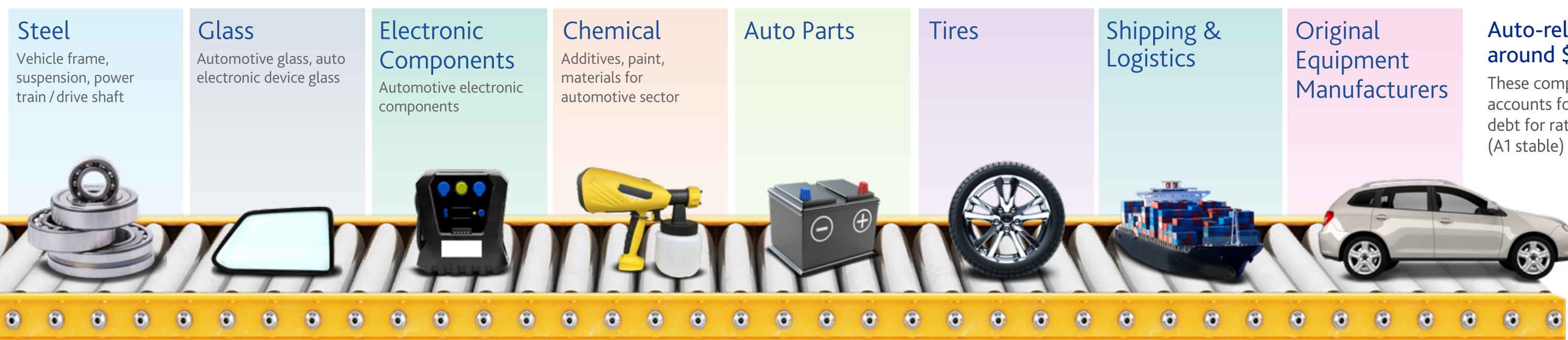


# The automotive sector drives Japan Inc.'s supply chain

The pandemic-led weakening in auto demand will have major knock-on effects for many industries and regions across Japan. Auto-related businesses are also major employers in the country.



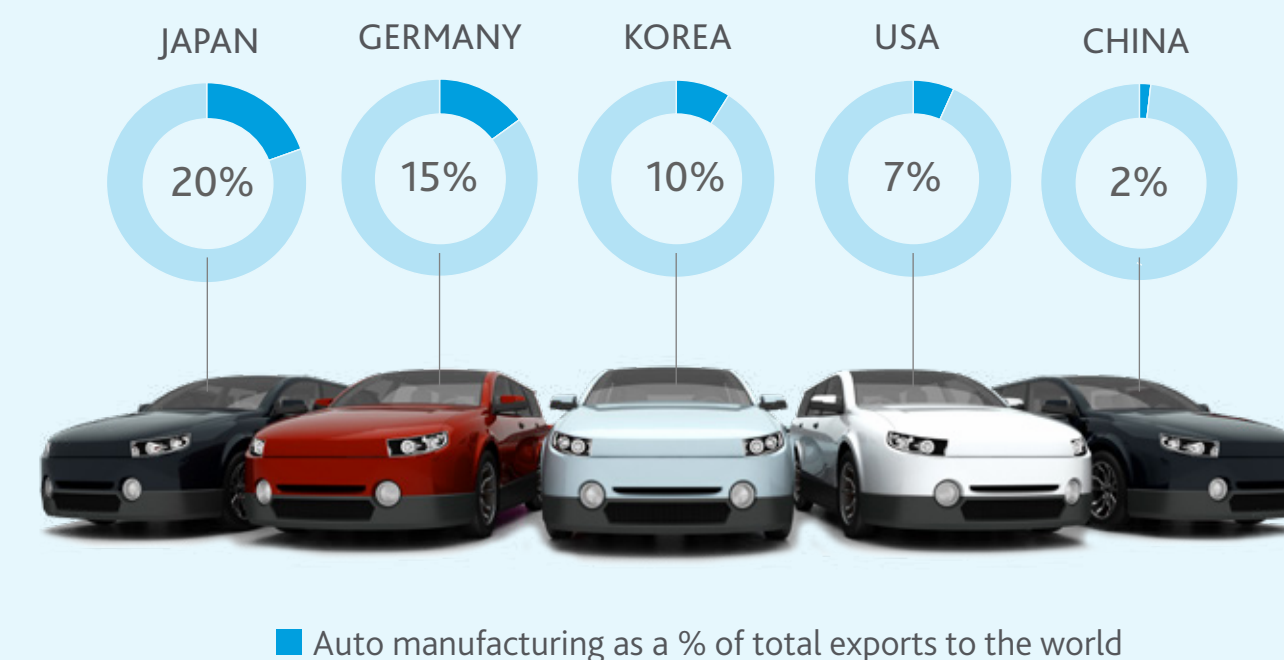
## Auto-related debt totals around \$491 billion

These companies' aggregate debt accounts for 42% of all corporate debt for rated entities in Japan (A1 stable)

|   |   |  |  |   |  |   |   |
|---|---|--|--|---|--|---|---|
| <p><b>Nippon Steel Corp.</b> (Baa2 negative)<br/><b>JFE Holdings</b> (Baa3 negative)</p> <p>About 30% of their respective domestic shipment was for automotive companies in fiscal 2018</p> | <p><b>AGC</b> (A2 stable)<br/>26% of revenue comes from automotive sector</p> <p>Top market share in automotive glass (one in four cars is fitted with AGC glass)</p> <p>Supplies products to 39 auto manufacturers</p> | <p><b>Mitsubishi Electric Corp.</b> (A1 negative)<br/>27% of operating income comes from industrial automation systems segment that manufactures navigation systems and powertrain products</p> <p><b>Nidec Corp.</b> (A3 negative)<br/>20% of operating income is related to electric motors in automotive applications</p> <p>Around 30% of global market share of electric power steering motors in fiscal 2017</p> <p><b>TDK Corp.</b> (A3 negative)<br/>18% of revenue came from automotive components and sensors supported by its magnetics technology in fiscal 2017</p> | <p><b>Asahi Kasei</b> (A2 negative)<br/>One of the world's leading suppliers of lithium-ion battery separators for electric vehicles and materials for tires, engineering plastics, sensors and car interior fabrics</p> | <p><b>Sumitomo Electric Industries</b> (A1 negative)<br/>54% of operating income comes from automotive sector<br/>Leading supplier of wire harnesses</p> <p><b>Toyota Industries Corp.</b> (A2 negative)<br/>13% of operating income comes from automotive sector<br/>Auto assembly for Toyota Motor<br/>Manufacturer of diesel engines and car bodies</p> <p><b>Hitachi, Ltd.</b> (A3 stable)<br/>Supplier of motors, engines and fuel components<br/>Auto parts JV partner with Honda</p> <p><b>Panasonic</b> (Baa1 negative)<br/>20% of revenue is automotive-related, including lithium-ion batteries and electric components</p> | <p><b>Bridgestone</b> (A2 negative)<br/>80% of operating income comes from tires for automotives and trucks<br/>15% of tire market share globally as of 2018</p> | <p>Shipping companies transport input commodities, components, fuel and cars</p> <p><b>Nippon Yusen</b> (Ba2 stable)<br/>Shipped 3.2 million cars<br/>Car carriers comprise 14% of total fleet</p> <p><b>Mitsui O.S.K.</b> (Ba3 stable)<br/>Shipped 3.8 million cars<br/>Car carriers comprise 13% of total fleet</p> <p>Trading companies are involved throughout the supply chain, as well as in logistics and auto financing</p> <p><b>Toyota Tsusho Corp.</b> (A3 stable)<br/>15% of net income is directly from the automotive segment<br/>With metals, parts, logistics, chemicals and other businesses, we estimate the majority of net income is auto-related</p> | <p><b>Japan's leading automakers</b></p> <p><b>Toyota</b> (A1 negative) sold 10.5 million cars</p> <p><b>Honda</b> (A3 negative) sold 4.8 million cars</p> <p><b>Nissan</b> (Baa3 negative) sold 4.9 million cars in fiscal 2019 by the respective group of companies</p> |
|---|---|--|--|---|--|---|---|

## Japan relies more on autos than other major exporters

Autos and auto components comprise a higher portion of exports than other top car-producing countries

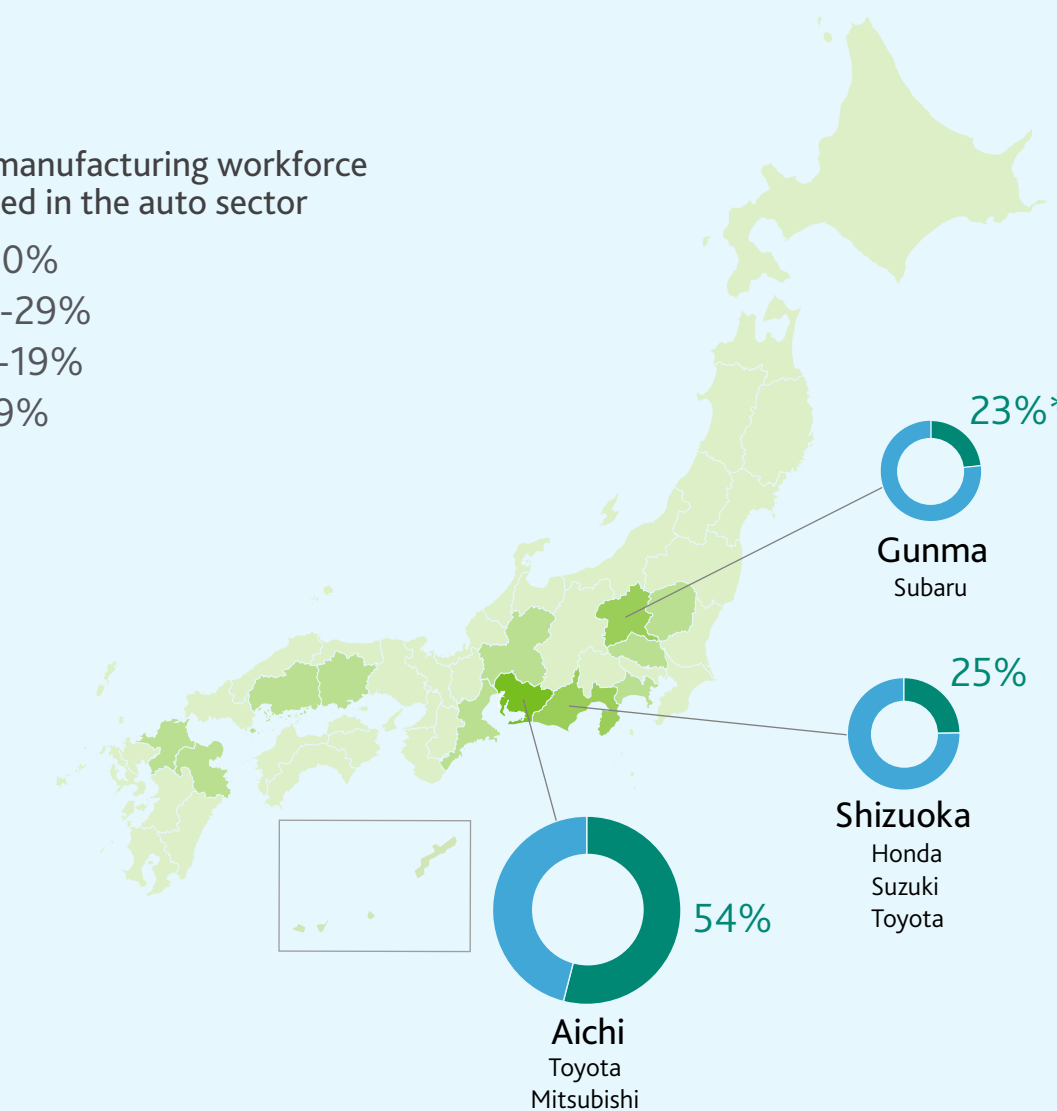
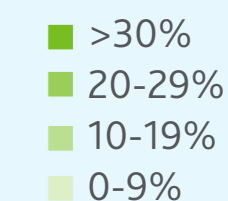


Source: United Nations Conference on Trade and Development

## Auto sector dominates regional economies Auto-related businesses employ 8% of Japan's workforce

Shizuoka, Aichi and Gunma prefectures have over 20% of their manufacturing workforce employed in auto-related businesses.

% of manufacturing workforce engaged in the auto sector



% of auto-related goods out of the total value of manufactured goods

Note: \*Based on limited information on manufactured goods for Gunma  
Sources: Census of Manufacture (2018) by geographical area, Ministry of Economy, Trade and Industry  
The Motor Industry of Japan 2020, Japan Automobile Manufacturers Association, Inc.