

# FACT SHEET

## EMPLOYMENT CHANGES IN EXTENSION DISTRICT 14: 1970-1974

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Expansion of employment opportunities has long been a goal of rural Texas communities. To reach this goal, community leaders may find the abundant Texas employment data useful for tracing changes in employment and for planning a variety of economic development activities. The Texas Agricultural Experiment Station and the Texas Agricultural Extension Service have developed a series of reports which utilize a shift-share analytical method and Texas employment data to trace changes in local employment. This report provides the results of a shift-share analysis of Extension District 14 employment compared to statewide growth during 1970-74.

Shift-share analysis is essentially descriptive, but yields more information than normal trend analysis by identifying the contribution to district employment changes made by the region's specific industry mix. Hence, the analysis provides estimates of the district's employment compared to other districts and the state as a whole and indicates those industries for which the region may have competitive advantages.

### Reasons for Employment Growth Differences Among Districts

Two major reasons explain why a district may grow at a different rate than the entire state or other regions within the state. First, a district is likely to have a different mix of economic activity. If the district is dominated by a variety of rapidly growing industries, it may have above average employment growth. Districts with predominantly slow growth industries may be expected to have below average employment growth.

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A second major reason for different employment growth among districts is more rapid growth of a specific industrial activity. While an industrial activity may experience statewide growth, decline or stagnation, that same industrial activity within a given district may manifest quite different local growth. For example, an industrial activity may be slow growing statewide but increase rapidly in a specific district because of locational advantages. Districts dominated by a local, rapidly-growing industrial activity may be expected to have an above-average employment growth (and vice versa).\*

### The Study Area

Extension District 14 consists of 16 counties on the Texas Gulf Coast with a total population of 548,748 in 1970 (Table 1). Corpus Christi, in Nueces County, is the only SMSA in the district. The population within Nueces County increased 7.2 percent from 1960 to 1970 (221,573 in 1960 compared to 237,544 in 1970). Ten of the remaining fifteen counties experienced population decreases from 1960 to 1970 and the entire district population increased 3.6 percent during this period. The overall unemployment rate for District 14 in 1970 was significantly greater than state unemployment.

### Employment Analysis for District 14

The employment data was provided by the Texas Employment Commission and was recorded by employee's place of employment rather than residence. Only employment covered by the Texas Unemployment Act was included. This excludes self-employed,

\*Employment growth may not be reflected in rapidly growing industries where productivity increases are accompanied by declining employment such as agriculture. These industrial activities are "capital-intensive."

Table 1. District 14 Population and Employment by County

County	1970 <sup>1</sup> Population	Percent Population <sup>1</sup> Change 1960-1970	1970 <sup>2</sup> Employment	Average Annual 1970 <sup>2</sup> Rate of Unemployment
Aransas	8,902	27.1	3,030	2.3
Bee	22,737	-4.3	7,250	3.5
Calhoun	17,831	7.5	6,080	3.7
DeWitt	18,660	-9.8	7,670	2.5
Goliad	4,869	-10.3	2,095	2.6
Gonzales	16,375	-8.2	6,800	2.4
Jim Wells	33,032	-4.4	11,170	4.9
Karnes	13,462	-10.2	5,180	3.9
Kenedy	678	-23.3	400	2.4
Kleberg	33,166	10.4	10,530	3.5
Lavaca	17,903	-11.3	8,085	2.1
Nueces	237,544	7.2	86,040	4.3
Refugio	9,494	-13.5	3,740	3.6
San Patricio	47,288	5.0	16,380	3.0
Victoria	53,766	15.7	20,485	2.7
Wilson	13,041	-1.7	5,300	2.4
District 14	548,748	3.6	200,235	3.8
Texas	11,196,730	16.9	4,584,455	3.7

<sup>1</sup>Bureau of Census: Number of Inhabitants — Texas, Table 9.

<sup>2</sup>Texas Employment Labor Force Estimates for Texas Counties, April 1970.

unpaid family workers, employees covered by the Railroad Retirement Act and domestic service and farm workers.

Since broad economic trends are of interest, an analysis of the structure of the district's economy was considered at the Standard Industrial Classification Division level. Comparisons of the growth in the agriculture, forestry and fisheries division should be carefully reviewed because of the incomplete nature of this data. Also, it should be noted that the government division includes only federal employees.

Table 2 shows statewide employment growth rates for each employment division for the 1970-74 period. The agriculture, forestry and fisheries division and the services division grew fastest during this period, with rates of 121.9 percent and 83.9 percent respectively. Overall, the average growth rate for the Texas economy was 29.8 percent.

The growth rates shown in Table 2 provide a basis for comparison of growth of industrial divisions in District 14 with those throughout the state. If District 14 had exactly the same industrial composition as Texas and if each industry within the District had grown at the same rate as it did within Texas, employment in District 14 would have increased 29.8 percent. Thus, the growth rates shown in Table 2 can be considered expected growth rates for the District. However, the District 14 economy differed from the overall state economy and growth rates deviated from the statewide pattern during the 1970-74 period.

Column 2 of Table 3 shows the expected employment increase within each employment division for District 14. These expected increases were computed by multiplying 1970 reported employment levels in the district by the Texas 1970-74 employment division

growth rates. Column 3 identifies growth resulting from specific industries within the district and indicates the difference between reported 1974 employment and the sum of reported 1970 employment and the expected employment increases in each industrial division.

Given the 1970 industrial mix in District 14, the number of jobs within the district would have expanded by 32,309 if every employment division had grown at exactly the state average for that employment division. This would have resulted in an employment growth rate in District 14 of 30.4 percent, slightly above the Texas overall average rate of 29.8 percent (31,666 jobs). In absolute terms, the district was expected to generate 643 more jobs by having a favorable mix of industrial activities.

However, the district generated only 27,422 new jobs between 1970 and 1974 and actually grew at a

Table 2. Texas Employment Growth Rates 1970-1974

Employment Division* (One-Digit S.I.C.)	Growth Rate 1970-1974
Agriculture, Forestry & Fisheries	121.9%
Mining	19.5%
Contract Construction	36.6%
Manufacturing	11.1%
Transportation, Communication & Utilities	19.2%
Wholesale and Retail Trade	29.2%
Finance, Insurance & Real Estate	37.8%
Services	83.9%
Government	.0%
Weighted Average	29.8%

\*Includes only employees covered by the Texas Unemployment Compensation Act. Agriculture, Forestry and Fisheries does not include owner-operators and their families or hired farm workers.

Table 3. District 14 Employment Shifts 1970-1974\*\*

Employment Division (One-Digit S.I.C.)	(1) Reported 1970 Employment	+	(2) Expected Employment Increase	+	(3) Employment Due to Specific Industry Growth Within District	=	(4) Reported 1974 Employment
Agriculture, Forestry & Fisheries	429		520		274		1,222
Mining	7,861		1,535		-983		8,413
Contract Construction	11,187		4,211		-1,618		13,779
Manufacturing	19,647		2,186		195		22,027
Transportation, Communication & Utilities	8,717		1,672		-1,234		9,154
Wholesale & Retail	33,957		9,920		-2,600		41,276
Financial, Insurance & Real Estate	4,821		1,821		152		6,794
Services	12,336		10,351		-54		22,633
Government	7,307		97		982		8,386
Totals	106,262		32,309		-4,887		133,684

\*\*Rounding errors may effect row totals.

rate of 25.8 percent rather than the expected 29.8 percent. The reason for this difference is that five of the nine employment divisions located in the district did not keep pace with their counterparts throughout the state, especially wholesale and retail trade. The net result of this apparent loss in regional locational advantage relative to other districts was 4,887 fewer jobs than expected were generated in District 14.

### Summary and Implications

Numerous factors determine location of industrial activity; sources of raw materials, availability of labor supply, nearness of product markets and transportation. Districts with a favorable industrial mix or a local, rapidly growing industrial activity have a "comparative advantage" — a relative efficiency in the production of these goods or services.

Shift-share analysis identifies employment changes which result from the region's industrial mix and specific industry growth within the district. Causes of employment shifts are not identified. Further research is needed to identify actual causes of

employment shifts in the five employment divisions which lag behind respective state growth. Unexpected employment increases not realized in District 14 may be the result of deliberate or other management decisions based on a number of factors including obsolete equipment, low labor productivity, geographic shifts in markets and inadequate availability of finances.

Additional research should explore the reasons for the district's industrial mix — why particular industries have located within the district. Also, the district's ability to compete for new industry should be examined. Of particular interest should be the ability of local rapidly growing industries to maintain their growth and the district's ability to further exploit its comparative advantage in these industrial activities.

To enable the reader to explore the district's employment shifts in greater depth, a more detailed employment analysis has been developed and is presented in Table 4.\* Analyses of employment shifts at the county level are available. Contact your local county Extension agent for further information.

\*District totals may differ from those presented in Table 3 as a result of disaggregation problems.

Table 4. District 13 Employment Shifts 1970-1974\*\*

Industrial Sector (One-Digit S.I.C.)	(1)	(2)	(3)	(4)
	Reported 1970 Employment	+ Expected Employment Increase	+ Employment Due to Specific Industry Growth Within District	= Reported 1974 Employment
Agriculture	243	289	0	533
Forestry	0	0	N/A	0
Fisheries	186	248	254	689
Metal Mining	156	-67	-83	6
Oil and Gas Extraction	7,567	1,581	-887	8,261
Nonmetal Mining except Fuel	138	2	6	146
Contract Construction	11,187	4,211	-1,618	13,779
Food and Kindred Products	3,407	118	326	3,852
Textile, Apparel	729	112	44	886
Wood Products	385	46	51	482
Printing, Publishing	1,028	177	-117	1,088
Chemicals and Allied Products	4,977	144	386	5,507
Petroleum, Coal Products	1,746	31	-316	1,461
Other Nondurable Manufacturing	1,512	420	-383	1,549
Metal Products	4,629	958	-226	5,361
Machinery Manufacturing	608	188	133	930
Transportation Equipment	519	-131	356	743
Instruments and Related Products	21	2	17	40
Miscellaneous Manufacturing	86	35	8	128
Railroad Transportation	0	0	N/A	0
Passenger Transit	213	-6	30	237
Trucking, Warehousing	2,241	552	-474	2,319
Other Transportation	1,146	285	-371	1,060
Pipeline Transportation	256	-29	35	263
Communication	1,941	366	9	2,317
Utilities	2,920	433	-395	2,958
Wholesale and Retail Trade	7,543	1,563	152	9,258
Food Stores	5,896	1,696	-1,077	6,515
Eating and Drinking Places	5,060	2,436	-322	7,174
Retail Trade-General	15,458	4,457	-1,586	18,329
Financial, Insurance, Real Estate	4,821	1,821	152	6,794
Lodging Places	1,274	369	-50	1,592
Personal Services	2,212	147	59	2,418
Miscellaneous Business Services	1,741	1,114	57	2,912
Repair Services	1,367	723	-212	1,879
Health Services	3,466	6,389	-934	8,921
Legal Services	181	267	37	485
Educational Services	98	223	55	376
Entertainment	973	247	79	1,299
Nonprofit Organizations	258	737	44	1,039
Private Household Services	0	0	N/A	0
Miscellaneous Services	766	519	427	1,712
State Government	0	0	N/A	0
Local Government	0	0	N/A	0
Federal Government	7,307	97	982	8,386
Non-Classifiable	0	0	N/A	0
	106,262	32,774	-5,352	133,684

\*\*Rounding errors may effect row totals.

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