Competitive Border Communities: Mapping and Developing U.S.-Mexico Transborder Industries

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Bilateral trade is growing.
Uneven growth in U.S.-Mexico border communities.
Border communities thought of as pass-through/transit point communities.
The U.S.-Mexico High-Level Economic Dialogue
Mexico-U.S. Entrepreneurship and Innovation Council (MUSEIC) + iCluster Subcommittee
National cluster mapping initiatives in U.S. and Mexico
Local cluster mapping initiatives in CaliBaja MegaRegion, Saltillo-Monterrey-San Antonio corridor
U.S.-Mexico Border Industry Mapping and Stakeholder Engagement Project, Apr.-Sept. 2015

- **Project partners:** NARP + Mexico Institute/WWICS.
- Project looks at **quantitative** and **qualitative** issues that affect border industries that are **concentrated, dynamic** and **binational**.
- Area of analysis = **border counties** and **municipios**.
- **Binational focus groups** in San Diego, Tucson, El Paso, Laredo and Brownsville.
- Designed to **support the crossborder economic development work** of bilateral (HLED), federal, state and local entities.
Clusters vs. Industries

What is a Cluster?

“Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (e.g., universities, standards agencies, trade associations) in a particular field that compete but also cooperate.” Michael Porter*

<table>
<thead>
<tr>
<th>Picking Winners</th>
<th>Cluster-Based Strategies</th>
<th>Macro and Overall Business Environment Improvements (Cross-Cluster Strategies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Firm Specific</td>
<td>- Data reveals existing industrial clusters with roots (not politically driven)</td>
<td>- Subregion, Region or Nation specific</td>
</tr>
<tr>
<td></td>
<td>- Industry/Cluster specific</td>
<td>- Pro-competition (robust business environment fosters competition)</td>
</tr>
<tr>
<td>- Weakens Competition and thus incentives to improve</td>
<td>- Pro-competition (seeks diversity and numerous firms competing within sector)</td>
<td>Examples: Education, Responsible Fiscal and Monetary Policy, Trade Liberalization, Cutting Red-Tape, Simplifying Tax Code, General Infrastructure (overall highway network, broadband, etc.), Broad tax incentives</td>
</tr>
<tr>
<td>- Politically driven</td>
<td>Examples: Specialized Education Programs, Industry Worker Training Programs, Specialized Infrastructure (port, pre-inspection), Business-Regulator Dialogue, Joint Marketing</td>
<td></td>
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<tr>
<td>- Inconsistent across administrations</td>
<td></td>
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<tr>
<td>Examples: Subsidies, Tariff Barriers, Negotiated tax incentives</td>
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</tbody>
</table>
Table 4. Tamaulipas GDP and Exports to the U.S. by Subsector (3-digit NAICS), 2013

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Subsector Contribution to Tamaulipas GDP (Million USD)</th>
<th>% of Total Tamaulipas GDP</th>
<th>Exports Tamaulipas to the US (Million USD)</th>
<th>% of Total State Exports to U.S.</th>
<th>Exports to U.S./GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil and gas extraction (211)</td>
<td>3,092</td>
<td>8.67%</td>
<td>337</td>
<td>1.86%</td>
<td>10.89%</td>
</tr>
<tr>
<td>Mining, except oil and gas (212)</td>
<td>13</td>
<td>0.04%</td>
<td>0</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Wood products manufacturing (321)</td>
<td>9</td>
<td>0.03%</td>
<td>3</td>
<td>0.02%</td>
<td>34.32%</td>
</tr>
<tr>
<td>Nonmetallic mineral products manufacturing (327)</td>
<td>154</td>
<td>0.43%</td>
<td>164</td>
<td>0.91%</td>
<td>106.37%</td>
</tr>
<tr>
<td>Furniture and related products manufacturing (337)</td>
<td>58</td>
<td>0.16%</td>
<td>400</td>
<td>2.21%</td>
<td>688.23%</td>
</tr>
<tr>
<td>Miscellaneous manufacturing (339)</td>
<td>191</td>
<td>0.54%</td>
<td>1,006</td>
<td>5.57%</td>
<td>526.93%</td>
</tr>
<tr>
<td>Food and beverage and tobacco products manufacturing (311 - 312)</td>
<td>686</td>
<td>1.92%</td>
<td>200</td>
<td>1.11%</td>
<td>25.18%</td>
</tr>
<tr>
<td>Textile mills and textile product mills (313 - 314)</td>
<td>42</td>
<td>0.12%</td>
<td>27</td>
<td>0.15%</td>
<td>65.48%</td>
</tr>
<tr>
<td>Apparel and leather and allied products manufacturing (315 - 316)</td>
<td>58</td>
<td>0.16%</td>
<td>34</td>
<td>0.19%</td>
<td>59.51%</td>
</tr>
<tr>
<td>Paper Manufacturing, Printing and related support activities (322 - 323)</td>
<td>103</td>
<td>0.29%</td>
<td>186</td>
<td>1.03%</td>
<td>179.95%</td>
</tr>
<tr>
<td>Petroleum, plastic and chemical product manufacturing (324 - 326)</td>
<td>2,297</td>
<td>6.44%</td>
<td>3,134</td>
<td>17.34%</td>
<td>136.43%</td>
</tr>
<tr>
<td>Primary metals manufacturing, fabricated metal products (331 - 332)</td>
<td>179</td>
<td>0.50%</td>
<td>746</td>
<td>4.13%</td>
<td>417.14%</td>
</tr>
<tr>
<td>Machinery Manufacturing, Computer and Electronic Product Manufacturing,</td>
<td>2,180</td>
<td>6.11%</td>
<td>11,841</td>
<td>65.50%</td>
<td>543.22%</td>
</tr>
<tr>
<td>Electrical Equipment, Appliance, and Component Manufacturing and Motor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vehicles, bodies and trailers, and parts manufacturing (333 - 336)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State GDP, Subsector Exports</td>
<td>35,682</td>
<td></td>
<td>18,079</td>
<td></td>
<td></td>
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</tbody>
</table>

Figure 1. Employment, Arizona - Sonora

Authors' own elaboration and data sources.
Automotive Sector
Automotive Sector

### Auto-Sector Employment (approx.) in the U.S.-Mexico Border Region, 2013

<table>
<thead>
<tr>
<th>Subregion</th>
<th>Employment (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>California-Baja California Border Subregion</td>
<td>17,000</td>
</tr>
<tr>
<td>Arizona-Sonora Border Subregion</td>
<td>8,500</td>
</tr>
<tr>
<td>Paso Del Norte Subregion</td>
<td>80,000</td>
</tr>
<tr>
<td>Coahuila-Nuevo León-Tamaulipas-Texas Border Subregion</td>
<td>50,000</td>
</tr>
<tr>
<td>Lower Rio Grande Valley-Tamaulipas Subregion</td>
<td>47,000</td>
</tr>
</tbody>
</table>

Includes: 3362-Motor Vehicle Body and Trailer Manufacturing; 3363-Motor Vehicle Parts Manufacturing; and 3369-Other Transportation Equipment Manufacturing; and is supported by industries such as 3321-Forging and Stamping.
Some Leaders in the Sector

- Hyundai
- Toyota
- Fujikura Automotive
- Hendrickson Spring
- Lear Corporation
- Arneses y Accesorios de México - Alcoa
- Johnson Controls
- Delphi
Aerospace Industry
Aerospace Industry

Wilson Center
North American Research Partnership
Strengths and Opportunities

- Bilateral Aviation Safety Agreement facilitates bi-national manufacturing activities.
- Complimentary activities on both sides of the border
  - In Tijuana there are 31 firms working in the industry. Most of the development is in fuselage systems and power plants.
  - San Diego County performs 60% of technology development in unmanned systems.
  - Arizona has a long history in the aerospace and defense sector
  - Sonora is developing its strength in the manufacturing of turbine and engine components.
  - Chihuahua has experience in high-tech manufacturing
  - Along the border in Texas, support activities for air transportation are important.
  - Tamaulipas is trying to attract FDI in the parts manufacturing for the aerospace sector
Some Companies Located in the Region

- Tier 1s surrounded by Tier 2s and Tier 3, as well as support-oriented firms
  - Zodiac Equipment Mexico (Cabin & Structures)
  - Eaton Aerospace (Electrical Sensing & Controls, Hydraulics)
  - Honeywell (R&D, Life Safety, ...)
  - Pencom (CNC manufacturing)
  - Daher (Composite aerostructures)
  - Boeing (Engineering, support)
  - Embraer (Service and repair)
  - Safran Labinal (electrical wiring)
  - Cessna (Machining)
Transportation, Logistics, and Trade
Logistics Sector: General Freight Trucking Employment

COUNTY/MUNICIPIO Employees (2013)
NAICS 4841
General Freight Trucking
Autotransporte de carga general

CA: San Diego
2,534

CA: Tijuana
1,263

BCN: Mexicali
1,825

AZ: Pima
1,016

CHH: Juárez
5,489

TX: El Paso
5,102

TX: Webb
3,592

TAM: Nuevo Laredo
5,891

TAM: Reynosa
1,489

TX: Hidalgo
2,485

TX: Cameron
375
Border-Wide Findings

- Highly specialized manufacturing industries on the Mexican side of the border.
- Strong logistics industries on the U.S. side.
- Fewer signs of deep supply chain connections or non-logistics service provision by U.S. firms along the border to Mexican border industries than we had expected.
- Highly uneven nature of cluster organization and crossborder economic development efforts throughout the border region.
- The predominance of border security over trade has affected the overall business environment on the border.
- Highly uneven distribution of manufacturing operations poses a challenge for the cultivation of binational clusters.
- Crossborder mobility and human capital development continues to be a challenge in the region.
1. The United States and Mexican federal governments must play an especially important role in cross-border economic development efforts.

2. Border communities should actively utilize cluster-based economic development, with its focus on collaboration among government, industry and educational institutions, as an opportunity to engage federal officials managing the border as partners in a joint effort.
3. Link up economic development organizations along the border through a variety of formal and informal mechanisms.

4. Minimize crossborder travel restrictions for university faculty, staff and students.

5. The two federal governments need to further harmonize (and localize) data collection across the border.
6. Update and streamline specialist, worker and student internship NAFTA visas to foster mobility.

7. Create binational cluster councils with public, private and education sectors all at the table.

8. Mega regions should monitor the growth of emerging binational industries that could be good candidates for cluster-based economic development.
Thank you

- naresearchpartnership.org/projects/binationalindustries/map
- wilsoncenter.org/specialinitiatives/binationalindustries