

*The Employment Dynamics of Regional Economies
on the U.S.-Mexico Border*

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Executive Summary

When two economies increase their interaction, international trade theory asserts that there will be changes in the composition of production in each economy as each specializes in what it does relatively best. Nevertheless, one of the key findings of recent studies of the North American Free Trade Agreement (NAFTA) is that for the U.S. economy as a whole, the changes brought on by NAFTA are small. This may change over time as the Mexican economy grows, and it does not discount the political importance of the agreement, which has created institutions for reaching cooperative solutions to common problems. In contrast to these small national effects, **the regional literature on international economic integration along the border has generally shown significant local economic impacts in the border region, both before and after NAFTA.**

Population and income on the border

The difference between the small national effects and the large border-region effects of U.S.-Mexico economic integration is largely the result of two factors: population and

income. First, the populations of Mexican border cities tend to be as large as or larger than their U.S. metropolitan-area counterparts (Table 1).

Table 1

U.S. Metropolitan Area	Population, 1995	Mexican <i>municipio</i>	Population, 1995
Brownsville-Harlingen-San Benito, TX	304,285	Matamoros	363,486
El Paso, TX	671,855	Ciudad Juarez	1,011,787
Imperial County, CA	141,082	Mexicali	696,033
Laredo, TX	170,394	Nuevo Laredo	275,060
McAllen-Edinburg-Mission, TX	476,697	Reynosa	337,052
San Diego County, CA	2,641,006	Tijuana	991,593
Santa Cruz County (Nogales), AZ	36,372	Nogales	133,489
Bureau of Economic Analysis, <i>Regional Economic Information System</i> INEGI, <i>SIMBAD</i>			

Large population concentrations across the border significantly affect the retail, service and other sectors of U.S. border cities. In particular, before Mexico began to open its economy in the mid-1980s, the selection and quality of goods and services were usually better on the U.S. side. In effect, U.S. border cities served as market centers for populations that were much larger than the U.S. data suggested, since these markets often included a significant proportion of the population of Mexican twin cities.

Two facets of income are important. First, in absolute size, Mexico's Gross Domestic Product (GDP) is only about 5 percent as big as U.S. GDP. This makes it unlikely that that there could be large national effects in the United States. A second income-related factor is that differences between U.S. and Mexican per-capita incomes are not as great along the border as they are in the national averages.

Table 2 shows the ratios of U.S. border-city income to income in the contiguous Mexican border state (Mexican border cities probably have higher average income levels than their states; this biases the estimated ratios upward but, unfortunately, there are no city-specific estimates available for Mexico.) At the national level, the ratio is about 59 percent ($8.77 \div 5.53$) greater than the population-weighted ratio for the border region.

Table 2

	Ratio of income per capita, 1996
U.S./Mexico	8.77
Brownsville/Tamaulipas	4.09
El Paso/ Chihuahua	3.79
Imperial County/Baja California	3.86
Laredo/Tamaulipas	4.08
McAllen/Tamaulipas	3.82
San Diego/Baja California	6.39
Average	4.33
Population-weighted average:	5.53
Bureau of Economic Analysis, <i>Regional Economic Information System</i>	
Census Bureau, <i>People Estimates</i>	
INEGI, Banco de Información Economía, Estructura de Poblacion	

Relatively smaller differences in U.S.-Mexico incomes along the border mean that there is less contrast to cross-border productivity. In other words, there is greater similarity in the productivity of the working populations of these regions when compared across the border, than between the populations of Mexico and the United States as a whole. This implies that that U.S. and Mexican workers are closer substitutes in the border region than they are at the national levels. This is likely to influence wage levels and the type of investment that is attracted to the border region, although this has not been closely studied.

Employment growth on the border

Given the problem of poverty along the U.S. side of the border, it would seem reasonable to conclude that one of the key indicators of community well-being, employment growth, must have fallen below the national trend in recent decades. In fact, just the opposite is true. **Employment growth in the U.S metropolitan areas on the border has usually outstripped the national average, often by a wide margin.** Table 3 shows average annual rates of employment growth from 1980 to June 1998 in the population centers comprising about 75 percent of the U.S. border population. In terms of total employment, four of the six regions (Brownsville, Imperial County, Laredo, and McAllen) grew at a

rate that was twice the U.S. rate. Even the region of slowest employment growth (San Diego) exceeded the U.S. rate by 25 percent.

Table 3

Employment growth, 1980-1998	Annual average growth
Brownsville	3.90%
El Paso	2.60%
Imperial County	3.60%
Laredo	4.90%
McAllen	3.80%
San Diego	2.50%
United States	2.00%

Source: Authors' Calculations, Bureau of Labor Statistics

Within the overall pattern of faster job growth on the border, there is a significant amount of variation across regions, across economic sectors, and across time. In other words, **the U.S. border regions are not homogeneous economies, and we should be careful when speaking about the "border economy."** Given this caveat, it seems appropriate to note that three sectors stand out as major growth poles in all six border regions. These are the retail sector, the transportation and public utilities sector, and the government (federal, state, and local) sector.

One of the most important impacts of international integration is the change in the composition of production. International trade theory teaches that as economies interact more, the tendency is for each trading partner to specialize in the production of complementary goods and services rather than to substitute goods and services. In other words, **we should expect to see the twin cities along the border differentiate their economies.** A good starting point to look for the changes brought on by U.S.-Mexico integration is in the economic structures of the urban areas along the border. One way to do this is to examine the location quotients of the border cities.

Location quotients are measures of the economic importance of different economic sectors, using the U.S. national economy as the standard of comparison. For a particular sector and region -- retail trade in San Diego, for example -- it is calculated as the percent of total San Diego employment in retail divided by the percent of total national employment in retail. A number greater than one means that the sector is more important in the region than in the nation, while less than one implies the opposite. Table 4 provides location quotients by sector for selected U.S. border cities.

Table 4

Table 4								
Location quotients for selected sectors								
	<i>Non-durable manufacturing.</i>		<i>Retail Trade</i>		<i>Transportation and Public Utilities.</i>		<i>Government</i>	
		<i>Change,</i>		<i>Change,</i>		<i>Change,</i>		<i>Change,</i>
	<i>1997</i>	<i>1993-1997</i>	<i>1997</i>	<i>1993-1997</i>	<i>1997</i>	<i>1993-1997</i>	<i>1997</i>	<i>1993-1997</i>
<i>Brownsville</i>	1.21	-0.16	1.12	-0.14	0.86	0.02	1.45	0.10
<i>El Paso</i>	1.85	-0.18	1.02	-0.05	1.05	0.08	1.37	0.10
<i>Imperial County</i>	0.49	0.02	1.19	-0.14	1.14	0.25	2.50	0.45
<i>Laredo</i>	0.23	0.00	1.22	-0.21	3.20	0.20	1.47	0.18
<i>McAllen</i>	1.21	-0.05	1.27	-0.12	0.66	0.04	1.67	0.05
<i>San Diego</i>	0.51	0.03	1.04	-0.05	0.75	0.03	1.15	0.04

Source: Authors' Calculations, Bureau of Labor Statistics

Two of the most interesting changes since the implementation of NAFTA are found in the transportation and public utilities (TPU) sector, and in the retail sector. The TPU sector has seen significant employment growth since the implementation of NAFTA, as well as increases in its relative importance in every one of the border urban areas. Presumably this has been brought on by the increased flow of goods overland between the United States and Mexico. In San Diego, as in the rest of the sample, the TPU sector increased in relative importance but still remains far below its average level nationally. This may partly reflect San Diego's unique location at the corner of the U.S.-Mexico border and on the Pacific side, outside the flow of commerce between the U.S. and Mexican industrial heartlands. It also reflects San Diego's relative lack of investment in trade-related infrastructure, as described in detail in Erie (1999).

A second shared attribute of the U.S.-side border cities is a larger-than-average retail sector. This is consistent with the idea that the retail sectors in U.S. border cities have grown in response to cross-border retailing activities. In every one of these cities, however, the retail sector has declined in relative importance after the passage of NAFTA. This is consistent with the idea that the increased openness of the Mexican economy has increased the quality and selection of goods and services in Mexican border cities, thereby reducing the population based served by U.S. retailers. One has only to think about the Wal-Marts and Costcos that have penetrated the Mexican market to understand this phenomenon.

Manufacturing is less important in U.S. border cities than in the nation as a whole. Furthermore, since the introduction of NAFTA, nondurable goods manufacturing (e.g., textiles, apparel, and food processing) has decreased in relative importance in each of the three cities where it is relatively larger than the U.S. average. **The relative absence of manufacturing in most U.S. border cities implies that international integration in the border region is not a result of increased manufacturing production sharing,** but is instead reflective of the likelihood that the U.S. cities function as suppliers of finished consumption goods and services.

This executive summary was prepared by Dr. Jim Gerber, professor of economics at San Diego State University and Economics Research Fellow at San Diego Dialogue. For more information on the research findings discussed in this summary, or to request copies of the cited research papers, please contact San Diego Dialogue by telephone at (858) 534-8638, by fax at (858) 822-1701 or by e-mail at sddialogue@ucsd.edu.