A RE-EVALUATION OF THE GREATER DALLAS CHAMBER'S INDUSTRIAL RECRUITMENT TARGETS

Prepared for the

Greater Dallas Chamber of Commerce

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October 2006

Introduction

In a 2001 study prepared for the Greater Dallas Chamber, the University of North Texas Center for Economic Development and Research examined 22 industry clusters as potential targets. Three target industries were identified in that exercise: (1) medical device and biopharmaceutical firms, (2) global financial services firms, and (3) computer and semiconductor manufacturing and suppliers. Data and computer management was identified as a "retention" target as were three facility types: logistics centers, headquarters, and data/call centers.

In 2006, we were asked to review the targets we had identified in 2001 to ascertain if they should be retained or deleted. We were also asked to identify any additional industries that should be added to the target list. After carefully reviewing the performance of the industries identified in 2001, we conclude that all should be retained with the exception of data/call centers. We also recommend that publishing be added to the list of targets in the Chamber's future recruitment efforts.

Our industry-by-industry assessment follows.

Medical Device and Biopharmaceutical Firms

The medical device and biopharmaceuticals industry consists of the following industry sectors: pharmaceutical and medicine manufacturing (3254), medical equipment and supplies manufacturing (3391), and medical and diagnostic laboratories (6215). Drugs and pharmaceutical manufacturing includes firms that develop and produce medicinal and diagnostic substances. Medical device and equipment includes firms that develop and produce physical products for diagnostics, therapeutics, surgical applications, and equipment and supplies for health care delivery. Medical and diagnostic laboratories include firms engaged in providing analytic or diagnostic services, including body fluid analysis and diagnostic imaging to the medical profession or to the patient on referral from a health practitioner. Many companies in the life sciences arena currently have a presence in the region including Alcon, Abbot Labs, MacroGenics, Advanced Neuromodulation Systems, Pharmafab, Zyvex, and Kimberly Clark.

Table 1 presents employment growth, shift share analysis, location quotients, wage and IMPLAN output for the medical device and biopharmaceutical industries. The location quotient shows the region to have a low concentration of these industries when compared to the nation, with values ranging from 0.32 to 0.82. The IMPLAN data additionally indicate that the regional economy has significant gaps, defining these as import industries. The region does show significant employment growth in two of the three sectors. Shift share analysis, measuring the region’s competitiveness against the same industry on a national level, demonstrates the region is lagging national growth in two sectors and leading the nation in one. Table 1 also presents the national hourly wage in 2005 for the industry sector. The industries have high wages due to the highly technical nature of the occupations within the field. The wages range from $25.45 to $19.53 per hour.

Table 1

Medical Device and Biopharmaceutical Firms: Dallas/Fort Worth

Industry	Regional Employment Change 98-04	Regional Share	Location Quotient	Wage	IMPLAN Net Demand
Pharmaceutical and Medicine Manufacturing	3.60%	-154.9	0.32	$25.45	1,533.20
Medical Equipment Mnfg	20.10%	627	0.57	$19.53	166.60
Medical and Diagnostic Laboratories	34.60%	-136.36	0.82	$20.09	N/A

Sources: County Business Patterns, Bureau of Labor Statistics, IMPLAN

Through the examination of the location quotient and IMPLAN data, the region does appear to be slightly trailing the nation in these industries. But with an internationally acclaimed scientific community and highly educated workforce, along with an aggressive pro-business environment, the region should quickly fill these gaps. The Metroplex is home to three internationally recognized medical schools: The University of Texas Southwestern Medical Center (with four active Noble Laureates), the University of North Texas Health Science Center, and the Baylor University Medical Center. These centers of research will serve as catalysts in fostering the development of new bio-medical companies across the region. Many of the region's IT advances make the Dallas area an ideal location for future biopharmaceutical activities, while transferable skills in technology and software development should benefit the medical device and products industry.

Global Financial Firms

The global finance cluster consist of the following industry sectors: non-depository credit intermediation; securities and commodities contracts; depository credit intermediation; other financial investment activities; insurance carriers, real estate agents and brokers; and accounting, tax preparation, booking and payroll services. These sectors were selected based on the SIC codes utilized in a 2001 target industry study report. The SIC codes were then reclassified to NAICS codes. These industries encompass a wide range of activities and services within the cluster. Therefore, specific industry sectors have experienced greater levels of success than others within the cluster.

The region has historically served as the financial center of the state and arguably the southwest. Establishments engaged in nondepository credit intermediation are engaged in extending credit or lending funds by credit market borrowing, such as issuing commercial paper, credit cards, or other debt instruments (see Table 2). The region appears to excel in this sector. There is a high concentration of firms, with an LQ value of 2.07. The industry is experiencing high growth levels with a regional employment change of 48 percent between 1998 and 2004. The regional share also shows Dallas to have a competitive advantage with a value of 4,525. The region also has an IMPLAN net demand of -1,434.65, meaning the services provided by the industry are exported outside of the region. The national hourly wage is relatively strong at $23.15.

Real estate agents and brokers constitute another strong sector within the cluster. A high IMPLAN value along with a region share value of 989.3 highlight the region’s relative strength in this industry. The jobs in this sector increase the region’s wealth with an hourly wage of $35.28.

Table 2

Global Financial Firms

Industry	Regional Employment Change 98-04	Regional Share	Location Quotient	Wage	IMPLAN Net Demand
Non-depository Credit Intermediation	48.33%	4,525.2	2.07	$23.15	-1,434.65
Securities and Commodity Contracts	5.55%	-581.7	1.53	$35.38	-847.62
Depository Credit Intermediation	19.24%	3,132.6	0.84	$19.04	1,220.34
Other Financial Investment Activities	23.86%	-364.9	0.95	$35.28	-417.92
Insurance Carriers	0.18%	963.5	1.15	$24.41	-1,858.35
Real Estate Agents and Brokers	51.42%	989.3	1.17	$35.38	-12,198.52
Accounting, Tax Preparation, Bookkeeping and Payroll	14.49%	-3,588.0	0.98	$23.93	86.16

Sources: County Business Patterns, Bureau of Labor Statistics, IMPLAN

Our highly educated workforce and pro-business attitude should enhance the growth prospects for this cluster.

Computer and Semiconductor Equipment Manufacturing

Computer and semiconductor equipment manufacturing consists of industries engaged in the production and manufacturing of high tech communications, broadcasting, computer, cable, and semiconductor equipment. The region has historically played a key role in the development and growth of the industries within this cluster. In 2000 the Milken Institute identified the region as the number two "techpole" in the United States, behind San Jose. The ranking was based on a combination of employment and output in the technology fields. Even after the "tech wreck" of the late 1990s, the region still retains its place as a world leader in innovation in advanced equipment manufacturing.

The data analysis illustrates the hard times that have fallen on all the sectors within this cluster (see Table 3). All sectors showed significant losses in employment during the study period. LQ values range from 4.85 to 0.75, indicating a high concentration of industries engaged in the sector when compared to the rest of the United States. IMPLAN data reveal mixed results within the sector. Semiconductor and other electronic manufacturers and electrical equipment manufactures both show high negative net demand values. But, other industries within the sector have positive values. Wages in the industry still remain relatively high despite the recent downturn, due to the fact that many opportunities within the sector require specialized training, certifications, and degrees.

Table 3

Computer and Semiconductor Equipment Manufacturing and Suppliers

Industry	Regional Employment Change 98-04	Regional Share Effect	Location Quotient	Wage	IMPLAN Net Demand
Computer/Electronic Manufacturers	-43.64%	-6,964.62	1.88	$27.68	723.88
Computer/Peripheral Manufacturers	-85.12%	-835.34	1.19	$35.23	981.21
Communications Equipment	-52.26%	-644.34	4.85	$27.92	N/A
Semiconductor, Other Elec. Manufacturers	-34.36%	601.97	2.10	$24.86	-3,358.33
Navigational/Measuring/Control Instrument Manufacturers	-22.11%	-712.35	2.01	$27.90	317.87
Electrical Equipment Manufacturers	-30.99%	61.93	0.75	$19.29	-8,435.00

Sources: County Business Patterns, Bureau of Labor Statistics, IMPLAN

Data and Computer Management

The information and computer services cluster includes establishments involved in the manipulation, transfer, processing, programming, and storage of information. The cluster also includes other related computer services and consulting. Dallas/Fort Worth is headquarters to the three primary establishments engaged in these services: EDS, Perot Systems, and ACS. The remaining establishments in the cluster are relative small.

IMPLAN data reveal that industries within the cluster have negative net demand values (see Table 4). LQ values remain high at 1.64 to 0.97, showing the region to have relatively high concentrations with the sector. The regional share effect may be the most telling analysis. Due to the maturity of the local industry when compared to the nation, it appears Dallas is lagging the nation in growth. However, industrial reorganization may help explain this slowdown. Wages in the industry are high at $33.76 and $28.85 per hour, again due to the highly technical nature of the occupations, requiring specialized training and degrees.

Table 4

Data and Computer Management

Industry	Regional Employment Change 98-04	Regional Share Effect	Location Quotient	Wage	IMPLAN Net Demand
Computer Systems Design and Related Services	22.79%	-1,128.97	1.64	$33.76	-252.56
Management, Scientific, and Technical Consulting Services	-5.11%	-11,034.25	0.97	$28.85	-531.49

Sources: County Business Patterns, Bureau of Labor Statistics, IMPLAN

Facility Type: Logistics Centers

The logistics cluster consists of companies engaged in truck transportation and warehousing operations. Establishments engaged in the sector provide transportation and storage services for general merchandise and refrigerated goods along with other logistical services. These services may include labeling, breaking bulk, light assembly, packaging, and price marking. The region's central location, along with several Interstate highways, has created a business climate conducive to the development of this sector. Many of the leading national trucking companies are located in DFW (see Table 5).

Table 5

Largest* Dallas-Fort Worth Trucking Companies

Company	Trucks and Trailers*	# of Local Employees
Swift Transportation	73,400	900
JB Hunt Transportation	57,000	
Yellow Transportation	42,600	642
FedEx Freight	37,161	392
ABF Freight Systems	24,460	
SAIA	13,700	595
Averitt Express	13,000	205
Dart Transit Co.	8,844	782
National Freight	8,800	370
Con-Way Southern Express	8,575	300
Frozen Food Express	6,436	
Arnold Transportation	6,200	420
Stevens Transport	4,900	972
Lone Star Transportation	2,260	160

** Ranked by total number of trucks and trailers nationally*
Note: Roadway Express, which ranked #2 last year, Central Freight Lines, which ranked #6 last year, and Bright Transportation which ranked #13 last year declined to submit a survey.
Source: The Dallas Book of Lists 2006, The Trucking Companies

Many high tech and emerging technologies are utilized in the logistics sector. The advent of computer tracking, global positioning systems and the increased utilization of intermodal transportation is transforming the industry. DFW is quickly emerging as the nation's premier location for intermodal transportation as evidenced by the development of Burlington Northern Santa Fe's 882 acre, $100+ million state-of-the art intermodal hub at Alliance Airport and the Union Pacific's 342 acre, $80 million intermodal facility in south Dallas.

The LQ data analysis illustrates the high concentration of transportation and warehousing companies in the DFW region (see Table 6). The region is particularly strong in truck transportation with an LQ value of 1.22. Warehousing and storage has an LQ value of 1.15. The region is outpacing the nation in growth, as seen in the high regional share effect values. Warehousing and storage is considered an export industry with an IMPLAN value of 250.55. The DFW region has experienced tremendous growth in this sector, and that growth should continue for the foreseeable future.

Table 6

Targeted Facility: Logistics Centers

Industry	Regional Employment Change 98-04	Regional Share Effect	Location Quotient	Wage	IMPLAN Net Demand
Warehousing & Storage	405.90%	748.48	1.15	$15.17	250.55
Truck Transportation	12.00%	1,412.00	1.22	$17.64	N/A

Sources: County Business Patterns, Bureau of Labor Statistics, IMPLAN

Facility Type: Headquarters

The region's business friendly environment, favorable climate, geographic location, educated workforce and low cost of living have all helped to attract company headquarters to the region. A recent study conducted by the Chicago Federal Reserve Bank shows the region having an LQ value of 1.8 in headquarters (see Table 7).

Table 7

Targeted Facility: Headquarters

Rank	Region	Number of Headquarters	Location Quotient
1	Chicago, IL	1,380	1.1
2	New York, NY	1,217	0.9
3	Los Angeles-Long Beach, CA	1,007	0.8
4	Washington, DC-MD-VA-WV	945	1.3
5	Dallas, TX	942	1.8
6	Philadelphia, PA-NJ	924	1.3
7	Atlanta, GA	892	1.4
8	Houston, TX	811	1.4
9	Boston, MA-NH	740	1.0
10	Minneapolis-St. Paul, MN-WI	970	1.4

Source: Chicago Federal Reserve Bank

All of the factors that have made DFW a magnet for corporate relocations in the past are still in place. So headquarters should remain in the sights of area recruiters.

Facility Type: Call/data Centers

According to the most recent Texas Workforce Commission data, the Dallas/Fort Worth MSA has 214 call centers employing 14,271 people. This represents about one half of one percent of area employment. The industry is characterized by low wages and high turnover.

As more and more call center activity is moving overseas, and the wage base remains quite low, we believe this facility type should be deleted from the Chamber's list of targets.

New Opportunities: Publishing

During our analysis, the publishing industry surfaced as a new target of opportunity for the region. The publishing industry today has two basic components. The first, being the more traditional definition of the industry, includes the production of magazines, books, newspapers, directories, calendars, greeting cards, and other published material. Additional formats, such as audio, CD-ROM, and other electronic media, are also included in this segment.

Software is the second component of the publishing industry and includes computer software, installation, and support services. Many types of software fall under "publishing" such as operating system software, word processing, spreadsheets, database, storage, games, graphics, and Internet browsers.

Software publishing is considered a high growth sector within the industry. The Bureau of Labor Statistics projects employment to increase by 68 percent between 2004 and 2014, ranking software publishers as the third fastest growing industry in the economy (see Table 8).

Table 8

The 10 industries with the Fastest Projected Employment Growth, 2004-2014* (numbers in thousands)

Industry	Employment		Change	
	2004	2014	Number	Percent
Educational support services, private		120	53	79.1
Home health care services	773.2	1,310.30	537.1	69.5
Software publishers	238.7	400	161.3	67.6
Management, scientific, and technical consulting services	779	1,250.20	471.2	60.5
Community care facilities for the elderly	582.6	902.1	319.5	54.8
Outpatient care centers, except mental health and substance abuse	298.4	447.4	149	49.9
Residential mental health and substance abuse facilities	154	230.8	76.8	49.9
Offices of all other health practitioners	71.7	107	35.3	49.3
Residential mental retardation facilities	337.1	496.7	159.6	47.3
Facilities support services	115.6	170	54.4	47.1

*Data are from the National Employment Matrix.
Source: Bureau of Labor Statistics

Our analysis found that DFW is doing quite well in the publishing industries. LQ values are relatively stable at 1.15 to 0.77. The region has a slight edge over the rest of the nation with an LQ value of 1.01 and IMPLAN net demand value of –287.70 (see Table 9).

Table 9

Publishing Industry

Industry	Regional Employment Change 98-04	Regional Share Effect	Location Quotient	Wage	IMPLAN Net Demand
Publishing Industries (except Internet)	14.59%	2,374.97	0.77	$24.55	
Newspapers, Periodicals, Books & Directories	15.90%	2,270	1.15	$20.33	
Software Publishing	11.10%	-399.5	1.01	$36.58	-287.70

Sources: County Business Patterns, Bureau of Labor Statistics, IMPLAN

Economic Underpinnings: Hospitals

Access to healthcare is essential in providing a high quality of life to the residents of a community. Though DFW aspires to be a major medical referral and research center, we lag many east and west coast cities in hospital beds per capita (see Table 10).

Table 10

Hospital beds per capita: 15 largest Metro areas

Region	# of Beds per capita*
New York	482.2
Miami	455.1
San Francisco	441.7
US Average	432.2
Philadelphia	420.4
Boston	419.2
Detroit	360.6
Houston	338.4
Chicago	335.7
Los Angeles	325.7
Dallas/Fort Worth	265.7
Washington D.C	258.1
Phoenix	242.5
Atlanta	230.4
Riverside/San Bernardino	217.4
Seattle	196.4

Source: US Department of Health and Human Services

Our analysis finds the region with a low concentration of hospitals, as illustrated by an LQ of 0.66 (see Table 11). But, the region is outpacing the nation in growth of this sector, as evidence by a negative IMPLAN value.

Table 11

Economic Underpinnings: Hospitals

NAICS Code	Industry	Regional Employment Change 98-04	Regional Share Effect	Location Quotient	Wage	IMPLAN Net Demand
662	Hospitals	18.40%	8,355.04	0.66	$20.10	-1,985.22

Sources: County Business Patterns, Bureau of Labor Statistics, IMPLAN

Hospital development shouldn't be a target of the Chamber but should be monitored closely.

Economic Underpinnings: Education

Educational institutions help build a region's human and social capital. Higher education also serves as a gateway for research and development. Many have described the universities of today as the factories of tomorrow, encouraging innovation while stimulating economic activity.

The region has low LQ values in both education services and higher education (see Table 12). The region also shows a negative regional share effect in colleges, universities, and professional schools. This may be attributed in part to the reporting methods of the United States Census Bureau that categorize public university employees as government workers. Due to large concentrations of both public universities and junior colleges in the region, the LQ may be artificially low.

IMPLAN data show a negative net demand for educational services. As with hospitals, educational services should be monitored but not targeted by the Chamber.

Table 12

Economic Underpinnings: Education

Industry	Regional Employment Change 98-04	Regional Share Effect	Location Quotient	Wage	IMPLAN Net Demand
Educational Services	43.32%	5,182.75	0.63	$20.17	N/A
College, University, Prof. Schools	0.63%	-2,099.44	0.57	$23.55	-196.84

Sources: County Business Patterns, Bureau of Labor Statistics, IMPLAN

Conclusion

After carefully assessing the performance of the industry clusters targeted in our 2001 report, we recommend that, because of untapped growth opportunities, all be retained with the exception of data/call centers. We also believe that publishing should be added to the list of targets because of the inherent local comparative advantages that abound in this industry.