

SECTOR REPORT: SUPPLYING AUTOMOTIVE PARTS TO JAPANESE COMPANIES

December 2014

Silke BROMANN

Table of Contents

Abstract.....	3
Definitions, Scope of Coverage	6
Regulations for Exporting Automotive Parts to Japan.....	6
Labelling & Packaging	8
Tax Matters: Tariffs and Taxes.....	9
Market Analysis.....	9
Market Size, Trends and Profitability.....	9
Main Players: Competitors, Customers, Suppliers, Producers of Substitute Products	14
Distribution	18
Key Success Factors, Main Challenges, Opportunities.....	21
Supplying Automotive Parts to Japanese Companies Based in the EU	23
Japanese Automobile Industry in the EU.....	23
Business with Japanese Automotive Firms Based in the EU.....	24
Appendix A: References.....	25
Appendix B: Additional Materials and Useful Addresses.....	27
Additional Materials.....	27
Authorities Responsible Regarding Laws and Regulations	27
Industry Associations	29
Trade Fairs.....	29

Abstract

The automotive industry comprises not only car manufacturers but also a large number of parts suppliers. The industry is relatively heterogeneous, ranging from large global systems manufacturers to small providers of minor parts or parts processing. Japan is the third largest manufacturer of automobiles in the world. Many Japanese companies are among the largest global car and parts manufacturers. For European companies, Japan is an important overseas market. Furthermore, Japanese automotive companies are interesting as cooperation partners, customers, suppliers or competitors. No European automotive companies should allow themselves to disregard Japan's automotive industry.

Automotive parts such as seats, wiring or brakes are either integrated into the car during the assembly process or sold as replacement parts or vehicle upgrades. This report focuses on parts for passenger cars, in particular parts used during the assembly process. Exports of parts to Japan will be discussed with respect to regulations, market conditions and distribution paths as well as key success factors and challenges.

Regulations rather than tariffs prove to be the main hurdle for exporters of automotive parts to Japan: Automobiles and their parts have to comply with local standards. Regulations include safety issues, emissions or recycling, for example.

Thomson Reuters estimates the size of the worldwide automotive supplier market in 2010 at 515 billion euros and forecasts an increase to over 600 billion euros in 2015. Further growth is expected. However, on a regional level there are diverging trends: Demand in Europe and Japan is shrinking, while it is set to grow in China, Russia and the emerging Asian economies in the next few years.

All product categories show an upward trend on a global scale; especially the powertrain sector has high potential, due to the trend towards fuel efficiency and the rising demand for electric vehicles.

According to the Japan Auto Parts Industries Association, automotive parts sales by Japanese companies in 2013 amounted to 24.1 trillion yen (about 163 billion euros).¹ One year before, it had been 20.7 trillion yen. This corresponds to a 16% rise. Domestic production has experienced ups and downs due to the Lehman shock in 2008 and the East Japan earthquake disaster in March 2011, which caused interruptions to the supply chain. In the aftermath of this catastrophe, the vulnerability of supply chains became obvious. As a consequence, automobile manufacturers and suppliers have reorganised their supply chains and increasingly prefer multiple sourcing.

As cars in Japan drive on the left, as they do in the UK, for example, the majority of vehicles have their steering wheel on the right-hand side. Most passenger cars have automatic transmission. A left-side steering wheel is found only in some imported cars. The market share for diesel engine passenger cars in Japan is very low at less than 1%.

Ongoing trends in the global and the Japanese automotive industry include platform/standardisation strategies, responses to environmental concerns, and the merging of information technology and automotive technology. Platform strategy means that OEM manufacturers use the same parts in different models. As a result, the same chassis can be used for a wide range of models. The same parts are even used across different OEMs. To reduce negative environmental impact, automotive firms are striving to improve fuel efficiency and are exploring alternatives such as electric or hybrid drives. More and more electronics systems are used in automobiles such as motor management, navigation or entertainment systems, which are also connected to external devices such as smartphones.

¹ Exchange rate 1 euro = 148 yen (November 2014).

Especially small and medium-sized Japanese automotive parts manufacturers struggle to cope with the effects of globalisation. OEM manufacturers not only expect their key business partners to follow them abroad, they also look for cost-effective suppliers worldwide. This offers an opportunity for European parts suppliers.

A special feature of the Japanese automobile industry is the *keiretsu*: This is a pyramid-like structure with OEMs (e.g. Toyota, Honda) at the top (see Figure 9). Tier-one suppliers manufacture larger components and modules. They purchase their components and parts from tier-two suppliers. Suppliers of simple standard parts and processing subcontractors are at the lowest level of the pyramid. Automotive suppliers manufacture parts according to their customers' specifications and cooperate with them on product development and management issues. Historically, until the 1990s, the "pyramids" were separated more rigorously and smaller suppliers tended to be dependent on one large customer. Especially at lower levels, suppliers now increasingly cater to more than one customer. Similarly, Japanese first-level suppliers no longer only sell to manufacturers from their own *keiretsu* group. Firms such as Denso or Aisin have even become worldwide leading automotive systems manufacturers.

About two to three years prior to the start of production of a new car model, OEMs initiate the supplier selection process for crucial components. A request for quotation with some specifications is given to selected suppliers. In the next stages, the suppliers submit drafts and cost estimates, the OEM makes suggestions for improvements and gives further specifics, the suppliers send a revised offer, and so on. One to two years prior to the start of production, the supplier is selected. Prototyping and testing follow. For less crucial components, the process is shorter and has fewer "loops". Both OEMs and suppliers prefer to conduct business with firms with which they have already established a relationship.

The first stage in establishing a business relationship with a larger Japanese automotive manufacturer is a vetting process on part of the prospective customer: Only suppliers registered in the company's list of "preferred suppliers" can quote and eventually enter into business. Key criteria include a track record in the automotive industry, compliance with certificates such as ISO 9001, and results of a manufacturer-specific evaluation process including on-site visits.

Contracts in the Japanese automotive supply system are usually less detailed than Western companies are used to. They offer leeway for further negotiations after the initial signing of the contract. Another peculiarity of the Japanese system is that the customer expects the supplier to make specific investments and incur development expenses on request, prior to the signing of a contract.

Regarding the distribution of after-sales parts via retailers and repair shops, we differentiate between OEMs' genuine parts, which are distributed either via their exclusive distribution networks or via wholesalers to other retailer types such as auto parts retail or gas stations, and independent parts or accessory manufacturers, which use several wholesale and retail channels.

It is much easier to enter into business with Japanese automotive companies (car manufacturers or suppliers) via their European subsidiaries. Japanese companies have been steadily increasing their activities in the EU in terms of local production and R&D facilities since the 1980s. In 2013, Japanese manufacturers maintained 14 plants in Europe, which produced 1.38 million vehicles. The majority of vehicles were sold within Europe. Furthermore, Japanese automakers regard Europe as a base for research and development: Currently, 16 R&D centres are in operation in five EU countries. EU-made parts purchased by Japanese transplants amounted to 12.69 billion euros in 2013.

Japanese parts suppliers follow their large customers to their production sites in Europe, as they do in North America and in Asia. In 2013, automotive parts suppliers from Japan had 215 production facilities in the EU. Their number has been steadily increasing. Sales in Europe amounted to 1,161 billion yen (about 7.8 billion euros), up 22% on the previous year. Nearly 60% of production is sold in the same country in which it is made.

How autonomous the European subsidiaries' purchasing departments are varies depending on the company. As a rule of thumb, the smaller the firm, the less freedom the overseas offices have to make their own decisions. Manufacturers who have R&D operations in Europe tend to be more open to offers from local suppliers.

Important success factors for companies looking to do business with Japanese automotive manufacturers include:

- products and services with a unique selling proposition that sets them apart from other products in the market, especially from Japanese competitors;
- a track record of supplying to other leading automotive manufacturers;
- top-management support for business with Japan; this will accelerate in-house processes in case of requests and problems;
- Japanese customers both in the industrial and the consumer goods sector have high expectations regarding service and availability.

It is advisable to cooperate either with a Japanese trading company or with an international trading firm with long-standing experience in Japan. A representative office in Japan can be useful to maintain ongoing contact with local business partners. Cooperating with a local manufacturer of complementary products is another option for entering the Japanese market.

As Japan is the home market for some of the leading players in the automotive industry, it is essential to keep an eye on this market. It is possible to gain information on competitors' moves by maintaining a presence in Japan and competing with their latest products.

Definitions, Scope of Coverage

Automotive parts are manufactured parts for automobiles. These parts are either integrated into the car during the assembly process or sold as replacement parts or vehicle upgrades. This sector report focuses on parts for passenger cars, in particular parts used during the assembly process.

Examples of automotive parts are tires, seats, braking systems or air conditioning units.

This report deals with the supply of automotive parts either to Japanese automobile manufacturers or to Japanese manufacturers of automotive parts (tier-one suppliers) in Japan and in third countries (especially the EU). The distribution of parts for subsequent repairs and vehicle upgrades is treated in the chapter on distribution.

Regulations for Exporting Automotive Parts to Japan

Generally speaking, the steps shown below apply when importing goods to Japan.

Figure 1: Procedure for importing goods to Japan

Prior consultation and research regarding import regulations

Preparation of necessary documents

Arrival of goods in Japan at designated customs area

- Customs procedure:
 - Import declaration
 - (A quarantine and testing procedure may apply for foodstuffs and other agricultural products)
 - Payment of customs duty
 - Payment of consumption tax
 - (If applicable:) payment of taxes other than consumption tax, payment of customs handling charges
 - Issue of import permit by Japanese customs

Distribution in Japan

When the goods arrive in the designated customs area (Hozei area), an import declaration has to be made. The import declaration must be submitted by the importer or another qualified institution, e.g. a customs agent. The following documents have to be submitted:

- Import declaration form
- Commercial invoice
- Bill of lading / air waybill
- Certificate of origin
- (If applicable:) certificate of origin for preferential origins (e.g. form A)
- (If applicable:) other certificates or licences required by laws other than Customs Law, e.g. for packaging of foodstuffs
- (If applicable:) insurance certificates, packing lists

Additional testing may be necessary for other products. Please refer to the MADB databases of the European Commission (<http://madb.europa.eu/madb/indexPubli.htm>) for requirements for specific products.

Legal Requirements at the Time of Import

Parts and components containing high pressure gas must be declared at the time of import according to the **High Pressure Gas Safety Law**. Examples of such items are fire extinguishers, shock absorbers or gas for spare tires. In this case, inspection prior to customs clearance is necessary. Usually, the importer requests the necessary procedures and documents from the prefectural administrative authority in charge of high pressure items. For further information please refer to the [High Pressure Gas Safety Institute of Japan](#) (KHK).

Legal Requirements at the Time of Sale

Automobiles must comply with the regulations of the **Road Transport Vehicle Act**. Complete vehicles imported into Japan for mass sale have to be inspected and registered under the “formal designation system”. This means that one unit of a model series is tested and registered, but not every single imported unit has to be inspected. The importer has to prove that his models are uniform. Usually the import agent is responsible for filing for the necessary procedures. Further information can be obtained from the [Ministry of Land, Infrastructure and Tourism](#) and [the Japanese National Traffic Safety and Environment Laboratory](#).

Vehicles and their components must comply with several **environmental standards and regulations**. The most important ones concern emission standards and waste management and recycling after a vehicle is taken out of use.

Regulations exist for **emissions** of carbon monoxide (CO), non-methane hydrocarbon (NMHC), nitrogen oxide (NOx), and particulate matter (PM) from automobile exhaust gases. Further information regarding testing and standards can be obtained from the [Ministry of the Environment](#).

As in other countries, recycling industrial goods at the end of their life cycle is a crucial issue. According to the **End-of-life-Vehicle Recycling Law**, automobile manufacturers or importers are responsible for recycling vehicles. The [Japan Automobile Recycling Promotion Center](#) (JARC) coordinates and manages the process of automobile recycling. Automobile manufacturers and importers are members of the JARC via their industry associations. End users have to pay a recycling fee either upon purchase of the car or at the time of its disposal. The fees paid by users and manufacturers are collected by the JARC and used for the recycling process and its administration. End-of-life vehicles have to

be dismantled and recycled by registered entities (waste management and recycling businesses specialised in automobiles). Crucial components are airbags, fluorocarbons and shredding residues.

To promote **energy efficiency**, a **Top Runner program** for automobiles is in operation. This means that the market for a certain product is screened with regard to energy efficiency (e.g. mileage for vehicles). The most efficient models are set as a benchmark for the industry. Manufacturers are obliged to fulfil this benchmark by a set date. If they do not comply, they are punished. The Top Runner program is coordinated by [The Energy Conservation Center Japan \(ECCJ\)](#).

The **Consumer Product Safety Act** regulates the safety standards of **consumer products**. Among other regulations, in case of a serious accident involving a specified product, information must be provided to the relevant authorities. The Consumer Product Safety Act further regulates labelling standards. For details refer to the [Ministry of Economy, Trade and Industry](#) or the [Consumer Affairs Agency](#).

These standards do not directly affect the import of parts to Japan, but parts manufacturers have to keep them in mind during the product development and design process.

Labelling & Packaging

Generally speaking, labelling must provide users of a product with accurate information regarding its characteristics and safe handling. The **Act against Unjustifiable Premiums and Misleading Representations** regulates the general information and advertising attached to the product.

For example, at the time of sale as a separate item in a shop, tyres must bear a label providing the following information, among others: manufacturer, brand name, dimension and uses, selling price, country of origin.

For further details, refer to the website of the [Consumer Affairs Agency](#).

Parts regulated by the **High Pressure Gas Safety Law** (e.g. fire extinguishers) must bear a label that conforms to this law. It must indicate the gas used and give instructions for safe handling.

The **JIS mark** which indicates compliance with the **Japanese Industrial Standards** is voluntary. However, use of the label is recommended as Japanese manufacturers require adherence to these standards. Testing for compliance must be conducted by a third-party agency accredited by the government. For information on Japanese industrial standards, refer to the [Japanese Industrial Standards Committee](#).

Figure 2: JIS mark



Source: Japanese Industrial Standards Committee

Parts used in after-sales service for car repair and maintenance are either provided by OEMs via their distribution networks or by parts manufacturers under their own brand label. For the latter, the [Japan Automotive Products As-](#)

[society \(JAPA\)](#) has introduced the “JAPA Recommended Parts” label to ensure quality and safety for auto parts such as these. Further information can be obtained from the JAPA. [1]

According to the **Act on the Promotion of Effective Utilisation of Resources**, Japan has a differentiated system of waste separation. Packaging materials in particular must be marked with labels indicating what materials they consist of. For more information on labelling packaging materials in Japan, please refer to the “Sector Report: Paper and Packaging” at www.eubusinessinJapan.eu.

Tax Matters: Tariffs and Taxes

The tariffs for importing most automotive parts and components are zero. For a comprehensive survey of the tariff duties for each product, please refer to the respective databases of the European Commission (<http://madb.europa.eu/madb/indexPubli.htm>) or Japan Customs (http://www.customs.go.jp/english/tariff/2014_4/index.htm).

Ensuring compliance with Japanese standards and regulations and with local industrial standards is the most important issue when exporting automotive parts to Japan (cf. Regulations for Exporting Automotive Parts to Japan, Labelling & Packaging).

Consumption tax

When importing products, Japanese consumption tax has to be paid. In December 2014, the tax rate was 8%.

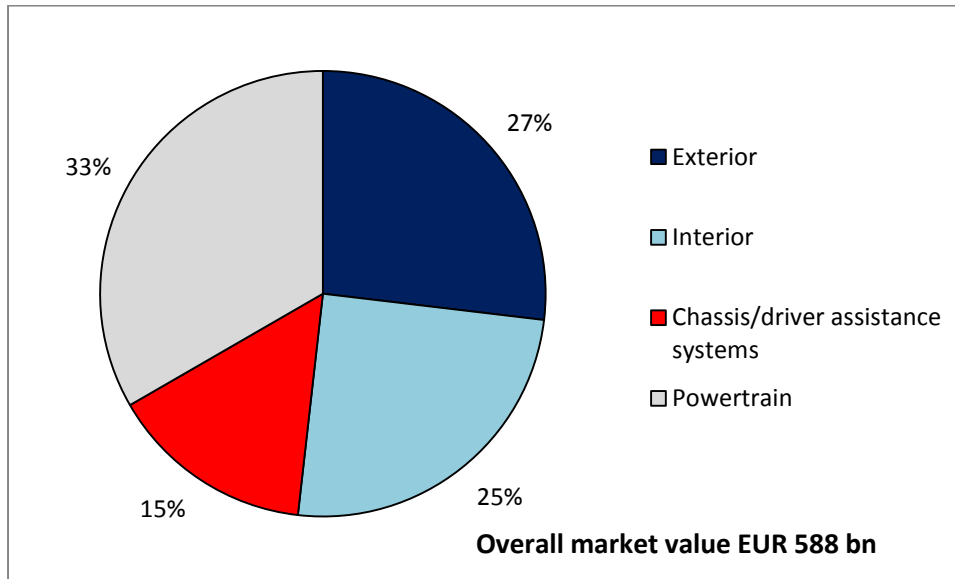
Market Analysis

Market Size, Trends and Profitability

Thomson Reuters estimates the size of the worldwide automotive supplier market in 2010 at 515 billion euros and forecasts a rise to over 600 billion euros in 2015. [2] Further growth is expected: The Roland Berger Lazard Global Automotive Suppliers Study estimates the worldwide market value in 2020 at 709 billion euros. [3]

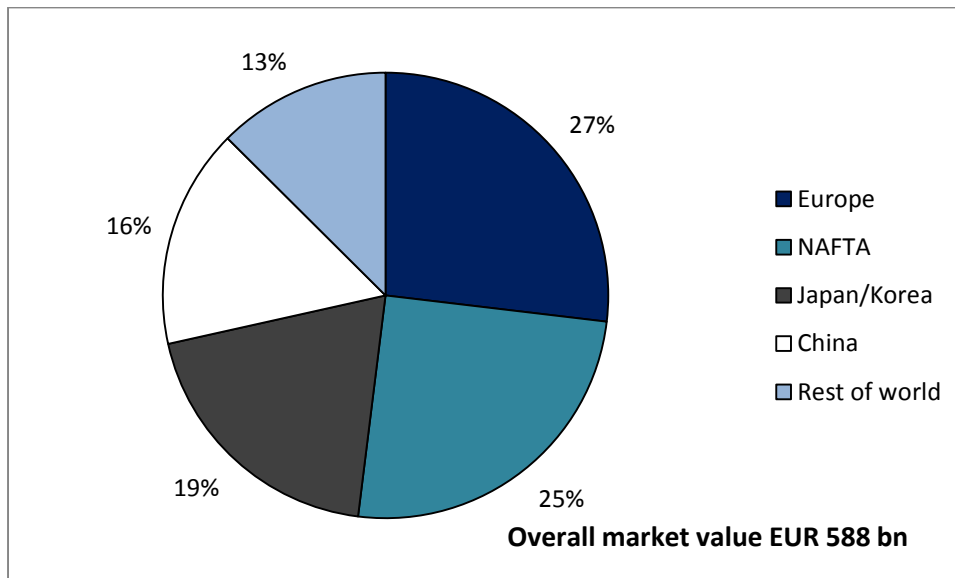
Figures 3 and 4 show the segmentation of the worldwide market in terms of product domains and regions in 2012. Powertrain components account for one third of the overall market, with exterior and interior parts taking a share of about one quarter each. The authors of the study expect all product segments to grow by more than 25% in the next six years. The largest increase is expected in the powertrain sector. [3] This is due to a trend towards more fuel-efficient and higher-performance automobiles. [4] Automotive suppliers sell more than half of their production in Europe and North America. Japan and Korea together account for nearly 20%, but the market in this region is expected to shrink by 5% until 2020. China is still regarded as an automotive market with high growth potential: Its worldwide market share is expected to increase from 16% in 2012 to 21% eight years later. [3] Due to the facts that only 5% of the Chinese population own a car and the middle class is growing, further expansion in China is expected. [5]

Figure 3: Automotive components: Global market share by product domain, 2012



Source: Roland Berger Strategy Consultants / Lazard (2013): Global Automotive Supplier Study, p. 17, web link: http://www.rolandberger.de/media/pdf/Roland_Berger_Global_Automotive_Supplier_Study_20130917.pdf, author's own arrangement.

Figure 4: Automotive components: Global market share by region, 2012



NAFTA: North American Free Trade Agreement (USA, Canada, Mexico)

Source: Roland Berger Strategy Consultants / Lazard (2013): Global Automotive Supplier Study, p. 17, web link: http://www.rolandberger.de/media/pdf/Roland_Berger_Global_Automotive_Supplier_Study_20130917.pdf, author's own arrangement.

Japanese automotive suppliers are among the leading companies in this sector. Table 1 shows the ten largest automotive suppliers worldwide in terms of sales. Three of the world's largest suppliers have Japanese origins; the top 100 companies include 29 Japanese firms. [6]

Table 1: The largest global automotive suppliers in terms of sales, 2012

Rank	Company	Country	Sales worldwide (in US\$ billion)
1	Robert Bosch GmbH	Germany	36.8
2	Denso Corp.	Japan	34.2
3	Continental AG	Germany	32.8
4	Magna International Inc.	Canada	30.4
5	Aisin Seiki Co.	Japan	30.1
6	Johnson Controls Inc.	USA	22.5
7	Faurecia	France	22.5
8	Hyundai Mobis	Korea	21.4
9	ZF Friedrichshafen AG	Germany	18.6
10	Yazaki Corp.	Japan	15.8

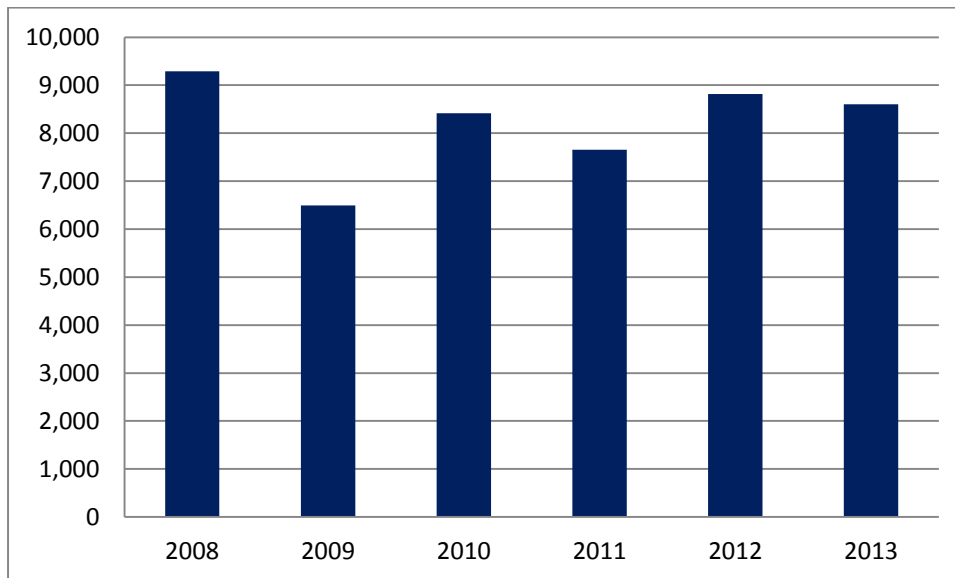
Source: Automotive News (2013): The Top 100 Global Suppliers, Supplement to Automotive News, June 17, 2013.

Sales data for the Japanese automotive supplier industry are collected by the [Japan Auto Parts Industries Association \(JAPIA\)](#) from members listed on the stock exchange and specialised in automotive parts (mainly tier-one suppliers). According to the [JAPIA](#), automotive parts sales in 2013 by Japanese companies amounted to 24.1 trillion yen (around 163 billion euros).² One year before, the figure had been 20.7 trillion yen. This corresponds to a 16% increase. [7] National industry statistics recorded domestic production of automotive parts to the value of 8.6 trillion yen in 2013. [8]

Figure 5 shows the Japanese domestic production value of automotive parts from 2008 to 2013. Domestic production experienced ups and downs due to the Lehman shock in 2008 and the East Japan earthquake disaster in 2011, which caused interruptions to the supply chain.

In the aftermath of the East Japan earthquake disaster in March 2011, the vulnerability of supply chains became obvious. Following the destruction of parts suppliers' factories due to the disaster, special electronic parts could not be supplied, putting a stop to production at [Toyota's](#) factories. [Toyota](#) faced similar problems later that year, after floods in Thailand destroyed some suppliers' operations there. Therefore, OEMs and suppliers have reorganised their supply chains and paid more attention to redundancies and backup mechanisms. They now prefer multiple sourcing to ensure a steady supply of important parts. Every supplier has to answer the question how to deal with sudden interruptions to the production flow.

² Exchange rate 1 euro = 148 yen (November 2014).

Figure 5: Automotive parts: Domestic production value Japan, in billion yen

Source: Ministry of Economy, Trade and Industry, Yearbook of Current Production Statistics: Machinery, Internet: http://www.meti.go.jp/statistics/tyo/seidou/result/ichiran/08_seidou.html#menu6

Automotive parts production in Japan is segmented as follows: 37.6% are engines and engine parts. Engines are usually produced by OEMs themselves, while engine parts are supplied. Drives, transmissions and control parts make up one third of the production value. As traffic in Japan is on the left-hand side as in the UK, for example, the majority of vehicles have their steering wheel on the right. Most passenger cars have automatic transmission. A left-side steering wheel is only found in some imported cars. Brake/suspension parts and chassis/body parts including seats have a share of 5.6% and 17.9% respectively. [8] In contrast to Europe, diesel engines are rarely used in passenger cars, only in commercial vehicles such as trucks or buses. The market share for diesel engine passenger cars in Japan is less than 1%. [9] As Japanese private passenger car users mostly drive in urban environments, gasoline engines or hybrid drives are more interesting for this market than diesel engines. Furthermore, there are strict emission standards in Japan (cf. Regulations for Exporting Automotive Parts to Japan).

During the 1990s, carmakers strove to realise economies of scale on a global level by means of platform strategies and parts standardisation. On the other hand, catering to customers' individual needs requires flexibility in production and design. Nowadays, cars are built to order for individual customers.

A platform strategy means that OEMs use the same parts in different models. The same chassis can be used for a wide range of models. Common parts are even used across different OEMs. As a consequence, parts are procured in large lot sizes. Therefore, parts manufacturers must be able to handle high-quality production of standardised parts in large quantities.

Modularisation (Japanese: *modyuuruka*) was first employed by German carmakers in the 1990s. System and component manufacturers (e.g. for seats) set up their factories in the vicinity of the OEM's car factory (supplier parks) and the components were delivered directly by conveyor belt or truck to the OEM's assembly line. This process ensures a more timely delivery than the original Japanese just-in-time system. North American, and later, Japanese automobile manufacturers followed this trend. [10]

Platform strategies and higher order volumes put suppliers at risk of being increasingly dependent on fewer large-scale projects. In case of quality issues or product recalls, a larger number of units is concerned.

Environmental concerns are an issue in designing and manufacturing automobiles. To reduce emissions, alternative powertrain technologies such as electric motors or fuel cells are employed. Another solution is better fuel efficiency. Besides new engine technologies, another way to improve efficiency is “lightweighting” vehicles and components. This also saves on material and thus costs. Bio-plastics (biodegradable plastics and plastics using renewable resources such as cellulose or vegetable fats as raw materials) are coming more and more common into use. For example, Toyota Motors has used 80% bio-based plastics for the interior of one of its hybrid vehicles since 2011. [11]

Furthermore, parts suppliers have to respond to the merging of information technology and automotive technology. One example is using electronic components for motor management. From the user’s perspective, car entertainment and navigation systems are becoming more and more sophisticated. Intelligent transportation systems (ITS) use an IT network between individual vehicles and traffic management systems to enable smoother and safer traffic.

Ten years ago, communication and entertainment systems were proprietary to the specific manufacturer. Nowadays, IT companies are working with automotive manufacturers to provide solutions. For example, in 2014, [Apple Inc.](#) launched “CarPlay”. This combination of hardware and software enables drivers to use Apple devices more easily in their car. Information from iPhone mobile devices can be read on the automobile’s dashboard display and mobile phone or the music play functions can be easily manipulated via the keys at the steering wheel.

The boundaries between IT and automotive technologies are becoming blurred. New players and business models are entering the market. There is a shift from products to services. [3]

As a consequence, suppliers have to ramp up their research and development (R&D) capacities. Their OEM customers expect cooperation in product development and design on a global scale. Especially for mid-sized and smaller companies, this poses a big challenge. Not only does it imply high investment costs, but also the need to manage more complex internal and external networks. The latter is also a cost-intensive task and requires qualified manpower. [3] [10]

Suppliers have to develop R&D strengths. Nowadays not only “design-in”, but “concept-in” is required from them. “Design-in” means that the supplier makes the design for a component, which is approved by the customer. In the “concept-in” form of R&D cooperation the supplier proposes new concepts and processes, e.g. the use of environmentally friendly materials for a specific component. [10]

The internationalisation of the supply chain is a current trend in the Japanese automotive industry. OEMs not only expect their key business partners to follow them abroad, they also look for cost-effective suppliers worldwide. This offers an opportunity for European parts suppliers.

Competition has become global in the automobile parts market. Especially Chinese parts suppliers have raised their competencies with regard to the quality of small and standard parts. [10] Recently, companies from emerging economies have made acquisitions in the automotive sector in the “Triad” markets. Examples include the acquisition of the German [Kiekert AG](#) by the Chinese automotive supplier Hebei Lingyun Industrial Group or of [Peguform GmbH](#) in Germany by the [Samvardhana Motherson Group](#) from India.

The conclusion of international trade agreements such as an Economic Partnership Agreement (EPA) between the European Union and Japan (currently under negotiation) could simplify access to the respective markets. The auto-

otive sector is a sensitive one and there are still barriers to smoother trade such as different industrial standards and testing procedures (cf. Regulations for Exporting Automotive Parts to Japan).

Main Players: Competitors, Customers, Suppliers, Producers of Substitute Products

Competitors

According to the 2012 Census of Manufacture, there are about 7,800 manufacturers³ of automobiles and automotive parts in Japan. The census lists 71 of them as manufacturers of motor vehicles. [12] 97% of Japan's automotive companies are small and medium-sized enterprises (SMEs) with less than 500 employees. Due to the high degree of division of labour in the production process in Japan, there are many smaller companies in the automotive and related industries: Nearly three quarters have fewer than 50 employees.

One peculiarity of the Japanese automotive market is the *keiretsu*. These groups of companies organised around an OEM are discussed more in the chapter on Distribution. The four largest tier-one parts suppliers in the Japanese market in terms of sales are part of the [Toyota keiretsu](#). In the same way, other large manufacturers are linked to large system suppliers, for example [Nissan](#) with [Calsonic Kansei Corp.](#) or [Honda Motor Co.](#) with [TS Tech Co., Ltd.](#) Please note that these *keiretsu* companies nowadays do not deal exclusively with the OEM they are connected with. In addition, there are a large number of independent automotive suppliers that are mostly specialised in one field. Prominent examples are [Yazaki](#) (wiring) or [Takata](#) (air bags). Large overseas suppliers such as [Robert Bosch GmbH](#) are present in Japan and have already established business with Japanese OEMs.

Vice versa, Japanese parts suppliers are following their OEM customers to overseas locations. To enter foreign markets, Japanese automotive companies also undertake international mergers and acquisitions.

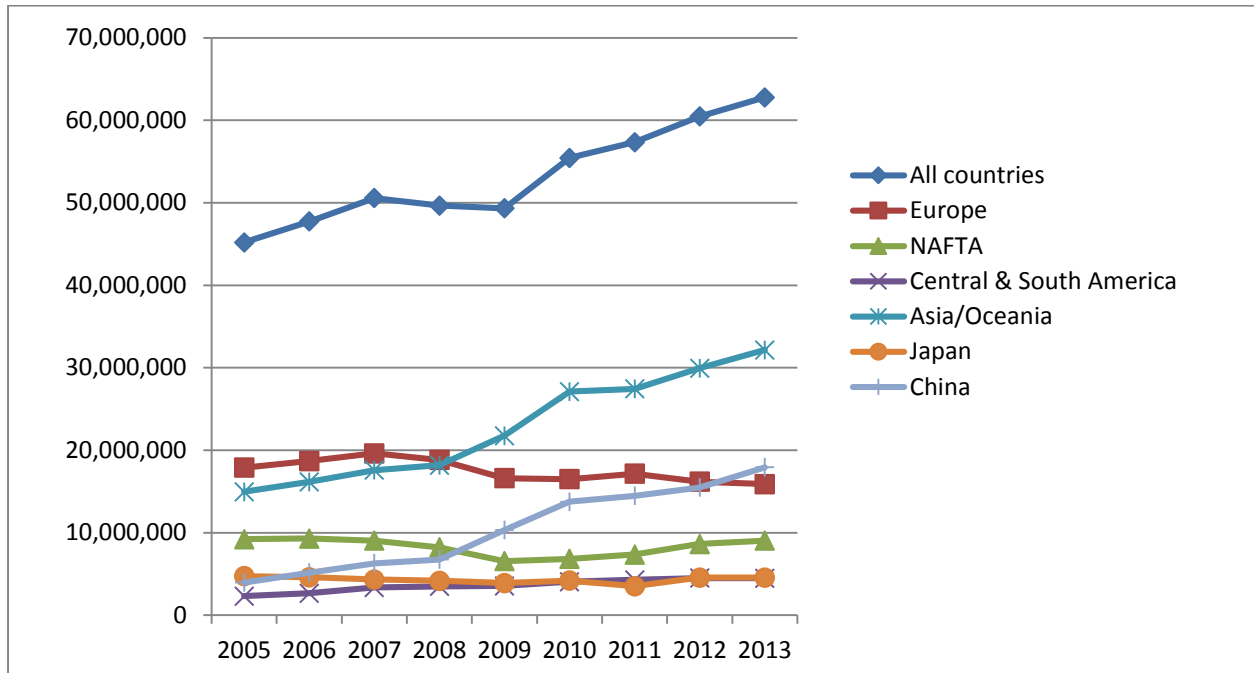
Globalisation is a megatrend not only for Japanese parts suppliers. It presents challenges especially for small and medium-sized suppliers: Due to the saturated home market and their customers' requests to follow them abroad, they are under pressure to go global. On the other hand, many of them lack the experience and capabilities to handle international transactions. A partner from Europe that caters to these needs, e.g. with Japanese-speaking employees or working with a Japanese go-between, can gain an advantage.

Customers: Automobile OEMs & Tier-one Suppliers

Figure 6 shows the yearly sales of passenger cars on a global and regional level. Automobile sales are increasing worldwide. Growing markets include Asia, especially China, and other emerging economies. On a global level, demand is expected to continue to rise. However, the markets in Japan and Europe are shrinking. For this reason, not only automobile manufacturers but also parts suppliers have to follow a global strategy. Limiting this to the Chinese market, which has the highest growth rates at the moment, could pose a risk. [3]

³ There are, however, more suppliers in this field, listed in other categories of the census.

Figure 6: Global and regional passenger car sales, in units



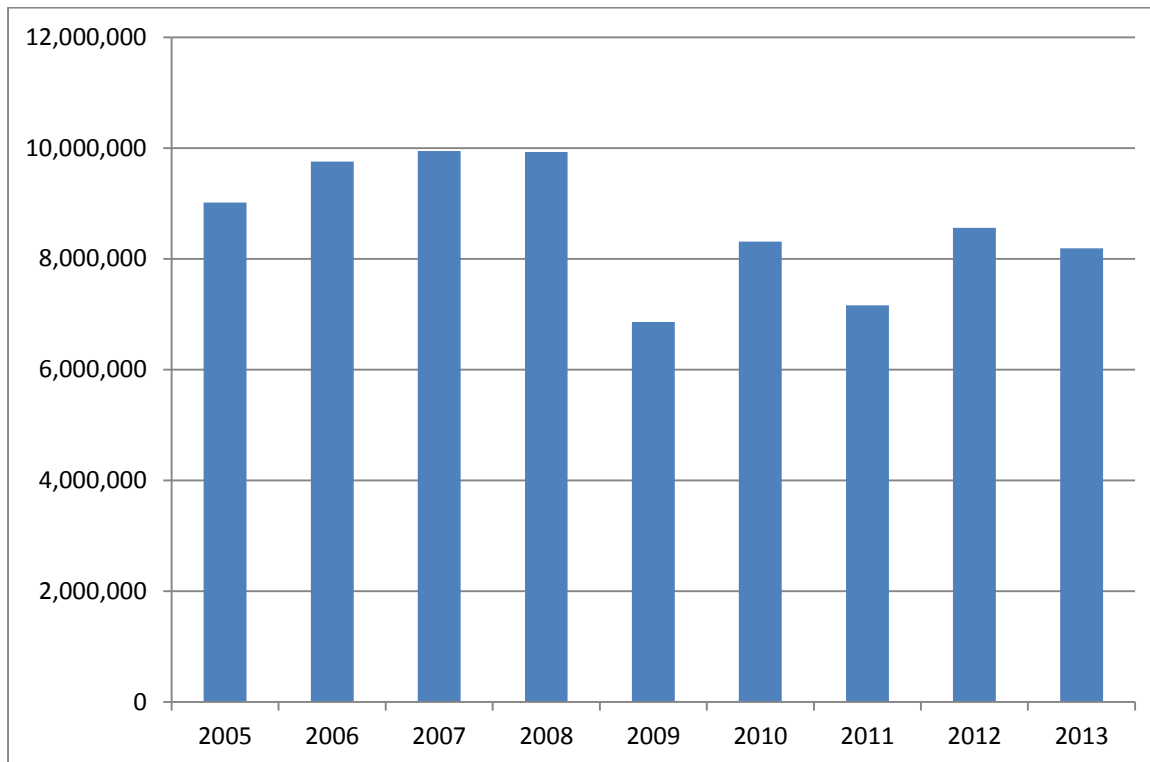
NAFTA: North American Free Trade Agreement (USA, Canada, Mexico)

Source: Organisation Internationale des Constructeurs d’Automobiles (OICA) (2014): Sales Statistics 2015-2013, Internet: <http://www.oica.net/category/sales-statistics/sales-statistics-2005-2013/>, accessed: January 2, 2015, author’s own arrangement.

In 2012, [Toyota](#) had the largest market share worldwide with 11.8%, followed by [Volkswagen Group](#) (11.1%) and [General Motors](#) (11.0%). The [Nissan-Renault](#) alliance is in fourth place with a market share of 9.2%. [13]

Figure 7 shows the domestic production of passenger cars in Japan since 2005. Production has shrunk since 2005. There are two reasons for this: Firstly, domestic demand in Japan is falling. Secondly, Japanese automobile manufacturers are steadily relocating their production capacities abroad. Nowadays, the overseas production of Japanese automobile OEMs is higher than their domestic production. In 2013, it was about 16.8 million units [14] – twice as high as domestic production.

Figure 7: Domestic production of passenger cars in Japan, 2005-2013, in units



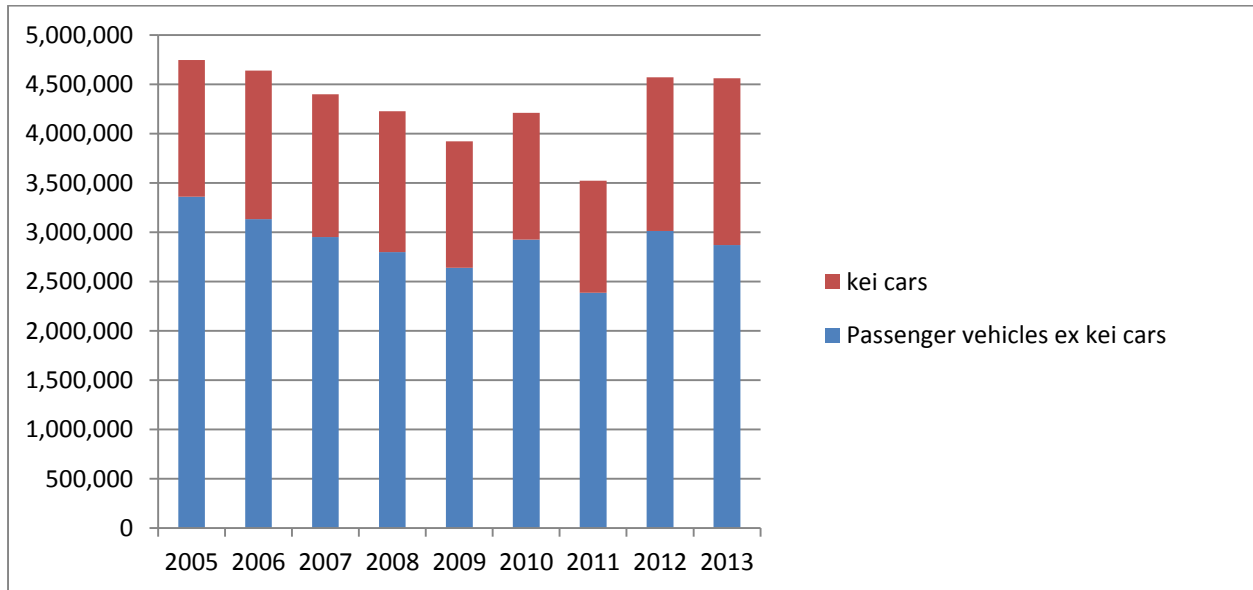
Source: Ministry of Economy, Trade and Industry (2012): Census of Manufacture, Internet: <http://www.meti.go.jp/statistics/tyo/kougyo/result-2.html>, accessed January 2, 2015, author's own arrangement.

Passenger car sales in Japan since 2008 reflect the trends in the overall economy: In 2008 the “Lehman shock” caused a slump in demand (cf. Figure 8). The decline in 2011 was rather caused by difficulties on the supply side due to natural disasters in East Japan and Thailand and their consequences for the supply chain. Despite a further rise in domestic car sales in 2013, a decline is expected in future years. High demand in 2012 and 2013 was driven by subsidies for designated environmentally friendly vehicles (“ecocar”)⁴. On the other hand, a saturated market and the declining tendency of younger people to own a car are future issues.

As the discussion above shows, the domestic Japanese market for automotive parts is shrinking. Therefore, Japanese suppliers, especially tier-two and tier-three firms are challenged to expand overseas. This means they will become potential competitors (or cooperation partners) in overseas markets for EU companies.

⁴ “Ecocars” are not necessarily hybrid or electric vehicles. Fuel efficiency also qualifies for the “ecocar” classification. The ongoing cycle will end in spring 2015. Further information can be obtained from the [Ministry of Land, Infrastructure, Transport and Tourism](#) or the [Japan Automobile Manufacturers Association](#).

Figure 8: Domestic sales of passenger cars in Japan, 2005-2013, in units



Source: Japan Automobile Manufacturers Association (2014): Yonrinsha shinsha hanbai daisuu (Sales of New Four-wheel Vehicle Units), Internet: http://www.jama.or.jp/industry/four_wheeled/four_wheeled_2t1.html, accessed January 2, 2015, author's own arrangement.

Kei cars (“*kei jidosha*”, “light vehicles”) are peculiar to the Japanese automobile market. Vehicles with a cubic capacity of no more than 660 cm³, an overall length of 3.40 m or less and a width of 1.48 m or less qualify according to the Road Transport Vehicle Law as “*kei jidosha*”. Their tax levy is less than for ordinary passenger cars and they have a yellow number plate. As the “*kei*” category is specific to the Japanese market, this segment is dominated by domestic products.

There are eight large Japanese manufacturers of passenger cars. The largest three (on the domestic market in terms of sales 2013) are [Toyota](#), [Honda](#), and [Suzuki](#). [15] The other five are [Nissan](#), [Daihatsu](#), [Subaru](#), [Mazda](#), and [Mitsubishi](#). All of them operate on a global scale. Toyota has by far the largest market share in Japan with over one third of units sold. In terms of units sold, Mazda (11.6%) and Honda (10.4%) come second and third. [16]

Japan's automobile manufacturers are very active in designing and promoting hybrid or fully electric passenger cars. Hybrid power (gasoline engine and battery-driven engine combined) automobiles are enjoying an increasing market share in Japan. Nearly 20% of newly registered cars in Japan are hybrid automobiles. [17] The automotive market researcher [Fourin Inc.](#) estimates domestic sales of hybrid and electric passenger cars at 870,000 units in 2013. [18] The share of “pure” electric vehicles (fuel cell, battery electric vehicle, plug-in hybrid) is still quite small. In 2012, about 45,000 vehicles of this category were being driven on Japan's streets. [19] High purchasing costs, ease of use and the still patchy network of recharging stations are still issues that prevent consumers from buying e-vehicles. Full cell technology is still quite new on the market: Toyota launched its first FC passenger car model in November 2014. However, e-mobility is a trend that automotive suppliers worldwide should not neglect. Japan's automobile manufacturers are the leading players in this field.

Besides automobile manufacturers, tier-one and tier-two suppliers are potential customers. The [Japan Auto Parts Industry Association \(JAPIA\)](#) has 444 member companies, mainly Japanese and foreign firms operating in Japan. [20] A much larger number of companies manufacture smaller parts and components for tier-one and tier-two suppliers.

The Census of Manufacture lists more than 7,000 companies in the automotive industry. The majority of parts producers are SMEs with fewer than 300 employees. [12]

Another characteristic of the Japanese automotive market are OEM-centred supplier networks. However, these relationships, which are characterised by a strong dependency, have become more relaxed in recent decades. Please refer to the chapter on distribution for further details on the supply chain.

As the Japanese economy is dependent on imports of energy and raw materials, factor costs are an issue for Japanese suppliers. After the East Japan earthquake disaster and the shutdown of nuclear power stations, Japan is now importing more fuel for energy generation. New energy sources from renewables are being explored and are slowly gaining market share. As a consequence, the cost of energy is high. Compared to other Asian economies, Japan has a well-educated workforce. Due to demographic change, the workforce in Japan will shrink. To win qualified workers, engineers and managers, employers have to pay higher wages. As a result, labour costs in Japan are also high. Tier-two suppliers in particular find themselves caught between rising raw material and factor costs and decreasing sales prices.

Distribution

Parts are either supplied during the manufacturing process or added to the vehicle “after-sales”. Customers in the first case are component manufacturers or automobile OEMs, and in the latter case they are repair shops or wholesalers and retailers. This report concentrates on manufacturing firms that purchase parts and components.

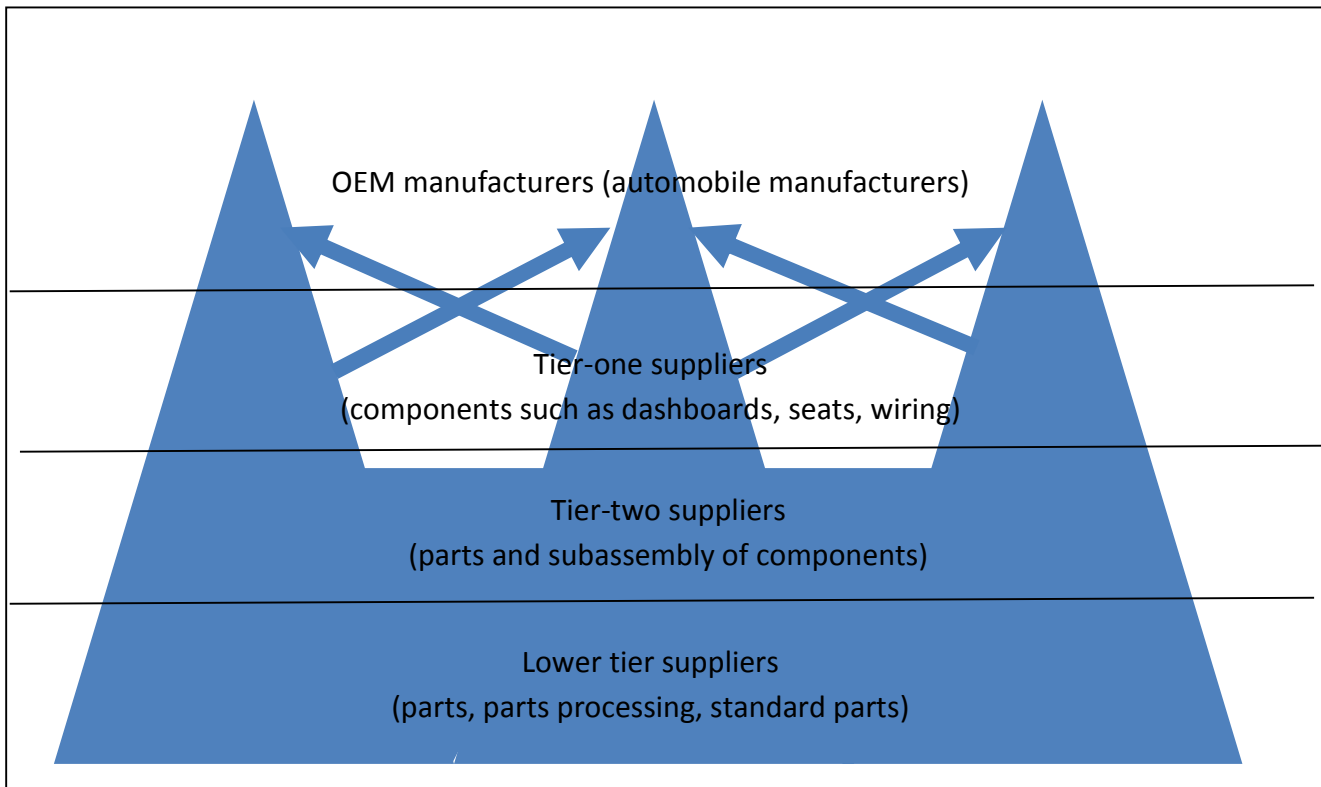
Supplier Networks

Figure 9 shows the pyramid structure of automotive supply in Japan. OEMs (e.g. [Toyota](#), [Honda](#)) are at the top of the respective pyramids. Tier-one suppliers manufacture larger components such as seats or wiring harnesses. They purchase their parts and components from tier-two suppliers. Suppliers of simple standard parts and processing subcontractors are at the lowest level of the pyramid. Automotive suppliers manufacture parts according to their customers’ specifications and cooperate with them in product development and management issues.

The Japanese automotive industry is characterised by a high degree of differentiation. Networks of suppliers grouped around one OEM – or the separate pyramids with one manufacturer at the top – are called *keiretsu*. However, these “pyramids” are not totally isolated from one another. Historically, until the 1990s, they were separated more rigorously and smaller suppliers tended to be dependent on one large customer. Especially at the lower levels, suppliers are now increasingly catering to more than one customer. Similarly, Japanese first-level suppliers no longer only sell to manufacturers from their own group. Firms such as [Denso](#) or [Aisin](#) have actually become worldwide leading component manufacturers.

The [Toyota Group](#) is a good example of a company that still has close ties within the supply chain. The four largest tier-one parts suppliers in the Japanese market in terms of sales are part of the [Toyota keiretsu](#). However, they also supply other manufacturers. [Nissan](#) and [Honda](#) are examples with fewer ties. After the [Nissan-Renault](#) alliance in 1999, the company streamlined its supply chain and severed ties with long-standing suppliers for reasons of cost effectiveness.

Figure 9: Supply pyramid structure



Source: Author

Manufacturers foster a more or less institutionalised network with their tier-one and some tier-two suppliers (the supplier networks are called *kyōryōkukai*). Although these networks seem to be closed to non-Japanese suppliers, there are signs that they are opening up. For example, [Honda](#) arranged a conference exclusively for its North American tier-one suppliers in November 2012. [21]

Cooperation in product development and management issues used to be quite common in the supplier-customer relationship at all levels of the pyramid. Engineers are sent to lower-tier suppliers to offer consulting in the development process. As the ties within the keiretsu supplier networks become more flexible, the nature of the relationship also seems to be changing. Smaller suppliers in particular complain that their larger customers have become less cooperative.

A particular feature at [Toyota](#) is building product development capacities at the suppliers by initiating “self-learning groups” (*jishu kenkyūkai*). Groups of suppliers work together on a task relating to product or production process development. Ideally the selected suppliers work in similar fields, are located in the same area and are not direct competitors. [22]

The supplier selection process by the OEM for crucial tier-one components starts about two to three years prior to start of production. In the first stage, a request for quotation with some specifications is given to selected suppliers. In the next stages, the supplier submits drafts and cost estimates, the OEM makes suggestions for improvements and gives further specifics, the suppliers send a revised offer, and so on. One to two years prior to start of production, the supplier is selected. Prototyping and testing follow. For less crucial components, the process is shorter and has fewer “loops”. [22]

At the level between tier one and two, tier-one suppliers share a request for quotations in their tier-two supplier networks. Similar to relations between the OEM and the tier-one supplier, they prefer to conduct business with suppliers with whom they already have a relationship.

Before they can become an established supplier and enter into business with automotive companies from Japan, suppliers have to go through a vetting process on the part of potential customers. Only suppliers registered in the companies' list of "preferred suppliers" can quote and eventually enter into business. Vetting criteria include a track record in the automotive industry, certificates such as ISO 9001, and results of a manufacturer-specific evaluation process including on-site visits. Japanese manufacturers take a close look at the potential supplier's cost structure. Negotiations are centred on "target costs" rather than "target prices". Furthermore, great importance is attached to reliability and trustworthiness. [22]

One peculiar feature of Japanese supplier networks in the automotive industry is that price is not the only competition factor. OEMs also make their suppliers compete in their capacity to develop products: Specifications are given to selected suppliers, which in turn offer their product solutions. This means that development capacities are cultivated at the suppliers' side. [22]

Online procurement in Japan is still less common than in Europe. After suppliers have entered into business, some procedures are standardised and processed online. [23]

Contracts in the Japanese automotive supply system are usually less detailed than Western companies are used to. They offer leeway for further negotiations after the initial signing of the contract. Another peculiarity of the Japanese system is that the customer expects the supplier to make specific investments and incur development expenses on request, prior to the signing of a contract. [22]

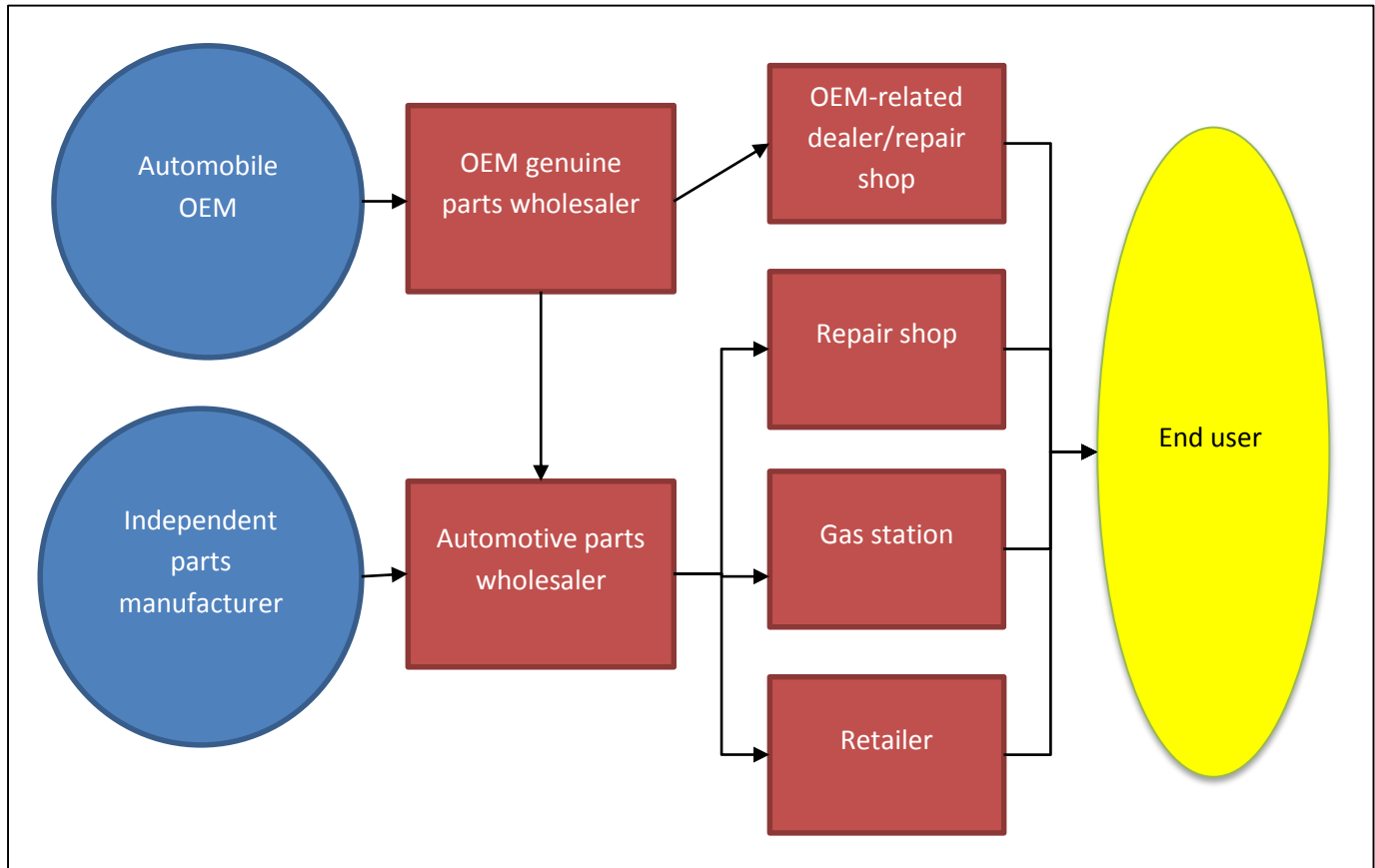
Trading firms or institutions that promote trade (such as the [Japan External Trade Organisation](#)) can act as a go-between if companies are planning to enter a new supplier network. The drawbacks of this are that there is one more partner to be considered and more steps in the communication process between supplier and customer. Trade fairs also offer a good opportunity to find prospective partners. However, they should be considered as an opportunity to get to know each other. It is unlikely that business will instantly be generated after the first meeting at a trade fair. More steps are necessary to establish trust.

Cooperating with a manufacturer of complementary products is another option; the Japanese partner would be able to contribute his contacts and knowledge of the market. Licensing production in Japan could be the next stage in such a step-by-step approach.

Distribution of After-sales Parts

Figure 10 shows the channels for after-sales distribution of auto parts. As in other countries, these can be differentiated into OEMs' genuine parts, which are distributed either via their exclusive distribution networks or via wholesalers to other retailer types such as auto parts retail or gas stations, and parts made by independent manufacturers or accessories that are distributed via several wholesale and retail channels.

Figure 10: Distribution of auto parts to end users



Source: Author

It is advisable to cooperate either with a Japanese trading company or with an international trading firm with long-standing experience in Japan. A general trading company could be a good choice because of its international experience and network of liaison offices in Europe. On the other hand, a smaller trading firm specialised in the automotive industry has the advantage of having more detailed knowledge of the market and contacts in the respective industry.

A representative office in Japan can be useful to maintain constant contact with local business partners. To ensure the success of business in Japan in the long run, a representative office is a “must”. This can also be used for market research purposes.

Key Success Factors, Main Challenges, Opportunities

Success Factors

Exporters should ask themselves what the unique selling proposition of their products is and how they can set themselves apart from other products in the market.

A track record of supplying other leading manufacturers is regarded as a sign of high quality and reliability.

Especially considering the traditionally close-knit networks in the automotive supply chain, keeping in contact and nurturing the relationship with Japanese customers and distribution partners can overcome the disadvantage of not being “made in Japan”.

As high-tech parts require a high degree of explanation, information material written in Japanese will help engineers and procurement staff at the Japanese firm to gain information on your product’s specifications and advantages.

A key success factor in serving the Japanese market is to ensure a high level of quality in the product itself and in related services (sales, after-sales, maintenance ...). For example, even slightly damaged or soiled packaging is not acceptable in Japan, even if the product itself is not affected.

During the quotation and development stage, companies should be prepared for frequent requests for further information and specifics. Japanese customers tend to clarify “every nut, bolt and screw”. Prepare to answer them as quickly as possible. Sufficient qualified sales/engineering personnel should be allocated to this task.

Business with Japan should be given top-management support. This will accelerate internal processes in case of requests and problems. Top managers should meet their Japanese counterparts regularly to cultivate the relationship.

An ideal opportunity for European “newcomers” to enter into business with Japanese OEMs/tier-one suppliers is at the beginning of a new model cycle. Such cycles usually last about five to six years. The purchasing department is responsible for checking prospective business contacts.

Challenges

The traditional long-standing and close relationships between parts suppliers and manufacturers could present difficulties for new entrants into the market. As Japanese companies are usually reluctant to drop established supplier relationships, patience is required. Trust has to be established first.

The automotive sector is characterised by harsh competition in terms of cost-effectiveness and innovation.

Japanese customers in both the industrial sector and the consumer goods sector have high expectations regarding service and availability. You have to “go one step further” to cater to customers.

Opportunities

Ongoing changes in the sourcing strategies of OEMs (global sourcing, standardisation of parts, multiple sourcing) create opportunities for international parts suppliers. How international and open companies are towards new supply sources varies from case to case.

It is much easier to enter into business with Japanese companies via their European subsidiaries. Tier-one manufacturers who already have R&D activities in Europe tend to be more open to local supply offers.

Batteries for hybrid and electric vehicles, electronic automotive parts in general, parts made of carbon-fibre-reinforced plastics or bio-plastics are all innovative fields with potential for growth.

As Japan is the home market for some of the leading players in the automotive industry, it is essential to keep an eye on this market. It is possible to gain information on competitors’ moves by maintaining a presence in Japan and competing with their latest products.

Supplying Automotive Parts to Japanese Companies Based in the EU

Japanese Automobile Industry in the EU

During the 1980s, Japanese carmakers began to open production facilities in North America and Europe. The first Japanese automobile company to open European factories for large-scale production of passenger cars was [Nissan](#) in Spain and in the United Kingdom in the 1980s. Other firms followed suit. The search for better access to European markets, trade frictions and the high value of the Japanese yen were the reasons for this move. Since then, the share of automobile production in Europe by OEMs of Asian origin has risen. In terms of units, it accounted for 9% of total automobile production in Europe in 2000. This figure was up to 15% in 2012. [3]

In 2013, Japanese manufacturers produced 1.38 million vehicles at 14 locations in Europe (see Table 2). The majority of vehicles were sold inside Europe. Furthermore, Japanese automakers regard Europe as a base for research and development: Currently, 16 R&D centres are in operation in five EU countries. They focus on the specific needs of European markets. [24]

Table 2: Japanese production facilities in the EU

Manufacturer	Location	Start of operation	Products	Units produced in 2013
Nissan	Sunderland, United Kingdom	1986	Note, Qashqai, Juke, Leaf	501,768
	Cantabria, Spain	1980	Primastar, Navara, Pathfinder, NV 200, Atleon, Nissan Cabstar, engines, manual transmissions, axle parts	131,545
	Barcelona, Spain	1983		
	Avila, Spain	1987		
Toyota	Burnaston, United Kingdom	1992	Avensis, Auris, Auris Hybrid	179,000
	Deeside, United Kingdom	1992	Engines	203,000
	Valenciennes, France	2001	Yaris, Yaris Hybrid	192,000
	Ovar, Portugal	1971	Dyna	1,100
	Walbrzych, Poland	2002	Transmissions, engines	410,000 220,000
	Jelcz-Jasowice, Poland	2005	Engines	129,000
	Kolin, Czech Republic	2005	Aygo	69,000
Honda	Swindon, United Kingdom	1992	Civic, C-RV, Jazz, engines	140,094
Mitsubishi Fuso	Tramagal, Portugal	1996	Canter	3,765
Suzuki	Esztergom, Hungary	1992	Splash, Swift, SX4, SX4 S-Cross	161,106

Source: Japan Automobile Manufacturers Association (2014): *Common challenges, common future: Japanese automobile manufacturers contribute to the competitiveness of Europe's motor industry*, Tokyo: Japan Automobile Manufacturers Association, modified.

EU-made parts purchases by Japanese transplants amounted to 12.69 billion euros in 2013. [24]

Japanese parts suppliers follow their large customers to their production sites in Europe, as they do in North America and in Asia. Six of the largest European automotive suppliers in terms of sales are Japanese companies such as [Denso](#).

[6] The aim of Japanese OEMs was to secure the high degree of quality and reliability they were used to at home. The number of subsidiaries of Japanese automotive parts manufacturers in Europe rose from 15 at the beginning of the 1980s to over 200 in 2010. [25] Further reasons for direct investments in Europe are the size of the market, factor costs and subsidies provided by local governments. [26]

The European country that hosts the most Japanese automotive suppliers' operations is the United Kingdom (44), followed by the Czech Republic (37), Hungary (21), France (21), Poland (19) and Germany (18). [25]

In 2013, automotive parts suppliers from Japan had 215 production facilities in the EU. Their number has risen steadily. Sales in Europe amounted to 1,161 billion yen (about 7.8 billion euros), up 22% on the previous year. Since 2010, sales have also grown constantly. Nearly 60% of products are sold in the country in which they are made. In contrast to other regions (North America, Asia), the majority of products are purchased by European customers. [27]

Questioned about challenges regarding business in the EU, Japanese manufacturers answered (in descending order): "economic slowdown, market concentration", "exchange rate fluctuations" (especially in non-euro economies), "strong competition regarding prices", "high labour costs" (especially in Western Europe) and "the challenge of finding good workers". [28]

Business with Japanese Automotive Firms Based in the EU

Experience has shown that it is easier to enter into business with Japanese manufacturers via European production networks than trying to contact the Japanese headquarters directly. As a part of their global sourcing strategy, managers of Japanese automobile manufacturers' operations in the EU actively look for local suppliers.

How autonomous the European subsidiaries' purchasing departments are varies by company. As a rule of thumb, it can be said that the smaller the firm, the less freedom overseas offices have to make decisions on their own. Manufacturers with R&D operations in Europe tend to be more open to offers from local suppliers. However, it is useful to provide information in Japanese, as not all Japanese expatriates have strong English language skills and this will facilitate communication with the Japanese headquarters.

Besides the selection criteria mentioned above (experience, certificates, evaluation results, costs), location can be a strong argument for a local supplier to reduce logistics costs. If this helps Japanese companies to avoid importing parts from Japan, it could be a considerable advantage.

Another piece of useful advice for EU companies looking to build business relationships with Japanese automotive firms in the EU is to get acquainted with Japanese peculiarities and business practices, such as a long-term orientation and the high degree of communication back-and-forth at all stages of the procurement and production process.

Appendix A: References

- [1] Japan Automotive Products Association (JAPA) (2007): *What's JAPA Recommended Parts?*, Internet: <http://www.japa.gr.jp/e/japa/parts.html>, accessed January 10, 2015.
- [2] Thomson Reuters Datastream (2014): Size of the Automotive Supplier Market Worldwide From 1985 to 2015, quoted from *Statista.com*, Internet: <http://www.statista.com/statistics/269618/size-of-the-automotive-supplier-market-worldwide-since-1985/>, accessed November 10, 2014.
- [3] Roland Berger Strategy Consultants / Lazard (2013): *Global Automotive Supplier Study*, Internet: http://www.rolandberger.de/media/pdf/Roland_Berger_Global_Automotive_Supplier_Study_20130917.pdf, accessed November 10, 2014.
- [4] Business Wire / Research and Markets (2014): *Press Release: Report on Global Automotive Powertrain Market 2014-2019*, Internet: <http://finance.yahoo.com/news/research-markets-global-automotive-powertrain-103700380.html>, November 7, 2014.
- [5] Euler Hermes Deutschland AG (2014): *Euler Hermes Studie Automobilindustrie: China "hot" Russland "not"* (Euler Hermes Automobile Industry Study: China "Hot" Russia "Not"), Euler Hermes press release, September 24, 2014.
- [6] Automotive News (2013): *The Top 100 Global Suppliers*, Supplement to Automotive News, June 17, 2013.
- [7] Japan Auto Parts Industries Association (2014): *2013-nendo jidōsha buhin kōgyō keiei dokō* (2013 Trends in the Automotive Parts Industry), Tokyo: Japan Auto Parts Industries Association.
- [8] Ministry of Economy, Trade and Industry, *Yearbook of Current Production Statistics: Machinery*, Internet: http://www.meti.go.jp/statistics/tyo/seidou/result/ichiran/08_seidou.html#menu6, accessed November 20, 2014.
- [9] Brüninghaus, Christiane (2013): *Luft nach oben für den Diesel* (Diesel Engines: Room for Improvement), in: *Springer für Professionals*, Internet: <http://www.springerprofessional.de/luft-nach-oben-fuer-den-diesel/4603308.html>, accessed January, 10, 2015.
- [10] Shimokawa, Koichi (2010): *Japan and the Global Automotive Industry*, Cambridge, Cambridge University Press.
- [11] Japanmarkt (2011): 80 Prozent Ökoplastik im Innenraum (80% of Interiors Made of Bio-plastics), *Japanmarkt*, October 19, 2011.
- [12] Ministry of Economy, Trade and Industry (2012): *Census of Manufacture*, Internet: <http://www.meti.go.jp/statistics/tyo/kougyo/result-2.html>, accessed November 23, 2014.
- [13] Nikkei Sangyō Shinbun (2014): *Nikkei shea chōsa 2014* (Nikkei Market Share Study 2014), Tokyo: Nikkei Sangyō Shinbun.
- [14] Japan Automobile Manufacturers Association (2014): *Nihon meekaa no kaigai seisan daisuu no idou* (Trends in Number of Units Manufactured Overseas), Internet: http://www.jama.or.jp/world/foreign_prdct/foreign_prdct_2t1.html, accessed January 2, 2015.
- [15] Nihon Keizai Shinbunsha (2014): *2015 nenban Nikkei gyōkai chizu* (Nikkei Business Sector Map 2015), Tokyo: Nihon Keizai Shinbunsha.

- [16] Yano Research Institute (2013): *2014-nen maaketto shea jiten* (Market Share Dictionary 2014), Tokyo: Yano Research Institute.
- [17] Bosch Media Service (2014): *Press Release: World Map of Automotive Powertrains: How People Drive in Europe, the Americas, and Asia*, Internet: http://www.bosch-presse.de/presseforum/details.htm?locale=en&txtID=7002&tk_id=108, accessed December 20, 2014.
- [18] Fourin Inc. (2014): *2013-nen sekai dendōsha shijō ha suitei 200-man dai* (Global EV Market: Estimate at 2 Million Units), Internet: http://www.fourin.jp/pdf/press/press_world20140701-2.pdf, accessed November 6, 2014.
- [19] International Energy Agency (2013): *Global EV Outlook*, Internet: http://www.iea.org/publications/globalevoutlook_2013.pdf, accessed December 22, 2014.
- [20] Japan Auto Parts Industries Association (2014): *Kaiin kigyō kensaku* (Member Companies Search), Internet: <http://www.japia.or.jp/search/index.html>, edited October 1, 2014.
- [21] Legewie, Jochen (2013): *Bröckelnde Netzwerke in der Autoindustrie als gutes Omen* (Crumbling Automotive Networks as a Good Omen), *Japanmarkt*, October 17, 2013, Internet: <http://www.japanmarkt.de/2013/10/17/serien/vertrieb-in-japan/broeckelnde-netzwerke-in-autoindustrie-als-gutes-omen/>.
- [22] Wilhelm, Miriam (2009): *Kooperation und Wettbewerb in Automobilzulieferernetzwerken* (Cooperation and Competition in Automobile Supplier Networks), Marburg, Metropolis Verlag (in German).
- [23] Saeki, Yasuo, Horak, Sven (2013): *The Role of Trust in Cultivating Relation-Specific Skills: The Case of a Multinational Automotive Supplier in Japan and Germany*, Duisburg Working Paper on East Asian Studies, No. 95, Duisburg: Institute for East Asian Studies Duisburg-Essen University.
- [24] Japan Automobile Manufacturers Association (2014): *Common Challenges, Common Future: Japanese Automobile Manufacturers Contribute to the Competitiveness of Europe's Motor Industry*, Tokyo: Japan Automobile Manufacturers Association.
- [25] Japan External Trade Organisation (JETRO) (2012): *Zai Ōshū Toruko Nikkei seizōgyō no keiei jittai – 2011nendo chōsa* (The Business Situation of Japanese Manufacturing Subsidiaries in Europe and Turkey, Fiscal Year 2011), Internet: http://www.jetro.go.jp/jfile/report/07000807/eu_tr_manage_all.pdf, accessed January 7, 2015.
- [26] Kawai, Norifumi (2010): *Japanese Multinationals in European Transition Economies: Motivation, Location, and Structural Patterns*, Doctoral dissertation at the Mercator School of Management, Duisburg-Essen University, Germany.
- [27] Japan Auto Parts Industries Association (2014): *Kaigai jigyō gaikyō chōsa* (Study on the State of Overseas Operations), Tokyo: Japan Auto Parts Industries Association.
- [28] Japan External Trade Organisation (JETRO) (2014): *2013 JETRO Survey Business Conditions of Japanese Companies in Europe*, Internet: http://www.jetro.go.jp/en/reports/survey/pdf/2014_03_biz2.pdf, accessed January 7, 2015.

Appendix B: Additional Materials and Useful Addresses

Additional Materials

Japan External Trade Organisation (2009): Handbook for industrial products import regulations, Internet: <http://jetro.org/en/reports/regulations/pdf/industry2009e.pdf>

Japan External Trade Organisation (2010): Handbook for consumer products import regulations 2010, Internet: <http://jetro.org/en/reports/regulations/pdf/cons2010ep.pdf>

EU Business in Japan website: <http://www.eubusinessinjapan.eu/>

Manufactured Imports and Investment Promotion Organisation (MIPRO)	6th Floor, World Import Mart Bldg. Sunshine City 3-1-3 Higashi-Ikebukuro, Toshima-ku, Tokyo 170-8630, Japan Tel: +81-(0)3-3988-2791 http://www.mipro.or.jp/english/	Brochures on import regulations and procedures (pdf file downloads from the website)
Japan External Trade Organisation (JETRO)	Ark Mori Building, 6F 1-12-32 Akasaka, Minato-ku, Tokyo 107-6006, Japan Tel: +81-(0)3-3582-5511 http://jetro.org/	JETRO operates offices in the following EU countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, Netherlands, Poland, Romania, Spain, Sweden, United Kingdom.

Authorities Responsible Regarding Laws and Regulations

Customs regulations and tariffs	Ministry of Finance, Customs and Tariff Bureau 3-1-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-8940, Japan Tel: +81-(0)3-3581-4111 http://www.customs.go.jp/english/index.htm
Road Transport Vehicle Act	Ministry of Land, Infrastructure, Transport and Tourism Road Transport Bureau 2-1-3 Kasumigaseki, Chiyoda-ku, Tokyo 100-8918, Japan Tel: +81-(0)3-5253-8111 http://www.mlit.go.jp/en/jidosha/index.html Japanese National Traffic Safety and Environment Laboratory 7-42-27, Jindaiji-higashimachi, Chofu-shi, Tokyo 182-0012, Japan Tel: +81-(0)422-41-3207 http://www.nts-el.go.jp/e/index.html

<p>High Pressure Gas Safety Law</p>	<p>High Pressure Gas Safety Institute of Japan (KHK) Hulic Kamiyacho Building 4-3-13 Toranomom, Minato-ku, Tokyo 105-8447, Japan Tel: +81-(0)3-3436-6100 http://www.khk.or.jp/english/index.html</p>
<p>Automotive emission standards</p>	<p>Ministry of the Environment, Environmental Management Bureau Godochosha No. 5 1-2-2 Kasumigaseki, Chiyoda-ku, Tokyo 100-8975, Japan Tel: +81-(0)3-3581-3351 http://www.env.go.jp/en/index.html</p> <p>Japanese National Traffic Safety and Environment Laboratory 7-42-27, Jindaiji-higashimachi, Chofu-shi, Tokyo 182-0012, Japan Tel: +81-(0)422-41-3207 http://www.nts-el.go.jp/e/index.html</p>
<p>End of Vehicle Recycling Law</p>	<p>Ministry of Economy, Trade and Industry , Manufacturing Industries Bureau, Automobile Division 1-3-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-8901, Japan Tel: +81-(0)3-3501-1511 http://www.meti.go.jp/english/index.html</p> <p>Japan Automobile Recycling Promotion Centre Jidosha Kaikan, 11F 1-1-30 Shiba Daimon, Minato-ku, Tokyo 105-0012, Japan Tel: +81-(0)50-3786-7755 http://www.jarc.or.jp/en/recycling</p>
<p>Act on the Efficient Use of Energy , “Top Runner” system</p>	<p>Energy Conservation Center Japan Igarashi Bldg., 5F 2-11-5 Shibaura, Minato-ku Tokyo 108-0023, Japan Tel: +81-(0)3-5493-9740 http://www.asiaeec-col.eccj.or.jp/index.html</p>
<p>Act against Unjustifiable Premiums and Misleading Representations, Consumer Product Safety Act</p>	<p>Consumer Affairs Agency Sanno Park Tower 2-11-1 Nagata, Chiyoda-ku, Tokyo 100-6178, Japan Tel: +81-(0)3-3507-8800 http://www.caa.go.jp/en/</p>
<p>Japanese Industrial Standards</p>	<p>Ministry of Economy, Trade and Industry, Japanese Industrial Standards Committee 1-3-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-8901, Japan Tel: +81-(0)3-3501-9245 E-mail: jisc@meti.go.jp http://www.jisc.go.jp/eng/</p>

Industry Associations

Japan Automobile Tyres Manufacturers Association (JATMA)	No. 33 Mori Bldg., 8F 3-8-21 Toranomom, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3435-9092 http://www.jatma.or.jp/english/about/
Japan Automotive Products Association (JAPA)	No. 2 Bunsei Bldg., 7F 1-11-7 Toranomom, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3580-5231 E-mail: info@japa.gr.jp http://www.japa.gr.jp/e/
Japan Auto Parts Industries Association (JAPIA)	Jidosha Buhin Kaikan, 5F 1-16-15 Takanawa, Minato-ku, Tokyo 108-0074, Japan Tel: +81-(0)3- 3445-4211 E-mail: info@japia.or.jp http://www.japia.or.jp/english/compendium.html
Japan Automobile Manufacturers Association (JAMA)	Jidosha Kaikan (NBF Tower), 16F 1-1-30 Shiba Daimon, Minato-ku, Tokyo 105-0012, Japan Tel: +81-(0)3-5405-6126 http://www.jama-english.jp/
Japan Auto Accessories Manufacturers' Association (JAAMA)	Kaiji Center Bldg., 6F 4-5 Kojimachi, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-6261-2973 http://www.jaama.gr.jp/index.html
Japan Automobile Service Promotion Association (JASPA)	Mori-Tower, 17F 6-10-1, Roppongi, Minato-ku, Tokyo 106-6117, Japan Tel: +81-(0)3-3404-6141 http://www4.jaspa.or.jp/jaspahp/english/jaspa_en.html

Trade Fairs

Tokyo Motor Show	Tokyo, Japan	http://www.tokyo-motorshow.com/en/
Automotive World	Tokyo, Japan	http://www.car-ele.jp/en/
Hannover Messe	Hanover, Germany	http://www.hannovermesse.de/home
IAA	Frankfurt, Germany	http://www.iaa.de/en/
Automechanika	Frankfurt, Germany	http://automechanika.messefrankfurt.com/frankfurt/en/besucher/willkommen.html

DISCLAIMER: The information contained in this report has been compiled by one or several independent experts and reflects the views of the author(s), and not necessarily the views of the EU-Japan Centre for Industrial Cooperation nor the views of the European Authorities. It is made available for general information and non-commercial purposes only. It does not claim to be comprehensive or up to date, and is not intended to provide legal or other advice. No person should rely on the contents of this report – or of internet web sites or other information sources indicated in this report – without first obtaining advice from a qualified professional person. This report is made available on the terms and understanding that **the EU-Japan Centre for Industrial Cooperation and the European Authorities are not responsible for the results of any actions taken - or omitted to be taken - on the basis of information in this report, nor for any error in or omission from this report.** The EU-Japan Centre for Industrial Cooperation and the European Authorities expressly disclaim all and any liability and responsibility to any person in respect of anything and the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partially, upon the whole or any part of the contents of this report. Without limiting the generality of the above neither the EU-Japan Centre for Industrial Cooperation nor the European Authorities shall have any responsibility for any act or omission of the author(s) of this report.

COPYRIGHT: Published by the EU-Japan Centre for Industrial Cooperation. The contents of this report are protected by copyright under international conventions. Reproduction is authorized for non-commercial purposes, provided that (i) the name of the author(s) is indicated and the EU-Japan Centre for Industrial Cooperation is acknowledged as the source, (ii) the text is not altered in any way and (iii) the attention of recipients is drawn to this warning. All other use and copying of any of the contents of this report is prohibited unless the prior, written and express consent of the EU-Japan Centre for Industrial Cooperation is obtained. All logos and figures published in this report are copyrighted and may not be reproduced without the full consent of their respective author(s).

GOVERNING LAW AND JURISDICTION: Any dispute arising from or related to the use of this report and/or the information in this report shall be submitted to the exclusive jurisdiction of the competent courts in Brussels, Belgium, which will apply Belgian law, with the exclusion of private international law rules.