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INTRODUCTION



Introduction

Local leaders seeking to develop their economies need to realize that, more often than not, their respective community is part of a broader economic region that has agglomerations, or clusters, of like-industries that share employment, industry, and other characteristics that play to their respective strengths. These concentrations of business sectors, also known as clusters, are “a geographically proximate group of companies and associated institutions in a particular field, linked by commonalities and complementarities.”¹ It is essential that regional leaders, local economic developers, and elected officials understand that a certain group of companies that perform well at the regional level might be good to pursue for localized economies.

It is this idea that *Market Street* captures in the *Regional Industry Cluster Analysis* by analyzing business targets at a regional and county level. Groups of businesses cluster together because firms in the same or closely related industry sector that share the same relative infrastructure, geography, population, and so forth, gain competitive advantages and economies of scale by locating in the same vicinity. Close proximity with like firms can allow businesses to learn about best practices, new technologies, create (and often compete for) a labor pool (with varying degrees of skill level), and reduce transportation costs. By recognizing that these agglomerations loosely exist, productivity and associations hold the potential to significantly improve the local or sub-regional economy.

Most clusters grow out of (and may later spurn others) a large or dominant business or the activity caused by possible interactions and interrelations of a few growing companies. Potential groups or clusters of companies may also benefit from synergies shared with universities, medical facilities, or government research labs. Usually, clustering occurs if the firms originally present are successful, spinning off like companies (who start as more innovative and flexible and nimble) and generating demand for related services and products.

It is mistaken to think that clusters only apply to industries labeled as “new economy” or “industries of the mind.” While industries at every level are reaping the benefits of collaboration and knowledge sharing, the information economy and productivity improvements have replaced cost advantages from resource intensive inputs (such as cheap labor or land). Most everywhere is within proximity of physical infrastructure and has a certain level of incentives, and so forth. The challenge now is to find the people with the right training, work ethic, and technical skills. Regardless of industry type, today’s fast-paced, changing economy increases the pressure on companies to best utilize their available resources. Increased global competition, the reduction of nearly all costs from the supply chain, and lower profits have also forced businesses to seek out new revenue streams and improved work processes. Clusters have been found to increase productivity because of the following factors:²

- Complementary relationships that benefit companies in a cluster;
- Exposure to competitors that raises expectations, quality, and worker motivation;
- Better access to suppliers and workers;

¹ *On Competition*, Dr. Michael Porter, Harvard University Business School.

² *Ibid.*

- Access to relevant public and private institutions; and
- Access to a flow of specialized information about other companies in a cluster (i.e. effective business strategies, performance measures, and so forth).

Successful clusters improve efficiency both *horizontally* (between firms) by facilitating greater communication and cooperation among cluster members, and *vertically* (with other industries) by providing individual firms the breadth, leverage and visibility of the overall cluster or industry group.

However, simply being positioned in a cluster or as part of a sub-region does not imply or guarantee a company's success. Often, clusters experience growth phases based on firm composition, product-cycles and level of competition (foreign and domestic) that may determine the ultimate viability of the cluster regardless of its past history. Linked companies and clusters can share resources and be looked at in whole (not in part) when it comes time to contact potential companies and focus marketing resources.

This report will focus on several target business clusters that, due to a concentration of existing industries, the future viability of these industries, their wages paid, and training and workforce resources available, will complement Cameron County's efforts to grow and diversify its economy.

Cameron Works contracted with *Market Street Services*, a national economic and workforce consulting firm headquartered in Atlanta, Georgia, to develop a *Regional Cluster Analysis* for the County. The results of this analysis, provided in this report, build upon the knowledge gained from *Market Street's* completion of prior deliverables. This *Regional Cluster Analysis* is the third deliverable of the four-part process outlined below:

- I. ***Current Realities.*** An assessment of Cameron County's demographic characteristics and present economic health and structure. Presented to the Regional Working Group in April of 2004.
- II. ***Workforce Assessment.*** An assessment of the present working-age population and Cameron's capacity for workforce training, support, and further development. Presented to the Regional Working Group in May of 2004.
- III. ***Regional Cluster Analysis.*** Identifies business sectors that Cameron can realistically target based on the area's existing strengths and national economic trends. Presented to the Regional Working Group in June of 2004.
- IV. ***Implementation Guidelines.*** Outlines the process to help achieve the successful targeting of the chosen business clusters, workforce development, and long-term economic prosperity for Cameron County. Presented to the Regional Working Group in June of 2004.

In this *Target Business Analysis*, after establishment of the methodology used to compile the report, each target area will be outlined using key statistics from the analysis as well as major themes that the overall data revealed.

METHODOLOGY



Methodology

Identifying specific target clusters requires both *quantitative* and *qualitative* research. Quantitative examination of indicators like wages paid or local employment compared to national averages determines the magnitude and impact of specific business sectors. These data are collected according to North American Industry Classification Systems (NAICS) codes from the Bureau of Labor Statistics' *Quarterly Census of Employment and Wages, Harris InfoSource*, and other data from state-level organizations.³ For the data, *Market Street* used the most recent available. In many cases, the data are presented in a chart as the percentage each component represents of the total. In these cases, unless otherwise noted, if the summation of the percentages of all the components does not equal 100 percent, it is due to rounding or disclosure issues for local-level data in certain sectors.

NAICS classifies businesses into sectors similar to the now defunct Standard Industrial Classification codes system, but in categories more closely aligned with today's service-oriented economy. Twenty different divisions represent the broadest NAICS codes. These divisions and their corresponding NAICS codes are:

Division	NAICS Code
Forestry, Fishing, Hunting & agriculture support	11
Mining	21
Utilities	22
Construction	23
Manufacturing	31-33
Wholesale Trade	42
Retail Trade	44-45
Transportation & Warehousing	48-49
Information	51
Finance & Insurance	52
Real Estate & Rental & Leasing	53
Professional, Scientific, & Technical Services	54
Management of Companies & Enterprises	55
Admin., Support, Waste Management, Remediation Services	56
Educational Services	61
Health Care & Social Assistance	62
Arts, Entertainment, & Recreation	71
Accommodation & Food Services	72
Other Services (except public administration)	81
Auxiliaries (exc. corporate, subsidiary & regional management)	95

³ Data are sometimes suppressed, or only ranges of employment size are listed, if the information provided would compromise the identity of a particular employer.

An important quantitative term used in this report is *location quotient* (LQ). A location quotient is a ratio representing the strength of a particular local business sector in relation to the national average. It is represented formulaically as:

$$LQ = \frac{(\text{Regional Employment in Sector} / \text{Total Regional Employment})}{(\text{National Employment in Sector} / \text{Total National Employment})}$$

If a location quotient is *greater* than 1.0, the area has a larger share of employment in that sector than the nation. The higher the LQ, the more concentrated the level of local employment compared to its U.S. equivalent. LQs provide insight into a community's economic structure and its level of industrial diversity. If one or two sectors dominate local employment, slowdowns in these industries may decimate an area's economy.

Conversely, if a location quotient is *less* than 1.0, this indicates a smaller local share of employment than the nation. The fact that a sector has a location quotient below 1.0 does not preclude it from being a target business cluster for the community. Similarly, an LQ over 1.0 does not automatically mean the community should aim for that sector. A number of factors, including national trends, local support services, and regional clusters, contribute to the viability of a local industry group.

Another important concept in local economic development is the *traded*, or *export* sector. A traded sector is a community's economic engine – that part of the economy that sells goods and services to customers outside the region, importing income that then circulates throughout the rest of the local economy. For example, machinery manufacturing is a traded sector in the County because most of these goods are sold outside the County. The “new” money entering the economy is then used to purchase local goods and services, creating new wealth in Cameron County. Conversely, retail is considered a *non-traded* sector because those monies originate within the community and have no “multiplier effect” on other spending. Local economic developers should always strive to recruit and develop traded industries because these sectors have a greater benefit to overall community vitality.

Market Street conducted focus groups in Cameron County the week of May 10, 2004 in order to provide a more qualitative analysis of the existing character and resources of the area. Approximately 30 total people participated in one of four focus groups conducted in Brownsville, Harlingen, Port Isabel, and San Benito, Texas. Additionally, an online survey was available for the three week period from May 3 to May 21, 2004 on the Cameron Works website, www.cameronworks.org. Written and administered by *Market Street* and powered by *SurveyMonkey.com*, 11 people responded to the online survey. The findings of these qualitative efforts are referenced throughout the report.

As mentioned, using the conclusions from prior deliverables, along with additional quantitative and qualitative analysis, *Market Street* identified the most appropriate types of business and industry for the County to pursue and focus its training resources on in the future. However, to accomplish this task, the geographic area of analysis was expanded to determine the sectors that

- ✓ Transportation Equipment Manufacturing;
- ✓ Logistics; and
- ✓ Plastics Product Manufacturing.

Both this quantitative and qualitative analysis has resulted in the selection of five business sectors the County should target. They are:

- **Health Care;**
- **Hospitality and Tourism;**
- **Transportation Equipment Manufacturing;**
- **Logistics; and**
- **Plastics Product Manufacturing.**

This does not mean that other sectors can be neglected, nor does this mean that these same businesses should be targeted 10 years from now. Existing businesses must be encouraged and given the tools needed to thrive, and community leaders must continually assess those clusters that are developing. However, in terms of business attraction and creating the types of assets that will attract certain higher-paying segments, these categories provide a roadmap utilizing the County's current strengths and opportunities for wealth creation.

Market Street Services views each of the five clusters discussed above as useful targets for the County's efforts in strengthening its long-term economic performance and workforce. The above clusters were selected primarily at the NAICS sector level. This report will discuss each in detail in the specific context of this methodology and specify how the targeting of these clusters will benefit the County.

TARGET BUSINESS SECTORS



HEALTH CARE



Health Care

Description and Trends

With the aging of the “Baby Boom” in the coming years, many anticipate a strain on the nation’s health care system. However, communities that anticipate and prepare for this demographic phenomenon will be able to generate economic activity based on the increase in demand for medical services; hospital, nursing, and at-home care; as well as the purchase of trillions of dollars worth of medications, medical devices, and other health related products.

Most people do not think of health care services beyond the critical role they play in meeting the needs of local residents. Targeting health care services as part of an economic development strategy is a coming sea change that (as an idea) is still gaining traction. The health care sector affects the economy in much the same way heavy industry did by bringing money in through third party payments, providing jobs and wages to residents, and providing an opportunity to keep health care dollars circulating within the County’s economy. Health care businesses have an additional impact through the purchases of utility services and cleaning supplies, as well as the payment of property taxes. Health care is a suitable cluster to develop because the jobs it offers are an excellent avenue to create wealth in a region’s economy.

The health services sector is primed for surging growth both at the national and local levels as seniors increasingly depend on medical products and services. U.S. health care consumption rose from 10.9 percent of national Gross Domestic Product (GDP) in 1988 to more than 14 percent in 2002. Forecasts indicate that figure will reach 17 percent of GDP by the year 2011.⁴ It is already a powerful economic sector, representing about 10 percent of the nation’s total employment. The U.S. Bureau of Labor Statistics predicts that employment in health care services will grow by 25.5% from 2000 to 2010, compared to 16.5% growth in jobs overall. Additionally, nine out of the 20 fastest-growing occupations nationwide will be in this category.

Growth opportunities in the health care sector are not limited to health care service providers. The industry ranges from health services, such as health practitioners and hospitals, to drugs and pharmaceuticals, medical instruments and supplies, medical service and health insurance, and research and testing services, where much of the emerging biotechnology sector is recorded.⁵ Biomedical research and pharmaceuticals are an increasingly sought-after portion of the health care industry, but it requires strong medical training and research facilities for a community to be truly competitive in this field. The State of Texas ranked third in the nation for both new branches and start-ups of these type of firms, a reputation the Cameron community may be able to benefit from if it is able to maximize and expand its existing medical research facilities.⁶

As illustrated in the chart on the next page, a variety of sectors comprise this broad definition of the health care sector. Beyond traditional health care service providers, such as the offices of physicians, dentists, specialists, and all other health practitioners that are included in the

⁴ DeVol, Ross C. and Rob Koepp. “America’s Health Care Economy.” Milken Institute, August 2003, p. 2.

⁵ Ibid.

⁶ Duran, Rachel. “Top States for Biomed/Pharmaceutical.” *Business Xpansion Journal*, June/July 2004, p. 18.

Ambulatory Health Care Services sector (NAICS 621), a community can also expand its health care industry by focusing on the production of medical equipment, supplies, and pharmaceuticals. While health care product manufacturing can be a competitive field, it can also be a lucrative field offering opportunities for an economy to expand its export base and increase the workforce's average wages.

Health Care Service Providers

- Offices of Physicians, Dentists, and Other Health Practitioners (NAICS 6211, 6212, 6213, respectively).
- Outpatient Care Centers (6214).
- Medical and Diagnostic Laboratories (NAICS 6215).
- Home Health Care Services (6216).
- Other Ambulatory Care Services (6219).
- Hospitals (NAICS 622).
- Nursing and Residential Care Facilities (NAICS 623).
- Research and Testing Services (NAICS 5417 and 54138).

- Total U.S. employment (3rd Quarter 2003) is 13,977,328.
- There are 570,271 establishments (3rd Quarter 2003).
- The national average weekly wage (3rd Quarter 2003) is \$760.

Health Care Products Manufacturing

- Medical Equipment and Supplies Manufacturing (NAICS 3391).
- Pharmaceutical and Medicine Manufacturing (NAICS 3254).

- Total U.S. employment (3rd Quarter 2003) is 596,421.
- There are 15,996 establishments (3rd Quarter 2003).
- The national average weekly wage (3rd Quarter 2003) is \$895 for NAICS 3391 and \$1,447 for NAICS 3254.

Location Factors:

- ✓ Close proximity to existing hospitals and health care facilities.
- ✓ Available, affordable, and technically skilled labor force.
- ✓ Close proximity to a university medical school.
- ✓ Strong quality of life.

Hospitals (NAICS 622) accounted for the largest share of the 270,000 new jobs created in the health care industry in 2002, a number that led all other sectors. Employment in hospitals grew 2.7 percent in 2002, compared to a 1.6 percent average annual growth from 1996 to 2001. Comparatively, total health care employment grew 2.6 percent, while most U.S. industries were shedding jobs. The overall weakening of the labor market likely helped the health care sector

ease some of its acute worker shortages.⁷ From 2000 to 2010, the Texas Workforce Commission projects that employment in Cameron County hospitals will increase by 15.3 percent (compared to 20.0% for the State).

The Nursing and Residential Care Facilities (NAICS 623) sub-sector is also growing rapidly as the notion of “retirement homes” changes to reflect the more active, independent lifestyles of today’s seniors. A new type of professional-care facility allows residents to buy a home or condominium independent of the care facility, and then transition to a professionally supervised residence when they are no longer able to care for themselves. Communities that have such facilities and other amenities that attract older populations can bring more retirees, and their dollars, to the area. Nursing and residential care facility employment in Cameron and Texas are projected to increase by a similar amount from 2000 to 2010, 21.8 percent and 22.0 percent, respectively.

Health care service jobs also feature higher than average wages. While doctors and nurse specialists earn top salaries, the jobs available to individuals without substantial training can still provide viable, high-paying career opportunities in a relatively stable profession. Furthermore, numerous technical support occupations in health care services require only one or two years of higher education.

Currently, health care is the largest employment sector in Cameron County, with the sector representing 21.5 percent of the total economy. Valley Baptist Medical Center is one of the County’s largest employers.⁸ From the second quarter of 2001 to the second quarter of 2003, the Health Care Service Providers sector (Ambulatory Health Care Services, Hospitals, and Nursing and Residential Care Facilities) grew by 18.6 percent, from 17,021 to 20,183 jobs in the County. Hospital employment in particular has strong wages, with an average weekly wage of \$774, or roughly \$40,000 a year.

Health Care, 2nd Quarter 2001 to 2nd Quarter 2003: Cameron County

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	
621	Ambulatory Health Care Services	2.85	3.23	11,042	13,983	26.6%	7.6%	\$336
622	Hospitals	0.89	0.88	3,936	4,228	7.4%	4.5%	\$774
623	Nursing and Residential Care Facilities	0.83	0.74	2,043	1,972	-3.5%	4.4%	\$323
3391	Medical Equipment and Supplies Mfg	0.11	0.13	30	35	16.7%	-2.7%	\$619

Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

Cameron’s Health Care sector growth is similar to that of the Rio Grande Valley region, with total service provider job opportunities rising from 41,638 to 50,000, or by 20.1 percent, from the second quarter of 2001 to the second quarter of 2003.

⁷ U.S. Labor Market in 2002: Continued Weakness, McMenamin, Krantz & Krolik, *Monthly Labor Review Online*, February 2003, vol. 126, no. 2. <www.bls.gov/opub/mlr/2003/02/art1full.pdf>.

⁸ Cameron County Profile, Economic Development & Tourism, Texas Office of the Governor. 18 June 2004. <<http://www.bidc.state.tx.us/countyprofiles/Cameron.pdf>>.

Health Care, 2nd Quarter 2001 to 2nd Quarter 2003: Rio Grande Valley*

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	
621	Ambulatory Health Care Services	2.73	3.04	28,243	35,859	27.0%	7.6%	\$368
622	Hospitals	0.82	0.79	9,701	10,369	6.9%	4.5%	\$717
623	Nursing and Residential Care Facilities	0.56	0.52	3,694	3,772	2.1%	4.4%	\$318
3391	Medical Equipment and Supplies Mfg	0.17	0.14	118	106	-10.2%	-2.7%	\$744

* Comprised of the following Texas counties: Cameron, Hidalgo, Starr, and Willacy.
Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

Existing Assets

In order to better understand the composition of the Ambulatory Health Care Services sector in Cameron County, the following table provides data regarding health care professionals in Cameron and the region.

Ratio of Population Per Health Care Professionals, 2001

	Cameron	Rio Grande Valley**	Texas
Direct Care Physician	838	967	661
General/Family Practice Physician	7,332	*	3,829
OB/GYN (Ratio of Females Ages 15-44)	2,478	*	2,297
Registered Nurse	225	256	156
Dentist	5,841	6,529	2,820

*Data not available.

**Comprised of the following Texas Counties: Cameron, Hidalgo, Starr, and Willacy.

Source: Texas Department of Health

While Cameron is stronger than the rest of the Rio Grande Valley in terms of the ratio of people to health care professionals, the County falls behind the State and must aggressively pursue the retention and recruitment of these professionals in order to improve the health of its population, as well as benefit from the economic impact more of these professionals would bring to the community. More physicians would provide additional jobs to staff their offices, and their consumption and tax revenues would add wealth to the local economy.

Further illustrating that the current supply of health care professionals in the Rio Grande Valley is insufficient to meet basic quality of life standards, as of February 2002, Hidalgo and Starr were designated as Health Professional Shortage Areas (HPSA), and Cameron and Willacy were only recently eligible to be removed from the list. The U.S. Department of Health and Human Services defines a HPSA as an area in which the ratio of the total population to an accessible physician is greater than 3,500 to one. Additionally, portions of Cameron and all of Hidalgo, Starr, and Willacy are designated as Medically Underserved Areas (MUA). A MUA is identified based on a weighted index score measuring the percent of the population that is over 65 years

old, the poverty rate, the infant mortality rate, and the number of primary care physicians per 1,000 people.⁹

One unique asset of Cameron and the region's health care industry is the strong Home Health Care Services sub-sector (of the Ambulatory Health Care Services sector), which includes nursing and personal care services in the home, as well as companion services, physical therapy, medical social services, medications, medical equipment and supplies, counseling, occupation and vocational therapy, and dietary and nutritional services. Illustrating the strength and importance of this sub-sector to the Rio Grande Valley economy, national rankings of metropolitan areas in Home Health Care Services rated the McAllen-Edinburg-Mission Metropolitan Statistical Area (MSA) of Hidalgo County first and the Brownsville-Harlingen-San Benito MSA of Cameron fourth in the country.¹⁰

The second quarter 2003 employment data supporting the apparent strength of this sector in Cameron and the Rio Grande Valley were the 10,045 jobs in Cameron (a location quotient of 15.54) and 24,063 jobs in the region (a location quotient of 13.68). The sector has also demonstrated substantial growth, even in just the two-year period from the second quarter of 2001 to the second quarter of 2003. During this time period, employment in the sub-sector grew by 33.5 percent in Cameron and 33.3 percent in the Rio Grande Valley.

While the Home Health Care Services sector offers a number of job opportunities – the Texas Workforce Commission forecasts that it will be one of the County's fastest growing sectors through 2010 (with employment increasing by 51.3 percent from 2000 to 2010) – the average weekly wages of these positions is quite low in Cameron: \$173 a week, or about \$9,000 a year. While growth in this sector will not increase the community's income levels in the short-run, the sector does offer the opportunity for unemployed members of the community to gain experience in the health care field to serve as a step towards higher-paying health care sector occupations.

The Hospital sector offers substantial opportunity for expansion and higher-paying job opportunities for the community. Presently, Cameron County has 3.40 licensed hospital beds per 1,000 persons, higher than that of the State average (3.25) and the Rio Grande Valley (2.59), illustrating that Cameron may bring patients in from other communities, thereby "trading" its health care services. This is a strong area for the County's present and future economy.

⁹ Primary Care Health Professional Shortage Areas (HPSA), Texas Department of Health. 18 June 2004. <<http://www.tdh.state.tx.us/dpa/01phy-wc.htm>>; Medically Underserved Areas (MUA), Texas Department of Health. 18 June 2004. <<http://www.tdh.state.tx.us/dpa/01mua-wc.htm>>.

¹⁰ Milken Institute, p. 26.

**Licensed Hospital Beds Per 1,000
Persons, May 2004***

Cameron	3.40
Rio Grande Valley	2.59
Texas	3.25

*Based on 2003 population estimates. Rio Grande Valley comprised of the following Texas Counties: Cameron, Hidalgo, Starr, and Willacy.

Source: Health Facility Licensing and Compliance Division, Texas Department of Health; U.S. Census Bureau

Cameron has six hospitals, five of which are in the two largest cities, Brownsville and Harlingen. Valley Baptist Medical Center of Harlingen, one of Cameron's largest employers with more than 2,500 employees, is considered a leading hospital in South Texas and has received recognition for its orthopedic and joint replacement procedures; back and neck surgery; treatment of stroke; and carotid endarterectomy (repairing clogged arteries). The hospital has been rated as the best in Texas for orthopedic services, in the top ten percent in the nation for vascular surgery, and in the top five percent in the nation for joint replacement surgeries.¹¹ As of 2001, the County also had 12 nursing homes with a total of 1,255 licensed beds.

Hospital Facilities in Cameron and the Rio Grande Valley, May 2004*

County	City	Name	Type	Licensed Beds
Cameron	Brownsville	Brownsville Medical Center	Profit	243
	Brownsville	Brownsville Surgical Hospital, LLC	Profit	8
	Brownsville	Valley Regional Medical Center	Profit	190
	Harlingen	Harlingen Medical Center	Profit	112
	Harlingen	Valley Baptist Medical Center	Non-Profit	602
	San Benito	Dolly Vinsant Memorial Hospital	Profit	81
	TOTAL			
Hidalgo	Edinburg	Cornerstone Regional Hospital	Profit	14
	Edinburg	Cornerstone Rehabilitation Hospital	Profit	25
	Edinburg	Doctors Hospital at Renaissance	Profit	30
	Edinburg	Edinburg Regional Medical Center UHS Rehabilitation Pavilion	Profit	168
	Edinburg	Lifecare Hospitals of South Texas	Non-Profit	40
	McAllen	McAllen Medical Heart Hospital McAllen Medical Behavioral Health Center McAllen Medical Center	Profit	630
	McAllen	Rio Grande Regional Hospital	Profit	227
	Mission	Mission Hospital	Non-Profit	138
	Weslaco	Knapp Medical Center	Non-Profit	233
	TOTAL			
Starr	Rio Grande City	Starr County Memorial Hospital	Non-Profit	49
	TOTAL			
RIO GRANDE VALLEY TOTAL				2,790

*Rio Grande Valley includes Cameron, Hidalgo, Starr, and Willacy (which has no licensed hospitals).

Source: Health Facility Licensing and Compliance Division, Texas Department of Health

¹¹ Valley Baptist Health System, "About Us." 06/03/2004 <<http://www.vbmc.org/aboutUs/>>.

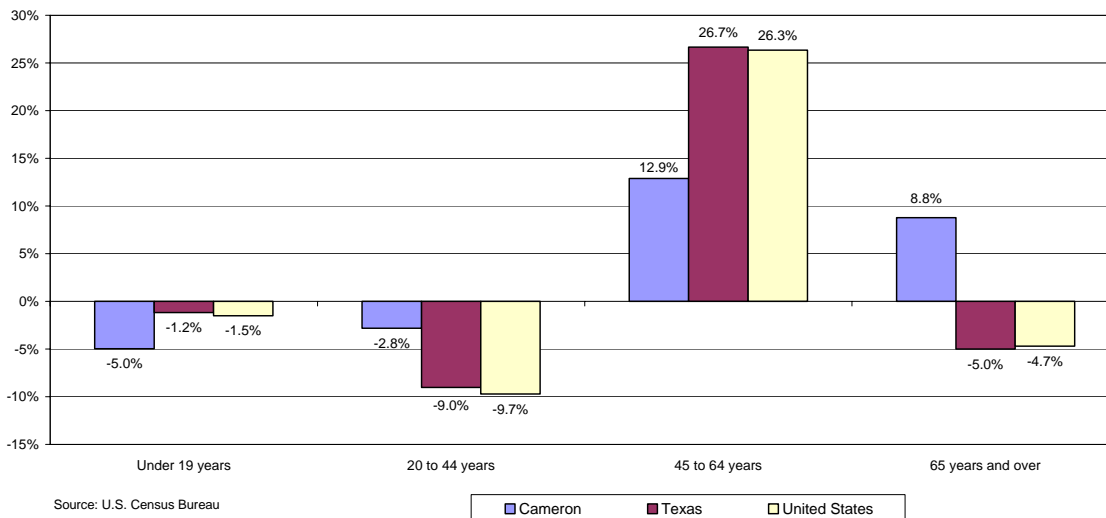
Currently, the Health Care Products Manufacturing sector does not have a true presence in Cameron and the Rio Grande Valley. Data on Pharmaceutical and Medicine Manufacturing were not available and indicated 35 employees in Cameron and 106 employees in the Valley in the Medical Equipment and Supplies Manufacturing sector. While this is a key component of generating a comprehensive health care industry in a community, expansion of these types of manufacturing opportunities in the region will have to occur over a longer time frame.

Health Care Demand

Cameron County is well positioned to expand its health care services with the sector already representing 21.5 percent of total employment and the natural increase in demand due to population growth and the growing over 65 years old population. While Cameron County has a large young population, the *Current Realities* assessment revealed that from 1990 to 2002 the population over 65 years old has increased as a percent of the total in Cameron (from 10.6 to 11.5%) even as it has decreased nationally (from 12.6 to 12.0%). With Cameron’s older population already growing, the community has the opportunity to exploit this demographic phenomenon to expand its health care services sector. The Texas Workforce Commission projects that from 2000 to 2010 employment in health services will increase by 35.9 percent, outpacing the State, which has expected growth of 25.1 percent.

As the following chart illustrates, the distributional effects of the Baby Boom generation are not as dramatic in Cameron as the State and nation, which both had over a 25 percent increase in the percentage change in the 45 to 64 year old age group compared to 12.9 percent for the County. However, Cameron can still expect demand for health care services to expand with the aging of the Baby Boom generation.

**Percent Change in Age Distribution, 1990 to 2002:
Cameron, Texas, and United States**



Migrating retirees to Cameron County can increase the growth of this age group even beyond natural increases, and improvements in the County’s attractiveness to tourists and retirees can facilitate this effect that will also help to expand demand for health care services.

Recently, Cameron County’s Nursing and Residential Care Facilities sector lost employment, 3.5 percent or 71 jobs from the second quarter of 2001 to the second quarter of 2003. Efforts to expand capacity at these facilities will increase the community’s attractiveness to migrating retirees, potentially improve the quality of life of existing elderly, and increase employment opportunities in these facilities.

Occupational Outlook

Health care occupations in Cameron County are expected to have strong growth, as the following table illustrates. All occupations combined in the field (listed as health care practitioners and technical occupations) have an expected growth of 28.0 percent from 2000 to 2010, and are overall well paying with an average wage of \$49,465. In many cases, technologist and technician occupations offer good salaries (with an average annual wage of \$29,549) for those in the workforce with the appropriate two-year degree. Occupations within this group include dental hygienists, emergency medical technicians, and technologists working in the following medical fields: cardiovascular, nuclear, radiologic, dietetic, pharmaceutical, psychiatric, respiratory therapy, and surgical. Also included in technologists and technicians are licensed practical and vocational nurses, medical record and health information technicians, and dispensing opticians. Registered nurses, who are combined with physicians, surgeons, etc. in the health diagnosing and treating practitioners occupational grouping, also are a high-paying occupation (\$45,624) for those interested in the medical field but without the means of or interest in becoming a Doctor of Medicine (M.D.).

Health Care Occupation Projection and Wage Data: Cameron County

	2000	2010	'00-'10	Average Annual Wage*
	Estimated Employment	Projected Employment	Percent Change	
Health Care Practitioners and Technical Occupations	6,210	7,950	28.0%	\$49,465
Health Technologists and Technicians	2,300	2,980	29.6%	\$29,549
Health Diagnosing and Treating Practitioners	3,670	4,680	27.5%	\$52,291
Registered Nurses	2,140	2,780	29.9%	\$45,634

*Estimate for the second quarter of 2003 in Cameron County.

Source: Texas Workforce Commission

Workforce Requirements and Assets

With only 45 percent of health care employment in professional occupations, the majority of the sector’s jobs do not require advanced degrees. Local resources like community colleges can often provide the principal means to educate and prepare a region’s health care workforce. While doctors and nurses will still be in demand – in fact the Texas Workforce Commission estimates that 138,000 more licensed practical nurses, registered nurses, and nurses aids will be needed within the next seven to ten years¹² – more widespread opportunities will also be created for health technologists (i.e. clinical laboratory technologists, EKG technologists, etc.); health technicians (i.e. emergency medical technicians, dispensing opticians, etc.); and pharmacy and

¹² Texas Workforce Commission, “Hot Careers in Texas.” 06/03/2004 <<http://www.texasworkforce.org/careers/nursing.html>>.

therapy occupations (i.e. nutritionists, physical therapists, pharmacists, etc.).¹³ Technical training for these types of occupations is often available at two-year degree institutions. Health care institutions will also need thousands of additional accountants, personnel specialists, managers, buyers, computer support specialists, and chemists.

Cameron's two higher educational institutions, Texas State Technical College-Harlingen (TSTC) and the University of Texas-Brownsville/Texas Southmost College (UTB/TSC), offer substantial training opportunities for a wide range of health care sector occupations, as do South Texas Community College (STCC) of McAllen of Hidalgo County and University of Texas-Pan American (UTPA) of Edinburg of Hidalgo County. The following is a review of some of the institutions' programs:

Health Care Sector Academic Programs

TSTC Certificates

- Dental Assistant
- Dental Laboratory Technology
- Emergency Medical Technology
- Medical Assistant
- Medical Information Specialist/Transcriptionist
- Nurse Assistant
- Surgical Technology

TSTC Associate of Applied Science Degrees

- Biomedical Engineering Technology
- Dental Hygiene
- Dental Laboratory Technology
- Health Information Technology
- Medical Assisting

UTB/TSC Certificates

- Emergency Medical Technology
- Vocational Nursing

UTB/TSC Associate of Applied Science Degrees

- Diagnostic Medical Sonography
- Emergency Medical Technology
- Medical Laboratory Technology
- Radiologic Technology
- Respiratory Therapy
- Nursing

UTB/TSC Bachelor of Science/Master of Science Degrees

- Registered Nurse (BS)
- Nursing (MSN, in cooperation with University of Texas Health Science Center in San Antonio)

¹³ HealthCareJobs.org

Health Care Sector Academic Programs (continued)

STCC Certificates (Not offered at TSTC or UTB/TSC)

- Medical Coding Specialist
- Patient Care Assistant
- Pharmacy Technology

STCC Associate of Applied Science Degrees (Not offered at TSTC or UTB/TSC)

- Occupational Therapy Assistant
- Pharmacy Technology
- Physical Therapist Assistant

UTPA Bachelor of Science/Bachelor of Arts Degrees (Not offered at UTB/TSC)

- Clinical Laboratory Sciences (BS)
- Dietetics (BS)
- Occupational Therapy (BS)
- Physician Assistant Studies (BS)
- Rehabilitative Services (BS)

UTPA Master of Science Degrees/Doctorates (Not offered at UTB/TSC)

- Adult Health Nursing (MSN)
- Family Nurse Practitioner (MSN)
- Pharmacy (Pharm.D., in cooperation with the University of Texas-Austin)
- Rehabilitation Counseling (MS)

A key locational asset for health care sector expansion is proximity to a university medical school. While Cameron and the Rio Grande Valley may be at a disadvantage compared to other areas with larger, more comprehensive medical training facilities, the **Regional Academic Health Center** is an important asset to develop more opportunities in the field. Such an effort would be most successful if Cameron and the other counties of the Valley embrace a regional approach to health care research and training opportunity expansion that encourages sharing of existing and future resources.

As discussed in the *Workforce Assessment*, the following are the divisions of the Regional Academic Health Center in the Rio Grande Valley:

- Medical Education Division, located in Harlingen (with the Valley Baptist Medical Center serving as the teaching hospital) and McAllen (Hidalgo County) as part of the UT-Health Science Center at San Antonio;
- Medical Research Division in Edinburg (Hidalgo County); and
- Public Health Division in Brownsville, which is one of four regional campuses of the University of Texas-Houston School of Public Health.¹⁴

¹⁴ Lower Rio Grande Valley Regional Academic Health Center Annual Report, September 1, 1999 – August 31, 2000. 13 April 2004. <<http://www.rahc.uthscsa.edu/annualreport.pdf>>.

The three divisions of the Regional Academic Health Center, combined with the variety of health care related coursework at TSTC, UTB/TSC, STCC, and UTPA, are critical to expand the County's already strong health care sector via the provision of services as well as the opportunities that may be derived from the research findings of the medical facilities.

Additionally, the health care sector offers many jobs to individuals without a college degree. Though many of these jobs are relatively low paying, they can be viable opportunities for individuals with little education to develop a career in a relatively stable business sector with satisfactory working conditions.

HOSPITALITY AND TOURISM



Hospitality and Tourism

Description and Trends

During the recent economic downturn in the national economy, the tourism industry has been a way to leverage local recreational and cultural assets to help stimulate job growth. Tourists and the dollars they spend in a community can bolster area tax receipts, bring business to local stores, attractions, and restaurants, and lead to the development of amenities that benefit existing residents' quality of life as well. Making a locality attractive for tourists has the corresponding effect of augmenting the area's appeal for relocating businesses and workers. After all, every visitor to an area is also a potential resident, business owner, or marketing tool advertising the community's strengths to friends, relatives, and co-workers.

Tourism, not unlike health care, should be thought of as an export sector because it attracts people, and their money, *to* a region. The money tourists spend often stays in the local economy and can help support many of an area's service-oriented businesses. Locations that are successful tourist destinations can also serve as marketing tools towards other prospective businesses. Because businesses looking to relocate or expand are progressively more concerned about quality of life factors, such as recreational and cultural activities, an area that is a popular tourist destination will innately sell itself as a location where people want to be.

Hospitality and Tourism

- Arts, Entertainment and Recreation (NAICS 71).
- Museums, Historical Sites, and Similar Institutions (NAICS 7121).
- Golf Courses and Country Clubs (NAICS 71391).
- Marinas (NAICS 71393).

- Accommodation and Food Services (NAICS 72).
- Traveler Accommodation (NAICS 7211).
- Bed-and-Breakfast Inns (NAICS 721191).
- Food Services and Drinking Places (NAICS 722).

- Total U.S. employment (3rd Quarter 2003) is 13,121,361.
- There are 669,893 establishments (3rd Quarter 2003).
- The national average weekly earnings (3rd Quarter 2003) is \$306 for NAICS 71 and \$210 for NAICS 72, although jobs in the latter sector are often part-time or seasonal, which lowers the cumulative annual wage.

- **Location Factors:**
 - ✓ Unique or interesting natural and/or man-made attractions.
 - ✓ Attractive quality of life.
 - ✓ Quality hotel, restaurant, entertainment, cultural, and recreational facilities.
 - ✓ An available, customer-oriented labor force.
 - ✓ Worker training in specialty areas.

Tourism is not defined by its own NAICS code, but is instead a compilation of several sectors including hotels and lodging, arts and recreation, and eating and drinking establishments. To most accurately estimate an area's tourism employment, two main sectors are used – Arts, Entertainment and Recreation (NAICS 71) and Accommodation and Food Services (NAICS 72). While not an exhaustive list of all possibilities for this target sector, several sub-sectors relevant to the County are included (as noted in the previous chart). Although every establishment in these sectors is not devoted to tourism, they all contribute to – and benefit from – the tourist industry.

These two categories combined (NAICS 71 and 72) create a regional Tourism cluster with nearly 30,000 employees and 2003 location quotients of 0.67 and 1.01, respectively. For Cameron County—as shown in the next chart—Tourism is more heavily concentrated than in the Region, with over 10,000 employees and 2003 location quotients of 0.81 (NAICS 71) and 1.10 (NAICS 72).

Tourism, 2nd Quarter 2001 to 2nd Quarter 2003: Cameron County

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	
71	Arts, Entertainment, and Recreation	0.82	0.81	1,563	1,657	6.0%	2.0%	\$255
72	Accommodation and Food Services	1.16	1.10	10,282	10,269	-0.1%	1.8%	\$209

*Data not available due to non-disclosure policies.

Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

Tourism, 2nd Quarter 2001 to 2nd Quarter 2003: Rio Grande Valley**

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	
71	Arts, Entertainment, and Recreation	0.64	0.67	3,253	3,706	13.9%	2.0%	\$246
72	Accommodation and Food Services	1.05	1.01	24,830	25,846	4.1%	1.8%	\$201

*Data not available due to non-disclosure policies.

** Comprised of the following Texas counties: Cameron, Hidalgo, Starr, and Willacy.

Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

While this is a large cluster with regard to employment, it is a relatively low-paying sector, because many jobs are service-oriented and are part-time positions. Regardless of the reasons, low wages indicate that this is a sector in which its immediate benefits to the Region will not be revealed in the number of jobs created. By potentially drawing frustrated jobseekers back into the labor force, these positions increase local incomes, ease the burden on social service agencies and give formerly displaced workers a much-needed boost of confidence and self-esteem. These jobs also provide reliable summer work for local teenagers, hold the potential to support an area's immigrant and bilingual communities, and can often serve as entry points for future advancement in tourism-related companies.

The success of developing this cluster will occur over time as the County continues as an area in which people want to visit, live, and work. Tourism rounds out an economy by enhancing the activities and events in which local residents can participate.

With most state budgets facing significant shortfalls, some funding for tourism-related marketing and infrastructure projects has been cut, forcing a greater burden on local governments and regions to stimulate tourism development. However, communities like Cameron and the Region with built-in cultural, historical, and recreational assets have the luxury of a guaranteed source of visitors and revenue – a captive audience to be leveraged for the area’s overall marketing efforts.

Travel Impact (2002): Cameron County and Rio Grande Valley*

	Cameron County		Rio Grande Valley*	
	Impact Amount	% Chg. (1994-2002)	Impact Amount	% Change (1994-2002)
<i>Spending at Destination (\$000)</i>	\$493,928	35.5%	\$1,244,764	42.0%
<i>Earnings (\$000)</i>	\$109,407	30.5%	\$304,289	40.1%
<i>Employment</i>	\$6,950	2.4%	\$19,060	12.1%
<i>State Tax Receipts (\$000)</i>	\$30,777	36.3%	\$80,876	41.5%
<i>Local Tax Receipts (\$000)</i>	\$11,898	41.2%	\$25,936	48.7%

* Comprised of the following Texas counties: Cameron, Hidalgo, Starr, and Willacy.

Source: Office of the Governor, Economic Development & Tourism: Texas Travel Spending Comparison

Existing Assets

Tourism is really measured by the cultural, historical, and recreational assets that get people to (and traveling through) the County and the Region. Recreational and entertainment amenities are also important, because more variety and the resulting sense of choice can influence the population’s satisfaction with their place of residence. These offerings also provide the means for attracting visitors and tourists to the area, a potential revenue source, and economic activity generator for the community. Cameron County and the Region have many assets in this area. The following are a few examples of local Tourism assets.

- Palo Alto Battlefield National Historic Site;
- Resaca de la Palma Site State Scenic Park;
- Chisholm Trail;
- Matamoros;
- Gladys Porter Zoo;
- Immaculate Conception Cathedral;
- Boca Chica State Park;
- Port Isabel Lighthouse State Historic Site;
- Schlitterbahn Waterpark;
- Texas Air Museum; and
- Forever Aloe Plantations (Valley is the aloe vera capital of the nation).¹⁵

¹⁵ Source: Harlingen Area Chamber of Commerce. 05/26/04. <<http://www.harlingen.com/Visitors/birding.asp>>.

Regional parks include: Bentsen-Rio Grande Valley State Park, Falcon State Park, Lake Casa Blanca International State Park, and others.

Special events that happen at various times during the year in the County include: Tourist Festival and Shuffleboard Tourney, Cameron County Livestock Show, Golden Gloves Boxing, Charro Days, Winter Texan Fishing Tourney, Valley Music Festival, Texas International Fishing Tournament, and so forth.

Film

A tourism strategy that includes “film” at some level contributes to overall economic development efforts, because the overall goal is essentially the same: to improve the quality of life in the Region. Local and regional efforts such as the Brownsville Border Film Commission and the South Padre Island Film Commission are entities established to help facilitate filming on location in Cameron County. For example, the South Padre Island Film Commission assists with location needs, including helping to arrange site visits and local transportation, and serving as a liaison between producer and state or local agencies.¹⁶

It is interesting to note two productions, “The President’s Man” and “Nadezha” have had filming take place on location in the County within the last five years.¹⁷ At the state level, for most projects shot in Texas, the production company is 100 percent exempt from State and local sales taxes on much of what is rented or purchased.¹⁸ Texas appears to be a major film spot, as over 500 film and TV productions have contributed nearly three billion dollars to the State’s economy during the past ten years.¹⁹



Heritage Tourism

There is a strong connection between heritage tourism and economic development. The County is well positioned for heritage tourism. It has been argued by many experts that the tragic events of 9/11 resulted in the growth of heritage tourism, long considered by many to be a dormant sector of the industry. Heritage tourism has been picking up speed while other areas, such as high dollar recreation and overseas travel, have been lagging. The new Veterans International Bridge and other major road improvements are helping to develop new corridors to get business and visitors to the County more quickly. Travelers on vacation rank visiting historic and cultural sites second only to shopping on their list of favored activities.²⁰

¹⁶ South Padre Island Film Commission <http://www.sopadre.com/film.asp>, accessed on 5/25/04.

¹⁷ Texas Film Commission http://www.governor.state.tx.us/divisions/film/filmography/00film_html, accessed on 5/25/04.

¹⁸ Texas Film Commission <http://www.governor.state.tx.us/divisions/film/incentives>, accessed on 5/25/04.

¹⁹ Texas Film Commission http://www.governor.state.tx.us/divisions/film/faq/economics_html, accessed on 5/25/04.

²⁰ “The History Draw,” Jim Miara, *Urban Land*, August 2003.

As Americans are now sticking to areas closer to home, small towns, renovated factories, rural parks, heritage trails, and so forth are gaining prominence.²¹ Heritage tourists present an attractive demographic profile, according to the Travel Industry Association of America (TIA). According to the TIA, they typically are people who like to learn while on vacation, are married, middle-aged, middle-income, and white-collar professionals. In addition, a 2001 TIA study showed that visitors to historic and cultural attractions spend an average of \$631 per trip, compared with \$457 for all U.S. travelers, and that they stay away from home longer, 4.7 nights away compared with 3.4 nights for all others.

Cameron County is rich in history, from artifacts suggesting that the first inhabitants arrived more than 10,000 years ago to the first Spanish explorers arriving in the seventeenth century to the area's emergence as a shipping and distribution point early in the 20th century. Some points to note are:

- The Mexican War started in southwest Cameron County on April 25, 1846. Several other Mexican War battles were fought in the area. Zachary Taylor and Ulysses S. Grant fought battles in the area.²²
- Parts of the Region officially became part of the United States on July 4, 1848 with the signing of the Treaty of Guadalupe-Hidalgo.
- The last land battle of the Civil War (the Battle of Palmito Ranch) was fought near Brazos Santiago in May 1865.²³
- Charles Lindbergh arrived in Brownsville, carrying the first airmail from Mexico to the U.S. in 1929.
- The first Charro Days was held in 1938, celebrating bi-national friendship.

As noted in the next chart, the Region has over 300 historic sites (comprised of National Register Properties, Sawmills, Historical County Courthouses, Historical Markers, and Museums). There are 45 National Register Properties, 6 Historical County Courthouses, 274 Historical Markers, and 13 Museums in the Region.

Historic Sites: Rio Grande Valley**

Area	National Register Properties	Sawmills	Historical County Courthouses	Historical Markers	Museums	Total
Cameron County	22	0	2	109	7	140
Hidalgo County	16	0	1	120	4	141
Starr County	5	0	2	31	1	39
Willacy County	2	0	1	14	1	18
Region	45	0	6	274	13	338

** Comprised of the following Texas counties: Cameron, Hidalgo, Starr, and Willacy.

Source: Texas Historical Commission. *Texas Historic Sites Atlas*. 25 May 2004. <http://atlas.thc.state.tx.us/Atlas/atlas_search_frame.html>

The County is in the top 10 percent of Texas counties for the number of National Register Properties and Historical Markers. Cameron is in the top 5 percent for having a Museum.

²¹ Ibid.

²² Source: The Handbook of Texas Online, UT Austin.

<http://www.tsha.utexas.edu/handbook/online/articles/view/CC/hcc4.html>, accessed on 5/26/04.

²³ Ibid.

Eco-Tourism

While the area is strong for many different varieties of wildlife, bird watching is one of the most popular and attracts visitors from around the world. Harlingen is known worldwide as a tropical birder's paradise because of its location on the convergence of two major flyways.²⁴ The city has several sites on the Great Texas Coastal Birding Trail co-sponsored by the Texas Parks and Wildlife Department and the Texas Department of Transportation, including the Harlingen Thicket Bird Sanctuary, a 40-acre tract of native brush in the city center. Attractions include:

- Great Texas Coastal Birding Trail;
- Laguna Atascosa National Wildlife Reserve;
- Sabal Palm Audubon Center and Sanctuary; and
- Los Ebanos Preserve



Nearly 500 bird species frequent or nest in the Region (it lies at about the same latitude as the Florida Keys). Six butterfly families (214 species) can be found in Cameron County.²⁵

Impact of Travelers from Mexico

Overall, the most attractive elements of travel to the U.S. for Mexican visitors are: shopping, visiting theme parks and casinos, partaking in sporting and outdoor activities, and visiting family or friends living in the United States. Medical care, cultural activities, and educational sites are also popular.²⁶

For Mexican visitors to Texas, the most appealing activities were cited as the following: shopping, visiting theme parks, seeing and/or participating in sporting events, receiving medical treatment, relaxing in the outdoors/countryside, attending cultural/educational events.²⁷

It is interesting to note that car travelers spent nearly \$5,000 a year (\$182 per visit), and bus travelers and pedestrians spent \$1,100 year (\$80 and \$20 per visit, respectively).²⁸ A total of 22.7 million Mexican crossers contribute to the Region's economy, keeping in mind that Mexican visitors spent an estimated total of \$1.4 billion in 2003. Mexican visitors support 12 percent of total output and 10 to 15 percent of employment in the lower Rio Grande Valley.²⁹

²⁴ Source: Harlingen Area Chamber of Commerce. <http://www.harlingen.com/Visitors/birding.asp> accessed on 5/26/04.

²⁵ Source: United States Geological Survey (USGS): Northern Prairie Wildlife Research Center, http://www.npwrc.usgs.gov/resource/DISTR/LEPID/BFLYUSA/chklist/states/counties/tx_61.htm accessed on 5/26/04.

²⁶ Menlo Consulting Group. Page 11.

²⁷ Ibid – p.17.

²⁸ "The Economic Impact of Mexican Visitors to the Lower Rio Grande Valley 2003" Brown, Cynthia J. Ph.D., et. al. May 2004. The Center of Border Economic Studies, The University of Texas-Pan American.

²⁹ Ibid.

The US VISIT (United States Visitor and Immigrant Status Indicator Technology) Program involves using lasers to enforce immigration rules. Under this program, Mexican visitors are only allowed to enter the United States for 72 hours within 25 miles of the border unless they get an additional kind of visa.³⁰

For Mexicans, it will be the first time anyone has checked how long they stayed in the United States. Mexican visitors may not tolerate extensive delays, and delays could cause them to reduce the frequency of their visits. This could seriously impact the Mexican citizens who own property in the County and Region, and could hurt the economy in Texas border towns.

Spring Break

Depending on who is asked, “Spring Break” is sometimes overlooked as a part of the economic development big picture. In 2003, 38 percent of students (2.14 million) traveled for spring break.³¹ In addition, spring breakers partying between Florida and Texas in 2003 spent a total of one billion dollars.³² South Padre Island was the third most popular spring break destination last year.³³ Spring breakers in Panama City Beach, Florida spent \$170 million last year.³⁴

Retirees

Migrating retirees can be another significant economic asset to communities that are able to attract them. Retirement recruitment can be a boost to local tourism, as retirees are more than likely to visit an area several times before selecting one. According to the American Association of Retirement Communities (AARC), the average retired couple moving to a community:

- ✓ Has an average annual retirement income of over \$30,000;
- ✓ Brings with them over \$250,000 in total assets; and
- ✓ Has an economic impact equaling 3.7 new factory jobs.

Cameron ranked seventh in a 1987 list of the most desirable retirement areas in the nation.³⁵ “Winter Texans” or “snowbirds,” as they are sometimes called, often come to the area for a few seasons and then make it their permanent home. They are attracted by the mild climate (average low of 51 degrees during the winter) and relatively low cost of living.

A change in cost of living is essentially a change in income for a household or individual. Moving between places that have larger cost of living differentials can affect the amount of purchasing power an individual or household has (assuming income is not adjusted for cost of living increases). National data sources are helpful for evaluating and comparing the cost of living relative to the national average. ACCRA, a national community and economic

³⁰ Source: U.S. Department of Homeland Security.

³¹ Source: Student Monitor LLC.

³² Source: Marketing to the Campus Crowd and TWENTYSOMETHING Inc.

³³ Ibid.

³⁴ Ibid.

³⁵ Source: The Handbook of Texas Online, UT Austin.

<http://www.tsha.utexas.edu/handbook/online/articles/view/CC/hcc4.html> accessed on 5/26/04.

development research organization, publishes quarterly cost of living indices for metropolitan communities across the nation.

Cost of Living Index Comparison, Fourth Quarter 2003: Rio Grande Valley**

Index Cities	Cost of Living Indices*							Avg. Rent	Avg. Home Price
	Total	Grocery	Housing	Utilities	Trans.	Health Care	Misc.		
Harlingen TX	88.6	86.8	78.2	91.9	97.8	98.8	93.4	\$612	\$192,000
McAllen TX	84.3	81.3	76.3	88.5	86.6	98.7	88.9	\$600	\$185,000

*100 = National Average

** Comprised of the following Texas counties: Cameron, Hidalgo, Starr, and Willacy.

Percentage each category contributes to the overall cost of living: Total (100%), Grocery (14%), Housing (29%), Utilities (10%), Transportation (10%), Health Care (4%), and Miscellaneous Goods & Services (33%).

Source: ACCRA

The previous table lists the cost of living indices for two cities in the Region.³⁶ As indicated in the table, the national average in each category is 100. For example, since the transportation index in McAllen, Texas is 86.6, transportation costs are 13.4 percent less there than across the nation.

Occupational Outlook

As the following data illustrates, certain Hospitality and Tourism occupations in Cameron County are expected to have measurable growth from 2000 to 2010. First-Line Supervisors/Managers of Retail Sales Workers have expected overall growth of 10.8 percent, and employment growth for Food and Beverage Serving Workers is expected to grow 24.5 percent from 2000 to 2010. The First-Line Supervisors/Managers of Retail Sales Workers category pays over \$25,000 on an annual basis. While the average annual wage for Food and Beverage Serving Workers and Hotel, Motel, and Resort Desk Clerks is relatively low (\$13,120 and \$13,891, respectively), these occupations are projected to continue to offer solid part-time and entry-level growth opportunities.

Hospitality and Tourism Occupation Projection and Wage Data: Cameron County

	2000	2010	'00-'10	Average Annual Wage*
	Estimated Employment	Projected Employment	Percent Change	
First-Line Supervisors/Managers of Retail Sales Workers	1,850	2,050	10.8%	\$27,762
Food and Beverage Serving Workers	4,740	5,900	24.5%	\$13,120
Hotel, Motel, and Resort Desk Clerks	190	250	31.6%	\$13,891

*Estimate for the second quarter of 2003 in Cameron County.

Source: Texas Workforce Commission

³⁶ Cities included in this report are those that reported data to ACCRA for 4th quarter 2003.

Workforce Requirements and Assets

Targeting tourism-related businesses for development in the Region allows local officials to effectively diversify the area economy and provide job opportunities for qualified residents that may lack the skills or knowledge base for higher paying employment.

Most businesses in the tourism sector require a workforce that is available, low-cost and trainable. With the County's recent history of high unemployment rates, there are thousands of local workers looking for jobs in the region. Some focus group participants told *Market Street* that a portion of the available labor force was less motivated and was often lacking in the so-called "soft skills" of customer service and business etiquette. Most agreed that a renewed presence of jobs in the County would be the catalyst to reinvigorate the area's workforce.

Tourism positions increase local incomes, ease the burden on social service agencies and provide opportunities for formerly displaced workers. The sector can provide reliable summer work for local teenagers, and holds the potential to support an area's immigrant and bilingual communities. Tourism plays to the "friendly" image described by some focus group participants.

TRANSPORTATION EQUIPMENT MANUFACTURING



Transportation Equipment Manufacturing

Description and Trends

Most transportation equipment manufacturing firms have not yet succumbed to the same pressures to relocate overseas that other U.S. manufacturers have. This fact is primarily due to their desire for a skilled workforce and proximity to the firms they supply, making it a viable target sector for communities. A growing trend in this industry is the early adoption of supplier parks, which aggregates several suppliers under one roof and cuts time and costs on production, transportation, logistics, and overhead. The Southeastern United States, including Texas, have become increasingly popular locations for these parks, due to the availability of large “greenfield” sites, relatively low wages, lower unionization, and flexible facilities that support production of several models at one site.

In Cameron, the development of a transportation equipment manufacturing cluster should include strengthening the existing presence of Ship and Boat Building firms. This sub-sector is already a strength of Cameron’s economy, and should likely continue to be so if properly sustained and nourished. The Texas Workforce Commission projects that total employment in Ship and Boat Building will increase by 22.5 percent in Cameron from 2000 to 2010, almost twice that of the projected 12.3 percent growth rate for the State in that sub-sector.

Automobile manufacturers are also a key part of the transportation equipment manufacturing sector. The sub-sector is expected to grow in Cameron, but at this point not by as much as Ship and Boat Building. While, as stated in the previous paragraph, Ship and Boat Building in Cameron is expected to grow by 22.5 percent from 2000 to 2010, the motor vehicle sub-sector is expected to grow by 8.3 percent (compared to 8 percent in the State).

There has been a recent surge in automobile manufacturing expansions, of which Cameron can position itself to take advantage. Record sales of cars and trucks around the world in 2003 fueled a new round of facility expansions among transportation equipment manufacturers. According to data from *Site Selection’s* New Plant Database, transportation equipment manufacturers accounted for more new and expanded plants last year than any other industry. With 400 total corporate projects in 2003, the transportation industry led all manufacturing sectors for the fifth year in a row.³⁷

Cameron has the opportunity to capitalize on this trend by advertising its locational advantages, including a young, large supply of labor, and relatively low cost of living, which translates into lower business costs. The recent consideration by the Boeing Company to locate manufacturing facilities in the County raised the profile of the community and suggests potential opportunities in the future.

The transportation equipment manufacturing sector includes a variety of products for ships, motor vehicles, and aircraft, as well as the parts used in the assembly of the larger transportation equipment, such as carburetors, pistons, piston rings, and valves; automotive stampings;

³⁷ Starner, Ron. “Transportation Makes It Five for Five.” *Site Selection*, March 2004, p. 190.

vehicular lighting equipment; and engine electrical equipment. Industry suppliers include electronics and semiconductors, computer services, and freight, storage and distribution.

The Transportation Equipment Manufacturing sector is composed of several different sub-sectors, Automobile Parts and Equipment Manufacturing and Ship and Boat Building having the largest presence in Cameron and the Rio Grande Valley thus far. Fabricated Metal Manufacturing (NAICS 332) and Machinery Manufacturing (NAICS 333) can also play an important role as suppliers of this sector.

Transportation Equipment Manufacturing

- Transportation Equipment Manufacturing (NAICS 336).
- Automobile Parts and Equipment Manufacturing (NAICS 3363).
- Ship and Boat Building (NAICS 3366).
- Fabricated Metal Manufacturing (NAICS 332).
- Machinery Manufacturing (NAICS 333).

- Total U.S. employment (3rd Quarter 2003) is 4,387,518.
- There are 110,670 establishments (3rd Quarter 2003).
- The national average weekly wages (3rd Quarter 2003) is \$1,006 for NAICS 336, \$739 for NAICS 332, and \$906 for NAICS 333.

- **Location Factors:**
 - ✓ Non-union workforce.
 - ✓ Proximity to customer base.
 - ✓ Large tracts of low-cost land.
 - ✓ Regional transportation industry.
 - ✓ Skilled trained production workers.

Cameron County clearly has a well established Ship and Boat Building Sector, with a location quotient of 9.01 in the second quarter of 2003. That sector is dominated by Amfels, Inc., which designs, constructs, and repairs offshore drilling units and specialized vessels.³⁸ Employment did decline from the second quarter of 2001 to the second quarter of 2003 in both the Ship and Boat Building sub-sector and the broader Transportation Equipment Manufacturing sector, but the County maintained strong location quotients in both, suggesting it still has a concentration in these sectors relatively greater than the average community in the United States.

The Texas Artificial Reef Program (“Rigs to Reef”) will provide promising opportunities in the County for the Ship and Boat Building sector. The Texas Artificial Reef Program is the recycling of obsolete petroleum platforms into permanent artificial reefs rather than allowing them to be taken ashore as scrap. Rigs make ideal artificial reefs because they are

³⁸ According to the website of its parent company, Keppel FELS Limited.

environmentally safe, are constructed of highly durable and stable material that withstands displacement or breakup, and already support a thriving reef ecosystem.³⁹

In Texas, 49 rigs to date have been donated by cooperating oil and gas companies. In addition to the rigs, these companies have also donated half their realized savings from leaving the rigs offshore to the Texas Artificial Reef Fund. These dedicated funds are used to finance research, administration, maintenance, liability, and construction of new artificial reefs. The funds also make the Texas Artificial Reef Program self-sufficient, with no need for taxpayer dollars.

There are currently two sites in the Region. One is an artificial reef built by Texas Department of Parks and Wildlife seven miles off South Padre Island from Port Isabel (Cameron County, Texas). The other is Port Mansfield Liberty Ship Reef, located 15 miles off Port Mansfield (Willacy County, Texas). These artificial reefs have become encrusted with invertebrates, such as barnacles, corals, and sponges, which are the beginning of the marine food chain. They attract grouper, snapper, amberjack, triggerfish, tarpon and shark, making them ideal sites for scuba diving.⁴⁰

Transportation Equipment Manufacturing, 2nd Quarter 2001 to 2nd Quarter 2003: Cameron County

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	
336	Transportation Equipment Manufacturing	1.43	1.45	2,422	2,320	-4.2%	-9.2%	\$621
3363	Motor Vehicle Parts Manufacturing	*	*	*	*	*	-9.5%	*
3366	Ship and Boat Building	9.57	9.01	1,401	1,338	-4.5%	-2.5%	\$534
332	Fabricated Metal Product Manufacturing	0.46	0.36	675	485	-28.1%	-12.5%	\$624
333	Machinery Manufacturing	0.39	0.45	463	468	1.1%	-17.2%	\$516

*Data not available due to non-disclosure policies.
Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

Motor Vehicle Parts Manufacturing does have a small presence in the Rio Grande Valley, which has lost employment in the past few years. The Transportation Equipment Manufacturing sector has also lost employment from the second quarter of 2001 to the second quarter of 2003. The location quotient of the broad sector is much lower in the Region (0.66) than the County (1.45), illustrating the County's dominating role in this sector (which is likely primarily due to the presence of Amfels). The County has the opportunity to turn recent employment losses in the Transportation Equipment Manufacturing sector around by utilizing its locational assets and developing a cluster around the existing presence of this sector.

Transportation Equipment Manufacturing, 2nd Quarter 2001 to 2nd Quarter 2003: Rio Grande Valley**

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	
336	Transportation Equipment Manufacturing	0.68	0.66	3,066	2,862	-6.7%	-9.2%	\$657
3363	Motor Vehicle Parts Manufacturing	0.22	0.18	386	302	-21.8%	-9.5%	\$903
3366	Ship and Boat Building	3.59	3.31	1,401	1,338	-4.5%	-2.5%	\$534
332	Fabricated Metal Product Manufacturing	0.33	0.31	1,294	1,121	-13.4%	-12.5%	\$497
333	Machinery Manufacturing	0.33	0.38	1,073	1,073	0.0%	-17.2%	\$505

*Data not available due to non-disclosure policies.
** Comprised of the following Texas counties: Cameron, Hidalgo, Starr, and Willacy.
Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

³⁹ <http://www.tpwd.state.tx.us/fish/reef/artreef.htm>, accessed on 6/22/04.

⁴⁰ Ibid.

Both Cameron and the Rio Grande Valley currently have a limited presence in the Fabricated Metal Product Manufacturing and Machinery Manufacturing sectors. These sectors have relatively strong wages, so growth would not only increase jobs but also potentially the average wage and income-levels of the community. Additional opportunities in this sector would also help support the existing transportation equipment manufacturers, encouraging its future expansion.

The Texas Workforce Commission has projected 8.9 percent job growth in Cameron from 2000 to 2010 in Fabricated Metal Product Manufacturing employment and 9.3 percent job growth in Machinery Manufacturing employment during this time period, suggesting the sectors are already on a growth path. While the employment losses in Fabricated Metal Product Manufacturing employment from 2001 to 2003 would suggest otherwise, that trend can be reversed.

Existing Businesses

As previously stated, Cameron County and the Rio Grande Valley have lost jobs in the Transportation Equipment Manufacturing sector, but the County has the opportunity to turn this trend around with smart choices about developing clusters around existing businesses in the community.

Cameron County firms include:⁴¹

- Amfels, Inc., Brownsville. Shipbuilding and repair; offshore drilling rig fabricating; manufactures pressure vessels (2,000 employees).
- TRICO Products Corp., Brownsville. Manufactures automotive wiper blades and window washer pumps (600 employees this site; 90,782 all sites).
- Lockheed Martin Corp., Harlingen. Manufactures aerospace equipment and parts (230 employees this site; 112,540 all sites).

Rio Grande Valley firms include:⁴²

- Wells Manufacturing Corp., McAllen (Hidalgo County). Manufactures automotive parts including ignition, wire and cable, switches, sensors, and parts for fuel emissions and charging systems (209 employees this site; 4,010 all sites).
- ATS Precision Components Texas, McAllen (Hidalgo County). Manufactures plastic and metal automotive products (200 employees this site; 3,169 all sites).
- Progressive Molded Products, McAllen (Hidalgo County). Manufactures injection molded plastic automobile parts and accessories (200 employees).
- Regency Plastics, McAllen (Hidalgo County). Manufactures plastic automotive parts (100 employees this site; 1,122 all sites).
- Kern-Liebers USA, Inc., Pharr (Hidalgo County). Manufactures seat belt coil springs (35 employees this site; 1,365 all sites).

⁴¹ Source: Harris InfoSource, accessed 6/2/04.

⁴² Ibid.

- Alps Automotive Inc., McAllen (Hidalgo County). Manufactures electronic automotive components (30 employees this site; 415 all sites).

Companies in this sector, such as Trico, Delphi Automotive, Tyco Electronics, and others, also have maquiladora operations across the border from Matamoros, Mexico. Cameron has several large employers in this sector, most prominently the Amfels shipbuilding and repair facility. The community needs to expand on these opportunities, while maintaining the diversity of transportation equipment produced, to ensure the community is not overly dependent on the well-being of a few firms to maintain the Transportation Equipment Manufacturing sector in the community.

One way to transition Cameron’s transportation equipment industry from the currently Amfels-dominated situation to a much more diverse, and therefore protected, sector would be to expand opportunities for manufacturers of parts that are used in the design, construction, and repair process of the products that Amfels specializes in. By doing so, not only would economic opportunities expand, but there would also be a more connected economic structure to support Amfels and reduce the possibility that the firm would relocate outside of the area. Existing business retention efforts, which this example would facilitate, are just as vital as, if not more vital than, recruitment efforts for comprehensive, sustainable economic development.

Occupational Outlook

From 2000 to 2010, strong growth is expected in several occupations in Cameron County within Transportation Equipment Manufacturing, most notably mechanical engineers. These positions, which usually require a Bachelor’s degree, have a high average wage of \$54,575. Metal and plastic worker occupations are expected to grow (18.4%) through 2010 and offer good salaries for persons with technical training (\$21,263). In addition to welders, cutters, solderers, and brazers, metal and plastic worker occupations include computer control programmers and operators; forming machine setters, operators, and tenders; machine tool cutting setters, operators, and tenders; machinists; metal furnace and kiln operators and tenders; model makers and patternmakers; molders and molding machine setters, operators, and tenders; and tool and die makers. With over 3,000 jobs, there are currently many employment opportunities for material moving workers, which like most of these occupations are often needed for other manufacturing sectors as well.

Transportation Equipment Manufacturing Occupation Projection and Wage Data: Cameron County

	2000	2010	'00-'10	Average Annual Wage*
	Estimated Employment	Projected Employment	Percent Change	
Assemblers and Fabricators	1,250	1,370	9.6%	\$16,437
Material Moving Workers	3,610	4,090	13.3%	\$16,396
Mechanical Engineers	150	200	33.3%	\$54,575
Metal and Plastic Workers	1,360	1,610	18.4%	\$22,722
Welders, Cutters, Solderers, and Brazers	490	590	20.4%	\$21,263

*Estimate for the second quarter of 2003 in Cameron County.

Source: Texas Workforce Commission

Workforce Requirements and Assets

The manufacturing skills of the current labor force fit well with production jobs in the transportation equipment industry. Focus group participants noted the “manual orientation” of the workforce, and to the extent that is a valid perception, Cameron can use that to attract manufacturing facilities to the area. Additionally, the many manufacturing related programs at the local post-secondary educational institutions provide the opportunity to expand the skill-set of the existing workforce and to retrain those without a manufacturing background.

It is interesting to note that engineering accounts for the largest share of positions in the Transportation Equipment Manufacturing industry (outside of skilled production workers). Engineers comprise 13 percent of the national industry’s workforce. These jobs are primarily mechanical and industrial engineers that design the manufacturing equipment, coordinate processes, and maintain quality control. Local academic programs in these fields can advance the workforce’s skill-levels and increase the attractiveness of the region to potential employers.

The improved efficiency of this sector has also created the need for a workforce trained in the latest industry technologies. Illustrating this trend is the projected fastest growing occupations within the industry, which are expected to be those of a technical nature, namely, mechanical engineers, electricians, industrial machinery mechanics, and computer-controlled machine tool operators.⁴³ Indeed, a skilled workforce is one of the prime necessities for a new location. However, most of the jobs just mentioned do not necessarily require a four-year college degree. The required training can either be provided in-house by local companies or at a community college or technical school.

The following are academic programs in the Rio Grande Valley with general applications to the Transportation Equipment Manufacturing industry, as well as the engineering programs to support the non-production worker portion of the potential employee base.

Manufacturing and Engineering Academic Programs	
TSTC Certificates	
•	Electro-Mechanical Engineering Technology
•	Machining Technology
TSTC Associate of Applied Science Degrees	
•	Computer Drafting and Design
•	Electro-Mechanical Engineering Technology
•	Electronic Engineering Technology
•	Instrumentation Technology
•	Machining Technology

⁴³ Bureau of Labor Statistics, Occupational Outlook Quarterly, Winter 2003.

Manufacturing and Engineering Academic Programs (continued)

UTB/TSC Certificates

- Computer Drafting and Design
- Electronics Engineering Technology
- Machine Shop
- Manufacturing/Mechanical Engineering Technology

UTB/TSC Associate of Applied Science Degrees

- Computer Drafting and Design
- Electronics
- Electronics Engineering Technology
- Manufacturing Engineering Technology
- Mechanical Engineering Technology

UTB/TSC Bachelor of Science Degrees

- Electronics Engineering Technology
- Engineering Physics – Industrial Engineering
- Engineering Physics – Mechanical Engineering
- Manufacturing Engineering Technology
- Mechanical Engineering Technology

UTB/TSC Master of Science Degrees

- Electrical Engineering (as a distance learning program in partnership with University of Texas-Arlington)

STCC Certificates (Not offered at TSTC or UTB/TSC)

- Industrial Systems Maintenance Technology
- Precision Manufacturing

STCC Associate of Applied Science Degrees (Not offered at TSTC or UTB/TSC)

- Engineering
- Precision Manufacturing

UTPA Bachelor of Science (Not offered at UTB/TSC)

- Electrical Engineering
- Manufacturing Engineering
- Mechanical Engineering

UTPA Master of Science Degrees (Not offered at UTB/TSC)

- Manufacturing Engineering
- Mechanical Engineering

Typical U.S. Facility Requirements

To maintain a competitive edge, it is important for communities to provide existing available sites with needed infrastructure as an additional incentive to attract a firm to the location. The following are the typical project requirements for a transportation equipment manufacturer:

Transportation Equipment Manufacturing

Building Size	100,000 - 200,000 sq. ft.
Site Size	15-50 acres
Employees	100 - 300 (10% Administrative & Managerial, 90% Production)
Water	up to 150,000 gallons per day (gpd)
Wastewater	up to 145,000 gpd
Electricity	1,500 kW Demand
	1-2 million kWh per month
Natural Gas	5,000 mcf / month
Telecommunications	T-1 or ISDN desirable
Capital Investment	\$10 - 15 million (bldg./land), \$15 -20 million (equip.)

Source: *Market Street Services*

Cameron County has several available buildings zoned for industrial use. The following are a few of those within the building size range listed above:⁴⁴

- Fruit of the Loom, Harlingen, 665,870 sq. ft. available.
- Dominion Building, Brownsville, 75,000 - 300,000 sq. ft. available.
- 213 Southgate Drive, Harlingen, 143,745 sq. ft. available.
- New Rio Grande Industrial Center Building, Brownsville, 10,000 - 120,120 sq. ft. available.
- NAFTA Buildings 1, 3, and 4, Brownsville, 20,000 - 100,000 sq. ft. available.

To increase their suitability and attractiveness to potential transportation equipment manufacturers, the County can work toward servicing these buildings, if they are not already, with the water, electricity, gas, and telecommunications needs of the average transportation equipment manufacturer. Experience has demonstrated that relocating businesses are more attracted to locations that have not just available facilities, but facilities already connected to vital infrastructure. Industrial parks across the border in Matamoros, Mexico (i.e. FINSA Industrial Park, CIMA Industrial Park, and others) may also offer attractive options for firms in this sector.

⁴⁴ Brownsville Economic Development Council 05/27/04
<http://www.bedc.com/realestate/searchResults.asp?city=1&aval=1&construction_id=-1&use_id=-1&text_search=&min_size=&max_size=&x=26&y=12> and Harlingen Chamber of Commerce 05/27/04
<<http://property.harlingen.com/do/search/display?page=4&cacheId=-936665704>>.

LOGISTICS



Logistics

Description and Trends

In years past, traditional transportation and warehousing facilities were located by railroad tracks, a seaport, and/or major roads or highways, usually in the least desirable parts of the community. This is no longer the model, as larger, state-of-the-art “mega-facilities” have been rapidly appearing in rural areas on the outskirts of transportation and population centers. Facilities are now cropping up in even less “traditional” areas, often outside of the urban fringe.

This new emphasis is due to the great number of changes that the logistics industry has been undergoing in the first part of the new century. Many of these changes are being driven by a growing trend in the manufacturing and retail sectors to form partnerships with companies to which they can outsource non-core logistics competencies. These providers, known by the acronym 3PL (or 3rd Party Logistics) are continually looking to provide innovative supply chain solutions to customers by focusing on value-added capabilities, differentiating themselves from the competition. This need to partner with customers and become more integrated into their supply chain processes has created the auxiliary need to locate closer to core nodes of customers.

This shift in business strategy, along with advances in technology that makes this decentralization possible, has opened the door for logistics facilities to operate with ease in a myriad of locations. In 2002, logistics industry revenue totaled \$910 billion. Of that total, \$571 billion was transportation, \$298 billion was warehousing, and \$41 billion was industry-related services (profit sharing, information technology, etc.).

As components of the Logistics sector, Transportation and Warehousing and Wholesale Trade are independent sectors in the NAICS system, and in many ways they are functionally linked in practice. Wholesale Trade, classified under NAICS sector 42, includes companies that normally operate from a warehouse or office and sell merchandise to other businesses. These companies’ facilities rarely display merchandise and generally do not solicit walk-in traffic. This sector comprises two main types of wholesalers: merchant wholesalers that sell goods on their own accounts, and business-to-business electronic markets, agents, and brokers that arrange sales and purchases for others, usually for a commission or fee.⁴⁵

The Transportation and Warehousing sector (NAICS 48-49) includes industries providing transportation of passengers and cargo, warehousing and storage of goods, scenic and sightseeing transportation, and support activities related to modes of transportation; as it is here, the sector is also referred to as *distribution* or *logistics*. Technological advances are revolutionizing operational processes in the logistics sector, with computerization and wireless technology redefining the practice of goods distribution. Current technology allows businesses to track where individual vehicles are located via satellite, and use refrigerated units to provide computerized feedback on specific operational times and temperatures. Advanced in-house technology and hand-held wireless devices in the field also greatly streamline inventory-maintenance operations.

⁴⁵ Source: U.S. Census Bureau, 2002 NAICS definitions, www.census.gov.

According to the U.S. Bureau of Transportation Statistics' 2001 annual report, demand for transportation-related goods and services represented over 10 percent of the U.S. economy in the year 2000, supporting nearly one in eight U.S. jobs. Purchases of transportation-related goods and services comprised nearly 11 percent of the Gross Domestic Product (GDP) in 2000, or \$1,054 billion. Only housing, health care, and food accounted for greater shares of GDP in 2000.⁴⁶

Taken together, the target sector of Logistics will allow the County to leverage its locational advantages, transportation infrastructure and available workforce to stimulate local economic development.

Logistics

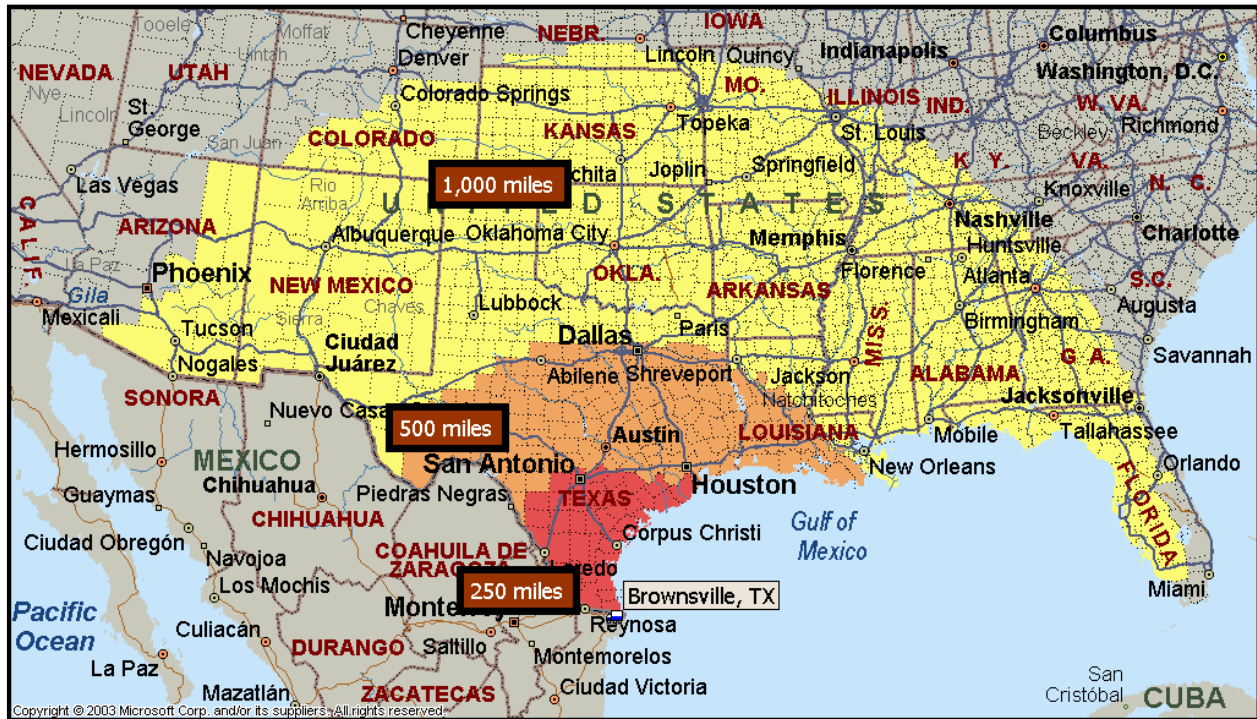
- Transportation and Warehousing (NAICS 48-49).
- Wholesale Trade (NAICS 42).

- Total U.S. employment (3rd Quarter 2003) is 9,573,772.
- There are 800,228 establishments (3rd Quarter 2003).
- The national average weekly wage (3rd Quarter 2003) is \$947 for NAICS 42, \$708 for NAICS 48-49.

- **Location Factors:**
 - ✓ Close proximity to customers, suppliers, and markets.
 - ✓ Available labor force with truck driving and technical skills.
 - ✓ Close proximity to training resources.
 - ✓ Close proximity to transportation infrastructure.
 - ✓ Low labor costs.
 - ✓ Close proximity to cargo hub.

⁴⁶ Source: U.S. Bureau of Transportation Statistics, *2001 Annual Report on Transportation Statistics*, accessed from http://www.bts.gov/publications/transportation_statistics_annual_report/2001/html/chapter_07.html, on 6 January 2004.

Proximity to Potential Customer Base: Cameron County, Texas



The County and Region have the advantage of being in close proximity to markets in the Southeastern and Southwestern United States. The area is just across the border from Matamoros, Mexico, a major maquiladora center for over 30 years. Products are shipped worldwide from Brownsville/Matamoros and other locations in the Region. At the State level, transportation assets helped export over \$5 million in transportation equipment to Mexico last year.⁴⁷

As depicted in the previous map, the County is well positioned, with a potential customer base of over 4 million within 250 miles, nearly 20 million within 500 miles, and nearly 75 million within 1,000 miles.

Adequate railways, airports, and deep-water seaports are also critical to an area's desirability. The County and Region's primary transportation assets (outlined below) can be leveraged to provide possible strategic benefits to prospective businesses.

- The Region has strong assets in the Gulf Intracoastal Waterway (provides over 1,300 miles of protected waterway), Port of Brownsville (main channel depth of 42 feet), and Port Isabel. The Region depends on the port and waterway for a large portion of its fuel needs;
- FedEx recently upgraded Rio Grande Valley International Airport in Harlingen, Texas to daily Airbus cargo service;

⁴⁷ Source: Brownsville Economic Development Council.

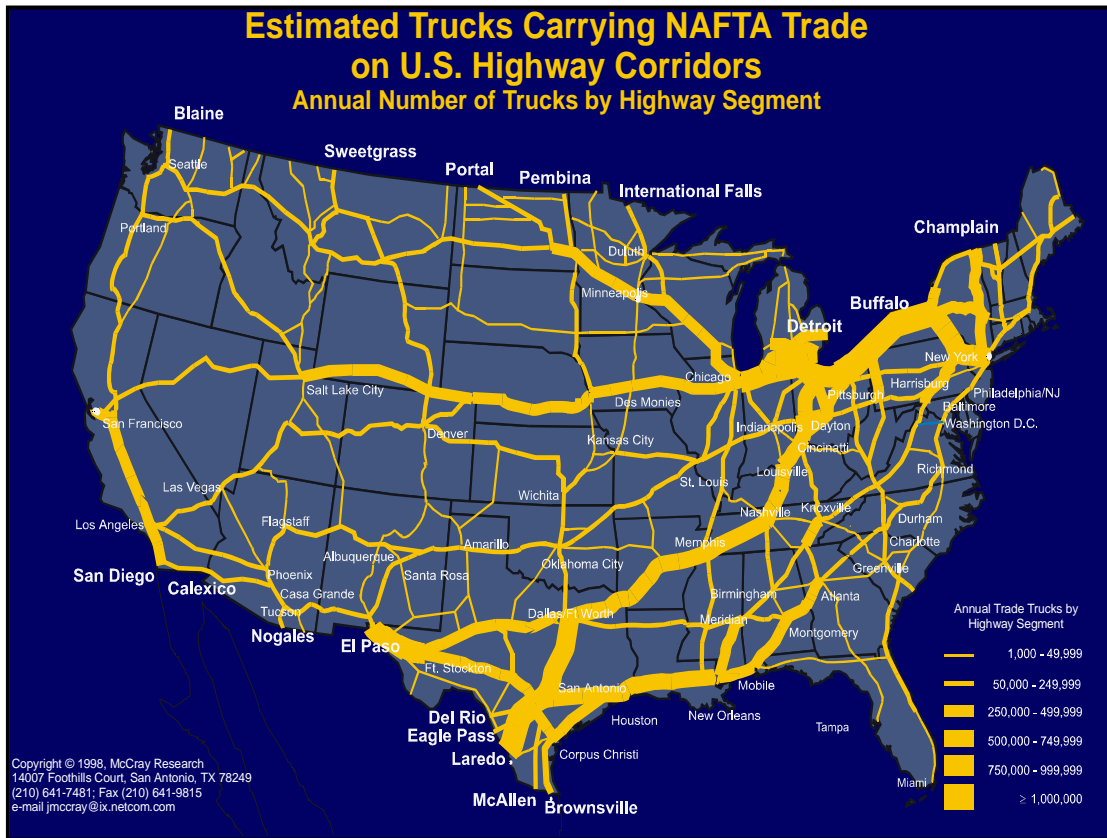
- Four international bridge crossings (pedestrian, auto, truck, and rail) and three international airports goods and people efficiently through the County and Region;
- The end-terminus of future Interstate 69 in the Region is a key strength for this target; and
- The Bush administration may fully open U.S. borders to Mexican trucks and buses without a federal agency extensively studying the potential impact on the environment.⁴⁸



Points of entry in the County and Region for trucks carrying U.S./Mexico trade are significant. As noted in the previous chart, nearly a million trucks a year cross between the U.S. and Mexico from points in the County and Region. As depicted in the next chart, points in the County and Region are also important to the NAFTA trade on U.S. highway corridors.⁴⁹

⁴⁸ Source: *USA Today*, June 8, 2004.

⁴⁹ Source: Professor John McCray, University of Texas-Pan American.



As noted in the next table, the Logistics sector is an industry that has garnered stability in the County. Warehousing and Storage and Air Transportation are two sectors that have gained employment over the 2001 to 2003 time period. While still small in terms of employment, data also show that Process and Logistics Consulting Services employment has grown just over 12 percent from 2001 to 2003. Wholesale Trade has also maintained a steady presence, relative to the nation. With few exceptions, the Logistics sector (which includes all occupations, including executives, logistics engineers, etc.) offers relatively well-paying employment opportunities for the residents of Cameron County.

Transportation and Warehousing, 2nd Quarter 2001 to 2nd Quarter 2003: Cameron County

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment Change	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change		
423	Merchant Wholesalers, Durable Goods	0.70	0.65	1,884	1,702	-9.7%	-6.4%	\$607
424	Merchant Wholesalers, Nondurable Goods	0.92	0.87	1,603	1,563	-2.5%	-1.0%	\$499
481	Air Transportation	0.20	0.24	107	113	5.6%	-15.8%	\$718
484	Truck Transportation	1.30	1.14	1,557	1,343	-13.7%	-5.2%	\$553
485	Transit and Ground Passenger Transport	0.62	0.26	320	141	-55.9%	2.0%	\$435
487	Scenic and Sightseeing Transportation	1.36	0.95	40	25	-37.5%	-13.8%	\$272
488	Support Activities for Transportation	2.67	2.06	1,442	1,105	-23.4%	-4.3%	\$387
493	Warehousing and Storage	0.98	1.32	433	616	42.3%	1.2%	\$541
541614	Process & Logistics Consulting Services	*	0.50	*	31	*	12.7%	\$440

*Data not available due to non-disclosure policies.

Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

As shown in the next table, the Region also has a strong Logistics employment base. Sectors in the Region with employment concentrations greater than the nation include Truck Transportation and Support Activities for Transportation.

Transportation and Warehousing, 2nd Quarter 2001 to 2nd Quarter 2003: Rio Grande Valley**

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	Per Employee
423	Merchant Wholesalers, Durable Goods	0.60	0.62	4,317	4,422	2.4%	-6.4%	\$578
424	Merchant Wholesalers, Nondurable Goods	1.13	0.94	5,222	4,576	-12.4%	-1.0%	\$478
481	Air Transportation	0.07	0.09	107	113	5.6%	-15.8%	\$718
484	Truck Transportation	1.15	1.03	3,656	3,320	-9.2%	-5.2%	\$526
485	Transit and Ground Passenger Transport	0.41	0.33	560	496	-11.4%	2.0%	\$388
487	Scenic and Sightseeing Transportation	0.51	0.35	40	25	-37.5%	-13.8%	\$272
488	Support Activities for Transportation	1.76	1.52	2,536	2,225	-12.3%	-4.3%	\$450
493	Warehousing and Storage	0.69	0.83	817	1,049	28.4%	1.2%	\$571
541614	Process & Logistics Consulting Services	0.17	0.31	24	53	120.8%	12.7%	\$566

*Data not available due to non-disclosure policies.

** Comprised of the following Texas counties: Cameron, Hidalgo, Starr, and Willacy.

Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

Existing Businesses

Cameron County firms include:⁵⁰

- BISD Food Services, Brownsville. Distributes food for schools (514 employees this site; 2,189 all sites).
- Valley Coca-Cola Inc., San Benito. Distributes soft drinks (100 employees).
- Valley Trucking Co, Inc., Brownsville. Local and long-distance truckload trucking services (59 employees).
- Tex-Mex Cold Storage, Inc., Brownsville. Refrigerated and frozen warehousing and storage of shrimp, poultry, beef, fruits, and vegetables (67 employees).

Regional firms include:⁵¹

- Am-Ex Productos, Inc., McAllen (Hidalgo County). General warehouse and storage services (725 employees).
- Haggar Clothing Co., Weslaco (Hidalgo County). Fabric warehouse and distribution center (350 this site; 2,330 all sites).
- Starr-Camargo Bridge Co., Rio Grande City (Starr County). International bridge services (60 employees).
- Central Freight Lines, Inc., Pharr (Hidalgo County). Local, long distance, full and partial load trucking service (50 employees this site; 2,316 all sites).

⁵⁰ Source: Harris InfoSource, accessed 6/2/04. Employment numbers are approximate.

⁵¹ Ibid.

Occupational Outlook

As the following data illustrate, certain Logistics occupations in Cameron County are expected to have measurable growth from 2000 to 2010. Transportation and Material Moving Occupations; Shipping, Receiving, and Traffic Clerks; and Transportation, Storage, and Distribution Managers have expected overall growth of 14.7 percent, 6.0 percent, and 28.6 percent (respectively) from 2000 to 2010. Each of these categories pay over \$20,000 on an annual basis. Transportation, Storage, and Distribution Managers have the highest average annual wage in the sector (\$54,883), followed by Truck Drivers, Heavy and Tractor-Trailer (\$26,361). Other occupations in the sector with projected employment growth rates over 10 percent include Material Moving Workers (13.3%) and Motor Vehicle Operators (15.6%).

Logistics Occupation Projection and Wage Data: Cameron County

	2000	2010	'00-'10	Average Annual Wage*
	Estimated Employment	Projected Employment	Percent Change	
Transportation and Material Moving Occupations	8,050	9,230	14.7%	\$20,030
Material Moving Workers	3,610	4,090	13.3%	\$16,396
Motor Vehicle Operators	3,710	4,290	15.6%	\$21,578
Truck Drivers, Heavy and Tractor-Trailer	1,480	1,780	20.3%	\$26,361
Shipping, Receiving, and Traffic Clerks	670	710	6.0%	\$18,820
Transportation, Storage, and Distribution Managers	140	180	28.6%	\$54,883

*Estimate for the second quarter of 2003 in Cameron County.

Source: Texas Workforce Commission

Workforce Requirements and Assets

While some jobs in this sector require a college degree, a high school education is sufficient for most jobs. E-commerce, consolidation, and new technology should slow employment growth in some occupations, but many new jobs will be created in other occupations.

Although some workers need a college degree, most jobs in wholesale trade can be entered without education beyond high school. Cameron County will have to work to improve high school educational attainment to remain competitive for jobs in this sector (as mentioned in the *Current Realities and Workforce Assessment*). New workers usually receive training after they begin work—for instance, in operation of inventory management databases, on-line purchasing systems, or electronic data interchange systems. Technological advances and market forces are rapidly altering this industry. Even workers in small firms need to keep informed about new selling techniques, management methodologies, and information systems. In addition, these technological advances affect the skill requirements for occupations across the entire industry—from warehouse workers to truck drivers to those in management. As a result, numerous firms devote significant resources to worker training.

Many firms offer on-the-job training. However, as providing training is becoming more costly and complex, the industry is increasingly using third-party training organizations and trade associations to reduce this burden. To increase productivity, many companies make their

employees responsible for more than one function and cross-train them by familiarizing them with many aspects of the company.

Wholesale trade has historically offered good advancement opportunities from the lowest skilled jobs up through management positions. For example, unskilled workers can start in the warehouse or stock room. After they become familiar with the products and procedures of the firm, workers may be promoted to counter sales or even to inside sales positions. Others may be trained to install, service, and repair the products sold by the firm. Eventually, workers may advance to outside sales positions or to managerial positions. Wholesale trade firms often emphasize promotion from within, especially in the numerous small businesses in the industry. Even in some of the largest firms, it is not uncommon to find top executives who began as part-time warehouse help.

In addition to advancement opportunities within a firm, there also are opportunities for self-employment. For example, because brokers match buyers with sellers and never actually own goods, those with the proper connections can establish wholesale brokerage businesses with only a small investment—perhaps working out of their home. Moreover, establishing a wholesale-distribution business can be easier than establishing many other kinds of businesses. Wholesalers who get exclusive distribution rights to popular items can become profitable quickly; although wholesale-distribution firms usually require a substantial investment, obtaining rights to a successful product can be the foundation of a successful new business.

Most will need to be highly trained and skilled workers who can operate well in an increasingly technological, dynamic, and solutions-oriented environment.⁵²

⁵² Hallock, Thom. “The Future of Logistics.” *Business Facilities Magazine*. March 2004. p. L-1-2.

Typical U.S. Facility Requirements

It is important for the County to provide existing available buildings with needed infrastructure as a baseline requirement to attract a firm in this industry to the County. The following chart shows typical requirements for U.S. logistics facilities.

Distribution and Warehouse

Building Size	250,000 - 550,000 sq. ft.
Site Size	15-50 acres
Employees	200 - 600 (10% Administrative & Managerial, 90% Production)
Water	6,000 gallons per day (gpd)
Wastewater	6,000 gpd
Electricity	1,400 kW Demand 1-2 million kWh per month
Natural Gas	150,000 therms per year
Telecommunications	T-1 or ISDN desirable
Capital Investment	\$20 - 25 million (bldg./land), \$10 -15 million (equip.)

Source: *Market Street Services*

Cameron County has several available buildings zoned for industrial use. The following are a few of those within the building size range listed above:⁵³

- Fruit of the Loom, Harlingen, 665,870 sq. ft. available.
- Dominion Building, Brownsville, 75,000 – 300,000 sq. ft. available.

To increase their suitability and attractiveness to potential logistics firms, the County can work toward servicing these buildings, if they are not already, with the water, electricity, gas, and telecommunications needs of the average transportation equipment manufacturer. Experience has demonstrated that relocating facilities are more attracted to locations that have not just available facilities, but facilities already connected to vital infrastructure. Industrial parks across the border in Matamoros, Mexico (i.e. FINSA Industrial Park, CIMA Industrial Park, and others) may also offer attractive options for industry in this sector.

⁵³ Brownsville Economic Development Council 05/27/04
<http://www.bedc.com/realestate/searchResults.asp?city=1&aval=1&construction_id=-1&use_id=-1&text_search=&min_size=&max_size=&x=26&y=12> and Harlingen Chamber of Commerce 05/27/04
<<http://property.harlingen.com/do/search/display?page=4&cacheId=-936665704>>.

PLASTIC PRODUCT MANUFACTURING



Plastics Product Manufacturing

Description and Trends

While many domestic manufacturing workers have seen their jobs shipped overseas in the past three years, the plastics industry has remained solidly on U.S. soil. *Business Facilities* magazine wrote, “If you think plastics products are mainly made overseas today thanks to cheaper labor, think again: the U.S. is the world’s largest producer of manufactured plastics products.”⁵⁴ U.S. plastics companies increased employment by nearly 74 percent from 1982 to 2001, until a global recession caused slowdowns in many industries. According to *Business Facilities*, “The trend is still overwhelmingly positive in the long term for plastics manufacturers. What’s amazing is that this employment growth has been accompanied by steady gains in efficiency in each plastics facility.”⁵⁵

The *Society of the Plastics Industry* calculated that the plastics manufacturing industry grew 3.7 percent per year from 1980 to 2001, with employment, real shipments, and real value-added all growing faster than U.S. manufacturing as a whole over the period. U.S. plastics shipments peaked at \$142.2 billion in 2000 before declining slightly in 2001, but the 2001 level of industry shipments was still 3.7 times the 1982 figure. Plastics manufacturing has been protected to date from pressures to move overseas in search of less expensive labor due to the sector’s need to be in close proximity to customers, suppliers, and markets, and the importance of a skilled workforce.

One advantage of plastics that enables long-term success is the diversity of the sector. It includes a variety of products such as packaging films and sheeting, pipefittings, polystyrene foam, urethanes, and floor coverings. The industry also impacts other manufacturers that have maintained a presence in the U.S., most notably automobiles and electronics producers. Both of these sectors often rely on plastics products.

Texas ranks fourth in the country in plastics employment (94,908 jobs in 2002), behind California, Ohio, and Michigan, and first in the county in plastics shipments (\$33.3 billion in 2002), according to the *Society of the Plastics Industry*.⁵⁶ Total employment in the combined rubber and plastics manufacturing sector is expected to grow by 17.3 percent from 2000 to 2010 in the State of Texas; Cameron’s growth rate is expected to surpass that amount with a 21.9 percent growth estimate.

While Rubber Product Manufacturing (NAICS 3262) is a viable sub-sector of the Plastics and Rubber Products Manufacturing (NAICS 326) sector in other places (Cameron’s Rubber Product Manufacturing base is very small), *Market Street* recommends that Cameron County target Plastics Product Manufacturing (NAICS 3261) for future growth, taking advantage of its existing presence in this sector and Texas’ leading role in the nation’s plastics industry.

⁵⁴ Khan, Karim. “Tomorrow’s Plastics Locations.” *Business Facilities*, August 2003, p. 24-25.

⁵⁵ Ibid.

⁵⁶ Society of the Plastics Industry, “Size and Impact of the U.S. Plastics Industry.” 06/03/2004 <<http://www.plasticsdatasource.org/impact.htm>>.

Plastics Product Manufacturing

- Plastics Product Manufacturing (NAICS 3261).
- Total U.S. employment (3rd Quarter 2003) is 633,150.
- There are 12,675 establishments (3rd Quarter 2003).
- The national average weekly wages (3rd Quarter 2003) is \$681.

Location Factors:

- ✓ Close proximity to customers, suppliers, and markets.
- ✓ Large “greenfield” sites.
- ✓ Low cost of industrial power.
- ✓ Non-union workforce.
- ✓ Skilled trained production workers.

Because plastics manufacturing facilities tend to be manageable in size and less dependent on regional linkages (unlike auto plants), smaller communities are often in the running for the location of these companies. While competition is therefore great, communities with the right mix of assets stand a strong chance of enhancing a current plastics cluster, or establishing a foothold in the industry. These plastics facilities are willing to invest in their relocation efforts; among the top five industries for new and expanded plants for 2003, the ten largest Plastics and Rubber Products Manufacturing projects invested nearly a billion dollars in U.S. locations.⁵⁷

As the table below relates, the State of Texas is considered the most competitive place in the world for plastics employment. *Business Facilities* magazine based their rankings on a survey of consultants, real estate professionals, and location selection experts who were asked to name today’s hottest opportunities in plastics. While there is competition within Texas, Cameron can leverage this finding to illustrate its competitiveness compared to locations in other states and throughout the world.

20 Hottest Plastics Locations

1	Texas	11	Georgia (tie for 11th)
2	Ohio	11	New Jersey (tie for 11th)
3	Tennessee	13	Virginia
4	North Carolina	14	Mississippi (tie for 14th)
5	Alabama	14	Oklahoma (tie for 14th)
6	Mexico (tie for 6th)	16	Illinois (tie for 16th)
6	Pennsylvania (tie for 6th)	16	Missouri (tie for 16th)
8	South Carolina	18	Minnesota
9	Arizona (tie for 9th)	19	India (tie for 19th)
9	Louisiana (tie for 9th)	19	Kentucky (tie for 19th)

Source: *Business Facilities*, August 2003

⁵⁷ Starner, Ron. “Transportation Makes It Five for Five.” *Site Selection*, March 2004, p. 190.

The Plastics Product Manufacturing sector is an industry that has gained strength in Cameron County, but it is still a relatively small sector in the economy. Therefore, plastics manufacturing is more of an emerging than existing strength for the community. While paying less than the national average (which includes all occupations, such as executives, design engineers, etc.), this sector offers better-paying employment opportunities for the residents of Cameron County than some alternative manufacturing and non-manufacturing jobs.

Plastics Products Manufacturing, 2nd Quarter 2001 to 2nd Quarter 2003: Cameron County

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	
3261	Plastics Product Manufacturing	0.51	0.69	307	393	28.0%	-8.6%	\$430

Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

Plastics Manufacturing is not a large employer in the Rio Grande Valley as a whole, but the growth in Cameron is greater than that of the Region, suggesting that Cameron is possibly establishing itself as a plastics leader within the regional economy. In the second quarter of 2001, Cameron's plastics employment represented 48.8 percent of the Valley's, compared to 57.6 percent just two years later.

Plastics Products Manufacturing, 2nd Quarter 2001 to 2nd Quarter 2003: Rio Grande Valley*

NAICS Code	Industry Code Description	Employment Location Quotient		Employment			U.S. Employment	Average Weekly Wage Per Employee
		2Q 2001	2Q 2003	2Q 2001	2Q 2003	Change	Change	
3261	Plastics Product Manufacturing	0.39	0.44	629	682	8.4%	-8.6%	\$429

* Comprised of the following Texas counties: Cameron, Hidalgo, Starr, and Willacy.

Source: Texas Workforce Commission, U.S. Bureau of Labor Statistics

Existing Businesses

Based on national prospects for plastics manufacturing, the emerging nature of the sector in Cameron, and strong local location factors for this industry including a large, young workforce, *Market Street* feels the community has a potential competitive advantage in this category. The cluster can be built around those firms already located in Cameron and the Rio Grande Valley.

Cameron County firms include:⁵⁸

- Unique Tool Inc., Brownsville. Manufactures industrial custom plastics molds and injection moldings (100 employees).
- Jamestown Plastics Inc., Brownsville. Manufactures acrylic products (50 employees this site; 90 all sites).
- Chem-Pruf Door Co. Ltd., Brownsville. Manufactures fiberglass doors, frames, and louvers (50 employees).
- Lorentson Manufacturing Co. Inc., San Benito. Manufactures plastic injection molds and injection molded Plastics Products (35 employees this site; 95 employees all sites).

⁵⁸ Source: Harris InfoSource, accessed 6/1/04.

- Autoglass Mexico Inc., Brownsville. Manufactures plastic glass sheets (30 employees).

Rio Grande Valley firms include:⁵⁹

- Progressive Molded Products, McAllen (Hidalgo County). Manufactures injection molded plastic automobile parts and accessories (200 employees).
- Atlantis Plastics, Alamo (Hidalgo County). Manufactures injection molded plastics (130 employees this site; 1,664 all sites).
- Regency Plastics, McAllen (Hidalgo County). Manufactures plastic automotive parts (100 employees this site; 1,122 all sites).
- Titan Plastics Group, McAllen (Hidalgo County). Manufactures plastic injection molds (67 employees this site; 2,317 all sites).
- Care Products Inc., McAllen (Hidalgo County). Manufactures plastic hospital and nursing care furniture (50 employees).
- Kings Prosperity Industries, McAllen (Hidalgo County). Manufactures plastic injection molded pots (45 employees).

While Cameron County's plastics manufacturing sector is growing at a faster pace than the region, more of the larger plastics manufacturers are currently located in Hidalgo County. Several small firms should be considered a strength of Cameron County's plastics manufacturing sector, because numerous small firms offer diversity and more expansion opportunities in the County.

The existing plastics manufactures overlap with two of the other target businesses outlined in this *Regional Cluster Analysis*. Care Products Inc. of McAllen (Hidalgo County) manufactures plastic hospital and nursing care furniture, falling within a broad definition of the health care sector that includes the production of the supplies necessary for the industry. One firm is not sufficient to suggest an existing strong niche market; however, it does offer the opportunity to expand similar businesses to create that potential.

Two of the larger plastics manufacturers in Hidalgo specialize in automobile parts: Progressive Molded Products and Regency Plastics. These suggest the potential opportunity to expand the transportation equipment manufacturing sector, currently specializing in ship and boat building, to include parts to supply automobile manufacturers (for example, the Toyota facility in San Antonio, Texas).

Local officials must not only work with existing businesses to stimulate expansion, but focus on the area's strengths, such as low business costs that significantly improve the bottom-line for manufacturing operations and increase the attractiveness of an area, that make the community a good location choice for plastics manufacturers. These strengths must then be aggressively marketed to both the plastics industry and site consultation professionals.

⁵⁹ Ibid.

Occupational Outlook

Plastics Product Manufacturing occupations in Cameron County offer similar opportunities as Transportation Equipment Manufacturing. After mechanical engineers, general plastic worker production occupations offer the highest wages, and have strong expectations of growth through 2010. As listed in the Transportation Equipment Manufacturing section of this report, a wide variety of occupations fall within the plastic worker production classification, including computer control programmers and operators; machine tool cutting setters, operators, and tenders; metal furnace and kiln operators and tenders; model makers and patternmakers; molders and molding machine setters, operators, and tenders; and tool and die makers. Industrial truck and tractor operators also have good wages (\$18,958) and strong expectations of growth.

Plastics Product Manufacturing Occupation Projection and Wage Data: Cameron County

	2000	2010	'00-'10	Average Annual Wage*
	Estimated Employment	Projected Employment	Percent Change	
Assemblers and Fabricators	1,250	1,370	9.6%	\$16,437
Industrial Truck and Tractor Operators	440	500	13.6%	\$18,958
Mechanical Engineers	150	200	33.3%	\$54,575
Metal and Plastic Workers	1,360	1,610	18.4%	\$22,722
Welders, Cutters, Solderers, and Brazers	490	590	20.4%	\$21,263
Semiconductor Processors	90	130	44.4%	NA

*Estimate for the second quarter of 2003 in Cameron County.

Source: Texas Workforce Commission

Workforce Requirements and Assets

With improved efficiency comes the need for a workforce trained in the latest industry technologies. Indeed, a skilled workforce is one of the prime necessities for a plastics manufacturer scouting a new location. However, most plastics jobs do not necessarily require a four-year college degree. The required training can either be provided in-house by local companies or at a community college or technical school. The chart below lists academic programs at the Cameron County and Rio Grande Valley institutions that may have general applications to the plastics manufacturing industry.

Manufacturing and Engineering Academic Programs	
TSTC Certificates	<ul style="list-style-type: none"> • Electro-Mechanical Engineering Technology • Machining Technology
TSTC Associate of Applied Science Degrees	<ul style="list-style-type: none"> • Computer Drafting and Design • Electro-Mechanical Engineering Technology • Electronic Engineering Technology • Instrumentation Technology • Machining Technology

Manufacturing and Engineering Academic Programs (continued)

UTB/TSC Certificates

- Computer Drafting and Design
- Electronics Engineering Technology
- Machine Shop
- Manufacturing/Mechanical Engineering Technology

UTB/TSC Associate of Applied Science Degrees

- Computer Drafting and Design
- Electronics
- Electronics Engineering Technology
- Manufacturing Engineering Technology
- Mechanical Engineering Technology

UTB/TSC Bachelor of Science Degrees

- Electronics Engineering Technology
- Engineering Physics – Industrial Engineering
- Engineering Physics – Mechanical Engineering
- Manufacturing Engineering Technology
- Mechanical Engineering Technology

UTB/TSC Master of Science Degrees

- Electrical Engineering (as a distance learning program in partnership with University of Texas-Arlington)

STCC Certificates (Not offered at TSTC or UTB/TSC)

- Industrial Systems Maintenance Technology
- Precision Manufacturing

STCC Associate of Applied Science Degrees (Not offered at TSTC or UTB/TSC)

- Engineering
- Precision Manufacturing

UTPA Bachelor of Science (Not offered at UTB/TSC)

- Electrical Engineering
- Manufacturing Engineering
- Mechanical Engineering

UTPA Master of Science Degrees (Not offered at UTB/TSC)

- Manufacturing Engineering
- Mechanical Engineering

TSTC's Machining Technology Associate of Applied Science Degree has coursework in plastic injection molding, with a particular emphasis on making molds using milling machines, engine lathes, surface grinders, computer numerically controlled machines, and electrical discharge machines. Some programs are offered on a distance-learning basis. As of 2000, the school had

received a total of \$20,000 in Smart Jobs Grant funding to provide coursework to serve the plastics injection-molding sector, among others.⁶⁰

At UTB/TSC, the Manufacturing Engineering Technology program includes a course in plastics manufacturing technology. It is this type of coursework, as well as that of TSTC, that can help train the workforce for the plastics manufacturing sector, allowing existing firms to expand and improve the attractiveness of the area to relocating plastics facilities. Making full-use of these educational opportunities must be carefully balanced so that the workforce is not trained for jobs that are not yet available.

For comparison, other communities have shown that providing companies with plastics-specific workforce training helps in the recruitment of these firms. In the south Atlanta, Georgia metropolitan area, for example, county economic development officials point to a new plastics technology facility at Griffin Technical College as a crucial asset in further developing the area's existing plastics cluster. The 70,000-square foot plastics technology center will include a 5,000-square-foot laboratory. Students will be able to earn certificates, diplomas, and degrees in all facets of plastics making. As the *Atlanta-Journal Constitution* noted, "Plastics manufacturing is appealing for several reasons. It's considered clean, meaning no smokestacks and little wasted material. It's not a big water consumer. It's resilient in a down economy. And it pays... well."⁶¹

By coordinating specific workforce training with its existing plastics manufacturing companies and potentially creating more in-depth industry-specific programs and facilities at Cameron County or the Valley's post-secondary institutions, the community can help ensure that their local plastics cluster is a vital future contributor to local employment and wage growth.

Typical U.S. Facility Requirements

In addition to the other locational features referenced in this section, plastics manufacturers also seek available buildings to reduce the costs of relocation. The following represents the type of facilities light manufacturers (including Plastics Product Manufacturers) seek:

⁶⁰ TSTC, Systems Statistical Data Reports. 06/03/2004. <<http://www.harlingen.tstc.edu/ier/sysstatdatrep/miscellaneous%20data/smartjobgrants/smart%5Fjob%5Fgrants.htm>>.

⁶¹ Duffy, Kevin. "Molding a future in plastics." *Atlanta Journal-Constitution*, 8/25/2003, p. E1-E4.

Light Manufacturing

Building Size	50,000 - 150,000 sq. ft.
Site Size	10-15 acres
Employees	200 (10% Administrative & Managerial, 90% Production)
Water	20,000 - 50,000 gallons per day (gpd)
Wastewater	30,000 gpd
Electricity	6,000 kW Demand 3 million kWh per month
Natural Gas	50,000 therms per month
Telecommunications	T-1 or ISDN desirable
Capital Investment	\$9 - 15 million (bldg./land), \$6 -10 million (equip.)

Source: *Market Street Services*

Cameron County has several available buildings zoned for industrial use. The following are a few of those within the building size range listed above:⁶²

- Fruit of the Loom, Harlingen, 665,870 sq. ft. available.
- Dominion Building, Brownsville, 75,000 – 300,000 sq. ft. available.
- 213 Southgate Drive, Harlingen, 143,745 sq. ft. available.
- New Rio Grande Industrial Center Building, Brownsville, 10,000 - 120,120 sq. ft. available.
- Old Kmart, Brownsville, 50,000 – 114,000 sq. ft. available.
- NAFTA Buildings 1, 3, and 4, Brownsville, 20,000-100,000 sq. ft. available.
- Loera Multi Tenant 2, Brownsville, 20,000-80,000 sq. ft. available.
- Industrial Park 8.449 AC Large Industrial Warehouse, Harlingen, 75,000 sq. ft. available.
- Cumberworth Building, Brownsville, 10,000 - 70,000 sq. ft. available.
- Cesar’s Enterprises, Brownsville, 16,600 - 64,400 sq. ft. available.
- Industrial Park 8.449 AC Mayflower Warehouse, 62,990 sq. ft. available.
- CTS Warehouse, Brownsville, 50,000 sq. ft. available.

To increase their suitability and attractiveness to potential plastics product manufacturers, the County can work toward servicing these buildings, if they are not already, with the water, electricity, gas, and telecommunications needs of the average plastics manufacturer. Experience has demonstrated that relocating companies are more attracted to locations that have not just available facilities, but facilities already connected to vital infrastructure. Industrial parks across the border in Matamoros, Mexico (i.e. FINSA Industrial Park, CIMA Industrial Park, and others) may also offer attractive options for industry in this sector.

⁶² Brownsville Economic Development Council 05/27/04
<http://www.bedc.com/realestate/searchResults.asp?city=1&aval=1&construction_id=-1&use_id=-1&text_search=&min_size=&max_size=&x=26&y=12> and Harlingen Chamber of Commerce 05/27/04
<<http://property.harlingen.com/do/search/display?page=4&cacheId=-936665704>>.

CONCLUSION



Conclusion

As was mentioned previously in this report, the five business sectors recommended as targets for the County's future economic development are not intended to be the exclusive means to achieve local job and wealth gains. A truly holistic economic strategy involves integrating a number of elements: recruitment, retention and entrepreneurship, and small business development. The target sectors in this document represent stable, growing industries in which the County and surrounding Region have an existing competitive position. The sectors are broad and diverse, incorporating an array of different skill-sets and educational attainment levels so that economic growth can benefit all segments of the community. Local leaders must also stay attuned to national and international trends that may affect the viability of existing or targeted sectors. With today's rapidly evolving global marketplace, an industry that may be growing today could be adversely affected by globalization in the future.

Adapting this *Regional Cluster Analysis* into practice will require a new approach toward local economic development. Policies and programs intended to facilitate the development of the County's clusters must also aim to expand upon the Region's current advantages and trends. Leveraging existing business and educational resources will enable the County to better understand the dynamics of successful local companies and how these processes can help build and train the workforce of the future.

A cluster strategy cannot be general. It must focus on specific business sectors or it will fail to effectively address these sector's unique characteristics and needs. Understanding the core competencies and best-practice processes of area clusters will enable local developers to proceed with specific programs oriented towards the need of all citizens.