Automotive–Definition

The Automotive cluster is comprised of industries involved in the manufacturing of motor vehicles, such as buses, cars, and trailer trucks. This also includes the manufacturing of new and after-market parts for use within the design of the motor vehicle.

Missouri’s Strengths

Vehicle Manufacturing

Light truck, utility vehicle, and truck trailer manufacturing are key global exporters and large employers in Missouri. The three major American automakers have had locations in the state for many years. Firms in this industry have contributed to the development of a highly skilled workforce in the state. Companies included in this industry are Chrysler Corporation, Ford Motor Company, and General Motors Corporation.

Vehicle Parts Manufacturing

Other large employers and exporters within the automotive segment in Missouri involve parts manufacturing. These industries manufacture and design parts for new cars as well as after-market. Growth industries include the manufacture of storage batteries, carburetors, pistons, valves, steering, suspensions, current-carrying wiring devices, seating, and vehicle bodies. Eagle-Picher and Lear Operations are some of the companies involved in vehicle parts manufacturing.

Key Locations

The largest employing areas in Automotive are located mainly in the St. Louis and Kansas City metro areas, and Greene County. The highest employment growth areas include the northwest, the central region, the Ozarks region, and the southeast. Regional export areas are spread throughout Missouri.

Factoid:

- Missouri is home to the Dodge Ram, the Chrysler Caravan, the Ford Escape, the GMC Savana, and the Chevrolet Express.
- 90% of all Automobile Dealers are involved in selling new cars; 10% sell used.
- More than 16% of automotive service technicians are self employed.
- The first locally manufactured gas engines were built in 1897 by the St. Louis Gasoline Engine Company.
What’s Next for Automotive?

Automotive manufacturing is an important part of Missouri’s economy. The automotive industry accounts for nearly 1.6% of total employment in the state. Ford, Daimler Chrysler and General Motors all have assembly plants in Missouri. A large number of vehicle parts manufacturers and wholesalers are also located in Missouri.

Higher gas prices have changed consumer buying patterns from large trucks and SUV’s to smaller, more fuel-efficient vehicles. This change is impacting the industry in different ways. Both Ford and Chrysler have recently announced assembly plant closures or employee cuts due to this shifting consumer demand. On a positive note, Chrysler has announced plans to convert one of its assembly plants into a flexible manufacturing facility which is capable of producing different models on the same assembly line. Flexible manufacturing systems represent the future of automotive manufacturing.

Automobile parts manufacturers in Missouri are aware that this changing market also means changes for them. Some are expanding their markets to reach automobile manufacturers throughout the U.S. Diversified Plastics Corporation in Nixa, for example, has recently contracted with Honda to manufacture foam seating.

Overall, employment has been consistent for Missouri’s automotive industrial group, despite a measured decrease in the number of total establishments between 2001 and 2005. Manufacturing output is expected to continue to grow to replace existing vehicles and meet the demand for new vehicles as the driving population grows. Market pressures for fuel efficiency and lower emissions could provide opportunities for new investment in the state as parts manufacturers adapt to new technology.

Missouri is a top ten auto-producing state. Possessing an automotive industrial knowledge base that reaches across the state, a robust and evolving infrastructure, and competitive energy costs, Missouri remains poised to continue as a key partner in the auto industry of the future.
Cluster Statistics

- Number of Businesses (2006) ........................................... 258
- Number of Jobs (2006) ................................................... 36,223
- Percent of Total Missouri Jobs (2006) ............................ 1.58%
- Average Annual Wages (2005) ....................................... $34,167
- Location Quotient (2006) ............................................. 1.65
- Percent Change from 2001 Location Quotient ............... 3.91%
- Net Percent Change in Jobs (2001-2006) ....................... -12.2%
- Total Change in Jobs (2001-2006) ................................. -5,051

Employment Change from 2007 attributed to:
- National Factors ...................................................... 1,059
- Industry Factors ...................................................... -7,066
- Missouri’s Competitiveness .......................................... 956

Top Five Industries

- Light truck and utility vehicle manufacturing
- Motor vehicle parts manufacturing
- Motor vehicle seating and interior trim mfg.
- Storage battery manufacturing
- Truck trailer manufacturing

68% of Cluster Jobs

Targeted Occupations with Projected Growth and Current Wage

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Current Wage</th>
<th>Projected Growth 2004–2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance and Repair Workers</td>
<td>$32,410</td>
<td>10.30%</td>
</tr>
<tr>
<td>Electricians</td>
<td>$50,500</td>
<td>9.20%</td>
</tr>
<tr>
<td>Welders, Cutters, Solderers, and Brazers</td>
<td>$29,840</td>
<td>4.90%</td>
</tr>
<tr>
<td>First-Line Supervisors/Managers</td>
<td>$47,950</td>
<td>4.40%</td>
</tr>
<tr>
<td>Team Assemblers</td>
<td>$28,570</td>
<td>4.30%</td>
</tr>
</tbody>
</table>
Missouri Targeted Industry Clusters

Automotive

Employment Percentage by County (2006)

Employment Change by County (2001-2006)
Location Quotient by County (2006)

Top Industries by 2006 Location Quotient (LQ) with Change from 2001 LQ

<table>
<thead>
<tr>
<th>NAICS</th>
<th>Industry</th>
<th>2006 LQ</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>336112</td>
<td>Light truck and utility vehicle manufacturing</td>
<td>9.52</td>
<td>-25.81%</td>
</tr>
<tr>
<td>335911</td>
<td>Storage battery manufacturing</td>
<td>6.41</td>
<td>44.42%</td>
</tr>
<tr>
<td>336212</td>
<td>Truck trailer manufacturing</td>
<td>2.46</td>
<td>-8.79%</td>
</tr>
<tr>
<td>336321</td>
<td>Vehicular lighting equipment manufacturing</td>
<td>2.32</td>
<td>-4.93%</td>
</tr>
<tr>
<td>336360</td>
<td>Motor vehicle seating and interior trim mfg.</td>
<td>2.08</td>
<td>-12.78%</td>
</tr>
<tr>
<td>336311</td>
<td>Carburetor, piston, ring, and valve mfg.</td>
<td>2.01</td>
<td>30.47%</td>
</tr>
<tr>
<td>336340</td>
<td>Motor vehicle brake system manufacturing</td>
<td>1.95</td>
<td>-22.30%</td>
</tr>
<tr>
<td>336330</td>
<td>Motor vehicle steering and suspension parts</td>
<td>1.46</td>
<td>47.70%</td>
</tr>
<tr>
<td>336399</td>
<td>All other motor vehicle parts manufacturing</td>
<td>1.30</td>
<td>8.63%</td>
</tr>
<tr>
<td>335931</td>
<td>Current-carrying wiring device manufacturing</td>
<td>1.13</td>
<td>27.60%</td>
</tr>
<tr>
<td>336211</td>
<td>Motor vehicle body manufacturing</td>
<td>1.07</td>
<td>21.06%</td>
</tr>
</tbody>
</table>
## Missouri Targeted Industry Clusters

**Automotive**

### Distribution of Firms and Jobs by Firm Size (2006)

<table>
<thead>
<tr>
<th>Firm Size</th>
<th>Firms</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (&lt;10 employees)</td>
<td>66%</td>
<td>4%</td>
</tr>
<tr>
<td>Medium (10-50 employees)</td>
<td>28%</td>
<td>23%</td>
</tr>
<tr>
<td>Large (&gt;50 employees)</td>
<td>6%</td>
<td>61%</td>
</tr>
</tbody>
</table>

### NAICS industries included in targeted cluster

- **335110** Electric Lamp Bulb and Part Manufacturing
- **335911** Storage Battery Manufacturing
- **335931** Current-Carrying Wiring Device Manufacturing
- **336111** Automobile Manufacturing
- **336112** Light Truck and Utility Vehicle Manufacturing
- **336120** Heavy Duty Truck Manufacturing
- **336211** Motor Vehicle Body Manufacturing
- **336212** Truck Trailer Manufacturing
- **336311** Carburetor, Piston, Piston Ring, and Valve Manufacturing
- **336312** Gasoline Engine and Engine Parts Manufacturing
- **336321** Vehicular Lighting Equipment Manufacturing
- **336322** Other Motor Vehicle Electrical and Electronic Equipment Manufacturing
- **336330** Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
- **336340** Motor Vehicle Brake System Manufacturing
- **336350** Motor Vehicle Transmission and Power Train Parts Manufacturing
- **336360** Motor Vehicle Seating and Interior Trim Manufacturing
- **336370** Motor Vehicle Metal Stamping
- **336391** Motor Vehicle Air-Conditioning Manufacturing
- **336399** All Other Motor Vehicle Parts Manufacturing
Missouri Auto Industry: The Supply Chain

Distribution trend maps illustrate the clustering orientation of employees or firms which can help identify industry corridors.

With major assembly operations in the metro areas of Kansas City and St. Louis, industrial expertise along the automotive value chain extends throughout Missouri. The employment density of automotive assembly plants, along with automotive parts manufacturers, is illustrated by the map on the left.

The automotive parts and component firms’ distribution is shown to the right.

“Steering, Suspension & Brake System”, “Electrical Equipment”, and “Engine & Power Train” trend southward toward Springfield but with heavy influence from Kansas City and St. Louis.

The directional trend for “Seating & Interior Trim” establishments, however, tightens along the Interstate 70 corridor and slightly favors the St. Louis metropolitan area.
Definition of Terms

Location Quotient

Location Quotient (LQ) measures the employment concentration of an industry within a specified area relative to the nation as a whole. It is calculated by dividing the region’s industry employment share by the nation’s industry employment share. A LQ of 1.00 or greater means that there is a higher concentration in the region for an industry than exists nationally. The Location Quotient is a quick guide to understanding key industries within an area, especially when coupled with employment growth trends that shift-share analysis can reveal.

Statewide Location Quotients are provided by cluster in the summary section and in each cluster and sub-cluster section. Top industry and county Location Quotients are included in each cluster and sub-cluster section.

Shift Share Analysis

Shift Share analysis measures employment changes in an industry, cluster, or regional industry mix. It breaks out employment changes into three components: National Share (NS), Industry Mix (IM), and Regional Shift (RS).

National Share (NS)—is the share of regional employment changes attributed to factors in the national economy.

Industry Mix (IM)—identifies local industry employment changes attributed to national industry employment changes.

Regional Shift (RS)—identifies a region’s lagging or leading industries. This is also considered a measure of a region’s competitiveness.

The shift share analysis is provided in the summary section and in each cluster and sub-cluster section under the heading Cluster Statistics.
### Summary of Clusters

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td>3,040</td>
<td>88,645</td>
<td>29</td>
<td>3.86%</td>
<td>$39,605</td>
<td>1.19</td>
<td>1.03%</td>
<td>1.03%</td>
<td>99%</td>
<td>-8.9%</td>
<td>-8,654</td>
<td>2,498</td>
<td>-14,590</td>
<td>3,438</td>
</tr>
<tr>
<td>Automotive</td>
<td>258</td>
<td>36,223</td>
<td>140</td>
<td>1.58%</td>
<td>$54,167</td>
<td>1.65</td>
<td>-1.43%</td>
<td>-1.43%</td>
<td>66%</td>
<td>-12.2%</td>
<td>-5,051</td>
<td>1,059</td>
<td>7,066</td>
<td>956</td>
</tr>
<tr>
<td>Defense/ Homeland Security</td>
<td>348</td>
<td>16,922</td>
<td>49</td>
<td>0.74%</td>
<td>$77,935</td>
<td>0.78</td>
<td>4.61%</td>
<td>4.61%</td>
<td>88%</td>
<td>42.2%</td>
<td>5,024</td>
<td>305</td>
<td>180</td>
<td>4,538</td>
</tr>
<tr>
<td>Energy</td>
<td>696</td>
<td>20,275</td>
<td>29</td>
<td>0.88%</td>
<td>$55,053</td>
<td>1.29</td>
<td>1.72%</td>
<td>1.72%</td>
<td>93%</td>
<td>-17.6%</td>
<td>-4,320</td>
<td>1,798</td>
<td>-6,315</td>
<td>-657</td>
</tr>
<tr>
<td>Finance</td>
<td>9,769</td>
<td>132,036</td>
<td>14</td>
<td>5.75%</td>
<td>$52,206</td>
<td>1.04</td>
<td>-1.91%</td>
<td>-1.91%</td>
<td>92%</td>
<td>14.4%</td>
<td>3,760</td>
<td>3,343</td>
<td>3,204</td>
<td>4,749</td>
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<tr>
<td>Information Technology</td>
<td>2,345</td>
<td>38,604</td>
<td>16</td>
<td>1.68%</td>
<td>$70,938</td>
<td>0.79</td>
<td>10.8%</td>
<td>10.8%</td>
<td>93%</td>
<td>1.4%</td>
<td>4,629</td>
<td>894</td>
<td>195</td>
<td>2,670</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>1,034</td>
<td>31,295</td>
<td>30</td>
<td>1.36%</td>
<td>$56,505</td>
<td>0.91</td>
<td>0.12%</td>
<td>0.12%</td>
<td>91%</td>
<td>17.4%</td>
<td>466</td>
<td>685</td>
<td>195</td>
<td>3,013</td>
</tr>
<tr>
<td>Transportation/Legislative</td>
<td>12,468</td>
<td>175,064</td>
<td>14</td>
<td>7.62%</td>
<td>$43,374</td>
<td>1.05</td>
<td>11.4%</td>
<td>11.4%</td>
<td>94%</td>
<td>0.3%</td>
<td>-18,482</td>
<td>4,482</td>
<td>932</td>
<td>-1,858</td>
</tr>
<tr>
<td>All Clusters</td>
<td>29,349</td>
<td>519,316</td>
<td>18</td>
<td>22.62%</td>
<td>$51,285</td>
<td>1.06</td>
<td>1.22%</td>
<td>1.22%</td>
<td>93%</td>
<td>-3.40%</td>
<td>-14,590</td>
<td>13,005</td>
<td>-2,178</td>
<td>272</td>
</tr>
</tbody>
</table>

Note: Some industries are in more than one cluster, so the sum of individual clusters will not equal the total for all clusters.