

FACT SHEET

EMPLOYMENT CHANGES IN EXTENSION DISTRICT 12: 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 12 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 in-

dustries, it may have above average employment growth. Districts with predominantly slow growth industries may be expected to have below average employment growth.

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 12 consists of 11 counties in the lower Rio Grande Valley of Texas with a total population of 464,564 in 1970 (Table 1). The district contains three SMSA's; Brownsville-Harlingen-San Benito in Cameron County, McAllen-Pharr-Edinburg in Hidalgo County and Laredo in Webb County. The population in Hidalgo and Webb Counties increased from 1960 to 1970 while Cameron County's population decreased during the decade (+0.3% in Hidalgo County, +12.5% in Webb County and -7.1% in Cameron County). Seven of the remaining eight

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*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 12 Population and Employment by County

County	1970 ¹ Population	Percent Population ¹ Change 1960-1970	1970 ² Employment	Average Annual 1970 ² Rate of Unemployment
Brooks	8,005	-7.0	2,470	5.4
Cameron	140,368	-7.1	46,580	7.2
Duval	11,722	-12.5	4,240	5.4
Hidalgo	181,535	0.3	59,340	6.4
Jim Hogg	4,654	-7.3	1,750	4.1
Live Oak	6,697	-14.6	2,520	6.7
McNullen	1,095	-1.9	470	2.1
Starr	17,707	3.3	5,780	12.4
Webb	72,859	12.5	22,055	12.0
Willacy	15,570	-22.5	7,660	5.7
Zapata	4,352	-0.9	2,015	15.9
District 12	464,564	-1.3	154,880	8.4
Texas	11,196,730	16.9	4,548,455	3.7

¹Bureau of Census: Number of Inhabitants — Texas, Table 9.

²Texas Employment Labor Force Estimates for Texas Counties, April 1970.

counties experienced population decreases from 1960 to 1970 and the entire district population decreased 1.3 percent during this period. The overall unemployment rate for District 12 in 1970 was significantly greater than state unemployment.

Employment Analysis for District 12

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, 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 12 with those throughout the state. If District 12 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 12 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 12 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 12. 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 12, the number of jobs within the district would have expanded by 19,496 if every employment division had

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 12 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	731		885		851		2,467
Mining	1,875		366		14		2,255
Contract Construction	4,126		1,553		2,462		8,141
Manufacturing	9,329		1,038		5,529		15,896
Transportation, Communication & Utilities	5,274		1,012		979		7,264
Wholesale & Retail	27,161		7,934		4,327		39,422
Financial, Insurance & Real Estate	2,719		1,027		1,313		5,059
Services	6,723		5,641		1,542		13,906
Government	3,092		41		-28		3,105
Totals	61,030		19,496		16,989		97,515

**Rounding errors may effect row totals.

grown at exactly the state average for that employment division. This would have resulted in an employment growth rate in District 12 of 31.9 percent, significantly above the Texas overall average rate of 29.8 percent (18,186 jobs). In absolute terms, the district was expected to generate 1,310 more jobs by having a favorable mix of industrial activities.

However, the district generated 36,485 new jobs between 1970 and 1974 and actually grew at a rate of 59.7 percent rather than the expected 29.8 percent. The reason for this difference is that eight of the nine employment divisions located in the district outpaced their counterparts throughout the state, especially manufacturing. The net result of this apparent gain in regional locational advantage relative to other districts was 16,989 more jobs than expected were generated in District 12.

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 one employment division which lags behind respective state growth. Unexpected employment increases realized in District 12 may be the result of deliberate or other management decisions based on a number of factors including new equipment, high labor productivity, geographic shifts in markets and adequate 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 12 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	230	275	938	1,442
Forestry	0	0	N/A	0
Fisheries	501	669	-146	1,025
Metal Mining	0	0	N/A	0
Oil and Gas Extraction	1,647	344	123	2,114
Nonmetal Mining except Fuel	228	3	-90	141
Contract Construction	4,126	1,553	2,462	8,141
Food and Kindred Products	4,372	152	801	5,325
Textile, Apparel	1,676	258	1,624	3,559
Wood Products	430	51	174	656
Printing, Publishing	608	105	26	739
Chemicals and Allied Products	399	12	-5	406
Petroleum, Coal Products	78	1	-17	62
Other Nondurable Manufacturing	515	142	505	1,163
Metal Products	306	63	8	377
Machinery Manufacturing	704	219	2,160	3,082
Transportation Equipment	169	-43	225	351
Instruments and Related Products	6	-1	9	16
Miscellaneous Manufacturing	66	27	68	160
Railroad Transportation	0	0	N/A	0
Passenger Transit	308	-8	77	377
Trucking, Warehousing	1,255	309	607	2,171
Other Transportation	1,324	330	229	1,882
Pipeline Transportation	77	-9	-31	37
Communication	1,258	238	-185	1,681
Utilities	1,052	156	-92	1,116
Wholesale and Retail Trade	6,576	1,363	1,436	9,374
Food Stores	3,273	941	825	5,040
Eating and Drinking Places	2,475	1,192	763	4,429
Retail Trade-General	14,837	4,278	1,464	20,579
Financial, Insurance, Real Estate	2,719	1,027	1,313	5,059
Lodging Places	1,801	521	197	2,519
Personal Services	997	66	123	1,186
Miscellaneous Business Services	490	313	466	1,270
Repair Services	543	288	203	1,033
Health Services	1,635	3,014	82	4,731
Legal Services	120	177	110	407
Educational Services	84	191	-57	218
Entertainment	584	148	-10	722
Nonprofit Organizations	125	357	595	1,077
Private Household Services	0	0	N/A	0
Miscellaneous Services	344	234	166	743
State Government	0	0	N/A	0
Local Government	0	0	N/A	0
Federal Government	3,092	41	-28	3,105
Non-Classifiable	0	0	N/A	0
	61,030	18,998	17,486	97,515

**Rounding errors may effect row totals.

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