

# Blue-Collar Outlook Not so Blue in Texas

*“While the gap between manufacturing employment growth in Texas and the United States is not likely to remain as large as it has been in recent years, several factors suggest that manufacturing in Texas will continue to outperform the nation.”*

The Texas economy has managed to skirt the recession that has plagued the nation for several years, and part of the explanation lies in the performance of the state's manufacturing sector.

Since January 1990, manufacturing employment has declined sharply in the United States as a whole but only slightly in Texas (*Chart 1*). A favorable industry mix, strong regional construction activity, relative strength in energy-related manufacturing industries and increased trade with Mexico account for much of the state's overall relative strength. An analysis of the state's economic performance indicates that Texas

has derived 8.6 percent of its relative strength from its favorable industry mix and 50.6 percent of its relative strength from construction, energy-related manufacturing and increased trade with Mexico.

## A Favorable Industry Mix

Texas has a larger-than-average concentration of industries that have performed better than the national average in recent years, and this favorable industry mix has helped limit job losses in the state's manufacturing sector. For example, energy-related manufacturing (oil field machinery production, petroleum refining and chemical production) represents about 14 percent of manufacturing employment in Texas and only about 7 percent of manufacturing employment in the United States. Since the beginning of 1990, national employment in these industries has declined by only 1.8 percent. Thus, the larger share of these relatively strong industries has been a positive factor in manufacturing employment growth in Texas.

Conversely, Texas has a smaller-than-average share of employment in some fairly weak industries, such as non-aircraft transportation equipment. Table 1 shows the breakdown of manufacturing employment for each sector and growth rates by sector for the United States and Texas. The first three columns in the table highlight the industry mix effect. If an industry declined by less than 6.7 percent (the national average), and the industry has a greater employment share in Texas than in the United States, then the industry contributes to a positive industry mix effect for Texas.

If industry shares and growth rates in Texas were the same as in the nation from January 1990 to September 1992, then total manufacturing employment in Texas would have declined by 66,000 jobs instead of the actual decline of only 700 jobs. Allowing for Texas' unique industry mix reduces the 66,000-job loss by only 5,640, or 8.6 percent of

the net difference. Thus, even after allowing for a favorable industry mix, Texas manufacturing strongly outperformed U.S. manufacturing. Much of the remainder of the relative strength in the Texas manufacturing sector, often referred to as the *competitive effect*, can be explained by several important factors.

## Texas' Competitive Edge

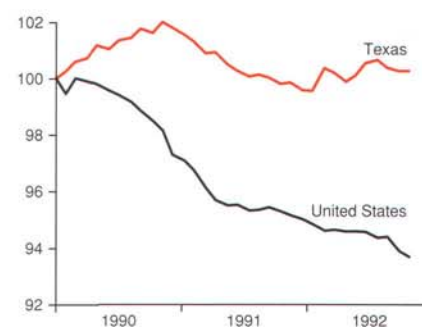
The strong performance of Texas manufacturing stems less from the relative shares of the industries in the state than from the growth of Texas industries, most of which have grown at faster rates than their counterparts across the nation. Many factors might explain why individual industries have grown faster in Texas than elsewhere in the nation.

One source of relative strength for Texas industries is the state's competitive economic environment. Texas offers low wages and rents, low rates of unionization, a large working-age population and desirable geographic characteristics.<sup>1</sup>

Much of the relative strength of the state's manufacturing industries in recent years is likely the result of several short-term factors. The construction sector, for example, underwent a major downsizing from 1985 to 1988. By the late 1980s, construction employment had adjusted to the stagnant commercial construction market.<sup>2</sup> Nationally, however, many of the major markets did not adjust to overbuilding until

**Chart 1**  
Manufacturing Employment

Index, January 1990 = 100





**Table 1**  
 Decomposition of Manufacturing Employment Growth:  
 United States and Texas, January 1990–September 1992

	U.S. share of employment (Percent)	Growth rate (Percent)	Texas share of employment (Percent)	Growth rate (Percent)
<b>Total manufacturing</b>	100.0	-6.7	100.0	-.07
<b>Durable goods</b>				
Lumber and wood products	3.9	-9.54	3.2	-2.84
Furniture and fixtures	2.7	-11.35	1.7	.61
Stone, clay and glass	2.9	-8.29	3.7	-5.43
Primary metals	3.9	-8.27	2.9	6.23
Fabricated metals	7.4	-7.32	8.1	1.51
Fabricated structural metal	2.2	-8.39	4.0	.77
Other fabricated metals	5.2	-6.86	4.1	2.22
Industrial machinery	11.0	-8.69	11.3	3.60
Oil field machinery	.2	-10.35	2.4	5.51
Other machinery	10.8	-8.66	8.9	3.09
Electronic and electrical machinery	8.8	-10.01	10.8	-4.34
Transportation equipment	10.5	-11.01	10.1	-15.23
Aircraft and parts	3.7	-15.87	7.3	-20.06
Other transportation	6.8	-8.36	2.8	-2.55
Instruments and related equipment	5.3	-8.06	3.9	5.14
Miscellaneous manufacturing	2.0	-3.96	1.6	3.09
<b>Nondurables</b>				
Food and kindred products	8.6	-.30	10.0	-2.12
Textiles	3.7	-4.80	.4	0
Apparel and other textiles	5.5	-5.97	5.9	2.05
Paper	3.6	-.86	2.5	6.94
Printing and publishing	8.1	-2.93	7.5	3.39
Chemicals and allied products	5.6	-1.38	8.3	7.70
Petroleum and coal refining	.8	-1.94	2.9	3.46
Rubber	4.6	-1.24	4.2	5.54
Leather products	.7	-10.22	.8	8.00

the late 1980s and early 1990s.

As shown in Chart 2, construction employment in Texas has been relatively strong over the past two years. This strength has led to gains in construction-related manufacturing employment (fabricated structural metals, lumber and wood products, furniture and fixtures, and stone, clay and glass manufacturing). The strength in construction-related manufacturing has accounted for 14.3 percent of the competitive effect of Texas manufacturing employment.

Another source of relative manufacturing strength has been the Texas energy sector. Energy-related manufacturing employment has been much stronger in Texas than in the nation (*Chart 3*). Energy-related manufacturing employment

in Texas has increased by 11,800 jobs, or 9 percent, since January 1990, but nationally employment in this industry has declined by 22,000 jobs, or 2 percent. Twenty-one percent of the growth in Texas manufacturing that is attributable to competitive factors has resulted from energy-related manufacturing.

Chemical manufacturing has been the strongest energy-related industry in Texas. In the late 1980s, a jump in profit margins for ethylene spurred a boom in the petrochemical industry along the Gulf Coast. Industry respondents to a Dallas Fed survey indicate that two important reasons this growth centered in Texas were the state's trained labor force and proximity to the Gulf of Mexico. Respondents also cited agglomeration economies, such as

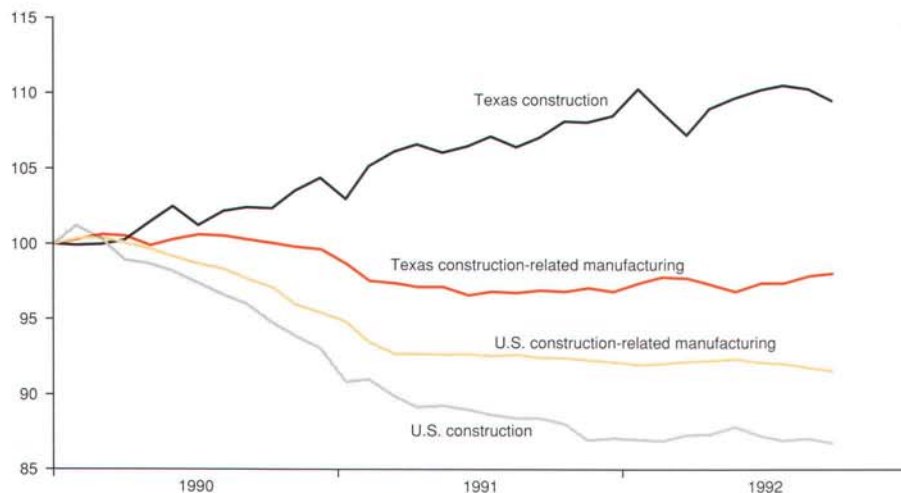
access to related service companies and the use of by-products from some petrochemical manufacturers as inputs for other petrochemical manufacturers.

Growth in international drilling and exploration has boosted demand for oil field equipment, while industry consolidations have sent much of the growth in oil field equipment manufacturing to Texas.

Another factor that has helped Texas manufacturing outperform the nation is Texas' border with Mexico. Texas, because of its geographic and cultural ties with Mexico, sends a higher proportion of its exports to Mexico than does the nation. Over the past four years, decreased import tariffs in Mexico and the strength of the Mexican economy have boosted exports to

**Chart 2**  
Construction-Related Employment

Index, January 1990 = 100



Mexico. In 1991, exports from Texas to Mexico increased 16.5 percent and represented 39 percent of the total gain in Texas exports.

Increased trade with Mexico has had a positive impact on primary metals, furniture and fixtures and apparel products.<sup>3</sup> Together these three industries accounted for 17.8 percent of the competitive effect of Texas manufacturing.

**Summary and Outlook**

Many factors have contributed to the relative strength of Texas manu-

facturing employment in recent years. Important factors include Texas' favorable industry mix, the relative strength of the region's construction sector, a consolidation of energy-related industries to the Southwest, and increased exports to Mexico.

While the gap between manufacturing employment growth in Texas and the United States is not likely to remain as large as it has been in recent years, several factors suggest that manufacturing in Texas will continue to outperform the nation. The continued expansion in the

Mexican economy and increased prospects for free trade with Mexico should continue to be positive factors. Other factors, such as the consolidations in the energy sector and the strength of the region's construction industry, should continue to support Texas' relative strength, only to a lesser degree.

— Keith R. Phillips  
Kelly A. Whealan

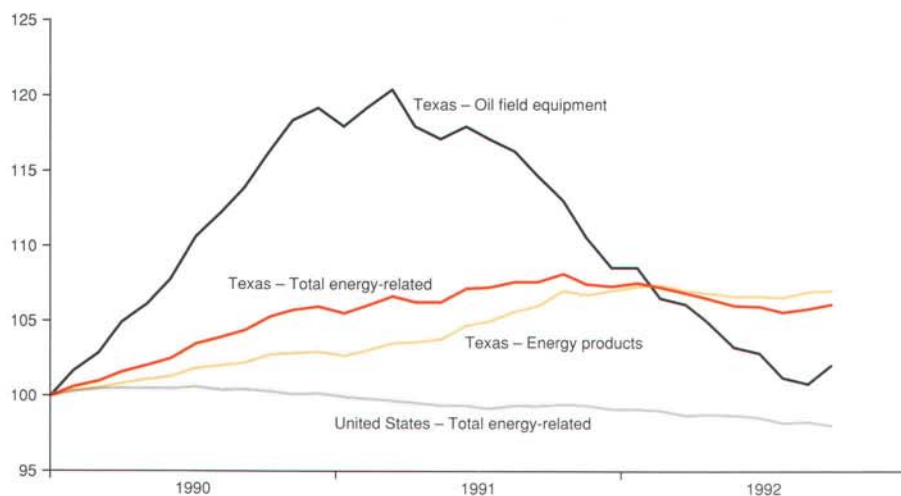
<sup>1</sup> For a more in-depth discussion of long-run factors affecting the Southwest economy, see Brown, Stephen P.A., and Lea Anderson (1988), "The Future of the Southwest Economy," Federal Reserve Bank of Dallas *Southwest Economy*, November.

<sup>2</sup> For a discussion of the decline in the Texas office market, see Petersen, D'Ann M. (1992), "Will Office Real Estate in Texas Ever Recover?" Federal Reserve Bank of Dallas *Southwest Economy*, September/October.

<sup>3</sup> The impact is measured by the industry's gain in exports divided by the 1989 value of gross state product in the industry.

**Chart 3**  
Energy-Related Manufacturing Employment

Index, January 1990 = 100



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