

**THE TEXAS BORDER WITH MEXICO: OPPORTUNITIES AND CHALLENGES**

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## 1. Introduction

The Texas border with Mexico is strategically located at the geographical center of the newly formed North America Trade area (NAFTA) linking the economies of the U.S., Mexico, and the Canada. The future of the region under NAFTA is the focus of much discussion today, in the business community and city halls from Brownsville to El Paso to Austin.

The purpose of this report is to provide a general overview to the socioeconomic conditions of the Texas border region with Mexico. Key issues- land transportation infrastructure, water and wastewater facilities, the environment, *colonias*, and economic diversification.

## 2. The U.S.-Mexico Border

The U.S. and Mexico share a rich history of cultural, social and economic ties and interaction along a common border, that stretches 2,000 miles (Map 1) from the Gulf of Mexico to the Pacific Ocean. At the border, one of the world's most industrialized and prosperous nations (U.S.) meets with a country (Mexico) striving to modernize and leave behind its underdeveloped

status. The U.S.-Mexico border is a region of paradox and contrast. It is also the frequent focal point of binational attention and concern on issues pertaining to immigration, environmental pollution, trade and commerce, foreign investment, drug interdiction, and human rights.

The U.S.-Mexico border region is one of the fastest growing in terms of population for both the U.S. and Mexico. Communities on the Mexican side enjoy some of the Republic's highest per capita wages and lowest unemployment levels. In contrast, U.S. border communities suffer some of their nation's lowest levels of per capita wages and highest levels of unemployment and poverty. While Mexican border communities enjoy relatively higher wages and employment opportunities they, nevertheless, are well below U.S. standards. Mexican border communities, under mounting population and economic growth pressures, are finding it difficult to meet the growing demand for housing, transportation, education and health services.

The U.S.-Mexico border region is at the geographical center of the newly formed trade area (NAFTA) that includes the U.S., Mexico, and Canada. NAFTA is expected to accelerate economic growth in the U.S.-Mexico border region. American and Mexican border residents, however, are keenly aware that overutilization of scarce resources, overpopulation, poverty, and asymmetrical economic interdependence in the region can act as barriers to sharing in the benefits of increased trade between the two countries.

### 3. The Texas Border with Mexico: A Profile

The Texas border with Mexico stretches 800 miles from the Gulf of Mexico and Brownsville to El Paso (Map 2). Population on the Texas side stood at 1.8 million in 1990, slightly more than one-tenth of the State's population. Population in the region is expected to increase by 300,000 during the 1990's, exceeding 2 million by the year 2000. Population along the Texas border with Mexico is concentrated in four Metropolitan areas-- El Paso (602,600), McAllen (393,000), Brownsville (263,000), and Laredo (135,600) and skewed towards the ends of the region. Approximately 47 percent of Texas' border population lives in the southeastern counties of Cameron and Hidalgo, while 43 percent live in the northwestern county of El Paso.

Texas border counties with Mexico outpaced the State in terms of population and employment growth during the 1980's. Data reported in Tables 1 and 2 show Texas border counties grew by 27.1 percent, compared to 19.4 percent for the State between 1980 and 1990, and total employment for Texas border counties increased by 35.2 percent, compared to 21.0 percent for the State. El Paso County and the City of El Paso lead Texas border counties and cities in terms of population and employment growth, followed by Hidalgo County and the City of McAllen.

**Table 1**

**Texas Border Counties with Mexico  
Population, 1980 and 1990**

<u>Counties</u>	<u>1980</u>	<u>1990</u>	<u>Pct. Change</u>
El Paso	479,899	591,610	23.28%
Hudspeth	2,728	2,915	6.85%
Jeff Davis	1,647	1,946	18.15%
Presidio	5,188	6,637	27.93%
Brewster	7,573	8,681	14.63%
Terrell	1,595	1,410	-11.60%
Val Verde	35,910	38,721	7.83%
Kinney	2,279	3,119	36.86%
Maverick	31,398	36,378	15.86%
Webb	99,258	133,237	34.23%
Zapata	6,628	9,279	40.00%
Starr	27,266	40,518	48.60%
Hidalgo	283,229	383,545	35.42%
Cameron	209,727	260,120	24.03%
Total	1,194,325	1,518,116	27.11%
State	14,229,191	16,986,510	19.38%

Source: U.S. Census of Population, 1980 & 1990

**Table 2**

**Texas Border Counties with Mexico  
Employment, 1980 and 1990**

<u>Counties</u>	<u>1980</u>	<u>1990</u>	<u>Pct. Change</u>
El Paso	147,547	196,691	33.30%
Hudspeth	615	578	-06.02%
Jeff Davis	404	566	40.10%
Presidio	945	1,558	64.87%
Brewster	2,504	2,911	16.25%
Terrell	280	339	21.07%
Val Verde	7,752	8,447	8.97%
Kinney	457	518	13.35%
Maverick	6,953	7,654	10.08%
Webb	31,450	46,298	47.21%
Zapata	1,059	1,057	-0.19%
Starr	4,285	6,686	56.03%
Hidalgo	74,617	109,089	46.20%
Cameron	61,683	77,917	26.32%
Total	640,801	460,759	35.20%
State	6,311,845	7,634,279	20.95%

Source: U.S. Census of Population, 1980 & 1990

Mexican border cities outpaced Texas border communities in population growth between 1980 and 1990 (Table 3), increasing by 36.6 percent. Ciudad Juarez had the largest growth, increasing by 44.8 percent, or 244,026 persons, followed by Matamoros with a 41.3 percent increase (77,960 persons), and Reynosa with a 36.5 percent increase (71,006 persons).

**Table 3**  
**Texas-Mexico Border Cities**  
**Population, 1980 and 1990**

<u>Border Cities</u>	<u>1980</u>	<u>1990</u>	<u>Pct. Change</u>
Ciudad Juarez	544,496	788,522	44.82%
El Paso	425,259	515,342	21.18%
Ciudad Acuna	38,887	52,983	36.25%
Del Rio	30,034	30,705	2.23%
Piedras Negras	67,444	96,178	42.60%
Eagle Pass	21,407	20,661	-3.48%
Nuevo Laredo	201,690	218,413	8.29%
Laredo	91,449	122,899	34.39%
Reynosa	194,657	265,663	36.48%
McAllen	66,281	88,031	32.81%
Matamoros	188,703	266,663	41.31%
Brownsville	84,997	98,962	16.43%
Sub-Total (Mexico)	1,235,877	1,688,422	36.62%
Sub-Total (Texas)	719,427	876,600	21.85%
Total (Mex.& Tex.)	1,955,304	2,565,022	31.18%
Mexico	66,846,833	81,249,645	21.55%
U.S.	226,545,805	248,709,873	9.78%
Total (Mex. & U.S.)	293,392,638	329,959,518	12.46%

Source: Mexico General Population Census, 1980 & 1990; U..S. Census of Population, 1980 & 1990

Economic activity is distributed unevenly along the Texas border with Mexico. El Paso County has the most diversified economy with a mix of manufacturing, retail and wholesale trade, services, tourism, refining, agriculture, and government employment (military bases). At

the other end of the Texas border, the lower Rio Grande Valley--Cameron, Hidalgo, Starr and Willacy Counties economic activity revolves mainly around agribusiness, trade, services, tourism, and some manufacturing. Warehousing and transportation services, trade, tourism, gas and oil exploration and agribusiness constitute the main economic activities in the middle region- Webb County (Table 4).

**Table 4**

**Texas Border Counties with Mexico  
Employment by Industry, 1990**

<u>Industry</u>	<u>El Paso</u>	<u>Hudspeth</u>	<u>Jeff Davis</u>	<u>Presidio</u>	<u>Brewster</u>	<u>Terrell</u>	<u>Val Verde</u>	<u>Kinney</u>	<u>Maverick</u>	<u>Webb</u>	<u>Zapata</u>	<u>Starr</u>	<u>Hidalgo</u>	<u>Cameron</u>	<u>Total</u>	<u>Pct. of Total</u>
Agriculture	1,991	164	47	439	87	25	130	57	614	505	8	121	8,844	2,057	15,089	3.27%
Mining	41	0	0	0	9	0	0	0	0	1,831	219	154	837	19	3,110	0.67%
Construction	8,330	0	25	46	180	0	219	1	87	1,512	7	53	4,226	2,241	16,927	3.67%
Manufacturing	41,369	0	0	0	48	0	401	0	900	1,897	0	47	12,784	11,254	68,700	14.91%
Transportation	9,776	48	6	51	166	11	453	0	322	6,821	51	150	3,033	3,506	24,394	5.29%
Wholesale/Retail Trade	52,442	61	79	278	651	57	2,938	69	2,272	14,979	246	1,324	31,682	21,349	128,427	27.87%
F.I.R.E.	7,868	0	23	48	106	0	354	20	283	1,989	63	212	3,764	3,396	18,126	3.93%
Services	41,053	70	169	319	608	119	1,445	184	800	7,521	221	1,581	17,574	17,640	89,304	19.38%
Government	33,821	235	217	377	1,056	127	2,507	187	2,376	9,243	692	3,044	26,345	16,455	96,682	20.98%
<b>TOTAL</b>	<b>196,691</b>	<b>578</b>	<b>566</b>	<b>1,558</b>	<b>2,911</b>	<b>339</b>	<b>8,447</b>	<b>518</b>	<b>7,654</b>	<b>46,298</b>	<b>1,057</b>	<b>6,686</b>	<b>109,089</b>	<b>77,917</b>	<b>460,759</b>	<b>100.00%</b>
Pct. of Total	42.69%	0.13%	0.12%	0.34%	0.63%	0.07%	1.83%	11%	1.66%	10.05%	0.33%	1.45%	23.68%	16.91%	100.00%	

Source: U.S. Census of Population



Historically, poverty and the lack of job opportunities have characterized the Texas border counties with Mexico. Per capita incomes have been only one-half to two-thirds the statewide average. In 1990, Texas border per capita income was \$7,602 compared to \$12,904 for the State of Texas; unemployment in the border region was 15.2 percent compared to 6.5 percent for the State. Nearly one-third of Texas border families live below the poverty level, as defined by the federal government, compared to 14 percent of all Texas families (Table 5).

**Table 5**  
**Texas Border Counties with Mexico**  
**Income, 1989**

INCOME IN 1989 (in U.S. Dollars)	<u>Border</u>	<u>Texas</u>
Total Households	448,547	6,070,937
Median household income*	18,947	27,016
Family households	371,216	4,343,878
Median family income*	20,206	31,553
Percent of female-headed families	18.4	16.2
Percent of families below poverty level	30.7	14.1
Nonfamily households	77,331	1,727,059
Median nonfamily household income*	12,026	16,619
Per capita income	7,602	12,904
INCOME TYPE IN 1989		
With wage and salary income	345,276	4,525,308
Mean wage and salary income	24,872	33,815
With nonfarm self-employment income	48,111	722,698
Mean nonfarm self-employment income	15,907	18,747
With farm self-employment income	7,463	143,952
Mean farm self-employment income	11,228	9,012
With Social Security Income	108,807	1,235,045
Mean Social Security Income	6,405	7,262
With public assistance income	65,164	343,770
Mean public assistance income	2,914	3,011
With retirement income	54,523	682,293
Mean retirement income	9,881	10,198

\*Weighed average of county medians, except Texas total.

Source: 1990 Census of Population and Housing

As a group, Texas border residents are younger, less educated, and poorer than other Texans. Three-fourths speak a language other than English and nearly one-third were born in a foreign country, predominantly Mexico. Slightly more than half of the border residents over the age of 25 have completed high school, compared to 74 percent of all Texas residents. Less than 35,000 of the 1.8 million Texas border residents hold a graduate or professional degree (Table 6).

**Table 6**

**Texas Border Counties with Mexico  
Education, 1990**

SCHOOL ENROLLMENT	<u>Border</u>	<u>Texas</u>
Persons 3 years and over enrolled in school	536,404	4,269,491
Preprimary school	23,908	278,488
Elementary or high school	408,507	2,895,945
College	104,029	1,095,018
<b>EDUCATIONAL ATTAINMENT</b>		
Persons 25 years and over	841,539	9,469,066
Less than 9th grade	279,493	1,108,035
9th to 12th grade, no diploma	110,064	1,374,967
High school graduate	174,209	2,465,953
Some college, no degree	135,424	2,036,015
Associates degree	34,384	497,156
Bachelor's degree	73,494	1,354,537
Graduate or Professional degree	34,471	632,403
Percent high school graduate or higher	53.7	73.8
Percent bachelor's degree or higher	12.8	21.0
<b>NATIVITY AND PLACE OF BIRTH</b>		
Native population	1,178,199	14,283,875
Foreign-born population	361,028	1,163,408
Entered the U.S. 1980 to 1990	135,023	582,674
<b>LANGUAGE SPOKEN AT HOME</b>		
Persons 5 years and over	1,404,085	14,686,727
Speak a language other than English	1,063,730	2,906,574
Percent of persons who do not speak English "very well"		
Ages 5-17	47.1	40.2
Ages 18+	52.6	45.9
Speak Spanish	1,045,988	2,397,118

Source: 1990 Census of Population and Housing

Hundreds of unincorporated rural and urban communities (*colonias*) exist along the Texas border with Mexico. Living conditions in the *colonias* are bad. Most lack sewerage facilities and many are without potable water, drainage, and paved roads. Housing units are mostly substandard and overall living conditions pose serious health hazards to *colonia* residents and to the public at large.<sup>1</sup>

The Texas border region with Mexico ranges from arid (El Paso County- 7.8 inches of rainfall annually) to semi-arid (Webb County- 20.1 inches of rainfall annually) to semi-tropical (Cameron County- 25.4 inches of rainfall annually). Water availability and water quality have always been a major concern of residents in the region. Air and soil contamination and the disposal of hazardous waste materials also pose a threat to the region's environment.

Over the years, the construction of numerous dams, reservoirs and canals have supported the growth of cities, agricultural, and industrial activity along the Texas border with Mexico. Water pollution has become significant due to agricultural run-off, industrial waste, and inadequate municipal waste water treatment and sewerage facilities. Rapid population growth in the region is creating tensions between users- agricultural, industrial, and residential as they compete for limited water supplies. Apportionment of existing water from river and groundwater sources between the U.S. and Mexico is becoming an increasingly important issue.

Apart from water contamination and water scarcity problems, many Texas border communities suffer from high levels of air pollution. Industrial waste, auto emissions, pesticide

use, open burning and dust from unpaved streets trapped by the natural phenomenon of desert temperature inversions contribute to air pollution at different times of the year. In many Texas border communities where industrial activity is significant, improper handling and disposal of hazardous waste materials is contaminating the soil and water sources, posing a serious threat to public health.

Environmental issues along the Texas border with Mexico require binational attention and responses, since residents from the two nations in the area share the same ecosystem, and the actions of one side impact the quality of life on the other side.

Texas border communities with Mexico have benefitted economically over the past ten years with the build-up of maquiladora plants along the border and Mexico's accession into the GATT. Maquiladora plants have been a key force behind the expansion of U.S.-Mexico trade over the past two decades. They account for a major share of the growth in Mexico's exports to the U.S. and represent a principal source of foreign exchange earnings. Beyond their numbers (Tables 7, 8, 9), the maquilas have contributed to an important qualitative transformation in Mexico's trade with the U.S., positioning Mexico to become a world-class exporter of sophisticated industrial products including electronics, electrical machinery, and transportation equipment.

**Table 7**

**Maquiladora Plants in Mexico**

	<u>Plants</u>	<u>Employees</u>
1966	12	3,000
1970	120	20,327
1975	454	67,214
1980	593	123,800
1985	789	217,800
1990	2,082	524,045

Source: Mexico's Commerce and Industrial Development Secretariat

**Table 8**

**Value Added by Maquiladora Plants  
(millions of dollars)**

	<u>1985</u>	<u>1988</u>	<u>1990</u>
Food Processing	10.3	23.3	50.8
Textiles & Apparel	87.2	127.7	264.2
Shoes & Leather Goods	20.9	28.3	67.2
Furniture & Wooden Goods	49.9	126.5	253.9
Chemical Products	1.8	18.3	68.3
Transportation Equipment	329.5	596.3	1,025.2
Equipment & Tools, Non-Electric	20.3	37.3	65.2
Electrical Equipment	240.5	382.1	633.0
Electronics	326.9	585.8	1,104.6
Toys & Sporting Goods	39.4	66.4	149.4
Other Manufacturing Goods	88.1	282.9	771.4
Services	52.4	62.7	110.8
Total	1,267.2	2,337.4	4,420.4

Source: Mexico's Commerce and Industrial Development Secretariat

**Table 9**

**Maquiladora Plants in Mexico**

<u>Border States</u>	1980		1985		1990	
	<u>Plants</u>	<u>Employees</u>	<u>Plants</u>	<u>Employees</u>	<u>Plants</u>	<u>Employees</u>
Baja California	203	20,200	319	37,600	860	99,173
Tijuana	123	12,300	203	34,800	559	69,231
Mexicali	79	6,900	77	10,600	170	22,633
Tecate	22	700	31	1,800	90	4,719
Ensenada*	6	300	8	400	41	2,590
Sonora	88	17,500	81	21,400	151	41,080
Nogales	59	12,500	48	13,900	76	23,195
Agua Prieta	22	4,300	23	5,600	25	6,254
Other*	7	700	10	1,900	50	11,631
Chihuahua	140	46,900	209	96,900	346	197,870
Cd. Juárez	121	42,400	174	79,000	281	159,901
Chihuahua*	19	4,400	33	17,000	65	37,969
Other*	-	-	2	600	-	-
Coahuila	37	7,600	53	13,800	141	31,909
Cd. Acuña	13	3,000	25	6,700	50	14,651
Piedras Negras	18	2,400	19	4,200	49	8,363
Other*	6	2,200	9	2,900	44	8,893
Nuevo Leon	-	-	-	-	56	11,140
Monterrey						
Tamaulipas	81	24,500	80	38,300	274	87,118
Matamoros	50	15,300	35	21,400	107	43,925
Reynosa/Rio Bravo	17	6,700	29	13,600	86	26,379
Nuevo Laredo	14	2,500	16	3,300	81	16,814
Non-Border States						
Jalisco	14	4,300	14	4,500	33	4,982
Guadalajara*	14	4,300	14	4,500	33	4,982
Other*	30	2,400	33	5,300	221	50,976
Total	593	123,800	789	217,800	2,028	524,045

\*Non-border locations

Source: Mexico's Commerce and Industrial Development Secretariat

Maquiladora and related industrial activity is an important contributor to the Texas-Mexico border economy. In 1990, for example, it was estimated that the maquiladoras accounted for 25 percent and 52 percent of employment in Texas and Mexican border communities, respectively. They were also thought to be responsible for 15-20 percent of the Texas border

region's gross product, and 30-40 percent of the Mexican border region's gross product (Table 10).

**Table 10**

**Texas-Mexico Border Economy  
Estimated Impact of Maquiladora Activity on Employment and Payroll (A)  
1990**

Texas Border Communities

Total Employment 432,000

Total Payroll: \$4.8 billion

Employment (direct & indirect) Tied to Maquiladora Activity:	110,000
● Services	102,000
● Manufacturing	8,000

Payroll (direct & indirect ) Tied to Maquiladora Activity:	\$1.4 billion
● Services	\$1.2 billion
● Manufacturing	\$0.2 billion

Percent of Total Employment Tied to Maquiladora Activity:	25 pct
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Percent of Total Payroll Tied to Maquiladora Activity	29 pct
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Percent of Gross Texas Border Product Contributed by Maquiladora Activity:	15-20pct
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Mexican Border Communities

Total Employment 602,080

Total Payroll: \$1.4 billion

Employment (direct & indirect) Tied to Maquiladora Activity:	316,560
● Services	105,404
● Manufacturing	211,156

Payroll (direct & indirect) Tied to Maquiladora Activity:	\$0.8 billion
● Services	\$0.2 billion
● Manufacturing	\$1.6 billion

Percent of Total Employment Tied to Maquiladora Activity:	52 pct
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Percent of Total Payroll Tied to Maquiladora Activity	58 pct
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Percent of Gross Mexican Border Product Contributed by Maquiladora Activity:	30-40pct
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(a) Estimates are based on information provided by Texas Department of Commerce, The Center for Entrepreneurship and Economic Development (CEED) at UT Pan American, Secretaria de Comercio y Fomento Industrial (SECOFI), El Colegio de la Frontera Norte and industry sources.

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Source: J. Michael Patrick, North American Free Trade Agreement/U.S.-Mexico Border Region/Trade Opportunities with Texas and the U.S., unpublished manuscript, University of Texas-Pan American, 1992

Since joining the GATT in 1986, Mexico's trade with the U.S. has more than doubled,

reaching \$74.2 billion in 1992 (Table 11). Trade between the two countries has been dominated by U.S. exports of intermediate goods, including industrial equipment, machinery, and supplies (Table 12). Mexico's exports to the U.S. have been mostly primary goods, including mineral fuel and oil, and agricultural products (Table 13).

**Table 11**

**U.S.-Mexico Trade, 1980-1992  
(in billions of dollars)**

	<u>U.S. Exports to Mexico</u>	<u>U.S. Imports from Mexico</u>	<u>Total U.S. Trade with Mexico</u>
1980	15.1	12.6	27.7
1981	17.8	13.8	31.8
1982	11.9	15.6	27.5
1983	9.0	16.8	25.8
1984	12.0	18.0	30.0
1985	13.6	19.1	32.7
1986	12.4	17.6	30.0
1987	14.8	20.5	35.3
1988	20.6	23.5	44.1
1989	25.0	27.6	52.8
1990	27.5	30.1	57.8
1991	32.3	31.1	63.4
1992	39.6	34.6	74.2

Source: U.S. International Trade Commission

**Table 12**

**Top Ten U.S. Exports to Mexico, 1992  
(in thousands of dollars)**

<u>Product</u>	<u>Value</u>
Total of all Commodities	39,604,899
1. Electric Machinery	7,284,906
2. Vehicles & Parts	4,411,941
3. Plastics & Plastic Articles	1,908,570
4. Optic, Photo, Medical & Surgical Instruments	1,543,183
5. Paper & Paper Products	1,016,633
6. Cereals	858,910
7. Organic Chemicals	843,045
8. Furniture	759,064
9. Articles of Iron & Steel	725,155
10. Oil Seeds & Miscellaneous Grains	565,106

Source: U.S. International Trade Commission



**Table 13**

**U.S. Imports from Mexico, 1992  
(in thousands of dollars)**

<u>Product</u>	<u>Value</u>
Total of All Commodities	34,591,836
1. Electric Machinery	8,661,344
2. Vehicles & Parts	5,654,528
3. Mineral, Fuel & Oil	4,749,818
4. Nuclear Reactors, Boilers, Machinery	2,813,425
5. Apparel Articles & Accessories	932,402
6. Furniture	912,975
7. Edible Vegetables	772,904
8. Edible Fruit & Nuts	516,178
9. Live Animals	348,727
10. Coffee, Tea & Spices	284,927

Source: U.S. International Trade Commission

The economic linkages between Texas and Mexico are significant and growing. According to the U.S. Department of Commerce, Texas ranks first among the 50 states in exports to Mexico. Production originating in Texas accounts for roughly 45 percent of all U.S. merchandise exports to Mexico. Of the approximately \$15.5 billion of Texas merchandise exports to Mexico in 1991, about 95 percent consisted of manufactured goods and most of the remainder agricultural crops. Seventy-five percent of trade was in intermediate goods traded within industries. Of the manufactured goods, the five leading categories were electric and electronic equipment, aircraft and parts, communications equipment, and automobile parts.

Over 60 percent of U.S.-Mexico merchandise trade passes through Texas' ports of entry. Between 1990 and 1993, rail and truck shipments, south and northbound, passing through Texas ports of entry increased by 88.2 percent and 24.0 percent, respectively (Table 14).

**Table 14**

**Bridge Traffic on Texas-Mexico Border**

	<u>1990</u>	<u>1993</u>	<u>Pct. Change 1990-1993</u>
Trucks			
Southbound	349,269	702,797	101.2
Northbound	545,700	406,549	-25.5
Totals	894,969	1,109,346	24.0
Rail			
Southbound	107,329	179,642	67.4
Northbound	25,309	70,045	176.8
Totals	132,638	249,687	88.2

Source: Collected from Principal Texas Cities bordering Mexico, compiled by the Texas Center for Border Economic and Enterprise Development, Texas A&M International University, Laredo, Texas

The rapid growth in trade between the U.S. and Mexico over the past decade has provided a significant boost to the Texas border economy with Mexico. The Texas border region has been the fastest growing area of the State. Employment in the border region has been growing at around 2.7 percent per year for the past seven years, compared to 1.7 percent for the State. Between 1985 and 1990 employment in the Texas border region grew by roughly 20 percent. The service sector added 23,400 new jobs, followed by trade-- wholesale and retail with 20,000 new jobs, manufacturing- 8,800 and transportation services- 4,500. Overall, the Laredo metropolitan area had the highest percent increase in total employment- 31.6 percent. The Laredo metropolitan area also had the largest increase in non-manufacturing jobs- 33.0 percent. The Brownsville metropolitan area had the largest increase in manufacturing jobs- 19.2 percent. Electronics, electronic equipment, fabricated metal products, and industrial machinery and equipment accounted for the most of the new manufacturing jobs in the Texas border region (Tables 15 and 16).

**Table 15: Nonagricultural Wage and Salary Employment by Texas Border MSA's, 1985, 1988, 1990**

Economic Sector	Brownsville Harlingen MSA			McAllen-Edinburg Mission MSA			Laredo MSA			EL Paso MSA			Border MSA's		
	'85	'88	'90	'85	'88	'90	'85	'88	'90	'85	'88	'90	'85	'88	'90
	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>	<u>000</u>
Wage & Salary Employment Total	65.2	68.8	76.1	83.3	93.2	101.5	34.2	38.9	45.0	178.5	195.4	209.1	361.2	396.3	431.7
Manufacturing-Total	9.9	10.0	11.8	11.5	12.6	13.4	1.8	1.9	1.9	36.5	40.6	41.4	59.7	65.1	68.5
Durable Goods	3.9	4.0	4.9	2.9	2.5	2.7	0.6	0.9	0.9	13.7	13.1	14.0	21.1	20.5	22.5
<i>Lumber &amp; Wood Products</i>										0.7	0.8	0.7	0.7	0.8	0.7
<i>Furniture &amp; Fixtures</i>										0.2			0.2		
<i>Stone, Clay &amp; Glass Products</i>	0.9	0.7	0.7	0.9	0.3	0.2				1.0	0.7	0.6	2.8	1.7	1.5
<i>Primary Metal Industries</i>										2.3	2.1	2.1	2.3	2.1	2.1
<i>Fabricated Metal Products</i>	0.3	0.4	0.5		0.9	0.9				0.9	0.9	1.1	1.2	2.2	2.5
<i>Industrial Machinery &amp; Eqpt.</i>		0.5	0.9				0.1						0.1	0.5	0.9
<i>Electronics &amp; Electronic Equip.</i>	0.7	0.9	1.1		0.4	0.7	0.3	0.5	0.3			2.7	3.2	1.0	4.5
<i>Transportation Equipment</i>		1.2	1.5												1.2
<i>Instruments &amp; Related Prod.</i>															5.2
<i>Misc. Manufacturing Inds.</i>	2.0	0.3	0.2	2.0	0.9	0.9	0.2	0.4	0.6	8.6	0.7	0.5	12.8	2.3	2.2
Nondurable Goods	6.0	6.0	6.9	8.6	10.1	10.7	1.2	1.0	1.0	22.8	27.5	27.4	38.6	44.6	46.0
<i>Food &amp; Kindred Products</i>	1.5	1.7	1.8	3.8	4.2	4.2	0.5			3.1	3.4	3.6	8.9	9.3	9.6
<i>Textile Mill Products</i>															
<i>Apparel &amp; Other Textile Products</i>		3.1	3.9	3.4	4.2	4.8			0.3	14.1	16.7	16.4	17.5	24.3	25.1
<i>Paper &amp; Allied Products</i>					0.4	0.4								0.4	0.4
<i>Printing &amp; Publishing</i>	0.5			0.5	0.5	0.5	0.3	0.2		1.6	1.6	1.7	2.9	2.3	2.2
<i>Chemicals &amp; Allied Products</i>	0.3			0.3	0.2	0.1							0.6	0.2	0.1
<i>Petroleum Refining &amp; Related</i>															
<i>Rubber &amp; Misc. Plastic Prod.</i>															
<i>Leather &amp; Leather Products</i>										1.9	3.7	3.7	1.9	3.7	3.7
<i>Other Nondurable Goods</i>	3.7	1.2	0.6	0.6	0.6	0.7	0.4	0.5	1.0	2.1	2.1	2.0	6.8	4.4	4.3
Nonmanufacturing - Total	55.3	58.8	64.3	71.8	80.6	88.1	32.4	37.0	43.1	142.0	154.7	167.7	301.5	331.1	363.2
<i>Mining</i>	0.1			1.6	0.9	0.9	2.0	1.7	1.8	0.3			4.0	2.6	2.7
<i>Construction</i>	3.2	2.1	2.3	4.6	4.1	4.4	1.4	1.2	1.4	9.3	9.0	8.4	18.5	16.4	16.5
<i>Transp. &amp; Public Util.</i>	3.4	3.1	3.2	2.6	2.9	3.0	3.7	5.0	6.6	9.9	10.6	10.8	19.6	21.6	23.6
<i>Transportation &amp; Allied</i>	2.0	1.9	2.0	1.3	1.8	1.8	3.1	4.3	5.8	5.1	6.0	6.4	11.5	14.0	16.0
<i>Communication</i>	1.0	0.8	0.8	0.7	0.5	0.6	0.3	0.4	0.5		1.7	1.7	2.0	3.4	3.6
<i>Elec., Gas &amp; Sanitary Serv.</i>	0.4	0.4	0.4	0.6	0.6	0.6	0.3	0.3	0.3	4.8	2.9	2.7	6.1	4.2	4.0
Trade	18.3	18.1	20.6	25.5	28.8	31.0	10.4	12.0	13.9	44.1	47.3	52.5	98.3	106.2	118.0
<i>Wholesale Trade</i>	3.6	3.2	3.6	6.5	7.3	6.5	1.4	1.9	2.5	10.7	11.2	12.1	22.2	23.6	24.7
<i>Retail Trade</i>	14.7	14.9	17.0	19.0	21.5	24.5	9.0	10.1	11.4	33.4	36.1	40.4	76.1	82.6	93.3
Finance, Insurance & Real Estate	3.4	3.6	3.7	3.9	3.7	4.0	1.6	1.7	1.9	9.2	8.9	8.4	18.1	17.9	18.0
Services & Miscellaneous	12.3	15.5	17.2	12.8	15.7	18.1	5.5	6.3	7.7	32.4	38.3	43.4	63.0	75.8	86.4
<i>Business &amp; Personal Serv.</i>		4.6	5.3		4.8	6.1		2.5	3.1		17.8	19.9	0.0	29.7	34.4
<i>Medical &amp; Professional Serv.</i>		10.9	11.9		10.9	12.0		3.8	4.6		20.5	23.5	0.0	46.1	52.0
Government	14.6	16.4	17.3	20.8	24.5	26.7	7.8	9.1	9.8	36.8	40.6	44.2	80.0	90.6	98.0
<i>Federal Government</i>	1.0	1.2	1.2	1.6	1.9	1.8	0.6	0.7	0.9	9.4	9.2	9.3	12.6	13.0	13.2
<i>State Government</i>	1.9	2.0	2.1	3.2	3.2	3.3	0.7	0.7	0.8	4.4	4.5	5.0	10.2	10.4	11.2
<i>Local Government</i>	11.7	13.2	14.0	16.0	19.4	21.6	6.5	7.7	8.1	23.0	26.9	29.9	57.2	67.2	73.6

Source: Texas Comptroller of Public Accounts: 1985, 1988, 1990

**Table 16: Nonagricultural Wage and Salary Employment by Texas Border MSA's, 1985-1988, 1988-1990, 1985-1990**

Economic Sector	Brownsville Harlingen MSA			McAllen-Edinburg Mission MSA			Laredo MSA			EL Paso MSA			Border MSA's		
	'85-'88	'88-'90	'85-'90	'85-'88	'88-'90	'85-'90	'85-'88	'88-'90	'85-'90	'85-'88	'88-'90	'85-'90	'85-'88	'88-'90	'85-'90
	%Change			%Change			%Change			%Change			%Change		
Wage & Salary Employment Total	5.5	10.6	16.7	11.9	8.9	21.8	13.7	15.7	31.6	9.5	7.0	17.1	9.7	8.9	19.5
Manufacturing-Total	1.0	18.0	19.2	9.6	6.3	16.5	5.6		5.6	11.2	2.0	13.4	9.0	5.2	14.7
Durable Goods	2.6	22.5	25.6	-13.8	8.0	-6.9	50.0		50.0	-4.4	6.9	2.2	-2.8	9.8	6.6
<i>Lumber &amp; Wood Products</i>										14.3	-12.5		14.3	-12.5	
<i>Furniture &amp; Fixtures</i>										-100.0		-100.0	-100.0		-100.0
<i>Stone, Clay &amp; Glass Products</i>	-22.2		-22.2	-66.7	-33.3	-77.8				-30.0	-14.3	-40.0	-39.3	-11.8	-46.4
<i>Primary Metal Industries</i>										-8.7		-8.7	-8.7		-8.7
<i>Fabricated Metal Products</i>	33.3	25.0	66.7								22.2	22.2	83.3	13.6	108.3
<i>Industrial Machinery &amp; Eqpt.</i>		80.0					-100.0		-100.0				400.0	80.0	800.0
<i>Electronics &amp; Electronic Equip.</i>	28.6	22.2	57.1		75.0		66.7	-40.0			18.5		350.0	17.8	430.0
<i>Transportation Equipment</i>		25.0												25.0	
<i>Instruments &amp; Related Prod.</i>											11.5			11.5	
<i>Misc. Manufacturing Inds.</i>	-85.0	-33.3	-90.0	-55.0		-55.0	100.0	50.0	200.0	-91.9	-28.6	-94.2	-82.0	-4.3	-82.8
Non-durable Goods		15.0	15.0	17.4	5.9	24.4	-16.7		-16.7	20.6	-0.4	20.2	15.5	3.1	19.2
<i>Food &amp; Kindred Products</i>	13.3	5.9	20.0	10.5		10.5	-100.0		-100.0	9.7	5.9	16.1	4.5	3.2	7.9
<i>Textile Mill Products</i>															
<i>Apparel &amp; Other Textile Products</i>		25.8		23.5	14.3	41.2		-100.0		18.4		16.3	38.9	3.3	43.4
<i>Paper &amp; Allied Products</i>															
<i>Printing &amp; Publishing</i>	-100.0		-100.0				-33.3	-100.0	-100.0		6.2	6.2	-20.7	-4.3	-24.1
<i>Chemicals &amp; Allied Products</i>	-100.0		-100.0	-33.3	-50.0	-66.7							-66.7	-50.0	-83.3
<i>Petroleum Refining &amp; Related</i>															
<i>Rubber &amp; Misc. Plastic Prod.</i>															
<i>Leather &amp; Leather Products</i>										94.7		94.7	94.7		94.7
<i>Other Non-durable Goods</i>	-67.6	-50.0	-83.3		16.7	16.7	25.0	100.0	150.0		-4.8	-4.8	-35.3	-2.3	-36.8
Nonmanufacturing - Total	6.3	9.4	16.3	12.3	9.3	22.7	14.2	16.5	33.0	8.9	8.4	18.1	9.8	9.7	20.5
<i>Mining</i>	-100.0		-100.0	-43.8		-43.8	-15.0	5.9	-10.0	-100.0		-100.0	-35.0	3.8	-32.5
<i>Construction</i>	-34.4		-28.1	-10.9	7.3	-4.3	-14.3	16.7		-3.2	-6.7	-9.7	-11.4	0.6	-10.8
<i>Transp. &amp; Public Util.</i>	-8.8	3.2	-5.9	11.5	3.4	15.4	35.1	32.0	78.4	7.1	1.9	9.1	10.2	9.3	20.4
<i>Transportation &amp; Allied</i>	-5.0	5.3	0.0	38.5		38.5	38.7	34.9	87.1	17.6	6.7	25.5	21.7	14.3	39.1
<i>Communication</i>	-20.0		-20.0	-28.6	20.0	-14.3	33.3	25.0	66.7				70.0	5.9	80.0
<i>Elec., Gas &amp; Sanitary Serv.</i>										-39.6	-6.9	-43.8	-31.1	-4.8	-34.4
Trade	-1.1	13.8	12.6	12.9	7.6	21.6	15.4	15.8	33.7	7.3	11.0	19.0	8.0	11.1	20.0
<i>Wholesale Trade</i>	-11.1	12.5	0.0	12.3	-11.0	0.0	35.7	31.6	78.6	4.7	8.0	13.1	6.3	4.7	11.3
<i>Retail Trade</i>	1.4	14.1	15.6	13.2	14.0	28.9	12.2	12.9	26.7	8.1	11.9	21.0	8.5	13.0	22.6
Finance, Insurance & Real Estate	5.9	2.8	8.8	-5.1	8.1	2.6	6.2	11.8	18.7	-3.3	-5.6	-8.7	-1.1	0.6	-0.6
Services & Miscellaneous	26.0	11.0	39.8	22.7	15.3	41.4	14.5	22.2	40.0	18.2	13.3	34.0	20.3	14.0	37.1
<i>Business &amp; Personal Serv.</i>		15.2			27.1			24.0			11.8			15.8	
<i>Medical &amp; Professional Serv.</i>		9.2			10.1			21.1			14.6			12.8	
Government	12.3	5.5	18.5	17.8	9.0	28.4	16.7	7.7	25.6	10.3	8.9	20.1	13.2	8.2	22.5
<i>Federal Government</i>	20.0		20.0	18.7	-5.3	12.5	16.7	28.6	50.0	-2.1	1.1	-1.1	3.2	1.5	4.8
<i>State Government</i>	5.3	5.0	10.5		3.1	3.1		14.3	14.3	2.3	11.1	13.6	2.0	7.7	9.8
<i>Local Government</i>	12.8	6.1	19.7	21.3	11.3	35.0	18.5	5.2	24.6	17.0	11.2	30.0	17.5	9.5	28.7

Computed from Table 15. Texas Comptroller of Public Accounts: 1985, 1988, 1990

#### 4. The Texas Border with Mexico: Some Key Issues

##### A. Infrastructure Issues<sup>2</sup>

##### 1. Land Transportation

The Texas border with Mexico provides the primary highway and rail access to Mexico for all states east of the Rocky Mountains. Since joining GATT in 1986, trade between the U.S. and Mexico has more than doubled, reaching \$74.2 billion in 1992. Over 60 percent of U.S.-Mexico merchandise trade passes through Texas' ports of entry. This traffic has put a tremendous burden on Texas land transportation infrastructure, particularly at border crossings.

A recent report by the U.S. Government Accounting Office (GAO)<sup>3</sup> concluded that existing U.S. border inspection facilities cannot adequately handle the current flow of commercial traffic. The GAO report also concluded that the ability of border inspection facilities to handle additional traffic and congestion resulting from expanded trade with Mexico would require major investments in new facilities, an expansion of hours of operation, and additional staffing.

Local officials from El Paso to Laredo to Brownsville have expressed concern about the future financing of needed bridge and highway construction and maintenance to handle increased traffic levels in their cities. Projections by state officials suggest that the cost of projects necessary to alleviate current congestion problems exceeds current revenues.

Additional funding will be necessary to handle the current and future land transportation infrastructure requirements associated with increased trade with Mexico.

Current methods for financing infrastructure needs place the primary burden on state and local governments. Because the Texas border communities and counties involved are some of the poorest in the nation, additional funding sources will be needed. A strong argument can be made for increased funding from federal sources. Since the benefits of increased trade with Mexico will accrue to the nation, as well as the border communities, "fairness" would argue for the nation to bear its share of the costs too.

To be effective, efforts by Texas and federal officials to relieve congestion at the border will require close cooperation and coordination with Mexican border state and federal officials. Construction schedules and standards for bridges and highways, as well as procedures for the operation of border crossing facilities need to be planned and coordinated in advance to ensure the efficient and safe movement of merchandise and people.

## 2. Water and Wastewater Facilities

Increased trade with Mexico will undoubtedly contribute to population growth and expanded industrial activity in Texas border communities. Texas border cities with Mexico are already experiencing problems of inadequate water and wastewater treatment facilities, as well as poor or non-existent municipal and hazardous waste disposal facilities. Many Texas border cities need to replace outdated facilities to meet new standards set by the Texas Water Commission, the Texas Department of Health, and the U.S. Environmental Protection Agency (EPA).

The problem of water and soil contamination resulting from inadequate wastewater collection and treatment facilities, and the improper handling and disposal of hazardous wastes,

is one that emanates from communities and factories on both sides of the Rio Grande/Rio Bravo river. The problem can only be adequately addressed through coordinated binational regional efforts at the municipal, state, and federal levels.

Thousands of unincorporated rural and urban fringe communities- (*colonias*) lack basic water and wastewater treatment facilities. The lack of basic sanitation infrastructure in the *colonias* pose not only a serious health risk for residents, but also the communities around them and the environment. Without proper sanitation, communicable diseases- including tuberculosis and cholera- could spread from *colonias* into surrounding communities on both sides of the border. Furthermore, without proper wastewater facilities, raw sewage could contaminate area waterways and present a health risk to communities downstream the same aquifer.

#### B. Environmental Issues

The implementation of NAFTA presents the U.S.-Mexico border communities with a unique opportunity to engage in collaborative environmental policy-making that incorporates the needs and perspectives of a rapidly developing country (Mexico) and a developed nation (U.S.). The process will require both nations to consider and modify, where appropriate, their environmental values, goals, and standards. Such a collaborative effort may benefit others as well. That is, if the U.S. and Mexico can achieve consensus on border environmental issues and procedures for addressing them, lessons learned in the process may contribute to the resolution of current conflicts between developed and developing nations worldwide over environmental issues ranging from sanitation to biodiversity to global warming.

Environmental considerations need to be more than just an "add on" to economic development policy. As the British agricultural economist J. S. Marsh wrote:

"Welcome as their presence may be ["add on" considerations], this is still not an adequate approach to the economic question: how can we best use our resources to ensure that the maximum range of choices is open to the community? To do this we have to start from the opposite end of the debate - what do people really want and what are the environmental constraints within which our economic system, including agriculture, has to work? These constraints are seldom absolute. They demand trade-offs which may be between different resources, between various products which can meet consumer demands and between today and tomorrow. They are nevertheless fundamental. Since economic activity can never exceed its ecological boundaries, it needs to know where those boundaries lie and how they may be moved by different choices that society may make. The concern is not peculiar to agriculture or to land use. Since there is an element of both substitutability and complementarity between resources and products in agriculture and other sectors, the choices that have to be made are choices for the economy as a whole."<sup>4</sup>

The flora and fauna of the Texas-Mexico border region have not received sufficient attention so that the ecological boundaries of biodiversity can be defined. The ecosystem of the Rio Grande/Río Bravo is very fragile. Due to the arid and harsh climate that characterizes much of the region, the loss of even one species can have a potentially greater impact on the ecological balance than would be the case in a less demanding environment. Ecosystem management goals that need to be addressed include maintaining viable populations of all native species, representation within protected areas of all native ecosystem types across their natural range of variation, protection of the evolutionary potential of species and ecosystems, and accommodating human use.<sup>5</sup>

To achieve these ecosystem management goals requires baseline data on the biodiversity of the region in order to measure and monitor the health of the ecosystem. Baseline biodiversity



data gives policy makers an essential tool for measuring and evaluating the impact of development decisions on the integrity of the region's ecological system.

Because water is such a scarce and vital resource to the border region more emphasis needs to be placed on its use, quality, and conservation than has occurred in the past. In order to sustain the rapid population growth taking place in the U.S.-Mexico border region, a stable and adequate water supply is required. The long term viability of the region's economy require that sustainable land and water use planning be given a high priority. For instance, promoting the growth of eco-tourism (camping, hiking, hunting, natural history tours, etc.), an increasingly important economic activity, cannot be achieved without careful planning to protect the region's natural resources.

Water supply and water quality concerns are the fundamental issues that will determine the success or failure of the development of the Texas-Mexico border region.<sup>6</sup> The water supply issue has two equally important facets: the total amount of available water and its allocation among different users. The actual amount of water available from surface and underground sources is limited due to the arid and semi-arid climate of most of the Rio Grande/Río Bravo Basin. Consequently, water management on a Basin-wide basis is not only desirable but necessary.

Presently, available water in the region is allocated to different users. Any new uses or users will require reallocation of existing water rights. Equitable allocation of the water between

all parties at the international, state, and local levels will require the close collaboration of all interested parties. At present, water allocations are based on historical precedent and existing international and state agreements. With the area economy in transition from an agriculture-based economy to a diversified, urban-based economy, a comprehensive framework for the allocation and sale of water rights will need to be developed.

The conflict between the city of El Paso and the State of New Mexico over water rights is a case in point. Without any new sources of water, El Paso's continued growth is very uncertain. New Mexico seeking to guard its scarce water resources to enhance its own future, has successfully blocked El Paso's attempt to pump groundwater from its aquifer. At present, the issue is still unresolved.<sup>7</sup>

The area of the Texas-Mexico border below El Paso depends upon the Río Concho and the Pecos River for adequate water supplies. Development activities along the Río Concho in Mexico have potential long-term implications for the border cities from Del Rio/Ciudad Acuña to Brownsville/Matamoros, as well as The Big Bend National Park/Parque Internacional del Río Bravo. Concerns are focused on the amount and quality of water flowing into the Rio Grande/Río Bravo, as well as ecological stability and habit preservation in the region.

Water quality through the region has become an a issue of growing concern. Citizens have the right to clean drinking water. Health problems that result from contaminated water place an economic and social burden upon Texas border communities that is preventable. Poor water

quality also hinders the development of tourism and related businesses. Outdoor water sports and recreation such as boating, skiing, fishing, and swimming are adversely affected if the water has unacceptable levels of contaminants. Inadequate infrastructure for handling wastewater and lax enforcement of existing laws pertaining to illegal dumping are areas that require immediate attention, in order to avoid long-term degradation of the environment and the regional economy.

Other environmental issues that must be addressed include the transshipment and disposal of hazardous wastes. The City of Laredo Fire Department's Hazardous Materials team is being called upon with increasing frequency to secure and clean-up chemical spills that occur during the transshipment of hazardous chemicals at the border. These toxic spills endanger the health of area residents and could eventually contaminate water sources, thereby creating even more serious economic disruptions.

Residents along the Texas-Mexico border are increasingly voicing their concern over threats to the environment, their health and quality of life. When Spofford, Texas was recently targeted to become a low-level radioactive dump site, residents from both sides of the border voiced concern about the possible contamination of the vital groundwater reservoirs by radioactive materials. At the last minute, the proposed facility was canceled.<sup>8</sup>

Vocal opposition to the development of the Río Escondido power plant's Carbon II expansion at Piedras Negras, Mexico caused nervous U.S. investors to pull out of the project. Opposition to the power plants is based upon the fear that smoke stack emissions will impair the

air quality of the Big Bend National Park. If potential for environmental damage had been taken into account during the initial planning of the power-plant, perhaps the present delay in bringing the plant online could have been avoided.<sup>9</sup>

As commercial trade between the U.S. and Mexico increases, especially in agricultural products, the possibility of outbreaks of various vector-borne diseases such as malaria, yellow fever, and encephalitis or other insect pests such as the medfly in Southern California increases. Waterborne diseases such as cholera can be traced to contaminated water supplies. Consequently, biological control programs need to be integrated into the overall development plans for the region to ensure that changes in agricultural practices, land use or water use do not damage the ecosystem.

### C. Colonias

The Texas border with Mexico is dotted with hundreds of unincorporated rural and urban communities (*colonias*), ranging in size from over 100 acres, housing up to 2,000 people, to less than 5 acres, housing as few as 20 people. Living conditions in the *colonias* are bad. Most *colonias* lack water and wastewater facilities, drainage, and paved streets. Housing units are mostly substandard and overall living conditions pose serious health hazards to *colonia* residents and the public at large.

Studies<sup>10</sup> indicate that *colonia* residents are mostly Hispanic, many recent immigrants from Mexico, others having immigrated over 20 years ago. Spanish is the primary language

spoken by *colonia* residents, with less than one in four claiming proficiency in English. While the majority of *colonia* residents are eligible for public assistance programs, less than a third avail themselves of the services due to the lack of information or transportation.

For *colonia* residents over the age of 16 and not in school, unemployment runs close to 50 percent. Of those working, nearly half work less than 40 hours a week, and three out of four receive the minimum wage or less. *Colonia* residents normally find employment in seasonal agricultural field work, construction, factory work, janitor/maid service, and retail/sales positions. Less than 10 percent of *colonia* residents have received some type of vocational training. However, more than half of those receiving training earned more than the minimum wage.

Illiteracy is the norm, rather than the exception, in the *colonias*. Less than 25 percent of *colonia* residents speak, read or write English. Close to 80 percent of the *colonia* adults who started high school have finished. Close to a third have never attended high school. Of those who completed high school, only 5 percent have attended college. And, only one in five attending college have graduated.

The continued growth of *colonias* along the Texas border with Mexico poses a serious problem for the future development of the region. *Colonia* residents make-up 10-15 percent of the region's population, and 20-25 percent of the laborforce. *Colonia* residents, properly educated, trained, housed, and in good health, can make a significant contribution to the future

development of the Texas border region with Mexico. Failing to solve the problems of substandard housing, inadequate education, poor health, and limited employment opportunities that characterize the life of *colonia* residents, however, will act as a brake on local economic development efforts.

#### D. Economic Diversification

Economic activity along the Texas border with Mexico is concentrated largely in the trade and service sectors, which together employ roughly 55 percent of the workforce and account for 75 percent of regional gross sales. Although manufacturing activity in the region has increased over the past decade through growing linkages with the maquiladora industry, over 40 percent of the manufacturing workforce continues to be employed in labor-intensive food processing, and apparel and textile assembly activities.

Several studies<sup>11</sup> have attempted to analyze the potential effects of NAFTA on industrial sectors in the U.S. Many uncertainties, including comparative regional factor costs (labor, materials, technologies, energy, capital), the level of skills in the laborforce (education, training), and the ability of firms and industries to capitalize on new opportunities require, however, that their conclusions be taken with caution.

While there is considerable similarity between the U.S. and Canadian economies, in terms of structure and industrial activity, dissimilarity characterizes the U.S. and Mexican economies. Despite the dissimilarity many see the opportunity to exploit complementarities

between the two economies based upon comparative advantage. Mexico has a comparative advantage in industrial activity that is raw material, labor intensive, and low to intermediate technology based. In contrast, the U.S. has a comparative advantage in industrial activity that is processed material, high tech, capital intensive and knowledge based.

Due to these comparative advantages, NAFTA will, over time, encourage the shifting of labor-intensive activity towards Mexico and capital-intensive activity towards the U.S. and Canada. Regions in the U.S. that have a heavy concentration of labor-intensive activities, such as the Texas border region with Mexico, will likely experience a decline in those activities.

Labor-intensive agriculture historically has played an important role in the development of south Texas, particularly in Hidalgo and Cameron County.<sup>12</sup> The area has long been recognized as one of the nation's leading food producing areas and a principal source of citrus and winter vegetables. The industry has been a major source of employment, employing in peak years more than 20,000 seasonal workers to plant, cultivate, harvest, and pack fruits and vegetables. Over the past two decades, however, the structure of agriculture in the region has undergone a gradual transformation, as mechanization and the adoption of labor-saving cultural practices have reduced the demand for labor. Since the majority of the displaced farmworkers have only minimal education and training, they have found it difficult to find alternative employment, and eventually seek help from public assistance programs.

NAFTA will eventually contribute to the decline in labor-intensive fruit and vegetable

activities in south Texas, as producers seek lower cost production sites in Mexico. This will result in the displacement of farmworkers, the majority of whom are ill equipped to qualify for other employment opportunities in the area.

Another important industry on the Texas border with Mexico, from the stand point of employment, is the labor-intensive cut-and-sew garment and apparel industry. Under NAFTA, this industry will gradually relocate, like labor-intensive agriculture, to lower cost production sites in Mexico.

Historically, Texas border communities have been important transshipment sites providing valuable transportation, warehousing, brokerage, financial and business services supporting the flow of merchandise trade between the U.S. and Mexico. Customs requirements and other restrictions limiting the operations of U.S. and Mexican truckers to narrow border commercial zones, made it necessary for merchandise to spend several days at the border while it was properly documented, unloaded and reloaded for shipment to its final destination.

Changes are likely under NAFTA. U.S. Customs modernization legislation attached to NAFTA will permit shipments to clear customs through remote filing procedures at non-border sites. In December 1995, the commercial zone restrictions will disappear and U.S. and Mexican truckers will be free to deliver international cargo to any destination within the U.S.-Mexico border states. Beginning in January 2000, truckers will be able to travel to any destination within the three NAFTA countries. As a consequence of these changes, the amount of time merchandise



will spend at the border, and the range of services required to handle it, will likely diminish. Many border officials fear these changes could lead to the loss of jobs and a downturn in economic activity in their communities.

Retail and wholesale sales to Mexican shoppers has long been a mainstay in many Texas border communities. Many border retailers fear that NAFTA will hurt their sales, as Mexicans decide to exercise their option to shop for U.S. products at home. Undoubtedly some Mexicans will decide to shop at home for the sake of convenience. Several studies<sup>13</sup>, however, including a survey by the *Wall Street Journal* (December 21, 1993), have found that many Mexican shoppers plan to continue shopping in the U.S. because they believe that prices will remain lower, quality of merchandise better, and variety greater on the U.S. side. Besides, many have second homes and family and friends in the U.S. that they plan to visit on a regular basis.

Mexico's decision in 1992 to enforce its Customs regulation limiting Mexican residents to a \$50.00 personal exemption on duties on merchandise purchased outside the country has many Texas border businesses concerned that it will hurt their sales. Sales data from the Texas Comptroller of Public Accounts seem to support the merchants concern. Laredo, for example, which has historically been the destination for many Mexican shoppers saw the rate of growth in its retail sales fall from 12.0 percent in 1992 to 1.0 percent in 1993. Growth in retail sales in McAllen, another favorite shopping destination for many Mexicans, also declined from 12.0 percent in 1992 to 5.0 percent in 1993. El Paso also experienced a fall-off in the growth of its retail sales from 11.0 percent in 1992 to 4.0 percent in 1993. While all Texas border cities

registered declines in the growth of retail sales from 1992 to 1993, many cities experienced absolute declines in the sales of certain items including clothing, home furnishings, appliances, and electronic equipment (Tables 17 and 18).

**Table 17**  
**Selected Sales Figures for Texas Border Cities**  
**1991, 1992 & 1993**  
**(in Millions of Dollars)**

<u>1991</u>	<u>Brownsville</u>	<u>McAllen</u>	<u>Laredo</u>	<u>Eagle Pass</u>	<u>Del Rio</u>	<u>El Paso</u>
All Sectors	1,999.6	2,688.9	2,704.7	286.7	285.6	8,869.6
Retail	900.3	1,555.4	1,719.5	230.2	210.3	3,773.3
Merchandise	174.3	338.6	303.9	50.9	42.7	612.9
Food Stores	209.8	233.5	268.9	66.7	64.4	159.0
Clothing	86.8	194.5	216.9	21.8	10.3	355.5
Home Furn. & Appliances	70.0	212.5	325.1	11.2	6.9	317.1
<u>1992</u>	<u>Brownsville</u>	<u>McAllen</u>	<u>Laredo</u>	<u>Eagle Pass</u>	<u>Del Rio</u>	<u>El Paso</u>
All Sectors	2,012.7	3,015.8	3,017.9	316.5	307.6	10,483.5
Retail	960.1	1,742.3	1,920.5	259.0	227.5	4,203.5
Merchandise	185.6	404.8	399.2	57.5	48.0	637.4
Food Stores	231.8	255.2	310.6	78.3	71.3	863.2
Clothing	98.4	209.2	275.8	24.4	11.2	396.4
Home Furn. & Appliances	76.7	218.5	257.5	11.0	7.5	375.7
<u>1993</u>	<u>Brownsville</u>	<u>McAllen</u>	<u>Laredo</u>	<u>Eagle Pass</u>	<u>Del Rio</u>	<u>El Paso</u>
All Sectors	1,790.8	3,401.4	3,109.7	344.7	327.5	1,1075.9
Retail	1,013.1	1,822.9	1,949.2	277.6	249.0	4,392.5
Merchandise	192.0	410.0	417.7	61.7	50.6	709.3
Food Stores	240.6	260.4	321.0	80.4	77.6	900.9
Clothing	96.5	233.2	231.5	28.5	12.3	418.3
Home Furn. & Appliances	78.9	191.9	256.0	10.9	8.1	372.2

Source: Texas Comptroller of Public Accounts

**Table 18**

**Selected Sales Figures for Texas Border Cities  
Percent Change: 1991, 1992 & 1993**

<u>1991-92</u>	<u>Brownsville</u>	<u>McAllen</u>	<u>Laredo</u>	<u>Eagle Pass</u>	<u>Del Rio</u>	<u>El Paso</u>
All Sectors	6.6	13.1	11.6	10.4	7.7	18.2
Retail	7.0	12.0	12.0	13.0	8.0	11.0
Merchandise	7.0	20.0	31.0	13.0	12.0	4.0
Food Stores	10.0	9.0	16.0	17.0	11.0	14.0
Clothing	13.0	7.0	9.0	12.0	9.0	12.0
Home Furn. & Appliances	10.0	3.0	-21.0	-2.0	9.0	18.0
<u>1992-93</u>	<u>Brownsville</u>	<u>McAllen</u>	<u>Laredo</u>	<u>Eagle Pass</u>	<u>Del Rio</u>	<u>El Paso</u>
All Sectors	-11.0	11.5	3.0	8.9	6.5	5.7
Retail	6.0	5.0	1.0	7.0	9.0	4.0
Merchandise	3.0	-1.0	5.0	7.0	5.0	11.0
Food Stores	4.0	2.0	3.0	3.0	9.0	4.0
Clothing	-2.0	12.0	-2.0	17.0	10.0	6.0
Home Furn. & Appliances	3.0	-12.0	-1.0	-1.0	8.0	-1.0

Source: Texas Comptroller of Public Accounts

The general consensus is that NAFTA, in the long term, will benefit certain economic sectors in the U.S. over others. The sectors likely to gain the most from NAFTA, based upon competitive advantage, are those producing high value goods (equipment, machinery, intermediate producer goods), that depend upon the latest technology and a relatively highly educated and skilled workforce.

A recent study<sup>14</sup> by the University of Texas at Austin found the Texas sectors with the most to gain from liberalized trade with Mexico include electric and electronic equipment, communication equipment, and motor vehicle equipment and parts. Presently, the Greater Dallas-Fort Worth Metroplex, and Houston and Harris Counties possess the manufacturing base, experience, and skilled workforce to benefit the most from NAFTA.

While Texas border communities are strategically located closer to Mexico's principal markets and industrial centers than are other areas of Texas, they lack the manufacturing base necessary to take advantage of NAFTA. The door to is not completely closed, however. Available technology makes it possible for small and medium size manufacturers to compete against the larger, better established corporations. The principal hurdle facing border manufacturers, however, is the lack of a skilled workforce, and to a lesser extent, access adequate financing and modern infrastructure.

A recent study of maquiladoras<sup>15</sup> operating in Matamoros, Reynosa/Rio Bravo, and Nuevo Laredo, Mexico on the Texas-Mexico border concluded that the plants represent a significant market opportunity for manufacturers in adjacent Texas border communities. The maquiladoras purchase component parts and materials in excess of \$1 billion annually from non-border sources. The maquiladora plant managers said they would prefer to purchase from local border sources, but at the present time are not because dependable sources do not exist. The study determined that south Texas firms, in general, do not have the facilities, equipment, skilled workers, nor experience to meet the stringent volume and product quality requirements that the maquiladoras require of their suppliers.

The single largest obstacle identified by the study to the future development of a maquiladora suppliers industry in south Texas is the shortage of skilled manpower including mechanical, electrical and chemical engineers, skilled tool and die makers, and experienced personnel in plastic injection molding, metal stamping, plating, castings, screw machining, and

general machining.

To take full advantage of NAFTA and the modernization activities taking place in Mexico, Texas border communities need to focus their development and investment strategies beyond merely reinforcing the area's traditional economic activities of trade, commerce, and services. Attention needs to be given to developing a manufacturing base that will broaden and strengthen the region's economic linkages with Texas and Mexico, at the same time raising wages and incomes, and expanding the tax base.

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