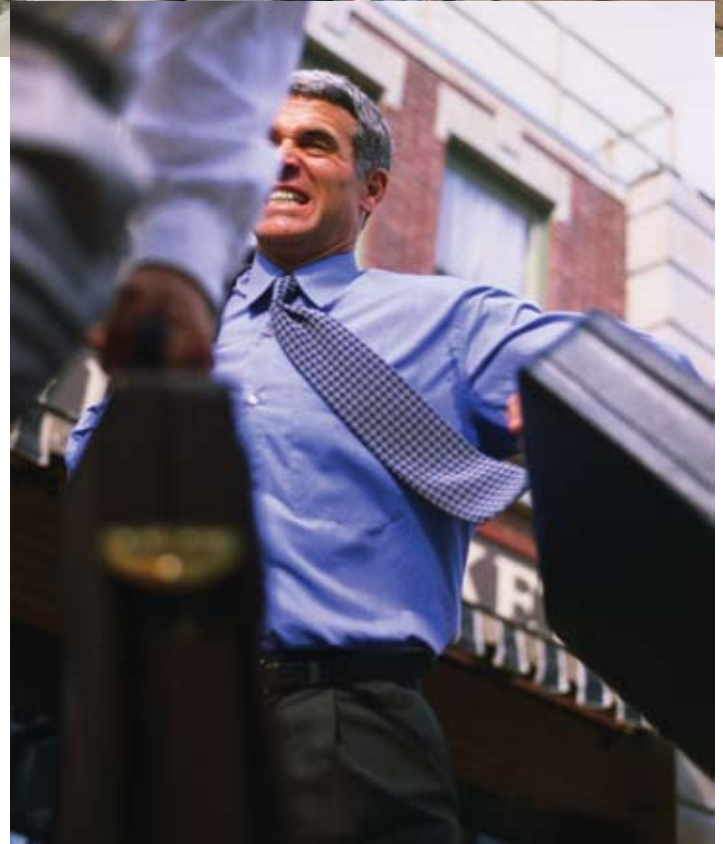




# Chasing Change

By Ali Anari and Harold D. Hunt



Ben Franklin once commented, "When you're finished changing, you're finished."

Change is inevitable in economies today, and the different sectors within a modern economy must function efficiently in an environment of constant change to produce the optimal amount of goods and services. As the relative importance of each sector changes and local economies evolve, demand for various types of commercial and industrial real estate also changes.

Higher growth rates in the service and financial sectors result in greater demand for office space, while a decline in manufacturing employment often translates into reduced demand for industrial buildings. Demand for warehouse space can be significantly affected by growth in the wholesale industry, while retail property demand is closely tied to retail sales.

Modern economies are becoming more knowledge-based, transforming continuously in response to changes in technology and consumer preference. Technological innovations allow new industries to emerge while obsolete ones are simultaneously eliminated. Consumer preferences change, leading to changes in output rates and employment rates in U.S. industries.

Continuous change in demand for and supply of goods and services eventually results in structural changes in local

economies, reallocating the importance of different economic sectors over time. These structural changes have important implications for real property, and real estate professionals can benefit greatly by monitoring these changes for long-range investment planning purposes.

## Real Estate Demand

Purchases of real estate services by other Texas industries exceeded \$34 billion during 2002, accounting for about half the revenue generated from real estate activities. The Financial Activities sector has been the state's largest consumer of real estate services, accounting for more than 26 percent of revenues (Table 1).

Demand within the Financial Activities sector primarily consists of demand for office space. Firms providing real estate services are included in the Financial Activities sector, and an important part of that sector's demand is for office space occupied by the real estate industry itself.

The Education and Health Services sector and the Trade sector ranked second and third, respectively, in their use of Texas real estate services (Table 1). Education and Health Services accounted for 16.4 percent of the demand for real estate services, with doctors, dentists and other health professionals



primarily consuming office space. The Trade sector accounted for 14.2 percent of Texas real estate revenues, mainly for space leased by the retail industry.

### Employment's Effects on Real Estate Services

The Texas economy has expanded by more than 2.6 million jobs since 1990, an increase of 37.2 percent (Table 2). The state's Professional and Business Services sector added 524,100

contracts, insurance carriers, agencies, brokerage, fund management and real estate sales and leasing. Firms within the Information sector include newspaper, periodical, book and directory publishers, telecommunications and Internet service providers, web search portals and data processing services.

The state's Financial Activities sector grew by 150,600 jobs between 1990 and 2005 (Table 2). During the period, the Information sector was taking a roller-coaster ride, going from 173,600 jobs in January 1990 to a peak of 280,700 by December 2001. The sector suffered significant job losses in the aftermath of the Internet meltdown, however. By December 2005 employment stood at 223,600, with jobs still being lost.

From 1990 to 2005, Trade sector employment in Texas grew by 24.4 percent while employment in Transportation, Warehousing and Utilities increased by 34.6 percent (Table 2). Commercial property affected by changes in these two sectors includes shops, stores, showrooms, gas stations and warehouses. Demand for commercial space is more heavily impacted by economic activity in the Trade sector than by Transportation, Warehousing and Utilities activity.

Real property affected by the Leisure and Hospitality sector includes hotels, motels, entertainment properties, restaurants, food services and drinking establishments. The state's Leisure and Hospitality sector has experienced significant growth, gaining 313,800 jobs since 1990, a 52.8 percent increase (Table 2).

The Natural Resources and Mining sector and the Manufacturing sector are important generators of industrial real estate demand. The state's Manufacturing sector has shed 49,100 jobs since 1990 (Table 2), decreasing its share of total nonfarm employment from 13.4 percent in 1990 to 9.2 percent in 2005 (Table 3).

jobs, an impressive 83.2 percent gain, increasing its employment share from 8.9 percent in 1990 to 11.9 percent in 2005 (Table 3). Job creation within this sector primarily centers around office employment, including legal services, accounting, tax preparation, bookkeeping, payroll, architectural, engineering and computer systems design, management, and scientific and technical consulting. Growth in this sector positively affects office occupancy rates.

The state's Education and Health Services sector gained 507,400 jobs, up 75 percent (Table 2). This sector's share of the state's total nonfarm employment rose from 9.5 percent in 1990 to 12.2 percent in 2005 (Table 3). This sector uses a mix of property types including buildings for colleges, professional schools, health-care facilities, physicians' offices, hospitals and day-care facilities. Demand for these properties should increase.

The Financial Activities and Information sectors generate a significant number of office jobs as well. Financial activities involve firms that deal with credit intermediation, securities, commodity

**Table 1. Texas Real Estate Services Demand by Industry**

Industry	Value of Services \$ Million	Percent of Total
Financial Activities	9,135.3	26.5
Education & Health Services	5,652.4	16.4
Trade	4,877.3	14.2
Professional & Business Services	3,519.0	10.2
Other Services	2,694.4	7.8
Leisure & Hospitality	2,617.7	7.6
Transportation, Warehousing & Utilities	1,468.3	4.3
Agriculture, Natural Resources & Mining	1,342.6	3.9
Manufacturing	1,259.6	3.6
Information	908.4	2.6
Construction	697.0	2.0
Government Enterprises	272.0	0.9
<b>Total Industrial Demand</b>	<b>34,444.0</b>	<b>100.0</b>

Sources: Texas Workforce Commission and Real Estate Center at Texas A&M University

**Table 2. Texas Employment by Industry, 1990–2005**

Industry	Employment		Change	
	2005	1990	Number	Percent
Total Nonfarm	9,735,000	7,096,800	2,638,200	37.2
Natural Resources and Mining	165,900	163,200	2,700	1.7
Construction	566,500	346,100	220,400	63.7
Manufacturing	898,600	947,700	-49,100	-5.2
Trade	1,585,800	1,274,700	311,100	24.4
Transportation, Warehousing, and Utilities	406,400	302,000	104,400	34.6
Information	223,600	177,000	46,600	26.3
Financial Activities	609,500	458,900	150,600	32.8
Professional and Business Services	1,154,300	630,200	524,100	83.2
Educational and Health Services	1,184,000	676,600	507,400	75.0
Leisure and Hospitality	908,000	594,200	313,800	52.8
Other Services	349,400	262,900	86,500	32.9
Government	1,683,100	1,263,400	419,700	33.2

Sources: Texas Workforce Commission and Real Estate Center at Texas A&M University



Employment in the Natural Resources and Mining sector is closely associated with changes in crude oil prices. Since 1990, the sector has gone through several periods of job gains and job losses. Overall, it managed to gain 2,700 jobs by 2005 (Table 2), but its employment share dropped from 2.3 percent to 1.7 percent of nonfarm employment (Table 3).

### Employment by MSAs

The employment mix varies significantly between the state's metropolitan statistical areas (MSAs). Table 4 displays the share of jobs represented by each employment sector for Texas MSAs measured as a percentage of total nonfarm employment. A brief discussion of meaningful statistics within each employment sector follows.

### Natural Resources, Mining & Construction

Natural Resources, Mining & Construction employment accounts for 19.9 percent of nonfarm employment in Midland, the metro area with the largest percentage of mining employment in Texas. Second and third place are occupied by the Odessa and Victoria MSAs at 14.6 percent and 13.1 percent, respectively. The Brownsville-Harlingen MSA has the smallest share of Natural Resources, Mining & Construction employment.

### Manufacturing

Employment in the Manufacturing sector ranges from a low of 2.1 percent in Laredo to a high of 15.2 percent in Waco. Other MSAs with Manufacturing employment above 10 percent are Amarillo, Beaumont-Port Arthur, Dallas-Plano-Irving, Fort Worth-Arlington, Longview, Sherman-Denison, Texarkana, Tyler, Victoria and Wichita Falls.

### Wholesale Trade

The Odessa MSA records the largest percentage of Wholesale Trade employment (7.9 percent), followed by Dallas-Plano-Irving (6.3 percent) and Austin-Round Rock (5.4 percent). College Station-Bryan has the smallest percentage at 1.7 percent.

### Retail Trade

The McAllen-Edinburg-Pharr and Sherman-Denison MSAs capture the largest percentage of Retail Trade employment (14.4 percent), followed by Laredo (14.1 percent). Houston-

Baytown-Sugar Land records the smallest percentage share (10.4 percent).

### Transportation, Utilities & Warehousing

Transportation, Utilities & Warehousing employment accounts for 14.9 percent of nonfarm employment in Laredo, the highest percentage recorded by any Texas MSA. Fort Worth-Arlington is second (7.4 percent) followed by El Paso (5.1 percent). The Transportation, Utilities & Warehousing sector is a major consumer of warehouses and industrial real estate.

### Information

The Information sector is made up of telecommunications companies, Internet service providers, web search portals and publishing firms. Information accounts for only 4.9 percent of total employment in Lubbock at the top end followed by 4.3 percent in San Angelo, 3.9 percent in Dallas-Plano-Irving and 3.1 percent in Austin-Round Rock.

### Financial Activities

The Financial Activities industry consists of credit intermediation, securities and commodities contracts, insurance carriers and real property leasing. The Dallas-Plano-Irving MSA has the largest percentage of Financial Activities employment (8.9 percent) followed by San Antonio (7.9 percent) and Sherman-Denison (6.2 percent).

### Professional and Business Services

The Professional and Business Services sector includes professional, scientific and technical services, management of companies, administrative

support, waste management and remediation services. Large metropolitan areas typically have high proportions of total employment in professional services.

Professional and Business Services employment accounts for 15.1 percent of total nonfarm employment in Dallas-Plano-Irving, 14.2 percent in Houston-Baytown-Sugar Land, 13.5 percent in Austin-Round Rock, 12.4 percent in San Antonio, 11 percent in Fort Worth-Arlington, 10.9 percent in Midland and 10.2 percent in El Paso.

### Education and Health Services

Only privately owned facilities that provide education or health services are included in the Education and Health Services sector. Publicly owned facilities are included in the

**Table 3. Shares of Texas Employment by Industry, 1990-2005**

Industry	Percent of Total Employment	
	2005	1990
Natural Resources and Mining	1.7	2.3
Construction	5.8	4.9
Manufacturing	9.2	13.4
Wholesale Trade	4.9	5.2
Retail Trade	11.4	12.7
Transportation, Warehousing, and Utilities	4.2	4.3
Information	2.3	2.5
Financial Activities	6.3	6.5
Professional and Business Services	11.9	8.9
Educational and Health Services	12.2	9.5
Leisure and Hospitality	9.3	8.4
Other Services	3.6	3.7
Government	17.3	17.8

Sources: Texas Workforce Commission and Real Estate Center at Texas A&M University



**Table 4. Shares of Employment by Industry for Texas Metropolitan Areas, 2005**

Metro Area	Natural Res., Mining & Constr.	Mfg.	Wholesale Trade	Retail Trade	Transport., Util. & Warehous.	Information	Financial Activities	Prof. & Bus. Svcs.	Educ. & Hlth. Svcs.	Leisure & Hospitality	Other Svcs.	Govt.
Abilene	7.1	4.9	3.4	12.9	2.5	1.9	5.0	6.4	21.6	10.2	4.7	19.4
Amarillo	6.1	11.2	5.1	12.9	3.4	1.7	5.5	8.4	13.8	10.1	4.6	17.5
Austin–Round Rock	5.8	8.3	5.4	10.5	1.7	3.1	5.9	13.5	10.3	10.0	3.9	21.6
Beaumont–Port Arthur	9.2	12.4	2.8	12.7	4.3	1.8	3.6	8.5	14.9	8.8	3.8	17.3
Brownsville–Harlingen	3.7	6.3	2.8	13.3	3.5	1.0	4.0	6.6	23.1	9.9	2.9	23.0
College Station–Bryan	6.6	7.1	1.7	10.8	1.2	1.2	3.9	6.2	10.3	10.6	3.0	37.2
Corpus Christi	10.4	6.2	3.2	11.7	3.0	1.5	4.6	9.4	15.5	11.6	3.8	19.0
Dallas–Plano–Irving	5.7	10.1	6.3	10.7	3.8	3.9	8.9	15.1	10.1	9.1	3.8	12.5
El Paso	4.7	8.8	3.9	12.5	5.1	1.8	4.4	10.2	12.7	9.7	3.0	23.2
Fort Worth–Arlington	6.6	11.7	4.7	12.0	7.4	2.1	5.8	11.0	10.8	9.9	4.0	13.9
Houston–Baytown–Sugar Land	10.2	9.0	5.2	10.4	4.9	1.5	5.9	14.2	11.1	8.8	4.0	14.5
Killeen–Temple–Ft. Hood	4.9	7.3	3.0	11.9	3.4	2.1	5.4	7.5	13.6	8.7	4.5	27.6
Laredo	5.0	2.1	3.1	14.1	14.9	0.9	4.3	5.0	14.2	10.0	2.1	24.4
Longview	12.1	14.9	4.0	12.2	3.1	2.1	3.9	7.4	15.9	8.1	3.6	12.8
Lubbock	4.2	4.1	4.6	12.1	3.0	4.9	5.4	8.3	14.7	11.6	4.2	22.9
McAllen–Edinburg–Pharr	5.4	4.3	3.4	14.4	3.0	1.5	4.2	6.6	20.8	8.6	2.5	24.5
Midland	19.9	3.9	4.4	12.1	2.5	3.0	5.4	10.9	10.3	9.9	3.7	13.8
Odessa	14.6	6.7	7.9	12.5	3.0	1.3	4.3	7.1	10.1	10.3	5.2	17.0
San Angelo	6.8	8.2	3.4	12.3	1.8	4.3	4.3	8.4	16.7	9.6	3.9	20.1
San Antonio	6.2	5.9	3.4	11.8	2.7	2.6	7.9	12.4	13.6	10.2	3.5	18.4
Sherman–Denison	6.6	14.4	2.3	14.4	2.7	1.4	6.2	6.2	18.9	9.6	3.4	14.2
Texarkana	4.4	10.1	4.4	13.0	4.4	0.9	4.4	5.9	16.5	9.3	3.8	22.7
Tyler	5.5	10.5	4.1	13.7	3.4	2.3	4.6	8.2	20.0	9.5	4.2	13.8
Victoria	13.1	11.7	3.5	13.3	3.1	1.2	4.3	7.0	13.5	8.6	3.1	17.8
Waco	5.3	15.2	3.9	10.7	2.9	1.7	5.9	7.3	17.5	9.2	4.0	16.5
Wichita Falls	5.7	12.5	2.9	12.5	2.4	2.4	3.7	5.2	16.4	9.1	5.0	22.0

Sources: Texas Workforce Commission and Real Estate Center at Texas A&M University

Government sector. Education and Health Services employment accounts for 23.1 percent of total employment in Brownsville–Harlingen, 21.6 percent in Abilene, 20.8 percent in McAllen–Edinburg, 20.0 in Tyler and 18.9 percent in Sherman–Denison. Corpus Christi, Longview, San Angelo, Texarkana, Waco and Wichita Falls all have more than 15 percent of their total employment in Education and Health Services.

### Leisure and Hospitality

The Leisure and Hospitality sector includes firms involved in the arts, entertainment and recreation as well as accommodations and food services. Leisure and Hospitality employment ranges from a high of 11.6 percent in Corpus Christi and Lubbock to a low of 8.1 percent in Longview.

### Other Services

The Other Services sector includes repair and maintenance, personal and laundry services as well as religious, civic and professional organizations. Wichita Falls has the largest share of Other Services employment at a mere 5 percent.

### Government

Government employment represents a relatively large share of total nonfarm employment in all Texas metro areas. Government records a 37.2 percent share in College Station–Bryan, primarily because of the scope of Texas A&M University employment relative to the area’s total population. Government exceeds 20 percent of total nonfarm employment in the Austin–Round Rock, Brownsville–Harlingen, El Paso, Killeen–Temple–Fort Hood, Laredo, Lubbock, McAllen–Edinburg–Pharr, San Angelo, Texarkana and Wichita Falls MSAs. 📍

*Dr. Anari (m-anari@tamu.edu) and Dr. Hunt (hhunt@recenter.tamu.edu) are research economists with the Real Estate Center at Texas A&M University.*

### THE TAKEAWAY

As economic sectors change and local economies evolve, demand for commercial and industrial real estate also changes. Real estate professionals can benefit greatly by monitoring these changes for long-range investment planning purposes.



MAYS BUSINESS SCHOOL

Texas A&M University  
2115 TAMU  
College Station, TX 77843-2115

<http://recenter.tamu.edu>  
979-845-2031

**Director**, Gary W. Maler; **Chief Economist**, Dr. Mark G. Dotzour; **Communications Director**, David S. Jones; **Associate Editor**, Nancy McQuiston; **Assistant Editor**, Kammy Baumann; **Assistant Editor**, Ellissa Brewster; **Art Director**, Robert P. Beals II; **Graphic Designer**, JP Beato III; **Circulation Manager**, Mark Baumann.

#### Advisory Committee

Douglas A. Schwartz, El Paso, chairman; David E. Dalzell, Abilene, vice chairman; Joseph A. Adame, Corpus Christi; Tom H. Gann, Lufkin; Celia Goode-Haddock, College Station; Joe Bob McCartt, Amarillo; Catherine Miller, Fort Worth; Nick Nicholas, Dallas; Jerry L. Schaffner, Dallas; and Larry Jokl, Brownsville, ex-officio representing the Texas Real Estate Commission.

**Tierra Grande** (ISSN 1070-0234) is published quarterly by the Real Estate Center at Texas A&M University, College Station, Texas 77843-2115. Subscriptions are free to Texas real estate licensees. Other subscribers, \$20 per year. Views expressed are those of the authors and do not imply endorsement by the Real Estate Center, Mays Business School or Texas A&M University. The Texas A&M University System serves people of all ages, regardless of socioeconomic level, race, color, sex, religion, disability or national origin. Photography/Illustrations: Real Estate Center files, pp. 1, 2, 3, 4.