World Gears

Industry Study with Forecasts for 2019 & 2024

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World demand to rise 6% annually through 2019

Worldwide demand for gears is projected to rise 6.0 percent per annum through 2019 to $221 billion, driven by healthy advances in motor vehicle and other durable goods output. In the automotive market, a shift toward more expensive, energy-efficient units, such as seven- and eight-speed automatic transmissions, will contribute to value gains. Additionally, sales of gears used in a number of relatively small but fast-growing applications, such as wind and solar power, are expected to increase significantly.

China to account for nearly two-fifths of all growth

Gear demand will expand the fastest in China and other industrializing nations, where the production of motor vehicles, motorcycles, and other durable goods is expected to post the strongest increases. This will result in additional investment in new manufacturing capacity and a sharp increase in related gear sales in the Asia/Pacific region, the Africa/Mideast region, Central and South America, and Eastern Europe. China alone is projected to account for nearly two-fifths of all market growth through 2019. In addition, in industrializing countries both small and large manufacturers of gear-using products are expected to increase their use of more expensive, higher-end gears, which will further boost market value gains.

Large, mature markets to see steady growth

The large, mature North American and West European gear markets are forecast to expand between three and four percent per year during the 2014-2019 period. Demand for gears in the US and Germany, the two largest markets in these regions, is expected to moderate after climbing twelve percent and six percent, respectively, from 2009 to 2014. In Japan, the world’s third largest national market behind China and the US, sales of gears will decelerate through 2019 as well because of a drop in motor vehicle output. Nonetheless, durables manufacturing activity in North America, Western Europe, and Japan is projected to increase going forward and generate additional demand for gears. Consumer spending on durable goods in these areas will also rise as economic conditions improve further, encouraging local manufacturers to boost production of gear-using products. In addition, durable goods suppliers in North America, Western Europe, and Japan will benefit from new export opportunities in nearby developing countries. However, competition from new and existing alternative technologies – such as continuously variable transmissions (CVTs) and gearless direct drive systems – is expected to restrain sales growth in many mature gear markets.

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ASIA/PACIFIC

Japan: Gear Supply & Demand

In 2014, demand for gears in Japan approached $18.4 billion, representing 24 percent of the Asia/Pacific total. Japan was the world’s largest market for these products in that year behind China and the US. The intensity of gear use in Japan -- compared to GDP -- is extremely high by regional standards because of its massive, technologically advanced, and export-oriented manufacturing sector. Japan is a leading exporter of many durable goods because of its developed industrial base, which results in higher levels of gear demand. Additionally, the overwhelming majority of local end users incorporate more expensive, high-end gears in their durable goods, resulting in higher levels of product sales. From 2009 to 2014, the Japanese gear market grew 5.7 percent annually, as durable goods output rose at a healthy pace. Advances in manufacturing activity were fueled by increasing demand for durable goods both at home and in other regions. Japan outperformed other mature gear markets during this period.

Japan, the world’s largest supplier, had gear shipments exceeding $34.7 billion in 2014, accounting for 45 percent of regional output. Europe has the second largest gear industry because of its large durable goods industries and advanced local manufacturing facilities. Leading European manufacturers tend to offer high-end, sophisticated gear products, allowing them to compete with Japanese and medium-sized producers. The German gear industry posted a trade surplus of $16.4 billion in 2014, more than 47 percent of shipments. Although Japanese companies export extensively to all regions, the most important markets are China, South Korea, and other Asia/Pacific countries as well as the US. Despite the country’s favorable trade position, Japan imports a large amount of advanced and specialty gears, as well as lower-end products. Shipments of gears grew 7.2 percent yearly between 2009 and 2014 due to large gains in domestic product demand and sharp increases in exports.

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<table>
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<tr>
<th>Item</th>
<th>2004</th>
<th>2009</th>
<th>2014</th>
<th>2019</th>
<th>2024</th>
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<td>Population (million)</td>
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<td>81.8</td>
<td>80.8</td>
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<td>per capita GDP</td>
<td>38700</td>
<td>40130</td>
<td>44720</td>
<td>48880</td>
<td>52780</td>
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<td>Gross Domestic Product (bil 2013$)</td>
<td>3193</td>
<td>3283</td>
<td>3613</td>
<td>3915</td>
<td>4170</td>
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<td>% durables MVA</td>
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<td>13.9</td>
<td>13.9</td>
<td>14.1</td>
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<td>Durable Goods Mfg Value Added (bil 2013$)</td>
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<td>Motor Vehicle Production (000 units)</td>
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<td>Light Vehicles</td>
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<td>5210</td>
<td>6050</td>
<td>6100</td>
<td>6250</td>
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<td>Medium &amp; Heavy Trucks &amp; Buses</td>
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<td>Motor Vehicles in Use (mil)</td>
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<td>$ gears/mil $ GDP</td>
<td>2819</td>
<td>3016</td>
<td>3584</td>
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<td>$ gears/000$ durable goods</td>
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<td>$ gears/vehicle produced</td>
<td>1616</td>
<td>1900</td>
<td>2141</td>
<td>2459</td>
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<td>Gear Demand</td>
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<td>net exports</td>
<td>4000</td>
<td>7500</td>
<td>14950</td>
<td>22000</td>
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<td>13000</td>
<td>17400</td>
<td>27900</td>
<td>37000</td>
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<td>% Germany</td>
<td>46.6</td>
<td>60.7</td>
<td>68.5</td>
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<tr>
<td>Western Europe Gear Production</td>
<td>27900</td>
<td>28650</td>
<td>40750</td>
<td>53400</td>
<td>68100</td>
</tr>
</tbody>
</table>

Source: The Freedonia Group, Inc.
Eaton Corporation plc

Eaton House
30 Pembroke Road
Dublin 4
Ireland

353-1-669-4672
www.eaton.com

Sales: $22.6 billion (2014)
Geographic Sales: US 52%, Canada 5%,
Latin America 9%, Europe 22%, and Asia/Pacific Region 12%
Employment: 102,000 (2014)

Key Products: transmissions, differentials, and precision forged gears

Eaton is a global diversified industrial manufacturer. It operates via five segments: Electrical Products, Electrical Systems and Services, Aerospace, Hydraulics, and Vehicle. The Company is involved in the world gear industry through the Vehicle segment, which had 2014 sales of $4.0 billion. Via this segment, Eaton designs, manufactures, and sells drivetrain and powertrain systems and critical components for use in passenger cars, light trucks, and commercial vehicles. Specific products from the Company include transmissions, differentials, and precision forged gears.

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