

# Arizona-Sonora Region

ECONOMIC INDICATORS AND REGIONAL INITIATIVES

2009



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# Arizona-Sonora Region

## Economic Indicators and Regional Initiatives 2009

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# **Arizona-Sonora Region: Economic Indicators & Regional Initiatives 2009**

## **Executive Summary**

### ***Arizona-Sonora Region***

Since it was formally announced in 1993, the binational region has come a long way. Under the auspices of Arizona-Mexico Commission (AMC) and its sister organization, Comisión Sonora-Arizona (CSA), a strategic economic development vision was initiated as one of the first formal cross-border partnerships between two border states in the U.S.-Mexico border region. The specific goal has been to increase the Region's competitive position within NAFTA and global economy by building on complementary resources, increased cooperation and focused regional approach.

While this formal partnership toward creating a single economic region started with an emphasis on economic integration and enhancement of quality of life, the Region was soon faced with new challenges: 9/11 terrorist attack and its impact on cross-border flow of goods and people; economic recession of 2000-2001 and its impact on cross-border production sharing (the maquiladora sector); increased competition from China and other low-cost global regions; implementation of new border crossing regimes in response to increasing concerns with border security; and growing concerns with border violence. The impacts of the current recession have not yet been fully understood.

### ***About Indicators***

Since 2000, when the first edition was published, the Arizona-Sonora indicators track the Region's progress in the following areas: (1) the foundations of the Region's competitiveness, including selected industry clusters, components of knowledge-based economy, and the maquiladora sector; (2) the Region's competitiveness in NAFTA and global markets; and (3) the role of the Region's border ports of entry in facilitating NAFTA trade. Updates between editions depend upon availability of comparable data in Arizona and Sonora, as well for other border states in the United States and Mexico, and thus the indicator selection may vary from one year to another.



## ***Since Last Report***

The most recent economic indicators are again a mixed bag of higher and lower growth rates. Here are some highlights:

The Region's manufacturing sector has remained strong although some geographical shifts have occurred: from 2004 to 2006, the manufacturing share of GSP continued to decline in Arizona to 8.1% , while increasing its share of Sonora's GSP to 19.1%.

Employment in high-technology sector – an indicator of the strength of driving forces of new economy – increased in Arizona between 2005 and 2006. The latest increase outpaced other U.S. border states. (Comparable data for 2006 were unavailable for Sonora by this report's deadline).

Among high-tech industries, the following expanded their employment levels between 2005 and 2006: software and computer services; aerospace industry; precision instruments, and pharmaceutical manufacturing. The last three outpaced average growth rates in U.S. border states.

Semiconductor and other electronic component manufacturing continued on a downturn path or recovered only slightly. (Comparable data for 2006 were unavailable for Sonora by this report's deadline).

Maquiladora sector in Sonora – the backbone of manufacturing activity south of the border – continued to expand between 2005 and 2006, although the pre-recession peak (in 2000) has not been reached. Sonora's maquiladora recovery followed a general trend of the overall recovery in Mexico's border states, but at a slower pace. Sonora's share of Mexico's border states' maquiladora employment is around 8.7 %.

Foreign Direct Investment (FDI), a critical factor for regional economic development, increased substantially in Sonora in 2007 in comparison with previous years, driving Sonora's share of Mexico's border states FDI to its highest level of 9.3%. Most of it was invested in Sonora's mining sector.

Region's share of commodity flow – the value of commodities exported to Mexico and imported from Mexico to U.S. through Arizona-Sonora border ports of entry (BPOE) – is one of the best indicators of the Region's role in facilitating NAFTA trade. Although in the last few years the Region was catching up with other U.S.-Mexico BPOE, between 2006 and 2007, it slowed again. The Region's share of all trade through U.S.-Mexico BPOE declined to 7.5% in 2007 from 8.0% in 2006.

The Region's BPOE, and in particular port of Nogales, are the main gateway for winter fresh produce from Mexico to markets in U.S. and Canada. While the value of produce shipped through the Region's BPOE has increased between 2006 and 2007, the Region's share of all U.S.-Mexico BPOE has decreased to 36.8% in 2007 from 38.8% in 2006. Some of that decline reflects changing mix of agricultural products and/or changing market values; it also reflects increasing competition from other BPOE.

## ***New in this Report: Assessment of Initiatives***

In 2006, the Region's focus has shifted somewhat in response to new challenges mentioned at the beginning. Four new initiatives were launched to improve situation in the following areas: (1) border security, (2) expanding trade, (3) promotion of regional economic development, and (4) enhancing quality of life of Region's residents.

In response to Arizona-Mexico Commission's Strategic Planning Committee's (SPC) request, a new set of measures has been developed to gauge the impact of these four new initiatives. While for most initiatives it will take time before the actual impacts will become measurable, this report provides a summary of actions and establishes a framework for a future systematic tracking.

Between 2006 and 2008, more than 50 action items were introduced: 18 during 2006-07, and another 33 during 2007-08.

### **Summary of Major Achievements**

- **Border Security Initiative**

- First Responder Training (300 Fire & HazMat responders trained)
- AZBIP (Arizona Border Infrastructure Program at [www.azbip.com](http://www.azbip.com)) updated
- Comprehensive Emergency Response Plan established
- Binational Human Trafficking Council established
- A compact approved by the U.S. and Mexican federal governments allowing state and local mutual aid response during emergencies
- Public-Private Partnership for funding the San Luis II BPOE established
- DHS Center of Excellence for Border Security & Immigration initiated
- Repair of Nogales Wash accomplished

- **Expanding Trade Initiative**

- WHTI deadline extended from January 2008 to June 2009
- Secured \$42 million for San Luis II POE design and construction
- Secured \$13.8 million for redesign of Mariposa POE
- FAST lanes opened in Nogales
- Hours extended during winter harvest at Andrade POE
- Workshop conducted with high-level leaders from U.S. and Mexico on water management in border region
- Secured \$160,000 for commercial time waits study at Mariposa POE
- Established partnership with the Greater Nogales Santa Cruz Port Authority (GNSCCPA) regarding the improvement of Mariposa POE
- Established first of its kind public-private partnership for improvements at the Lukeville POE
- Proposal for national infrastructure funding accepted at Border Governors Conference

- **Promoting Economic Development**

- Organization of the 3rd economic forum
- Release of 2006 Regional Indicators Report

- Production of the National Geographic GeoTourism MapGuide for the Arizona-Sonora desert region
  - Establishment of the Arizona-Sonora Manufacturing Initiative
  - Establishment of the Regional Economic Indicators Program to include assessment of initiatives
- **Enhancing Quality of Life Initiative**
    - 511 Travel and Transportation System put in place
    - AzGATES website was updated
    - 200 educators, parents, professionals, community advocates and individuals with disabilities participated in a training program in Nogales, Sonora
    - Two cross-border games were organized
    - Organization of "Environmental Common Ground" conference
    - Arizona-Sonora Bowl II took place in Hermosillo, Sonora
    - Spring exhibition game took place in Hermosillo; a portion of the profits from the game was donated to the building of youth baseball fields

### ***Relationship between Initiatives and Indicators***

The Indicators are unique in the sense that they measure changes in Region's position relative to the entire U.S. Mexico border region. They are mostly based on state-level statistical data, such as exports, volume of shipments through border ports of entry, and employment in selected industries.

The Initiatives, on the other side, consist of specific actions that are undertaken by governmental and private organizations (mostly in form of private-public partnerships) with the overarching goal to contribute to the improvement in Region's position. It is clear, however, that (a) the impact (i.e., outcome) of initiatives usually takes a long time before it can be assessed; (b) that even when the impact of such initiatives is measurable, it will most likely not be visible in state-level or regional statistics (i.e., Indicators). Therefore, because of different nature, these two – Indicators and Initiatives – need to be measured by means of two different approaches.

Indicators continue to gauge changes in the Arizona-Sonora Region primarily in comparison with other border states with a purpose to monitor which areas are lagging behind "average" trends, and thus need to be brought to the attention of policy and decision makers in the region.

For Initiatives, a new set of metrics needs to be developed further to assess actions undertaken at state and regional levels toward improving the Region's position. The results presented in this report are just the first step in that direction.

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# *Introduction*

# Introduction

*The Arizona-Mexico Commission and its sister organization, Comisión Sonora-Arizona, were established in 1972 to promote trade, commerce and cultural exchange between the two states. Two Plenary sessions are held each year, one in each state. The members represent government, private sector and educational institutions, as well as citizens at large.*

## Arizona-Sonora Region



## Arizona-Sonora Region

Increasing economic integration requires a borderless approach to achieve vibrant and sustainable economic growth that benefits residents on both sides of the border. The Arizona-Sonora Region is best defined as a model of transborder regional economy created with the purpose of better responding to the challenges of increasing hemispheric and global competition. It is also a real place with a long tradition of economic and cultural ties.

The idea of Arizona and Sonora as a “single economic region” was formally advanced at the 1993 plenary session of the Arizona-Mexico Commission and Comisión Sonora-Arizona in Phoenix, Arizona. The goal was to enhance economic development and regional growth through formal collaboration and more efficient utilization of complementary resources within the NAFTA framework. The specific goals were to increase the Region’s competitive position within the hemisphere and globally, and to promote the development of the CANAMEX trade corridor with Arizona and Sonora as a hub.

These goals were shaped by the prevailing philosophy of economic development within the NAFTA framework: enhanced regional competitiveness brings higher returns to existing businesses and attracts new investment, which results in an improvement of the region’s prosperity. Improving the standard of living and quality of life of residents in both states has been the overarching goal.

Under the auspices of the Arizona-Mexico Commission and Comisión Sonora-Arizona, a strategic economic visioning project was carried out in partnership with universities in Arizona and Sonora. The resulting binational reports identified the status, opportunities and challenges involved in building a more prosperous and competitive region across the international border. The Regional Economic Indicators Project was initiated as a tool for monitoring progress toward these goals.

## Purpose of regional indicators

The main purpose of the Regional Economic Indicators Project is to provide information to decision and policy-makers about economic trends in the Arizona-Sonora Region and to draw attention to those areas where the Region lags behind “average” or “expected” performance.

Originally four major areas of interest were identified: (1) competitiveness in NAFTA and global markets; (2) growth of leading economic sectors; (3) crossborder interactions, and (4) dimensions of quality of life. Since the Project’s original inception in 1993, the Region’s economy has evolved, and new economic opportunities have appeared. As a result, the scope of the Project has broadened. For example, in 2006 report, additional indicators were included to reflect the development of the “New Economy,” focusing on selected areas of high technology activity. Specifically, selected indicators were developed to assess how the Region compares with respect to technological innovation and education, particularly in the areas of science and technology.

## Methodology

The methodology is noteworthy in that it yielded an original set of indicators designed to measure the two neighboring states as an economically integrated region. This methodology sets the indicators apart from those available for other border regions, where the indicators remain divided by the international boundary.

The indicators were designed primarily to measure changes in the relative position of the Arizona-Sonora Region in comparison to the entire U.S.-Mexico border region rather than absolute changes in Arizona and Sonora. For example, while dollar figures may indicate an increase in exports from the Arizona-Sonora Region, monitoring the changes in relative shares of exports from the entire U.S.-Mexico border region indicates whether the Region follows, exceeds, or lags behind the average trend. This allows for an assessment of the Region’s competitiveness with respect to the U.S.-Mexico border region as a whole.

Originally, 72 variables were identified based on the economic development literature, inputs from government and private sector representatives, and specific goals of the binational strategic

economic development visioning process for the Arizona-Sonora Region. Differences in U.S. and Mexican data availability and comparability reduced the number of indicators to about 30.<sup>1</sup> Depending on the availability of comparable updates, the number and type of indicators may change between reports.

This report contains indicators for which new information was available compared to 2006 edition.

## Previous reports

Starting in 2000, six annual reports have been published presenting Regional Economic Indicators for the Arizona-Sonora Region.<sup>2</sup> These reports presented information for each individual indicator in graphic form with a brief interpretation of changes between observed time periods. While information about each indicator will be updated in its original format and available electronically, not all the graphs are printed in this report.



## What is new in this report

Arizona-Mexico Commission's Strategic Planning Committee (SPC) in collaboration with the Comisión Sonora-Arizona requested an additional set of measures to gauge the impact of initiatives that were introduced during 2006-07 and 2007-08 with a purpose to improve situation in the Arizona-Sonora region in four areas: border security, trade, economic development and quality of life.

## Relationship between (new) Initiatives and existing Indicators

As noted, the existing Indicators are unique in the sense that they measure changes in Region's position relative to the entire U.S. Mexico border region. They are mostly based on state-level statistical data, such as exports, volume of shipments through border ports of entry (BPOE), employment, and educational attainment.

The Initiatives, on the other side, consist of specific actions that are undertaken by governmental and private organizations (mostly in form of private-public partnerships) with the overarching goal to contribute to the improvement of the Region's position. It is clear, however, that (1) the impact (i.e., outcome) of initiatives usually takes a long time before it can be assessed; (2) that even when the impact of such initiatives is measurable, it will most likely not be visible in state-level or regional statistics (i.e., Indicators). Therefore, because of different nature, these two – Indicators and Initiatives – need to be measured by means of two different approaches.

Indicators will continue to gauge changes in the Arizona-Sonora Region primarily in comparison with other border states with a purpose to monitor which areas are lagging behind “average” trends, and thus need to be brought to the attention of policy and decision makers in the region.

For Initiatives, a new set of metrics needs to be developed to assess actions undertaken at state and regional levels toward improving the Region's position. For example, a successful cooperation in obtaining federal funding for improvement of a border port of entry will not show any substantial improvement in

facilitation of trade for years because of the longevity of the construction project. And yet, the effort deserves attention as a purposeful action toward improvement of the Region's ability to facilitate international trade.

## Organization of the report

This report is organized in two sections; the first presents regional indicators for the Arizona-Sonora region comparable to our previous reports; the second section presents a new model for the assessment of new initiatives.

The Regional Indicators section analyzes data for selected sectors of the Region's economy and addresses questions such as:

- Has the Region's competitiveness in NAFTA and global markets improved?
- Have the Region's BPOE enhanced their role as facilitators of trade?
- Have the Region's BPOE become more specialized in terms of crossborder commodity flows?
- Has the Region retained its leading role as a gateway for Mexican agricultural products?
- Has the maquiladora sector in Sonora increased its share of Mexican border states' employment?
- What are the most promising industry clusters that could more efficiently utilize complementary resources on both sides of the border?

The Initiatives section describes the four initiatives and provides summaries of actions by type, partnerships and outcomes as applicable. It is followed by the assessment of specific actions.

The final concluding remarks summarize findings from regional indicators and regional initiatives and briefly discuss the implications of the findings.



# ***Regional Economic Indicators***

*The Region's share of U.S.-Mexico border states' population increased steadily mainly due to the rapid population growth in Arizona. However, Sonora's share of Mexican border states is larger than Arizona's share of U.S. border states.*

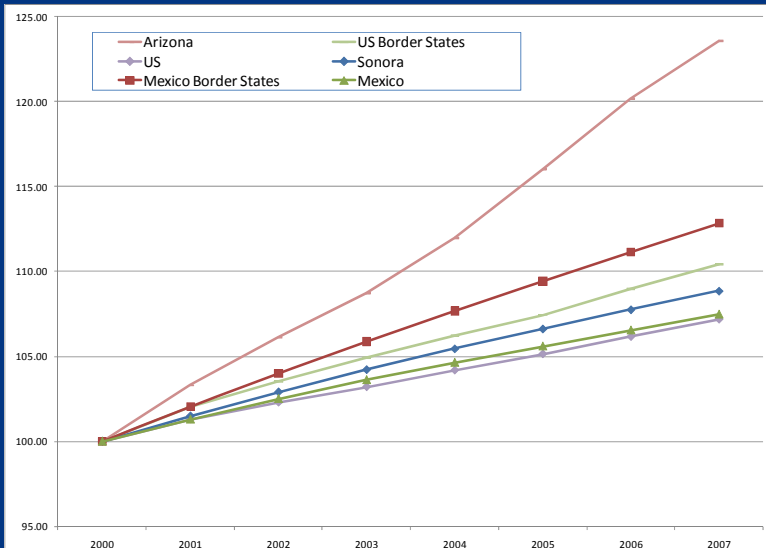
**The Arizona-Sonora Region: Population**

	1990	2000	2005	2007	Change 1990- 2000 (%)	Change 2000- 2005 (%)	Change 2005- 2007 (%)
Arizona	3,665,228	5,130,632	5,952,083	6,338,755	40.0	16.0	6.5
Sonora	1,885,578	2,263,126	2,413,074	2,463,707	20.0	6.6	2.1
Region's Share of Border-State (U.S.-MEX)	8.5	9.4	9.8	10.1	+ 11.5	+ 4.4	+ 2.1
Region's Share of Two Nations (U.S.-MEXICO)	1.7	1.9	2.1	2.2	+ 16.7	+ 7.5	+ 3.3
Arizona's Share of U.S. Border* (%)	7.1	8.3	8.9	9.2	+ 1.2	+ 0.6	+ 0.3
Sonora's Share of Mexico's Border** (%)	13.8	13.5	13.2	13.1	- 0.3	- 0.3	- 0.1
Arizona's Share of U.S. Total (%)	1.5	1.8	2.0	2.1	+ 0.3	+ 0.2	+ 0.1
Sonora's Share of Mexico Total (%)	2.2	2.3	2.3	2.3	+ 0.1	-	-

\* U.S. Border States: Arizona, California, New Mexico and Texas

\*\* Mexico Border States: Baja California, Chihuahua, Coahuila, Nuevo Leon, Sonora and Tamaulipas

**Population Growth Index (Pop. In 2000 = 100)**



Source: U.S. Census., INEGI

## Region at a Glance

### POPULATION

As a single region, Arizona and Sonora had an estimated population of 8.8 million in 2007. Arizona's population was 6.3 million in 2007, a 6.5% growth since 2005, making Arizona the second fastest growing U.S. state only next to Utah for the same period. This rapid growth pattern pushed Arizona up from the 16<sup>th</sup> largest state in 2005 to 15<sup>th</sup> in 2007 in terms of population size. Arizona was not only a destination for retiree migration, but also attracted relatively younger Hispanic origin population group. The share of Hispanic origin population in 1990 was 18.6%, rose to 28.0% in 2005 and reached close to 30% in 2007.

For the time period of 2005-2007, Sonora's population grew by 2.1% from 2.4 million to 2.5 million. This was only one-third of growth rate compared to Arizona. Even with the faster growth rate compared to Mexican national population growth rate of 1.8%, Sonora had the slowest growth among the six border states in Mexico. Also, the share of Sonora's population among the six border states was 13.1% in 2007, a slight decrease from 13.2% in 2005.

For 7-year period between 2000 and 2007, both Arizona and Sonora had faster population growth in comparison to their respective national averages. Arizona's population had grown more than twice as fast as U.S. border states' population, 23.6% compared to 10.4%. Sonora had shown much slower population growth for the same period than the average for Mexican border states: Sonora's population grew 8.9% and Mexican border states' 12.9%.

Young adult group aged 15 to 39 in Arizona was 35.1% of total population in 2005, while the matching share in Sonora was 40.8%. From a regional economic perspective, the most relevant consequence of age structure is the relationship between the economically active group and dependent population, and the flow of entrants into the labor force. Sonora's relatively younger age structure in the Region's population in general, its labor force in particular, is more juvenescent. Young adult group is more mobile seeking educational and professional opportunities and this higher mobility can fulfill the regional demand for labor force.

## ECONOMY

In 2006, the combined GSP of the Arizona-Sonora region was \$258 billion, an 87.6 % increase over 10-year period since 1997. Between 2004 and 2006, the Region's GSP grew 22.8% and the annualized growth rate of 11.4% was higher than annualized growth of 8.8% over 10-year period.

A comparison with the entire U.S.-Mexico border region indicates that the GSP of the Region grew at a higher rate than the average for all U.S.-Mexico border states, which increased 75.7% from 1997 to 2006.

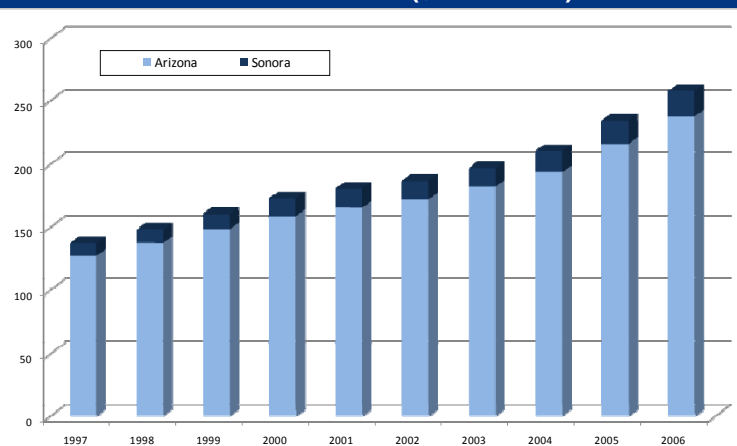
Arizona had shown the fastest GSP growth among the U.S. border states for 10-year period (1997-2006): 86.4% compared to border states' average of 74.0% and U.S. average of 59.3%. Texas had the second fastest GSP growth, 78.2%. This pattern holds for the growth rate for the 2-year period between 2004 and 2006. Arizona led the GSP growth among the U.S. border states with 22.7%, which is faster than that of U.S. border states' average and the U.S. average as well.

Sonora's GSP growth of 103.6% was faster than Arizona's growth during 1997-2006 period. However, Sonora's growth pattern lagged behind the Mexican border states' average. Only Coahuila had lower growth rate. For more recent years, between 2004 and 2006, Sonora had the fastest growth rate (24.0%) among the six Mexican border states, which was slightly higher than Arizona's growth of 22.7%.

GSP share of manufacturing sector had continuously decreased in Arizona from 13.1% in 1990 down to 8.1% in 2006, while its share in Sonora almost doubled from 10.4% in 1990 to 19.1% in 2006. Sonora's dependency on agriculture, mining and construction sectors dropped dramatically in the same period. Arizona's construction sector increased its share from 5.2% in 1990 to 7.4% in 2006, equivalent to 42% of growth. Services sector in Arizona had grown steadily, from 77.9% share in 1990 to 82.4% in 2006.

*Gross State Product (GSP) growth pattern in the Arizona-Sonora Region led U.S.-Mexico border states, especially in more recent period from 2004 to 2006 with growing role of Sonora. However, dominance of Arizona's share of the Region's GSP still persists.*

Gross State Product (\$ in billions)



Source: U.S.DOC, INEGI

GSP Growth Rate (%)

	Change 1997-2006 (%)	Change 2004-2006 (%)
<b>Arizona-Sonora</b>	<b>87.6</b>	<b>22.8</b>
<b>Arizona</b>	86.4	22.7
<b>Sonora</b>	103.6	24.0
<b>U.S. Border States</b>	74.0	16.5
<b>Mexican Border States</b>	112.7	18.4
<b>U.S.</b>	59.3	13.0
<b>Mexico</b>	98.1	16.6

Source: U.S.DOC, INEGI

The Arizona-Sonora Region: GSP by Sector (%)

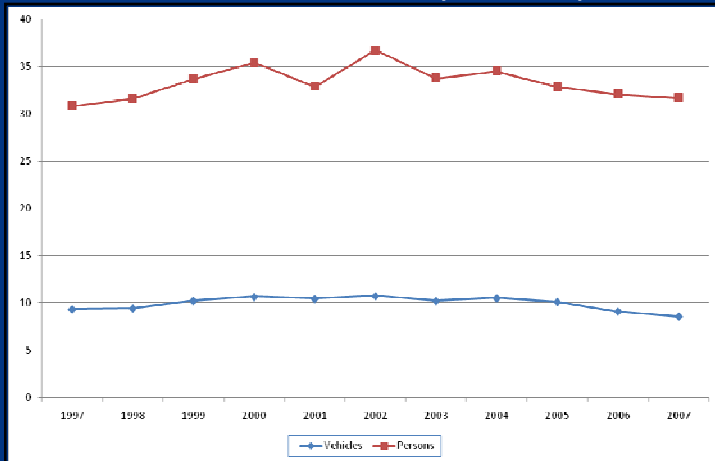
	Arizona			Sonora		
	1990	2004	2006	1990	2004	2006
<b>Agriculture</b>	2.1	1.1	0.7	15.3	6.6	6.2
<b>Mining</b>	1.6	0.9	1.7	8.3	2.5	4.2
<b>Construction</b>	5.2	6.5	7.4	9.6	4.0	3.7
<b>Manufacturing</b>	13.1	9.0	8.1	10.4	16.4	19.1
<b>Services*</b>	77.9	82.4	82.1	56.4	70.5	66.8
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0

Source: U.S.DOC, INEGI

\* Services include the government sector.

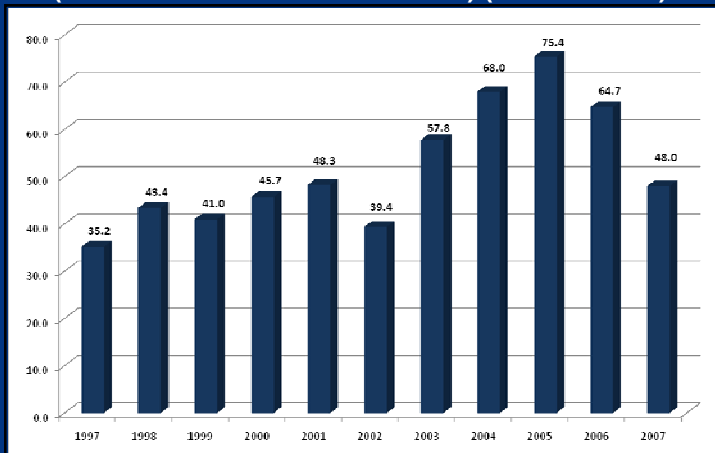
*Even with the smaller number of vehicles crossing the border, the total number of people crossings increased between 1997 and 2007. This is mainly due to the increasing number of pedestrians as well as ridership by bus and by train.*

**Number of People and Vehicles Crossing the Border from Sonora to Arizona (in millions)**



Source: U.S. DOT, BTS

**Air Passenger Traffic between Arizona and Sonora (Phoenix/Tucson and Hermosillo) (in thousands)**



Source: U.S. DOT, BTS

## CROSSBORDER INTERACTIONS

Crossing the border for shopping, business, health services or visiting friends and relatives, has a long tradition in the Arizona-Sonora border communities.<sup>3</sup> There are six BPOE along the Arizona-Sonora sector of the international boundary. The busiest is Nogales/Nogales, followed by San Luis/San Luis Río Colorado and Douglas/Agua Prieta.

The number of vehicles and people crossing the border is a measure of the economic interdependency between Arizona and Sonora. In 2007, 8.6 million vehicles (including both commercial and non-commercial vehicles) and 31.7 million people crossed the border from Sonora to Arizona.<sup>4</sup> While number of people crossing border increased slightly by 2.8% from 1997, number of vehicle crossing decreased by 8.2% from 1997. For the same period from 1997 to 2007, number of buses crossing border almost tripled from 4,572 in 1997 to 16,913 in 2007. Also, number of trucks crossing increased from 332,691 in 1997 to 370,106 in 2007 (11.2% increase).

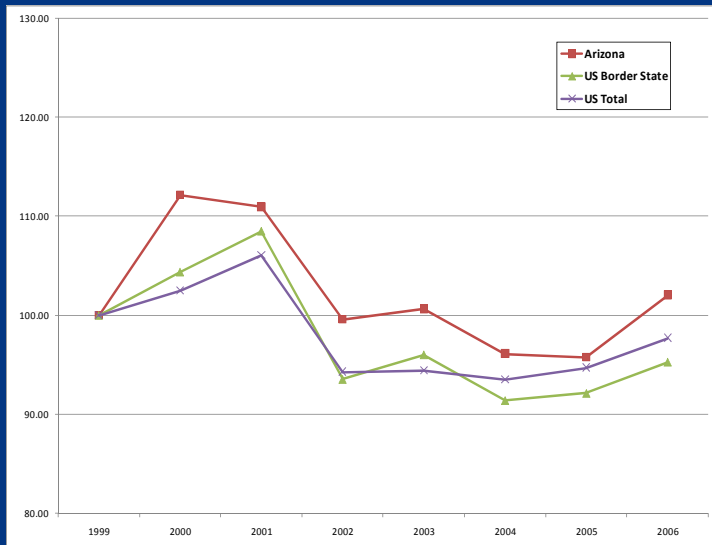
However, number of passenger cars crossing border had dropped significantly by 9.0% from 1997 to 2007. Compared to the peak in 2002, number of passenger cars crossing decreased 21.3% in 2007. As a consequence, total number of vehicle crossing had decreased. Interestingly, even with the big drop in personal vehicle passengers, total number of people crossing had increased slightly. This is mainly due to the increased number of pedestrian crossings; an increase of 55.0% from 1997 to 2007. Between 1997 and 2007, bus passengers had increased by 276,000, at 823.2% growth, whereas train passengers (mainly tour train) were up from 900 when the service started in 1999 to 2,352 in 2007, a 161.3% growth for 8-year period.

The number of persons traveling by air between Arizona and Sonora is small in comparison to the number of people crossing through BPOE. Air passenger traffic between Hermosillo, the capital of Sonora, and Phoenix-Tucson in Arizona, increased 36.4% between 1997 and 2007. After the peak of 75,400 in 2005, the air passenger traffic between Arizona and Sonora had dropped dramatically to 48,000 in 2007. Two factors, in particular, explain this change. First, the increasing role of private or chartered planes compared to commercial flights. Data used for this study cover only the air passengers of commercial flights excluding the air passengers of private or chartered planes. Second, general contraction of air transportation industry partly explains the decreasing number of passengers. This pattern aggravated more recently with the economic depression.

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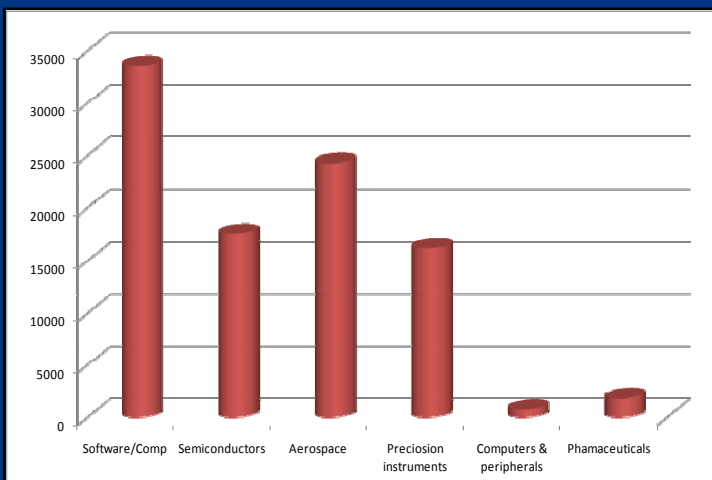
*Since the peak level in 2000, high-tech industries in Arizona had been losing employment until 2005. The loss was relatively less severe compared to the U.S. border states' average and U.S. national average. Also, between 2005 and 2006, Arizona had the fastest recovery rate among all the U.S. border states.*

**Employment Trends: Total High Tech Industries (1999=100)**



Source: U.S. BLS

**Employment in High Tech Industries in Arizona 2006**



Source: U.S. BLS

## Foundation of Regional Economy

### REGIONAL INDUSTRY CLUSTERS

The original concept of transborder cluster development in the Arizona-Sonora Region was proposed in the Strategic Economic Development Vision in the early 1990s. A series of studies conducted in the 1990s showed that the most advanced transborder cluster was agribusiness based on traditional familiar ties, close relationships between growers, distributors and brokers, and a number of business associations, such as the Fresh Produce Association of Americas, located in Nogales, Arizona.<sup>5</sup> In other sectors, such as the hospitality industry, manufacturing and health services, businesses have developed intensive transborder linkages, but formal transborder cluster organizations have not yet been created.

More recently, there has been an increased emphasis on the potential development of complementary sectors that use new technologies and a higher-skilled workforce.<sup>6</sup> This section examines selected industries that are associated with "high-technology" activities.<sup>7</sup> These include, in order of employment size: software and computer services; manufacture of semiconductors and electronic components, aerospace products, precision instruments (including medical and optical), and computer and computer equipment; and pharmaceutical products.

Unfortunately, the matching data on Mexican high-technology employment was not available at state-level for the comparison period (1999-2006).<sup>\*</sup> Employment trend analysis is made for Arizona, U.S. border states and U.S. nation as a whole.

Consequently, the strength and weakness of the Region's high-tech clusters have not been fully captured.

<sup>\*</sup> The latest data available for Sonora were for 2003, presented in 2006 edition.

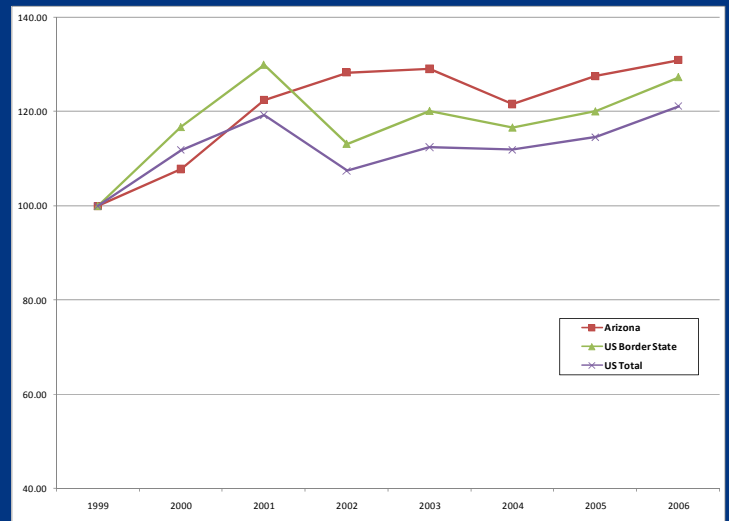
## Software and computer services

Labeled as one of the most “dynamic and promising drivers of the Arizona economy,”<sup>8</sup> software and computer services include a wide variety of activities, such as data processing, computer systems design, on-line information services, software publishing, as well as the manufacture of magnetic and optical media.

In 2006, employment in Arizona’s software and computer services industry was 33,550, a 2.7% increase from the employment level in 2005 and 7.7% increase from 2004.

Arizona’s employment in the software and computing services sector increased 30.9% from 1999, a rate higher than the U.S. border states’ average growth of 27.7% and U.S. national growth of 21.1%.

Employment Trends: Software/Computer Services  
(1999=100)



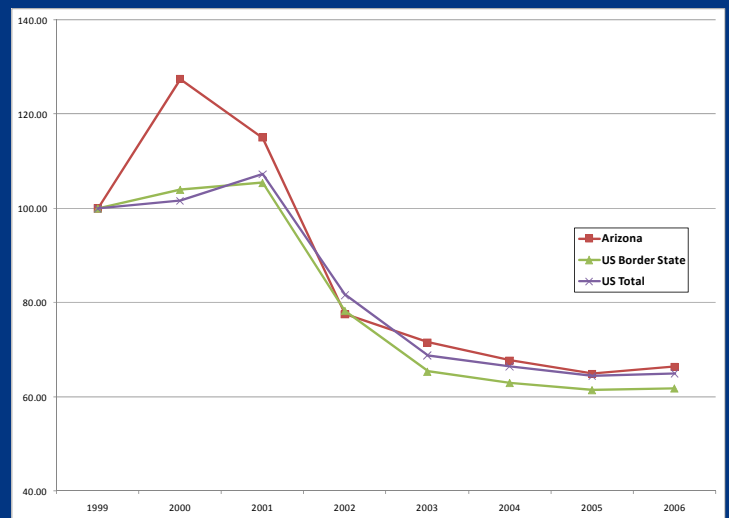
Source: U.S. BLS

## Semi-conductors and other electronic component manufacturing

Arizona’s employment in the semi-conductor and electronic component manufacturing industry had experienced substantial decline between 2000 and 2005. In 2006, the employment had rebounded from 17,129 in 2005 to 17,527. However, this represented a 33.6% decrease from 1999, a fall that mirrored this sector’s widespread decline across the United States. Employment in all U.S. border states had dropped significantly since 1999.

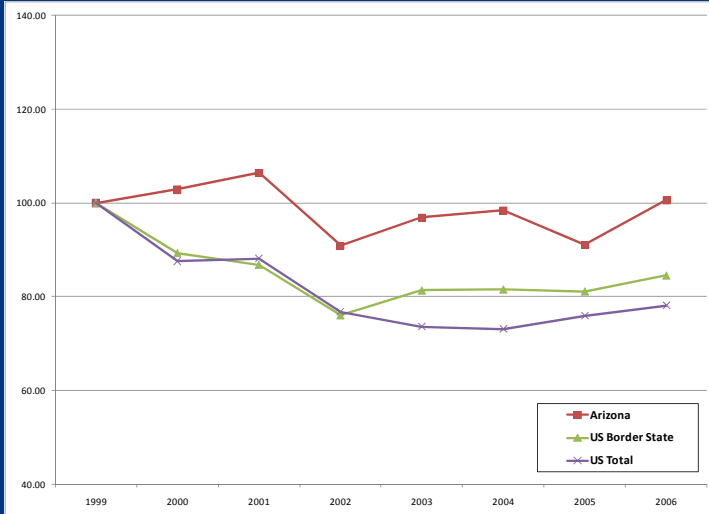
Arizona’s relative share of the U.S. border states’ semi-conductor and electronic component manufacturing industry decreased from 14.3% in 2000 to 12.5% in 2006.

Employment Trends: Semiconductor Manufacturing  
(1999=100)



Source: U.S. BLS

### Employment Trends: Aerospace Manufacturing (1999=100)



Source: U.S. BLS

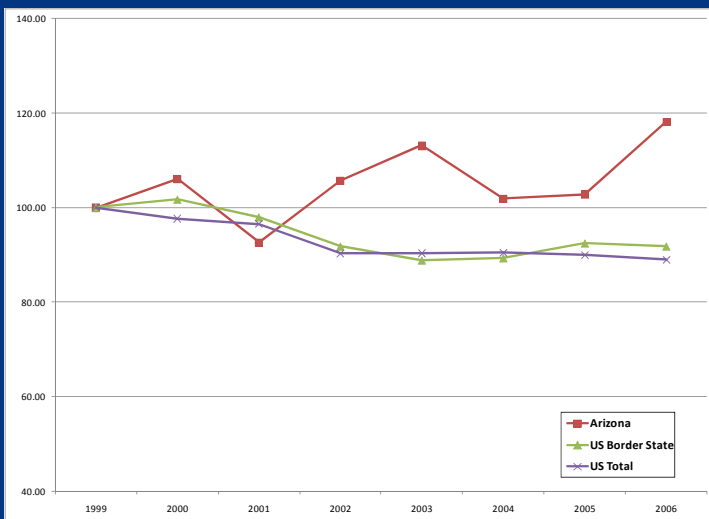
### Aerospace industry

Arizona's 24,248 aerospace employees accounted for 16.8% of the U.S. border states' aerospace employment in 2006 and increased its share of total U.S. employment in this sector from 14.1% in 1999.

Arizona's aerospace industry experienced a 9.0% decline between 1999 and 2002, compared to a fall of 23.9% for all U.S. border states and 23.2% for U.S. national employment.

Given the strength of Arizona's aerospace industry and the proximity to Sonora's skilled labor, this sector seems to be promising as a newly growing regional cluster.<sup>9</sup>

### Employment Trends: Precision Instrument Manufacturing (1999=100)



Source: U.S. BLS

### Precision instruments manufacturing

Precision instruments manufacturing encompasses a wide range of products, including navigational, medical and optical. In 2006, 16,167 people were employed in this sector in Arizona, an increase of 18.1% from 1999.

As a result of positive growth, the Arizona's share of U.S. border states' employment in precision instruments manufacturing rose from 6.6% in 1999 to 8.5% in 2006.

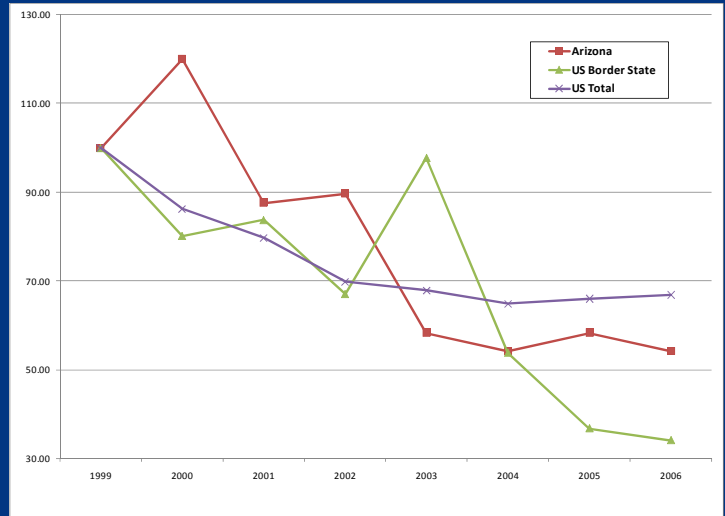


## Computers and peripheral office manufacturing

In Arizona, employment in this sector declined 45.8% between 1999 and 2006, from 1,286 to 697 employees. This was a faster loss than the U.S. national average of 33.2% but slower than the U.S. border states' average of 65.9%. Among the U.S. border states, California and New Mexico had worse situation compared to Arizona, while Texas experienced decline similar to Arizona's. As a result, the Arizona's share of total U.S. border computer manufacturing rose from 1.6% to 2.6%.

Texas was the only U.S. border state to experience growth until 2003, more than doubling its employment and overtaking the lead position from California. However, the employment level in Texas for 2006 dropped to 54.6% of the employment level in 1999.

## Employment Trends: Computers and Peripheral Office Manufacturing (1999=100)



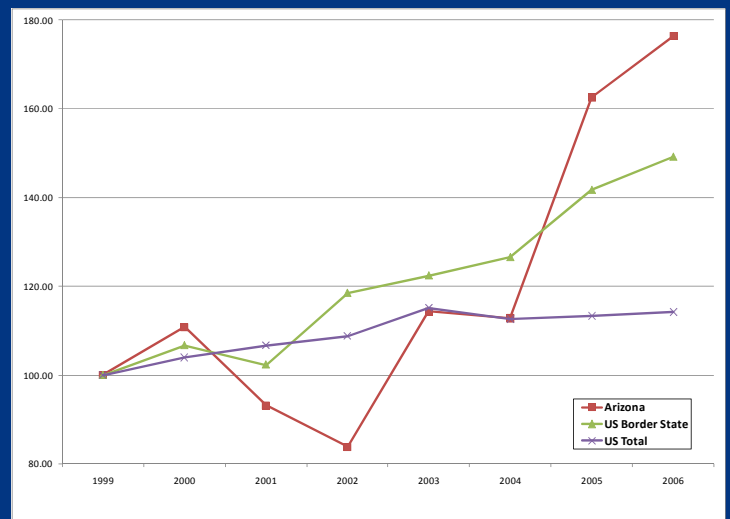
Source: U.S. BLS

## Pharmaceutical manufacturing

In 2006, Arizona's employment in pharmaceutical manufacturing sector was 1,750, a 76.4% increase in employment since 1999. This was more than five times faster than the sector's nationwide growth and also faster than the U.S. border states' average growth of 49.2%.

Since 2004, the surge of Arizona's employment in pharmaceutical manufacturing was noticeable.

## Employment Trends: Pharmaceutical Manufacturing (1999=100)



Source: U.S. BLS

*Foreign Direct Investment (FDI) in Sonora hit the record high in 2007. Consequently, Sonora's share of Mexican border states' FDI increased to 9.3% and 2.4% of Mexico's FDI.*

## FOREIGN DIRECT INVESTMENT

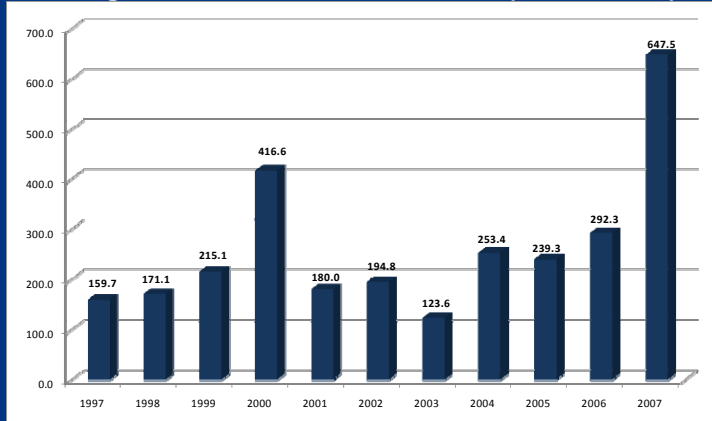
Foreign direct investment (FDI) tends to fluctuate from year to year for a variety of reasons.<sup>10</sup> After the peak of \$416.6 million in 2000, FDI in Sonora had slowed down and hit the lowest level in 2003.

In 2007, Sonora received \$647.5 million, \$230.9 million higher than the previous peak in 2000. This was mainly due to the influx of FDI in mining sector of Sonora.

Sonora's share of border states and national FDI also marked the record high in 2007, 9.3% and 2.4%, respectively. National share shows stabilized and steadily increasing pattern since the lowest level in 2001, 0.6%. Sonora's share of border states' total FDI was at the lowest in 2005 when other border states experienced a big surge in the inflow of FDI, especially Nuevo León and Chihuahua.

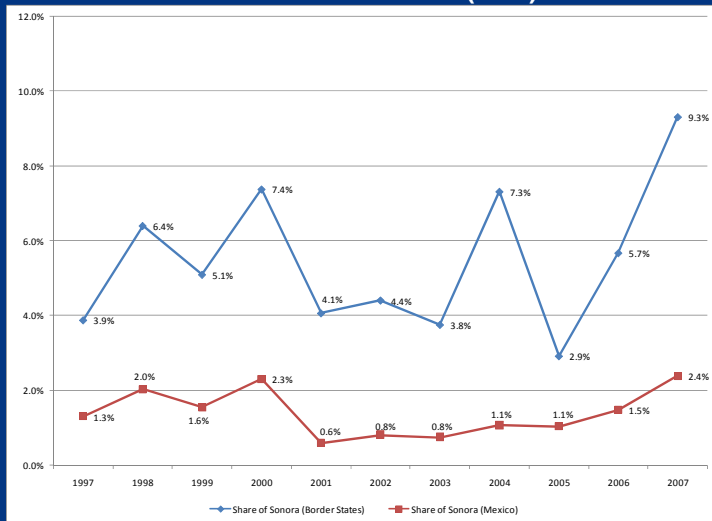
For the ten-year period from 1997 to 2006, Sonora had attracted second lowest amount of FDI next to Coahuila. In 2007, Coahuila and Tamaulipas had lower level of FDI than Sonora.

**Foreign Direct Investment in Sonora (\$ in millions)**



Source: INEGI, BIE

**Sonora's Share of FDI (in %)**



Source: INEGI, BIE

## MAQUILADORA SECTOR

One of the acknowledged “drivers” of the Arizona-Sonora regional economy is the maquiladora sector. In 2006, Sonora was home to 210 maquiladora plants with 86,793 employees, representing 7.5% of the total number of maquiladora plants and 7.2 % of maquiladora employment in Mexico.<sup>11</sup>

A large number of Sonora’s maquiladora plants are directly owned by companies located in Arizona, such as Motorola. The Sonora maquiladora plants are important customers for goods and services supplied by Arizona businesses.<sup>12</sup>

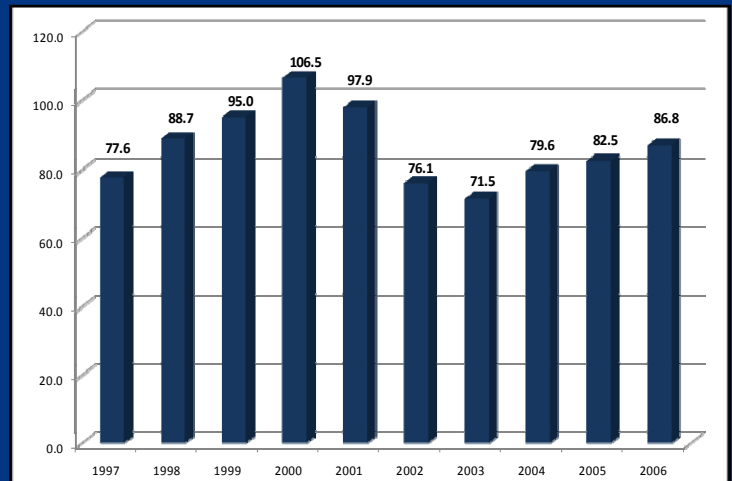
For Mexico as a whole, employment in the maquiladora industry peaked in 2000 with 1.3 million employees, 42.9% growth compared to maquiladora employment in 1997. Between 2001 and 2003, employment fell, reaching a low of 1.1 million, but recovered to 1.2 million in 2006, which is 33.0% higher than employment level in 1997. This pattern also occurred in Sonora. Employment peaked in 2000 with 106,457 employees, fell to 71,547 in 2003 and expanded to 86,793 in 2006.

There are two main reasons for the change in maquiladora employment in early 2000s. First, since maquiladora production is closely tied to the U.S. economy, the downturn in production was affected directly by the U.S. recession of the early 2000s. Second, competition from China and other low-wage regions caused a relocation of some high volume production from Mexico.<sup>13</sup>

The post-recession recovery in Sonora employment exceeded the positive trend across the Mexican border states. Between 2003 and 2006, employment in Sonora increased 21.3%, while employment in the Mexican border maquiladora increased 14.2%; Mexico’s total maquiladora employment increased 13.2%. However, Sonora’s relative share of Mexico-border employment dropped from 10.1 % to 8.7 % between 1997 and 2006. More recently, Sonora’s share among Mexican border states increased from 8.2% in 2003 to 8.7% in 2006.

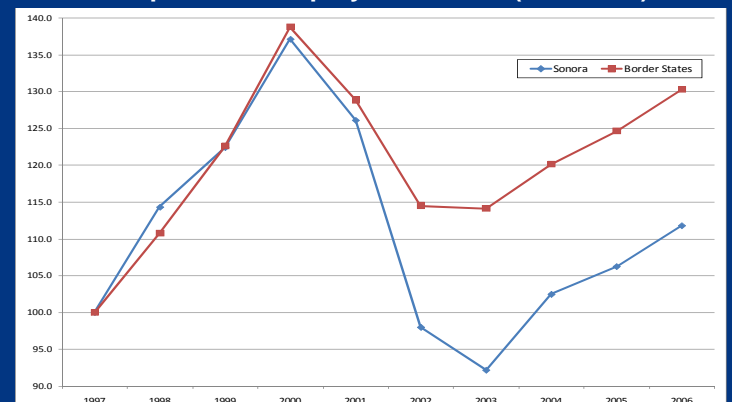
*Maquiladora employment in Sonora dropped significantly to the lowest level in 2003. More recently between 2003 and 2006, employment had been recovering at faster pace compared to Mexican border states’ average.*

**Maquiladora Employment: Sonora (in thousands)**



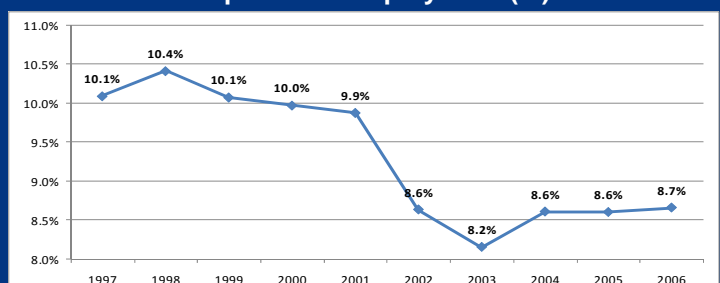
Source: INEGI, BIE

**Maquiladora Employment Index (1997=100)**



Source: INEGI, BIE

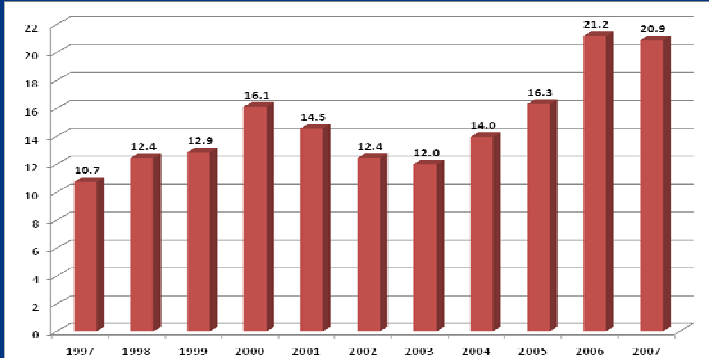
**Sonora’s Share of Mexican Border States’ Maquiladora Employment (%)**



Source: INEGI, BIE

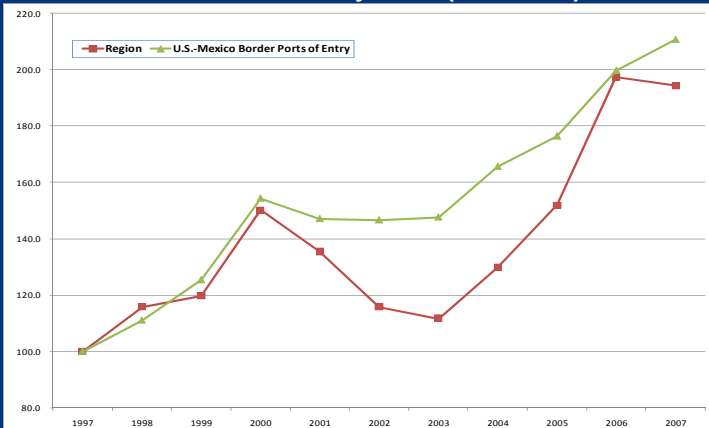
*Region's cross-border commodity flow had increased since hitting the bottom in 2003. Between 2003 and 2006, the regional growth of commodity flow was faster compared to the average growth of all U.S.-Mexico BPOE. However, the region had net loss of commodity flow in 2007, while other U.S.-Mexico BPOE had increasing value of commodity flows.*

**Cross-Border Commodity Flow through Region's Border Ports of Entry (\$in billions)**



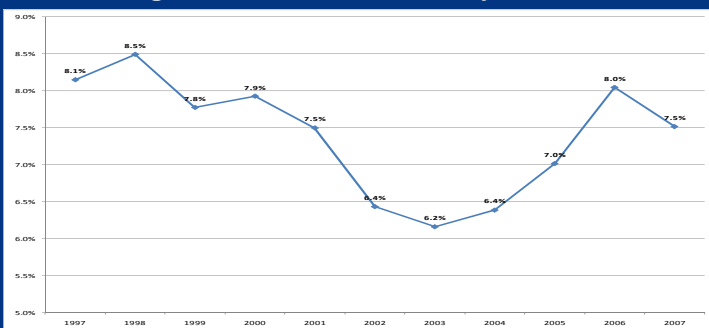
Source: U.S. DOT, BTS

**Trends in Commodity Flow (1997=100)**



Source: U.S. DOT, BTS

**Region's Share of Commodity Flow**



Source: U.S. DOT, BTS

## ***Role of Border Ports of Entry (BPOE) in Facilitating NAFTA Trade***

### **CROSBORDER COMMODITY FLOW**

The merchandise flow through Arizona-Sonora BPOE reinforces the importance of the Region as a gateway for goods passing between Canada, the United States and Mexico, and its role within the CANAMEX trade corridor. In assessing the Region's competitiveness vis-à-vis other border states, it is important to recognize that many factors determine which port of entry might be used, such as origin and destination of the product, relative costs of transportation, and port efficiency. In this section, two indicators are assessed -- the number of commercial trucks passing through the Region's BPOE and the dollar value of commodities shipped.

In 2007, close to \$21 billion worth of goods moved through the Region's BPOE (imports and exports).<sup>14</sup> This was a slight decrease of 1.5% from 2006 when the value of commodity flow through region's BPOE reached its peak of \$21.2 billion. The value of commodity flow in 2006 was an increase of 29.9 % from 2005 and was the highest dollar value of goods since 1997.

While the Arizona-Sonora BPOE experienced a slight drop in the total value of goods crossing through in 2007, other border ports continued the stable growth. As a consequence, the gap in commodity flow index had expanded in 2007. The value of commodity flow through the Arizona-Sonora BPOE had increased by 94.4% since 1997, while the growth rate for U.S.-Mexico BPOE was 110.8% for the same period.

The region's share of total commodity flow through U.S.-Mexico BPOE was at its lowest level of 6.2% in 2003, slowly recovered up to 8.0% in 2006 and dropped to 7.5% in 2007. This picture of a relative decline in the share of the total flow of commodities across the U.S.-Mexico border becomes more complex when individual key commodities are examined: agricultural products, electric and electronic equipment, and machinery and equipment supplies.

Another indicator of BPOE's role is commercial truck crossing.

## Agricultural Products

Agricultural products are an important sector of Mexican exports. The Region's ports of entry are a major gateway for these goods, most of which originate in Sinaloa and Sonora and are destined for the United States and Canada.

In 2007, the share of Region's BPOE in total value of agricultural products shipped to U.S. from Mexico (northbound) was 36.8%, a slight decrease from 38.8% in 2006.

The share of total value of agricultural products to Mexico from U.S. (southbound) was 18.2% in 2007.

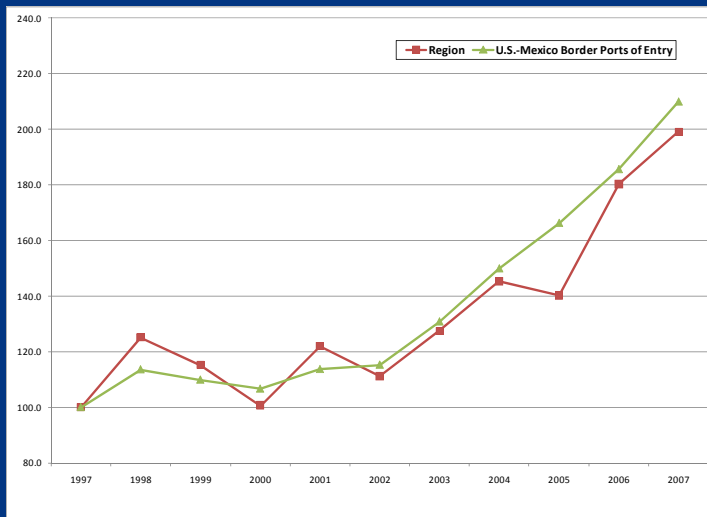
In 2007, \$1.9 billion worth of agricultural products moved through Arizona-Sonora ports of entry, representing the highest dollar amount since 1997.\*

Compared to the total shipments of agricultural product through U.S.-Mexico border region as a whole, the Region's shipments of agricultural products had fluctuated more over time since 1997. Between 2005 and 2006, shipments of agricultural products through the Region's BPOE grew 17.0% faster than for the U.S.-Mexico border region as a whole. However, between 2006 and 2007, the Region's agricultural product shipments grew at a slower rate: 10.4% compared to a 13.1 % increase for all U.S.-Mexico BPOE.

Majority of the agricultural products through region's BPOEs has been export of fresh produce from Mexico to U.S. Therefore, northbound agricultural product shipments account for 93.6% of total agricultural shipments through Region's BPOE in 2007. The share of northbound flow was 97.9% in 1997 and continuously but slowly decreased to 93.6% in 2007.

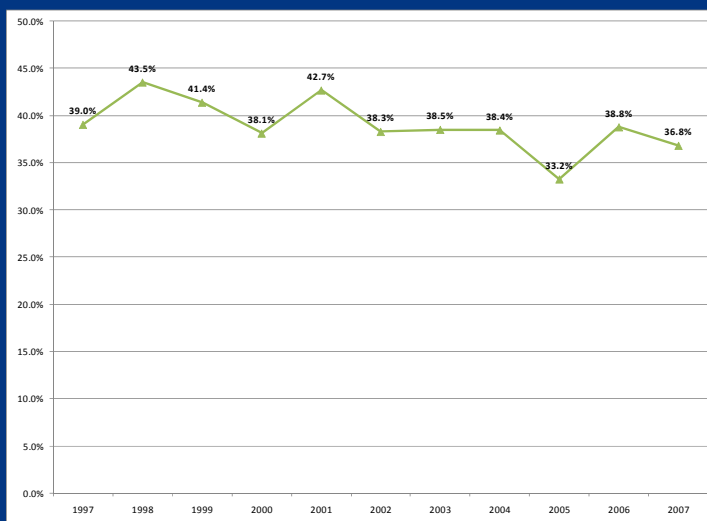
\* Based on the revised data for 2005.

## Trends in Agricultural Product Shipments (Northbound) (1997=100)



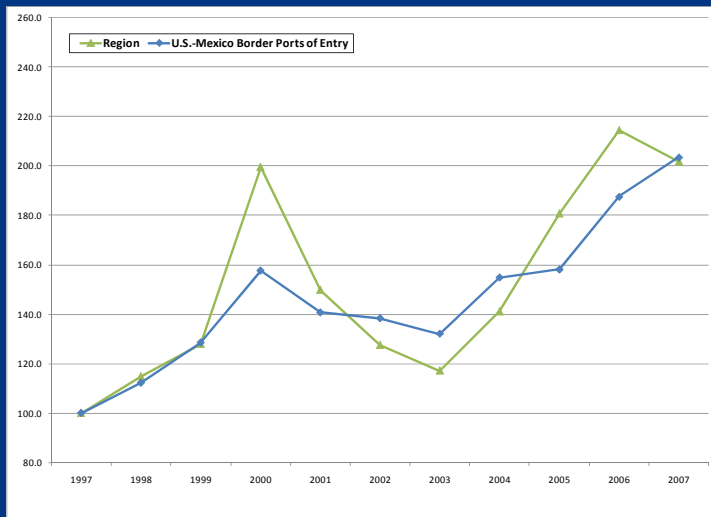
Source: U.S. DOT, BTS

## Region's Share of Border States' Agricultural Shipments (Northbound)



Source: U.S. DOT, BTS

### Trends in Electric/Electronics Shipments (1997=100)



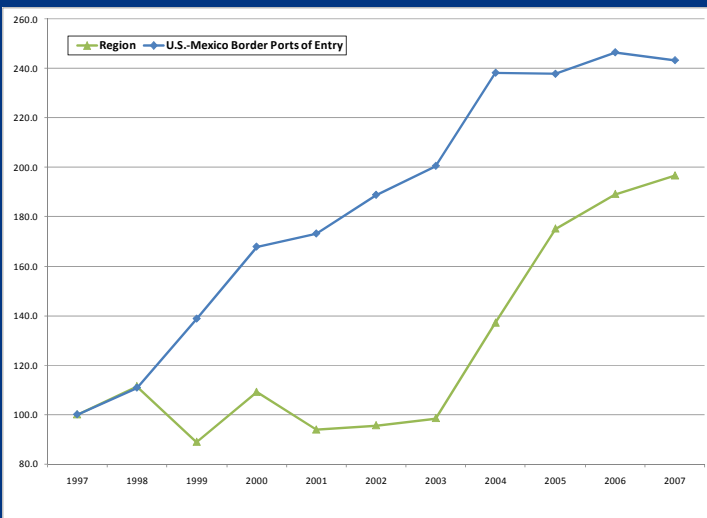
Source: U.S. DOT, BTS

### Electric and Electronics Equipment

Another key commodity is electric and electronic equipment. In 2007, \$2.9 billion worth of such equipment was shipped through the Region's ports of entry, a 5.9% decrease from \$3.0 billion in 2006.

Shipments through the Region's ports of entry grew 101.7 percent, compared to 103.5 percent for the border as a whole since 1997. However, from 2003 to 2006, relative to other border regions, the Region experienced greater growth in shipments than the U.S.-Mexico border region as a whole. But, this trend had reversed in 2007 when the Region experienced 5.9% of decrease while the U.S.-Mexico border region as a whole had strong growth at 8.5%.

### Trends in Machinery and Equipments Shipments (1997=100)



Source: U.S. DOT, BTS

### Machinery and Equipment Supplies

In 2007, \$1.5 billion of machinery and equipment supplies moved through the Region's ports of entry, resulting in the highest value since 1997.

Despite an improvement in the Region's share of machinery and equipment shipments, the relative growth of shipments was slower than for other BPOE. Shipments of machinery and equipment rose 143.4% for all U.S. BPOE from 1997, while shipments increased only 96.7% in the Region.

However, the gap in growth pattern had narrowed between 2003 and 2007, since the shipments of machinery and equipment through region grew much faster than shipments through all U.S. BPOE. The average annual growth over the period from 2003 to 2007 was 19.7% for the Region and 5.2% for all U.S. BPOE.

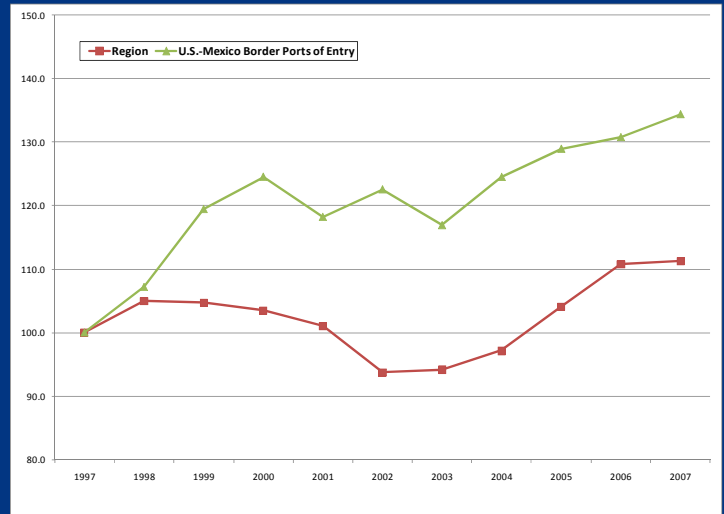
## Commercial Truck Crossing

Commercial trucks carried 84.5% of the dollar value of all commodities shipped through U.S.-Mexico BPOE in 2007. In the Region, comparable share was 87.2%. This higher share reflects the role of trucks in shipments of fresh produce from Mexico through the Region's BPOE.

In 2007, 370,100 trucks crossed through the Region's ports of entry, a 0.4% increase from 2006. In 2006, the annual growth was 6.4% from 346,400 in 2005 to 368,500 in 2006.

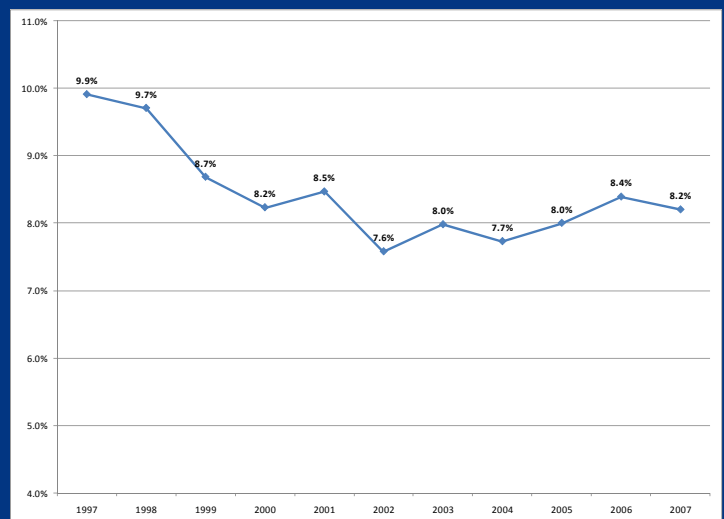
Between 1997 and 2007, the relative share of commercial trucks crossing through the Region's ports of entry fell from 9.9% to 8.2%. This decline in relation to other BPOE was a result of the Region's lower rate of growth. Between 1997 and 2007, the number of trucks crossing through all U.S.-Mexico BPOE rose 34.4% compared to 11.2% for the Region.

### Trends in Truck Crossing Through Region's Border Ports of Entry (1997=100)



Source: U.S. DOT, BTS

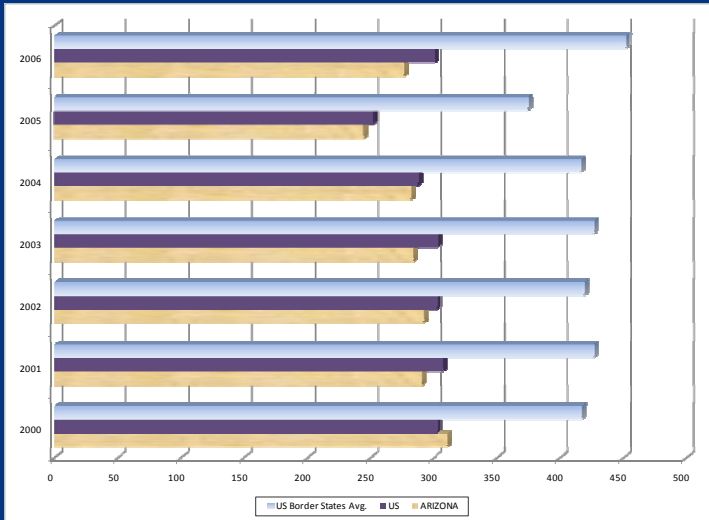
### Region's Share of Truck Crossing through U.S.-Mexico Border Ports of Entry



Source: U.S. DOT, BTS

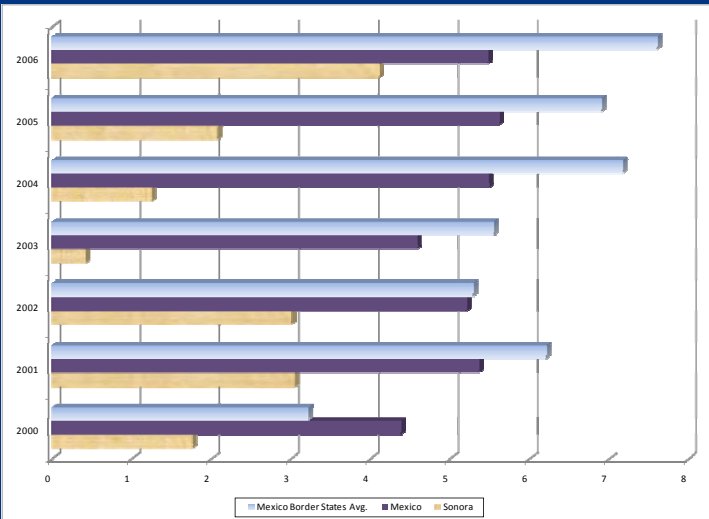
*Region's movement towards "knowledge-based" economy is a key to strengthen the foundations of the regional economy. Selected indicators show steady growth over innovative R&D activities, high-skilled workforce and communications networks.*

**Annual Number of Patents Issued per One Million Residents in U.S. Border States (2000-2006)**



Source: U.S. PTO

**Annual Number of Patents Issued per One Million Residents in Mexico's Border States (2000-2006)**



Source: CONACYT

## ***Strengthening the Foundation of Regional Economy***

### **KNOWLEDGE-BASED ECONOMY**

A variety of indicators have been used to assess the extent to which a regional economy is moving towards one that is "knowledge-based."<sup>15</sup> In this section, selected measures are described that reflect (1) innovative research and development (R&D) activities reflected in patents, (2) development of a highly skilled workforce through education and training, and (3) building communication networks as a means of disseminating information in the U.S.-Mexico border region.<sup>16</sup>

In selecting these indicators, the challenge was to find comparable data for both Arizona and Sonora. Due to the incompatibility of available data, the choice was made to examine each State separately, and assess their position relative to their respective border neighbors.

### **Patents**

In 2006, the annual number of patents issued per one million residents in Arizona was 277. This was higher than for New Mexico and Texas, but below the level for California with 614 and U.S. national average of 301. Relative to other border states, Arizona's share of total patents issued remained constant during this period (between 5.6% and 6.2%). In this respect, the number of patents in Arizona grew at a similar average rate for all border states.

Data sources for individual Mexican states count the number of patent applications rather than the number of patents issued. In 2006, the annual number of patent applications per one million residents in Sonora was four, the highest level since 2000. By comparison, the annual number of patent applications was 19 for Nuevo León and 7 for Chihuahua and Coahuila. Baja California had only one application and Tamaulipas had two.



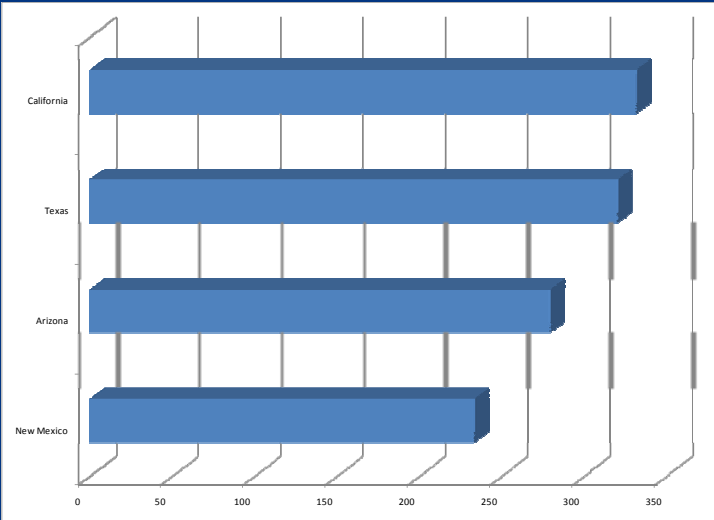
High-Skilled Workforce

An essential factor in a knowledge-based economy is the acquisition and retention of a highly skilled work force, particularly in the areas of science and engineering. The following indicators assess the Arizona's position relative to other U.S. border states.

In 2007, the percentage of Arizona's population, aged 25 years and older, with graduate degrees was 9.2 percent. This compared to 10.5 percent in California, 10.2 percent in New Mexico and 8.1 percent in Texas. In 2005, the number of doctorates in science and engineering awarded per 100,000 Arizona residents, aged 25 years and older was 8, below the national average of 9. With respect to other U.S. border states, Arizona lagged behind California (10) and New Mexico (9), but exceeded Texas (7). The relative share of science and engineering doctorates awarded from Arizona institutions was 7.8% of the total doctorates awarded in U.S. border states.

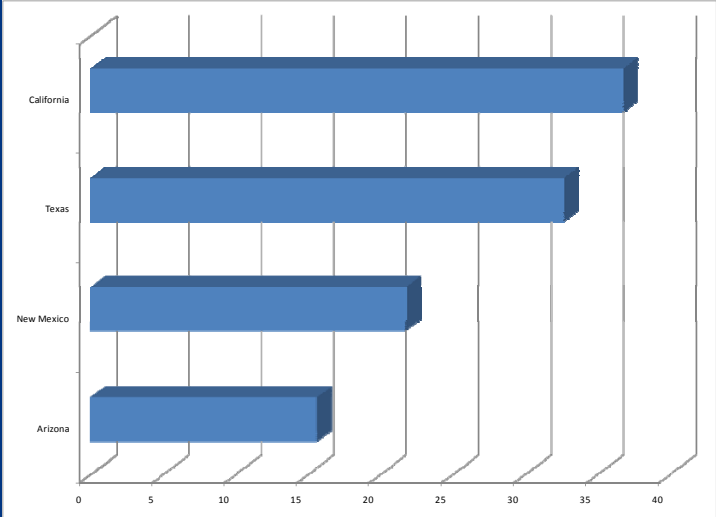
Examining the number of computer specialists and engineers working in the state, shows that Arizona is in third place among U.S. border states in 2007. The number of life and physical scientists in Arizona per 10,000 civilian workers was also lower than other border states with the exception of New Mexico.

Number of Engineers  
per 10,000 Civilian Labor Force (2007)



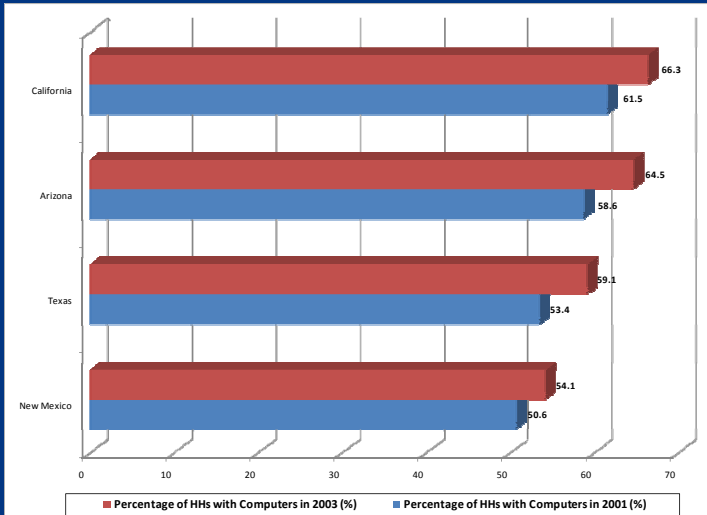
Source: U.S. BLS

Number of Life and Physical Scientists  
per 10,000 Civilian Labor Force (2007)



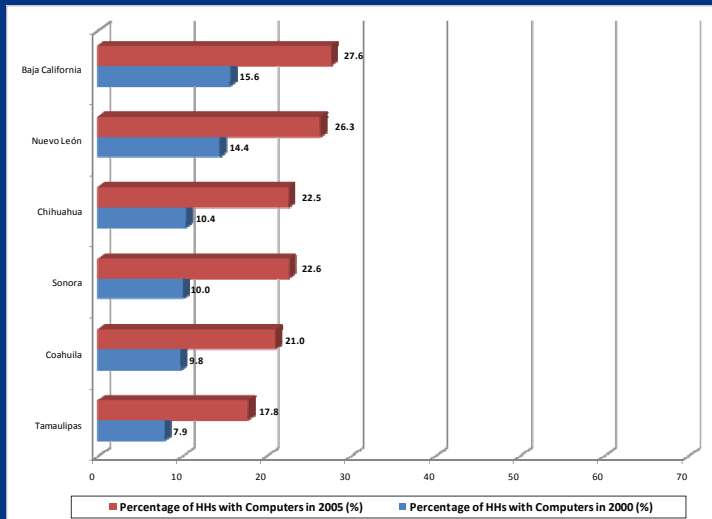
Source: U.S. BLS

### Percentage of Households with a Computer U.S. Border States (2001 & 2003)



Source: U.S. Census

### Percentage of Households with a Computer Mexico Border States (2000 & 2005)



Source: ITESM

## Communication Networks

A third set of indicators measures the transfer of information and technology to the broader community. Common measures include the use of communication networks, such as wireless phones, computers and the internet.<sup>17</sup>

In 2003, the number of households in Arizona with a computer was 1.3 million, 64.5 % of all households. Comparable data for other border states show that Arizona was behind California (66.3 %), but ahead of Texas (59.1 %) and New Mexico (54.1 %).

Using 2000 data, the percentage of households with computers in Sonora was 10.0 %. This compared to 15.6 % in Baja California, and 14.4 % in Nuevo León. Only Tamaulipas was significantly lower with 7.9 % of households having a computer.

Most recent data for 2005 indicate a fast growth in the number of households with computers in Mexican border states. The share of households with computers in Sonora more than doubled from 10% in 2000 to 23% in 2005. Average growth rate for six Mexican border states was 106.9% for 5-year period from 2000 to 2005; Sonora was the fastest growing state with 126.0%.

***Regional Initiatives:***  
***Descriptive Inventory &***  
***Key Performance Initiatives***

## ***Regional Initiatives: Descriptive Inventory & Key Performance Indicators (KPIs)***

### **Background**

In their unique cross-border collaboration stretching over half a century, the Arizona-Mexico Commission (AMC) and its sister organization, Comisión Sonora-Arizona (CSA), initiated numerous resolutions, programs and actions with an overarching goal to increase region's competitiveness and enhance quality of life in the Arizona-Sonora region. In that respect, the Regional Economic Indicators for the Arizona-Sonora Region played a significant role by providing a larger picture of region's progress compared to the entire U.S.-Mexico border region. While the economic integration in the region remains at the core of regional growth and development, the post-9/11 environment in particular created new challenges for the transborder region.

Starting in 2006-07, four major areas of focused action have been identified: (1) Border security; (2) Expanding trade; (3) Promoting regional economic development, and (4) Enhancing quality of life. Commissions' committees are required to report on the progress in their quarterly reports, which are then summarized into annual accomplishments. Currently, the existing accomplishment reports cover the period for 2006-07 and 2007-08.

### **Model for assessment of initiatives**

While the mere volume of action items undertaken under each of the four initiatives is impressive by itself, a more critical issue is whether and how these initiatives impact and change the situations they were designed to impact/change in the first place.

To accomplish this, a model has been developed to capture a diverse nature of actions in terms of

specific goals, targets, resource inputs, measurable outputs and impact (outcome). Because of their diverse nature and specific objectives, it was necessary to develop a new creative way by which to gauge the progress, performance and final impact (outcome) of Initiatives. To achieve this, the process entailed five major steps.

The first step involved creating a descriptive inventory ("inventory templates") for each initiative based on the summary reports provided by the Arizona-Mexico Commission's Strategic Planning Committee (SPC).<sup>18</sup> Each action item was described in terms of (a) specific goal, (b) initiation date -- baseline, (c) specific target, (d) input of human resources and/or dollar amount, (e) partners/participants, (f) achieved or anticipated output, and (g) achieved or anticipated impact (outcome).

The second step involved a detailed review process of the descriptive inventories by the AMC's SPS and the CSA's Committee Co-chairs to make sure that all relevant information about every action item was captured and correctly presented.

The third step focused on developing the criteria for evaluation of each initiative in terms of number and character of individual activities. In that process each action item was identified as falling into one of the eight categories based on the nature of the action: (i) Binational agreements, declarations and resolutions; (ii) New initiatives and programs; (iii) Workshops, training, seminars, conferences and forums; (iv) Border infrastructure improvements; (v) New/reorganized institutions; (vi) Sources of information, including study reports; (vii) New cooperative entities and partnerships, and (viii) Border-wide (entire U.S.-Mexico border region) initiatives. Each category was further described by "hard" measures such as number of agreements or meetings, and "soft" measures,<sup>19</sup>

such as types of participants – government, private sector, or public-private organizations. The summary tables produced at the end of the third step provided insights into the volume, type of activities, input of resources/funding, and output. (Because of the short period of time since the initiatives were introduced, it will take some time before their impact becomes measurable.)

The forth step involved the selection of one action within each initiative for which data were available to develop key performance indicators.<sup>20</sup> As the tracking system becomes systematic and more information becomes available, the key indicators will be expanded and applied to all actions.

### **Plotting the “trajectory” of initiatives**

The presented assessment model is just a first step in development of a more meaningful and effective way in which to gauge the impact of regional initiatives. For that to happen, two key requirements need to be met: (1) a systematic tracking system as designed in the “inventory templates,” and (b) development of other nontraditional measures, both hard and soft, to capture specific nature and scope of actions. Aside from these requirements, the success of the assessment model will depend on the availability of contextual data against which to measure the impacts.

The initiatives consist of specific actions that are undertaken by government and private organizations (mostly in form of private-public partnerships) with the overarching goal to contribute to the improvement in Region’s position. It is clear, however, that the impact (i.e., outcome) of initiatives usually takes a long time before it can be assessed in terms of some tangible measures. For example, a successful cooperation in obtaining federal funding for improvement of a border port of entry will not show any substantial improvement in facilitation of trade for years because of the longevity of the construction project. Secondly, even when the impact of such initiative is measurable, most

likely it will not be visible in state-level or regional statistics. It may not show any measurable increases in crossborder trade at the scale at which trade data are reported in the official statistics even if individual companies and entire industries benefit from more efficient facilitation of crossborder flow of goods. And yet, the effort deserves attention as a purposeful action toward improvement of Region’s ability to facilitate international trade.

## INITIATIVE 1: BORDER SECURITY

### Goals

The overarching goal of the Border Security Initiative has been to curb illegal activities in the border region while securing efficient flow of goods and people across the border and increasing protection of residents in Arizona and Sonora.

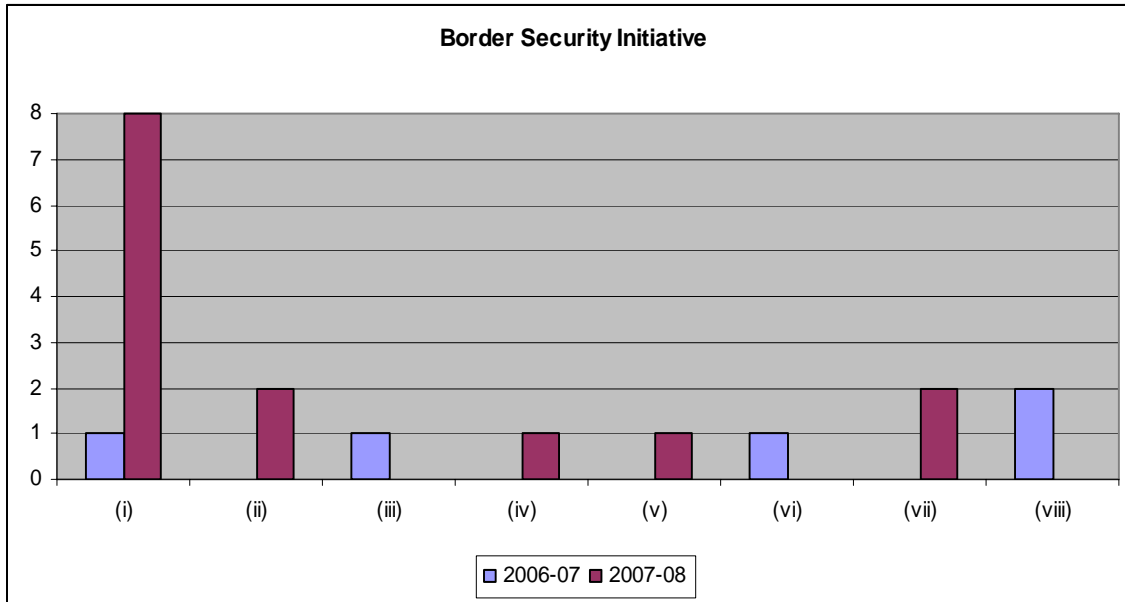
### Specific targets

2007-08	<ul style="list-style-type: none"><li>• Establish coordination of responses in time of emergency between fire departments, police departments, health agencies, and emergency planners</li><li>• Establish telephone &amp; email communication system as the point of contact; update and share information about outstanding fugitives; develop and provide training; meet quarterly to share info and coordinate efforts</li><li>• Develop the mechanisms that support the federal authorities in both countries to combat the trafficking of illegal drugs in border region; establish regular law enforcement meetings on both sides of the border</li><li>• Increase number of operations to disrupt the transportation of firearms through the region; cities of Nogales and Douglas to serve as the initial firearms anti-trafficking pilot projects</li><li>• Establish a process to draft and ratify a bi-national emergency management mutual aid compact</li><li>• Establish a formal protocol to share highway safety information across the Arizona-Sonora border</li><li>• Establish a Cross-Border Geospatial Information Sharing Committee</li><li>• Develop joint timelines for developing border infrastructure to accomplish port-of-entry projects within the Arizona-Sonora region;</li><li>• Addition of e-trace program to track weapons involved in crimes</li><li>• Secure \$0.5 million for the Nogales wash repair</li><li>• Establish research center for improvement of border surveillance &amp; policies</li><li>• Secure \$42 million for the construction of San Luis II BPOE</li></ul>
2006-07	<ul style="list-style-type: none"><li>• Train 300 Fire and hazardous materials first responders annually</li><li>• Increase the number of applications from border communities for federal dollars</li></ul>

## INITIATIVE 1: BORDER SECURITY (CONT'D)

### Biannual Assessment of Actions

A total of 19 action items were initiated under the Border Security Initiative, of which five during 2006-07 and another 14 during 2007-08. These action items fall into one the eight accomplishment categories:



- (i) Binational agreements, declarations and resolutions
- (ii) New initiatives and programs
- (iii) Workshops, training, seminars, conferences and forums
- (iv) Border infrastructure improvements
- (v) New/reorganized institutions
- (vi) Sources of information, including study reports
- (vii) New cooperative entities and partnerships, and
- (viii) Border-wide (entire U.S.-Mexico border region) initiatives.

Action categories are evaluated in terms of 'hard' and 'soft' measures. Examples of hard measures are number of agreements, number of meetings, number of participants, and dollar amount of invested funds; examples of soft measures include types of partnering organizations (government, other public, and private-sector). Output is measured in either hard or soft measures, as available.

## INITIATIVE 1 (CONT'D)

### Binational Agreements and Declarations (i)

During 2006-07, State of Arizona and State of Sonora signed the Public Safety Agreement.

During 2007-08, State of Arizona and State of Sonora signed eight agreements/declarations: (1) Declaration of Cooperation in Apprehension of Fugitives; (2) Declaration of Cooperation in Combating Trafficking of Illegal Drugs; (3) Declaration of Cooperation in Combating the Shipment of Weapons from Arizona to Sonora; (4) Resolution Regarding Bi-National Emergency Management Assistance (supported by the Border Governors Conference); (5) Declaration of Cooperation for the Prevention of Accidents; (6) Declaration of Cooperation in Cross-Border Geospatial Information Sharing, and (7) Memorandum of Understanding for Execution of "2015 Arizona and Sonora's New Border" Plan, and (8) Tri-National Emergency response Plan, which was also signed by Tohono O'odham Nation.

### New Initiatives/Programs (ii)

During 2007-08, two new programs were initiated: (1) Arizona-Mexico Commission (AMC) initiated "Damming Warrants Program" in partnership with the Arizona Department of Public safety to reduce transfer of illegal moneys among organized crime groups; (2) the State of Arizona and Arizona-Mexico Commission (AMC) initiated plan for extension of "Gunrunner Project" for border-wide tracking of weapons involved in crime. Border Governors supported the initiative.

### Workshops/Training/Conferences/Forums (WTCF) (iii)

During 2006-07, the State of Arizona in cooperation with State of Sonora, Arizona State University (ASU) and U.S. Environmental Protection Agency (USEPA) conducted training of first responders capable of responding to fire and hazardous materials incidents in border communities. About 300 fire and hazardous materials first responders participated in the training.

Binational Agreements/Declarations		
Year	2006-07	2007-08
# of Binational Agreements/Declarations	1	8
Participating State Government(s)	State of AZ; State of Sonora	State of AZ; State of Sonora
Other Government(s)		Tohono O'odham Nation
Participating Government Organizations/Agencies		AZ Dept of Public Safety; Sonora's Dept. of Public Safety; AMC, CSA

New Initiatives/Programs		
Year	2006-07	2007-08
# of Initiatives/Programs	0	2
Participating State Government(s)		State of AZ; State of Sonora
Other Government(s)		Border Governors
Participating Government Organizations/Agencies		AZ Dept of Public Safety; AMC

Workshops/Training/Conferences		
Year	2006-07	2007-08
# of Initiatives/Programs	1	0
Participating State Government(s)	State of AZ; State of Sonora	
Participating Government Organizations/Agencies	USEPA	
Participating Public Organizations	ASU	
# of Trained First Responders	300	



## INITIATIVE 1 (CONT'D)

### Border Infrastructure Improvements (iv)

In 2006-07, \$0.5 million federal funding was secured for a repair of Nogales wash through a partnership between the city of Nogales, Arizona; City of Nogales, Sonora; Santa Cruz County; State of Arizona; State of Sonora, and the Arizona-Mexico Commission (AMC).

### New/reorganized Institutions (v)

During 2007-08, the Arizona-Mexico Commission (AMC) supported the University of Arizona (UA) in successful application for the establishment of the Center of Excellence for Border Security and Immigration (BSI), funded by U.S. Department of Homeland Security (DHS). The BSI has been organized as a multistate university consortium with a total \$16.56 million in funding over 5 years.

### Sources of Information/Study Reports/Guidebooks (vi)

During 2006-07, the Arizona-Mexico Commission (AMC) in partnership with the University of Arizona (UA) updated the Arizona Border Infrastructure Project ([www.azbip.org](http://www.azbip.org)) designed as a source of information about application process for federal money for border infrastructure projects.

Border Infrastructure Improvements		
Year	2006-07	2007-08
# of Projects	0	1
Participating State Government(s)		State of AZ; State of Sonora
Participating Local Governments		Santa Cruz County, City of Nogales AZ, City of Nogales Sonora, AMC
Inputs		\$0.5 million

New/Reorganized Institutions		
Year	2006-07	2007-08
# of New Organizations	0	1
Participating Government Organizations		AMC
Participating Public Organizations		UA, ASU
Federal Funding		\$16.56 million over 6 years

New Cooperation/Partnership		
Year	2006-07	2007-08
# of Sources	1	0
Participating Government Organizations	AMC	
Participating Public Organizations	UA	
Output	Electronic database	

## INITIATIVE 1 (CONT'D)

### New Cooperative Entities and Partnerships (vii)

During 2007-08, two new partnerships were initiated: (1) Greater Yuma Port Authority (GYPA) partnered with the Arizona-Mexico Commission (AMC) to secure \$42 million in federal funding for design of San Luis II Port of Entry (POE), and (2) the State of Arizona and State of Sonora established a Binational Human Trafficking Coordination Council, a first of its kind in the entire border region.

### Border-wide initiatives (viii)

During 2006-07, SENTRI (Secure Electronic network for Travelers' Rapid Inspection) lanes open at Nogales border port of entry (BPO). In the same year, the 25<sup>th</sup> U.S.-Mexico Border Governors Conference (BGC) accepted the Arizona-Sonora initiatives to be incorporated in policy development for the entire U.S.-Mexico border region.

New Cooperative Entities and Partnerships		
Year	2006-07	2007-08
# of New Partnerships	0	2
Participating State Government(s)		State of AZ; State of Sonora
Participating Government Organizations		AMC
Participating Private Organizations		GYPA
Input (Federal Funding)		\$42 million

Border-wide Initiatives		
Year	2006-07	2007-08
# of Initiatives /Programs	2	0
Participating State Government(s)	State of AZ; State of Sonora	
Other State Government(s)	Border Governors	
Participating Government Organizations (Federal)	USCBP	

## Border Security Initiative: Measuring performance of specific actions

### Action: First Responder Training

Goal: Establish skilled first responders to fire and hazardous materials incidents in border communities

Input indicator	Baseline 2007-08	Target 2008-09	Target 2009-10
Participating agencies	State of AZ, State of Sonora, ASU, USEPA		
Funding	\$100,000	\$100,000	\$100,000
Output Indicator	Baseline 2007-08	Target 2008-09	Target 2009-10
Number of trained respondents	300	300	300

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## INITIATIVE 2: EXPANDING TRADE

### Goals

The overarching goal of the Expanding Trade Initiative has been the improvement of BPOE's physical infrastructure and operation mechanisms (such as FAST lanes and working hours) that are critical for efficient crossborder trade.

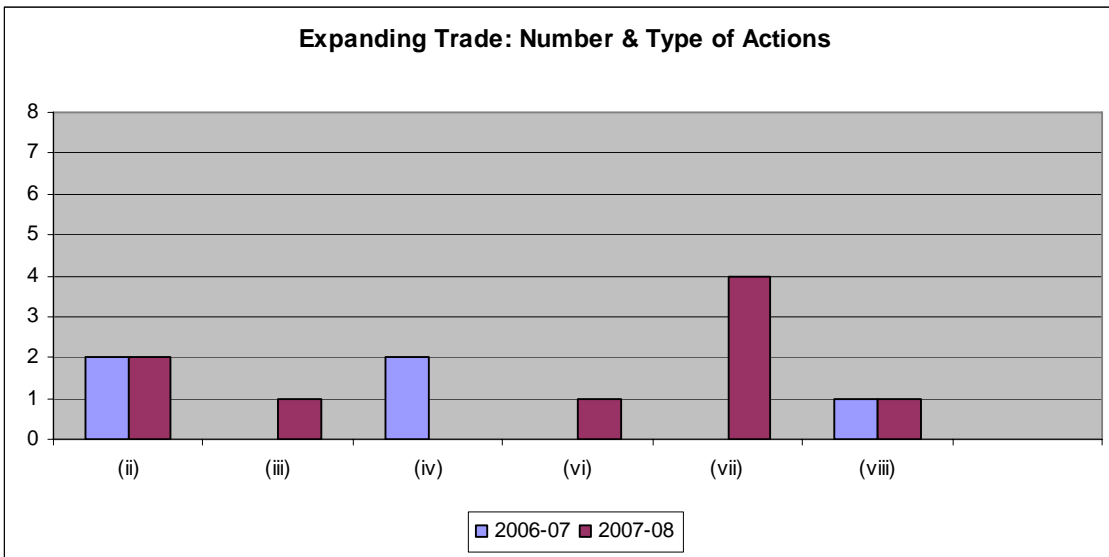
### Specific targets

<b>2007-08</b>	<ul style="list-style-type: none"><li>• Extend hours of operation to accommodate demand for guest workers during winter harvest in Yuma County</li><li>• Secure funding for improvement of Mariposa POE; \$42 million (design phase)</li><li>• Secure federal funding for the Mariposa POE; \$174 million in 2009</li><li>• Assess wait times for commercial border crossings at Mariposa POE</li><li>• Coordinate with federal, state, tribal and local stakeholders to improve Arizona border infrastructure</li><li>• Integrate electronic inspection of cattle crossing into Mexico</li><li>• Secure funding for construction of two additional POV lanes at Lukeville POE</li><li>• Conduct workshop on water management in the border region with high-level leaders from U.S. and Mexico</li><li>• Establish national infrastructure funding timeline</li></ul>
<b>2006-07</b>	<ul style="list-style-type: none"><li>• Re-open previously established market to U.S. cattle producers</li><li>• Extend WHTI compliance deadline to June 2009</li><li>• Secure funding for design and construction of San Luis II POE</li><li>• Increase efficiency of commercial vehicles crossings at Mariposa POE</li></ul>

## INITIATIVE 2: EXPANDING TRADE (CONT'D)

### Biannual Assessment of Actions

A total of 14 action items were initiated under the Expanding Trade Initiative, of which five during 2006-07 and another 9 during 2007-08. These action items fall into one of the seven accomplishment categories:



- (ii) New initiatives and programs
- (iii) Workshops, training, seminars, conferences and forums
- (iv) Border infrastructure improvements
- (vi) Sources of information, including study reports
- (vii) New cooperation formats & partnerships
- (viii) Border-wide (entire U.S.-Mexico border) initiatives.

Action categories are evaluated in terms of 'hard' and 'soft' measures. Examples of hard measures are number of agreements, number of meetings, number of participants, and dollar amount of invested funds; examples of soft measures include types of partnering organizations (government, other public, private-sector). Output is measured in either hard or soft measures, as available.

## INITIATIVE 2 (CONT'D)

### New Initiatives/Programs (ii)

During 2007-08, two initiatives were introduced: (1) the Arizona-Mexico Commission (AMC) in partnership with Comisión Sonora-Arizona (CSA) introduced the Beef Breeding Cattle Initiative to re-open the border for the American cattle, and (2) in collaboration with the Arizona Office of Tourism (AOT) the AMC was successful in extending the Western Hemisphere Travel Initiative's (WHTI) deadline to June 2009.

The two initiatives introduced during 2007-08 were: (1) AMC introduced a new initiative, "2015: Arizona's New Border" to secure funding for border infrastructure with the Mariposa BPOE as a top priority, and (2) in partnership with Yuma industry representatives and other local stakeholders the AMC was successful in extending the operating hours at Andrade BPO to accommodate demand for guest workers during winter harvest season.

### Workshops/Training/Conferences/Forums (WTCF) (iii)

During 2007-08, the AMC's Water Committee organized a workshop on water management policies for high-level leaders from U.S. and Mexico.

### Border Infrastructure Improvements (iv)

In 2006-07, two projects were launched for the improvement of border infrastructure: (1) the Arizona-Mexico Commission (AMC) partnered with Greater Yuma Port Authority (GYPA) to secure \$42 million for the design and construction of the San Luis II POE; and (2) \$13.8 million was secured for the redesign of Mariposa POE.

### Sources of Information/Study Reports (vi)

During 2007-08, the Arizona-Mexico Commission (AMC) in partnership with the CANAMEX CyberPort Program and the Federal Highway Administration (FDA) funded an assessment of commercial traffic border wait at Mariposa POE, which was conducted by the University of Arizona (UA).

New Initiatives/Programs		
Year	2006-07	2007-08
# of Initiatives /Programs	2	2
Participating State Government(s)	AMC, CSA (Agricultural Committee), ADOT	AMC, CSA, Yuma Industry representatives
Output	Deadline extended from January 2008 to June 2009	Extended hours during winter harvest

Workshops/Training/Conferences		
Year	2006-07	2007-08
# of Workshops	0	1
Participating Government Organizations/Agencies		AMC Water Committee
Participants		High-level leaders from U.S. and Mexico

Border Infrastructure Improvements		
Year	2006-07	2007-08
# of Projects	2	0
State Government Organizations	AMC	
Private Sector	GYPA	
Inputs (federal funding)	\$55.8 million	

Source of Information/Study/Report		
Year	2006-07	2007-08
# of Sources	0	1
Government Organizations (State)		AMC, CANAMEX
Government Organizations (Federal)		FHA
Inputs		\$160,000
Output		Study Report

## INITIATIVE 2 (CONT'D)

### New Cooperative Entities and Partnerships (vii)

During 2007-08, four new partnerships were initiated: (1) the Arizona-Mexico Commission (AMC) partnered with the State of Arizona, Federal Government, Tohono O'odham Nation and local stakeholders for the purpose of coordination of funding for Arizona's border infrastructure; (2) AMC partnered with the Greater Nogales Santa Cruz Port Authority (GNSCPA) and U.S. Customs and Border Protection agency (USCBP) to position Mariposa POE as one of the top-five national priority projects; (3) AMC partnered with Arizona department of Transportation (ADOT) and U.S. Trade and Development Agency (USTDA) to integrate electronic inspection technology for the facilitation of cattle crossing, and (4) the first of its kind partnership was established between the State of Arizona and private sector from Sonora to fund the improvement of Lukeville POE in lieu of growing tourism and commercial traffic.

### Border-wide initiatives (viii)

Two border-wide initiatives were implemented: (1) during 2006-07, FAST (Free and Secure Trade) lanes were dedicated at Nogales POE to facilitate commercial crossings under new security regime being implemented under U.S. Customs and Border Protection (USCBP). Nogales was the first BPOE among Arizona-Sonora BPOEs to have opened FAST lane, and (2) during 2007-08, the Border Governors Conference embraced Arizona-Sonora's initiative to create a national infrastructure funding timeline.

New Cooperation/Partnership		
Year	2006-07	2007-08
# of New Partnerships	0	4
State Governments		State of AZ, State of Sonora
Other Government		Tohono O'odham Nation
Federal Government Organizations		Federal Gov., USCBP, USTDA
Other Government Organizations		ADOT, AMC, CSA
Participating Private Organizations		GYPA, GNSCPA, Sonora Private Sector

Border-wide Initiatives		
Year	2006-07	2007-08
# of Initiatives	1	1
Participating Government Organizations (Federal)	USCBP	
Participating Government Organizations (State)	State of AZ, State of Sonora	State of AZ, State of Sonora, Border Governors

### Expanding Trade Initiative: Measuring performance of specific actions

Action: Partnership for Improvement of Mariposa POE Goal: Position Mariposa POE as a Top National Priority Project			
Input indicator	Baseline 2007-08	Target 2008-09	Target 2009-10
Participating agencies	AMC; Greater Nogales/Santa Cruz Port Authority; USCBP		
Funding		\$174 million	\$200 million
Output Indicator	Baseline 2007-08	Target 2008-09	Target 2009-10
Output	Design and construction		New/more efficient lanes

### INITIATIVE 3: PROMOTING ECONOMIC DEVELOPMENT

#### Goals

The overarching goal has been to increase competitiveness of businesses in the Arizona-Sonora, stimulate infrastructure investments, and increase economic growth in the region.

#### Specific Targets

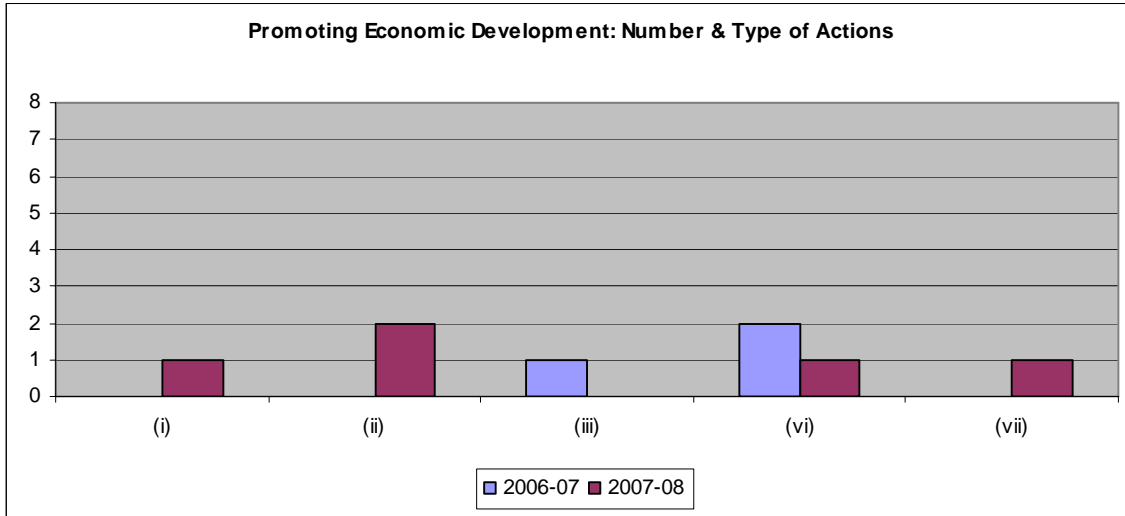
<b>2007-08</b>	<ul style="list-style-type: none"><li>• <b>Create a Sonora-Arizona Professional Workers Database</b></li><li>• <b>Establish professional visa program</b></li><li>• <b>Design strategies, policies, and/or actions for stimulation of investments</b></li><li>• <b>Implement actions to promote the region and attract manufacturers</b></li><li>• <b>Develop a set of measures to assess the success of past and current policy projects</b></li><li>• <b>Organize binational forums about acquiring property in Mexico</b></li></ul>
<b>2006-07</b>	<ul style="list-style-type: none"><li>• Organize 3rd economic forum</li><li>• Update regional economic indicators</li><li>• Create a map of the region to promote tourism through ecologically and culturally aware travel and trade</li></ul>



### INITIATIVE 3: PROMOTING ECONOMIC DEVELOPMENT (CONT'D)

#### Biannual Assessment of Actions

A total of 8 action items were initiated under the Promoting Economic Development Initiative, of which 3 during 2006-07 and another 5 during 2007-08. These action items fall into one of the five accomplishment categories:



- (i) Binational agreements, declarations and resolutions
- (ii) New initiatives and programs
- (iii) Workshops, training, seminars, conferences and forums
- (vi) Sources of information, including study reports
- (vii) New cooperation formats & partnerships.

Action categories are evaluated in terms of 'hard' and 'soft' measures. Examples of hard measures are number of agreements, number of meetings, number of participants, and dollar amount of invested funds; examples of soft measures include types of partnering organizations (government, other public, private-sector). Output is measured in either hard or soft measures, as available.

### INITIATIVE 3 (CONT'D)

#### Binational Agreements and Declarations (i)

During 2007-08 the States of Arizona and Sonora, in partnership with the Arizona-Mexico Commission (AMC) and Comisión Sonora-Arizona (CSA), signed a binational agreement regarding professional visa program and to create a Sonora-Arizona professional workers database.

#### New Initiatives/Programs (ii)

During 2007-08, two initiatives were introduced: (1) under the leadership of the AMC's Economic Development Committee the Economic Development Initiative was introduced to promote economic redevelopment and secure investment in the Arizona-Sonora region, and (2) AMC and CSA established the Manufacturing Initiative to stimulate manufacturers to locate and relocate in the Arizona-Sonora region.

#### Workshops/Training/Conferences/Forums (WTCF) (iii)

During 2007-08, the AMC organized the Border Economic Forum for government and private sector representatives to discuss how to spur regional economic growth and attraction of suppliers to the region.

Binational Agreements/Declarations		
Year	2006-07	2007-08
# of Binational Agreements/Declarations	0	1
Participating State Government(s)		State of AZ; State of Sonora
Participating Government Organizations/Agencies		AMC, CSA

New Initiatives/Programs		
Year	2006-07	2007-08
# of Initiatives/Programs	0	2
Participating Government Organizations/Agencies		AMC, CSA

Workshops/Training/Conferences		
Year	2006-07	2007-08
# of Workshops	1	0
Participating Government Organizations/Agencies	AMC	
Participants	Government and private sector representatives	

## INITIATIVE 3 (CONT'D)

### Sources of Information/Study Reports/Guidebooks (vi)

During 2006-07, two sources of information were produced: (1) under the auspices the Arizona-Mexico Commission (AMC) and in collaboration with El Centro de Investigación en Alimentación y Desarrollo (CIAD), the University of Arizona (UA) produced an updated report on the economic indicators for the Arizona-Sonora region; and (2) in collaboration with AMC and CSA, the National Geographic produced a geotourism map guide for the Arizona-Sonora desert region.

During 2007-08, AMC in partnership with CSA established the regional Economic Indicators Program to assess past and current policy projects in the Arizona-Sonora region. The University of Arizona (UA) will develop a model for assessment of initiatives and will update existing regional indicators.

### New Cooperative Formats & Partnerships (vii)

During 2007-08, the Arizona-Mexico Commission (AMC) established a partnership with the Arizona Department of Real Estate (ADRE) to address concerns and educate investors about real property in Mexico, through binational estate forums.

Source of Information/Study Report		
Year	2006-07	2007-08
# of Sources	2	1
Government Organizations	AMC	AMC, CSA
Public Organizations	UA, CIAD	UA
National Organizations	National Geographic Magazine	
Output	Report, GeoTourism Map	

New Cooperation/Partnership		
Year	2006-07	2007-08
# of New Partnership	0	1
Government Organizations		AMC
Private Sector		ADRE

## Promoting Economic Development Initiative: Measuring performance of specific actions

Action: Establishment of the Manufacturing Initiatives			
Goal: Stimulate manufacturers to move their installations to the Arizona-Sonora Region			
Input indicator	Baseline 2007-08	Target 2008-09	Target 2009-10
Participating agencies	AMC, CSA		
Output Indicator	Baseline 2007-08	Target 2008-09	Target 2009-10
Output	Meeting with representatives of government and private sector in Arizona and Sonora	Create inventory of manufacturers and suppliers operating within Sonora's maquiladora sector	Attracting 2 new manufacturers/suppliers

## **INITIATIVE 4: ENHANCING QUALITY OF LIFE**

### **Goals**

The overarching goal has been the enhancement of quality of life in the Arizona-Sonora region with emphasis on health issues, education and cultural exchanges.

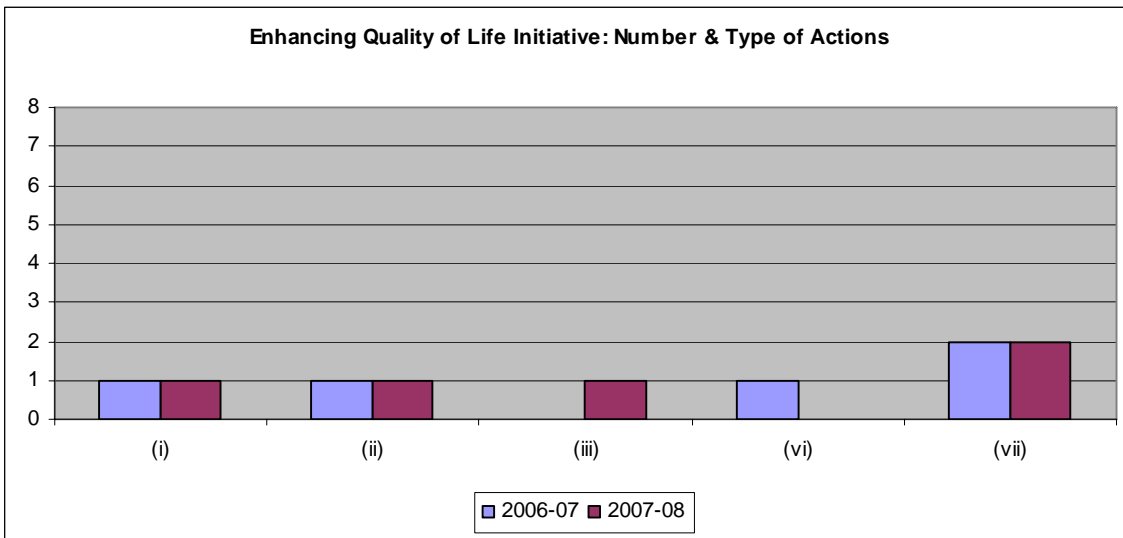
### **Specific Targets**

<b>2007-08</b>	<ul style="list-style-type: none"><li>• <b>Establish an electronic system for the exchange of information concerning diseases of binational public health importance along the Arizona-Sonora border</b></li><li>• <b>Create certification of pharmaceutical sales</b></li><li>• <b>Organize "Environmental Common Ground" conference</b></li><li>• <b>Organize binational high-school football event</b></li><li>• <b>Support the building of youth baseball fields in Sonora</b></li></ul>
<b>2006-07</b>	<ul style="list-style-type: none"><li>• Establish bi-national emergency response plan</li><li>• Establish 511-Travel and Transportation System</li><li>• Educate employers, care providers of disabled individuals and empower families of individuals with disabilities.</li><li>• Update Arizona Grants Access Tool and Experts Source (AzGATES)</li></ul>

## INITIATIVE 4: ENHANCING QUALITY OF LIFE (CONT'D)

### Biannual Assessment of Actions

A total of 10 actions were initiated under the Enhancing Quality of Life Initiative, of which five during 2006-07 and another five during 2007-08. These actions fall into one the five accomplishment categories:



- (i) Binational agreements, declarations and resolutions
- (ii) New initiatives and programs
- (iii) Workshops, training, seminars, conferences and forums
- (vi) Sources of information, including study reports
- (vii) New cooperation formats & partnerships.

Action categories are evaluated in terms of 'hard' and 'soft' measures. Examples of hard measures are number of agreements, number of meetings, number of participants, and dollar amount of invested funds; examples of soft measures include types of partnering organizations (government, other public, private-sector). Output is measured in either hard or soft measures, as available.

## INITIATIVE 4 (CONT'D)

### Binational Agreements and Declarations (i)

During 2006-07, the Arizona-Mexico Commission (AMC) and the Comisión Sonora-Arizona (CSA) in partnership with the Arizona Department of Health and Sonora's Department of Public Health signed a declaration regarding a Regional Influenza Pandemic Response Plan.

During 2007-08, the Arizona-Mexico Commission (AMC) and Comisión Sonora-Arizona (CSA) in partnership with the Arizona Department of Health and Sonora's Department of Public Health signed a declaration regarding the exchange of information concerning diseases in the Arizona-Sonora region.

### New Initiatives/Programs (ii)

During 2006-07, the Arizona-Mexico Commission (AMC) and Comisión Sonora-Arizona (CSA) initiated 511-Travel and Transportation System to link cross-border travelers to timely traffic information in the Arizona-Sonora region.

During 2007-08, AMC in collaboration with CSA initiated a pilot program for certification of pharmaceutical sales operating along the border.

### Workshops/Training/Conferences/Forums (WTCF) (iii)

During 2007-08, the Arizona-Mexico Commission (AMC) in partnership with the Yuma Heritage National Crossing (HNC) area organized the Environmental Common Ground conference to promote and educate community stakeholders on innovative restoration techniques to preserve natural habitats along the Arizona-Sonora border.

Binational Agreements/Declarations		
Year	2006-07	2007-08
# of Binational Agreements/Declarations	1	1
Participating Government Organizations	AMC, CSA, AZ Dept. of Health, Sonora Public Health	AMC, CSA, AZ Dept. of Health, Sonora Public Health
Output	Binational emergency response plan	Electronic system for the exchange of information

New Initiatives/Programs		
Year	2006-07	2007-08
# of Initiatives/Programs	1	1
Participating Government Organizations	AMC, CSA	AMC, CSA
Output	511-Travel & Transportation System	Certificate of pharmaceutical sales

Workshops/Training/Conferences		
Year	2006-07	2007-08
# of Workshops/Conferences	0	1
Government Organizations		AMC
Participating Public Organizations		YUMA HNC

## INITIATIVE 4 (CONT'D)

### Sources of Information/Study Reports/Guidebooks (vi)

During 2006-07, the Arizona-Mexico Commission (AMC) in partnership with the Arizona State University (ASU) created the Arizona Grants Access Tool and Expert Source ([www.AzGates.com](http://www.AzGates.com)) to facilitate border communities' access to funding sources.

Source of Information/Study Report		
Year	2006-07	2007-08
# of Sources	2	1
Government Organizations	AMC	AMC, CSA
Public Organizations	UA, CIAD	UA
National Organizations	National Geographic Magazine	
Output	Report, GeoTourism Map	

### New Cooperative Formats & Partnerships (vii)

During 2006-07 two partnerships were established: (1) partnership for improvement in education through comprehensive professional development focused on teaching students with disabilities in elementary and secondary schools, organized under the auspices of the Arizona-Mexico Commission (AMC) and Comisión Sonora-Arizona (CSA) with about 200 educators, parents, professionals and community advocates participating in the training program in Nogales, Sonora; and (2) two cross-border games were organized as a part of cultural exchange, initiated by AMC and CSA.

New Cooperation/Partnership		
Year	2006-07	2007-08
# of New Partnership	0	1
Government Organizations		AMC
Private Sector		ADRE

During 2007-08, two sporting events were organized in Sonora as part of the cultural/sporting exchange program under the auspices of AMC and CSA in partnership with the Arizona Super Bowl Host Committee and Arizona Diamondbacks.

## Enhancing Quality of Life Initiative: Measuring performance of specific actions

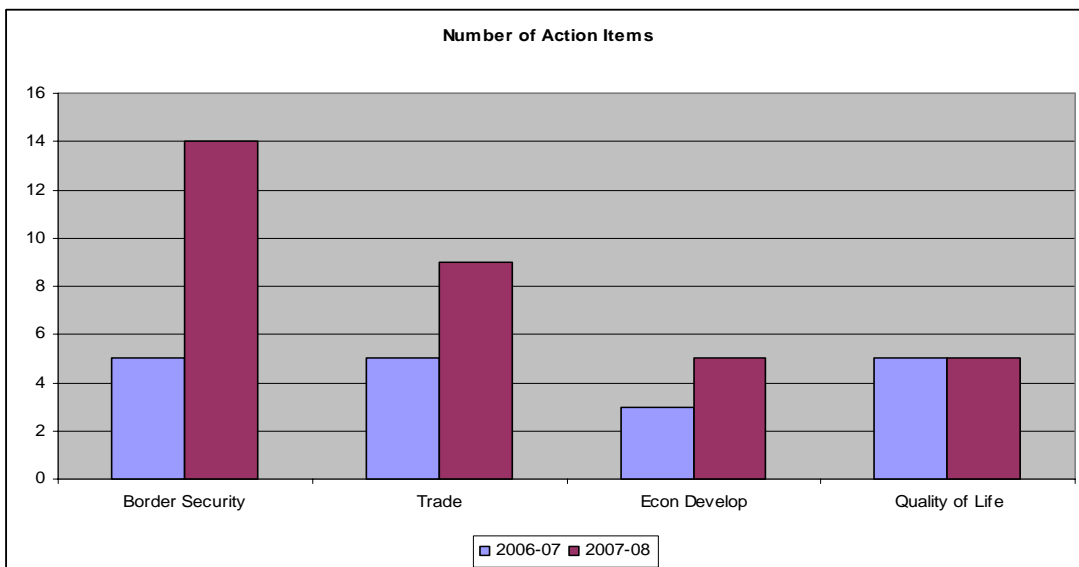
### Action: 511-Travel and Transportation System Initiative

Goal: Linking cross-border travelers to timely traffic information in Arizona and Sonora

Input indicator	Baseline 2007-08	Target 2008-09	Target 2009-10
Participating agencies	AMC, CSA		
Output Indicator	Baseline 2007-08	Target 2008-09	Target 2009-10
Output		511 Travel & Transportation system activated	Making timely information regarding highway safety available

## ***SUMMARY OF INITIATIVES' ASSESSMENT***

### **Number of Action Items**



### **Major Accomplishments**

#### **Border Security Initiative:**

<b>2007-08</b>	<ul style="list-style-type: none"> <li>• Comprehensive Emergency Response Plan established</li> <li>• Binational Human Trafficking Council established</li> <li>• A compact approved by the U.S. and Mexican federal governments allowing state and local mutual aid response during emergencies</li> <li>• Public-Private Partnership for funding the San Luis II BPOE established</li> <li>• DHS Center of Excellence for Border Security &amp; Immigration initiated</li> <li>• Repair of Nogales Wash accomplished</li> </ul>
2006-07	<ul style="list-style-type: none"> <li>• First Responder Training (300 Fire &amp; HazMat responders trained)</li> <li>• AZBIP (Arizona Border Infrastructure Program at <a href="http://www.azbip.com">www.azbip.com</a>) updated</li> </ul>

#### **Expanding Trade Initiative**

<b>2007-08</b>	<ul style="list-style-type: none"> <li>• Hours extended during winter harvest at Andrade POE</li> <li>• Workshop conducted with high-level leaders from U.S. and Mexico on water management in border region</li> <li>• Secured \$160,000 for commercial time waits study at Mariposa POE</li> <li>• Established partnership with the Greater Nogales Santa Cruz Port Authority (GNSCCPA) regarding the improvement of Mariposa POE</li> <li>• Established first of its kind public-private partnership for improvements at the Lukeville POE</li> <li>• Proposal for national infrastructure funding accepted at Border Governors Conference</li> </ul>
2006-07	<ul style="list-style-type: none"> <li>• WHTI deadline extended from January 2008 to June 2009</li> <li>• Secured \$42 million for San Luis II POE design and construction</li> <li>• Secured \$13.8 million for redesign of Mariposa POE</li> <li>• FAST lanes opened in Nogales</li> </ul>



### **Promoting Economic Development**

<b>2007-08</b>	<ul style="list-style-type: none"><li>• <b>Establishment of the Arizona-Sonora Manufacturing Initiative</b></li><li>• <b>Establishment of the Regional Economic Indicators Program to include assessment of initiatives</b></li></ul>
2006-07	<ul style="list-style-type: none"><li>• Organization of the 3rd economic forum</li><li>• Release of 2006 Regional Indicators Report</li><li>• Production of the National Geographic GeoTourism MapGuide for the Arizona-Sonora desert region</li></ul>

### **Enhancing Quality of Life Initiative**

<b>2007-08</b>	<ul style="list-style-type: none"><li>• <b>Organization of "Environmental Common Ground" conference</b></li><li>• <b>Arizona-Sonora Bowl II took place in Hermosillo, Sonora</b></li><li>• <b>Spring exhibition game took place in Hermosillo; a portion of the profits from the game was donated to the building of youth baseball fields</b></li></ul>
2006-08	<ul style="list-style-type: none"><li>• 511 Travel and Transportation System put in place</li><li>• AzGATES website was updated</li><li>• 200 educators, parents, professionals, community advocates and individuals with disabilities participated in a training program in Nogales, Sonora</li><li>• Two cross-border games were organized</li></ul>

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## ***Concluding Remarks***

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## Concluding Remarks

This Report is special in that it combines two different yet related sets of measures aimed at assessing the progress in the Arizona-Sonora Region.

The Indicators follow an established track from previous reports that utilize mainly state-based statistical data to monitor improvements in the Region's position relative to other U.S.-Mexico border states. These indicators have shown that in general, since the last report, the Region was on a recovery path following the 2000-2001 recession. The Region's GSP grew faster than the average for all U.S.-Mexico border states; some high-tech industries (aerospace, precision instruments and pharmaceutical manufacturing) have also outpaced the border states' average growth rates. Other indicators show that the Region lost its share of NAFTA trade to other ports of entry along the U.S.-Mexico border; it continues to lose its share of maquiladora sector, and its share of exports of Mexico's fresh produce to U.S. and Canada's markets.

Under the auspices of Arizona-Mexico Commission and Comisión Sonora-Arizona, a number of initiatives were introduced to specifically address improvements in the above areas, such as the Expanding Trade Initiative with a number of actions involving securing funding for port infrastructure improvements, and expanding of hours of operation to better facilitate cross-border traffic. Under the Economic Development Initiative, activities were focused on strengthening of cross-border cooperation through economic forums, establishment of manufacturing initiative, and promotion of regional approach.

A totally new initiative -- Border Security Initiative -- was introduced in response to new challenges associated with increasing concerns about violence and border security. While the objectives are clear, it is even more difficult to assess its impacts in a regional context.

The approach for the assessment of initiatives presented in this report presents just the first step in developing a more meaningful and effective way by which to gauge the impact of regional initiatives. Its major value is in that it has established "templates," i.e. matrices for collecting information about goals, inputs (human and financial), number of participants, types of partnerships, specific outcomes and finally, measures of impacts. At present, these templates helped identify inventory associated with each action and provided a basis for evaluation of types of actions, types of participants, nature of partnerships, actual or expected resources, and targets. Over time, these templates will help in plotting trajectories of each initiative and provide data for a more meaningful and effective evaluation of their impacts on the Region and its residents.

## Data Sources

A primary source for Mexican data is the *Instituto Nacional de Estadística, Geografía, e Informática* (INEGI). It is comparable to the U.S. Census Bureau and contains a large amount of demographic, social and economic data. INEGI also maintains the *Banco de Información Económica* (BIE), a database containing economic data such as GSP, trade, industry sectors and employment. The database can be accessed through INEGI's website, [www.inegi.gob.mx](http://www.inegi.gob.mx), or directly at [www.dgcnesyp.inegi.gob.mx](http://www.dgcnesyp.inegi.gob.mx).

For U.S. data, the U.S. Department of Commerce (USDOC) and its agencies, the U.S. Census Bureau (USCB), the Bureau of Economic Analysis (BEA), the Bureau of Labor Statistics (BLS) collect a large amount of demographic, social and economic data. In addition, the Bureau of Transportation Statistics (BTS) in the U.S. Department of Transportation (USDOT) houses numerous databases on border ports of entry, available on-line at [www.bts.gov](http://www.bts.gov).

### Population

U.S. Census Bureau (USCB), Population Division

website: <http://www.census.gov>

Secretaría de Gobernación, Consejo Nacional de Población (CONAPO)

website: <http://www.conapo.gob.mx>

### Gross State Product

U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA)

website: <http://www.bea.gov>

INEGI, Banco de Información Económica (BIE),

website: <http://dgcnesyp.inegi.gob.mx>

### Exchange Rates

INEGI, BIE

website: <http://dgcnesyp.inegi.gob.mx>

### Cross-Border Interactions

U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS), Border Crossing data

website: <http://www.bts.gov>

U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS), Air Carrier Statistics, T-100 International Market data

website: <http://www.bts.gov>

### Regional Industry Clusters

U.S. Bureau of Labor Statistics (BLS)

website: <http://www.bls.gov>

U.S. Census Bureau (USCB), County Business Patterns (CBP)

website: <http://www.census.gov>

**Foreign Direct Investment**

INEGI, BIE

website: <http://dgcnesyp.inegi.gob.mx>

**Maquiladora Industry**

INEGI, BIE

website: <http://dgcnesyp.inegi.gob.mx>.

**Cross-border Commodity Flow**

U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS),  
Transborder Surface Freight Data

website: <http://www.bts.gov>

U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS),  
Border Crossing data

website: <http://www.bts.gov>.

**Knowledge-based Indicators**

The U.S. Patent and Trademark Office (USPTO) releases annual data for patents issued and granted in the United States. The National Science Foundation (NSF)'s Division of Science Resources Statistics, publishes annual statistics on science and engineering resources. Employment data were used from the Bureau of Labor Statistics (BLS). Data on the communications infrastructure came from the U.S. Census Bureau (USCB) and the Federal Communications Commission (FCC).

Information regarding patents, scholarships, and Sistema Nacional de Investigadores (SNI) membership in Mexico is reported in the *Informe General del Estado de la Ciencia y la Tecnología*, published by the Consejo Nacional de Ciencia y Tecnología (CONACYT). CONACYT maintains an information portal, the *Sistema Integrado de Información sobre Investigación de la Científica y la Tecnológica* (SIICYT).

Data regarding communication infrastructure in Sonora and Mexico came from the publication, *La Economía basada en el Conocimiento: las condiciones de los Estados Mexicanos*, by Hector R. Peiro, Alfredo M. Ortiz and Rolando F. Bracamontes, published by the Centro de Estudios Estrategicos, Tecnológico de Monterrey (ITESM), 2005.

## End Notes

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- <sup>1</sup> For a more detailed description of the methodology see Vera Pavlakovich-Kochi and Jerry N. Conover. *Indicators of Progress*, The University of Arizona Office of Economic Development, 1998; Vera Pavlakovich-Kochi, "Measuring Progress in a Transborder Region: The Arizona-Sonora Indicators," presented at NOBE/RED International Research Forum "The U.S.-Mexico Border Economy in the 21<sup>st</sup> Century" in Tijuana, BC, June 22-23, 2001, available at [www.nobe-ref.org](http://www.nobe-ref.org); Vera Pavlakovich-Kochi, "Measuring the Non-measurable: Lessons from the Arizona-Sonora Region," paper presented at the 42<sup>nd</sup> Annual meeting of the Western regional science Association, Rio Rico, AS, February 26-March 1, 2003. Copies are available by contacting the author at [vkp@email.arizona.edu](mailto:vkp@email.arizona.edu).
- <sup>2</sup> Previous reports are available on the internet at [www.oepa.arizona.edu](http://www.oepa.arizona.edu).
- <sup>3</sup> See for example: Alberta H. Charney and Vera Pavlakovich-Kochi, *The Economic Impacts of Mexican Visitors to Arizona 2001*, Eller College of Management Economic and Business Research Center, 2002.
- <sup>4</sup> Data are available only for northbound crossings. U.S. Bureau of Transportation Statistics, 2006.
- <sup>5</sup> Vera Pavlakovich-Kochi, Alberta H. Charney and Alexander C. Vias, *Fresh Produce Industry in Nogales, Arizona: Impacts of a Transborder Production Complex on the Economy of Arizona. An Economic and Revenue Analysis*, The University of Arizona, Office of Economic Development, 1998. Prepared for the City of Nogales.
- <sup>6</sup> Gobierno del Estado de Sonora, *Plan Estatal de Desarrollo 2004-2009*, accessed at <http://www.sonora.gob.mx/ped/default.htm> on May 19, 2005.
- <sup>7</sup> *High-Technology Activities in Arizona*, Prepared for the Arizona dept of Commerce by Center for Business Research at ASU, September 2003. Report available at: <http://newazcommerce.com/Research>
- <sup>8</sup> *The Changing Face of the Software Cluster*, Collaborative Economics 1999. Available at: [www.azcommerce.state.az.us/busattraction](http://www.azcommerce.state.az.us/busattraction).
- <sup>9</sup> See for example the experience of the San Diego-Tijuana Region in *Borderless Innovation: catalyzing the competitiveness of the San Diego-Baja California Region*, A report by Dialogue, December 2005. Available at: <http://www.sandiegodialogue.org>.
- <sup>10</sup> Annual Reports (Informes Anuales) published by Banco de Mexico provide yearly assessments of the trends in foreign direct investment, see <http://www.banxico.gov.mx>.
- <sup>11</sup> INEGI, 2006.
- <sup>12</sup> While precise data on maquiladora-related exports from Arizona do not exist, the composition and destination of Arizona's exports to Mexico suggest a strong connection with Sonora's maquiladora sector. Two earlier studies documented the Arizona-Sonora maquiladora connection: Arthur Silvers and Vera Pavlakovich-Kochi, *Survey of the Maquila Plants in Sonora, Mexico*, prepared for the Arizona Department of Commerce and the Arizona-Mexico Commission, 1988; and Smith-Daniels and Pavlakovich-Kochi, *The Maquiladora Industry in the Arizona-Sonora Region: Impacts and Trends*, prepared for the Arizona-Mexico Commission, 2000.
- <sup>13</sup> William C. Gruben and Sherry L. Kiser, "NAFTA and Maquiladoras: Is the Growth Connected?" *The Border Economy*, June 2001, accessed at [http://www.dallasfed.org/research/border/tbe\\_gruben.html](http://www.dallasfed.org/research/border/tbe_gruben.html) on 2/28/2006; Jesus. Cañas, Roberto Coronado and Robert W. Gilmer, "U.S., Mexico Deepen Economic Ties," *Southwest Economy*, Issue 1, January/February 2006, accessed at <http://www.dallasfed.org/research/swe/2006/swe0601c.html> on 2/28/2006.
- <sup>14</sup> Includes both northbound and southbound trade flows through border ports of entry. Additional trade through Phoenix and Tucson are not included.
- <sup>15</sup> *The Knowledge-Based Economy*, Organization for Economic Co-operation and Development (OECD), 1996.
- <sup>16</sup> OECD. *ibid*.
- <sup>17</sup> Usage data at the state level are collected through the Current Population Survey and are available every two years. The most recent data release presents 2001 and 2003 data.
- <sup>18</sup> Sources: Arizona-Mexico Commission. *AMC Fact Sheet. 2006-2007 AMC National and Binational Accomplishments; 2007-2008 Arizona-Mexico Commission (AMC) National and Binational Accomplishments with its Regional Partners*; State of Arizona, State of Sonora, and Tohono O'odham Nation. Statement of Commitment. TRI-NATIONAL EMERGENCY RESPONSE PLAN. June 21, 2008;



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State of Arizona, and State of Sonora. DECLARATION OF COOPERATION to Establish a Partnership Committed to the Apprehension of Fugitives. June 21, 2008; State of Arizona, and State of Sonora. DECLARATION OF COOPERATION to Establish a Bi-National Commitment to Combat the Trafficking of Illegal Drugs. June 21, 2008; State of Arizona, and State of Sonora. DECLARATION OF COOPERATION to Establish a Bi-National Commitment to Combat the Illegal Shipment of Weapons From Arizona to Sonora. June 21, 2008; State of Arizona, and State of Sonora. RESOLUTION regarding Bi-National Emergency Management Assistance Compact. June 21, 2008; State of Arizona, and State of Sonora. DECLARATION OF COOPERATION to Establish a Formal Protocol to Share Highway Safety Information. June 21, 2008; and State of Arizona, and State of Sonora. DECLARATION OF COOPERATION to Establish a Bi-National Protocol for Cross- Border Geospatial Information Sharing. June 21, 2008.

<sup>19</sup> “Hard” metrics refers to measures such as the number of participating organizations; “soft” metrics includes measures such as the existence of a cooperative program. Some basic ideas were borrowed from Davidson, D., S. Dreyer and B. Hammond. 2008. Initiating an Investigation of the Border’s performance. Border Policy Research institute, Western Washington University: *Border Policy Brief*, Vol.3, No.6 (November), [www.wvu.edu/bpri](http://www.wvu.edu/bpri) December 16, 2008.

<sup>20</sup> Helpful ideas were extracted from the following sources: Minich, L., S. Howe, D. Langmeyer, and K. Corcoran. 2006. Can Community Change be Measured for an Outcome-Based Initiative? A Comparative Case Study of the Success by 6\* Initiative. *American Journal of Community Psychology*, Vol.28, No 3-4: 183-190 (December). <http://springerlink.com/content/f63584t446672w82/> on 10/29/2008; Sheltair Group. 2007. *Indicators for Sustainable Communities. A Case Study Scan of Performance Indicator Initiatives*. Prepared for the City of Victoria, B.C. [http://www.victoria.ca/cityhall/pdf/currentprojects\\_dockside\\_csstdy\\_indctr.pdf](http://www.victoria.ca/cityhall/pdf/currentprojects_dockside_csstdy_indctr.pdf) on 10/29/2008; U.S. Department of State. 2004. FY 2005 Performance Summary (The Plan). Strategic Goal 3: Homeland Security. Released by the Bureau of Resource Management. <http://www.state.gov/s/d/rm/rls/perfplan/2005/html/29302.htm> on 10/21/2008; U.S. Department of State. 2006. FY 2006 Performance and Accountability Highlights. Strategic Goal 3: Homeland Security. Released by the Bureau of Resource Management. <http://www.state.gov/s/d/rm/rls/perfrtp/2006hlts/html/79819.htm> on 10/21/2008; U.S. Environmental Protection Agency. 2008. Indicator Development for Estuaries. EPA-842-B-07-004. <http://www.epa.gov/owow/estuaries/indicators/> on 10/29/2008.