11	5,736	5,139	12
Unemployed (percent)	3.0	20	- 29	2.7	3.2	- 16

AUGUST 1973 187

^{**} Absolute change is less than one half of 1 percent.
† Monthly average.
Urban-building permit data are preliminary and subject to revision.

INDICATORS OF LOCAL BUSINESS CONDITIONS FOR INDIVIDUAL MUNICIPALITIES

BREWSTER Alpine	7,780	68,000	- 21	- 62	216,885	594,649	- 64	9,300	31	45	42,555	41,394	8
BURLESON Caldwell	9,999	:	:	:		:		5,102	- 1	11	31,367	27,401	14
BURNET Marble Falls	11,420 2,209	:	:	:	:	:	:	18,996	∞ 	97	86,265	50,671	70
CALDWELL Lockhart	21,178 6,489	170,035	- 18	- 10	1,273,728	2,124,161	- 40	12,035	7	7	74,304	61,391	21
CALHOUN Point Comfort Port Lavaca Seadrift	17,831 1,446 10,491 1,092	59,850 2,000	- 62	* ::	750,021		!!!	1,673	- 12	57	10,804	5,343	-18
CAMERON (Constitutes Brownsville-Harlingen-San Benito SMSA) Brownsville Harlingen La Feria Los Fresnos Port Isabel San Benito	52,522 33,503 2,642 1,297 3,067 15,176	2,614,572 754,799 33,400 63,467 74,831	- 18 - 40 101 - 83 - 90	107 - 4 76 	18,473,385 5,746,794 132,301 644,767 1,708,386	6,971,825 3,680,067 237,045	165 - 44 	106,730 101,036 3,728 2,429 8,224 11,986	1 1 2 8 2 4 4 4	37 20 33 26 93 37	584,330 600,251 22,805 14,365 64,789	484,551 513,805 17,729 11,919 52,986	21 17 29 21 21
CASTRO Dimmitt	10,394	:	:	:	:	:	:	27,519	- 26	7	194,286	158,001	23
CHEROKEE Jacksonville	32,008 9,734	129,500	- 44	464	1,122,744	622,500	80	33,759	*	32	201,823	151,717	33
COLEMAN Coleman	10,288 5,608	5,750	:	- 61	144,252	i	:	:	:		:	:	:
COLLIN (In Dallas SMSA) McKinney Plano	66,920 15,193 17,872	566,783	\$:	319	2,860,868	2,418,788	18 :	18,578 35,286	1 4 æ	- 7	110,136	99,292	111
COLORADO Eagle Lake	17,638	:	:	:		:		6,054	23	14	34,642	34,866	1 1
COMAL New Braunfels	24,165 17,859	312,707	- 50	- 17	3,054,356	4,115,323	- 26	31,740	1	*	191,601	165,733	16
COOKE Gainesville Muenster	23,471 13,830 1,411	140,950	- 46	- 48	1,575,365	3,621,610 82,152	- 57	28,747 5,181	N 4	16	169,541	138,287	23
CORYELL (In Killeen-Temple SMSA) Copperas Cove Gatesville	35,311 10,818 4,683	400,720	- 62	- 61	4,184,313	4,156,673	- :	8,994	1 1	47	45,834 80,944	32,842 65,837	40 23
CRANE Crane	4,172	0	:	:	20,102	91,552	- 78	2,868	5	6	18,124	16,367	==
DALLAS (In Dallas SMSA) Carrollton Dallas	1,327,321 13,855 844,401	6,224,928 24,822,306	11 - 3	13	25,250,950 157,557,260	24,598,216 238,384,036	3 - 34	23,546 15,835,492	4 9	10	145,969 83,887,953	127,325 69,612,892	15

Percent Perc					Urban b	Urban building permits					Ba	Bank debits		
COUNTY Population 1973				Perc	ent			Percent		Perc	cent			Percent
Say 3 (a) 2,492 (b) 2,492 (c) 1,992	COUNTY	Population	Jun 1973 (dollars)	Jun 1973 from May 1973	Jun 1973 from Jun 1972	Jan-Jun 1973 (dollar		Jan-Jun 1973 from Jan-Jun 1972	Jun 1973 (thousands of dollars)	Jun 1973 from May 1973	Jun 1973 from Jun 1972	Jan-Jun Jan-Jun 1973 1972 (thousands of dollars)	Jan-Jun 1972 of dollars)	Jan-Jun 1973 from Jan-Jun 1972
Graffer 10,522 Graffer 10,523 Graffer 11,529 Graffer 11,529	DALLAS (continued) Farmers Branch Garland Grand Prairie	27,492 81,437 50,904	7,952,681 4,695,324 1,643,843	213 20 - 55	591	25,772,753	22,886,892		28,931 88,453 42,261	9 1 - 4	\(\alpha \omega	159,052 560,175 252,736	153,774 452,827 233,420	24 8
SMITH 18,999 SMITH 19,999 SMITH SMITH	Irving Lancaster Mesquite Richardson	97,260 10,522 55,131 48,582	6,935,385	52	83	28,562,458	17,127,920		122,177 12,412 40,259 94,169	- 4 4 5	23 26 7	705,822 75,784 223,168 566,230	570,534 58,281 200,076 544,755	24 30 12 4
SMITH	DAWSON I ameed	16,604	370,546	204	09	:	:	:	13,172	21	61	64,843	47,108	38
Dollas SMSA) 15,633 10,010 10,010 10,010 10,010 10,010 10,010 11,000	DEAF SMITH Hereford	18,999	1,070,600	870	221	2.244.070	1.820.600		24,436	11 -	12	197,876		13
Pallate SMISA 39,874 6,898,873 236 125 14,373,248 13,714,989 13 91,069 ** * * * * * * * * * * * * * * * * *	DENTON	75,633											•	:
TT (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	(In Dallas SMSA) Denton Justin Lewisville Pilot Point	39,874 741 9,264 1,663	6,898,573 11,000 1,842,150 37,200	236 51 - 15	125 - 8 430 4	14,373,248 7,282,326 211,800	12,714,989	13	91,069 2,176 36,382 3,469	* ~ ~ 11	33 * 8	529,897 11,821 205,593 19,415	460,335 9,064 143,718 21,304	15 30 43 - 9
AND And And And And And And And An	DE WITT Yoakum (see Lavaca)	18,660												
San SMSA) 78,380 78,380 2,603,076 156 283 8,849,477 16,952,853 -48 202,397 -2 9 1,852 13,452 29 1,11,900 13,452 18,18425 20,00,837 2,641,054 -24 26,205 -7 18,18425 19,1806 19,1806 11,1806 11,1806 11,1906 11,1	EASTLAND Cisco	18,092 4,160		:		i	:	:	10,402	S	93	51,071	30,432	89
Abilitation of the contract of	ECTOR (Constitutes Odesse SMSA)	91,805												
Dallas SMSA) 2,322 78,000 78,000 71 11 13,452 980,187 176 18 18,185,047 170 18 18,191 18,191 18,191 18 18,191 18 18,191 18 18,191 18 18,191 18 18,191 18 18,191 18 18 18 18 18 18 18 18 18	Odessa	78,380	2,603,076	156	283	8,849,477	16,952,853	- 48	202,397	- 2	29	1,096,248	928,728	18
tutes El Paso SMSA) 322,261 18,185,047 - 7 10 91,907,279 94,274,704 - 3 900,396 1 18 18,191 9,277 199,100 30 5 1,111,900 804,250 38 19,539 - 3 17 17,650 17,650 5,500 - 86 - 67 162,865 172,050 - 5 172,050 - 7 18 18,18425 172,050 - 8 18,425 172,050 - 8 18,425 172,050 - 8 18,425 1	ELLIS (In Dallas SMSA) Midlothian Waxahachie	46,638 2,322 13,452	78,000	- 71 176	- 11 - 28	931,950	961,890		3,761 26,205	- 16	14	24,417	18,430	32
322,261 18,185,047 - 7 10 91,907,279 94,274,704 - 3 900,396 1 18 5, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18	EL PASO (Constitutes FI Paso SMSA)	359,291												
ille 9,277 199,100 30 5 1,111,900 804,250 38 19,539 - 3 17 22,705 7,698 97,950 - 39 - 53 1,207,004 608,432 98 18,425 3 21 17,650 2,294 5,500 - 86 - 67 162,865 172,050 - 5 UD s2,314 sston SMSA) 5,314 sston 5,500 - 78 6 2,820,854 1,012,706 179	El Paso	322,261	18,185,047	1 -	10	91,907,279	94,274,704	1 3	900,396	1	18	5,410,159	4,609,583	17
22,705 7,698 97,950 - 39 - 53 1,207,004 608,432 98 18,425 3 21 17,650 2,294 5,500 - 86 - 67 162,865 172,050 - 5 UD ston SMSA) 52,314 131,400 - 78 6 2,820,854 1,012,706 179	ERATH Stephenville	18,191	199,100	30	v	1,111,900	804,250	38	19,539	ا د	17	119,411	97,993	22
urg 2,294 5,500 -86 -67 162,865 172,050 - 5	FANNIN Bonham	22,705	97,950	- 39	- 53	1,207,004	608,432	86		ю	21	108,300	90,277	20
on SMSA) 5,7,77 131,400 - 78 6 2,820,854 1,012,706 179	FAYETTE Schulenburg	17,650 2,294	2,500	98 -	<u>- 67</u>	162,865	172,050	٧,	:		:			:
5,777 131,400 - 78 6 2,820,854 1,012,706 179	FORT BEND	52,314												
14,313 2 36	(In Houston SMSA) Richmond Rosenberg	5,777	131,400	- 78	9:	2,820,854	1,012,706	179	14,313	: 6	36	82,061	61,412	: 6

190

90098 73,102 176,000 -58 3,098 -10 2,000 -97 167 195,325 162,350 20 13,169 -1		357,638 -75 -38 6,710,781 9,319,234 -28 166,862 864,360 79 134 4,827,318 6,016,935 -20 36,697 -1	57,165 - 65 77 806,262 550,460 46 23,921	650 - 97 333 53,416 48,585 10	80,200 - 37 - 20 497,180 47,376 -	274,476 - 3 - 23 1,723,309 1,814,281 - 5 34,019 - 5 463 - 66 - 19 3 382,498 4 256,382 - 21 77,687		71,450 - 25 161 403,110 524,972 - 23 7,005 - 61,050 - 74 - 36 1,167,667 2,463,106 - 53 28,156 - 590,500 - 85 - 54 13,366,200 9,648,500 39 122,852 -		82,578 - 78 1,054,577 2,874 11 518,382 - 6 198 1,821,569 1,157,907 57 34,362 - 4	2,000 - 86 - 92 4,403 57,801 - 92 302,600 - 66 40 1,924,555 2,083,800 - 8 82,131 - 2	** ** 0	16,644 – 7		479,333 -58 -53 3,339,943 6,983,601 -52 101,046 29 198,290 -86 -3 4,051,416 1,654,387 145 79,568 -5 2,063,049 347 270 7,419,483 11,117,942 -33 18,554 3 57,982,360 -2 -4 387,016,774 298,894,552 29 12,298,927 -5 116,700 -61 -75 2,246,143 15,890 -7 218,919 26 13 1,099,936 1,139,780 -3 6,328 1 1,266,188 -64 -68 17,095,716 25,915,991 -34 141,534 -4 10,786 -89 -74 689,517 25,915,991 -3 25,373 -7		98,259 - 36 33 2,618,424 1,209,964 116 36,400 - 4
GAINES 11,593 Seagraves 2,440 Seminole 5,007	ON 16 tutes Galveston-Texas	City SMSA) 10,776 Dickinson 61,809 La Marque 16,131 Texas City 38,908	GILLESPIE 10,553 Fredericksburg 5,326	GONZALES 16,375 Nixon 1,925	GRAY 26,949 Pampa 21,726	GRAYSON 83,225 (Constitutes Sherman-Denison SMSA) 24,923 Sherman 29,061	neview-Marshall	Metropolitan Area) 5,574 Gladewater Kilgore 9,495 Longview 45,547	GUADALUPE 33,554	(in San Antonio SMSA) 4,061 Schertz 4,061 Seguin 15,934	HALE 34,137 Hale Center 1,964 Plainview 19,096	HARDEMAN 6,795 Quanah 3,948	HARDIN 29,996 Silsbee 7,271	HARRIS 1,741,912	(In Houston SMSA) Baytown Belaire Belaire 19,009 Deer Park Houston Humble La Porte Pasadena South Houston 11,527 Tag 12,773 Tomball 2,734	HARRISON 44,841 (In Longview-Marshall	ΞZ

					Organ bunding permits					à	Bank debits		
			Percent	ent			Percent		Perc	Percent			Percent
COUNTY	Population	Jun 1973 (dollars)	Jun Jun 1973 19 from fro May Jun 1973 19	Jun 1973 from Jun 1972	Jan-Jun J 1973 (dollars)	Jan-Jun 1972 1rs)	Jan-Jun 1973 from Jan-Jun 1972	Jun 1973 (thousands of dollars)	Jun 1973 from May 1973	Jun 1973 from Jun 1972	Jan-Jun 1973 (thousands	Jan-Jun 1972 of dollars)	Jan-Jun 1973 from Jan-Jun 1972
HASKELL Haskell	8,512	22,000	175	- 48	96,901	206,853	- 53	9,024	31	58	44,236	36,675	21
HAYS San Marcos	27,642 18,860		:	:	:	:	:	16,597	- 12	-	109,434	101,102	∞
HENDERSON Athens	26,466 9,582	15,380	88	88 	1,167,505	1,634,600	- 29	26,946	6	20	149,165	118,304	26
HIDALGO (Constitutes McAllen-Pharr- Edinhurg SMSA)	181,535												
Alamo Donna	4,291	49,025		78	644,753	450,766		6,220 5,610	- 1 8 7	47	38,667	28,412	36
Edinburg Elsa	17,163 4,400	359,406	- 62	92 –	6,488,522 226,408	2,606,688		32,796	- 19 9	$\frac{-1}{163}$	215,778 63,300	192,406	12 104
McAllen Mercedes	37,636	3,171,820	172	- 3	11,670,908	10,349,134	13	101,980	1 6	57	613,335	445,022	38
Mission	13,043	131,065	- 49 984	5 574	2,603,366	810,705	221	31,362	- 5 - 19	44	197,088	149,517	32 26
San Juan Weslaco	5,070	1,004,991		::	3,661,962	1,122,461	226	6,209	7 - 7	13	38,304 138,975	28,098 133,878	36
HOCKLEY Levelland	20,396	112,850	- 58	66	782,307	948,426	- 18	28,127	6 1	14	208,534	177,540	17
HOOD Granbury	6,368 2,473	:	:	:	:	:	:	4,936	n	17	27,991	22,278	26
HOPKINS Sulphur Springs	20,710	251,364	52	260	:	:	:	43,369	9	30	236,004	198,735	19
HOWARD Big Spring	37,796 28,735	107,607	52	22	2,566,091	581,483	341	70,616	*	12	436,852	403,209	∞
HUNT Greenville	47,948 22,043	:	:	:	:	:	:	52,177	15	61	245,467	186,105	32
HUTCHINSON Borger	24,443 14,195	4,250	- 97	06 -	507,239	1,577,275	- 68		:	:	:	:	:
JACKSON Edna	12,975 5,332	28,479	- 61	- 57	429,639	:	:	9,043	- 15	9	60,836	57,874	S
JASPER Jasper Kirbyville	24,692 6,251 1,869	60,850	- 32	363	244,450	562,000	- 57	22,354	11	1 42	136,265	113,559	20
JEFFERSON (In Beaumont-Port Arthur-	244,773												
Orange SMSA) Beaumont Groves Nederland Port Arthur Port Neches	115,919 18,067 16,810 57,371 10,894	5,136,105 298,788 54,476 240,635 288,471	39 27 - 86 - 87 - 15	55 134 - 56 - 44 - 21	19,754,358 1,150,550 982,997 3,987,757	16,274,669 1,147,251 3,205,019	* * .:	426,629 22,190 16,801 106,256 20,789	L 2 2 4 1 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	13 13 13 3	2,496,093 133,965 99,975 630,427 127,190	2,152,087 135,049 80,785 550,650	16 - 1 24 14 9

192 TEXAS BUSINESS REVIEW

JIM WELLS Alice	33,032 20,121	478,314	146	175	2,573,081	2,158,774	19	56,953	- 31	17	:	:	:
JOHNSON (In Fort Worth SMSA)	45,769												
Burleson Cleburne	7,713	127,004 85,880	- 62 - 80	- 53	1,078,199	1,875,746	: 4	12,754 29,863	1 3 7	29	68,709 178,810	53,522 139,005	28
KARNES Karnes City	13,462 2,926	54,000	:	8	116,801	341,547	99 –	956'9	18	29	37,882	30,068	26
KAUFMAN (In Dallas SMSA) Terrell	32,392	247.300	160	- 64	1.138.699	1,466,331	- 22	:	:	:	:	:	:
KIMBLE Junction	3,904 2,654	:	:	:			:	3,723	- 11	*	25,183	19,905	27
KLEBERG Kingsville	33,166 28,711	431,378	82	43	2,110,641	4,459,269	- 53	33,757	v	*	189,916	173,571	6
LAMAR Paris	36,062 23,441	153,613	- 68	- 89	1,644,299	2,781,529	- 41	:	i	:	:	:	:
LAMB Littlefield	17,770 6,738		:	:	:	:		10,594	∞ 1	11	78,809	72,131	6
LAMPASAS Lampasas	9,323	111,500	233	- 37	809,850	812,390	*	16,836	ю	18	689,76	77,942	25
LAVACA Hallettsville Yoakum	17,903 2,712 5,755	25,475	- 57 - 63	- 53	518,293 356,644	212,390 871,024	144 – 59	6,261	6 %	23	41,748	33,682 85,056	24
LEE Giddings	8,048 2,783	33,950	- 23		475,888	137,971	245	11,822	13	34	61,194	48,347	27
LIBERTY (In Houston SMSA)	33,014												
Dayton Liberty	3,804 5,591	89,025 272,358	- 26 - 7	98	394,775 1,027,149	337,673	17	10,152	9 6	18	63,432 113,390	52,114 99,856	22 14
LIMESTONE Mexia	18,100 5,943	34,600	63	102	145,776	215,845	- 32	15,353	23	28	76,894	64,665	19
LLANO Kingsland Llano	6,979 1,262 2,608	43,250	:-		229,150	206,485	:=	8,023	7.5	13	50,357 67,713	54,509 40,891	8 9 9
LUBBOCK (Constitutes Lubbock SMSA)	179,295												
Lubbock Slaton	149,101 6,583	5,202,556	- 20 - 93	- 16 - 93	44,327,510 234,573	28,804,041 238,774	54 - 2	579,045	1 - 1 - 5	43	3,607,210 52,221	2,706,883 44,563	33
LYNN Tahoka	9,107 2,956	0	:	:	154,262	74,004	108	7,786	14	37	96,960	42,572	34
McCULLOCH Brady	8,571	166,450	111	58	507,880	400,350	27	14,734	4	19	84,691	65,750	29
MCLENNAN	147,553												
(Constitutes waco SMSA) McGregor Waco	4,365 95,326	2,689,407	121	- 38	266,026	17,527,872		8,690	2 %	12 5	48,701	38,836 1,896,090	25

AUGUST 1973

												The second secon	
			Percent	Percent change			Percent change		Percent	Percent change			Percent change
COUNTY	Population	Jun 1973 (dollars)	Jun 1973 from May 1973	Jun 1973 from Jun 1972	Jan-Jun 1973 (dollars)	Jan-Jun 1972 irs)	Jan-Jun 1973 from Jan-Jun 1972	Jun 1973 (thousands of dollars)	Jun 1973 from May 1973	Jun 1973 from Jun 1972	Jan-Jun 1973 (thousands	Jan-Jun 1972 of dollars)	Jan-Jun 1973 from Jan-Jun 1972
MATAGORDA Bay City	27,913	10,158	- 89	- 80	884,742	376,536	135	30,365	S	17	176,791	157,545	12
MAVERICK Eagle Pass	18,093	149,565	- 17	40	1,342,183	1,280,201	S	18,402	Э	28	109,008	103,974	S
MEDINA Castroville Hondo	20,249 1,893 5,487	122,800	26	- 26	460,804	546,132	- 16	1,984	* :	10	12,782	10,102	27
MIDLAND (Constitutes Midland SMSA) Midland	65,433	1,685,661	- 36	139	10,104,358	10,861,706	- 7	209,001	-	∞	1,245,149	1,099,305	13
MILAM Cameron Rockdale	20,028 5,546 4,655	64,027	::	250	150,601	173,323	- 13	10,098	3 5	20	62,385 58,528	54,829 51,822	13
MILLS Goldthwaite	4,212	:	:	:	:	:	:	10,500	9	7	55,271	45,643	21
MITCHELL Colorado City	9,073		:	:	:	:	:	7,506	- 12	1	50,200	44,783	12
MONTGOMERY (In Houston SMSA)	49,479												
Conroe	11,969	603,702	- 46	- 50	:	:	:	63,424	- 20	=======================================	428,458	394,514	6
MOORE Dumas	14,060 9,771	675,020	126	374	2,057,348	896'808	154	:	:	:	:	:	:
NACOGDOCHES Nacogdoches	36,362 22,544	608,950	35	37		:	:		:	:	:	:	:
NAVARRO Corsicana	31,150	321,310	22	85	2,530,758	1,356,176	87	43,861	5	S	277,713	218,828	27
NOLAN Sweetwater	16,220	298,995	302	521	1,538,347	245,002	528	29,194	6	20	174,709	154,325	13
NUECES Chairti SMSA)	237,544												
Gin Corpus Cintsti SiniSA) Bishop Corpus Christi Port Aransas Robstown	3,466 204,525 1,218 11,217	2,195,974	- 58	- 33	30,067,905	34,776,504	- 14	3,175 586,821 1,450 19,118	- 32 - 2 - 13 - 11	20 111 12	3,539,995 6,849 121,056	3,125,116 6,437 114,692	113
ORANGE (In Beaumont-Port Arthur- Orange SMSA)	71,170	461.774	397	146	1,727,934	1.290.287	34	60 878	,	-	201 100		
PALO PINTO Mineral Wells	28,962	13,550	- 13	9	331,131	256,742	29	40,648	ı m	30	212 423	102,000	α ,

194 TEXAS BUSINESS REVIEW

PANOLA Carthage	15,894 5,392	209,000	16	111	749,100	698,775	7	7,848	∞ 1	22	46,850	39,263	19
PARKER Weatherford	33,888	66,859	53	7	331,141	1,525,390	- 78	33,204	3	6	191,886	169,857	13
PARMER Friona	10,509	181,000	306	429	429,800	332,750	29	38,563	- 16	38	241,229	175,940	37
PECOS Fort Stockton	13,748 8,283	140,250	- 93	:	2,342,580	481,275	387	16,718	10	32	107,233	75,010	43
POTTER (In Amarillo SMSA) Amarillo	90,511	8,922,640	116	325	31,776,644	13,267,618	140	849,118	12	29	4,502,426	3,567,287	26
RANDALL (In Amarillo SMSA) Amarillo (see Potter) Canyon	53,885	197,500	- 33	96 -	1,127,775	5,362,279	- 79	21,621	7	64	111,625	75,634	84
REEVES Pecos	16,526	93,850	15	- 95	:		:	29,411	3	20	187,572	166,785	12
REFUGIO Refugio	9,494	0	:	*	52,903	178,951	- 70	860'9	- 10	11	37,185	31,064	20
RUSK Henderson Kilgore (see Gregg)	34,102	277,130	=	* *	2,692,389	994,847	171	31,220	4	22	177,018	144,694	22
SAN PATRICIO (In Corpus Christi SMSA) Aransas Pass Sinton	47,288 5,813 5,563	79,390	- 80	1 :	1,985,384	822,620 555,165	141 - 54	12,979	6 6	13	74,157 59,347	65,537 61,312	13
SAN SABA San Saba	5,540 2,555	44,000	- 54	:	292,658	57,400	410	14,572	- 10	43	:	:	:
SCURRY Snyder	15,760	64,220	- 59	- 43	931,254	1,287,300	- 28	24,019	- 10	- 1	153,918	128,092	20
SHACKELFORD Albany	3,323	45,000	:	:	:	:	:	3,853	10	- 2	22,018	21,992	*
SHERMAN Stratford	3,657 2,139	90,000	- 56	165	362,502	423,382	- 14	22,866	- 21	36	169,524	95,127	78
SMITH (Constitutes Tyler SMSA) Tyler	97,096	1,527,147	- 40	86	13,911,698	6,816,576	104	226,167	1 3	∞	1,441,388	1,227,827	17
STEPHENS Breckenridge	8,414 5,944	16,500	*	- 73	180,150	166,225	∞	:	:	:	:	:	:
SUTTON Sonora	3,175 2,149	15,600	- 16	:	444,494	55,763	269	4,649	-	- 14	27,352	23,763	15
H	716,317 90,643 10,049	12,011,110 273,900	50 - 25	62 - 60	55,306,428 3,734,497	57,471,089 5,498,546	- 4	147,603	4 4	9 9	819,014	743,650	10
Burleson (see Johnson) 5. Euless Fort Worth	19,316 393,476	1,531,645 8,229,314	125	188	4,049,145	3,874,384	89	14,944 2,271,324	, * 4		81,851 13,823,481	12,628,264	: 6

				Ologii o	Oroan building permits					Da	Bank debits		
			Percent change	ent			Percent		Percent	ent			Percent change
COUNTY City P	Population	Jun 1973 (dollars)	Jun 1973 from May 1973	Jun 1973 from Jun 1972	Jan-Jun 1973 (dollars)	Jan-Jun 1972 s)	Jan-Jun 1973 from Jan-Jun 1972	Jun 1973 (thousands of dollars)	Jun 1973 from May 1973	Jun 1973 from Jun 1972	Jan-Jun Jan-Jun 1973 1972 (thousands of dollars)	Jan-Jun 1972 of dollars)	Jan-Jun 1973 from Jan-Jun 1972
TARRANT (continued) Grapevine North Richland Hills White Settlement	7,023 16,514 13,449	929,339 579,979 9,510	480 - 30 - 54	- 58	3,034,171 3,887,307 977,244	1,003,070 4,178,500 838,613	202	17,051 25,003 10,690	27.1	51 5 15	89,965 145,766	65,511	37 10
TAYLOR (In Abilene SMSA) Abilene	97,853	2,466,107	- 34	165	17.159.499	8.932.516	92	229.045	1	81	1.330.401	1.110.232	20
TERRY Brownfield	14,118	75,200	70	- 65	409,863	904,365	- 55	30,658	7	17	213,640	187,599	14
TITUS Mount Pleasant	16,702	138,590	- 24	- 49	1,090,678	1,326,871	- 18	32,917	- 2	6 -	178,202	172,186	6
TOM GREEN (Constitutes San Angelo SMSA) San Angelo	71,047	504,390	- 49	- 17	5,420,495	3,777,704	43	198,908	15	36	1,013,576	824,799	23
TRAVIS (Constitutes Austin SMSA)	295,516												
Austin UPSHUR	251,808	15,490,608	- 13	- 51	124,137,641 1	130,941,622	5	1,192,534	∞ I	17	7,052,833	6,374,399	11
Gladewater (see Gregg)													
UPTON McCamey	4,697	:	:	:	:	:	:	2,267	S	4	13,796	13,933	1
UVALDE Uvalde	17,348	188,925	16	74	1,655,851	1,165,573	42	40,165	19	53	216,361	155,396	39
VAL VERDE Del Rio	27,471 21,330	307,797	83	49		:	:	32,800	7	15	189,524	152,019	25
VICTORIA Victoria	53,766 41,349	303,657	- 46	- 77	5,084,134	4,565,338	11		:	:	:		
WALKER Huntsville	27,680 17,610	347,550	- 38	- 31	3,557,703	5,248,982	- 32	31,646	- 111	7	201,440	174,847	15
WARD Monahans	13,019 8,333	1,400	- 97	66 -	260,047	236,508	10	14,888	6	*	87,565	85,259	ю
WASHINGTON Brenham	18,842 8,922	354,039	- 85	- 20	3,701,573	2,255,978	64	35,094	2	20	204,726	173,425	18
WEBB (Constitutes Laredo SMSA)	72,859		1										
Laredo	69,024	689,515	- 70	- 83	10,918,328	10,492,580	4	122,343	-	28	692,835	560,875	24
WHARTON El Campo	36,729	:	:	:	:	:		25,237	10	10	150,418	137,531	6

196 TEXAS BUSINESS REVIEW

WICHITA (In Wichita Falls SMSA) Burkburnett Iowa Park Wichita Falls	9,230 5,796 97,564	216,125 6,475 855,767	491 - 64 - 77	640 - 75 - 46	590,206 11,324,654	275,217	114	16,353 4,945 259,772	44 6 1	41 7 19	72,497 28,905 1,499,220	61,857 27,758 1,315,942	17
WILBARGER Vernon	15,355 11,454	72,050	1 1	- 74	756,230	3,873,523	- 80	52,823	15	59	279,744	206,922	35
WILLACY Raymondville	15,570	7,500	- 82	- 93	396,450	1,185,000	- 67	14,248	11	12	81,182	73,030	11
WILLAIMSON Barlett Georgetown Taylor	37,305 1,622 6,395 9,616	279,975	42	211 - 82	1,611,100	3,119,505	- 48 - 42	2,133 15,984 17,829	29 13 - 3	33 15 20	10,984 86,600 112,051	9,626 79,135 90,252	14 9 24
WINKLER Kermit	9,640	3,000	:	67	41,701	24,754	89	:	:	:	:	:	:
WISE Decatur	19,687	47,100	- 68	28	1,879,100	189,601	891	7,453	- 17	7	54,684	40,121	36
YOUNG Graham Olney	15,400 7,477 3,624	810,300 6,600	790	- 65	1,808,405	178,076	375	11,838		. 14	57,836	45,801	26
ZAVALA Crystal City	11,370 8,104	28,000	:	9	:	:	:	12,546	13	43	60,350	46,890	29
** Absolute change is less than one half of 1 percent No data, or inadequate basis for reporting.	one half of 1 pe for reporting.	rcent.											

AUGUST 1973

GROSS RETAIL SALES BY KIND OF BUSINESS FOR STANDARD METROPOLITAN STATISTICAL AREAS

Reported area and	Gross sales _	Percent Jan-Mar 1	changes 973 from	Reported area and	Gross sales	Percent Jan-Mar 1	changes 973 from
kind of business	(\$000)	Oct-Dec 1972	Jan-Mar 1972	kind of business	(\$000)	Oct-Dec 1972	Jan-Mar 1972
ABILENE SMSA				BRYAN-COLLEGE ST.	ATION SM	ISA	
Apparel, accessories Automotive dealers,	3,311	- 32	11	Apparel, accessories Automotive dealers,	1,338	• • •	•••
service stations Building materials,	19,642	- 13	14	service stations Building materials,	7,899		
farm equipment	5,879	- 3	- 5	farm equipment	2,417		
Drugstores	1,690	- 6	2	Drugstores	667		
Eating and drinking	4,496	1	12	Eating and drinking	2,228		
Food Furniture, home	12,412	- 12	3	Food Furniture, home	8,382		•••
furnishings	3,966	- 9	- 17	furnishings	1,115		
General merchandise	9,623	- 31	10	General merchandise	4,014		
Liquor	1,223	2	42	Liquor	498	***	
Miscellaneous retail	10,852	- 15	10	Miscellaneous retail	2,950	•••	
AMARILLO SMSA				CORPUS CHRISTI SMS	SA		
Apparel, accessories Automotive dealers,	5,646	- 27	10	Apparel, accessories Automotive dealers,	4,625	- 24	- 16
service stations Building materials,	38,446	18	- 6	service stations Building materials,	42,614	- 3	7
farm equipment	9,509	14	15	farm equipment	13,165	- 9	- 8
Drugstores	5,237	- 11	6	Drugstores	3,797	- 8	- 2
Eating and drinking	7,926	- 1	14	Eating and drinking	11,121	5	5
Food Furniture, home	17,831	- 2	7	Food Furniture, home	37,138	- 13	- 4
furnishing	5,307	- 4	3	furnishings	6,043	- 11	- 12
General merchandise	11,850	- 39	- 7	General merchandise	18,474	- 37	6
Liquor	2,677	- 18	- 25	Liquor	2,116	- 21	- 29
Miscellaneous retail	12,913	- 5	9	Miscellaneous retail	27,199	- 1	27
AUSTIN SMSA Apparel, accessories	10,313	- 22	6	DALLAS SMSA Apparel, accessories	81,729	- 6	3
Automotive dealers,				Automotive dealers,			
service stations Building materials,	50,811	- 5	11	service stations Building materials,	319,876	- 1	12
farm equipment	20,134	4	12	farm equipment	114,890	2	13
Drugstores Eating and drinking	5,760 18,777	- 4 3	20 17	Drugstores Eating and drinking	39,925 100,860	- 5 1	18 32
Food	45,169	**	10	Food	253,316	- î	7
Furniture, home furnishing	11,582	- 8	16	Furniture, home furnishings	61,116	- 9	4
General merchandise	31,902	- 3 - 27	12	General merchandise		- 33	9
Liquor	3,625	- 16	- 22	Liquor	25,088	- 13	- 5
Miscellaneous retail	36,425	- 2	15	Miscellaneous retail	198,225	- 19	- 1
BEAUMONT-PORT AR	THUR-OR	ANGE SMSA		EL PASO SMSA			
Apparel, accessories Automotive dealers,	5,791	- 31	- 5	Apparel, accessories Automotive dealers,	10,663	- 33	8
service stations Building materials,	48,153	1	12	service stations Building materials,	65,173	- 14	23
farm equipment	14,515	- 38	- 2	farm equipment	11,395	- 3	16
Drugstores	7,840	- 5	24	Drugstores	5,004	- 12	4
Eating and drinking	10,317	- 5	9	Eating and drinking	35,923	6	11
Food Furniture, home	44,066	**	5	Food Furniture, home	38,337	2	4
furnishings	7,718	- 16	- 1	furnishings	12,585	- 7	26
General merchandise	22,213	- 37	4	General merchandise	36,962	- 24	11
Liquor Miscellaneous retail	2,926 15,612	- 15 - 12	- 9	Liquor Miscellaneous retail	3,584 30,845	- 16 - 3	- 10 24
BROWNSVILLE-HARL	INGEN-SA	N BENITO SMSA		FORT WORTH SMSA			
Apparel, accessories	5,021	- 18	**	Apparel, accessories	15,461	- 26	2
Automotive dealers, service stations	16,290	1	5	Automotive dealers, service stations		- 10	15
Building materials, farm equipment				Building materials,	144,289		
Drugstores	8,307 1,772	- 7 - 8	- 1	farm equipment	31,481	6	- 11 31
Eating and drinking	5,896	- 8 29	10 23	Drugstores Eating and drinking	24,132 33,297	10 5	10
Food Furniture, home	17,861	8	21	Food	92,476	- 1	10
furnishings	3,044	- 6	21	Furniture, home	21.126	- 54	21
General merchandise	14,853	- 29	3	furnishings General merchandise	21,136 64,665	- 34 - 32	10
Liquor	627	- 1	15	Liquor	9,229	- 14	- 12
Miscellaneous retail	7,974	- 22	11	Miscellaneous retail	72,495	- 16	20

Reported area and	Gross sales		changes 973 from	Reported area and	Gross sales _	Percent Jan-Mar 1	changes 973 from
kind of business		Oct-Dec 1972	Jan-Mar 1972	kind of business	(\$000)	Oct-Dec 1972	Jan-Mar 197
GALVESTON-TEXAS	TITY SMSA			McALLEN-PHARR-EDI	VRURG S	MSA	
Apparel, accessories	3,301	- 18	17	Apparel, accessories	5,590	- 20	- 4
Automotive dealers,	-,	1.0		Automotive dealers,	0,000		
service stations	47,650	- 1	10	service stations	24,625	6	21
Building materials,				Building materials,			
farm equipment	4,709	1	7	farm equipment	11,111	- 7	17
Drugstores	3,294	- 5	11	Drugstores	2,873	2	7
Eating and drinking	7,010	12	6	Eating and drinking	5,632	18	16
Food	21,770	- 1	4	Food	25,487	9	22
Furniture, home	2.062			Furniture, home	2 424		2.4
furnishings General merchandise	3,062	- 11 - 31	- 4	furnishings	3,431	- 13 - 26	24
Liquor	9,559 1,443	- 31 - 16	- ⁷	General merchandise Liquor	14,924 520	- 20 - 2	16
Miscellaneous retail	8,993	- 10 - 10	- 6	Miscellaneous retail	9,105	- 13	7
	0,770	**		mademand day return	,,,,,,,,		
HOUSTON SMSA				MIDLAND SMSA			
Apparel, accessories	52,064	- 31	8	Apparel, accessories	1,964	- 23	1
Automotive dealers,				Automotive dealers,			
service stations	486,903	1	- 38	service stations	11,025	- 26	- 5
Building materials,				Building materials,			
farm equipment	126,316	- 5	- 3	farm equipment	3,508	- 1	4
Drugstores	44,491	- 12	11	Drugstores	2,980	- 19	11
	100,910	- 11	11	Eating and drinking	2,737	- 1	8 8
Food	305,687	- 5	7	Food	7,578	- 2	0
Furniture, home	66 107	- 12	0	Furniture, home	2,113	- 9	8
furnishings General merchandise	66,197	- 12 - 34	8	furnishings General merchandise	6,086	- 26	- 3
Liquor	29,375	- 34 - 27	- 30	Liquor	742	- 19	2
Miscellaneous retail		- 17	- 30 8	Miscellaneous retail	7,540	- 11	2
miscendificous retain	213,132	**		misconditions return	,,,,,,		
KILLEEN-TEMPLE SM	SA			ODESSA SMSA			
Apparel, accessories	2,594	4 2 4		Apparel, accessories	1,809	- 27	5
Automotive dealers,				Automotive dealers,			
service stations	19,387			service stations	23,079	6	14
Building materials,				Building materials,			
farm equipment	5,371			farm equipment	3,508	- 1	10
Drugstores	1,388			Drugstores	1,359	- 22	1
Eating and drinking	5,421			Eating and drinking	4,208	- 1	8
Food	14,019		• • •	Food	11,792	- 2	18
Furniture, home	2 950			Furniture, home furnishings	2,693	**	13
furnishings	2,859			General merchandise	9,847	- 30	- 7
General merchandise Liquor	9,100 619			Liquor	2,842	- 24	- 23
Miscellaneous retail	8,238		•••	Miscellaneous retail	30,597	10	16
made and retain	0,200				,		
LAREDO SMSA				SAN ANGELO SMSA			
Apparel, accessories	7,428	- 23	7	Apparel, accessories	1,548	- 25	1
Automotive dealers,				Automotive dealers,			
service stations	7,764	- 1	2	service stations	12,111	- 6	22
Building materials,				Building materials,			
farm equipment	2,662	- 2	17	farm equipment	3,881	- 8	4
Drugstores	1,293	4	12	Drugstores	2,649	- 8	16
Eating and drinking	2,112	- 8	13	Eating and drinking	2,654	- 3 - 2	12 9
Food	9,327	- 1	- 2	Food	7,749	- 2	9
Furniture, home	2 272	16	19	Furniture, home furnishings	2,311	9	30
furnishings	3,372	- 16 - 29	6	General merchandise	6,185	- 31	9
General merchandise Liquor	11,552 112	- 29 - 30	**	Liquor	504	- 27	- 2
Miscellaneous retail	5,323	- 30 - 12	22	Miscellaneous retail	4,877	- 28	57
miscenaneous retain	3,323	- 12			,		
LUBBOCK SMSA				SAN ANTONIO SMSA			
Apparel, accessories	6,144	- 19	13	Apparel, accessories	24,266	- 23	9
Automotive dealers,		14 5-12 9 6		Automotive dealers,			
service stations	27,505	- 26	- 5	service stations	134,767	- 10	12
Building materials,				Building materials,			
farm equipment	14,851	9	- 2	farm equipment	40,940	- 2	10
Drugstores	2,992	**	18	Drugstores	10,112	- 9	5
Eating and drinking	7,858	- 9	17	Eating and drinking	39,804	- 1	9
Food	23,191	- 4	12	Food	105,960	- 1	11
Furniture, home				Furniture, home	22.540	10	0
furnishings	6,823	- 8	11	furnishings	23,548	- 12 - 32	8
General merchandise	15,998	- 36	11	General merchandise		- 32 - 27	- 24
Liquor Miscellaneous retail	3,021 24,504	- 12 - 11	3 8	Liquor Miscellaneous retail	5,916 58,265	- 27 - 2	20
				WINCEHAUGOUN ICIAIL		- 4	20

Reported area and	Gross sales		changes 973 from
kind of business	(\$000)	Oct-Dec 1972	Jan-Mar 197
SHERMAN-DENISON S	MSA		
Apparel, accessories Automotive dealers,	2,680	- 25	- 8
service stations Building materials,	12,361	3	6
farm equipment	3,975	4	3
Drugstores	2,038	- 13	11
Eating and drinking	2,943	**	14
Food Furniture, home	8,812	- 4	5
furnishings	1,911	- 12	14
General merchandise	6,049	- 33	- 18
Liquor	624	- 14	6
Miscellaneous retail	5,203	- 24	- 12
TEXARKANA SMSA (Excludes Miller County	A =leancac		
		- 36	- 9
Apparel, accessories Automotive dealers,	1,176	- 30	- 9
service stations Building materials,	10,179	- 25	- 7
farm equipment	3,590	- 9	- 7
Drugstores	991	- 9	4
Eating and drinking	2,128	5	23
Food	9,474	- i	- 36
Furniture, home	2,777	•	30
furnishings	1,768	- 15	7
General merchandise	7,426	- 35	8
Liquor	*		
Miscellaneous retail	5,541	4	3
TYLER SMSA			
Apparel, accessories Automotive dealers,	3,215	- 21	3
service stations Building materials,	14,074	- 26	18
farm equipment	8,744	9	- 23
Drugstores	1,958	- 4	18
Eating and drinking	3,237	1	13
Food Furniture, home	14,611	3	10
furnishings	2,744	- 19	10
General merchandise Liquor	7,690	- 34	6
Miscellaneous retail	8,369	- 5	12

Reported area and	Gross sales	Percent Jan-Mar 1	
kind of business	(\$000)	Oct-Dec 1972	Jan-Mar 1972
WACO SMSA			
Apparel, accessories Automotive dealers,	2,637	- 29	15
service stations Building materials,	25,470	- 27	31
farm equipment	15,915	14	9
Drugstores	2,817	- 7	6
Eating and drinking	7,919	15	5
Food	20,630	- 1	- 1
Furniture, home			
furnishings	3,583	- 22	11
General merchandise	11,747	- 41	10
Liquor	*		
Miscellaneous retail	17,830	11	20
WICHITA FALLS SMS	A		
Apparel, accessories Automotive dealers,	2,903	- 28	- 2
service stations Building materials,	23,421	1	16
farm equipment	5,509	10	- 16
Drugstores	1,793	- 11	- 33
Eating and drinking	4,956	3	4
Food	30,778		
Furniture, home			
furnishings	3,633	7	15
General merchandise	9,608	- 36	6
Liquor	1,747	- 11	3
Miscellaneous retail	8,357	- 14	- 3

^{*} Omitted to avoid disclosure.

Source: Sales Tax Division, State Comptroller of Public Accounts.

DIRECTORY OF TEXAS MANUFACTURERS, 1973

The 1973 Directory of Texas Manufacturers is the most complete and authoritative source of information on manufacturing plants in Texas. The Directory provides the following information for approximately 12,000 plants: name and complete address of plants, date of establishment, name of executive officer, a description of products manufactured, and the name and main office address of parent company where applicable.

The Directory consists of five helpful sections: a convenient alphabetical listing of all plants by firm name with city location and home office; a geographical listing of plants according to city of location, with both cities and plants in alphabetical order, and with the detailed information for each plant; an organizational reference section giving the main office address of each parent company and the addresses of regional and subsidiary offices; a product section in which all products manufactured in Texas are listed under at least the first four digits of their Standard Industrial Classification number, in arithmetical order and geographical suborder for each number; an excellent product index, on the basis of alphabetical name order.

810 pp.

(Texas residents pay \$1.13 sales tax.)

\$22.50 per set

Bureau of Business Research
The University of Texas at Austin

^{**} 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 1967=100 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.

	Jun		May		Jun		Year-to	-dat	e average
	1973		1973		1972		1973		1972
GENERAL BUSINESS ACTIVITY		-							
exas business activity (index)	174.5		179.5		172.9		173.4		162.3
stimates of personal income	n		n		т				
(millions of dollars, seasonally adjusted)\$	4,256 ^p	\$	4,247 ^p	\$	3,988 ^r	\$	4,145	\$	3,866
ncome payments to individuals in U.S. (billions, at seasonally adjusted annual rate)	1,027.1 ^p	\$	1,018.7 ^p	\$	927.0 ^r	\$	1,007.9	\$	915.9
/holesale prices in U.S. (unadjusted index)	136.7	Ф	133.5	Þ	118.8	Ф	130.3	φ	117.0
onsumer prices in Dallas (unadjusted index)			130.6						
onsumer prices in U.S. (unadjusted index)	132.4		131.5		125.0		130.1		124.
usiness failures (number)			48		81				7
usiness failures (liabilities, thousands)\$		\$	4,067	\$	6,025	\$	•••	\$	15,28
ales of ordinary life insurance (index)			193.1		164.8		•••		162.
PRODUCTION	156.8 ^p		151.9 ^p		147.6 ^r		154.5		147.
otal electric-power use (index)	156.8° 143.3°		151.9 ^p		132.7 ^r		134.3		133.
rude-oil production (index)	118.2 ^p		115.3 ^p		116.0 ^r		116.0		112
verage daily production per oil well (bbl.)	20.0		19.8		19.9		19.4		18
rude-oil runs to stills (index)	123.4_		121.8_		117.1_		121.5		115
ndustrial production in U.S. (index)	123.9 ^p		123.5 ^p		113.4		122.2		111
exas industrial production-total (index)	140.0 ^p		138.0 ^p		131.6		136.2		128
exas industrial production—total manufactures (index)	144.2 ^p		142.3 ^p 156.1 ^p		133.1°		140.3		130
exas industrial production—durable manufactures (index)	157.1 ^p 134.9 ^p		130.1°		144.7° 124.7°		154.6 130.0		140 122
exas industrial production—nondurable manufactures (index)	134.9 ^p		132.4p		124.7r		118.9		117
exas industrial production—Infiling (index)exas industrial production—utilities (index)	162.1 ^p		162.2 ^p		156.1°		163.3		155
rban building permits issued (index)	166.9		191.2		192.7		188.0		187
New residential building authorized (index)	147.8		182.0		206.9 ^r		196.2		205
New residential units authorized (index)	94.8		128.5		163.0		148.5		167
New nonresidential building authorized (unadjusted index)	181.0		202.9		222.9		183.9		176
AGRICULTURE									
rices received by farmers (unadjusted index, 1910-14=100)	458		446		341		430		3.
rices paid by farmers in U.S. (unadjusted index, 1910-14=100)	499		488		431		477		4:
atio of Texas farm prices received to U.S. prices paid	02		91		79		90		
by farmers	92		91		19		90		
FINANCE	238.6		239.6		202.2 ^r		226.1		190
ank debits (index)	230.0		222.0		195.7		220.1		192
ank debits, U.S. (index)	161.6		159.9		130.4		155.0		128
eporting member banks, Dallas Federal Reserve District									
Loans (millions)\$	9,760	\$	9,698	\$	8,052	\$	9,368	\$	7,6
Loans and investments (millions)	13,655	\$	13,732	\$	11,659	\$	13,391	\$	11,2
Adjusted demand deposits (millions)	4,193	\$	4,166	\$	3,850	\$	4,187	\$	3,7
evenue receipts of the state comptroller (thousands) \$	383,013	\$ 0.1	524,798	23/2	420,418 403,320	\$	391,815 10,593.2*	\$	366,0 9,812
ederal Internal Revenue collections (thousands)	,170,003	ф1	,072,219	φ1,	103,320	Ψ	10,373.2	Ψ	2,012
ecurities registrations—original applications Mutual investment companies (thousands)	32,688	\$	42,451	\$	41,843	\$	378,293*	\$	265,4
All other corporate securities	02,000		,		,	-		7.0	
Texas companies (thousands)	13,917	\$	14,415	\$	26,726	\$	215,787*	\$	240,0
Other companies (thousands)	1,731	\$	8,379	\$	37,364	\$	158,491*	\$	395,6
ecurities registration—renewals				_					
Mutual investment companies (thousands)	36,684	\$	36,765	\$	59,948	\$	361,574*	\$	371,9
Other corporate securities (thousands)	3,131	\$	6,461	\$	10,516	\$	10,999*	\$	23,7
LABOR	100 oP		123.9 ^p		110 aT		1024		110
otal nonagricultural employment in Texas (index)†	123.9 ^p 115.4 ^p		123.9° 115.3°		119.2 ^r 111.5 ^r		123.4 115.3		118
anufacturing employment in Texas (index)†	99.1 ^p		98.6 ^p		99.1°		98.2		98
verage weekly earnings—manufacturing (index)†	137.8 ^p		135.7 ^p		130.9°		134.5		128
otal nonagricultural employment (thousands)†	4,054.3 ^p		4,036.9 ^p		3,901.5 ^r		3,998.8		3,822
Total manufacturing employment (thousands)†	777.4		766.1 ^P		751.5°		763.6		731
Durable-goods employment (thousands)†	427.3 ^p		420.9 ^P		404.7		417.2		391
Nondurable-goods employment (thousands)†	350.1 ^p		345.2 ^p		346.8		346.5		339
Percent of total labor force unemployed	4.1		3.0		4.5		3.1		
otal civilian labor force in selected labor-market	2046		2 706 1		2 6 6 9 7		27420		2.50
areas (thousands)	3,846.5		3,786.1		3,668.7		3,743.0		3,594
Nonagricultural employment in selected labor-market	2 5 9 0 0		3 575 1		3,399.7		3,540.3		3 370
areas (thousands)	3,589.0		3,575.4		3,377.1		3,340.3		3,370
areas (thousands)	655.1		645.6		607.8		639.7		598
Total unemployment in selected labor-market areas	00011								
(thousands)	166.2		119.6		183.2		128.3		143
Percent of labor force unemployed in selected	4.3		3.2		5.0		3.3		

OF THE CPA by Denzil Y. Causey, Jr.

One of the most striking developments in the public accounting profession in recent years has been the enormous increase in the legal liability of the auditor. The wave of litigation has affected the largest CPA firms as well as the smallest. Criminal charges against individuals and civil actions against CPA firms have created an awareness of this trend, even among new staff members and among college students looking toward public accounting as a career.

The auditor can no longer achieve a comfortable sense of security by proclaiming that an annual audit is not designed or intended to detect fraud. Even the classical defense that the auditor performed his work in full compliance with generally accepted accounting principles may no longer afford protection. Perhaps most significant of all these developments is the implicit challenge to the assumption that widespread collusion which makes a mockery of internal control systems is an unlikely phenomenon.

In the face of these startling changes in the environment of auditing, no clear answers are as yet apparent. As a first step, however, the independent public accountant must look long and hard at the specific cases that illuminate the path along which the accounting profession is traveling. In this book Denzil Y. Causey, Jr., associate professor of accounting at Florida State Technological University in Orlando, Florida, affords the practitioner and the student of accounting an opportunity to assess some of the significant events that have ushered in a new era in public accounting.

\$4.00

(Texas residents add \$.20 sales tax.)

Bureau of Business Research The University of Texas at Austin