ARIZONA-MEXICO ECONOMIC INDICATORS

Arizona’s Trade and Competitiveness in the U.S. – Mexico Region

Annual Report 2016

Prepared by
Economic and Business Research Center

azmex.eller.arizona.edu

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# TABLE OF CONTENTS

Arizona-Mexico Economic Indicators Annual Report 2016

- **Introduction** ................................................................. 4
- **Summary of Findings** .................................................. 6
- **Population** ........................................................................ 12
  - Arizona Population ......................................................... 12
  - Sonora Population .......................................................... 12
- **Economic Output** ........................................................... 14
  - Arizona Gross Domestic Product ........................................ 14
  - Sonora Gross State Product ............................................... 15
- **Exports to Mexico** .......................................................... 16
  - Manufacturing Exports to Mexico ....................................... 17
- **Exports to Canada** .......................................................... 18
  - Manufacturing Exports to Canada ....................................... 19
- **Border Crossings** ........................................................... 20
  - Truck Crossings .............................................................. 20
  - Train Crossings .............................................................. 22
  - Bus Crossings .............................................................. 22
  - Personal Vehicle Crossings ................................................ 24
  - Personal Vehicle Passengers ............................................. 26
  - Pedestrian Crossings ....................................................... 28
- **Commodity Flows** .......................................................... 30
  - U.S. Exports to Mexico ...................................................... 30
  - U.S. Exports of Electric and Electronic Products ................. 31
  - U.S. Exports of Transportation Products ............................. 32
  - U.S. Imports from Mexico .................................................. 33
  - U.S. Imports of Electric and Electronic Products ................. 34
  - U.S. Imports of Transportation Products from Mexico ......... 35
  - U.S. Imports of Fresh Produce from Mexico ....................... 36
- **Export-Based Economy** .................................................. 38
  - Arizona Employment ....................................................... 38
  - IMMEX (Maquiladora) Employment in Mexico .................... 40
- **Knowledge-Based Economy** .......................................... 42
  - Patents ............................................................................ 42
  - Engineering Occupations ................................................ 42
  - Internet Access ................................................................ 43
- **Educational Attainment** .................................................. 44
- **Foreign Direct Investment** ............................................... 45
Purpose of Arizona-Mexico Economic Indicators

Since December 2014, the Economic and Business Research Center at the University of Arizona’s Eller College of Management, in collaboration and with financial support from four of Arizona’s leading economic development organizations – Arizona-Mexico Commission, Arizona Commerce Authority, Arizona Department of Transportation, and Arizona Department of Tourism – has maintained the Arizona-Mexico Economic Indicators at https://azmex.eller.arizona.edu. This new set of online indicators monitors Arizona’s trade and competitiveness in the U.S.-Mexico region across a range of key economic categories such as Arizona’s trade, border crossings, commodity flows through border ports of entry, and economic trends in Mexico.

While designed primarily to meet the needs of organizations engaged with improving Arizona’s trade and competitiveness, the AZMEX website has also proved to be a useful tool for citizens, business leaders, and public sector decision makers interested in the unique opportunities the border region has to offer. The project’s overarching theme is that presentation of the most up-to-date factual knowledge on the region will enhance understanding and appreciation of the importance of Arizona’s economic relationships with Mexico.

Connection with previous reports

The original set of regional economic indicators focusing on the Arizona-Sonora Region was compiled by the University of Arizona in 2000 under the auspices of the Arizona-Mexico Commission and in collaboration with several institutions in Sonora, Mexico. The last report in this series was completed in 2009 and is available in pdf format on our website at http://ebr.eller.arizona.edu/. While some core indicator groups have been retained from these previous studies, the emphasis and scope of the AZMEX website and this report has been broadened in response to the changing economic landscape, as well as, interest on the part of many Arizonans in extending their understanding of economic relationships with Mexico beyond Sonora.

About this Annual Report

This is the second annual report that follows the original design of the 2015 Annual Report. While the AZMEX website is a dynamic tool providing access to the most recent data at any time, the Annual Report is prepared as a detailed profile of Arizona’s trade and competitiveness in the U.S.-Mexico region relative to other border states on an annual basis. By taking a “snapshot” of these indicators at a single point in time, the Annual Report provides a benchmark for year-over-year comparisons, and for evaluating major changes within each indicator group as well as across sections. The focus of the Annual Report is to show where Arizona stands relative to previous period(s), and equally important, how Arizona’s progress compares to other border states.
The Report is organized into the following sections: Population, Economic Output, Exports to Mexico, Exports to Canada, Border Crossings, Commodity Flows, Foundations of Export-Based Economy, Foundations of Knowledge-Based Economy, Educational Attainment, and Foreign Direct Investment. Each section describes the significance of relevant indicators and highlights important changes and trends. In addition, charts illustrating trends and comparisons are presented. Directly following the "Introduction" is a "Summary of Findings" section which provides readers with a quick scan of important changes as they pertain to Arizona. Findings are organized according to positive changes, declines, upward trends (over the decade), downward trends (over the decade), increases in Arizona's share among border states, decreases in Arizona's share among border states, and trends in Mexico, Sonora, and Sinaloa. This summary outlines areas where Arizona is making progress, as well as, areas Arizona is falling behind relative to other U.S. border states.

**Methodology**

Indicators are presented in respective units of measurement, such as dollar value of exported merchandise, number of vehicles and passengers crossing the border, or as percentages of totals. To facilitate the comparison of trends with other border states (last decade wherever applicable) index numbers are used with the first year in the series serving as a base year, e.g., year 2005=100. This method allows for easy visual comparison of relative changes, especially in situations when units such as states or volume of trade through border ports of entry differ greatly in size. Arizona's competitiveness in the U.S.-Mexico region relative to other border states is represented by a simple proxy measure of percentage share with a focus on changes between two periods.
IN 2015, ARIZONA’S EXPORTS TO MEXICO INCREASED 6.3%, AND THE IMPORTANT MANUFACTURING EXPORTS SECTOR EXPERIENCED A 10.5% GAIN.

IN 2015, TOTAL U.S. EXPORTS OF ELECTRIC AND ELECTRONIC PRODUCTS TO MEXICO TRAVELLING VIA ARIZONA BPOE INCREASED 13.2%.

Compared to a year ago, Arizona experienced positive changes in the following areas:

- Arizona’s total population grew 1.4% (2014-2015);
- Arizona’s % of population over 65 years increased 3.4% (2013-2014);
- Arizona’s real GDP increased 2.4% (2013-2014);
- Arizona’s real GDP per capita increased 0.9% (2013-2014);
- Arizona’s exports to NAFTA trade area increased 4.6% (2014-2015);
- Arizona’s imports from NAFTA trade area increased 2.7% (2014-2015);
- Arizona’s exports of manufacturing products to NAFTA increased 7.3% (2014-2015);
- Arizona’s imports of manufacturing products from NAFTA increased 6.9% (2014-2015);
- Arizona’s exports to Mexico increased 6.3% (2014-2015);
- Arizona’s imports from Mexico increased 4.0% (2014-2015);
- Arizona’s manufacturing exports to Mexico increased 10.5% (2014-2015);
- Arizona’s imports of manufacturing products from Mexico increased 8.9% (2014-2015);
- Vehicle and passenger crossings were up 3.6% and 3.4%, respectively, at Arizona BPOE (2014-2015); as are bus crossings (6.9%) and pedestrian crossings (5.8%);
- Truck crossings increased 2.1% and train crossings 0.8% (2014-2015);
- U.S. exports to Mexico through Arizona BPOE increased 5.8% (2014-2015);
- U.S. exports of electric and electronic products to Mexico through Arizona BPOE increased 13.2% (2014-2015);
- U.S. exports of transportation equipment to Mexico through Arizona BPOE increased 5.8% (2014-2015);
- U.S. imports from Mexico through Arizona BPOE increased 1.3% (2014-2015);
• **U.S. imports of electric and electronic products** from Mexico through Arizona BPOE increased 1.6% (2014-2015);  

• **U.S. imports of transportation equipment** from Mexico through Arizona BPOE increased 7.2% (2014-2015);  

• Arizona’s **pharmaceutical and medicine manufacturing employment** increased 5.2% (2013-2014);  

• Arizona’s **% of population over 25 with a BA or higher** increased 0.7% (2013-2014).  

• The number of **patents** issued in Arizona increased 0.9% (2014-2015);  

• In Arizona, the number of households where people can use the **Internet** from home increased 5.0% (2013-2015).

**Compared to a year ago, Arizona experienced decline in the following areas**

• Arizona’s **% of population under 15 years** decreased 1.3% (2013-2014);  

• Arizona’s total **exports to Canada** and **manufacturing exports to Canada** declined 1.7% and 2.0%, respectively (2014-2015);  

• Arizona’s **imports from Canada** decreased 3.6% (2014-2015);  

• U.S. **exports of machinery/equipment products** to Mexico via Arizona BPOE were down 6.6% (2014-2015);  

• U.S. **imports of fresh produce from Mexico** through Arizona BPOE declined 4.0% (2014-2015);  

• Arizona’s **high-tech manufacturing employment** declined 0.1% (2013-2014);  

• **Computer and electronic product manufacturing employment** in Arizona declined 4.0% (2013-2014)  

• **Aerospace products and parts manufacturing employment** in Arizona declined 1.2% (2013-2014);  

• The number of **life and physical scientists** employed in Arizona
SUMMARY OF FINDINGS

Compared to a decade ago, Arizona experienced upward trends in the following areas:

- Arizona’s population increased 14.1% (2005-2015);
- The percentage of Arizona’s population 65 and over increased 23.0% (2004-2014);
- Arizona’s real GDP increased 13.2% (2004-2014);
- Arizona’s exports to NAFTA trade area increased 78.9% (2005-2015);
- Arizona’s exports of manufactured products to the NAFTA trade area increased 31.1% (2005-2015);
- Arizona’s exports to Mexico increased 93.0% (2005-2015);
- Arizona’s exports to Canada grew 37.2% (2005-2015);
- Arizona’s exports of manufacturing products to Mexico and Canada increased 31.3% and 30.5%, respectively (2005-2015);
- U.S. exports to Mexico via Arizona BPOE increased 126.2% (2005-2015);
- U.S. imports from Mexico via Arizona BPOE increased 71.6% (2005-2015);
- U.S. exports of electric/electronic products to Mexico via Arizona BPOE increased 129.3% (2005-2015);
- U.S. exports of transportation equipment products to Mexico via Arizona BPOE increased 167.8% (2005-2015);
- U.S. imports of electric/electronic products from Mexico via Arizona BPOE increased 81.6% (2005-2015);
- U.S. imports of transportation equipment products from Mexico via Arizona BPOE increased 201.2% (2005-2015);
- U.S. Imports of Fresh Produce from Mexico via Arizona BPOE increased 50.9% (2005-2015).
- Number of truck crossings through all Arizona BPOE increased 12.2% (2005-2015);
IN 2015, THE NUMBER OF PATENTS ISSUED ANNUALLY IN ARIZONA WAS 74.3% HIGHER THAN IT WAS A DECADE AGO IN 2005.

SUMMARY OF FINDINGS

• Number of train crossings through Nogales BPOE increased 2.0% (2005-2015);

• Arizona’s Employment pharmaceutical and medicine manufacturing increased 92.9% (2004-2014);

• Number of patents in Arizona in 2015 was 74.3% more than in 2005;

Compared to a decade ago, Arizona experienced downward trends in the following areas

• The percentage of Arizona’s population under 15 years decreased 8.7% (2004-2014);

• Arizona’s real GDP per capita decreased 4.9% (2004-2014);

• Number of bus crossings through Arizona BPOE decreased 2.8% (2005-2015);

• Number of vehicle passenger crossings through Arizona BPOE decreased 24.9% (2005-2015);

• Number of pedestrian crossings decreased 33.7% (2005-2015);

• Arizona’s high-tech manufacturing employment decreased 3.1% (2007-2014);

• Arizona’s computer and electronic manufacturing employment decreased 26.1% (2005-2015);

• Arizona’s aerospace product and parts manufacturing employment decreased 6.3% (2005-2015);
Compared to a decade ago, Arizona’s share of southern border states increased in the following areas:

- Arizona’s share of border states exports to NAFTA trade area increased from 6.2% in 2005 to 6.4% in 2015.
- Arizona’s share of border states’ exports to Mexico increased from 6.5% to 6.9% (2005-2015);
- Arizona BPOE share of U.S. exports to Mexico via southern BPOE increased from 5.9% to 6.8% (2005-2015);
- Arizona BPOE share of U.S. exports of transportation manufacturing products to Mexico via southern BPOE increased from 4.6% to 5.2% (2005-2015);
- Arizona BPOE share of U.S. imports of transportation manufacturing products from Mexico via southern BPOE increased from 5.9% to 7.2% (2005-2015).

Compared to a decade ago, Arizona’s share of southern border states decreased in the following areas:

- Arizona’s share of border states exports of manufacturing products to NAFTA trade area decreased from 6.2% to 4.9% (2005-2015);
- Arizona’s share of border states’ manufacturing exports to Mexico decreased from 6.5% to 4.9% (2005-2015);
- Arizona’s share of border states’ exports to Canada fell from 5.4% to 4.9% (2005-2015);
- Arizona’s share of manufacturing exports to Canada decreased from 5.2% to 5.1% (2005-2015);
- Arizona BPOE share of U.S. exports of electric and electronic manufacturing products to Mexico via southern BPOE declined from 6.4% to 6.0% (2005-2015);
- Arizona BPOE share of U.S. imports of electric and electronic manufacturing products via southern BPOE decreased from 5.7% to 3.7% (2005-2015);
- Arizona BPOE share of U.S. imports of fresh produce via southern BPOE decreased from 47.6% to 27.7% (2005-2015).
Selected Indicators for Mexico, Sonora, and Sinaloa:

**Upward Trends**

- **Sonora’s population** increased 29.7% (2000-2015);
- **Sonora’s real GSP** increased 44.6% (2004-2014);
- **Sinaloa’s real GSP** increased 24.1% (2004-2014);
- **Mexico’s real GDP** increased 27.1% (2004-2014);
- **Mexico’s IMMEX employment** increased 24.2% (2008-2015);
- **Border states’ IMMEX employment** increased 24.3% (2008-2015);
- **Sonora’s IMMEX employment** increased 20.9% (2008-2015);
- **FDI in Mexico’s border states** increased 20.0% (2014-2015);
- **Sinaloa’s FDI** increased 283.9% (2005-2015).

**Downward Trends**

- Share of Sonora’s **population under 15 years** of age declined from 32.7% to 27.3% (2000-2015);
- Sonora’s share of border states’ **IMMEX employment** decreased from 8.3% to 8.1% (2008-2015);
- Sonora’s **FDI** decreased 24.0% (2005-2015);
- Sonora’s share of border states’ **FDI** decreased from 6.5% to 5.9% (2005-2015);
- **FDI in Mexico’s border states** decreased 16.6% (2005-2015);
Population growth is an indicator of the attractiveness of a region for businesses and people. Population levels also indicate both the volume of producers and consumers in regional economy. Age composition provides insight into the changing relationship between working age and dependent populations.

**Arizona’s Population**

In 2015, Arizona added 91,010 residents to reach a population total of 6.8 million (Figure 1). This represented a 1.4% increase over 2014, and ranked Arizona second behind Texas among border states for annual population growth. Texas posted the highest growth rate of 1.9%. California came in third at 0.9%, while New Mexico was the only state to lose residents posting a 0.02% decrease.

Between 2000 and 2005, Arizona had significantly higher annual population growth rates than other border states, reaching a peak of 3.5% in 2005. However, Arizona’s growth decelerated more rapidly than other states following 2005 and moving into the Great Recession. Post-recession, Texas and Arizona have added residents at a faster pace than other border states, with annual growth rates consistently exceeding 1.0%. Over the 15 years since Census 2000, Arizona’s population has grown 30.1%, and in Texas 31.2%. By contrast, California’s population grew 15.2%, and New Mexico’s 14.5%.

(Figure 2)

**Sonora’s Population**

According to the just-released Encuesta Intercensal 2015, Sonora’s population reached 2.9 million.
in 2015. Sonora’s population has increased 29.7% since 2000, approximately the same percent gain as Arizona and Texas. (Figure 3)

**Age Distribution**

In 2014, 15.9% of Arizona’s population was 65 years and older, a 2.9 percentage point increase over 2000. Over 65 age cohorts for the other border states and the U.S. as a whole are also increasing. However, Arizona had the highest share. (Figure 4)

Arizona’s share of population under 15 was 20.1% in 2014, higher than the national figure of 19.2%, but a decline of 2.4 percentage points since 2000. California experienced the greatest percent decrease in this time period falling 3.4 percentage points. Texas had the largest share of residents under 15 in 2014 at 22.1%, but this share is also declining. (Figure 5)

While Mexico border states have higher percentages of total population under 15, long term trends show that, like the U.S., Mexico’s population is aging. Between 2000 and 2015, the share of residents under 15 in Mexico’s border states has decreased by between 3.6 and 6.9 percentage points. (Figure 6)

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**How does Arizona compare?**

- **2000–2015:** Arizona had the second fastest growing population and highest share of 65+ among U.S. border states

- **2005–2015:** Mexico border states have a higher share of young people than U.S. border states, but Mexico’s population is also aging
Gross domestic product (GDP) is the total output of a country or a state produced in a year. It is a direct measure of the size of an economy. Per capita GDP is useful as a measure of relative performance. A rise in per capita GDP signals growth in the economy.

### Arizona Gross Domestic Product

At 2.4% Arizona’s real GDP growth kept pace with the nation in 2014. However, even after trending upward for the last five years, the state's 2014 real GDP was still 3.4% below its pre-recession peak of $272.8 bil (chained $2009). Texas experienced the fastest growth in 2014 among border states at 4.5%. California and New Mexico experienced real GDP growth rates of 2.3% and 1.8%, respectively. (Table 1)

Arizona’s share of border states real GDP was 6.7% in 2014. This is still below its 7.3% share of a decade ago. (Figure 7)

Arizona’s real GDP grew significantly faster than other border states prior to the great recession. Post recession, Arizona’s trend has more closely resembled California’s slower growth path. Arizona is the only border state whose real GDP has yet to reach or surpass its pre-recessionary level. (Figure 8)

In 2014, Arizona’s real per capita GDP (chained $2009) was $39,129. This is a 1.0% increase over the year, and is the lowest real GDP per capita
among southern border states (Figure 9). Other border states saw growth of between 1.3% for California and 2.7% in Texas. U.S. real per capita GDP grew 1.5% in 2014.

**Sonora Gross State Product**

In 2014, Sonora’s real GSP was 394,623 million pesos (constant 2008 pesos), remaining relatively unchanged from a year ago. Sinaloa real GSP grew 2.0%, and Mexico’s real GDP grew by 2.2% in 2014. Over the decade 2004–2014, Sonora’s real GSP has grown 44.6%. (Figure 10)

Sonora’s real per capita GSP was 139,398 pesos (constant 2008 pesos) in 2014, the third highest among Mexican border states. Nuevo León was the highest at 198,694. Sonora’s real per capita GSP remains significantly higher than Mexico’s per capita GDP of 113,205. (Figure 11)

Sonora’s real per capita GSP was roughly equal to 10,481 (US$) annually in 2014. Sonora and Baja California were the only border states to experience declining real per capita GSP in 2014, falling 1.4% and 0.9%, respectively. (Figure 11)

**How does Arizona Compare?**

- Arizona’s real GDP and real GDP/capita suggest slower recovery after the recession than other border states
- Sonora’s real per capita GSP has followed a similar trend to Mexico, however, is consistently higher than national levels
Table 2: Exports to Mexico ($mil)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>4,747.7</td>
<td>17,711.5</td>
<td>185.1</td>
<td>50,277.1</td>
</tr>
<tr>
<td>2006</td>
<td>5,369.4</td>
<td>19,627.7</td>
<td>258.0</td>
<td>54,811.3</td>
</tr>
<tr>
<td>2007</td>
<td>5,235.2</td>
<td>18,346.8</td>
<td>375.8</td>
<td>56,006.3</td>
</tr>
<tr>
<td>2008</td>
<td>5,909.7</td>
<td>20,472.3</td>
<td>384.5</td>
<td>62,087.7</td>
</tr>
<tr>
<td>2009</td>
<td>4,546.7</td>
<td>17,473.9</td>
<td>384.6</td>
<td>56,035.4</td>
</tr>
<tr>
<td>2010</td>
<td>5,135.3</td>
<td>20,949.1</td>
<td>429.4</td>
<td>72,688.5</td>
</tr>
<tr>
<td>2011</td>
<td>6,044.9</td>
<td>25,825.4</td>
<td>464.7</td>
<td>87,186.1</td>
</tr>
<tr>
<td>2012</td>
<td>6,290.8</td>
<td>26,379.6</td>
<td>593.0</td>
<td>94,434.3</td>
</tr>
<tr>
<td>2013</td>
<td>7,068.4</td>
<td>23,901.6</td>
<td>800.7</td>
<td>100,929.7</td>
</tr>
<tr>
<td>2014</td>
<td>8,623.0</td>
<td>25,419.7</td>
<td>1,548.5</td>
<td>102,555.9</td>
</tr>
<tr>
<td>2015</td>
<td>9,164.2</td>
<td>26,819.8</td>
<td>1,683.4</td>
<td>94,524.0</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

Mexico is Arizona’s number one trade partner, accounting for more than 30% of Arizona’s exports to foreign markets. The dynamics of Arizona’s exports to Mexico provide a composite measure of both Arizona’s integration in the U.S. – Mexico production sharing system, as well as competitiveness in Mexico’s consumer markets.

Exports to Mexico

Texas lead the border states exporting $94.5 billion in goods to Mexico in 2015. Texas was followed by California with $26.8 billion, and Arizona came in third with $9.2 billion. New Mexico exported the smallest dollar value of $1.7 billion. (Table 2)

Arizona’s $9.2 billion in exports to Mexico was a 6.3% increase over its $8.6 billion in 2014. Arizona’s exports to Mexico have increased steadily since 2009, growing at rates between 4.0% and 22.0% annually. Arizona’s percent share of exports to Mexico of southern border states has also increased. In 2015, its share was 6.9%, up from 6.2% in 2014. (Figure 12)

Arizona’s exports to Mexico increased 93% between 2005 and 2015. Among southern border states, Arizona’s growth in exports to Mexico has tracked California’s growth closely, but has recently caught up with Texas. New Mexico’s growth was by far the most rapid over the decade with 2015 export levels 809% above what they were in 2005. (Figure 13)
**Manufacturing Exports to Mexico**

The dollar value of Arizona’s manufacturing exports to Mexico was $6.0 billion in 2015, ranking Arizona third among southern border states. Texas exported the largest dollar value of manufacturing products at $90.3 billion. *(Table 3)*

Arizona’s manufacturing exports to Mexico grew by 10.5% in 2015 and accounted for 65.6% of the state’s total exports to Mexico. Arizona’s growth in this sector was faster than in California (7.0%), while Texas exports declined 7.1%. Only New Mexico saw faster growth than Arizona in 2015 at 13.3%. Arizona’s border state share of manufacturing exports to Mexico increased from 4.3% to 4.9% in 2015. *(Figure 14)*

Arizona trails California and Texas in total dollar value of manufacturing exports. Between 2005 and 2015, Arizona experienced 31.3% growth in this sector, behind California’s 49.6%, and Texas at 86.8%. New Mexico has by far the smallest dollar volume of trade and experienced more than 946% growth during this time. *(Figure 15)*

**Table 3: Manufacturing Exports to Mexico ($mil)**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>4,580.9</td>
<td>17,079.7</td>
<td>157.1</td>
<td>48,327.7</td>
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<tr>
<td>2006</td>
<td>5,055.8</td>
<td>18,859.8</td>
<td>207.7</td>
<td>52,613.7</td>
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<td>2007</td>
<td>4,897.9</td>
<td>17,461.6</td>
<td>336.6</td>
<td>53,479.4</td>
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<tr>
<td>2008</td>
<td>5,008.9</td>
<td>19,364.0</td>
<td>356.6</td>
<td>58,771.2</td>
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<td>2009</td>
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<td>16,569.4</td>
<td>357.7</td>
<td>53,526.1</td>
</tr>
<tr>
<td>2010</td>
<td>4,545.8</td>
<td>19,859.4</td>
<td>407.9</td>
<td>68,846.7</td>
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<td>2011</td>
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<td>24,647.6</td>
<td>443.5</td>
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</tr>
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<td>25,068.5</td>
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<tr>
<td>2013</td>
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<td>22,471.2</td>
<td>652.8</td>
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<td>2014</td>
<td>5,444.5</td>
<td>23,897.5</td>
<td>1,449.9</td>
<td>97,242.0</td>
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<tr>
<td>2015</td>
<td>6,014.0</td>
<td>25,559.4</td>
<td>1,643.1</td>
<td>90,299.3</td>
</tr>
</tbody>
</table>

*Source: U.S. Census Bureau*

**Figure 14: Arizona Manufacturing Exports to Mexico**

**Figure 15: U.S. Border States Mfg. Exports to Mexico (2005=100)**

*Source: U.S. Census Bureau*

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**How does Arizona compare?**

In 2015, 65.6% of Arizona’s exports to Mexico were in manufacturing products.

In 2015, Arizona’s manufacturing exports to Mexico increased 10.5%; faster growth than California, Texas, or the U.S. overall.
Table 4: Exports to Canada ($mil)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,614.0</td>
<td>13,261.7</td>
<td>134.6</td>
<td>14,769.6</td>
</tr>
<tr>
<td>2006</td>
<td>1,846.9</td>
<td>14,247.2</td>
<td>198.7</td>
<td>15,716.2</td>
</tr>
<tr>
<td>2007</td>
<td>2,193.3</td>
<td>16,273.6</td>
<td>237.6</td>
<td>16,899.9</td>
</tr>
<tr>
<td>2008</td>
<td>2,319.5</td>
<td>17,850.2</td>
<td>343.2</td>
<td>19,381.6</td>
</tr>
<tr>
<td>2009</td>
<td>1,762.3</td>
<td>14,314.9</td>
<td>247.1</td>
<td>13,799.4</td>
</tr>
<tr>
<td>2010</td>
<td>1,963.0</td>
<td>16,214.3</td>
<td>283.9</td>
<td>18,757.8</td>
</tr>
<tr>
<td>2011</td>
<td>2,135.0</td>
<td>17,261.0</td>
<td>352.2</td>
<td>22,124.4</td>
</tr>
<tr>
<td>2012</td>
<td>2,194.1</td>
<td>17,423.7</td>
<td>328.3</td>
<td>23,858.9</td>
</tr>
<tr>
<td>2013</td>
<td>2,273.9</td>
<td>18,884.8</td>
<td>288.9</td>
<td>26,054.3</td>
</tr>
<tr>
<td>2014</td>
<td>2,253.6</td>
<td>18,342.6</td>
<td>231.6</td>
<td>31,295.0</td>
</tr>
<tr>
<td>2015</td>
<td>2,214.8</td>
<td>16,929.0</td>
<td>180.0</td>
<td>25,387.4</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

Although Arizona’s exports to Canada form a smaller share of totals than exports to Mexico, they are significant as an important driver of regional economic activity. The dynamics of Arizona’s exports to Canada provide a composite measure of both Arizona’s integration into the North American production-sharing system and competitiveness in Canada’s consumer markets.

Figure 16: Arizona Exports to Canada

Arizona's exports to Canada were valued at $2.2 billion in 2015. Among southern border states, Texas exported the largest dollar value to Canada at $25.4 billion, followed by California with $16.9 billion. New Mexico exported $0.2 billion. (Table 4)

Arizona’s $2.2 billion in exports to Canada in 2015 was a 1.7% decline from $2.25 billion in 2014. However, Arizona’s percent share of southern border states’ exports to Canada increased from 4.3% in 2014 to 5.0% as other states experienced larger dollar declines in 2015. (Figure 16)

Arizona’s exports to Canada increased 37.2% over the decade 2005 to 2015. Texas and California exports grew by 71.9% and 27.0%, respectively, during the same time frame. New Mexico’s exports grew from $0.13 billion in 2005 to $0.18 billion in 2015 for 33.7% increase over the decade. (Figure 17)

Exports to Canada
Manufacturing Exports to Canada

In 2015, Texas lead the southern border states in this sector with $19.4 billion in manufacturing exports to Canada. Arizona was third among southern border states with $1.8 billion. (Table 5)

The 2015 dollar value of Arizona’s manufacturing exports to Canada was a 2.0% decrease from $1.83 billion in 2014. Despite this decrease in dollar value, Arizona’s percent share of manufacturing exports to Canada among southern border states increased from 4.5% in 2014, to 5.1% in 2015. (Figure 18)

In 2015, Arizona’s manufacturing exports to Canada were 30% higher than they were a decade ago in 2005. Arizona has experienced slower growth than Texas or New Mexico in its dollar value of manufacturing exports to Canada, but is still slightly ahead of California. New Mexico’s growth in this sector has slowed significantly since 2011. (Figure 19)

How does Arizona compare?

- Arizona has seen 30% growth over the last decade in manufacturing exports to Canada, faster growth than California.
- In 2015, Arizona ranked third among southern border states in manufacturing exports to Canada.

Table 5: Manufacturing Exports to Canada ($mil)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,374.3</td>
<td>11,255.5</td>
<td>125.4</td>
<td>13,645.5</td>
</tr>
<tr>
<td>2006</td>
<td>1,561.8</td>
<td>12,056.4</td>
<td>174.9</td>
<td>14,773.0</td>
</tr>
<tr>
<td>2007</td>
<td>1,845.5</td>
<td>13,912.6</td>
<td>193.3</td>
<td>15,637.6</td>
</tr>
<tr>
<td>2008</td>
<td>1,970.7</td>
<td>15,261.4</td>
<td>233.5</td>
<td>17,451.4</td>
</tr>
<tr>
<td>2009</td>
<td>1,453.0</td>
<td>11,841.6</td>
<td>160.2</td>
<td>12,533.4</td>
</tr>
<tr>
<td>2010</td>
<td>1,546.6</td>
<td>13,371.7</td>
<td>232.4</td>
<td>16,907.7</td>
</tr>
<tr>
<td>2011</td>
<td>1,681.7</td>
<td>14,380.5</td>
<td>337.5</td>
<td>20,119.5</td>
</tr>
<tr>
<td>2012</td>
<td>1,735.1</td>
<td>14,697.5</td>
<td>317.1</td>
<td>22,185.9</td>
</tr>
<tr>
<td>2013</td>
<td>1,814.4</td>
<td>15,992.5</td>
<td>273.5</td>
<td>23,007.2</td>
</tr>
<tr>
<td>2014</td>
<td>1,830.1</td>
<td>15,462.3</td>
<td>218.5</td>
<td>22,896.9</td>
</tr>
<tr>
<td>2015</td>
<td>1,793.5</td>
<td>14,074.6</td>
<td>166.7</td>
<td>19,396.7</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau
Table 6: Arizona Northbound Truck Crossings (000’s)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Douglas</th>
<th>Lukeville</th>
<th>Naco</th>
<th>Nogales</th>
<th>San Luis</th>
<th>Sasabe</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>28.4</td>
<td>0.9</td>
<td>4.5</td>
<td>266.2</td>
<td>45.9</td>
<td>0.5</td>
</tr>
<tr>
<td>2006</td>
<td>28.0</td>
<td>0.7</td>
<td>4.1</td>
<td>289.6</td>
<td>45.9</td>
<td>0.4</td>
</tr>
<tr>
<td>2007</td>
<td>26.7</td>
<td>0.5</td>
<td>4.6</td>
<td>295.3</td>
<td>42.7</td>
<td>0.3</td>
</tr>
<tr>
<td>2008</td>
<td>25.1</td>
<td>0.4</td>
<td>2.5</td>
<td>303.8</td>
<td>43.8</td>
<td>0.4</td>
</tr>
<tr>
<td>2009</td>
<td>25.2</td>
<td>0.3</td>
<td>1.7</td>
<td>276.9</td>
<td>39.6</td>
<td>0.1</td>
</tr>
<tr>
<td>2010</td>
<td>25.5</td>
<td>0.1</td>
<td>2.5</td>
<td>307.5</td>
<td>37.1</td>
<td>0.0</td>
</tr>
<tr>
<td>2011</td>
<td>29.9</td>
<td>0.0</td>
<td>3.4</td>
<td>287.1</td>
<td>34.2</td>
<td>0.0</td>
</tr>
<tr>
<td>2012</td>
<td>31.6</td>
<td>0.0</td>
<td>3.7</td>
<td>307.6</td>
<td>34.9</td>
<td>0.0</td>
</tr>
<tr>
<td>2013</td>
<td>32.5</td>
<td>0.1</td>
<td>3.7</td>
<td>311.7</td>
<td>33.4</td>
<td>0.0</td>
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<tr>
<td>2014</td>
<td>33.1</td>
<td>0.1</td>
<td>3.6</td>
<td>312.0</td>
<td>32.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2015</td>
<td>32.1</td>
<td>0.1</td>
<td>3.0</td>
<td>319.8</td>
<td>33.7</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics and EBRC

Figure 20: Arizona Northbound Truck Crossings

Source: Bureau of Transportation Statistics and EBRC

Figure 21: Arizona BPOE Northbound Truck Crossings (2005=100)

Source: Bureau of Transportation Statistics and EBRC

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Arizona’s border ports of entry (BPOE) play a pivotal role in facilitating commercial exchanges between the U.S., Canada, and Mexico. The dynamics of personal vehicle, pedestrian and bus crossings reflect the regional significance of border ports of entry for personal transportation, tourism and trade. Commercial travel and freight in the form of train and truck crossings contextualize border ports of entry as of national and North American significance.

Truck Crossings

Arizona’s six border ports of entry facilitated 388,657 truck crossings in 2015. This was a 2.1% increase from a year ago. Nogales facilitated the largest volume of truck crossings of Arizona BPOE, with 319,747 in 2015. San Luis was second, with 33,712, and Douglas was third with 32,104. (Table 6)

Truck crossings represent an important segment of commercial border crossing activity along the U.S.–Mexico border. Trucks carry the largest value and volume of merchandise across the border, and are the primary means of transportation for Mexican fresh produce. In 2015, the Arizona BPOE share of southern truck crossings decreased 0.2%. (Figure 20)

Nogales is Arizona’s largest border port of entry. This port has experienced steady, yet slow growth in truck crossings since 2005. Nogales and Douglas are the only Arizona BPOE which have experienced enough growth in the volume of truck cross-
ings to bring them back above 2005 levels. (Figure 21)

Nogales ranks among the top southern border ports in volume of truck crossings. In 2015, among major southern BPOE, Laredo facilitated the largest volume of truck crossings, 2.0 million. El Paso was second with 747,702 crossings. (Table 7)

Truck crossings through the Nogales port increased 20.1% between 2005 and 2015. Major ports such as Calexico East, El Paso, and Hidalgo all experienced much slower growth rates, at 5.4%, 1.0%, and 11.2%, respectively. Traffic through Laredo increased 38.5% over the decade. All major ports experienced declines during the Great Recession. However, since the recession, growth has been most consistent in Laredo. (Figure 22)

Nogales is one of the major U.S. ports of entry for Mexican fresh produce. The seasonal variability associated with the import of fresh produce through Nogales is reflected in higher truck crossing volumes during winter months (Dec.–May). (Figure 23)

### Table 7: Major BPOE Northbound Truck Crossings (000’s)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Nogales</th>
<th>Calexico East</th>
<th>El Paso</th>
<th>Hidalgo</th>
<th>Laredo</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>266</td>
<td>320</td>
<td>741</td>
<td>491</td>
<td>1,456</td>
</tr>
<tr>
<td>2006</td>
<td>266</td>
<td>320</td>
<td>741</td>
<td>491</td>
<td>1,456</td>
</tr>
<tr>
<td>2007</td>
<td>295</td>
<td>323</td>
<td>783</td>
<td>487</td>
<td>1,564</td>
</tr>
<tr>
<td>2008</td>
<td>304</td>
<td>326</td>
<td>759</td>
<td>476</td>
<td>1,555</td>
</tr>
<tr>
<td>2009</td>
<td>277</td>
<td>277</td>
<td>644</td>
<td>419</td>
<td>1,382</td>
</tr>
<tr>
<td>2010</td>
<td>308</td>
<td>304</td>
<td>710</td>
<td>459</td>
<td>1,586</td>
</tr>
<tr>
<td>2011</td>
<td>287</td>
<td>313</td>
<td>715</td>
<td>453</td>
<td>1,696</td>
</tr>
<tr>
<td>2012</td>
<td>308</td>
<td>322</td>
<td>725</td>
<td>482</td>
<td>1,790</td>
</tr>
<tr>
<td>2013</td>
<td>312</td>
<td>326</td>
<td>739</td>
<td>511</td>
<td>1,846</td>
</tr>
<tr>
<td>2014</td>
<td>312</td>
<td>325</td>
<td>759</td>
<td>530</td>
<td>1,948</td>
</tr>
<tr>
<td>2015</td>
<td>320</td>
<td>337</td>
<td>748</td>
<td>546</td>
<td>2,016</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics and EBRC

#### How does Arizona compare?

- **2005–2015:** Nogales has experienced substantial growth (20.1%) since 2005, much faster than Calexico East, El Paso, and Hidalgo.
- **2015:** Nogales was Arizona’s busiest port for truck crossings facilitating 388,657 crossings, 2.5% increase Y/Y.
Nogales is the oldest rail crossing along the U.S.-Mexico border. Historically, the railroad has primarily served mining and agriculture. At present, the most important commodities are associated with auto manufacturing at the Ford Company in Hermosillo, Sonora.

Train Crossings

Train crossings are particularly vital to the auto industry in Sonora, as well as to the transport of commodities such as cement and garbanzo beans. Nogales ranked third among major ports in 2015, with 801 train crossings. Laredo facilitated the largest volume of train crossings in 2015, with 3,634 crossings, followed by El Paso with 1,528. (Table 8)

Arizona train crossings increased almost 1.0% in 2015. Although, Arizona's share of train crossings of southern border ports remained relatively unchanged in 2015. (Figure 24)

Nogales has experienced variable growth during the last decade, exceeding its 2005 level only in the last three years. Only Laredo grew faster with 5.0% growth. (Figure 25)

Bus Crossings

The Nogales port of entry facilitated 9,694 bus crossings in 2015, a 2.9% increase over 2014, and accounted for 74.1% of all bus crossings at Arizona BPOE. Among major southern BPOE, Laredo facilitated the largest volume of bus crossings, 40,065, in 2015. No-
gales ranked fourth ahead of Calexico East with 3,064, and Santa Teresa with 118 bus crossings. (Table 9)

Arizona BPOE facilitated 13,088 bus crossings in 2015, a 6.9% gain over 2014. Arizona’s percent share of bus crossings among all southern border ports in 2015 was 6.5%, an increase from its 5.7% share in 2014. (Figure 26)

Between 2005 and 2015, bus crossing volume at the Nogales BPOE expanded 7.8%. Although still a rather small port, Calexico East grew dramatically over the decade, with 2015 levels more than 900% higher than in 2005 reflecting the recent expansions at that port (not shown on chart due to scale). Overall, the volume of crossings at major southern BPOE increased 8.7% during this time period. (Figure 27)

How does Arizona compare?

- 2005 – 2015: Train traffic via Nogales grew 2.0%. Its growth was surpassed only by Laredo which grew 5.1% over the decade.

- In 2015, 9,694 buses crossed the border at Nogales, a 2.9% gain over 2014.

- 2005 – 2015: bus crossings at Nogales expanded 7.9%. El Paso and Laredo experienced larger increases, 23.4% and 11.8%, respectively. Bus crossings at Hidalgo decreased 7.8%.

### Table 9: Major BPOE Northbound Crossings

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Nogales</th>
<th>Calexico East</th>
<th>El Paso</th>
<th>Hidalgo</th>
<th>Laredo</th>
<th>Santa Teresa</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>8,988</td>
<td>284</td>
<td>15,993</td>
<td>27,964</td>
<td>35,841</td>
<td>116</td>
</tr>
<tr>
<td>2006</td>
<td>11,521</td>
<td>1,518</td>
<td>14,843</td>
<td>27,344</td>
<td>37,105</td>
<td>122</td>
</tr>
<tr>
<td>2007</td>
<td>12,375</td>
<td>1,170</td>
<td>18,530</td>
<td>28,942</td>
<td>37,106</td>
<td>186</td>
</tr>
<tr>
<td>2008</td>
<td>11,585</td>
<td>1,669</td>
<td>24,716</td>
<td>33,127</td>
<td>39,122</td>
<td>341</td>
</tr>
<tr>
<td>2009</td>
<td>11,096</td>
<td>2,451</td>
<td>19,474</td>
<td>28,407</td>
<td>43,342</td>
<td>329</td>
</tr>
<tr>
<td>2010</td>
<td>9,872</td>
<td>1,897</td>
<td>22,852</td>
<td>20,031</td>
<td>44,121</td>
<td>440</td>
</tr>
<tr>
<td>2011</td>
<td>9,144</td>
<td>3,193</td>
<td>23,421</td>
<td>20,992</td>
<td>42,980</td>
<td>315</td>
</tr>
<tr>
<td>2012</td>
<td>8,068</td>
<td>2,564</td>
<td>22,798</td>
<td>20,476</td>
<td>38,368</td>
<td>258</td>
</tr>
<tr>
<td>2013</td>
<td>8,699</td>
<td>2,571</td>
<td>21,595</td>
<td>22,521</td>
<td>38,017</td>
<td>215</td>
</tr>
<tr>
<td>2014</td>
<td>9,423</td>
<td>2,785</td>
<td>21,554</td>
<td>26,087</td>
<td>41,230</td>
<td>129</td>
</tr>
<tr>
<td>2015</td>
<td>9,694</td>
<td>3,064</td>
<td>19,739</td>
<td>25,776</td>
<td>40,065</td>
<td>118</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics and EBRC

### Figure 26: Arizona Northbound Bus Crossings

Legend:
- AZ % of Southern BPOE
- Arizona

Source: Bureau of Transportation Statistics and EBRC

### Figure 27: Major BPOE Northbound Bus Crossings (2005=100)

Legend:
- Nogales
- El Paso
- Hidalgo
- Laredo
- Santa Teresa

Source: Bureau of Transportation Statistics and EBRC
Personal vehicles are the primary mode of transportation for people crossing the border. These data measure crossings by local residents for business, shopping, and visiting family and friends. Data are available only for northbound crossings, and include all personal vehicles regardless of nationality.

**Personal Vehicle Crossings**

Personal vehicles facilitate the largest travel volume of any mode along the U.S. – Mexico border. Nogales is the busiest port in Arizona, with 3.5 million personal vehicle crossings in 2015, up 5.6% from 2014. Other major Arizona ports for vehicle crossings are San Luis (3.1 million) and Douglas (1.6 million). (Table 10)

In 2015, 8.8 million personal vehicle crossings were facilitated by Arizona border ports of entry (BPOE), a 3.6% increase from 2015. Arizona’s percent share of vehicle crossings at all southern border ports declined 2.7% in 2015. (Figure 28)

Most Arizona BPOE saw gains in 2015 lead by Sasabe with a 14.5% increase over a year ago, followed by Lukeville (8.6%), Nogales (5.6%), and San Luis (2.6%). Traffic at Naco BPOE remained constant. Of the six Arizona ports only Nogales has recovered personal vehicle traffic volumes to 2005 levels. (Figure 29)

Although Nogales is Arizona’s busiest port, it has the smallest volume of personal vehicle traffic among the

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**Table 10: Arizona BPOE Northbound Vehicle Crossings (000’s)**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Douglas</th>
<th>Lukeville</th>
<th>Naco</th>
<th>Nogales</th>
<th>San Luis</th>
<th>Sasabe</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2,098</td>
<td>409</td>
<td>316</td>
<td>3,446</td>
<td>3,472</td>
<td>39</td>
</tr>
<tr>
<td>2006</td>
<td>1,953</td>
<td>438</td>
<td>336</td>
<td>3,283</td>
<td>2,703</td>
<td>35</td>
</tr>
<tr>
<td>2007</td>
<td>1,747</td>
<td>447</td>
<td>319</td>
<td>3,181</td>
<td>2,481</td>
<td>33</td>
</tr>
<tr>
<td>2008</td>
<td>1,691</td>
<td>410</td>
<td>264</td>
<td>3,027</td>
<td>2,314</td>
<td>30</td>
</tr>
<tr>
<td>2009</td>
<td>1,514</td>
<td>323</td>
<td>279</td>
<td>2,991</td>
<td>2,253</td>
<td>28</td>
</tr>
<tr>
<td>2010</td>
<td>1,432</td>
<td>300</td>
<td>263</td>
<td>2,601</td>
<td>2,033</td>
<td>21</td>
</tr>
<tr>
<td>2011</td>
<td>1,393</td>
<td>256</td>
<td>236</td>
<td>2,641</td>
<td>2,171</td>
<td>15</td>
</tr>
<tr>
<td>2012</td>
<td>1,405</td>
<td>270</td>
<td>270</td>
<td>2,823</td>
<td>2,690</td>
<td>14</td>
</tr>
<tr>
<td>2013</td>
<td>1,471</td>
<td>290</td>
<td>285</td>
<td>3,162</td>
<td>2,949</td>
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<tr>
<td>2014</td>
<td>1,572</td>
<td>316</td>
<td>298</td>
<td>3,287</td>
<td>3,028</td>
<td>18</td>
</tr>
<tr>
<td>2015</td>
<td>1,591</td>
<td>344</td>
<td>297</td>
<td>3,470</td>
<td>3,107</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics and EBRC
major southern BPOE, with 3.5 million crossings it comes in just behind Calexico East, CA, at 3.6 million. El Paso, TX, leads with 12.2 million. (Table 11)

Nogales has experienced more post-recession growth than El Paso, Hidalgo, and Laredo, and has recovered 100% of its 2005 volume. Calexico East is the only major port to exceed its 2005 crossing volume, and is now up 10.7% from 2005. Overall traffic through all southern BPOE declined 19.0% between 2005 and 2015. (Figure 30)

Seasonal variability is visible in personal vehicle crossing trends at Arizona BPOE. Crossings tend to be lower in February, and higher in May. (Figure 31)

### Table 11: Major BPOE Northbound Personal Vehicle Crossings (000’s)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Nogales</th>
<th>Calexico East</th>
<th>El Paso</th>
<th>Hidalgo</th>
<th>Laredo</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>3,446</td>
<td>3,272</td>
<td>15,972</td>
<td>6,970</td>
<td>6,263</td>
</tr>
<tr>
<td>2006</td>
<td>3,283</td>
<td>3,785</td>
<td>15,603</td>
<td>6,480</td>
<td>6,042</td>
</tr>
<tr>
<td>2007</td>
<td>3,181</td>
<td>3,418</td>
<td>14,062</td>
<td>6,835</td>
<td>5,600</td>
</tr>
<tr>
<td>2008</td>
<td>3,027</td>
<td>3,549</td>
<td>13,716</td>
<td>6,983</td>
<td>6,105</td>
</tr>
<tr>
<td>2009</td>
<td>2,991</td>
<td>2,954</td>
<td>10,529</td>
<td>6,178</td>
<td>5,452</td>
</tr>
<tr>
<td>2010</td>
<td>2,601</td>
<td>2,627</td>
<td>9,968</td>
<td>5,604</td>
<td>4,864</td>
</tr>
<tr>
<td>2011</td>
<td>2,641</td>
<td>2,785</td>
<td>9,148</td>
<td>4,878</td>
<td>4,746</td>
</tr>
<tr>
<td>2012</td>
<td>2,823</td>
<td>3,017</td>
<td>9,462</td>
<td>4,894</td>
<td>4,440</td>
</tr>
<tr>
<td>2013</td>
<td>3,162</td>
<td>3,199</td>
<td>10,877</td>
<td>4,768</td>
<td>5,023</td>
</tr>
<tr>
<td>2014</td>
<td>3,287</td>
<td>3,400</td>
<td>11,595</td>
<td>4,565</td>
<td>5,251</td>
</tr>
<tr>
<td>2015</td>
<td>3,470</td>
<td>3,622</td>
<td>12,258</td>
<td>4,594</td>
<td>5,224</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics and EBRC

### Figure 30: Major BPOE Northbound Vehicle Crossings (2005=100)

![Figure 30: Major BPOE Northbound Vehicle Crossings (2005=100)](source)

### Figure 31: Nogales District (All AZ BPOE) Monthly Personal Vehicle Crossings

![Figure 31: Nogales District (All AZ BPOE) Monthly Personal Vehicle Crossings](source)

---

**How does Arizona compare?**

- **Post-recession:** Nogales has experienced faster growth than El Paso, Hidalgo, and Laredo
- In 2015, All Arizona BPOE saw gains in 2015, with Sasabe growing 14.5% and overall traffic at Arizona BPOE growing 3.6%
Personal vehicle passenger crossings through Arizona-Sonora border ports of entry (BPOE) reflect the composite effects of both the economic ties between Arizona and Sonora, as well as border crossing procedures that affect wait times.

Table 12: Arizona Northbound Vehicle Passengers (000’s)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Douglas</th>
<th>Lukeville</th>
<th>Naco</th>
<th>Nogales</th>
<th>San Luis</th>
<th>Sasabe</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>4,675</td>
<td>1,187</td>
<td>1,119</td>
<td>8,767</td>
<td>6,691</td>
<td>101</td>
</tr>
<tr>
<td>2006</td>
<td>4,507</td>
<td>1,269</td>
<td>907</td>
<td>8,401</td>
<td>5,207</td>
<td>90</td>
</tr>
<tr>
<td>2007</td>
<td>4,032</td>
<td>1,297</td>
<td>861</td>
<td>8,587</td>
<td>4,713</td>
<td>103</td>
</tr>
<tr>
<td>2008</td>
<td>3,907</td>
<td>1,188</td>
<td>705</td>
<td>8,472</td>
<td>4,417</td>
<td>79</td>
</tr>
<tr>
<td>2009</td>
<td>3,893</td>
<td>1,088</td>
<td>661</td>
<td>7,636</td>
<td>4,234</td>
<td>67</td>
</tr>
<tr>
<td>2010</td>
<td>2,893</td>
<td>695</td>
<td>512</td>
<td>6,729</td>
<td>3,860</td>
<td>37</td>
</tr>
<tr>
<td>2011</td>
<td>2,615</td>
<td>539</td>
<td>465</td>
<td>5,289</td>
<td>3,941</td>
<td>30</td>
</tr>
<tr>
<td>2012</td>
<td>2,610</td>
<td>581</td>
<td>493</td>
<td>5,730</td>
<td>4,575</td>
<td>26</td>
</tr>
<tr>
<td>2013</td>
<td>2,704</td>
<td>625</td>
<td>509</td>
<td>6,510</td>
<td>5,089</td>
<td>26</td>
</tr>
<tr>
<td>2014</td>
<td>2,822</td>
<td>653</td>
<td>526</td>
<td>6,798</td>
<td>5,537</td>
<td>31</td>
</tr>
<tr>
<td>2015</td>
<td>2,851</td>
<td>751</td>
<td>515</td>
<td>7,190</td>
<td>5,575</td>
<td>36</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics and EBRC

Figure 32: Arizona Northbound Vehicle Passengers

In 2015, 6.9 million personal vehicle passenger crossings were facilitated by Arizona BPOE. This was a 3.4% increase from 2014. Arizona’s share of personal vehicle passenger crossings as a percentage of all southern BPOE declined slightly to 12.3% from 12.7% in 2014. (Figure 32)

With the exception of Naco, passenger crossings at all Arizona BPOE increased in 2015, but still fell short of 2005 levels. San Luis and Nogales have seen the most recent growth, recovering to 83.3% and 82.0% of 2005 levels by 2015, respectively. They were followed by Lukeville at 63.3% and Douglas at 61.0%. (Figure 33)

Among major southern BPOE, El Paso facilitates the largest volume of vehicle passenger crossings. This is followed by Laredo. Nogales was slightly ahead of Calexico East with 7.2 million passenger crossings in 2015, a 5.8% increase over 2014. All major BPOE saw increases in 2015. (Table 13)

Table 13: Arizona Northbound Vehicle Passengers (000’s)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Douglas</th>
<th>Lukeville</th>
<th>Naco</th>
<th>Nogales</th>
<th>San Luis</th>
<th>Sasabe</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>4,675</td>
<td>1,187</td>
<td>1,119</td>
<td>8,767</td>
<td>6,691</td>
<td>101</td>
</tr>
<tr>
<td>2006</td>
<td>4,507</td>
<td>1,269</td>
<td>907</td>
<td>8,401</td>
<td>5,207</td>
<td>90</td>
</tr>
<tr>
<td>2007</td>
<td>4,032</td>
<td>1,297</td>
<td>861</td>
<td>8,587</td>
<td>4,713</td>
<td>103</td>
</tr>
<tr>
<td>2008</td>
<td>3,907</td>
<td>1,188</td>
<td>705</td>
<td>8,472</td>
<td>4,417</td>
<td>79</td>
</tr>
<tr>
<td>2009</td>
<td>3,893</td>
<td>1,088</td>
<td>661</td>
<td>7,636</td>
<td>4,234</td>
<td>67</td>
</tr>
<tr>
<td>2010</td>
<td>2,893</td>
<td>695</td>
<td>512</td>
<td>6,729</td>
<td>3,860</td>
<td>37</td>
</tr>
<tr>
<td>2011</td>
<td>2,615</td>
<td>539</td>
<td>465</td>
<td>5,289</td>
<td>3,941</td>
<td>30</td>
</tr>
<tr>
<td>2012</td>
<td>2,610</td>
<td>581</td>
<td>493</td>
<td>5,730</td>
<td>4,575</td>
<td>26</td>
</tr>
<tr>
<td>2013</td>
<td>2,704</td>
<td>625</td>
<td>509</td>
<td>6,510</td>
<td>5,089</td>
<td>26</td>
</tr>
<tr>
<td>2014</td>
<td>2,822</td>
<td>653</td>
<td>526</td>
<td>6,798</td>
<td>5,537</td>
<td>31</td>
</tr>
<tr>
<td>2015</td>
<td>2,851</td>
<td>751</td>
<td>515</td>
<td>7,190</td>
<td>5,575</td>
<td>36</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics and EBRC

Figure 33: Arizona BPOE Northbound Vehicle Passengers (2005=100)
While all major southern BPOE experienced declines in vehicle passenger crossings during the recession of 2009, Calexico East is the only major port of entry that has, not only recovered, but surpassed its 2005 volume. In 2015, Nogales was still 18% below its 2005 level, but ahead of Hidalgo, Laredo, and El Paso. In recent years, personal vehicle passenger crossings through all major ports of entry have experienced steady growth. (Figure 34)

Since the early 2000’s, periods of economic slowdown, together with increased wait times at border crossings have reduced the number of personal vehicle crossings and the number of passengers, although not at the same rate. Personal vehicle crossings have been recovering at a faster pace. (Figure 35)

### How does Arizona compare?

- Since 2011, Nogales has experienced faster growth than major ports such as El Paso, Hidalgo and Laredo in vehicle passenger crossings.
- In 2015, 16.9 million personal vehicle passengers crossed via Arizona BPOE, up 3.4% from 2014.
- Post-recession: All major southern ports experienced temporary declines.

---

**Table 13: Major BPOE Northbound Vehicle Passengers (000's)**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Nogales</th>
<th>Calexico East</th>
<th>El Paso</th>
<th>Hidalgo</th>
<th>Laredo</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>8,767</td>
<td>6,493</td>
<td>29,181</td>
<td>13,989</td>
<td>14,017</td>
</tr>
<tr>
<td>2006</td>
<td>8,401</td>
<td>7,771</td>
<td>28,000</td>
<td>12,632</td>
<td>14,244</td>
</tr>
<tr>
<td>2007</td>
<td>8,587</td>
<td>7,004</td>
<td>23,675</td>
<td>13,305</td>
<td>13,368</td>
</tr>
<tr>
<td>2008</td>
<td>8,472</td>
<td>7,144</td>
<td>21,806</td>
<td>13,468</td>
<td>15,398</td>
</tr>
<tr>
<td>2009</td>
<td>7,636</td>
<td>5,731</td>
<td>18,377</td>
<td>12,074</td>
<td>12,729</td>
</tr>
<tr>
<td>2010</td>
<td>6,729</td>
<td>5,152</td>
<td>17,920</td>
<td>10,692</td>
<td>10,858</td>
</tr>
<tr>
<td>2011</td>
<td>5,289</td>
<td>5,082</td>
<td>14,941</td>
<td>9,040</td>
<td>8,458</td>
</tr>
<tr>
<td>2012</td>
<td>5,730</td>
<td>5,530</td>
<td>15,908</td>
<td>9,484</td>
<td>8,768</td>
</tr>
<tr>
<td>2013</td>
<td>6,510</td>
<td>5,916</td>
<td>17,545</td>
<td>9,609</td>
<td>9,588</td>
</tr>
<tr>
<td>2014</td>
<td>6,798</td>
<td>6,438</td>
<td>19,135</td>
<td>9,252</td>
<td>10,335</td>
</tr>
<tr>
<td>2015</td>
<td>7,190</td>
<td>6,744</td>
<td>19,982</td>
<td>9,272</td>
<td>10,985</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics and EBRC

**Figure 34: Major BPOE Northbound Vehicle Passengers (2005=100)**

**Figure 35: No. of Vehicles & Vehicle Passengers through Nogales District (2005=100)**

Source: Bureau of Transportation Statistics and EBRC
The dynamics of pedestrian crossings through the Arizona-Sonora border ports of entry (BPOE) reflect the composite effects of both the economic and familial ties between Arizona and Sonora, as well as border crossing procedures that affect wait times.

Pedestrian Crossings

Nogales is Arizona’s busiest port for pedestrian crossings, with 3.1 million crossings in 2015. San Luis follows closely with 2.4 million, and Douglas from a distance with 1.1 million. (Table 14)

In 2015, Arizona’s percent share of pedestrian crossings at southern BPOE was 16.2%. (Figure 36)

Nogales’ 3.1 million crossings in 2015 represented an 8.5% increase from 2014. Three other Arizona ports, San Luis, Douglas, and Lukeville experienced increases of 2.8%, 5.7%, and 8.7%, respectively, while Naco was the only port to experience a decrease. (Figure 37)

Nogales ranked third in volume among major southern BPOE. El Paso, TX, was first with 6.8 million pedestrian crossings followed by Laredo with 3.5 million. (Table 15)

Pedestrian crossings grew rapidly at the Nogales BPOE in the early 2000’s, but began to decline in 2007. In 2015, pedestrian crossings at Nogales were
45.2% of 2005 levels. All major BPOE BPOE recovered faster following the Great Recession. *(Figure 38)*

The number of vehicle passenger crossings has grown faster at Arizona BPOE than the number of pedestrian crossings. This may reflect increased border crossing wait times for pedestrians, as well as, reduced job opportunities in U.S. border communities post recession. Pedestrian crossers typically cross more for work related purposes than persons crossing in vehicles. The latter travelling more for business and leisure. *(Figure 39)*

### How does Arizona compare?

- In 2015, 3.1 million pedestrians crossed the border at Nogales, ranking it third among major BPOE
- In 2015, pedestrian crossings at Nogales BPOE increased 8.5% Y/Y
- 2005 - 2015: total pedestrian crossings at Arizona BPOE have declined 33.7%

### Table 15: Major BPOE Northbound Vehicle Passengers (000's)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Nogales</th>
<th>Calexico East</th>
<th>El Paso</th>
<th>Hidalgo</th>
<th>Laredo</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>6,930</td>
<td>1</td>
<td>7,614</td>
<td>1,774</td>
<td>4,356</td>
</tr>
<tr>
<td>2006</td>
<td>7,726</td>
<td>13</td>
<td>7,500</td>
<td>1,989</td>
<td>4,246</td>
</tr>
<tr>
<td>2007</td>
<td>7,723</td>
<td>9</td>
<td>8,454</td>
<td>2,169</td>
<td>4,625</td>
</tr>
<tr>
<td>2008</td>
<td>6,568</td>
<td>18</td>
<td>8,029</td>
<td>2,090</td>
<td>3,874</td>
</tr>
<tr>
<td>2009</td>
<td>4,038</td>
<td>34</td>
<td>7,638</td>
<td>2,257</td>
<td>4,090</td>
</tr>
<tr>
<td>2010</td>
<td>3,971</td>
<td>59</td>
<td>6,930</td>
<td>2,245</td>
<td>3,588</td>
</tr>
<tr>
<td>2011</td>
<td>3,526</td>
<td>118</td>
<td>6,172</td>
<td>1,998</td>
<td>3,090</td>
</tr>
<tr>
<td>2012</td>
<td>3,239</td>
<td>319</td>
<td>6,091</td>
<td>2,073</td>
<td>3,206</td>
</tr>
<tr>
<td>2013</td>
<td>2,912</td>
<td>322</td>
<td>6,015</td>
<td>2,062</td>
<td>3,559</td>
</tr>
<tr>
<td>2014</td>
<td>2,886</td>
<td>310</td>
<td>6,572</td>
<td>2,290</td>
<td>3,447</td>
</tr>
<tr>
<td>2015</td>
<td>3,132</td>
<td>223</td>
<td>6,848</td>
<td>2,475</td>
<td>3,542</td>
</tr>
</tbody>
</table>

*Source: Bureau of Transportation Statistics and EBRC*
Table 16: U.S. Exports via So. Border States ($mil)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>5,931.7</td>
<td>15,945.4</td>
<td>440.9</td>
<td>85,969.6</td>
</tr>
<tr>
<td>2006</td>
<td>7,454.9</td>
<td>17,575.3</td>
<td>439.7</td>
<td>95,385.7</td>
</tr>
<tr>
<td>2007</td>
<td>7,117.6</td>
<td>17,037.5</td>
<td>496.3</td>
<td>97,769.8</td>
</tr>
<tr>
<td>2008</td>
<td>7,978.0</td>
<td>18,493.6</td>
<td>420.5</td>
<td>108,712.2</td>
</tr>
<tr>
<td>2009</td>
<td>6,836.5</td>
<td>15,605.2</td>
<td>1,563.5</td>
<td>92,799.1</td>
</tr>
<tr>
<td>2010</td>
<td>8,115.1</td>
<td>18,482.9</td>
<td>4,900.3</td>
<td>117,445.9</td>
</tr>
<tr>
<td>2011</td>
<td>9,681.6</td>
<td>20,914.8</td>
<td>7,509.6</td>
<td>140,374.6</td>
</tr>
<tr>
<td>2012</td>
<td>10,933.9</td>
<td>22,127.7</td>
<td>8,148.9</td>
<td>152,562.9</td>
</tr>
<tr>
<td>2013</td>
<td>12,475.9</td>
<td>22,571.6</td>
<td>8,698.4</td>
<td>159,797.0</td>
</tr>
<tr>
<td>2014</td>
<td>13,417.4</td>
<td>24,886.3</td>
<td>10,324.4</td>
<td>165,081.0</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

Arizona border ports of entry (BPOE) play a pivotal role in facilitating trade exchanges between the U.S. and Mexico. The dynamics of commodity flows reflect the composite effects of both the national and local border-specific economies, as well as the physical and human infrastructure capacities of BPOE.

U.S. Exports to Mexico

Arizona BPOE facilitated $13.4 billion worth of U.S. exports to Mexico in 2015, an increase of $734 million (5.8%) over the year. With the exception of 2007 and 2009, the value of U.S. exports moving through Arizona BPOE has increased every year throughout the last decade. (Table 16)

In 2015, 6.8% of U.S. exports to Mexico through southern BPOE travelled via Arizona BPOE, an increase of 5.7% from Arizona’s 6.4% share in 2014. Arizona’s share is up 15.1% from its 5.9% share of a decade ago. (Figure 40)

Exports through Nogales increased 129.7% from 2005 to 2015. With the exception of Eagle Pass, TX. (133.1%), and Santa Teresa, NM, (2,334.2%) all other major BPOE experienced slower growth over the decade. (Figure 41)

How does Arizona compare?

In 2015, Arizona BPOE share of border states commodity flows increased from 6.4% to 6.8%

In 2015, exports via Nogales BPOE increased more than through any other major southern BPOE
Electric and electronic manufacturing product exports travelling via Arizona’s BPOE reflect the composite effects of manufacturing integration between Arizona and Mexico, as well between Mexico, Canada, and other U.S. states that use Arizona’s border ports for their exports to Mexico.

**U.S. Exports of Electric and Electronic Products**

In 2015, $3.3 billion worth of U.S. electric and electronic manufacturing products to Mexico passed through Arizona BPOE, up 13.2% from 2014. With the exception of 2008 and 2009 (recession), the last decade has been a period of growth. (Table 17)

Arizona BPOE share of this export category was 6.0% in 2015, an increase from its 5.6% share in 2014, but still below 6.4% of a decade ago. (Figure 42)

U.S. exports of electric and electronic products through Nogales increased 120.4% from 2005 to 2015. Eagle Pass and Laredo, TX, as well as Santa Teresa, NM, experienced larger percent growth over the decade. (Figure 43)

**Table 17: U.S. Exports Electric & Electronic Prod. via So. Border States ($mil)**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,434.6</td>
<td>4,079.8</td>
<td>34.5</td>
<td>17,575.4</td>
</tr>
<tr>
<td>2006</td>
<td>1,717.1</td>
<td>4,129.7</td>
<td>31.5</td>
<td>18,880.2</td>
</tr>
<tr>
<td>2007</td>
<td>2,205.9</td>
<td>4,904.1</td>
<td>75.7</td>
<td>23,563.9</td>
</tr>
<tr>
<td>2008</td>
<td>1,970.8</td>
<td>4,840.6</td>
<td>81.2</td>
<td>25,016.8</td>
</tr>
<tr>
<td>2009</td>
<td>1,851.7</td>
<td>4,318.3</td>
<td>1,169.7</td>
<td>22,990.3</td>
</tr>
<tr>
<td>2010</td>
<td>2,090.8</td>
<td>5,237.7</td>
<td>3,878.2</td>
<td>28,375.9</td>
</tr>
<tr>
<td>2011</td>
<td>2,398.0</td>
<td>5,528.9</td>
<td>5,860.1</td>
<td>29,687.8</td>
</tr>
<tr>
<td>2012</td>
<td>2,911.3</td>
<td>5,899.8</td>
<td>5,941.5</td>
<td>32,194.6</td>
</tr>
<tr>
<td>2013</td>
<td>2,802.6</td>
<td>6,322.7</td>
<td>6,263.9</td>
<td>35,018.3</td>
</tr>
<tr>
<td>2014</td>
<td>2,906.7</td>
<td>7,110.6</td>
<td>7,245.9</td>
<td>36,262.5</td>
</tr>
<tr>
<td>2015</td>
<td>3,289.3</td>
<td>7,916.2</td>
<td>8,109.4</td>
<td>37,336.4</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

**Figure 42: U.S. Exports of Electric & Electronic Products via Arizona BPOE**

**Figure 43: U.S. Exports of Electric & Electronic Products via So. BPOE (2005=100)**

How does Arizona compare?

- In 2015, Arizona’s share of border states was 6.0%, up from its 5.6% share in 2014.
- 2005-2015: Exports through Nogales BPOE increased 120.4%, only Laredo, Eagle Pass, and Santa Teresa grew faster.
Table 18: U.S. Exports of Transportation Prod. via So. Border States ($mil)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>692.8</td>
<td>1,461.9</td>
<td>186.1</td>
<td>13,023.5</td>
</tr>
<tr>
<td>2006</td>
<td>1,317.1</td>
<td>2,254.3</td>
<td>213.7</td>
<td>13,309.5</td>
</tr>
<tr>
<td>2007</td>
<td>1,179.4</td>
<td>2,261.2</td>
<td>138.4</td>
<td>15,145.9</td>
</tr>
<tr>
<td>2008</td>
<td>1,269.2</td>
<td>2,452.0</td>
<td>81.8</td>
<td>16,152.7</td>
</tr>
<tr>
<td>2009</td>
<td>1,210.9</td>
<td>1,981.1</td>
<td>59.6</td>
<td>12,875.8</td>
</tr>
<tr>
<td>2010</td>
<td>1,592.1</td>
<td>2,329.1</td>
<td>86.5</td>
<td>17,848.7</td>
</tr>
<tr>
<td>2011</td>
<td>1,593.2</td>
<td>2,450.3</td>
<td>136.2</td>
<td>22,457.6</td>
</tr>
<tr>
<td>2012</td>
<td>1,723.4</td>
<td>2,726.6</td>
<td>203.9</td>
<td>25,738.4</td>
</tr>
<tr>
<td>2013</td>
<td>2,107.0</td>
<td>2,783.1</td>
<td>449.1</td>
<td>27,199.6</td>
</tr>
<tr>
<td>2014</td>
<td>1,753.2</td>
<td>2,899.4</td>
<td>590.1</td>
<td>28,752.4</td>
</tr>
<tr>
<td>2015</td>
<td>1,855.2</td>
<td>3,447.9</td>
<td>237.2</td>
<td>30,822.7</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

Mexico’s transportation equipment manufacturing sector has become one of the keystones of the North American industrial integration. A recent expansion of the Ford Motor Company in Sonora has enhanced the role of Arizona’s BPOE, most notably Nogales, for exports of transportation equipment to Mexico.

U.S. Exports of Transportation Products

In 2015, $1.9 billion worth of U.S. transportation equipment was exported to Mexico through Arizona BPOE. This was a $102 million increase (5.8%) over a year ago. (Table 18)

In 2015, Arizona BPOE share of U.S. exports of transportation equipment manufacturing products shipped through all southern BPOE was 5.2%, essentially unchanged from 2014. Over the decade, its share has increased by 13.5%. Arizona’s share in 2004 was 4.6%. (Figure 44)

Exports of transportation equipment manufacturing products through Nogales increased 191.7% from 2005 to 2015. Only Otay Mesa, CA, experienced a similar increase, 192.0%, over the same period. (Figure 45)

How does Arizona compare?

- In 2015, Arizona BPOE’s share of southern border ports was 5.2%, unchanged from year ago.
- 2005-2015: Exports through Nogales increased 191.7%. A growth rate surpassing all other major BPOE except Otay Mesa, CA.
Imports through Arizona border ports of entry reflect the composite effects of both the trade between Arizona and Mexico, and other U.S. states that use Arizona’s border ports to import goods from Mexico. Also reflected in commodity flow dynamics are the infrastructure capacities of border ports of entry.

U.S. Imports from Mexico

Arizona BPOE facilitated $18.1 billion in U.S. imports from Mexico in 2015, an increase of $240 million, or 1.3% from a year ago. The value of U.S. imports from Mexico through Arizona BPOE has grown each year of the last decade, excluding 2009 and 2014. (Table 19)

In 2015, Arizona BPOE share of U.S. imports from Mexico via southern border ports of entry was 7.0%, a decrease from 8.0% a decade ago. During the decade Arizona’s share has fluctuated between 7.0% (2015) and 9.2% (2006). The 2015 share is a 4.9% decline over 2014, although the dollar value of imported goods increased. (Figure 46)

Imports through the Nogales BPOE increased 74.7% from 2005 to 2015. With the exception of El Paso and Hidalgo, TX, and Calexico East, CA, all other major BPOE experienced faster growth over the decade. (Figure 47)

How does Arizona compare?

In 2015, Arizona BPOE’s share of So. border ports declined from 7.3% to 7.0%


<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>10,562.4</td>
<td>24,001.7</td>
<td>791.8</td>
<td>116,306.0</td>
</tr>
<tr>
<td>2006</td>
<td>13,921.8</td>
<td>28,597.2</td>
<td>776.3</td>
<td>132,139.7</td>
</tr>
<tr>
<td>2007</td>
<td>14,005.8</td>
<td>30,366.4</td>
<td>959.8</td>
<td>141,342.2</td>
</tr>
<tr>
<td>2008</td>
<td>13,667.5</td>
<td>30,239.4</td>
<td>882.4</td>
<td>143,193.8</td>
</tr>
<tr>
<td>2009</td>
<td>11,648.0</td>
<td>25,898.7</td>
<td>2,971.8</td>
<td>115,054.1</td>
</tr>
<tr>
<td>2010</td>
<td>14,532.6</td>
<td>28,817.2</td>
<td>8,447.2</td>
<td>150,273.7</td>
</tr>
<tr>
<td>2011</td>
<td>15,918.5</td>
<td>29,836.4</td>
<td>10,381.9</td>
<td>175,123.0</td>
</tr>
<tr>
<td>2012</td>
<td>16,448.0</td>
<td>31,192.1</td>
<td>11,827.4</td>
<td>191,036.1</td>
</tr>
<tr>
<td>2013</td>
<td>19,339.9</td>
<td>32,094.9</td>
<td>10,295.6</td>
<td>192,771.8</td>
</tr>
<tr>
<td>2014</td>
<td>17,887.1</td>
<td>35,626.3</td>
<td>9,608.9</td>
<td>204,065.9</td>
</tr>
<tr>
<td>2015</td>
<td>18,127.3</td>
<td>39,843.2</td>
<td>11,764.8</td>
<td>202,292.1</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

Figure 46: U.S. Imports via Arizona BPOE

Figure 47: U.S. Imports via So. BPOE (2005=100)
Table 20: U.S. Imports of Electric & Electronic Prod. via So. Border States

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,772.0</td>
<td>5,578.0</td>
<td>152.3</td>
<td>23,932.6</td>
</tr>
<tr>
<td>2006</td>
<td>1,870.0</td>
<td>5,470.5</td>
<td>163.0</td>
<td>26,202.0</td>
</tr>
<tr>
<td>2007</td>
<td>3,298.6</td>
<td>18,165.8</td>
<td>345.5</td>
<td>42,289.2</td>
</tr>
<tr>
<td>2008</td>
<td>2,929.1</td>
<td>17,905.2</td>
<td>308.2</td>
<td>41,185.0</td>
</tr>
<tr>
<td>2009</td>
<td>2,037.9</td>
<td>15,240.3</td>
<td>2,148.5</td>
<td>36,987.5</td>
</tr>
<tr>
<td>2010</td>
<td>2,375.8</td>
<td>15,839.3</td>
<td>7,055.4</td>
<td>43,107.2</td>
</tr>
<tr>
<td>2011</td>
<td>2,563.1</td>
<td>15,874.2</td>
<td>8,492.8</td>
<td>44,722.8</td>
</tr>
<tr>
<td>2012</td>
<td>3,048.9</td>
<td>16,644.0</td>
<td>9,355.7</td>
<td>47,415.7</td>
</tr>
<tr>
<td>2013</td>
<td>3,030.8</td>
<td>16,682.1</td>
<td>8,466.6</td>
<td>49,059.8</td>
</tr>
<tr>
<td>2014</td>
<td>3,167.0</td>
<td>17,945.5</td>
<td>7,709.1</td>
<td>49,799.4</td>
</tr>
<tr>
<td>2015</td>
<td>3,217.9</td>
<td>20,438.2</td>
<td>10,053.8</td>
<td>52,846.3</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

Electric and electronic manufacturing products are the top commodity imported via Arizona’s border ports of entry, and a key component of the North American production sharing system.

U.S. Imports of Electric and Electronic Products

Arizona BPOE facilitated $3.2 billion of electric and electronic manufacturing imports from Mexico in 2015; an increase of $51.0 million, up 1.6% over a year ago. Imports peaked at $3.3 billion in 2007. Overall, the value of these imports via Arizona BPOE has almost doubled since 2005. (Table 20)

In 2015, Arizona BPOE accounted for 3.7% of U.S. imports of electric and electronic manufacturing products from Mexico via southern BPOE. Arizona’s share was 4.1% a year ago, and 5.7% in 2005. This is a 34.2% decline over the decade. (Figure 48)

Electric and electronic product imports from Mexico via Nogales increased 67.2% (2005 to 2015). All other major BPOE experienced larger increases over the decade. Eagle Pass, TX, lead with 340.4%. Santa Teresa, NM, is an outlier due to dramatic increase from small dollar values in 2005. (Figure 49)

How does Arizona compare?

- In 2015, Arizona BPOE’s share decreased from 4.1% to 3.7%
- 2005-2015: Imports through Nogales grew more slowly than other major BPOE
Mexico’s transportation equipment manufacturing sector has become one of the keystones of North American industrial integration. A recent expansion of the Ford Motor Company in Sonora has enhanced the role of Arizona’s BPOE, most notably Nogales, for the import of cars and other transportation equipment from Mexico.

U.S. Imports of Transportation Products from Mexico

In 2015, $7.1 billion worth of transportation products were imported from Mexico through Arizona BPOE. This was a $481 million gain from a year ago, an 7.2% increase. (Table 21)

Arizona BPOE facilitated 7.3% of U.S. transportation manufacturing imports from Mexico through southern BPOE in 2015. This was an increase from 6.0% a decade ago but no change from a year ago. (Figure 50)

Imports of transportation products through Nogales increased 206.0% from its 2005 level. Only Calexico East, CA, and Eagle Pass, TX, performed better over the decade, 2005-2015. (Figure 51)

How does Arizona compare?

▶ In 2015, Arizona’s share of border states remained unchanged

▶ 2005-2015: Imports through Nogales grew 206.0%, outperformed by only Eagle Pass and Calexico East

Table 21: U.S. Imports of Transportation Prod. via So. Border States ($mil)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2,375.2</td>
<td>2,420.6</td>
<td>89.7</td>
<td>35,126.9</td>
</tr>
<tr>
<td>2006</td>
<td>5,215.4</td>
<td>3,148.7</td>
<td>113.7</td>
<td>38,140.1</td>
</tr>
<tr>
<td>2007</td>
<td>4,598.0</td>
<td>2,634.7</td>
<td>158.8</td>
<td>42,698.7</td>
</tr>
<tr>
<td>2008</td>
<td>5,040.8</td>
<td>2,833.9</td>
<td>160.3</td>
<td>38,570.6</td>
</tr>
<tr>
<td>2009</td>
<td>4,258.3</td>
<td>2,542.5</td>
<td>103.6</td>
<td>29,685.3</td>
</tr>
<tr>
<td>2010</td>
<td>5,839.1</td>
<td>3,135.7</td>
<td>148.9</td>
<td>45,612.5</td>
</tr>
<tr>
<td>2011</td>
<td>6,128.2</td>
<td>3,518.9</td>
<td>100.3</td>
<td>54,255.1</td>
</tr>
<tr>
<td>2012</td>
<td>5,394.2</td>
<td>4,145.1</td>
<td>130.9</td>
<td>64,945.4</td>
</tr>
<tr>
<td>2013</td>
<td>8,215.1</td>
<td>4,552.4</td>
<td>170.6</td>
<td>69,451.0</td>
</tr>
<tr>
<td>2014</td>
<td>6,673.1</td>
<td>5,857.6</td>
<td>202.5</td>
<td>79,388.3</td>
</tr>
<tr>
<td>2015</td>
<td>7,154.3</td>
<td>7,281.7</td>
<td>160.0</td>
<td>84,604.7</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

Figure 50: U.S. Imports of Transportation Products via Arizona BPOE

Figure 51: U.S. Imports of Transportation Products via So. BPOE (2005=100)
### Table 22: U.S. Imports of Fresh Produce via So. Border States ($mil)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,874.7</td>
<td>896.9</td>
<td>20.4</td>
<td>1,148.8</td>
</tr>
<tr>
<td>2006</td>
<td>2,054.6</td>
<td>867.2</td>
<td>24.5</td>
<td>1,209.5</td>
</tr>
<tr>
<td>2007</td>
<td>2,328.2</td>
<td>912.2</td>
<td>45.8</td>
<td>1,615.3</td>
</tr>
<tr>
<td>2008</td>
<td>2,318.4</td>
<td>975.1</td>
<td>45.4</td>
<td>1,851.3</td>
</tr>
<tr>
<td>2009</td>
<td>2,213.5</td>
<td>942.7</td>
<td>67.9</td>
<td>2,126.8</td>
</tr>
<tr>
<td>2010</td>
<td>2,814.4</td>
<td>1,112.8</td>
<td>62.9</td>
<td>2,547.9</td>
</tr>
<tr>
<td>2011</td>
<td>2,540.6</td>
<td>1,299.8</td>
<td>72.4</td>
<td>3,315.6</td>
</tr>
<tr>
<td>2012</td>
<td>2,852.0</td>
<td>1,299.4</td>
<td>67.9</td>
<td>3,436.1</td>
</tr>
<tr>
<td>2013</td>
<td>3,035.6</td>
<td>1,452.9</td>
<td>49.6</td>
<td>3,990.1</td>
</tr>
<tr>
<td>2014</td>
<td>2,948.6</td>
<td>1,509.6</td>
<td>68.2</td>
<td>4,869.4</td>
</tr>
<tr>
<td>2015</td>
<td>2,829.2</td>
<td>1,695.1</td>
<td>69.5</td>
<td>5,629.7</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

### Arizona Border Ports of Entry

Arizona border ports of entry have a long tradition of serving as the primary gateway for fresh produce originating in Sinaloa and Sonora. This is particularly true for the Nogales port of entry. The dynamics of fresh produce movement through Arizona BPOE reflect climate-related seasonality of agricultural production in Sinaloa and Sonora, as well as the physical and human infrastructure capabilities of border ports of entry to facilitate efficient and secure movement of fresh produce across the border.

### U.S. Imports of Fresh Produce from Mexico

In 2015, Arizona BPOE facilitated $2.8 billion worth of fresh produce imports from Mexico, which was $119.4 million less than a year ago. (Table 22)

Arizona BPOE accounted for 27.7% of the dollar value of Mexican fresh produce imported through southern BPOE in 2015, a decrease from 47.6% a decade ago. Arizona’s 2015 share was the lowest it has been in the last decade. (Figure 52)

The Nogales BPOE facilitated the second highest dollar value of imported fresh produce from Mexico, following closely the port of Hidalgo, Texas. From 2005 to 2015 all major BPOE surpassed Nogales BPOE growth of 50.3%. Most notably Laredo, TX, with 390.9% growth, Hidalgo, TX, with 436.3%, and El Paso, TX, with 269.2%. (Figure 53)
Of the three top BPOE importing fresh produce from Mexico, Nogales has the highest monthly variability: 73.8% was imported from December through May in comparison with 58.1% through Hidalgo, and 55.4% through Laredo, in 2015. (Table 23)

Imports of fresh produce through Arizona’s BPOE have a distinctive seasonal character with peaks during winter months from December through May each year. (Figure 54)

Fresh produce imports from Mexico through the Nogales BPOE exhibit higher seasonal fluctuations than imports through Hidalgo and Laredo. Increases in seasonality through Texas BPOE suggest an increase in imports of winter fresh produce. (Figure 55)

### Table 23: Mo. U.S. Imports of Fresh Produce via Major So. BPOE ($mil)

<table>
<thead>
<tr>
<th></th>
<th>Nogales</th>
<th>Hidalgo</th>
<th>Laredo</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>338.2</td>
<td>315.4</td>
<td>200.8</td>
</tr>
<tr>
<td>February</td>
<td>277.0</td>
<td>287.5</td>
<td>173.4</td>
</tr>
<tr>
<td>March</td>
<td>289.9</td>
<td>294.6</td>
<td>204.1</td>
</tr>
<tr>
<td>April</td>
<td>373.1</td>
<td>290.9</td>
<td>190.9</td>
</tr>
<tr>
<td>May</td>
<td>375.3</td>
<td>254.7</td>
<td>170.0</td>
</tr>
<tr>
<td>June</td>
<td>300.2</td>
<td>177.3</td>
<td>134.0</td>
</tr>
<tr>
<td>July</td>
<td>41.7</td>
<td>189.3</td>
<td>144.7</td>
</tr>
<tr>
<td>August</td>
<td>32.9</td>
<td>165.7</td>
<td>133.6</td>
</tr>
<tr>
<td>September</td>
<td>34.0</td>
<td>176.3</td>
<td>141.1</td>
</tr>
<tr>
<td>October</td>
<td>98.9</td>
<td>216.9</td>
<td>161.9</td>
</tr>
<tr>
<td>November</td>
<td>175.0</td>
<td>327.9</td>
<td>183.9</td>
</tr>
<tr>
<td>December</td>
<td>265.3</td>
<td>296.5</td>
<td>179.1</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

### How does Arizona compare?

- In 2015, Arizona’s share of border states fresh produce import traffic decreased from 31.4% to 27.7%
- 2005–2015: Imports of fresh produce via all major BPOE surpassed Nogales, most notably Laredo and Hidalgo
- Arizona BPOEs have a higher concentration of imports during winter months than other BPOE
- 2005–2015: Imports of winter fresh produce have been increasing at BPOEs outside of Arizona

Source: U.S. Census Bureau
**High-tech manufacturing is a pivotal driver of Arizona’s export-based economy. In addition to its increasingly important role in international trade, high-tech industries are characterized by higher productivity, highly skilled workers, and higher wages. The dynamics of Arizona’s employment in high-tech manufacturing industries provide a measure of Arizona’s capacity to build and sustain an export-based economy.**

**Table 24: Employment in High-Tech Manufacturing Industries**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>146,759</td>
<td>1,060,617</td>
<td>52,037</td>
<td>540,744</td>
</tr>
<tr>
<td>2008</td>
<td>145,348</td>
<td>1,077,579</td>
<td>50,753</td>
<td>557,754</td>
</tr>
<tr>
<td>2009</td>
<td>135,527</td>
<td>1,021,005</td>
<td>48,444</td>
<td>525,329</td>
</tr>
<tr>
<td>2010</td>
<td>132,711</td>
<td>1,016,777</td>
<td>48,150</td>
<td>525,329</td>
</tr>
<tr>
<td>2011</td>
<td>135,883</td>
<td>1,040,556</td>
<td>47,666</td>
<td>538,151</td>
</tr>
<tr>
<td>2012</td>
<td>139,007</td>
<td>1,073,419</td>
<td>46,234</td>
<td>558,469</td>
</tr>
<tr>
<td>2013</td>
<td>142,324</td>
<td>1,101,203</td>
<td>45,632</td>
<td>575,589</td>
</tr>
<tr>
<td>2014</td>
<td>142,171</td>
<td>1,141,368</td>
<td>44,837</td>
<td>590,706</td>
</tr>
</tbody>
</table>

*Source: U.S. Bureau of Labor Statistics, QCEW, and EBRC*

**Figure 56: Arizona High-Tech Manufacturing Employment**

Despite recovery after the recession, Arizona’s share of U.S. border states’ high-tech manufacturing employment has declined from 8.2% in 2007 to 7.4% in 2014. (Figure 56)

In 2015, Arizona’s computer and electronic manufacturing employment decreased by 1,400 workers, or 4.2% from a year ago. (Figure 57)

In 2015, Arizona’s aerospace manufacturing industries employed 24,900 workers, a decrease of 300 employees.
How does Arizona compare?

- In 2014, High tech manufacturing employment in Arizona has not yet recovered to pre-recession levels.
- 2005-2015: Arizona has retained a significant percentage of border states’ aerospace manufacturing employment.

In 2015, Arizona’s share of U.S. border states’ aerospace products and parts manufacturing employment was 17.2%. This is down from its peak of 19.6% in 2009, and is 0.8 percentage points below its level of a decade ago. (Figure 58)

Although small in absolute numbers, employment in the pharmaceutical and medicine products manufacturing sector has experienced rapid growth, 92.9%, over the decade. In 2014, the last year for which we have data, it gained 5.3%. Arizona’s share of U.S. border states increased from 1.9% in 2004 to 3.1% in 2014. (Figure 59)

Note: EBRC’s “High-Tech Manufacturing” total employment and “Pharmaceutical and Medicine Products Manufacturing” employment are custom aggregations constructed using the Quarterly Census of Employment and Wages (QCEW), BLS. The most current full year of data available from the QCEW is 2014. Aerospace and Computer and Electronic Products Manufacturing sector is from the Current Employment Statistics (CES) program, BLS, and is complete through 2015.

Table 25: Employment in Aerospace Products and Parts Mfg. (000’s)*

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>26.6</td>
<td>73.4</td>
<td>47.8</td>
</tr>
<tr>
<td>2006</td>
<td>26.7</td>
<td>73.0</td>
<td>49.0</td>
</tr>
<tr>
<td>2007</td>
<td>27.3</td>
<td>72.8</td>
<td>48.0</td>
</tr>
<tr>
<td>2008</td>
<td>28.9</td>
<td>73.7</td>
<td>48.7</td>
</tr>
<tr>
<td>2009</td>
<td>29.3</td>
<td>72.4</td>
<td>48.0</td>
</tr>
<tr>
<td>2010</td>
<td>27.2</td>
<td>73.1</td>
<td>48.1</td>
</tr>
<tr>
<td>2011</td>
<td>26.5</td>
<td>71.5</td>
<td>48.5</td>
</tr>
<tr>
<td>2012</td>
<td>26.7</td>
<td>71.1</td>
<td>48.0</td>
</tr>
<tr>
<td>2013</td>
<td>26.3</td>
<td>72.1</td>
<td>47.3</td>
</tr>
<tr>
<td>2014</td>
<td>25.2</td>
<td>74.4</td>
<td>44.8</td>
</tr>
<tr>
<td>2015</td>
<td>24.9</td>
<td>76.5</td>
<td>43.5</td>
</tr>
</tbody>
</table>

* BLS does not report employment in this category for New Mexico because it is negligible.

Source: Bureau of Labor Statistics, CES

Figure 58: AZ Employment in Aerospace Prod. and Parts Mfg.

Figure 59: AZ Employment in Pharmaceutical and Medicine Prod. Mfg.
Aquilarada plants, together with other companies producing products for export, including automobile manufacturers; form IMMEX program employment. IMMEX accounts for more than 80.0% of all manufacturing exports from Mexico and the largest share of trade between the U.S. and Mexico. The majority of IMMEX employment is concentrated in border states.

### Table 26: Mexico Border States IMMEX (maquiladora) Employment (000’s)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>247</td>
<td>157</td>
<td>271</td>
<td>199</td>
<td>95</td>
<td>180</td>
</tr>
<tr>
<td>2009</td>
<td>206</td>
<td>132</td>
<td>218</td>
<td>187</td>
<td>82</td>
<td>145</td>
</tr>
<tr>
<td>2010</td>
<td>219</td>
<td>155</td>
<td>245</td>
<td>213</td>
<td>91</td>
<td>152</td>
</tr>
<tr>
<td>2011</td>
<td>221</td>
<td>176</td>
<td>251</td>
<td>228</td>
<td>97</td>
<td>161</td>
</tr>
<tr>
<td>2012</td>
<td>232</td>
<td>192</td>
<td>271</td>
<td>234</td>
<td>102</td>
<td>170</td>
</tr>
<tr>
<td>2013</td>
<td>246</td>
<td>209</td>
<td>290</td>
<td>239</td>
<td>111</td>
<td>180</td>
</tr>
<tr>
<td>2014</td>
<td>264</td>
<td>221</td>
<td>307</td>
<td>245</td>
<td>113</td>
<td>189</td>
</tr>
<tr>
<td>2015</td>
<td>283</td>
<td>238</td>
<td>335</td>
<td>255</td>
<td>115</td>
<td>201</td>
</tr>
</tbody>
</table>

Source: INEGI

### Figure 60: Mexico Border States IMMEX (maquiladora) Employment

The Maquiladora Program, initiated in mid-1960s as assembly platforms for U.S. manufacturers, continued to grow under NAFTA, and by 2006 employed 1.2 million people. The PITEX Program was established in 1990 and by 2006 included all motor vehicle assembly plants and most of their parts suppliers in Mexico. The two programs were merged into IMMEX program in 2006.

In 2015, IMMEX employment in Mexico’s border states was 1,427,586, a 6.6% increase from a year ago. Nationwide, IMMEX employment increased 5.7%. (Table 26)

Mexico’s border states accounted for 61.6% of all IMMEX employment in Mexico, a slight uptick from 61.1% a year ago, and more or less a steady share since 2010. (Figure 60)

In 2015, Chihuahua (335,172) and Baja California (283,015) had the largest numbers of employees in the IMMEX sector. Sonora, with 115,414 had the smallest, however, this was
SONORA'S IMMEX employment increased 2.0% from a year ago compared to the Mexico border states’ average of 6.6%. Compared to 2008, Sonora's IMMEX has employment increased 20.9%, slightly less than the border states' overall average of 24.3%. (Table 27)

Sonora's share of the border states' total decreased slightly from 8.5% in 2014 to 8.1% in 2015, but remained between 8.1% and 8.6% throughout the 2008–2015 period. (Figure 62)

From 2008 to 2015 Sonora's growth in IMMEX employment of 20.9% accelerated, between faster growth of Coahuila, Chihuahua, and Nuevo León (51.4%, 23.6%, and 28.3%), and slower growth of Baja California (14.8%) and Tamaulipas (12.0%). Mexico's average growth during the same period was 24.2%. (Figure 63)

**Table 27: Sonora and Mexico IMMEX (maquiladora) Employment (000's)**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Son.</th>
<th>Son. % share of Mexico Border States</th>
<th>Mexico Border States</th>
<th>Mexico Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>95</td>
<td>8.31</td>
<td>1,149</td>
<td>1,868</td>
</tr>
<tr>
<td>2009</td>
<td>82</td>
<td>8.44</td>
<td>970</td>
<td>1,618</td>
</tr>
<tr>
<td>2010</td>
<td>91</td>
<td>8.46</td>
<td>1,074</td>
<td>1,770</td>
</tr>
<tr>
<td>2011</td>
<td>97</td>
<td>8.57</td>
<td>1,135</td>
<td>1,860</td>
</tr>
<tr>
<td>2012</td>
<td>102</td>
<td>8.50</td>
<td>1,201</td>
<td>1,971</td>
</tr>
<tr>
<td>2013</td>
<td>111</td>
<td>8.68</td>
<td>1,274</td>
<td>2,096</td>
</tr>
<tr>
<td>2014</td>
<td>113</td>
<td>8.45</td>
<td>1,339</td>
<td>2,193</td>
</tr>
<tr>
<td>2015</td>
<td>115</td>
<td>8.08</td>
<td>1,428</td>
<td>2,319</td>
</tr>
</tbody>
</table>

*Source: INEGI*

**Figure 62: Sonora IMMEX (maquiladora) Employment**

**Figure 63: IMMEX (maquiladora) Employment Mexico Border States (2008=100)**

*Source: INEGI*
Knowledge drives productivity and economic growth, generates new or improved products and services, contributes to technological change, and enhances living standards. The knowledge economy can be measured in terms of the number of “knowledge workers” such as engineers and scientists, or also in terms of overall human capital based on educational level.

**Patents**

In 2015, 2540 patents were issued in Arizona. This was a small (0.9%) yet positive increase over a year ago, and increased Arizona's share of patents in southern border states by 0.1 percentage points to 4.8%. (Figure 64)

Along with New Mexico, Arizona was one of only two border states to experience an increase, albeit small, in the number of patents issued. California and Texas exhibited declines of 1.1% and 0.9%, respectively, brought about by 465 and 88 fewer patents issued than in 2014.

**Engineering Occupations**

In 2015 there were 29,170 workers in engineering occupations in Arizona. This was 790 fewer than in 2014, and a 2.6% decrease over a year ago. (Table 28)

After a small increase in 2012, the number of engineers in Arizona has declined steadily. In 2015, this figure was 3.8% below its 2011 level, whereas other border states experienced increases between 8.0 and 10.0% over the same period. (Figure 65)
The number of life and physical scientists in Arizona decreased by 530 in 2015, a 7.2% decrease over the year. (Table 29) This was the largest percent decline among border states. Texas experienced a 6.4% decline, California 4.9%, nationally the U.S declined by 1.1% in this sector. New Mexico was the only border state to gain ground adding 370 scientists for a 9.1% gain. Arizona has gained 10.0% in this sector since 2011, this is faster growth than California or Texas. (Figure 66)

Internet Access

Internet access is increasingly necessary at individual, company, and societal levels for finding employment, expanding innovation, and remaining globally competitive. At the individual level, access to internet at home is especially important as an educational tool for middle- and high-school students. Access to internet profoundly affects participation in the knowledge economy.

The number of households where any household member uses the internet at home in Arizona was 1,830,911 in 2015, an increase of 87,884 compared to 2013. This was a 5.0% increase, and the second highest growth rate among border states, behind only Texas with 6.0% growth over the same period.* (Figure 67)

How does Arizona compare?

- 2011 – 2015: While the number of life and physical scientists in Arizona has decreased recently, the state has added 620
- In 2015, 69.0 % of Arizona’s population lives in a household with internet access from home

*National Telecommunications & Information Administration

Table 29: Number of Life and Physical Scientists

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AZ</th>
<th>CA</th>
<th>NM</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>6,220</td>
<td>87,460</td>
<td>3,840</td>
<td>38,020</td>
</tr>
<tr>
<td>2012</td>
<td>6,500</td>
<td>90,910</td>
<td>3,710</td>
<td>38,320</td>
</tr>
<tr>
<td>2013</td>
<td>7,450</td>
<td>98,070</td>
<td>4,070</td>
<td>37,080</td>
</tr>
<tr>
<td>2014</td>
<td>7,370</td>
<td>95,920</td>
<td>4,080</td>
<td>38,920</td>
</tr>
<tr>
<td>2015</td>
<td>6,840</td>
<td>91,200</td>
<td>4,450</td>
<td>34,680</td>
</tr>
</tbody>
</table>


Figure 66: Life and Physical Scientists

Figure 67: Individuals Living in Households with Internet Access

Source: National Telecommunications & Information Administration
Educational attainment is key to better paying jobs and improving standards of living. A strong relationship exists between educational attainment and regional economic performance. Regions with better-educated workers show higher GDP per capita and real wages. These regions also compete more successfully in the knowledge economy for high-tech industries.

Educational Attainment

In 2014, 27.6% of Arizona’s population 25 years and older had a bachelor’s degree or higher. This was a 0.7% increase over a year ago, and ranked Arizona third among border states. (Figure 68)

At 31.7% California has the largest share of individuals over 25 with a bachelor’s degree or higher. This was followed by Texas (27.8%) and Arizona (27.6%). New Mexico is in fourth place with 26.4%, unchanged from a year ago. (Table 30)

California and Texas posted the largest year over year gains in the share of population over 25 with a bachelor’s degree or higher, with 2.3% and 1.1% increases, respectively, in 2014. (Figure 69)

How does Arizona compare?

- In 2014, Arizona ranked third among border states in the percentage of population with a BA or higher
- In 2014, percentage of population over 25 with a BA or higher in Arizona increased by 0.7%
Foreign Direct Investment (FDI) is a key characteristic of international economic integration. Its importance to a host country is that it brings additional capital, creates jobs, and encourages the transfer of technology. Benefits to investor countries include access to an expanded labor force, and expanded opportunities for promotion of products in international markets. Mexico ranks among the top developing countries in the attraction of foreign investors seeking to expand into the NAFTA area.

In 2015, Sonora garnered $498.2 million in foreign direct investment. This was a decline of $362.5 million, or a 42.1% decrease over 2014. Nuevo León led among border states with $2.6 billion, followed by Chihuahua with $2.1 billion. Sinaloa was last with $402.3 million. (Table 31)

Sonora’s share as a percentage of Mexico’s border states in 2015 declined to 5.9% from 12.3% in 2014. Sonora’s share of the national total decreased from 3.4% to 1.8%. (Figure 71)

Foreign direct investment in Sonora has fluctuated significantly between 2005 and 2015. It reached a high point in 2013 at $1.9 billion and a low point in 2011 at $324.7 million. 2015 FDI levels were 24.0% less than a decade ago in 2005. (Figure 72)

Table 31: FDI Sonora, Sinaloa, and Mexico Total ($mil)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Sinaloa</th>
<th>Sonora</th>
<th>Mexico Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>104.8</td>
<td>655.7</td>
<td>24,890.4</td>
</tr>
<tr>
<td>2006</td>
<td>144.4</td>
<td>473.9</td>
<td>21,025.9</td>
</tr>
<tr>
<td>2007</td>
<td>277.4</td>
<td>958.2</td>
<td>32,409.2</td>
</tr>
<tr>
<td>2008</td>
<td>173.8</td>
<td>1,566.8</td>
<td>28,937.1</td>
</tr>
<tr>
<td>2009</td>
<td>147.7</td>
<td>353.5</td>
<td>17,889.6</td>
</tr>
<tr>
<td>2010</td>
<td>217.7</td>
<td>1,102.7</td>
<td>26,369.1</td>
</tr>
<tr>
<td>2011</td>
<td>226.1</td>
<td>324.7</td>
<td>23,746.1</td>
</tr>
<tr>
<td>2012</td>
<td>416.7</td>
<td>1,185.7</td>
<td>20,305.6</td>
</tr>
<tr>
<td>2013</td>
<td>580.3</td>
<td>1,920.6</td>
<td>45,725.6</td>
</tr>
<tr>
<td>2014</td>
<td>343.8</td>
<td>860.7</td>
<td>25,629.1</td>
</tr>
<tr>
<td>2015</td>
<td>402.3</td>
<td>498.2</td>
<td>28,382.3</td>
</tr>
</tbody>
</table>

Source: INEGI

Figure 71: Sonora FDI

Figure 72: Sonora and Mexico FDI (2005=100)

Source: INEGI
DATA SOURCES

Arizona-Mexico Economic Indicators Annual Report 2016

Population

Instituto Nacional de Estadística Y Geografía (INEGI), Banco de Información; website: www3.inegi.org.mx

U.S. Census Bureau, Population Division; website: www.census.gov

U.S. Census Bureau, American Community Survey; website: www.census.gov

Border Crossings
U.S. Department of Transportation, Office of the Assistant Secretary for Research and Technology (RITA), Bureau of Transportation Statistics (BTS); website: http://www.rita.dot.gov/bts/

Economic Output
U.S. Department of Commerce, Bureau of Economic Analysis; website: www.bea.gov

Instituto Nacional de Estadística Y Geografía (INEGI), Banco de Información Económica (BIE); website: www3.inegi.org.mx

Economic Business and Research Center, Eller College of Management, The University of Arizona

Exports to Mexico and Canada
U.S. Census Bureau via USA Trade; website: https://usatrade.census.gov/

Commodity Flows
U.S. Census Bureau via USA Trade; website: https://usatrade.census.gov/

Export-Based Economy
  Current Employment Statistics (CES); http://www.bls.gov/ces/
  Quarterly Census of Employment And Wages (QCEW); http://www.bls.gov/cew/cewover.htm

Instituto Nacional de Estadística Y Geografía (INEGI), Banco de Información Económica (BIE); website: www3.inegi.org.mx

Knowledge-Based Economy
U.S. Patent and Trademark Office; website: www.uspto.gov

National Science Foundation; website: www.nsf.gov

U.S. Department of Labor, Bureau of Labor Statistics (BLS); website: www.bls.gov

U.S. Census Bureau, American Fact Finder; website: www.factfinder.census.gov

Foreign Direct Investment
Instituto Nacional de Estadística Y Geografía (INEGI), Banco de Información Económica (BIE); website: www3.inegi.org.mx

Find the complete Arizona-Mexico Economic Indicators at:
AZMEX.eller.arizona.edu