Mexico’s role in North America’s auto industry

U.S.-Mexico Manufacturing: Back in the Race
El Paso, TX
October 9, 2015

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Disclaimer
The analysis and conclusions set forth are those of the author and do not indicate concurrence by other members of the research staff or the Federal Reserve Bank of Chicago.
Vehicle production in North America 2013

Thomas Klier, FRB Chicago
Parts and vehicle assembly co-locate

2013

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Mexico’s light vehicle assembly plants

- Tijuana (2004)
- Hermosillo (1986)
- Ramos Arizpe (1981)
- Monterrey (2016)
- Saltillo (1995)
- El Salto (1995)
- Salamanca (2013)
- BMW (2019)
- San Luis Potosi (2008)
- Silao (1993)
- Guanajuato (2019)
- Celaya (2014)
- Toluca (1968)
- Cuernavaca (1966)
- Puebla (1965)
- San Jose Chiapa (2016)
- Cuautitlan (1970)
North America in the world

North America’s vehicle production share

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2009</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31%</td>
<td>17%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Growth in markets outside North America.
Most vehicles produced where sold

U.S. light vehicle sales by major production region

NAFTA

Asia

Europe
Within North America, gains for Mexico

Share of light vehicle production

<table>
<thead>
<tr>
<th>Country</th>
<th>1990</th>
<th>2007</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>16</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Mexico</td>
<td>6</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>U.S.</td>
<td>78</td>
<td>70</td>
<td>67</td>
</tr>
<tr>
<td>N. America</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Mexican light vehicle production up strongly

Annual production is up by 2.8 million units since 1985
Exports drive Mexico’s growth

Annual exports have increased by 2.5 million units since 1985
Those exports go north and south

Vehicle exports from Mexico by destination

<table>
<thead>
<tr>
<th>Region</th>
<th>export share</th>
<th>2005</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAFTA</td>
<td>88</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Latin America</td>
<td>3</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Not known</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

In 2013, 82% (2.38 million units) of Mexico’s LV production was exported.
Every producer exports most of its production

<table>
<thead>
<tr>
<th>Company</th>
<th>Share of its Mexican production exported</th>
<th>Share of Mexican light veh. exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>GM</td>
<td>84</td>
<td>22</td>
</tr>
<tr>
<td>Ford</td>
<td>97</td>
<td>16</td>
</tr>
<tr>
<td>Chrysler</td>
<td>94</td>
<td>18</td>
</tr>
<tr>
<td>VW</td>
<td>85</td>
<td>15</td>
</tr>
<tr>
<td>Nissan</td>
<td>64</td>
<td>20</td>
</tr>
<tr>
<td>Toyota</td>
<td>80</td>
<td>2</td>
</tr>
<tr>
<td>Honda</td>
<td>92</td>
<td>4</td>
</tr>
<tr>
<td>Mazda</td>
<td>80</td>
<td>3</td>
</tr>
</tbody>
</table>
Summary

• Vehicles tend to be produced in the region in which they are sold
• Mexico’s growth in vehicle output has been driven by exports
• Mexico’s roles as export hub extends beyond North America
• As in the rest of North America, Mexico’s production has become more international
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