enabling new business

SWITZERLAND GLOBAL ENTERPRISE

A guideline how to access the Japanese market

THE JAPANESE AUTOMOTIVE INDUSTRY



THE JAPANESE AUTOMOTIVE INDUSTRY

A guideline how to access the Japanese market

With a production volume of around 25 mil. units, 30% of the global production, the Japanese automotive industry is currently the single biggest production nation for automobiles, and analysts do not expect this to change. But most non-Japanese suppliers have not found ways to connect to this huge potential customer group although the respective opportunities are growing - the supply of foreign suppliers to the Japanese car industry accounts for around 5% to 8%.

This report gives Swiss companies an overview of the Japanese automotive industry and discusses opportunities and risks of entering the Japanese market.

Language: English

Number of pages: 91

Author: Swiss Business Hub Japan, CBI Partners

Other architectural Reports: Are you interested in other architectural Reports for other sectors and countries? Please find more Reports here: www.s-ge.com/reports

DISCLAIMER

The information in this report was gathered and researched from sources believed to be reliable and are written in good faith. S-GE and its network partners cannot be held liable for data, which might not be complete, accurate or up-to-date; nor for data which are from internet pages/sources on which S-GE or its network partners do not have any influence. The information in this report does not have a legal or juridical character, unless specifically noted.

Contents

1. INTRODUCTION ____ 6

1.1. Report background ____ 6

1.2. Executive summary & how to use this report ____ 6

2. JAPAN – A GENERAL OVERVIEW ____ 9

2.1. Population ____ 9

2.2. The political system ____ 9

2.3. The Japanese economy ____ 9

2.3.1. Current economic situation ____ 9

2.3.2. Keiretsu ____ 11

2.3.3. Employment culture – salary men, seniority, lifelong employment ____ 12

2.3.4. Principle of legal certainty, stability and public safety 13

2.3.5. Abenomics and economic prospects ____ 13

2.4. Geography ____ 14

2.5. Historical aspects ____ 15

3. THE JAPANESE AUTOMOTIVE INDUSTRY ____ 16

3.1. General structure ____ 16

3.2. Japanese production in comparison with global production volume ____ 16

3.3. Car makers, suppliers, Keiretsu ____ 18

3.3.1. Understanding of tier 1 and system supplier ____ 18

3.3.2. Tier 2/3 ____ 18

3.4. Japanese automotive industry between isolation and global market leadership ____ 19

3.5. The importance of innovation (product process brand) 21

3.6. The Japanese OEMs ____ 23

3.6.1. Overview ____ 23

3.6.2. Toyota ____ 27

3.6.3. Nissan ____ 27

3.6.4. Honda ____ 29

3.6.5. Suzuki ____ 30

3.6.6. Mazda ____ 31

3.6.7. Mitsubishi ____ 32

3.6.8. Subaru ____ 33

3.6.9. Isuzu ____ 34

3.6.10. Mitsubishi Fuso ____ 35

3.7. The status of electric vehicles in Japan ____ 36

3.7.1. Early efforts for E-mobility by government and industry 36

3.7.2. Energy mix – network structure ____ 38

3.7.3. Energy structure – smart communities ____ 38

3.7.4. EV charging standards ____ 39

3.7.5. Japanese EV charging infrastructure ____ 41

4. CHARACTERISTICS OF THE SWISS AUTOMOTIVE INDUSTRY ____ 43

4.1. Summary of the study “Automobilindustrie Schweiz” by ETH Zürich swiss Center for Automotive Research (swiss CAR) 43

4.2. Swiss automotive companies in Japan ____ 45

5. HOW TO SUPPLY TO JAPANESE AUTOMOTIVE CUSTOMERS ____ 48

5.1. Who should try to walk (work) with Japanese customers 48

5.2. Process for planning a market entry ____ 49

5.3. How to get information and expertise ____ 51

5.4. Anonymous failures and reason for failures ____ 52

5.5. Relationships ____ 52

5.6. No change - no business ____ 52

Contents

5.7. Classic failures / hurdles 52
5.8. Management of limited success 54
5.9. Major differences to European business 55
5.9.1. Quality 57
5.9.2. Service / aftersales service 57
5.9.3. You are not a partner, you are a supplier 57
5.10. How to present to Japanese customers 57
5.11. The Japanese HR market 58
5.12. Different company setups in Japan 59
5.12.1. Representative office 59
5.12.2. Kabushiki Gaishya (Co., Ltd.) 60
5.12.3. Joint ventures 60
5.12.4. Virtual Kabushiki Gaishya 60
5.12.5. Distribution / trading firms 60
5.12.6. Greenfield production 60
5.12.7. M&A 61
5.12.8. Networks and partnerships 61

6. INTERVIEW WITH MASARU OTSUKA 62

7. SUPPLIERS AND TECHNOLOGY 68
7.1. Production technology / production systems 68
7.2. Components / general small parts 68
7.3. Engine / fuel / emission systems / engine controller / OBD... 68
7.4. Powertrain / rolling chassis 69
7.5. Body exterior / lightWeight / composite materials / gluing 69
7.6. Steel and materials 69
7.7. Interior 70
7.8. Electronics / electronic parts 70
7.9. CAD, CAM, CAE, simulation tools, MBD, DoE... 70
7.10. Engineering services 70
7.11. Focus on environmentally friendly technologies and production 70
7.12. Opportunities from global alliances 71
7.13. Opportunities based on the Swiss automotive industry 71

8. SUCCESSFUL EUROPEAN SUPPLIERS IN JAPAN 72
8.1. Examples of different successful companies 72
8.1.1. Independent companies in Japan with clear profiles 72
8.1.2. Acquisition combined with core technology 72
8.1.3. From representative office to greenfield production 72
8.1.4. Joint ventures 73

9. AFTERMARKET AND ACCESSORIES 74

10. REGULATION 75

11. ASSOCIATIONS / FAIRS AND SHOWS 76
11.1. Associations 76
11.2. Fairs / shows 76

12. CONCLUSION / NEXT STEPS 77

13. BACKGROUND OF THIS STUDY 78

14. APPENDIX 79

15. BIBLIOGRAPHY 89

Contents

LIST OF FIGURES

Figure 1: Japanese Financial Key Stats 2012
Figure 2: Japanese Government Debt in Comparison (2012 estimate)
Figure 3: Japanese Exports and Imports Commodities
Figure 4: Japanese Exports and Imports Partners 2012
Figure 5: Japanese 'Keiretsu' Structure (USC Marshall)
Figure 6: Shares of global production by origin of technology / capital 2012
Figure 7: Produced units by origin of technology / capital 2008 - 2012
Figure 8: J-OEMs production volume by region 2012
Figure 9: Shares of production by origin of technology / capital in China 2012
Figure 10: Shares of production by origin of technology / capital in USA 2012
Figure 11: Top 10 Global Sales for 2012 (Marklines)
Figure 12: Types of Innovation (Ten Types of Innovation: The Discipline of Building Breakthroughs, Larry Keely, Helen Walters, Ryan Pikkel, Brian Quinn 2013)
Figure 13: J-OEMs Production Data 2012
Figure 14: J-OEMs industry ties Japan (The Motor Industry of Japan, JAMA 2013)
Figure 15: J-OEMs industry ties USA (The Motor Industry of Japan, JAMA 2013)
Figure 16: J-OEMs industry ties Europe (The Motor Industry of Japan, JAMA 2013)
Figure 17: J-OEMs industry ties China (The Motor Industry of Japan, JAMA 2013)
Figure 18: Toyota brands and involments
Figure 19: Toyota Breakdown of Sales by Region 2013
Figure 20: Nissan Breakdown of Sales by Region 2013
Figure 21: Overview Relationship Renault-Nissan Alliance & Daimler (Nissan Global Homepage Corporate Information)
Figure 22: Honda Breakdown of Sales by Business 2013
Figure 23: Honda Breakdown of Sales by Region 2013
Figure 24: Suzuki Breakdown of Sales by Business 2013
Figure 25: Suzuki Breakdown of Sales by Region 2013
Figure 26: Mazda Breakdown of Sales by Region 2013
Figure 27: Mitsubishi Breakdown of Sales by Region 2013
Figure 28: Subaru Breakdown of Sales by Region 2013
Figure 29: Isuzu no.1 Market Share Regions in 2012
Figure 30: EV Deployment Targets and Progress (Global EV Outlook, IEA 2013)
Figure 31: 2012 World BEV Sales, by Country (Global EV Outlook, IEA 2013)
Figure 32: EV Uptake Comparison, Q1 – Q3 2012 (Global EV Outlook, IEA 2013)
Figure 33: Announced EV/Hybrid Projects worldwide, Shares by Country
Figure 34: Registered Suppliers in the area of EV and Hybrid Vehicles, by Country
Figure 35: Japanese Energy Mix (Energy Mix before and after Fukushima, METI 2012)
Figure 36: Smart Community Concept (Trendbericht Elektromobilität in Japan, AHK 2013)
Figure 37: Available standards and couplers by region (Energy Efficiency and Renewable Energy, US Department of Energy EERI 2012)
Figure 38: Structure of International Standardization Activity in Japan (Trendbericht Elektromobilität in Japan, AHK 2013)
Figure 39: Nonresidental EVSE Stock in EV Countries by slow/fast 2012 (Global EV Outlook, IEA 2013)
Figure 40: Customer of the Swiss supplier industry (Automobil(zuliefer)industrie Schweiz 13, ETH Swiss CAR Analyse 2013)
Figure 41: Production Locations (Automobil(zuliefer)industrie Schweiz 13, ETH Swiss CAR Analyse 2013)
Figure 42: Trends and their relevance (Automobil(zuliefer)industrie Schweiz 13, ETH Swiss CAR Analyse 2013)
Figure 43: Leadership/Maturity Diagram
Figure 44: Profit/Flexibility Diagram
Figure 45: V-Process to develop business

1. Introduction

1.1. REPORT BACKGROUND

This report is to help understand what is so different about the Japanese automotive industry. Most European managers are very reluctant to accept that there are major differences between the European, American and Japanese car industries. In order to understand the industry and the country, this report begins with a general chapter about Japan.

In further sections we look into special segments and commodities of the Japanese automotive industry and the requirements Japanese customers have in different areas. Following the structure of the Swiss automotive industry, "customer" is defined beyond the auto-makers (in this study often referred to as OEMs, original equipment manufacturers), because the majority of Swiss companies supply to Tier 1 or Tier 2 suppliers. A requirement for a product or service does not automatically create a market and business. Many companies have lost huge investments in the Japanese market because they accept that the delivery of a product and a service can deviate massively from the way business is done in Europe or other parts of the world.

The Japanese automotive industry is the single biggest production market for automobiles. No other single country produces more cars all over the world. This industry has a very unique history, which is different from the history of the inventors of the automobile (the European manufacturers). The Japanese are perfectionists about automobile production and technology. **"Anzen dai ichi!" (Safety first!) is one of the keys to understanding this industry.** This perfectionism, persistence and need for 100% compliance to requirements of Japanese OEMs has broken the backs of many foreign suppliers. "Fish cannot see water!" – The management of western companies is often blind to their own culture. The development of a car has a unique culture, from company to company and country to country. Most European companies who failed in Japan were unable to realise when and how things began to derail. Foreign suppliers often do not see the requirements put in front of them because they automatically compare them to German or American standards and think they understand. But when it comes to delivery and passing the release-steps of Japanese specifications the world is changing. Recognising the differences too late can lead to disastrous financial results. European manufacturers quickly implement new technologies or features if they help increase customer satisfaction or reduce the cost of vehicles. Japanese manufacturers are eager to learn about such technologies and to study them, with the result that implementation speed is much slower. Implementation only occurs after a complete organisation has literally "signed off" the product. The authors of this study built a plant for convertible systems in Japan – including the complete organisation – between 2006 and 2010. "The closer we came to mass production, the more we had to learn how much deeper the customer wants to be involved in every single detail of the product. The 30% higher cost we had budgeted for project management compared to European projects was not enough; we should have budgeted around 40% to 50%. But on the other hand our production equipment investment was 35% lower compared to European projects. Overall, the project was a success and the first greenfield plant of a European system supplier ever to be successfully launched in Japan." Please consider that this statement is made by managers who have been managing projects successfully in Japan since 1989.

Please keep in mind that there is no standard recipe for entering the Japanese market. Beyond technology leadership and production process security, a company that successfully enters into business with Japanese companies needs to have a committed, experienced management team, a company culture which is receptive towards change, the capital and patience to overcome initial hurdles and as a result the luck that comes to those who work hard and with dedication.

We hope this report encourages you to study a market which can add another 25 million vehicles to your target customer range.

1.2. EXECUTIVE SUMMARY & HOW TO USE THIS REPORT

In order to summarise this paper as comprehensively as possible, it is necessary to provide a black and white picture. As with all such statements, this will need closer verification later with the use of the rest of the study.

Here is the comprehensive summary: "If you as a Swiss parts-maker or service provider have been successful with German automotive producers and if you have been profitably supplying to BMW, VW and/or Mercedes

Benz for several years with your product, you should consider approaching Japanese manufacturers. Do not consider selling any **"ME TOO"** products or services in which you have bigger Japanese competition. If you have a proven leading market position due to excellent technology and know-how, Japan can offer you great potential for your global expansion, but just knocking at the doors of Japanese OEMs will not open them automatically.

Chapter 2: Consider the history and environment of a country which has never really been occupied in its history, in which most people do not speak English and which is the 3rd biggest economy of the world. Even though it has battled with a difficult economy for 20 years, Japan is ruled by one of the most frequently changing governments of the world and even though it was hit by one the worst natural disaster in recorded human history on the 11th of March 2011, Japan does not easily adjust to new or different things. Japan has its own way, its own culture and decision-making processes, and the companies who have entered Japan successfully have learned to understand and to respect its history and culture.

Who should read this chapter: Everybody who is interested in doing business in Japan and needs to understand the basics of Japan.

Chapter 3: 30% of global automotive production is Japanese and no major change in this figure is expected in coming years. Japan has the most diversified global plant and production structure of all manufacturers. Japanese OEMs have major manufacturing shares in China, Europe, the Americas and other markets. The Japanese car industry is the by far most powerful of the world. In chapter 3 we provide background information about this fascinating industry and its structure.

Who should read this chapter: Everybody seriously considering entering the market or reflecting on their current management level strategy should read this chapter. The chapters about the individual OEMs are more important if you visit customers and you want to gain a fast overview of their global position.

Chapter 4: In order to focus this report and its statements it was necessary to understand the structure of the Swiss automotive industry. For this we used the study "Automobile Switzerland" by ETH Zürich swiss Center for Automotive Research (swiss CAR). This chapter also contains an initial report of a success story of a Swiss company in Japan, FEINTOOL.

Who should read this: We consider this an excellent study to understand the strong points of the Swiss automotive cluster, and people who are interested in understanding this industry should read the short extract provided from this study.

Chapter 5: After having layed the foundations for understanding the country and its industry, this chapter provides concrete details and advice about what a Swiss company should consider when planning a business approach to Japan. The differences between the European and Japanese automotive industries are shown in depth, and advice is given on how to gain access to Japanese customers. Questions like JVs, M&A, which regions to target, etc. are covered here. This chapter also covers challenges for headquarters when entering Japan, as changes within headquarters are always required to succeed with Japanese customers. Different methods of gaining access to Japanese customers are described. This chapter also briefly covers the legalities of different company set-ups in Japan.

Who should read this: Anybody seriously considering a market approach. This is the core of the report.

Chapter 6: One of the most successful European suppliers in Japan / Asia in recent years is Webasto AG Fahrzeugtechnik. We had the chance to interview Masaru Otsuka, who made Japan and Asia the cornerstone of Webasto's global strategy. He touches on central questions for SMEs when it comes to entering Japan and working with Japanese customers.

Who should read this: This is a must read for anybody considering Japan as a target market.

Chapter 7: The chapter provides a short overview of the most important sectors, with a short description of their potential.

Who should read this: Managers who are active in one of the described sectors. The chapter are short and reflect that it is impossible to make global valid statements here.

Chapter 8: Short examples of companies who are actively successful in Japan and their set-ups.

Who should read this: Anybody interested in examples.

Chapter 9: The aftermarket and accessory business is a major global industry. Yet up until now foreign companies in Japan have not managed to play a major role here.

Who should read this: Anybody interested in the aftermarket and accessory business.

Chapter 10: Against the expectations of most managers, regulatory and legal items are not a major hurdle for entering Japan.

Who should read this: This point is one factor to bear in mind when considering a market entry.

Chapter 11: Provides a profile of the authors of this study.

Chapter 12: Describes the important associations and events

2. Japan – a general overview

This chapter is about Japan, with a focus on its economy. After a short introduction about Japan's demographics and political system, the Japanese economy is described in detail. The current situation and prospects are presented, along with its characteristics and peculiarities. For further information, Japan's climate and geographic conditions and its history are introduced in the last two sections.

2.1. POPULATION

Japan has a highly educated, disciplined and hard working population. Japanese society is linguistically and culturally homogeneous, composed of 98.5% ethnic Japanese with small populations of foreign workers (mainly Korean, Chinese). Currently standing at 83.5 years, the overall life expectancy of Japanese people is the longest worldwide. But Japanese society is facing serious problems of an aging population, a result of a post-World War II baby boom followed by a decrease in birth rates. Japan's population is expected to drop to 95 million, while the proportion of over-65s is projected to rise from its current (2012) 24.1 percent to almost 49% by 2050. The changes in demographic structure will cause a number of social issues, particularly a potential decline in workforce population and a rising cost of the pension system. Immigration and birth incentives are sometimes suggested as a solution to provide younger workers to support the nation's aging population. Faced with the twin facts of a decreasing domestic market and fewer human resources, Japanese companies have to evaluate their global business opportunities. For example, there are not enough engineers to support the increasing production, particularly in the automotive industry, so Japanese companies have to outsource. Internally they will concentrate on the production and development of areas which they view as core technologies, but for other areas they will also utilize foreign suppliers to overcome the human resource gap.

2.2. THE POLITICAL SYSTEM

Japan is a constitutional monarchy where the Emperor is a ceremonial figurehead. The power is held chiefly by the Prime Minister of Japan and other elected members of the Diet, while sovereignty is vested in the Japanese people. Japan's legislative organ is the National Diet, a bicameral parliament. The Diet is dominated by the Liberal Democratic Party (LDP) - the LDP has enjoyed near continuous electoral success since 1955, except for a brief 11 month period between 1993 and 1994, and from 2009 to 2012. The prime minister is the head of the Cabinet, and he appoints and dismisses the Ministers of State. Following the LDP's landslide victory in the 2012 general election, Shinzo Abe is the current prime minister, his second term after 2006/2007.

Because of the strong integration of politics and administration in Japan, room for political action is limited. The enforcement is further complicated due to the short tenures of the Japanese Prime Ministers. But currently Shinzo Abe enjoys a very high popularity, and according to experts the chances of a stable period of governance are high.

2.3. THE JAPANESE ECONOMY

2.3.1. Current economic situation

The economy of Japan is the 3rd largest in the world by nominal GDP, the 5th largest by purchasing power parity and the world's 2nd largest developed economy. Japan's trade balance is still negative after 2011, which was the first time since 1980. The main reasons are the weak yen combined with increasing import costs of fossil fuels. As 93% of Japanese energy production is import based, the impact of the Fukushima disaster and the related (temporary) stop in nuclear energy production was high.

Figure 1

Japanese Financial Key Stats 2012					
GDP, nominal (billion USD)	GDP change, real in %	GDP per capita (thousand USD)	Export (billion USD)	Import (billion USD)	Trade Balance (billion USD)
5,960	1.9%	46.7	799	886	-72.9

Source: AHK Japan

Japanese governmental debt is the 2nd highest worldwide, the highest relative to GDP, and consequently it is viewed as one of Japan's major economic issues, and the high government spending of "Abenomics" has worsened the figures. However, it is important to note that – unlike in other nations – this debt is mainly national owned: most of the borrowing is internal and denominated in yen; less than 10% is held by foreign ownership.

Figure 2

Japanese Government Debt in Comparison (2012 estimate)				
Country	Public Debt (billion USD)	% of GDP	per capita (USD)	% of World Public Debt
World	56,308	64%	7,936	100.00%
USA	17,607	73.60%	36,653	20.61%
Japan	9,872	214.30%	77,577	17.53%
China	3,894	31.70%	2,885	6.91%
Germany	2,592	81.70%	31,945	4.60%

Data Source: CIA, The World Factbook

Japan has a high purchasing power and a highly advanced infrastructure. The country has a large industrial capacity, and is home to some of the largest and most technologically advanced producers of motor vehicles, electronics, machine tools, steel and nonferrous metals, ships, chemical substances, textiles, environmentally friendly technologies and processed foods. Japan is also a leading nation in scientific research, particularly technology, machinery and biomedical research. Traditionally, the Japanese economy has been export orientated, especially since domestic consumption is decreasing due to demographic issues. As Japan has a lack of natural resources, a large part of the imports are fossil fuels, foodstuffs, chemicals, textiles and raw materials for its industries, as well as machinery and equipment. Although the volume is not small, measured by market share the Japanese market is significantly less open compared to other countries. However, considering the low globalization level of Japanese companies, this is also a point where Japanese industry, and especially the automotive industry, has to change. And actually Japan is currently undergoing a rethinking and opening process, including the opening of negotiations for a free trade agreement between Japan and the EU. The opportunities for foreign companies to access the Japanese market are increasing.

Figure 3

Japanese Exports and Imports Commodities					
Exports (2012 est.)					
motor vehicles	semiconductors	iron & steel prod.	auto parts	plastic materials	machinery (pow. gen.)
13.6%	6.2%	5.5%	4.6%	3.5%	3.5%
Imports (2011 est.)					
petroleum	liquid natural gas	clothing	semiconductors	coal	audio/visual apparatus
15.5%	5.7%	3.9%	3.5%	3.5%	2.7%

Data Source: CIA, The World Factbook

Despite all historical burdens, China is Japan's most important trading partner, both as supplier and as a sales market for Japanese products, followed by the USA. The main export target markets are located in Asia, the main import partners are primarily resource related, except South Korea.

Trade connections to Europe have grown in recent years, and the negotiated free trade agreement between Japan and the EU can strengthen this progress further. Swiss companies may profit from this progress. Considering the figures, there is definitely potential for growth, especially in the automotive sector.

Figure 4

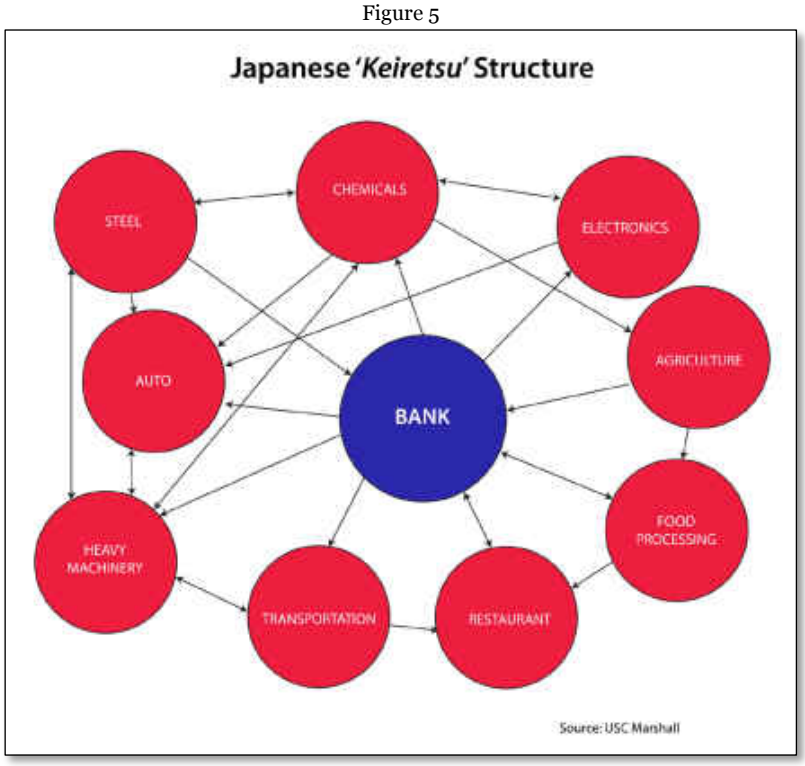
Japanese Exports and Imports Partners 2012			
Exports		Imports	
Country	Share	Country	Share
China	18.1%	China	21.3%
USA	17.8%	USA	8.8%
South Korea	7.7%	Australia	6.4%
Thailand	5.5%	Saudi Arabia	6.2%
Hong Kong	5.1%	UAE	5.0%
		South Korea	4.6%
		Qatar	4.0%

Data Source: CIA, The World Factbook

2.3.2. Keiretsu

The Japanese economic landscape is based on distinctive company networks, the "Keiretsu" system, combined with a wide range of small- and medium-sized enterprises. A Keiretsu, which originally means line or row, is a type of a business group comprised of a set of companies with interlocking business relationships and shareholdings. Originally the Keiretsus emerged out of the Zaibatsus, big family-owned industrial and financial business conglomerates. But because of their anti-democratic structures, monopolies and restrictive business practices, the Zaibatsus were dissolved and reorganized after World War II by the American occupiers. The member companies of a Keiretsu own small portions of the shares in each other's companies, centred on a core bank; this system helps to protect each member from stock market fluctuations and takeover attempts. Examples for major Keiretsus are Mitsubishi or Sumitomo.

Figure 5



The close (business) connections between the companies enable a higher efficiency in supply and production and with it long-term planning in innovative projects. These benefits of the Keiretsu system are also a key element of the Japanese automotive industry. But there is also the risk of inefficiency because of reduced competition inside the Keiretsu group, and generally the Keiretsu groups are viewed as being too big and stagnant to react promptly to market requirements.

2.3.3. Employment culture – salary men, seniority, lifelong employment

Japanese employment culture also has its own rules and traditions, very different from those in western countries. The anonymous face of the Japanese companies are the so called “salary men”, the cities’ ever-present, suited Japanese business men. After the war, becoming a salary man was viewed as a gateway to a stable, middle-class lifestyle. And these white-collar workers, with their very long working hours and high loyalty became the cornerstone of the Japanese economic miracle. Very little holiday, spending the night at the office (even sleeping under their desks) and often “Nomunications” (portmanteau of “nomu”=drinking and communication, meaning to go out drinking with colleagues and clients until late into the night) are still part of the job. The female counterpart is the OL (for office lady), a female office worker who performs generally lower prestige jobs. OLs are usually full-time permanent staff, although the jobs they do usually have little opportunity for promotion, and there is usually the tacit expectation that they will leave their jobs once they get married.

Work and company was and is the dominant institution in Japanese people's lives. Japanese employees generally have high identification with their companies and loyalty and hardworking is self-evident. In return, Japanese companies give them high employment security, good promotion prospects (particularly for men) and a familiar company atmosphere. Japanese employees generally stay a long time at the same company, often their whole working lives. This concept is called “Shushin Koyo”, meaning lifetime employment, and has become common in the post-war Japanese work environment. It also includes a large retirement grant. The seniority wage system, “Nenko Joretsu”, is the Japanese system of promoting an employee based on their proximity to retirement. The advantages are a clear salary development forecast, an incentive effect and the education of a company-specific human resource. The disadvantage of the system is that it does not allow new talents to be merged with experience and those with specialized skills cannot be promoted to the already crowded executive ranks. It also does not guarantee or even attempt to find the "right person for the right job".

But in recent years, Japan has begun to gradually move away from some of these norms, which affects not only Japan's world of work but also wider Japanese society. The attitudes of younger Japanese people are changing, and today the classical salary man often carries negative associations of long working hours, low prestige in the corporate hierarchy etc. It also seems that in Japan work-life balance is becoming more important, and today's young professionals refuse to make work the centre of their lives or to accept these hardships and corporate paternalism as much as previous generations.

In recent years, Japanese businesses, harried by foreign competitors, have benefited from having a more flexible workforce. Moreover, mergers and acquisitions are starting to become more common, so firms cannot offer the traditional long-term assurances to employees, even if they want to. As a result many firms hire new staff on short- or part-time contracts. These labour markets affect gender equality, as more women can enter the workforce. They are changing the role of older people, as many pensioners are re-joining the workforce. They touch on immigration, as foreigners are called in to do jobs that the Japanese reject. And as part of globalization, more foreign companies are setting up in Japan. Last but not least, the structural reforms of Abenomics will and are intended to strengthen (some of) these changes. Abenomics wants to especially strengthen the position of women and young people, who are currently not very well integrated into the employment structures.

This chapter until now has dealt with the image and the norm which Japan wants to create in public; but some (seldom-published) figures also show the downside of the system. Around 65% of Japanese are still working in salary-men or fixed employment systems (Japanese Ministry of Internal Affairs and Communications, 2012), a reduction from 80% in the 1980s. This means that (officially) 35% work in temp-staff companies or as low-level part-time employees, especially women. With no lobby to change the situation, the salaries of temporary staff are on average 40% lower, causing increasing poverty problems: 15.7% live in relative poverty, meaning they earn less than half of the median household income of 23,458 US Dollar per year (OECD 2011). This huge labour force makes production in Japan comparatively cheap (compared to Europe), and at an exchange rate of around 1 euro = 140 yen, it is possible to employ motivated and reliable labour starting from 6.5 euros per hour.

2.3.4. Principle of legal certainty, stability and public safety

In Japan the principle of legal certainty is totally valid. This should be self-evident, but often it is not; therefore this fact is explicitly mentioned here. For investments and planning it is important to have a stable and secure legal system with separated powers. Also foreign individuals or companies have guaranteed legal security for acquired property, the established company, employees, products, patents and trademarks etc. Japan is a democratic country with legal certainty and maximum predictability of officials' behaviour. The stability, respect, behaviour and discipline of officials and people, as well as globally unparalleled public safety, are benefits which should not be underestimated.

2.3.5. Abenomics and economic prospects

"Abenomics" (in analogy to "Reaganomics") is a portmanteau of "Abe" and "economics" and refers to the economic policies of current Japanese Prime Minister Shinzo Abe. Abenomics is a new aggressive economic policy combination of several strategies with the main objectives of ending the vicious circle of deflation and encouraging private investment. The concrete targets are a 2% annual inflation rate, correction of the excessive appreciation in the yen, setting negative interest rates, radical quantitative easing, expansion of public investment, buying operations of construction bonds by Bank of Japan (BOJ) and revision of the Bank of Japan Act. Fiscal spending will increase by 2% of GDP and raising the deficit to 9.3% of GDP by 2013 (OECD 2014).The strategy is composed of the so-called "three arrows", based on a Japanese proverb that says "three arrows cannot be broken":

- 1st arrow: Monetary policy - Part of the problem for the Japanese economy since the bubble crisis has been deflation, with stagnant or falling prices. Japanese consumers have got used to waiting to spend money in the hope of being able to buy at lower prices. Similarly, Japanese businesses have often delayed stock purchase. The Bank of Japan is trying to create excess liquidity, drive down the exchange rate, stimulate expenditure and increase the rate of inflation by engaging in extensive quantitative easing through purchasing government bonds and asset-backed securities. The concrete target is to double the amount of money in circulation and as a consequence reach a 2% inflation target.

- 2nd arrow: Fiscal policy - Despite high public debt, the Abe administration is establishing an over 100 billion US Dollar programme of infrastructure investment and other public works. The programme

includes the renovation of infrastructure which is over 50 years old (built shortly after the Second World War) and fiscal deductions to companies that invest in R&D, hire more employees, pay higher salaries, buy new equipment, etc. These measures aim to achieve an increase in investments, jobs and salaries. This expansionary fiscal policy is accompanied by a longer-term plan for fiscal consolidation as economic growth picks up. In the short term, Japan should have no difficulty in financing the higher deficit, because of the low rate of foreign debt.

- 3rd arrow: Structural reform, deregulations and creation of sustainable growth – The third arrow is the least concrete. The target is to solve structural problems such as an ageing population, restrictions in wage and employment laws and inefficiencies in the service and agriculture sectors. The announced strategy is to encourage more women to work by improving day-care facilities for children and deregulation of capital and labour markets. Further targets include increasing private-sector investment (both domestic and inward) and infrastructure expenditure (both private and public), but there are not many details given about how to achieve these.

Two of the "three arrows" were implemented in the first weeks of Abe's government. The administration quickly implemented a ¥10.3 trillion stimulus package and arranged that the Bank of Japan should generate a 2 percent target inflation rate through quantitative easing. But the structural reforms will take more time to implement and more detailed measures will be proposed by a group of experts over next few years.

Currently, at the beginning of 2014, it seems that the first two arrows will most likely hit their targets. On some measures, Abenomics has already been a success: The world's third largest economy expanded in the first half of 2013, with a 4.3% annual growth rate in the January-March quarter and 3.8% in the April-June period. Although Japan's growth rate halved in the third quarter, it was still higher than expected. The Nikkei has risen more than 40% in 2013, and the yen has devalued sharply, helping Japanese exports, which reached a three-year high last autumn. But GDP growth has been less dramatic, the trade deficit has widened and salaries and bonuses have not increased. And given that the pace of growth is slowing despite progress, the question is how stable this trend will be in the future.

The key for 2014 will be which structural reforms will be implemented to position Japan's economy to compete in the 21st century. Abe made some early moves such as negotiating the Trans-Pacific Partnership (TPP), a new free-trade agreement between countries in the Asia-Pacific region that would help Japanese companies export more. Labour market reforms are also being introduced, as well as a planned tax reform in April which will raise consumption tax and reduce corporate tax. But essential economic reform is still required, and there are doubts about whether there is enough will and power to implement those steps, as the rigid political and social structure makes this difficult. Lobbyism (as in other countries) is also a problem.

Of course, Abenomics also could open the Japanese market for foreign companies by changing labour rules, relaxing immigration rules or lowering corporate tax. It should also be remembered that the upcoming 2020 Olympic Games in Tokyo are expected to have a positive impact in the coming years.

2.4. GEOGRAPHY

Japan is an island chain in East Asia, in the Pacific Ocean east of the Asian continent. Japan consists of 4 main islands with the largest island Honshu, Hokkaido to the North, Shikoku and Kyushu to the South and additionally over 6,000 smaller islands. Japan is located next to the Korean peninsula, Taiwan and China, and the northern part is not far away from East-Siberian coast of Russia.

The Japanese Islands extend over a long distance from North to South through six climate zones with very different climate conditions. The weather is mainly warmer and wetter than in central Europe, with rainy season at the beginning of summer and typhoon season in late summer and early autumn. As Japan is situated in a volcanic zone along the Pacific deeps, frequent low-intensity earth tremors and occasional volcanic activity are felt throughout the islands. Destructive earthquakes occur several times a century.

Topographically, the Japanese islands are the summits of mountain ridges raised near the outer edge of the continental shelf, so a long chain of mountains runs down the middle of the archipelago. About 73 percent of Japan is forested, mountainous and unsuitable for agricultural, industrial or residential use. As a result, the 20% habitable zones, mainly located in coastal areas, have extremely high population densities. About 50% of the 127 million-strong population is concentrated in 2% of the area: the Kanto region (Greater Tokyo area) and the Kansai region (Greater Osaka area). Japan is one of the most densely populated countries in the world.

These facts, combined with the experience and permanent hazard of natural disasters (earthquakes, tsunamis, typhoons etc.) were and are defining for the Japanese culture and mentality - these living conditions make harmony, respect, rules and discipline a must and are the basis of the harmony-driven and group-orientated Japanese society and economy. To succeed in Japan, foreign companies have to understand, respect and manage these cultural differences.

2.5. HISTORICAL ASPECTS

Even today, Japanese mentality is still characterized by the so-called “Sakoku Jidai” – the closed country era. The authority of that time, the Tokugawa shogunate, established a strict isolation policy, under which no foreigner could enter nor could any Japanese leave the country on penalty of death. These over 200 years of isolation influenced the Japanese culture and mentality and explain why even today the Japanese society and economy is relatively isolated compared to other countries.

The isolation was forced to end by US Navy ships in 1854 and caused economic and political crisis and the end of the authority of the shogun, followed by the Boshin War and the establishment of a centralized state nominally unified under the Tenno (emperor). This new era, the Meij Restoration (named after the Meiji Tenno), began in 1868, and Japan underwent radical political, economic and cultural transformations. The Restoration led to enormous changes in Japan's political and social structure by adopting Western political, judicial and military institutions and constitutions (the Meiji Constitution). The Meiji Restoration transformed the Empire of Japan into an industrialized world power that pursued military conflict to expand its sphere of influence during the subsequent (world) wars. During this period Japan's population doubled, from 35 million in 1873 to 70 million in 1935.

In 1945, Japan was destructively defeated in World War II, with 2.1 million fatalities. Japan’s industry and infrastructure were totally destroyed. This loss combined with the two atomic bombs on Hiroshima and Nagasaki proved a traumatic experience which seems still not to have been completely resolved. In particular, relationships with colonised Asian countries such as China or Korea are still problematic. Occupied by the allied powers after the war, Japan transformed to a democratic state and adopted a new constitution emphasizing liberal democratic practices. During the 1960s and early 1970s, Japan entered a period of rapid economic growth: The Japanese post-war economic miracle catapulted the country into the world's 2nd largest economy (after the United States) by the 1980s.

In the 1980s the bubble economy formed, and its collapse in 1991 and the subsequent economic crisis led to the so called “lost decade”, when the economy contracted or grew at a paltry rate combined with persistent deflation. Despite the economic recovery in the 2000s, the conspicuous consumption of the 1980s mostly did not return, and the nation's economy has still not fully recovered from the crash. The world financial crisis in 2007/2008 and the Tohoku earthquake and tsunami with Fukushima nuclear disaster also affected the Japanese economy negatively. Since December 2012, the Japanese government under prime minister Shinzo Abe has tried to revitalise the Japanese economy through a policy of combining increased government spending with unprecedented monetary easing, the so-called "Abenomics” (see chapter 2.3.5).

3. The Japanese automotive industry

3.1. GENERAL STRUCTURE

At first glance the Japanese automotive industry is identical to the American and the European ones. Several totally independent competing OEMs utilise a pyramid of tier-x suppliers. This is nothing new, but did you know that:

- Japanese OEMs produce cars for each other, e.g. Mitsubishi produces for Nissan, Mazda produces for Suzuki, etc.
- Toyota supplies hybrid technology to Mazda
- The Japanese automotive industry has a Keiretsu structure, in which suppliers are not really free to deliver to any of their mother company's competitors
- Most Japanese suppliers are barely profitable and are totally dependent on the mercy of their share-holding customers
- Of the 25 million vehicles Japanese manufacturers produce, only 10 million are produced in Japan
- Only around 10% of the Tier 1 and Tier 2 suppliers participate in global business or have non-Japanese customers

After the next section, which outlines the scale of the Japanese automotive industry, some of the up- and downsides of the industry will be described. The used database is MarkLines; the used figures are 2012 based, and also for the following years there is no major change expected. For detailed information and data please check also the Japan Automobile Manufacturers Association (JAMA) Industry Report "The Motor Industry of Japan 2013"available on the JAMA homepage.[1]

3.2. JAPANESE PRODUCTION IN COMPARISON WITH GLOBAL PRODUCTION VOLUME

The automotive industry is one of the Japanese economy's core industrial sectors. In 2012, Japanese OEMs produced about 24.7 million units in total, about 10 million (40%) of which were produced in Japan. In 2010, automotive shipments accounted for 16.4% of the total value of Japan's manufacturing shipments, and 36.6% of the value of the machinery industries' combined shipments. Automotive shipments (both domestic and export shipments, including motorcycles, auto parts, etc.) valued 47.3 trillion yen in 2010, up 16.8% from the previous year.

Figure 6

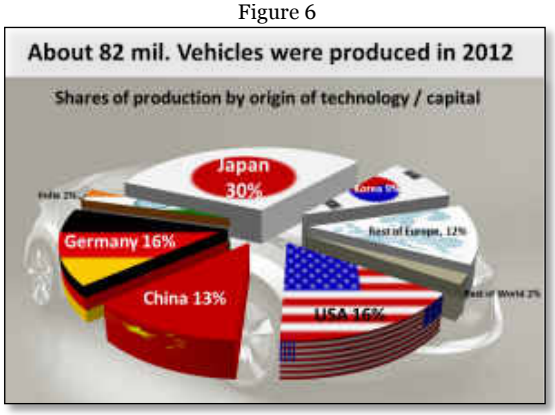
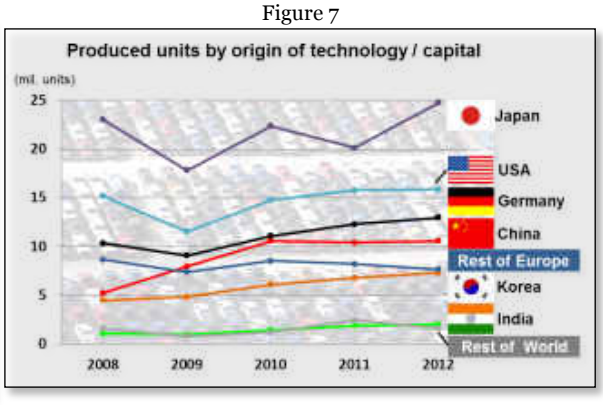


Figure 7



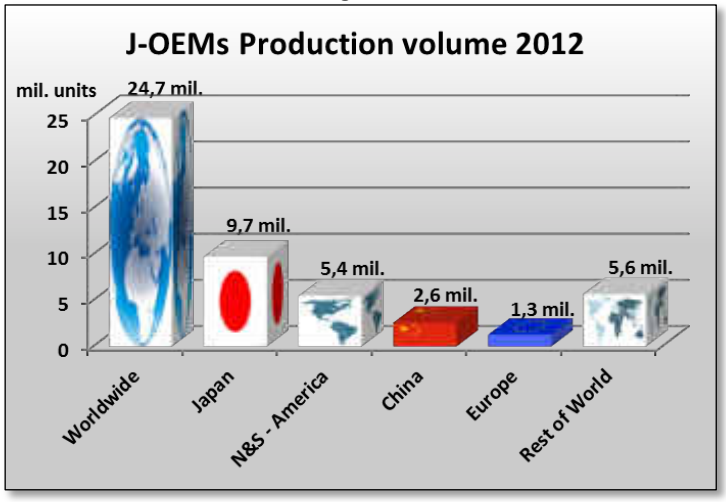
Data Source: MarkLines

These figures show that the Japanese automotive industry is one of the most prominent and largest industries in the world. Japan has been in the top three countries with most cars manufactured since the 1960s, surpassing Germany. The automotive industry in Japan rapidly increased from the 1970s to the 1990s (when it was oriented both for domestic use and worldwide export). In the 1980s and 1990s, it overtook the USA as the production leader.

[1] http://jama.org/wp-content/uploads/2013/05/The-Motor-Industry-of-Japan-2013-Publications-Industry-Report-2013.pdf

The domestic production of 10 million automobiles in 2012 means that Japan is currently the third largest automotive producing country in the world (without production in transplants). Japanese investments have helped the auto industry grow in many countries throughout the last few decades. Japanese OEMs produce about 30% of the global production and these figures are constantly steady. The considered professional forecast is that this will not change. Even shocks and crises like the global financial crisis of 2007/08 or the Great East Japan Earthquake of 2011 did not crucially influence the leading position of Japan's automotive manufacturers.

Figure 8



Data Source: MarkLines

60 % (15 million units) of Japanese OEM production takes place outside of Japan. The distribution of car production over the different continents makes Japanese manufacturers the most global producers with the strongest global footprint. Particularly in North and South America, China and South-East Asia the Japanese OEMs are the leading players with huge business potential for any supplier who can adjust to their requirements. Even in Europe, home ground of the German dominated European automotive industry, Japanese OEMs are trying to increase their production shares. For automotive suppliers with the intention to grow globally, the Japanese OEMs are definitely the key targets for their strategic considerations.

Figure 9

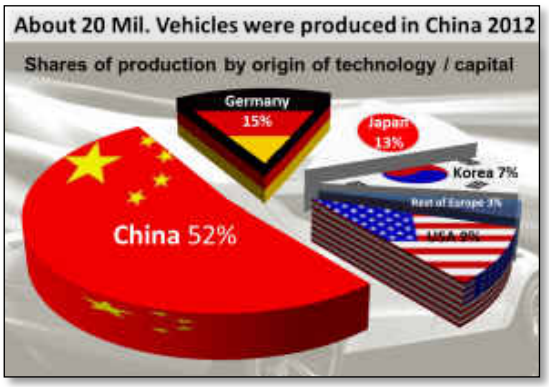
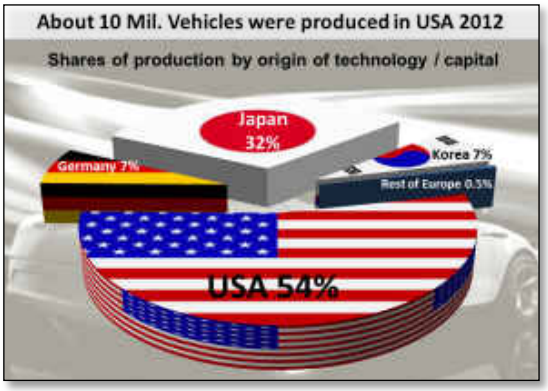


Figure 10



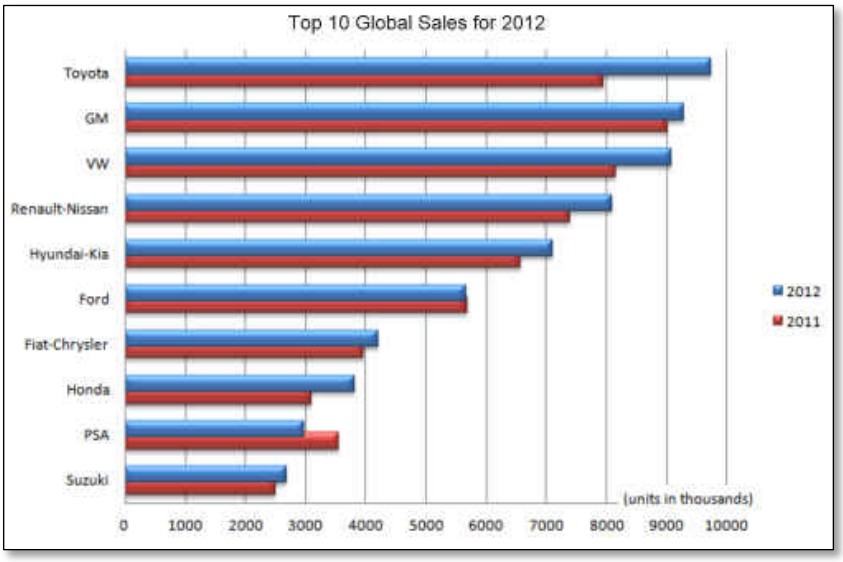
Data Source: MarkLines

The global sales top 10 in 2012 was dominated by the Japanese. There are 4 J-OEMs represented in the list, with Toyota in the lead and Nissan, in the Renault-Nissan alliance, at position 4 (6th without Renault). Honda and Suzuki are also in the top 10. This shows the scale of the Japanese sales and production volume, although it is based on the fact that the J-OEMs mainly produce volume models with fewer margins, in contrast to the German OEMs' luxury cars like Mercedes or BMW. The "Kei Car" (light car), the Japanese category of very

small vehicles with defined regulations (max. size, weight, capacity, power, etc.) is a good example. And it also shows the difference in markets: the Kei Car is successful in Japan, but generally too specialized and too small to be profitable in Western markets.

The figures do not include motorcycles, an area which is even more dominated by Japanese manufacturers like Honda, Yamaha or Suzuki, especially in the developing countries of Asia.

Figure 11



Source: MarkLines

3.3. CAR MAKERS, SUPPLIERS, KEIRETSU

At first glance, the Japanese automotive industry has the same structure as all industries, but this is only superficial. The details – and the way in which the cooperation between manufacturer and supplier is defined– are radically different from Europe or the USA. So what are the differences?

3.3.1. Understanding of tier 1 and system supplier

In Europe, most Tier 1 suppliers are freely operating companies which are able to supply to whomever they want and who hold significant in-house knowledge. Most of them are full-service suppliers or system suppliers.

In Japan the structure is different: while there are real Tier 1 suppliers according to European understanding, for example Yazaki, Ushin or Horiba, which are not connected to one of the big OEMs and supply their products and services to many customers, most Tier 1 suppliers have the following restrictions. One of their customers is the dominating share-holder and these suppliers are not really free to deliver to some other Japanese OEMs. Moreover, many of them do not have the ability to really develop innovations or systems by themselves. In addition, most Tier 1 suppliers are not really global players and make more than 80% of their sales with Japanese OEMs (also abroad, if they are abroad). These suppliers are very dependent on their shareholder (please see next chapter). The two leading examples and also exceptions from the rule for Japanese suppliers are Aisin and Denso. These two companies are dependent on Toyota (their biggest single share-holder), but they freely work with other, mainly non-Japanese, customers. Why? Toyota needs Aisin and Denso to bring new impulses and innovation and therefore literally pushes them to gain business with European manufacturers. But most Japanese Tier 1 suppliers are neither innovative nor international; they produce what one or two customers tell them to and build plants where the customer asks them to go.

3.3.2. Tier 2/3

With very few exceptions, Tier 2/3 suppliers operate at the limits of profitability and have a salary and cost structure which European companies cannot compete with. Their innovation level is almost 0, except for some very interesting exceptions. Yet they sometimes have well-trained engineers, which European companies can utilise in M&A processes. Tier 2/3 suppliers barely participate in global business.

3.4. JAPANESE AUTOMOTIVE INDUSTRY BETWEEN ISOLATION AND GLOBAL MARKET LEADERSHIP

In 1995, Japanese automotive makers were already responsible for around 30% of the global car and truck production. This has not changed, and looking at professional forecast data it will not change. In many areas the cars developed in Japan are technology leaders, e.g. in hybrid or electric vehicles. Yet in many other technologies and business areas Japan's automotive industry has lost global competitiveness, due to what many insiders call the "Galapagos effect".

European suppliers, which confidently call themselves system-partners of their customers, have supported and are driving innovation in the vehicle development process and facilitate the globalisation of their customers with investments and by assuming responsibility for their expertise. The wide base of competent and independent system suppliers in Europe is one reason for the striking global success of European, especially German, car brands and suppliers in recent years. In Japan the relationship between OEMs and suppliers is slightly differently defined. While there are system-suppliers with deep know-how and outstanding capability such as Denso and Aisin, these are not the norm. The majority of suppliers are buhin makers (parts producers), who basically build the parts for which they get the blueprints from the OEM. The innovative ability of these producers is the same as their margin: low to zero. These producers are not globalized, and if they do go abroad it is because their customers have asked them to build a plant next to the OEM's plant in another country. The system stays the same: the part makers produces what they are told to. Yet the ability of these suppliers to develop (apply) their components and to produce them according to the OEMs' requirements should not be underestimated. Excellent, loyal engineers are the backbone for their OEM partners. It is just that the roles and responsibilities between OEMs and suppliers are often differently defined from what we are used to in Europe. This system initially cuts costs, because the J-OEM does not have to finance the complete advanced development team of comparable European suppliers. As long as the OEM maintains technology leadership with a sufficient team of engineers, the strategy will pay off. The supplier is specialized in application and production design, and the OEM takes care of the innovation. But in reality the system has caused major issues. It is no secret that some of the biggest opponents of innovations are big organisations, which do not possess the flexibility and agility to make fast decisions. As a result, Japanese OEMs have fallen behind in technology leadership, except for hybrids and EV models. And as the ability of Japanese OEMs to work with foreign suppliers also has potential for improvement, innovation is a major issue for Japanese OEMs.

Exception: Hybrid EV

The hybrid and electric vehicle sectors show a clear up-side to the Japanese automotive industry. Toyota made hybrid a brand characteristic, and many suppliers and companies in Japan are following the biggest car maker in the world.
Of the 1.5 million EV and hybrid vehicles produced globally per year, 900 000 were produced in Japan. Japan is the single biggest sales and production market. Japanese manufacturers are currently selling their 3rd and 4th generations of hybrid cars. In this area the Japanese automotive industry offers very good chances for Swiss suppliers who want to catch up on technology and expertise. At the same time many Japanese suppliers look for partners who can offer what they cannot build (easily) themselves: a functioning organisation including customer base in Europe.





The Galapagos effect

What does all of this have to do with the Galapagos Islands? On the Galapagos Islands, Charles Darwin noticed a number of species which were extremely beautiful, had evolved on the Galapagos Islands locally, but were

not able to live anywhere else. Similarly, due to language, culture and comparatively small interchange between Japan's markets and foreign markets, some technologies and products evolved in Japan differently than in other markets. The term was originally coined to refer to Japanese 3G mobile phones, which had developed a large number of specialized features and dominated Japan, but were unsuccessful abroad because of different Japanese standards.

The "Galapagos Effect" also concerns the Japanese automotive industry, e.g. the "Kei Car". Initially, Japanese OEMs began to produce cars for their local market, and in this case leading quality and an attractive price made these cars globally competitive. But today, it is more the speed to market and building cars which attract global customer groups that makes car-brands successful. The ability to produce leading quality is still the core characteristic of Japanese OEMs. Their approach is still production and quality driven. But customers require more today: differentiating design in interior and exterior and DNA-specific car dynamics, each of which is a little different for each market. In addition, infotainment integration into local networks is becoming more and more important. Japanese suppliers, which supported the Japanese OEMs into their leading positions, are increasingly becoming a bottleneck. For example, in the electronic board-net and ECU infrastructure, software for controllers and production equipment is written in Japanese. The systems are often unique to one Japanese OEM and global on-board or off-board diagnostic and control tools cannot be used to calibrate and program cars, program controllers and support development processes. There are rumours that engine calibration and drivability adjustments of vehicles became an obstacle for J-OEMs, because there was not sufficient outsourcing capacity to take over these tasks. In Europe, high-level engineering services can be provided by various suppliers based on unified systems, architectures and development tools. In Japan, most OEMs have unique systems. Such individualism often limits the cooperation with external partners to Keiretsu companies or in-house work. Comparable issues exist in most components and systems of Japanese car platforms.

Failures, risks and opportunities

A shocking example where this focus of product development on Japanese standards failed is PANASONIC - a world leading technology group which has been overtaken and isolated by companies like Samsung or LG. Today Panasonic mainly makes money with "white goods" in Japan and has few electronic goods which are truly competitive on the global scene. Independent TV standards failed in the same way as the attempt to develop unique mobile phone standards for Japan.

In order to avoid a similar future, Japanese car OEMs need to build partnerships with globally competent system-suppliers in order to break through these innovation and globalisation bottlenecks. Companies like Continental and Bosch have successfully bought their way into Japan by acquiring and integrating Japanese organisations in Japan. The same is true for some hidden champions like Webasto or Elring Klinger. The companies who have invested into their relationship with Japanese OEMs and have shown their loyalty to them are making good money in Japan today, and their global innovation power supports Japanese OEMs.

"Abenomics", the new prime minister's economic policy which aims to revitalize the Japanese industry, is controversial. But one thing is clear: he is pushing for structural change in the industry. More foreign participation and innovation is required to re-connect Japan to the world-leading class it once belonged to. Based on strong production technology, Japan can quickly catch up if innovation is injected and structural changes to the labour force are made – by overcoming seniority and putting performance at the centre of society and organisations.

The opportunities for European suppliers to participate in the Japanese automotive industry have never been better. But it is still difficult to do a greenfield approach in Japan, even though it has been managed in recent years. KARMANN Japan, the local subsidiary of the convertible and car producer, whose headquarters in Germany filed for bankruptcy in 2008, had built a plant in Japan on greenfield which was the most valuable asset during the insolvency proceeding and later supported the growth of Magna Steyr in Japan, who bought the entire organisation.

A more common way to set up in Japan is to joint venture with or acquire a parts maker. Even though the innovative power of such companies is not high, their ability to adjust technologies to Japanese OEMs requirements is excellent. Normally well-educated loyal engineers work hard to meet the requirements of their customers and it is especially these R&D and production capabilities which are required to succeed with Japanese OEMs.

Many European suppliers are currently seeking growth options and evaluating market potentials. In most cases an objective analysis would show them that their sales to J-OEMs totally underrepresent the global

percentage which Japanese OEMs have in global production. The key to success with J-OEMs is still a solid presence in Japan, where Japanese OEMs produce around 10 million of the 30 million units produced globally (J-production only). A company that can do (application) engineering and production in Japan will automatically deliver in China and all other regions of the world. And one thing also has not changed: the loyalty and reliability of relationships with Japanese customers, once such relationships are built. **So successful access to the Japanese market will also bring a solid increase in business opportunities with Japanese companies in other markets (this is not limited to the automotive industry).**

The current need for J-OEMs to expand their supplier base, combined with the willingness of many mid-sized suppliers to build JVs or discuss M&A, provides great opportunities to buy into Japan, and the currently weak yen makes such activities very affordable. A recent example of a smart partnership is Eberspächer Climate Control Systems, who announced a joint venture with stock-listed Mikuni, a former competitor. This joint venture opens up a market which was inaccessible to them for many years. The approach to partnerships and negotiations is still a little different from Europe or the USA, and negotiations follow a process which is beyond the logic of a western manager. In many cases the future of the company and its employees or the chance to suddenly become more competitive again are more important for Japanese suppliers than the direct financial benefit from a partnership or a JV or M&A activity. There have been transactions in which Japanese companies literally were handed over to European partners just in order to not lose face in a direct market confrontation with a competitor. The acquiring European companies were understood to be offering the target an honourable way to remain a strong partner to its customers. This alone was enough for the Japanese partner to accept a minority share-holding. We hope that this report encourages more Swiss suppliers, especially in the midsized company range, to re-evaluate their future with J-OEMs or to optimize their existing structure.

3.5. THE IMPORTANCE OF INNOVATION (PRODUCT PROCESS BRAND)

Innovation particularly drives the German automotive industry, and its structure is set up to delegate innovation into the vertical supply chain as well as possible. Major inventions in assisted driving, engine development, body design and production technology are carried by megasuppliers like Bosch, Continental, ZF or hidden champions like Webasto, Elring-Klinger or Mann-Hummel. European manufacturers are aware that innovations are quickly shared with their competitors and often enter exclusivity agreements, particularly for investment intensive innovations with their system suppliers. The speed at which innovation finds application in European cars is very high, and often technologies which are only verified to 98% go into mass production (naturally this is never the case with any safety relevant applications).

The innovation philosophy of Japanese OEMs is different. In order to understand this, it is necessary to look at the history of Japanese car makers. The industry grew as a fast follower, excelling in quality and production. With a considerably lower price, higher quality and fewer options, Japanese manufacturers positioned themselves successfully to reach market leadership in terms of sales numbers. It was not the target to build the most desirable car in the world. Japanese manufacturers focused and continue to focus on selling the best compromise of price, performance, quality, design and fuel-consumption. For Japanese cars it is still a challenge to attract European customers, for whom brand experience and the “sexiness” of cars are important.
Innovation means risk and cost, two factors to which Japanese makers are extremely sensitive. At high volumes and low margin, one mistake with an innovative feature can endanger the whole company. Therefore innovation is still not the main target, even though Japanese manufacturers have recognized that technical innovation and leadership is becoming more and more important to maintain their position in competition, especially with the Korean manufacturers.

In Germany many innovations are carried out by independent suppliers; this is definitely not the case in Japan. Most European suppliers who want to enter the Japanese market will very quickly become aware of the Keiretsu suppliers. Keiretsu suppliers are companies who are either totally or partly owned by an OEM and who almost exclusively work for this OEM. These Keiretsu suppliers carry out innovation programs in close cooperation with their mother company. This technology will never be offered to any other company. But these innovation carrying Keiretsu companies are very rare. Toyota recognized long ago that the Keiretsu system holds strong disadvantages. In order to not lose contact with the rest of the world, they created several suppliers who operate more or less freely on the global markets. Aisin and Denso, for example, are suppliers who operate all over the world and are increasingly becoming partners of the German automotive industry. These suppliers also participate in global innovations. But when it comes to the application of innovations, Japanese manufacturers are very careful. Before a technology goes into mass production it has to pass tests and internal release hurdles unlike any seen at any other manufacturer. These release hurdles are not only

technical or bureaucratic; many of them are political and require a good network into the board of companies. Until now we have dealt with technical innovation in products; but innovation is not limited to car features.

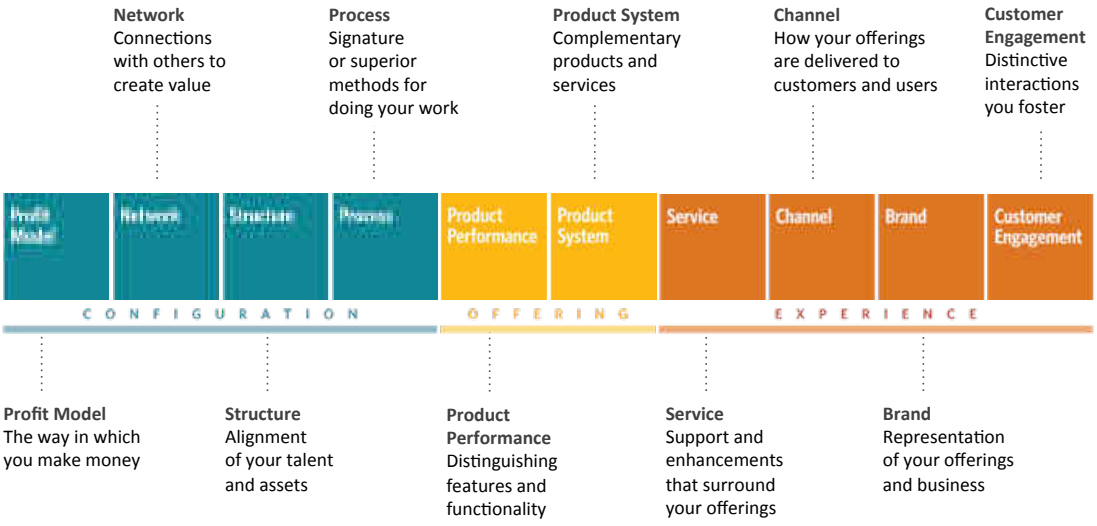
Innovation occurs in three areas:

1.) Configuration

2.) Offering

3.) Experience

Figure 12: Types of Innovation



Source: Ten Types of Innovation: The Discipline of Building Breakthroughs (Keely, Walters, Pikkel, Quinn, 2013)

The strength of Japanese OEMs is the role of innovation, which takes place in the configuration of the business. The simplicity with which Japanese cars are produced is tightly connected to innovative development and quality assurance processes. It is in the configuration of the business where Japanese manufacturers excel, and it is in this area most European suppliers fail to connect to them. Here innovation has even a Japanese term, Kaizen (Improvement), because Kaizen is one way to innovation.

It seems that European manufacturers have recognised this advantage since the beginning of this millennium. They are catching up rapidly and the advantage and superiority which Japanese manufacturers had in the configuration of their business is vanishing. The Japanese R&D and quality process greatly depends on a huge effort in the concept phase of the vehicle and the first development loop. The involvement of all divisions and the alignment during this phase is incomparable more intensive to that seen at European suppliers. Here the Japanese culture of alignment and the interest of creating excellent group results contribute to increasing potentials in quality cost and design (QCD). European manufacturers work in a project management style which does many tasks in sequence – work package A follows B, etc. By creating cross-functional teams, the results of Japanese makers in product, quality and product cost are superior. Japanese OEMs are currently losing ground, because European manufacturers excel in virtual development processes, which allow the confirmation of performance, production, safety aspects at a very early stage. A bottom-up vehicle development in Japan and Europe takes around the same time, today 30 to 38 months from concept to production (bottom-up development). Derivatives are launched in between 18 to 24 months. Toyota's leading suppliers in the body-shop area can currently launch the complete body-shop within 8 to 10 months. 10 years ago this process took 12 to 15 months and was one of the bottleneck processes in the automotive industry.In innovation areas 2 (Offering) and 3 (Experience), the Japanese have a major disadvantage because of their risk aversion and slow, centralised decision processes. Whilst Korean manufacturers are implementing new and peer group relevant designs fast, Japanese manufacturers are lagging behind in building diversified vehicles which customers consider attractive. The main sales points are still quality, price and reliability.

All in all, Japanese OEMs are not as closed towards innovative technologies from foreign suppliers as they were 10 to 15 years ago, but the approach still has to be founded on innovation which is 100% validated for safety.

We would never recommend a foreign supplier to consider launching a technology or product in Japan first or to even offer it before it has been validated in mass-production with European suppliers.

3.6. THE JAPANESE OEMS

3.6.1. Overview

In terms of J-OEM production data, Toyota's figures stick out. The high quota (45%) of domestic production is exceptional compared to the other high production volume OEMs, which mainly produce overseas.
The presence of the truck makers Hino, Isuzu and Mitsubishi Fuso (after the acquisition by the Daimler Group, actually not an original Japanese automaker anymore) shows a further strength of the Japanese automobile industry.

Figure 13

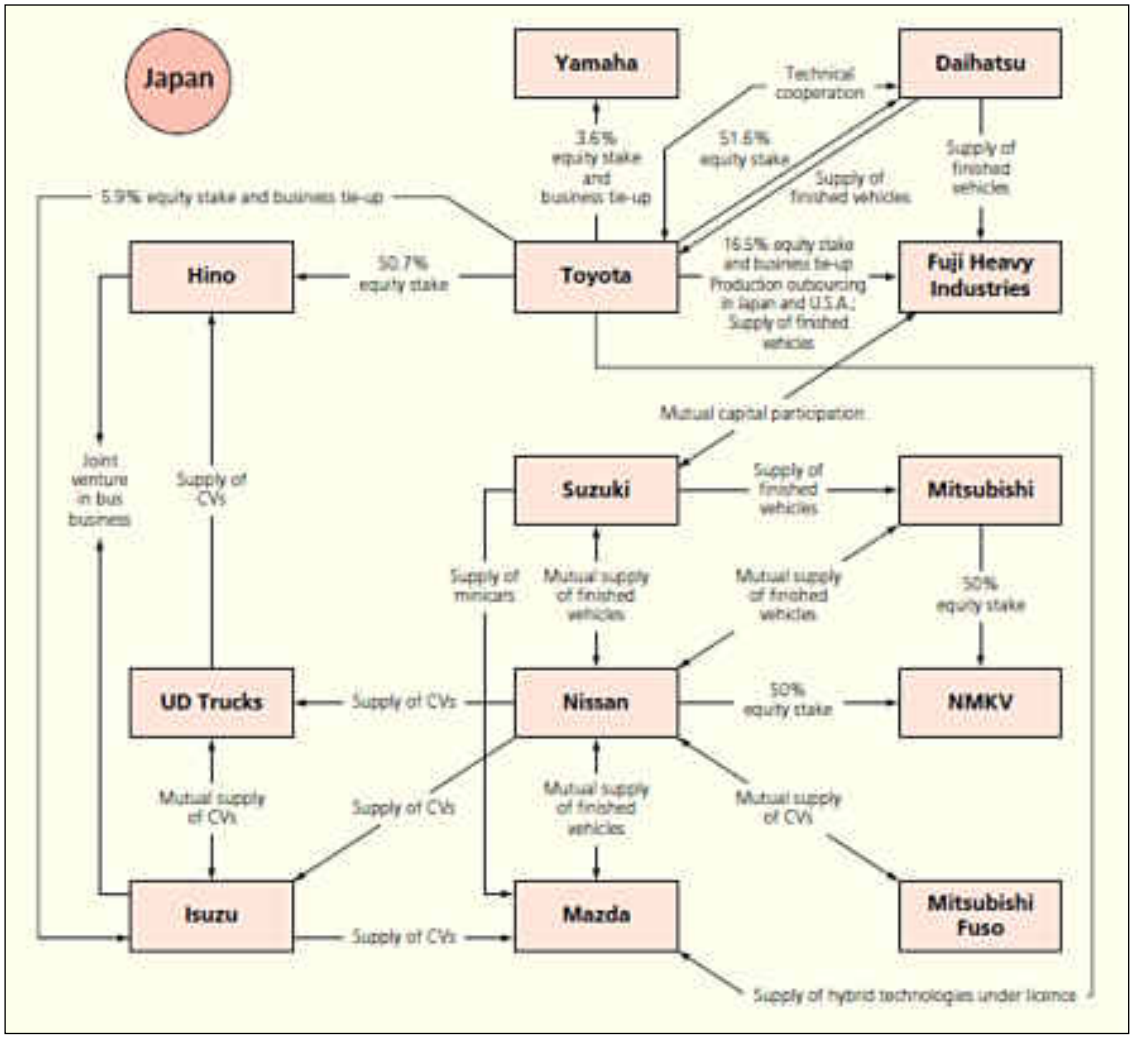
J-OEMs Production Data 2012

Group	Brand	Produced Units (mil.)			%	
		Total	Japan	Overseas	Japan	Overseas
Toyota Group	Daihatsu	0.89	0.71	0.18	80.23%	19.77%
	Hino	0.21	0.15	0.06	71.26%	28.74%
	Lexus	0.38	0.30	0.09	77.31%	22.69%
	Scion	0.03	0.03	-	100.00%	0%
	Toyota	8.32	3.29	5.03	39.49%	60.51%
	Toyota Group Total	**9.83**	**4.48**	**5.36**	**45.53%**	**54.47%**
Renault-Nissan Alliance	Infiniti	0.08	0.05	0.03	59.35%	40.65%
	Nissan	4.37	1.06	3.31	24.28%	75.72%
	Nissan & Infiniti Total	**4.45**	**1.11**	**3.34**	**24.92%**	**75.08%**
Honda	Acura	0.20	0.03	0.18	13.67%	86.33%
	Honda	3.90	1.00	2.90	25.74%	74.26%
	Honda Group Total	**4.10**	**1.03**	**3.07**	**25.14%**	**74.86%**
Suzuki	**Suzuki**	**2.85**	**1.02**	**1.82**	**35.98%**	**64.02%**
Mazda	**Mazda**	**1.19**	**0.85**	**0.34**	**71.21%**	**28.79%**
Mitsubishi	**Mitsubishi**	**1.08**	**0.46**	**0.62**	**42.48%**	**57.52%**
Subaru	**Subaru**	**0.73**	**0.55**	**0.19**	**74.69%**	**25.31%**
Isuzu	**Isuzu**	**0.61**	**0.24**	**0.37**	**39.31%**	**60.69%**
Daimler Group	**Mitsubishi Fuso**	**0.11**	**0.09**	**0.02**	**79.71%**	**20.29%**
J-OEMs Total		**24.96**	**9.82**	**15.14**	**39.36%**	**60.64%**

Data Source: MarkLines

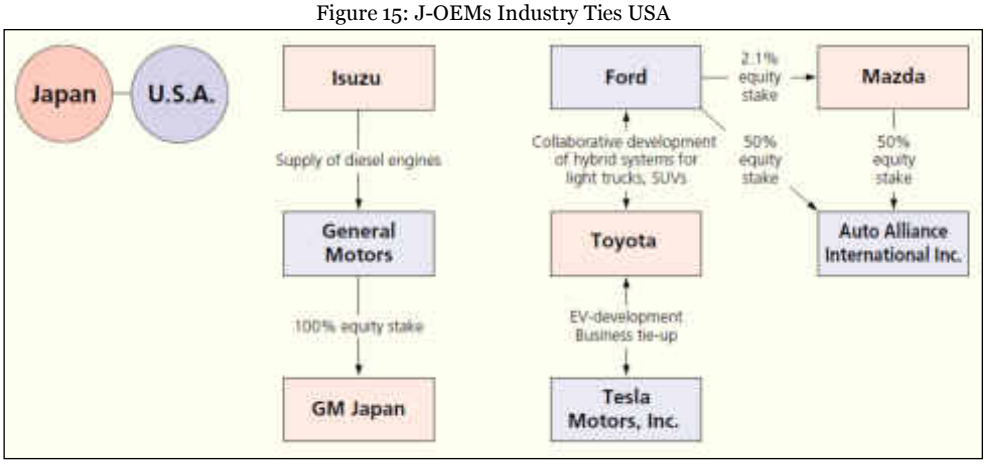
With economic globalization, Japanese automobile manufacturers have rapidly adapted to the needs of individual markets, not only by shifting production to those markets but also by forging extensive alliances with overseas manufacturers. Various forms of partnership currently exist between Japanese, U.S. and European automakers – including capital and technical tie-ups, joint R&D and production operations and cooperative sales ties – and such arrangements are expanding annually. With the rapid spread of motorization in China and Southeast Asia, Japanese automakers are actively building relationships with local manufacturers there on the basis of capital tie-ups and the supply of production-, environment- and safety-related technologies. The graphics below show the global industry ties between the Japanese OEMs and the main markets of Japan, USA, Europe and China.

Figure 14: J-OEMs Industry Ties Japan



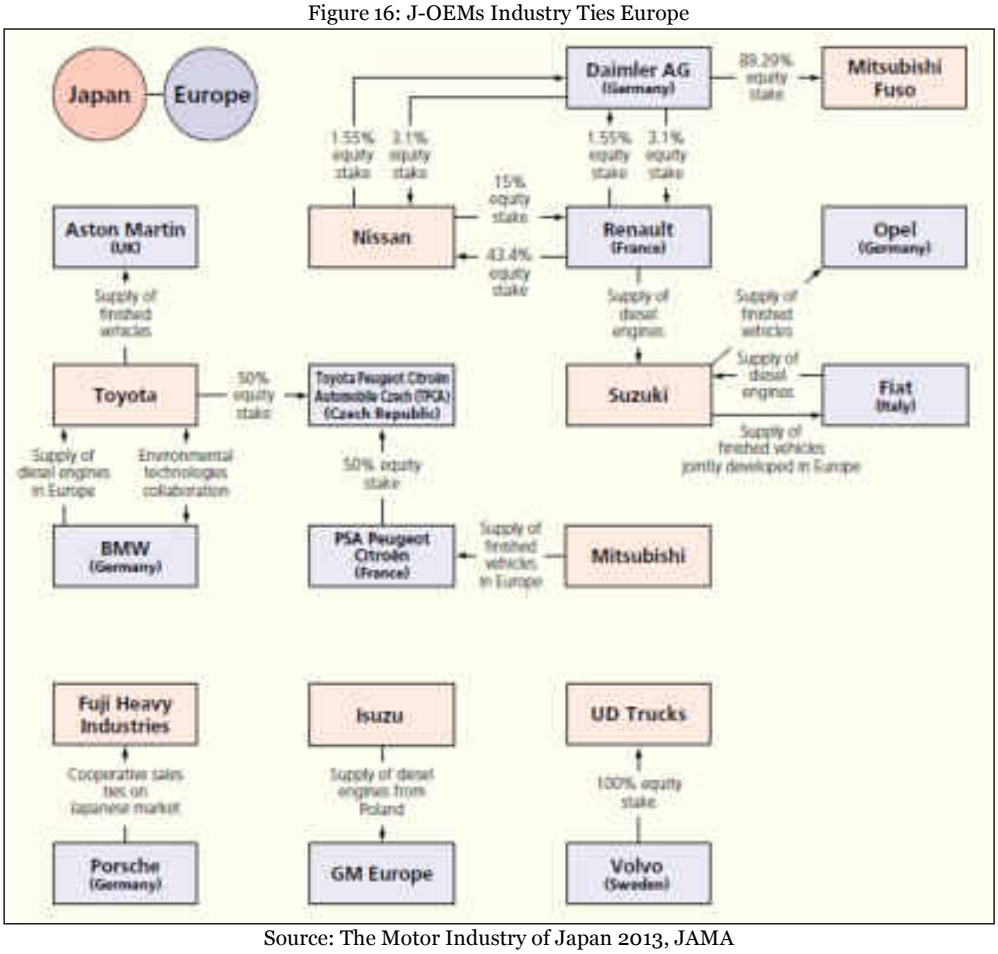
Source: The Motor Industry of Japan 2013, JAMA

Figure 15: J-OEMs Industry Ties USA



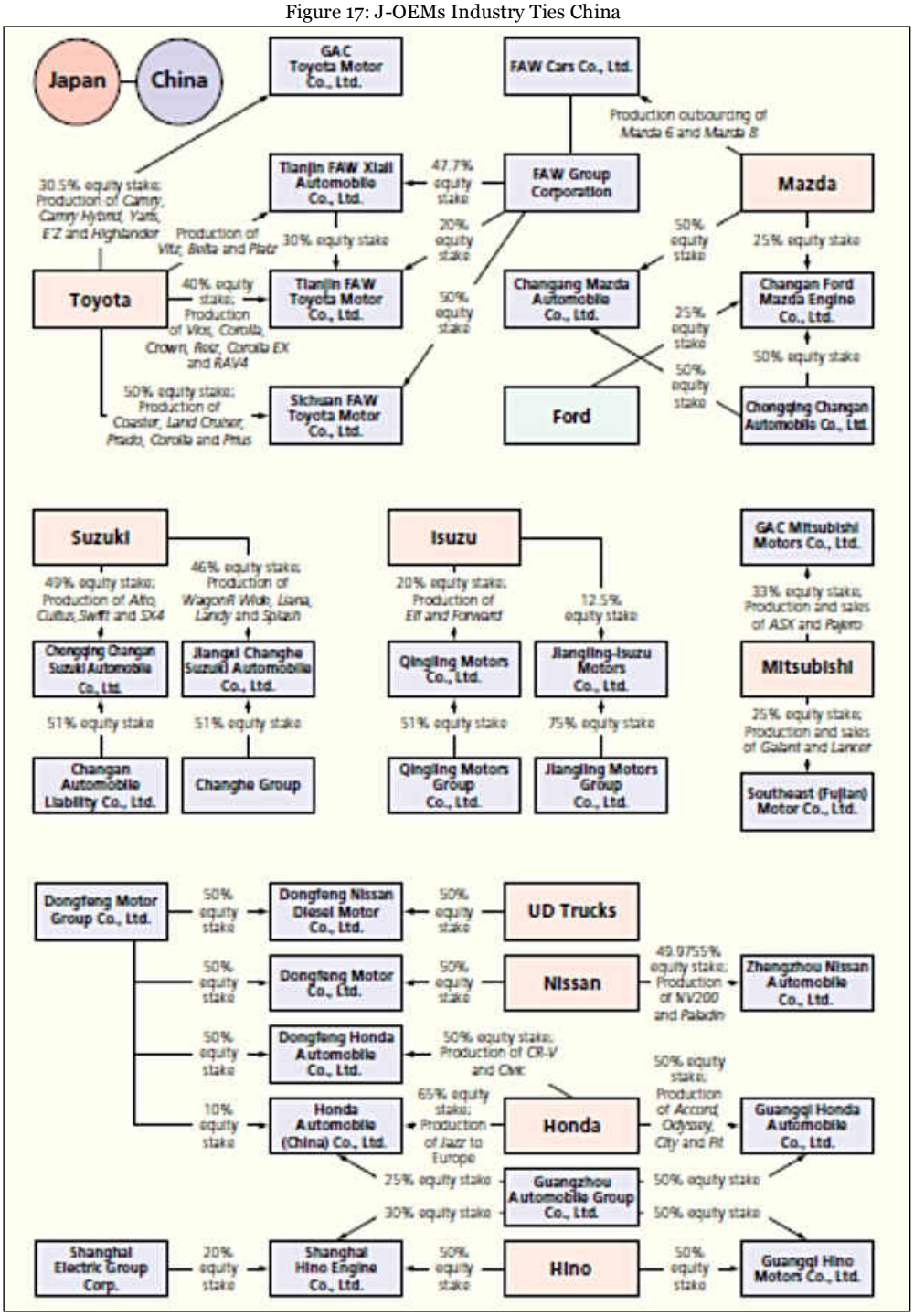
Source: The Motor Industry of Japan 2013, JAMA

Figure 16: J-OEMs Industry Ties Europe



Source: The Motor Industry of Japan 2013, JAMA

Figure 17: J-OEMs Industry Ties China



Source: The Motor Industry of Japan 2013, JAMA

The individual J-OEMs data presented in the following chapters are based on the companies' own announced facts and figures combined with MarkLines data. The data are based on the fiscal year 2012/2013 (Japanese fiscal year ends on March 31st), the data for the fiscal year 2013/2014 was not available yet, but there is no major change expected. The euro-yen exchange rate employed is 1 euro = 130 yen.

3.6.2. Toyota

The Toyota Motor Corporation (TMC) is headquartered in Toyota, Aichi, Japan. In 2013 the multinational corporation consisted of about 333,000 employees worldwide and, as of January 2014, is the 14th largest company in the world by revenue. Toyota was the largest automobile manufacturer in 2012 (by production). In July of that year, the company reported the production of its 200-millionth vehicle. Toyota is the world's first automobile manufacturer to produce more than 10 million vehicles per year. As of November 2013, Toyota was the largest listed company in Japan by market capitalization and by revenue.

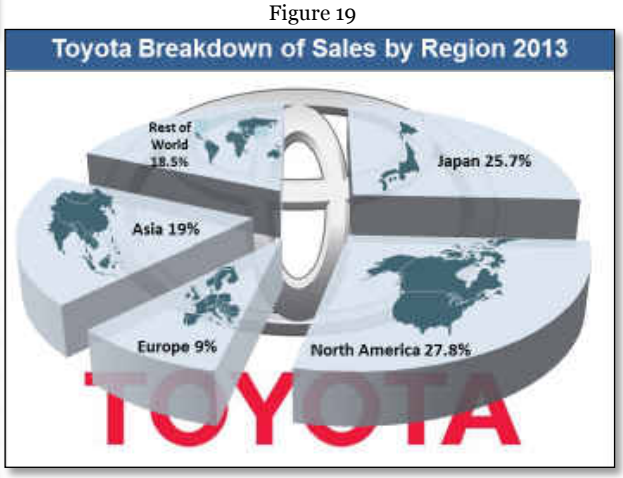
The announced financial results for the fiscal year ending March 31, 2013 were: net revenues 22.0 trillion yen (170 billion euro, +18.7%), operating income 1.32 trillion yen (10.2 billion euro, +371%), net revenue/operating income revenue ratio 6%, net income 962 billion yen (7.4 billion euro, +239%). The R&D budget was 807 billion yen (6.2 billion euro).

Toyota Motor Corporation produces vehicles under 5 brands, including the Toyota brand, Hino, Lexus, Ranz and Scion. Toyota also holds a 51.2% stake in Daihatsu, a 16.66% stake in Fuji Heavy Industries (which manufactures Subaru vehicles), a 5.9% stake in Isuzu and a 0.27% stake in Tesla, as well as joint-ventures with two companies in China (GAC Toyota and Sichuan FAW Toyota Motor), one in India (Toyota Kirloskar), one in the Czech Republic (TPCA), along with several "nonautomotive" companies. Toyota also holds a 24.74% stake in Denso, one of the biggest automotive suppliers worldwide. TMC is part of the Toyota Group, one of the largest conglomerates in the world. As reported in its consolidated financial statements, Toyota has 540 consolidated subsidiaries and 226 affiliates as of March 2013.

Figure 18

Toyota brands and involvements
Toyota Motor North America (100% – 2004)
Toyota Canada Inc. owned via Toyota Motor North America
Toyota Tsusho – Trading company for the Toyota Group
Daihatsu Motor Company (51.2% – March 31, 2006)
Hino Motors (50.1% – 2001)
Lexus 100% (1989)
Scion 100% (2003)
DENSO (24.74% – September 30, 2006)
Toyota Industries (23.51% – March 31, 2006)
Aisin Seiki Co. (23.0% – September 30, 2006)
Fuji Heavy Industries (16.66% – June 28, 2008)
Isuzu Motors (5.9% – November 10, 2006)
PT Toyota Astra Motor (49% – 2003)
PT Toyota Motor Manufacturing Indonesia[14] (95% – 2003)

Figure 19



Data Source: Toyota

Toyota has factories in most parts of the world, manufacturing or assembling vehicles for local markets. Toyota has a large market share in the United States (around 14 %), but has only small market share in Europe (nearly 5%). They also sell vehicles in Africa and are a market leader in Australia. Due to its Daihatsu subsidiary, it has significant market shares in several fast-growing Southeast Asian countries.

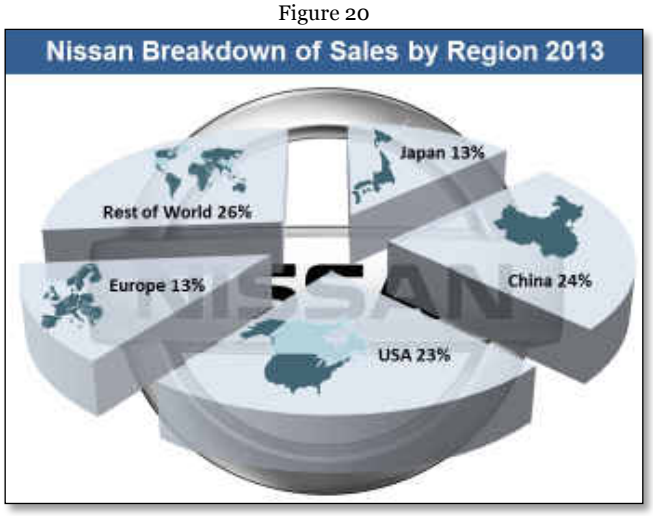
Toyota has introduced new technologies including one of the first mass-produced hybrid gasoline-electric vehicles; they reached the 5 million hybrid sales mark in March 2013. Toyota and Toyota-produced Lexus and Scion automobiles consistently rank near the top in certain quality and reliability surveys, although they had several automobile recalls in recent years, the first time in 2009.

3.6.3. Nissan

Nissan Motor Co., Ltd. is headquartered in Nishi-ku, Yokohama, Japan. Nissan is the 6th largest automaker with a production volume of about 4.9 million units with over 160,000 consolidated employees in 2012. Nissan sells its cars under the Nissan, Infiniti, Datsun and NISMO brands.

The announced financial results for the 2012 fiscal year (ending March 31, 2013) were: net revenues 9.63 trillion yen (74 billion euro, +2.3%), operating income 524 billion yen (4 billion euro, -4.1%), net revenue/operating income revenue ratio 5.36%, net income 342 billion yen (2.6 billion euro, +0.3%). The R&D budget amounted to 470 billion yen (3.6 billion euro).

Figure 20



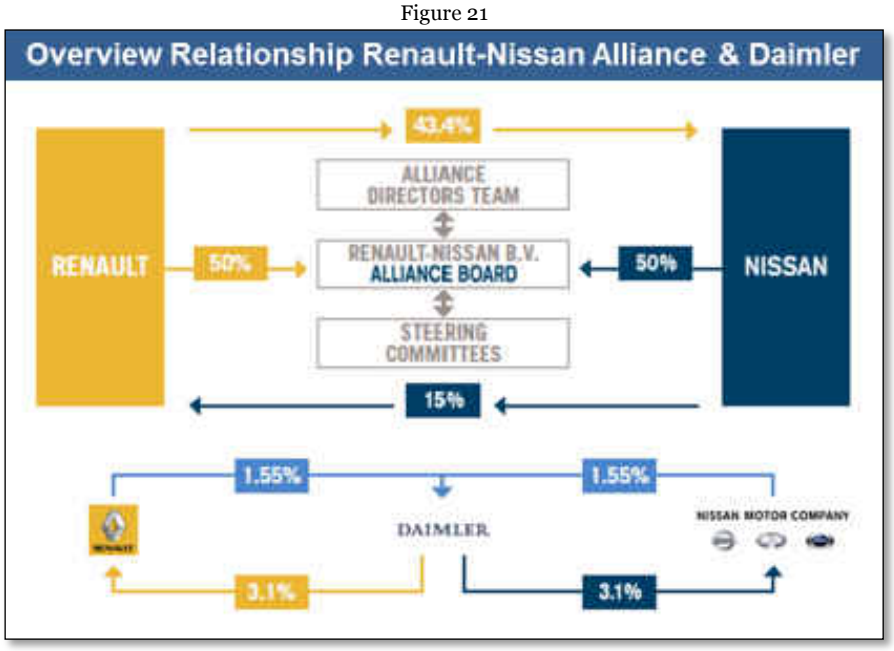
Data Source: Nissan

The company is in a close alliance with Renault. In 1999, facing serious financial difficulties, Nissan entered the alliance with Renault S.A. of France. At that time, the automobile industry was in a period of rapid consolidation. Numerous companies merged or were acquired in high-profile deals, most notably Daimler's acquisition of Chrysler in 1998 (which dissolved in 2007, when the companies separated). The Renault-Nissan Alliance was the first of its kind; it was not a merger or an acquisition. The alliance is a strategic partnership based on the rationale that, due to substantial cross-shareholding investments, each company acts in the financial interest of the other—while maintaining individual brand identities and independent corporate cultures. The structure was unique in the auto industry during the 1990s consolidation trend and later served as a model for General Motors and PSA Peugeot Citroën, PSA Peugeot Citroën and Mitsubishi, as well as Volkswagen and Suzuki, though the latter combination failed.

The goal of the Alliance is to increase economies of scale for both Renault and Nissan without forcing one company's identity to be consumed by the other. With jointly developed engines, batteries and other key components or consolidated logistic costs, the alliance generates high synergy effects. The collaboration between Renault and Nissan also focuses on capital-intensive research projects like electric mobility and development of automobile manufacturing in emerging markets such as Brazil, Russia and India. Another outcome is Nissan's trans-cultural, diverse management team (which is very unusual for a Japanese company) with Carlos Ghosn at the top as CEO of both companies. Under CEO Ghosn's "Nissan Revival Plan" (NRP), the company has rebounded with a very successful turnaround, but the more international alignment also caused culture issues like the discontent of Nissan's non-English speaking Japanese staff.

Renault currently has a 43.4 percent stake in Nissan, and Nissan holds a 15 percent stake in Renault. Taken together, the Renault–Nissan Alliance would be the world's 4th largest automaker with about 8.3 million units. In 2010, Daimler AG exchanged a 3.1% share of its holdings for 3.1% from both Nissan and Renault. This triple alliance allows for the increased sharing of technology and development costs, encouraging global cooperation and mutual development.

Figure 21



Source: Nissan

At the end of 2012, the Renault–Nissan Alliance formed a joint venture with Russian Technologies (Alliance Rostec Auto BV) with the aim of becoming the long-term controlling shareholder of AvtoVAZ, Russia's largest car company and owner of the country's biggest selling brand, Lada. Furthermore, Nissan has been in a 50:50 joint venture with Dongfeng Motor Corporation since 2003, as well as an alliance with Ashok Leyland in India. Nissan's volume models are sold worldwide under the Nissan brand; Infinity is the luxury model brand. In July 2013, Nissan announced the relaunch of Datsun as a brand targeted at emerging markets.

Outside Japan, Nissan has plants in China, India, Vietnam, Indonesia, Malaysia, Philippines, Thailand, Taiwan, Mexico, Brazil, Morocco, Egypt, Kenya, South Africa, Spain, UK, Russia, USA and Australia.

The Nissan Leaf, the first electric car based on the Renault-Nissan Alliance's zero-emission vehicle project, is the world's top selling highway-capable all-electric car. It reached the 100,000 unit mark by January 2014 and captured a 50% market share of worldwide pure electric vehicles sold since 2010.

3.6.4. Honda

Honda Motor Co., Ltd. is headquartered in Minato-ku, Tokyo, Japan. Honda is the 8th largest automobile manufacturer in the world, with about 4 million units sold in 2012. Simultaneously, Honda has been the world's largest motorcycle manufacturer since 1959, with about 15 million units sold in 2012. Primarily known as a manufacturer of automobiles and motorcycles, Honda is also the world's largest manufacturer of internal combustion engines measured by volume, producing more than 14 million internal combustion engines each year. Honda also sells power products (6 million units in 2013). Honda also manufactures, amongst other things, garden equipment, marine engines and personal watercraft. They have ventured into aerospace and are quiet famous for their science artificial intelligence/robotics research. The number of employees is about 190,000 worldwide (March 2013).

Figure 22

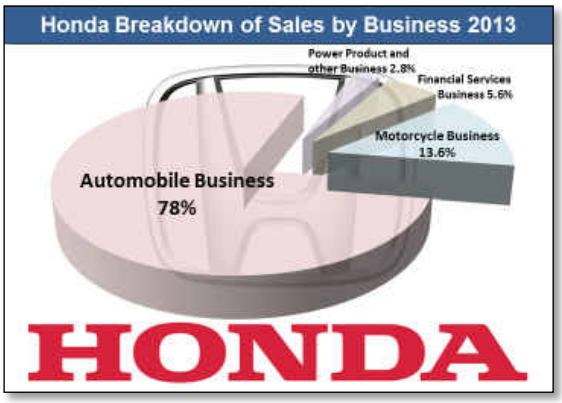
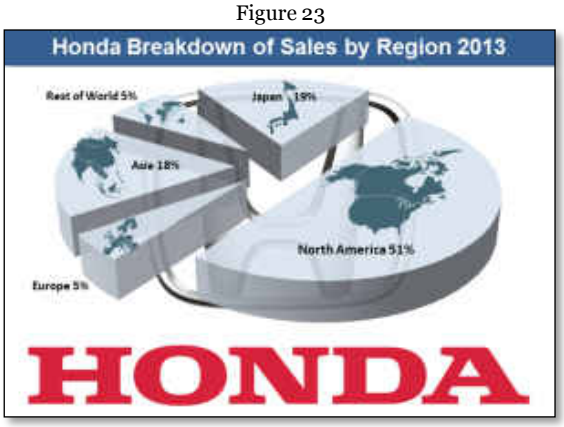


Figure 23



Data source: Honda

The announced financial results for the fiscal year ending March 31, 2013 were: net revenues 9.9 trillion yen (76 billion euro, +24.28%), operating income 545 billion yen (4.2 billion euro, +135%), net revenue/operating income revenue ratio 5.5%, net income 367 billion yen (2.8 billion euro, +74%). The R&D budget was 560 billion yen (4.3 billion euro).

In addition to their main Honda brand, the company sells their luxury models under the Acura brand. Honda was the first Japanese automobile manufacturer to adopt the strategy of a dedicated luxury brand.
The company has assembly plants around the globe. These plants are located in China, the USA, Pakistan, Canada, the UK, Japan, Belgium, Brazil, México, New Zealand, Malaysia, Indonesia, India, Thailand, Turkey, Taiwan, Peru and Argentina. As of July 2010, 89 percent of Honda and Acura vehicles sold in the United States were built in North American plants, up from 82.2 percent a year earlier. This shields profits from the yen's advance to a 15-year high against the dollar.

Honda instilled a sense of doing things a little differently from their Japanese competitors. The CEO is traditionally an engineer, and the company always strives to be the first to try new approaches.
They mainstay products, like the Accord and Civic, have always employed front-wheel-drive powertrain implementation, which is a long-held Honda tradition. The compact Honda Civic is the 2nd-longest continuously running nameplate from a Japanese manufacturer (1st is the Toyota Corolla). Honda also produces a Civic hybrid version, which competes with the Toyota Prius. Generally, by focusing on environmentally friendly technologies, Honda shows high performance in fuel efficiency: e.g. five of the United States Environmental Protection Agency's top ten most fuel-efficient cars from 1984 to 2010 came from Honda, more than any other automaker.

3.6.5. Suzuki

Suzuki Motor Corporation is a Japanese multinational corporation headquartered in Minami-ku, Hamamatsu, Japan, which specializes in manufacturing automobiles, four-wheel drive vehicles, motorcycles, all-terrain vehicles (ATVs), outboard marine engines, wheelchairs and a variety of other small internal combustion engines. With a production of around 2.9 million units in 2012, Suzuki is the 10th largest automaker in the world and is also one of the big players in motorcycle business. Suzuki is a major brand name in important markets, particularly Japan and India, but the company no longer sells cars in North America. The company employs around 56,000 people worldwide, has 35 main production facilities in 23 countries, with main overseas production locations in China, Thailand, Indonesia, India, Pakistan, Hungary and Egypt.

The announced financial results for the fiscal year ending March 31, 2013 were: net revenues 2.6 trillion yen (20 billion euro, +2.6%), operating income 145 billion yen (1.1 billion euro, +21.2%), net revenue/operating income revenue ratio 5.6%, net income 80 billion yen (0.62 billion euro, +49.2%). The R&D budget was 119 billion yen (0.9 billion euro).

Figure 24

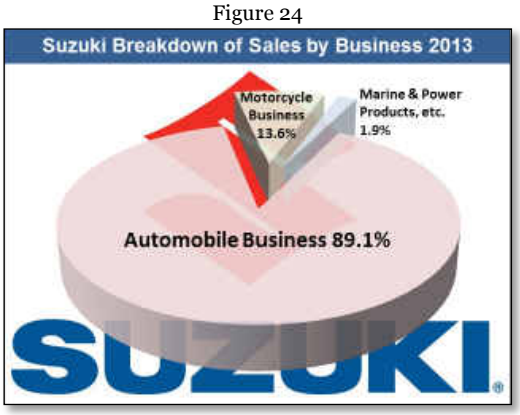
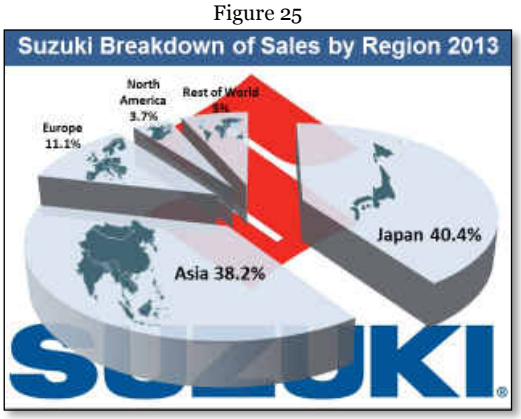


Figure 25



Data Source: Suzuki

Suzuki's famous philosophy is simple: produce (small) reasonable cars. This is also shown by the sales data: in 2003 Suzuki was the No.1 in Kei car sales for the 30th consecutive year in Japan. Since 1985, Suzuki has shared or produced automobiles for other manufacturers around the world: for former stakeholder GM, as well as for Nissan, Mazda, Mitsubishi and Fiat. Suzuki also owns 54.2% of Maruti Suzuki, formerly Maruti Udyog Limited, an Indian automobile manufacturer.

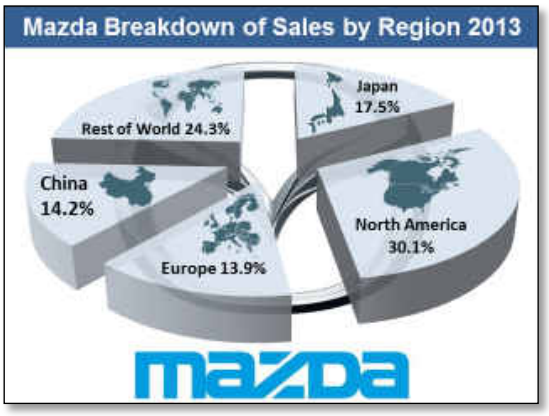
Volkswagen and Suzuki announced the establishment of a global strategic partnership in 2009. By investing about 2.5 billion dollars, Volkswagen AG completed the purchase of 19.9% of Suzuki Motor Corporation's issued shares on 15 January 2010, making Volkswagen AG the biggest shareholder in Suzuki. It seemed that the partnership made sense: the German car making giant offered Suzuki access to its world-class expertise in such things as hybrid and diesel engines. In turn, Suzuki could teach Volkswagen a lot about how to make money from small, cheap cars, and offer it much-improved access to the fast-growing Indian market, through its majority-owned subsidiary, Maruti Suzuki. But it went wrong. By 2011 the partnership was already causing conflicts and accusations arose from both sides. The success of this partnership is now more doubtful than ever. Although they are in conciliatory talks, the development of the VW Rocktan (Suzuki SX4) is suspended or cancelled due to the dispute between the companies. Although it is not clear how this will end, this could be an example of the difficulties between Japanese and non-Japanese companies.

3.6.6. Mazda

Mazda Motor Corporation is a Japanese automaker based in Fuchū, Aki District, Hiroshima Prefecture, Japan. Their annual production is around 1.5 million units (2012), which makes Mazda the 14th largest automaker in the world. The employ around 38,000 people. Major production facilities outside Japan are located in North America (incl. Mexico), Russia, China, Thailand and Malaysia. Mazda is the company's only brand. In the 90's the company tried but failed to release a luxury marque, Amati, to challenge the competing Japanese luxury brands Acura, Infiniti, and Lexus in North America.

The announced financial results for the fiscal year ending March 31, 2013 were: net revenues 2.2 trillion yen (17 billion euro, +8.5%), operating income 53 billion yen (0.42 billion euro, +239%), net revenue/operating income revenue ratio 2.45%, net income 34.3 billion yen (0.26 billion euro, +414%). The R&D budget was 90 billion yen (0.7 billion euro).

Figure 26



Data Source: Mazda

Mazda is relatively independent, with only few shares and connections in the industry. They supply hybrid technology from Toyota under licence and Kei cars/CVs from Suzuki/Isuzu and have two joint ventures in China. From 1979 to 2010, Mazda had a partnership with Ford, who acquired a 33.3% equity stake in Mazda. Confronted with problems because of the world financial crisis in autumn 2008, Ford gradually divested its stake in Mazda from 2008 to 2010 down to 2.1%. However, Ford remains a strategic partner through joint ventures and exchanges of technological information.

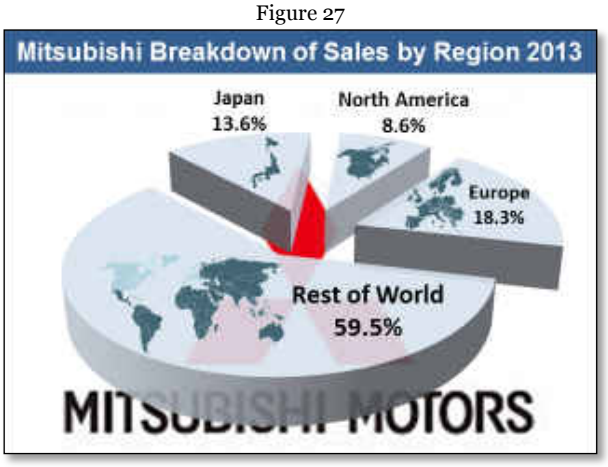
From the 1960s, Mazda directed major engineering efforts into development of the Wankel rotary engine as a way of differentiating itself from other Japanese auto companies. The rotary models quickly became popular for their combination of good power and light weight compared to piston-engined competitors. But as fuel efficiency became a bigger factor, the relatively thirsty rotary-powered models began to fall out of favour. Despite Mazda's efforts to keep this technology alive, they ceased the production in 2012 after the latest version failed to meet the improved Euro 5 emission standard. SkyActiv technology is an umbrella name for a range of technologies developed by Mazda which increase fuel efficiency and engine output, which appeared in Mazda products from 2011. Together these technologies increase fuel economy to a level similar to a hybrid drivetrain. Engine output is increased and emission levels are reduced. These technologies include high compression ratio gasoline and diesel engines, highly efficient automatic transmissions, lighter weight manual transmissions, lightweight body designs and electric power steering. It is also possible to combine these technologies with a hybrid drivetrain for even greater fuel economy.

3.6.7. Mitsubishi

Mitsubishi Motors Corporation (MMC) is headquartered in Minato, Tokyo, Japan. It is part of the Mitsubishi keiretsu, formerly the biggest industrial group in Japan, and was formed in 1970 from the automotive division of Mitsubishi Heavy Industries. Production in 2012 was around 1.1 million units, making MMC the 16th biggest carmaker worldwide by production. MMC has 30,000 employees worldwide, with main production locations outside Japan in China, USA, Thailand, the Philippines and Russia. Their shares in a European production facility in the Netherlands were sold in 2012. In the past MMC also produced trucks and busses under the Mitsubishi Fuso brand, but during the 2000's the Daimler group became the main shareholder with 89.29%. Only the remaining 10.71% belongs to the Mitsubishi group.

The announced financial results for the fiscal year ending March 31, 2013 were: net revenues 1.8 trillion yen (14 billion euro, +0.43%), operating income 67 billion yen (1.35 billion euro, +5.82%), net revenue/operating income revenue ratio 3.71%, net income 38 billion yen (0.29 billion euro, +58.72%). The R&D budget was 35 billion yen (0.27 billion euro).

Figure 27



Data Source: Mitsubishi

In 2011, MMC established a 50/50 joint venture with Nissan NMKV, the first in Japan's automotive industry. The joint venture was developed to utilize their resources technology, and expertise to handle the planning and development of Kei cars. MMC also supplies finished vehicles of Suzuki. In Europe they are in cooperation with PSA, e.g. the electric city car Mitsubishi i-MiEV is sold in Europe by PSA (as the Peugeot iOn and Citroën C-Zero). They are also in cooperation with Renault Samsung and participate in two joint ventures in China and in one in India.

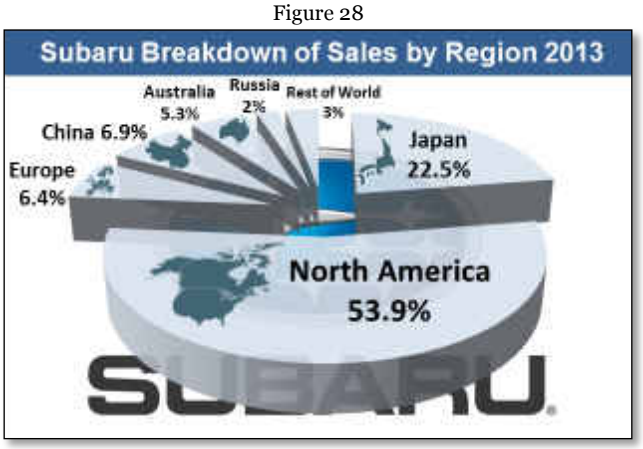
MMC has gone through hard years: management mistakes, several crises and principal shareholder changes (e.g. DaimlerChrysler) left marks and sales dropped continuously. But it seems that the worst is over. The company has been restructured in an attempt to increase production at its U.S. facility and new export markets are being explored in Ukraine, the Middle East and Russia, where the company's bestselling dealership is located. Furthermore, in January 2011, the company announced its next mid-term business plan to introduce eight hybrid and battery-powered models by 2015.

3.6.8. Subaru

Subaru is the brand of the automobile manufacturing division of Fuji Heavy Industries (FHI), headquartered in Shinjuku, Tokyo, Japan. FHI is a Japanese multinational corporation and conglomerate primarily involved in aerospace and ground transportation manufacturing. The production volume of Subaru automobiles is around 0.73 million units, which makes them the 22nd biggest automaker in the world. Their main production location is Japan (75%), with the rest produced at their US Indiana plant. The plan is to increase the production volume over 1 million units; to reach this target a local production plant in China is also planned for the future. The number of employees is 27,509 (FHI total).

The announced financial results of the FHI automobile division Subaru for the fiscal year ending March 31, 2013 were: net revenues 1.78 trillion yen (13.7 billion euro, +28.07%), operating income 111 billion yen (0.85 billion euro, +181.73%), net revenue/operating income revenue ratio 6.24%. The R&D budget was 49 billion yen (0.38 billion euro).

Figure 28



Data Source: Fuji Heavy Industries

Subaru's parent company, Fuji Heavy Industries, is currently in a partial partnership with Toyota Motor Corporation, which owns 16.48% of FHI. In the past Nissan was a major shareholder, with a 20% stake since 1968, but after Nissan's acquisition by Renault, its 20% stake was sold to General Motors in 1999. In 2005 Toyota Motor Corporation purchased 8.7% of FHI shares from General Motors. GM later divested its remaining 11.4% stake and Toyota increased their stakes to the present 16% in 2008.

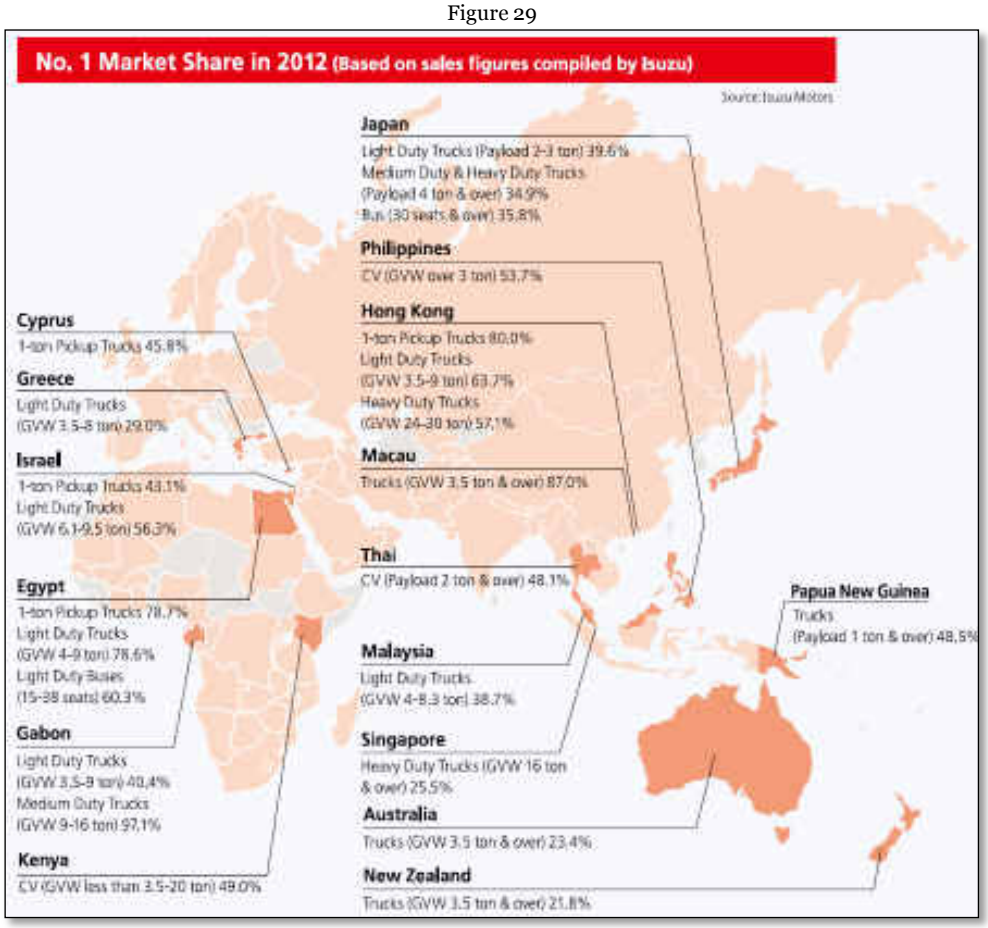
Subaru is known for its use of the boxer engine layout in most of its vehicles above 1500 cc as well as its use of the all-wheel drive-train layout since 1972, with it becoming standard equipment for most Subaru vehicles. Although Subaru is the largest manufacturer of all-wheel drive cars, it is very small compared to many of its competitors in the automotive sector. However, it has been highly profitable for years. Despite a low market share, Subaru is constantly top-ranked in the lists by the specialized press in terms of reliability, workmanship and satisfaction. For example the brand has always been no. 1 since 2006 in the German ADAC's ranking of customer satisfaction.

3.6.9. Isuzu

Isuzu Motors Ltd. is a Japanese commercial vehicles and diesel engine manufacturing company headquartered in Tokyo, Japan. Its principal activity is the production, distribution and sale of Isuzu commercial vehicles and diesel engines. Isuzu produced 0.61 million units in 2012, of which around 40% were produced in Japan. Their overseas production is mainly located in South-East Asia, with the biggest output (nearly 50% more than Japan) in their two Thailand plants. The number of employees is 26,102.

The announced financial results for the fiscal year ending March 31, 2013 were: net revenues 1.65 trillion yen (12.8 billion euro, +18.25%), operating income 131 billion yen (1 billion euro, +34.31%), net revenue/operating income revenue ratio +7.9%, net income 97 billion yen (0.74 billion euro, +5.78%). The R&D budget was 31 billion yen (0.47 billion euro).

Figure 29



In 2006, Toyota acquired a 5.9% equity stake in Isuzu, which made them the 4th biggest shareholder; the two companies agreed to study possible business collaboration, focusing on R&D and production of diesel engines, related emissions-control and other environmental technologies. GM was the main shareholder for a long time (since 1971), at times with a stake as high as 49% (1999), but facing financial problems, most shares were sold back to Isuzu 2002 (down to 12%). In 2006, Isuzu finally purchased its remaining shares from GM, but claims the companies will keep their business partnership for joint development and manufacturing of trucks and diesel engines. Isuzu is also in joint ventures with two Chinese companies.

Isuzu also used to produce passenger cars in rivalry with Nissan or Toyota and were famous for their diesel engines (63% of their production). But decreasing sales figures and poor management in this field resulted in serious economic woes, particularly after the Japanese bubble collapse. The exclusion from several markets like North America or Australia by GM was also a factor. In the end, as part of a restructuring, Isuzu announced the complete withdrawal from the passenger car business, in 2002 in Japan and finally in 2009 in North America (they still sell SUVs and pick-up trucks in South-East Asia). Focusing on commercial vehicles (trucks, buses) and diesel technology, the company has recovered in recent years. Currently Isuzu is in cooperation with Toyota, Hino, UD Trucks, Nissan and Mazda. Isuzu diesel engines are used by Renault-Nissan Alliance and General Motors, among others.

3.6.10. Mitsubishi Fuso

The Mitsubishi Fuso Truck and Bus Cooperation (MFTBC) is a German-owned, Japan-based manufacturer of trucks and buses headquartered in Kawasaki-shi, Kanagawa, Japan. This company is the 3rd largest Japanese truck manufacturer, with 113,073 units annually, mainly produced in Japan (around 80%). The remaining production is located in South-East Asia. The number of employees is 11,000.

As Fuso is part of the Daimler Trucks Department, there are no explicit financial results announced for Fuso. The Daimler Group have an 89.29% equity stake; the remaining 10.71% is in possession of the Mitsubishi Group.

The Fuso brand had over 70 years of history in the Mitsubishi Group before MFTBC was established from MMC's truck department in 2003. As part of the alliance with DaimlerChrysler, the allocation of the equity stakes was DaimlerChrysler 43%, MMC 42% and other Mitsubishi group companies 15%. Within a single year DaimlerChrysler enlarged their share to 65% by acquiring MMC stakes. Finally MMC transferred the rest of its shares to DaimlerChrysler as a major part of the agreement of compensation for financial damages resulting from quality issues and recalls at MFTBC. After the Chrysler groups were sold off, the former DaimlerChrysler Truck Group was renamed Daimler Trucks. MFTBC is an integral part of the Daimler Trucks Division of Daimler AG.

Recently MFTBC produced a series hybrid drive, in which the diesel engine does not drive wheels directly but instead is used solely to drive an electrical generator to recharge lithium-ion batteries. It can reduce fuel consumption by as much as 30 percent, and Daimler Trucks uses such a system for most of its full-hybrid commercial vehicles.

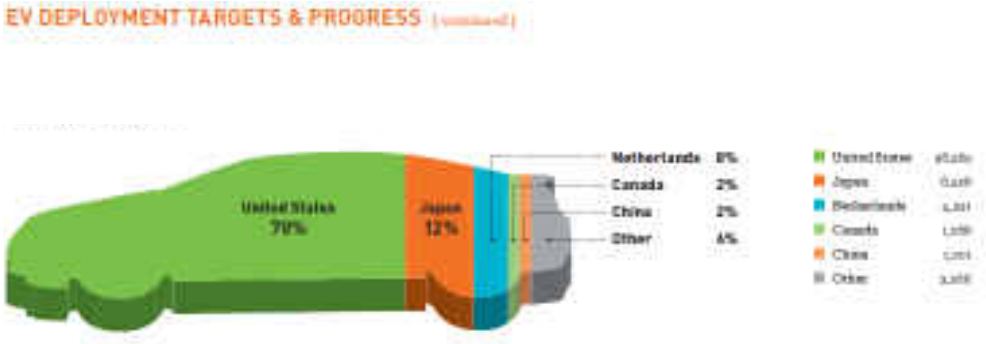
3.7. THE STATUS OF ELECTRIC VEHICLES IN JAPAN

3.7.1. Early efforts for E-mobility by government and industry

Japanese OEMs had decided early for EV development. Fundamental research and development activities have been done continuously from 1970's. Also because of big air pollution problems in the 1960's and the big oil shock 1973, these efforts were supported by the Japanese government as well. Based on these early decisions, the Japanese automobile industry became leading regarding EVs.

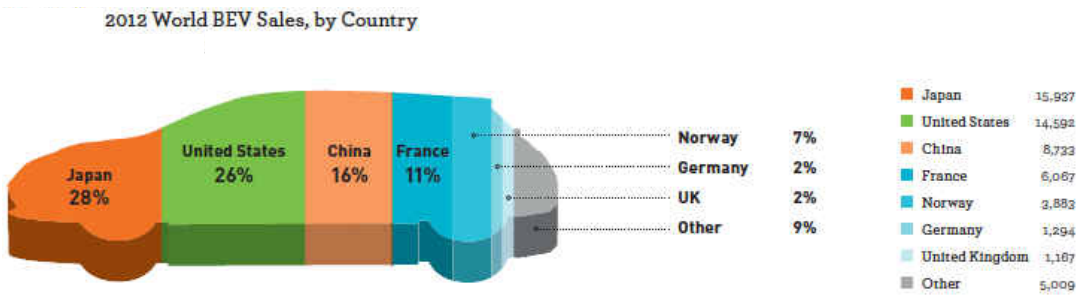
Japan not only produces the majority of EVs worldwide, they also hold by far the most patents and most of the core technologies utilised in EVs were developed in Japan. In 2013, around 1.8 million EVs (full EVs and hybrids) were produced worldwide, of which Japanese OEMs produced around 1.4 million.

Figure 30



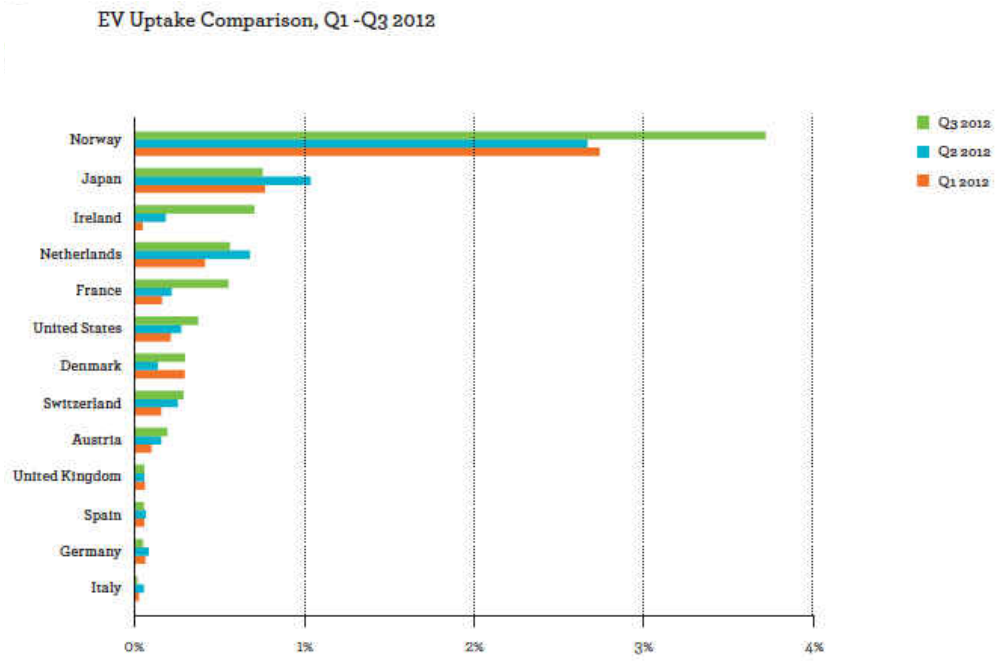
Source: Global EV Outlook, IEA 2013

Figure 31



Source: Global EV Outlook, IEA 2013

Figure 32



Source: Global EV Outlook, IEA 2013

Japanese companies are enormous technology and production leaders in Li/Ion Batteries, magnet and electric drive technologies, inverter technologies and the electric system integration of such technologies. Toyota defined its brand based on such technologies, and while European makers are only now launching their first generation of hybrid and full EVs, Toyota and Honda are currently launching their 3rd or 4th generations and will start to sell fuel cell cars from this year on. The step from introducing a technology to really gaining the scale of business to make money is huge, and many Japanese automotive industry insiders know that Japanese firms made huge investments and financial failures in their electrification endeavours. These learning curves made Toyota, Honda and Nissan the technology leaders in the EV and hybrid industry and a huge supplier industry supports them. The probability that European makers can contribute to the Japanese EV or hybrid industry is low, but companies which have leading, patented technology which has proven its performance in production should not hesitate to approach Japanese OEMs.

Figure 33

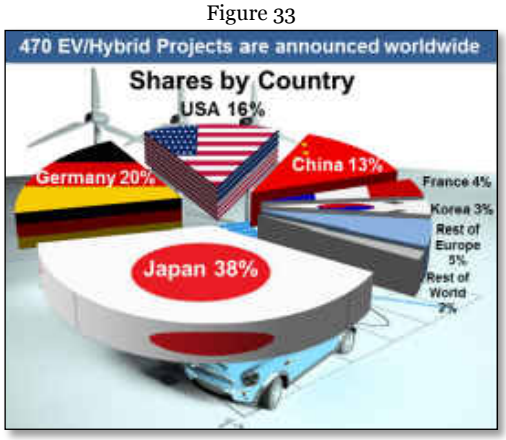
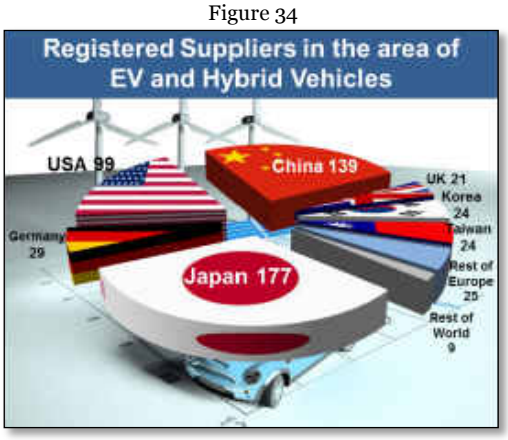


Figure 34



Data Source: MarkLines

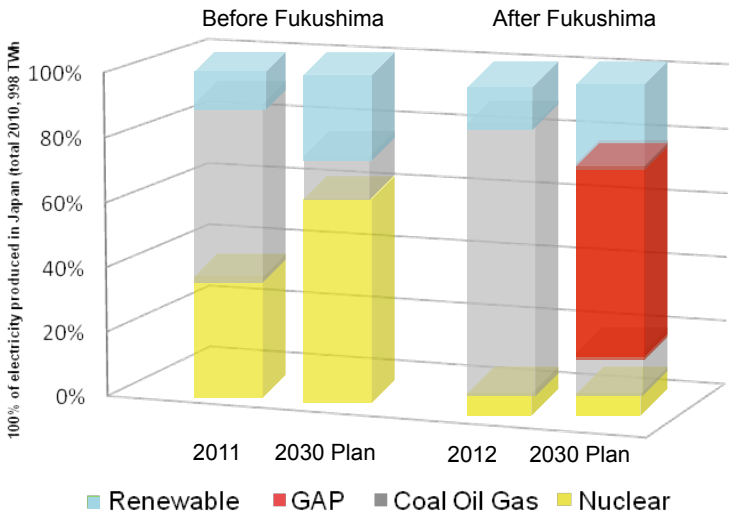
In terms of the EV market as a whole, the best chances for Swiss companies lie more in the area of helping Japanese technology leaders to enter the European market. Many SMEs in Japan do have good technology and are looking for partners who could provide engineering teams which can introduce such technologies to

European companies. For a really deep insight and summary of the Japanese EV and connected technology market, we recommend the report "Trendbericht Elektromobilität in Japan", which is published by the German Chamber of Commerce in cooperation with the VDI/VDE/IT and available on their homepage.[2]

3.7.2. Energy mix – network structure

Before the triple disaster in 2011, it was the clear strategy of the government to grow atomic electricity to 50% and to grow renewables to around 15% by 2030. After Fukushima only 2 reactors remained on the grid, and the rest of the electricity is now created by gas and oil power plants. Due to the sudden strong need for imports of gas and oil for electricity production, Japan found itself running a negative trade deficit for the first time in decades. Japan does not really have a plan to get out of atomic energy, and the current government is pushing hard to bring most of the dormant atomic reactors back to the grid. Japan lacks a flexible grid-structure, which would allow a smart energy mix and the flexibility to feed in from multiple sources. Many solar projects in Hokkaido, for example, cannot be realised because the grid does not have the capacity to withstand peaks. Electricity highways from north to south are missing, and Japan's electricity network is divided into two frequencies: 50Hz and 60Hz. The red gap in the graphic below, which was caused by the Fukushima incident, is still a big question mark. Japan has neither the right energy infrastructure to compensate for its plants nor a liberalised energy sector, which makes change slow and difficult.

Figure 35: Japanese Energy Mix



Source METI: Energy mix before and after Fukushima, 2012

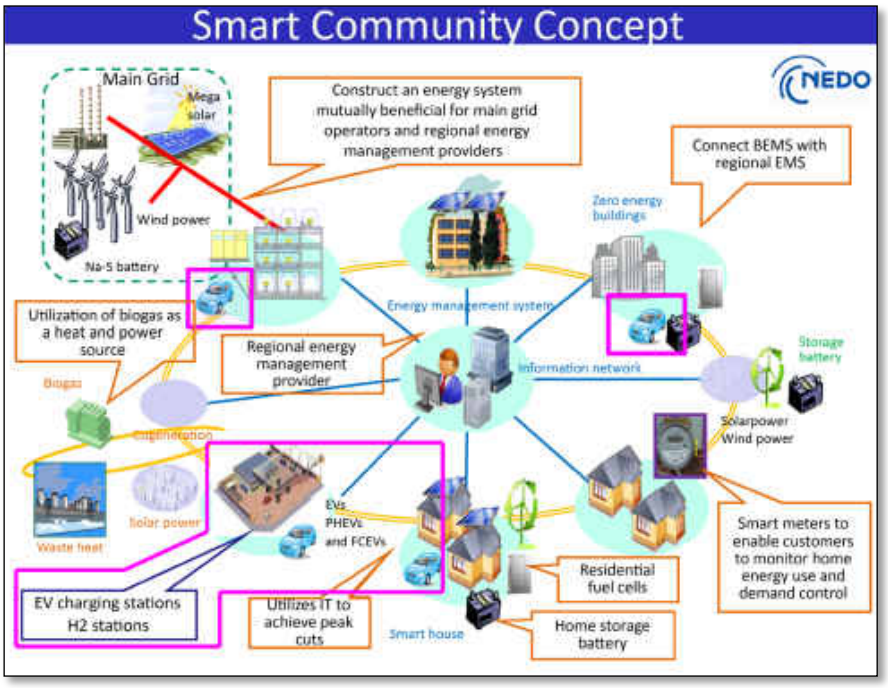
The renewable energy and grid structure in general is not supportive of fast growth in EV technologies. But the general attitude of the private sector and industry heavily supports a fast distribution of EVs. After the US, Japan is the country with the most EVs and hybrid cars. All companies are investing in smart grid solutions, and with Japanese battery makers being the world leaders, concepts to use car batteries for energy storage for houses are ready and being tested in many model cases.

3.7.3. Energy structure – smart communities

In actual vehicle technologies, Japan must be considered technology leader. When it comes to technologies surrounding electric vehicles and energy change, Japan is facing challenges similar to other countries and does not have a real advantage over European countries. Recently the Japanese government has propagated the "Smart Community Concept" as a holistic solution for sustainable development. The aim is the progressive integration of several environmentally friendly tools like renewable energies, smart grids, EVs, energy-plus houses etc. to a holistic system in which the social structure and infrastructure of cities are the central key players (see graphic below).

[2] http://www.japan.ahk.de/fileadmin/ahk_japan/Publikationen/PDF/Trendbericht_Elektromobilitat_in_Japan_Februar_2014_Klein.pdf

Figure 36



Source: AHK "Trendbericht Elektromobilität in Japan"

For the realization of such concepts (including electric mobility systems on a broad front), the combined forces of industry, government and research are a fundamental requirement. Electromobility is one element of the targeted smart communities and the connection and transformation between the key elements of mobility, energy structure and Information and Communications Technology (ICT) is a core task to optimize the process and resource efficiency. In future cities, electric vehicles will not only provide environmental friendly transportation, they will form part of the energy storage and supplier structure. Their batteries can be used directly as an emergency power source and as storage for locally generated power. Small intelligent units have a more important function in the Japanese typical regional approach than in Europe. There are several institutions to support smart community concepts, like the New Energy and Industrial Technology Development Organization (NEDO) or the recently founded (2010) Japan Smart Community Alliance (JSCA).

3.7.4. EV charging standards

There is currently no common global standard for electric vehicle charging. Generally one can differentiate between four main regions: North America, Japan, Europe and recently China. There have always been different mains electricity, plugs and sockets, which maybe led to the different EV standards, but there is also a political and industrial conflict between the countries and their automotive industries. The differences are mainly based on two factors. The first is charging levels (or modes), which describe the power level of a charging outlet. The often mentioned slow charging (AC charging) and fast charging (DC charging) are part of this. The second factor is the different types of actual connectors, sockets, plugs and inlets.

The major Japanese standard for DC charging is "CHAdeMO". The CHAdeMO standard was formed by The Tokyo Electric Power Company, Nissan, Mitsubishi and FHI and later Toyota. Therefore, it is mainly distributed by Japanese (automotive) industry with the aim of establishing it as the international standard. However, the lack of compatibility with AC charging is seen as a weak point. The competing standard is the "Combined Charging System" (CCS), which combines AC and DC charging in a single connector/inlet and is being introduced by Western car makers (BMW, Daimler, Ford, General Motors, Volkswagen Group). Recently, the CCS in combination with the type 2 or Menneke plug (pushed mainly by German carmakers, while France and Italy have favoured type 3), was announced as EU-norm, while outside of Europe, apart from the CHAdeMO, the type 1 connector is more usual. Finally, the Chinese market is also trying to establish its own standard. The graphic below gives a rough overview of the different standards.

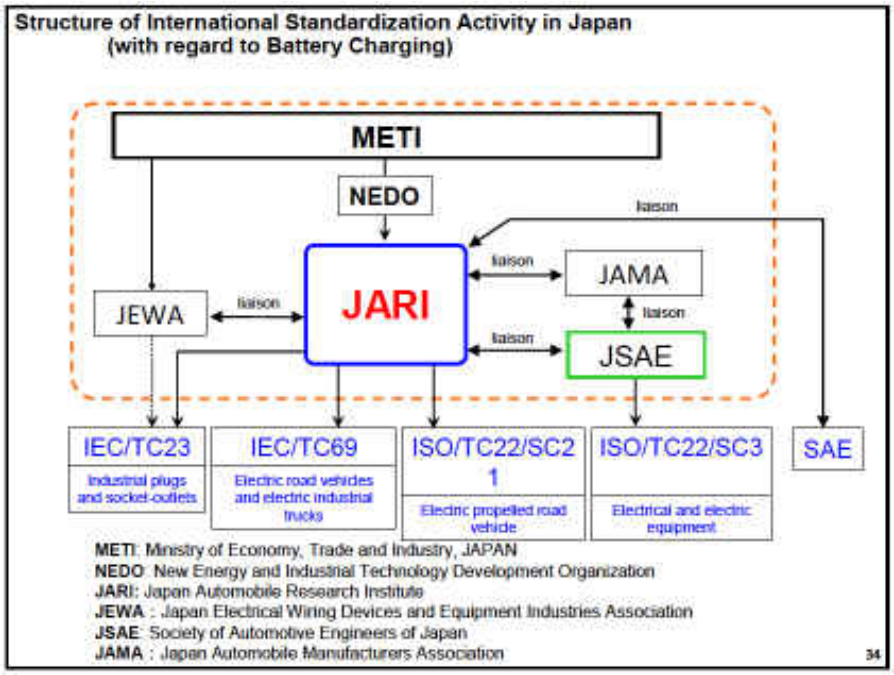
Figure 37



Source: US Department of Energy EERI Energy Efficiency and Renewable Energy EERI

At present, it seems that a common standard is a long way off. Generally, a modern electric vehicle is equipped with various standards aligned to the region, and EV charging stations also have the various standards installed, but this is generally impractical and all the differences are confusing for laymen. Wireless inductive charging is tipped as the next big advancement for EV charging. A large number of companies are working on getting this technology ready for the next generation of EVs. With this, the debate over which type of charging connector to use might be finally over, or – equally likely – another fight over standards will erupt. The graphic below shows the institutes and government offices involved in the regulation and standardisation of EV.

Figure 38

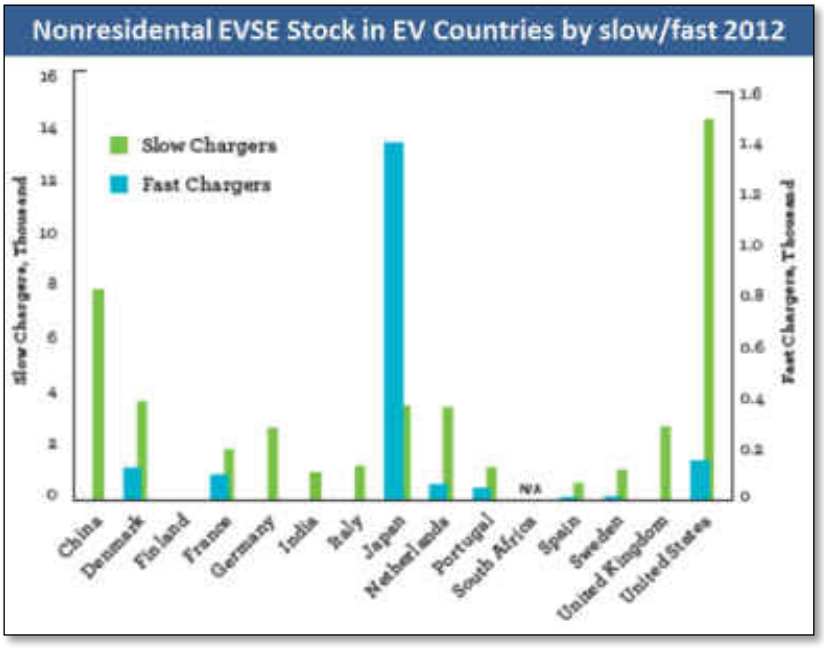


Source: AHK "Trendbericht Elektromobilität in Japan"

3.7.5. Japanese EV charging infrastructure

The charging infrastructure, missing standards and interfaces are major issues affecting the prompt distribution of full electric vehicles in all EV countries. The lack of charging opportunities is a major purchase decision against EVs, although as pilot studies have shown, the requirements are lower than classical gasoline station infrastructure, because the EVs are mainly charged at home and at the workplace. Currently there are around 1,700 fast and 3,000 regular chargers in Japan (August 2013); good figures compared to other countries, but far from sufficient (see graphic below, "Electric Vehicle Supply Equipment (EVSE) Stock").

Figure 39



Source: Global EV Outlook, IEA 2013

With this in mind, at the end of July 2013 Toyota, Nissan, Honda and Mitsubishi Motors announced they would work together to promote the mass installation of more electric vehicle chargers. Following this announcement, the four automakers have reached a framework agreement to provide financial assistance to developers of the electric vehicle charging infrastructure in November 2013. By the second quarter of 2014, a joint organisation will be established by the automakers to manage a membership based charging service for electric vehicle users.

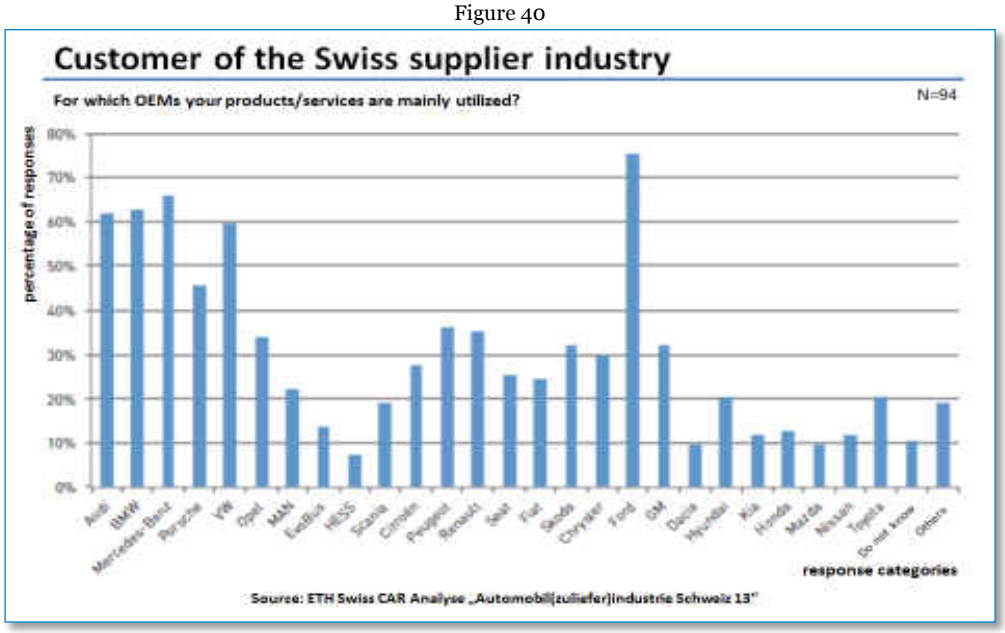
The Japanese government has already announced subsidies for installation of charging facilities totalling 100.5 billion yen (0.77 billion euro) as part of its economic policy for the 2013 fiscal year. Each of Japan's 47 prefectures is drawing up a charging infrastructure plan to take advantage of these federal subsidies. The ambitious official government target is 2 million slow chargers and 5,000 fast charging points by 2020. In comparison, the cumulative targets of the EVI (Electric Vehicles Initiative) countries are approximately 2.4 million slow chargers and 6,000 fast chargers.

4. Characteristics of the Swiss automotive industry

4.1. SUMMARY OF THE STUDY "AUTOMOBILINDUSTRIE SCHWEIZ" BY ETH ZÜRICH SWISS CENTER FOR AUTOMOTIVE RESEARCH (SWISS CAR)[3]

The Swiss automotive industry is made up of over 300 companies which partly or entirely belong to the automotive sector. In Switzerland, the development or manufacture of automotive products generated annual sales of CHF 9 billion, and 24,000 employees are employed in the automotive industry (2013). The companies with the largest numbers of employees and highest turnover are (in alphabetical order): Autoneum, Carosserie Hess, EMS-CHEMIE, Komax, SFS intec and ThyssenKrupp Presta. Baumann Springs, Reishauer, Sauber Motorsport, Sika Switzerland and Styner+Bienz are further examples. The main services provided are classic parts supply (54%). Car manufacture, material supply, conversions and capital goods production are all in the range of 9% - 15%. At 7%, electromobility is (still) relatively low. Besides Ford, German OEMs are Swiss suppliers' biggest customers, mainly BMW, Audi, Porsche, Mercedes Benz and VW. Japanese OEMs are not strongly present (see graphic below).

Figure 40



The products and services provided imply that the majority of these companies can be classified as second and third tiers. They mainly supply higher tier levels and have no direct contact with the OEMs. In the past five years, a trend towards forward integration has been seen, with Swiss suppliers increasingly taking over services that were originally provided by the customer. But still only 16% of all suppliers are in constant exchange with the OEM, although 29% know which vehicles their products are used in. If there is direct contact with OEMs (or there is information about those in lower tier levels), Western European and in particular German OEMs are mentioned most after Ford.

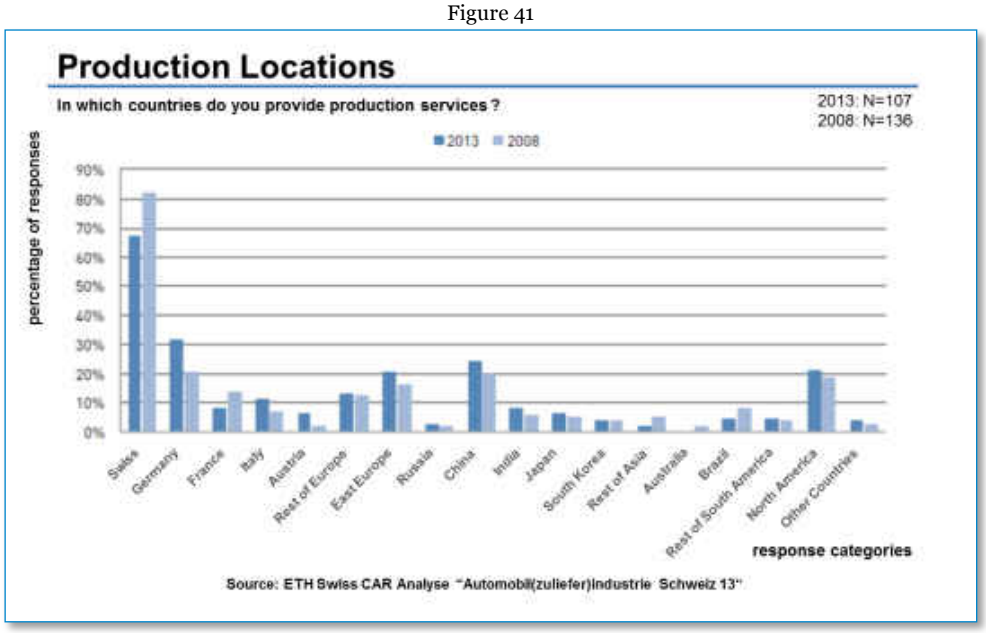
Although the time after the 2007 economic crisis was characterized by turbulent economic development, the global situation eased significantly based on good sales figures from automobile manufacturers in recent years. The economic development in Europe, especially in Germany, had strong influence on sales expectations, and

[3]available on the ETH Zürich Homepage: http://www.timgroup.ethz.ch/research/swisscar/Research

the local automotive suppliers are optimistic for the future: in particular, the Chinese and Brazilian emerging markets are considered to be very promising, although increased competitive pressure is perceived in these regions. Even if the sales expectations are reserved because of economic and monetary developments of recent years, the solid revenues during the crisis mean the outlook for the coming years is positive. With German OEMs as their most frequent customers and their positioning as premium and volume suppliers in the past five years, the long term stability of Swiss suppliers seems to be ensured. The increasing price pressure from international competition is seen as a challenge, and a frequently mentioned key feature for business activities is a necessary flexibility surrounding new orders.

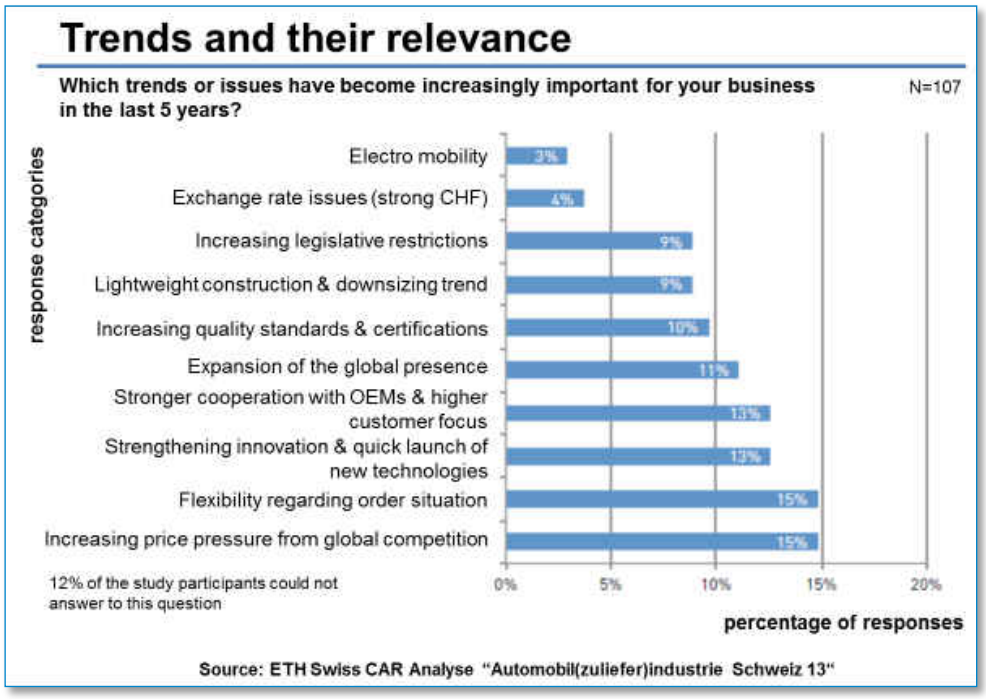
The big companies are following the ongoing trend of internationalization and increasing staff numbers in global locations, which allows conclusions to be drawn regarding the adaptation of the expansion policy of renowned OEMs. More than a third of the interviewed Swiss suppliers are sympathetic about an expansion of the supplier network. Activities in R&D, innovation and technological trends and joint research projects would be of more interest than collaborations in purchasing and production. Employees' technical expertise and a stable political environment are perceived as the most important location factors by Swiss companies. So production sites in France have become less attractive; however Germany, Eastern Europe, China and North America continue to be appealing production locations. A third of companies rank China as favourite in terms of development of international locations. This applies to both production and R&D activities.

Figure 41



Technological trends such as networked vehicle, car sharing or driver assistance systems are currently not considered priorities for day-to-day business. This contrasts with a strong interest in lightweight developments and energy-efficient driving. Electric mobility is becoming increasingly important and the corresponding technologies are coming closer and closer to large scale production. But surprisingly most Swiss companies are still neutral about this field and see the issue as no great challenge. There are also specialized manufacturers with very high growth potentials operating successfully here, but considering that the value chain will be developed through these alternative technologies, which offer big business potential, it seems there is still some catching-up to do. It will be interesting to watch how the Swiss companies will adapt and encourage these technologies in the coming years.

Figure 42



4.2. SWISS AUTOMOTIVE COMPANIES IN JAPAN

Around 60 Swiss automotive suppliers are active in Japan, either as stand-alone companies, in joint ventures or via distributors. Many of them consider Japan (Japanese OEMs) a profitable business environment and enjoy the business. On request, Switzerland Global Enterprise can introduce such companies for an experience exchange. As an example and success story we would like to highlight the following story of Feintool, which is also presented on the Swiss Chamber of Commerce and Industry in Japan (SCCIJ) homepage.[4]

Feintool wins by localization in Japan



Feintool Japan employee in action

Tokyo (SCCIJ) – Feintool, founded and headquartered in Switzerland, is the envy of most foreign companies operating in Japan: The technology company specializes in fine blanking systems and fine blanked components have become an integral part of the supply chain within the Japanese automotive industry. Feintool is so deeply integrated that other Japanese companies only recognize Feintool's foreign roots when they meet Mr Marcel Pernici, Feintool's Chief Executive Officer in Japan and Division Head System Parts for Asia. Feintool's secret for its success in Japan is summed up by Mr Pernici with a single word: "localization".

Up to 160 million parts produced in Japan

There is a thin smell of oil in the air. A truck delivers shining rolls of steel sheets. Accompanied by a surprisingly low noise volume, a fine blanking press produces complicated metal parts. A single worker staples the parts in a plastic box. Feintool produces 150 to 160 million such parts annually in its three Japanese factories in Atsugi and Tokoname.

As a supplier in the automotive industry, Feintool is not recognized by retail customers. But the international company is fully integrated into the supply chain on the second-, third- and fourth-tier levels. In 2012, Feintool components were built into two-thirds of all Honda cars worldwide.

[4] http://www.sccij.jp/news/overview/detail/report/2013/09/27/feintool-wins-by-localization-in-japan/

Focus in Japan on seat adjusters

Thanks to its fine blanking and forming technologies, Feintool produces up to 200 different automotive components for compact transmissions, efficient engines and reliable airbags. In Japan, however, Feintool focuses on steel components for seat adjusters with and without a built-in motor. At the same time, Feintool also develops fine blanking and orbital presses for other companies' production facilities. "Consequently we are suppliers to most car manufacturers," says Mr Pernici, who since 2006 has been Feintool Japan's Chief Executive Officer and has twenty years' work experience in Japan.

Feintool's strong position in Japan puts a spotlight on the interesting phenomenon of the hidden cluster of automotive suppliers in Switzerland with an annual turnover of CHF 16 billion. This is why the Swiss Secretary for Economics, Mrs. Marie-Gabrielle Ineichen-Fleisch, together with Mr. Roger Zbinden, Head of Swiss Business Hub Japan, visited Feintool's plant in Tokoname in early summer of this year. After all, more than 90 percent of all worldwide manufactured vehicles contain seat adjuster parts either produced by Feintool or by a Feintool press.



Feintool Japan's headquarters and factory in Atsugi

Reason for success in Japan

Feintool's achievements in Japan are based on a simple secret which costs time and money: "First of all, you need patience and have to think in the long-term," Mr Pernici says. Feintool had already entered the Japanese market at the end of the 1970s and was among the first foreign automotive suppliers to set up its factories in Japan. But from first contact with the customer to the signature under a contract, it is common for four to six years to elapse.

Feintool even considered shutting down its Japanese operations in the 1990s. But since 2002, the operation has become highly profitable by focusing on seat adjusters and consequent localization. "If you want to have success in Japan in the technological field, the engineering cannot be kept in Europe," says Mr Pernici. This is the fine difference which generates long-term success.

Localization as a secret

First of all, localization allows prompt reaction to customer inquiries and problems. Secondly, production in Japan can fulfil the specific demands of Japanese customers such as impeccable reports. "Our metal parts are supposed to have neither scratches nor spots, although they would still function properly," Mr Pernici explains. In the same spirit of localization, Feintool has recently chosen a Japanese partner to manufacture big forming presses for the Asian markets.

Another of Feintool's business advantages is its Japanese research and development centre, which serves the needs of all Asian Feintool customers. "We are not growing in Japan because we give away Swiss chocolate to our customers," laughs Mr. Pernici and



Factory hall in Atsugi with fine blanking press

points to some example components on the table. “The first generation of these seat adjuster parts weight 400 grams,” he explains. “The second generation’s weight was 290 grams, and the newest one’s only 185 grams.” This saves up to a fifth of material costs. The production process has become more complicated, but this means the parts are also less easily copied by competitors.

Fivefold sales increase since 2000

Due to such innovations, Feintool Japan has increased its sales by a factor of 5 since 2000. The innovations have been developed by its Japanese engineers. “At European speeds we could not have produced such fast results,” Mr Pernici says. In the past it took three to four years to cover the process from the first drawing to high-volume production.

Japanese engineers shortened this process to one year. “Only in Japan is there such a dedication to work and to your company,” the Swiss manager explains. The admiration for his 110 Japanese employees is clearly audible in his voice.

5. How to supply to Japanese automotive customers

This chapter systematically guides the reader through the decision process for entering Japan and the points have to consider when planning a business relationship with Japanese OEMs.

5.1. WHO SHOULD TRY TO WALK (WORK) WITH JAPANESE CUSTOMERS

Several previous chapters have talked about Japanese customers' request for technology which is totally free of any risk of failure.

Figure 43: Leadership/Maturity Diagram

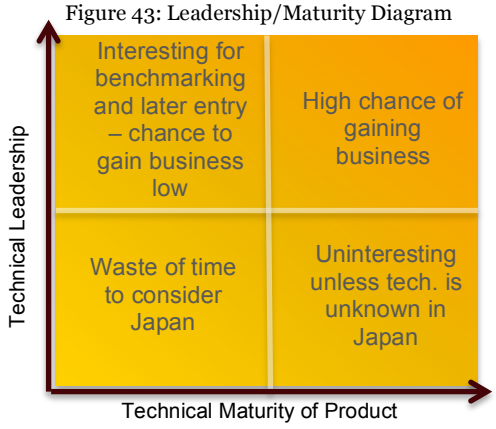
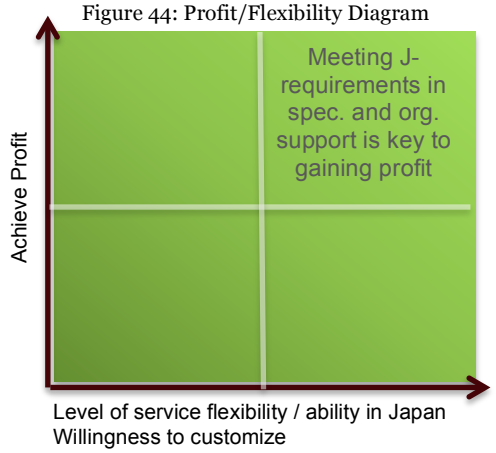


Figure 44: Profit/Flexibility Diagram



The orange diagram shows where companies have the highest chance to actually gain business. Technical leadership is the basis from which to start a discussion with Japanese OEMs. But leadership without proven experience in the field will only create a lot of questions and the customer most likely will work hard to understand the supplier and to benchmark the technology. Chances to gain business are low if the product is not already validated in the field. A second interesting aspect of gaining business in Japan is the ability to adjust to Japanese requirements and to make money (green diagram). Only companies which are able to adjust to the requirements of J-customers and adjust their way of working can actually make profit.

With very few exceptions, newcomers in a market have to create a profitable cash flow fast in order to have a sustainable market entry. This means that these companies normally target projects which are close to mass production (2 to 3 years' development time). If your company is a high-tech firm which can influence a car manufacturer's future developments, it is possible to enter advanced engineering processes, but it is essential to be aware of all the risks which are connected with such a decision. It will take years to go into serial developments. If your company has problems delivering during the advanced engineering process, the chances that you get business later are very low. The authors have rarely seen companies meet with success using this approach. In addition, it is normally necessary to have a certain stamina to start business with Japanese customers, as the decision processes take much longer than in Europe or the rest of the world. It is not rare for it to take 3 to 5 years before companies receive their first orders.

But companies should be very careful of how they manage expectations on both sides. It is not acceptable to invest in relationships for years without clearly understood targets and gates. Particularly when pre-developments start and first investments are made, the management from both customer and supplier have to find a common understanding about what the next steps are and when and how the customer's expectations will be considered fulfilled. It is difficult to put such expectations into contracts, but experienced cross cultural managers understand the commitment of the customer and are able to create the correct expectations on both sides of the business.

In general it is very important to go through a USP (Unique Sales Point), SWOT (Strength Weakness, Opportunity, Threat) and KSF (Key Success Factor) analysis prior to making major decisions about Japan.
After doing this basic groundwork, companies have to consider what this means to their business in particular, how the following areas will be impacted and whether the company is able to effect the required change:

- **Strategy**

Business with Japanese OEMs or customers is always a strategic decision at board level. If the risks and opportunities have not been studied thoroughly, and if there are no clear indications that business with J-customers has a chance for success, one should not proceed.

- **Management**

Does the management have the necessary experience and time capacity to start business in Japan? This point is often underestimated and costs companies a lot of time and money. Using the wrong managers and not having the correct attention in the board will create failure, no matter how big the opportunities.

- **Organisation**

The organisation sooner or later has to reflect the requirements of the Japanese customer. Questions like where to perform application development, what kind of HR to build at which location, how to delegate the necessary authority to Japan etc. have to be considered from the beginning.

- **Human resources**

You cannot expect your employees to work with a completely different customer group starting tomorrow without training and education. Cultural training will not be sufficient. You have to involve your team in Japan and in Europe deeply in the business, and along with business objectives, you have to develop teams who share commonly defined targets.

- **Finance / legal**

Many companies enter Japan without a clear business case and gates to make crucial decisions, but this is required, because normally the process takes longer than expected and regular reviews are necessary.

- **Product / customer / markets**

Even companies which have worked more or less successfully in Japan for years sometimes have not developed clear matrixes which clearly define customer, product and market. This is fatal, because in the biggest automotive industry in the world it is easy to get lost among 1000 possibilities. A Japanese saying describes the situation: “If you hunt two rabbits, you might not get any.”

- **Roadmap with gates**

Transparency between Japan and headquarters is a guarantor for success and a way to determine why things went well or badly. Clear roadmaps for which the Japanese and European sides of the business sign responsibility are a must to create a common understanding and to recognise and fix deviations at an early stage.

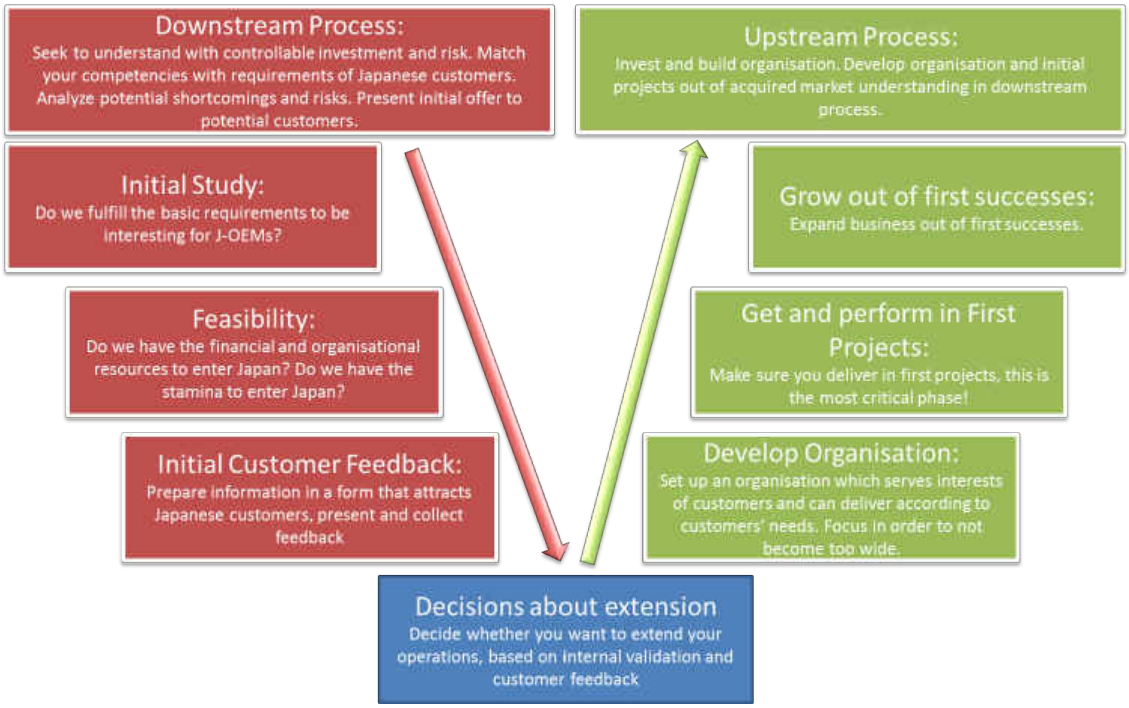
- **Expertise / experience**

Experienced automotive cross-border managers are able to develop and manage all the above points efficiently and suggest the right steps for implementation. Such people can help to save years of time and millions of euros. Remember that the decisions surrounding your initial team determing your ultimate success in Japan.

5.2. PROCESS FOR PLANNING A MARKET ENTRY

Many companies have lost considerable time and money in their approach to Japan because they did not clarify the questions summarised in this report sufficiently. In this chapter we would like to provide some basic understanding of how a market access should be planned. The first V-Process as illustrated below shows how a company should operate in principle: working from assumptions, going into a general clarification and then making a decision about if and how to extend after receiving customer feedback.

Figure 45: V-Process to develop business



Source: CBI Partners

Considering all earlier points, it is recommended that companies go through the following more detailed steps in order to decide whether to enter the Japanese market and to actually execute a market entry. Naturally this process is different for each company, but the seven general steps below are fairly universal. The V-Process and these steps are complementary. The steps below provide a more concrete recommendation on how to proceed.

What	Output
Step 1: Develop a basic understanding	
Study this report, as it is a practical summary of more than 25 years of cross-border management experience	Top management should develop a feeling for what it means to work with Japanese customers (general pros and cons)
Step 2: Pre-clarification about business environment	
Study target customers and target competitors. USP (Unique Sales Point Analysis), SWOT, global structure of customer and competitor. Answer the following questions: • Are we competitive in products and structure? • Do we have a leading market position in Europe, one which makes us interesting enough for Japanese companies? Based on these questions, make a decision to start a pre-study	Basic decision whether an approach to Japanese customers should be continued.
Step 3: Initial study with customer feedback	
Develop clear targets for an initial study: • To whom do we want to present (customers, potential partners, industry experts…)? • Also create Japanese presentation materials which fit the tastes of Japanese customers (data, details, benchmark) • Think about how to conduct an initial approach (define your targets clearly and communicate them. E.g. We came today to present a new technology and to receive your feedback about whether your company might be interested in this.) • Think about what kind or organisation you present to	First feeling for requirements. First understanding of whether there is an interest. (Make sure in this step that you do not look like somebody who just wants to acquire information. Your approach should be set up in a way that it is clear that you want to do business and that you are ready to invest.)

customers in case they are really interested. • Make meetings with target customers and follow up (such meetings should take place in Japan, Europe and maybe other regions of target customers' presence and your presences).	
Step 4: Develop business plan and strategy	
As soon as you recognise that there is a significant interest, we recommend you invest in a professional business plan which contains a 3 to 5 year perspective on: • Sales targets • Structure in which you do the business (alone or partnership, M&A…) • Required investment • Required cost of operations in Japan and headquarters • Cost to develop HR (in Japan and HQ) • Cost to set up the business • Cost for IT • Cost for translations • Do you have the required management capacity? • Do you have the required engineering capacity? • Develop a clear implementation plan (roadmap, timeline) • Define which company processes are connected to the new business • Implement a steering committee, which will stay in place during the complete initial phase of 2 to 4 years (The CEO has to lead this team). This plan should contain clear gates at which you review your business and evaluate why deviations have occurred. Most companies react to failure by just repeating their initial plan more intensely. This is a mistake. If you're in a hole, stop digging! Look for people who have done all of this a couple of times, as they work more efficiently and their assumptions are more likely to be correct.	Strategy, roadmap, gates, budget, management assignments and task
Step 5: Implementation and Review	
• Execute your plan and review at predefined gates • Adjust company and reporting processes In case of deviations, react appropriately and try to understand why such deviations occur. There can be no business with Japanese OEMs without changing your attitude at headquarters as well.	Implementation of business plan, adjustment of direction.
Step 6: Acquire and grow business	
Once you receive business, the pace and pressure will increase. Make sure that the projects have the correct management attention and clear review plans are in place. Most companies recognise too late that things have gone wrong and pay a high price.	First projects finished successfully
Step 7: Dissolve steering committee (business as usual)	
Business as usual – the company has learned to deal with J-customers and partners (3 to 6 years are required)	Japanese customers became part of portfolio.

5.3. HOW TO GET INFORMATION AND EXPERTISE

Intelligence is useless without interpretation and experience. It is easy today to gain a lot of market information about the Japanese Automotive Industry. The leading data providers are MarkLines or the Japanese Associations (listed in chapter 11). The challenge is to draw the right conclusions from this data for your business and to develop the right strategy, especially to see the major differences for your business between Japanese and European customers fast enough to adjust. There are various providers of market entry services or interims management. Check that they have a proven track record and provide viable references.
Switzerland Global Enterprise (S-GE) and Swiss Business Hub Japan (SBHJ) provide professional guidance and customized solutions to Swiss companies, especially SMEs, which are pursuing a market entry or trying to

expand their business in Japan. Their services include up-do-date market information, tailor-made analyses of business opportunities, contacts to decision-makers and potential business partners as well as support regarding sales activities, HR issues and business set-ups. For a more comprehensive overview and contact details, see chapter 12.

5.4. ANONYMOUS FAILURES AND REASON FOR FAILURES

Many companies fail in their approach to Japan, because they do not take the steps outlined above and then discover that they have underestimated the requirements for their organisations. But an interesting phenomenon then takes place. Companies and decision makers do not want to accept that they are responsible for such failure and try to place the blame on their Japanese staff. They then begin to exchange people. They try to find people who are able to make Japanese customers function like European customers. "Somebody has to explain to these stubborn Japanese that we know how to do it, because we deliver to the leading OEMs in Europe…." Yes, there are incapable Japanese employees, just as there are in Europe. But a CEO and head of the steering committee Japan have to understand why things went wrong and must decide on how to react. This is not to say that HR restructuring is never necessary, but as this is always connected with a substantial loss of credibility with customers, it must be considered very carefully. When things go wrong a company really has to dive deep into the root causes, because there is rarely the chance for many adjustment loops.

The customer must feel that the management is informed and proactive, and often meetings or dinners with the customer or even a request for support help to understand the situation and to make the right decisions are appropriate. It is important to establish the necessary relationships from the beginning. It is also recommended to work with external parties during crisis management as they will – provided they are good and experienced – automatically analyse the situation in headquarters and provide recommendations for both sides of the business.

5.5. RELATIONSHIPS

People always talk about relationship building in the context of Japan. What does this mean? It does not only mean having "drinking buddies", even though that might be part of the equation. It means that people know each other and build trust. Trust means "walk your talk and show responsibility for relationships and results." If you promise somebody something, you have to deliver. Customers will not accept or understand long holidays during which they do not receive support or answers, or a project being delayed due to Swiss summer holidays.

Relationships are formed by creating success and solving problems together. Solving problems together naturally includes responsibility clarification at some point, especially if money is lost. But the process in Europe includes protection from the beginning, while Japanese culture focuses on solutions first. Making mistakes in this process destroys many businesses.

5.6. NO CHANGE - NO BUSINESS

Why does this warrant its own chapter? The authors of this report have wide cross-border managing experience and it is essential for later success that top management understands that starting to work with Japanese customers will stress their organisation. Most managers have this understanding. The problem is that organisations and humans are defensive against the change necessary to successfully work with Japanese customers. Our internal logic is programmed to look for and find arguments why Japan has to function like Europe, even though it does not. Change management is a discipline which has to be learned, and most companies do not have the expertise to do this. Because companies are not willing to change, they endanger their success in Japan.

A classical case is the occurrence of a quality claim. In most European supplier/customer relationships, the first big question on the table is "Whose mistake is this and who has to pay?" This question is also essential in Japan, especially when the mistake has caused loss of life or damage to people's health. But this question of responsibility is dealt with only after the problem is jointly solved and analysed. By creating overprotective borders at the beginning of the clarification process, trust can be destroyed and never regained. Perhaps the company will win the negotiation over the quality claim, but by not adjusting to the cooperative style to solve the quality issue, the customer is easily lost for ever.

5.7. CLASSIC FAILURES / HURDLES

The previous chapters have described why so many companies in Japan fail. Many readers might now say, "OK, but this is basically the same as with any other country". While this statement is correct, the intensity and the uniqueness of Japan are not comparable to other countries, and the willingness of Japanese customers to

compromise is the lowest possible. They are the global production leaders in the automotive industry and do not see the need to change. So why should they compromise?

We have joined countless workshops and discussions with newcomers to Japan who at the end of the day say: "So what? Same as in Germany." After 20 years of experience we have learned to accept this attitude, and we understand the 3 Ts (Things Take Time), but as a top manager of a company who makes the decision to go to Japan, you have to accept the following statement: "Fish cannot see water". Culture can only be felt in the process; to ignore the input of experts is fatal. "Culture must never be an excuse, it is a business factor which needs to be managed."

Let us briefly elaborate on the major failures again:

(1) HR / leadership
Starting with the decision to hire your country manager, you have already decided the success of your business in Japan. There is no simple answer for who is the right candidate: young, old, foreigner, Japanese… We have seen young, foreign, aggressive, culturally unaware people succeed, because this was what the internal company culture required and excellent senior Japanese managers enjoyed working with the person and could "manage" his shortcomings. We have also seen top executives from Japanese OEMs fail at foreign suppliers because they were unable to manage the European side, and simply repeating, "You have to understand that this is what Japanese customers want," does not lead to change.

In order to fill all positions, a diligent process of creating job descriptions and skill qualification matrixes is required. In many assessment centres we see foreign managers repeatedly picking the candidate who speaks English best and shows western behaviour. In most cases this is a fatal way to choose executives, and often the CVs of these candidates show that other companies already paid a high price in hiring them.

(2) Time
Everybody coming close to Japanese business is taught immediately that time and time to success are critical factors – but please manage this, discuss it with your Japanese team and create transparency and gates.

(3) Empowerment of Japanese entity
A lot of European companies understand that their Japanese entity is not yet ready to run the business. In many cases the conclusion is that power and control decisions should stay in headquarters. The result in most cases is failure, as unempowered and non-responsible managers will not take the lead in business. Empowerment and integration is required.

(4) Project management
The closer your teams come to actual engineering or production for Japanese customers, the closer the decision power and project management has to be to the customer. The likelihood that a Swiss person in Switzerland can successfully manage a project to be launched in Japan is low. In many cases two project managers are required, and dependent on the phase of the project the lead has to change from Switzerland to Japan.

(5) Engineering change management
Most European companies lose big money in change management, because they have not clearly defined the specifications and do not know how to get more money. In the process, many companies build up the typical scenarios which are required to succeed in negotiations with European makers, including development stops. But to get money for change is a negotiation art, one which has to be carried out by experienced Japanese sales managers.

(6) Not understanding / accepting the customers' requirements
The likelihood that a customer accepts the explanation, "this is how we do it for European manufacturers A and B and we cannot change it, as this is the global standard," and will change his request is virtually zero. Does that mean that you have to accept everything a customer expects from you? No, but you have to enter into a serious discussion based on facts and data. And you have to learn to understand why the other side is so inflexible. In many cases J-OEMs have rule and specifications books which are totally out of date, and the engineer does nothing but rely on this specification. He might not even have a chance to discuss it internally.

(7) Not understanding the Japanese competitive environment
The following is a true story, although the industry has been changed to protect the company's identity. During a technology show, the CEO of one of the leading producers for rear-view camera systems went to the Toyota

Museum, which was on the same campus as the show. After an hour he came back, went to his foreign local top-manager and told him: “Mike, please remove our rear-view driving system from the booth immediately, I’ve just seen the next generation in the Toyota museum!” This is not a joke; it happened! Benchmarking and the professional presentation of data are keys to success.

(8) Product and data presentation
A newcomer to Japan has to present its products in a way that Japanese customers are able to accept. The way Japanese companies present is different from the way European companies do. Please get advice on this from experienced Japanese sales managers and read our chapter about this.

In general, clear comparisons to existing technologies or competitors are a must. Such comparisons must be backed up with data. Slides can be slightly busier than in Europe but must contain viable information. If you want to succeed in Japan, please do not present your products without making clear how you want to deliver them, including the engineering. Japanese customers have seen too many foreign companies which have good products but no structure for delivery.

When business with Japanese customers matures, the challenges will change and become more monetary (i.e. how to make profit) and organisational in nature. Only a consequent empowerment of your Japanese entity and trust in the teams working across borders will help you to succeed in overcoming those challenges. And in many cases it is only the trust between the Japanese CEO and the foreign CEO which resolves inevitable conflicts.

(9) Contracts and insisting on specifications
In most cases, Japanese suppliers and OEMs have developed a common relationship in which both partners find their financial targets fulfilled and maintain a generally amicable financial relationship. A strict project-by-project controlling system, in which every change is financially scrutinised and implemented to the last cent, is not an established routine. Please do not confuse this with the non-existence of a change management process and the associated financials. The way these changes are negotiated is simply different and needs the following:

- Experienced Japanese sales staff who knows how to get money
- Foreign suppliers in particular should clarify change procedures prior to entering projects. Japanese OEMs are often surprised what kind of changes western suppliers want and for how much money. Discuss this with new customers in depth before entering projects.

5.8. MANAGEMENT OF LIMITED SUCCESS

“If you are in a hole – stop digging.” This is an American saying which most companies do not respect, which explains why they have started to be unsuccessful in Japan. The reason companies find themselves in this situation is by basically doing the opposite of what we describe in this report as necessary to be successful, but more interesting is how to turn such companies around. Most companies find themselves in a very difficult situation once their business is incurring more losses than they planned in their initial business approach or never becomes profitable. They cannot leave, because they have initial projects and commitments, and so have to find solutions to make the business profitable. If a company exits the Japanese market too radically, as many American companies have done in the past, it closes the door for any transplant or future business. So once the decision to enter Japan is made, often only a soft and careful restructuring is possible.

Many foreign companies are unsuccessful because they do not adjust their approach to the real requirements of their Japanese customer. Often they have a local management which either explains to them that there is nothing that can be done to change the situation, or that they need more time to explain to the “stupid” Japanese that they have to accept to work like the “superior” European manufacturers. Reading this, many readers might smile, but in reality we often meet these extreme attitudes, only under a thick layer of camouflage which makes it sound almost reasonable.

What can be done?
If you have no internal specialist whom you trust, hire external partners to analyse your situation. It should not take you more than 3 to 6 months to understand why you have a problem. In parallel, implement a management steering committee which approaches your problem with both your company’s expertise and market-specific expertise. After a thorough analysis of the root causes, define a strategy for solving your problems. Here we strongly advise against relying exclusively on your European expertise. Instead, find a setup which contains both European and Japanese experts, which can work jointly on solutions and how to implement them. Develop a clear roadmap for getting out of the difficult situation. As a CEO or responsible manager, you have to make sure that your Japanese colleagues really agree to the solution and are not forced

to accept the opinion of their European colleagues, who are often responsible for the problems. How is this done? Take the Japanese managers out for dinner and discuss the issue with them on a fact basis and not on a blame and responsibility basis. As soon as your team has developed a good solution, make sure that the implementation plan has gates and trace these gates in regular steering committee meetings. As CEO and responsible manager it is your task to validate the extent to which the local or central leadership is responsible for the failure. Exchange underperforming managers. Culture has to be managed and can never serve as an excuse for failure.

Please always consider the information in chapter 5.7. Working with Japanese customers requires a change within your headquarters. It is not possible to implement this business without affecting the organisation in Switzerland as well.

5.9. MAJOR DIFFERENCES TO EUROPEAN BUSINESS

It would be possible to write entire books about this topic, but the goal of this study is not to clarify all the details but instead give the reader a quick overview of major differences. Since most Swiss companies aiming to go to Japan are established partners of the European manufacturers, the focus is on a tabular comparison between European and Japanese suppliers.

Field	Europe	Japan
Top Management		
Stability	Top managers change between suppliers.	Top management does not change, and changes amongst Japanese suppliers or OEMs are very rare.
		Middle management of OEMs are dispatched to suppliers in the Keiretsu.
Decision making	Involved in decisions, influential in supplier decisions, high power in operations.	Observing, not much involved in decision making, involved in strategic decisions. Many foreign companies overestimate their influence. Only decide on a new supplier, if all levels below have said yes. Focus on manager and GM level required.
Salaries	High	Low: Board members of Japanese manufacturers make between 500 000 and 1 million euros per year. The exception is Nissan.
Contracts		
Contracts	Contracts are a very integral and crucial basis for cooperation, they define the business relationship.	Contracts are a fall-back construct if common sense and mutual cooperation fails. Business partners have the understanding that they have a common mission and adjust the framework along the way.
Engineering		
Advanced engineering	Comparable budget for Japan and Europe.	Japanese OEMs prefer to have as much advanced engineering in-house as possible.
Concept phase	High involvement of critical suppliers.	Only involvement of critical close suppliers
Production development phase	Clear sequential process, which often causes problems close to mass production, because basic alignment between divisions is insufficient.	Huge front-loading during the first development loop. Production and quality are much more involved than in Europe. Communication effort extremely high – here most European suppliers lose money and credibility.
Production engineering	High investment if lifetime equipment efficiency supports such investment. Tendency to over-	Tendency toward low investment. Very balanced quality control between human and automated. Each OEM has a

	engineering in jigs and fixtures. High control of production via cameras and fully automated quality control steps.	different production philosophy and PPAP Process.
Release process (design)	Similar between Europe and Japan. The big difference is that control, especially of new suppliers, is extremely high in Japan. The details required by Japanese OMEs are initially incomprehensible for most European suppliers.	
Change management	Clear rules and gates for change management process.	Clear rules exist, but compared to most European OEMs, J-OEMs seldom make clear decisions and the development never stops for the decision of who pays how much. It is a constant negotiation, which has to be staffed as a separate function from the beginning (in sales). Here most European companies lose money, reputation and customers.
Value analysis / Value engineering	Supplier is requested to do VA/VE, actual performance is negotiable.	VA/VE is an essential part of getting new business.
Production Phase		
Production release process	Comparable in terms of release process (Initial Samples, PPAP….). But again, there are major differences in the details, which have to be provided and checked and which are too challenging for most foreign companies. Japanese OEMs make far more detailed checks into the process capability of suppliers and sub-suppliers.	
RAMP up	Low control as long as the IS and other gates are kept.	High involvement in details at supplier's production line. In case of problems, a larger team from the OEM are dispatched to support.
Running production	Comparable but different running change procedures.	
Quality assurance process	The difference is not so much in the process itself. However, the intensity and the details which have to be provided and confirmed are extremely different. European OEMs believe in their suppliers and do not want to see all the details. Japanese OEMs confirm the smallest details and in most projects the European suppliers are unable to answer, for example, "Why their technology is safe and good, confirmed, the supply-chain-management (SCM) path is secured, the sub-suppliers are safe…." In addition, alignment with all departments is much more intensive than with European suppliers. In quality, the cultural differences and gaps are an obstacle for each cross-border project. The response speed in all quality-related issues and the insensitivity with which they are dealt is incomparably higher than anything suppliers will experience in Europe. How many times have you had to do a quality investigation and root cause analysis, because a box in a container was damaged – the box, not the product!	
Purchasing	Basically not much different from Europe, but strong differences from OEM to OEM and product to product. Sometimes purchasing is the main factor in a decision, sometimes engineering. The process of getting a PO or nomination letter is sometimes extremely irritating, but depends on the quality of your own salespeople.	
Standards	In Europe the VDA standards provide a common foundation, but each OEM has its own engineering standards. The same is valid for Japan, but the common standard is not really as accepted at all. Each OEM vehemently insists on standards.	
Innovativeness	Product innovation driven	Less product innovation driven, but very process and production innovation process driven. (See chapter 3.5)
Regulation and regulatory bodies	The Japanese and European automotive industries have different standards, rules and regulations. Particularly in serial production projects, a supplier is unlikely to be confronted with any problems with it, as the homologation of the product is done by the customer.	

5.9.1. Quality

As quality and the definition of quality repeatedly cause major irritations for both the Japanese customer and European supplier, it is necessary to elaborate on this. Previous chapters have already mentioned that quality is one of the reasons why Japanese OEMs became global volume leaders and that they operate on much lower margins per car than their European competitors. This is why they are so sensitive about quality. Talking with European business partners about this special quality demand always causes incredulity and people instinctively say: "Excuse me, we supply to the top brands like Audi and Mercedes. Don't you think these companies have high quality requirements?" They do, and their processes and specifications to validate quality are excellent as well. Yet it is still Japanese cars which are statistically the quality leaders in most long-term tests. But even this does not matter for the relationship between supplier and customer.

Like the German automotive industry, the Japanese manufacturers have developed their own specifications and processes to achieve quality and the culture surrounding how this quality is achieved is different. Here is an example. Can you imagine that a German OEM would return a container because one box is scratched on the outside? But the logic behind this for Japanese quality managers is simple and striking – how can they trust a company which is not even able to manage the loading and unloading process of its products? The packaging is part of the product quality. Can you imagine an engineer wanting to discuss why the screws you are using have anti-corrosion coating (A) and not (B) for hours, and demanding proof that your choice of coating is correct? You cannot, because no European OEM would ever care, as this is none of their business.

Many terms from the Japanese quality mentality are making their way into our companies, the Toyota Production System (TPS), 5S, 4M…, to name just a few. Just as it is the role of European project management to think about efficiency and delegation of work and to think in terms of roles and responsibilities, it is fundamental to most Japanese companies to follow their cultural understanding of quality. This has no hierarchical or company borders. "The screw coating in your product is considered a core responsibility of your customer."

5.9.2. Service / aftersales service

To have good products or technology is one thing, to be able to offer the connected service and aftersales service for them is another. For many companies who deliver technologies which need aftercare in the market, this is the biggest hurdle when entering the Japanese market. Just as in Europe, Japanese competitors have built strong service and aftersales service networks for their products.

If a European company fails to establish the right partnerships to provide such a service, companies will not buy their products. E.g., European robot makers are world leading suppliers to the automotive industry in Europe, the US and China, but in Japan they have not gained any major market share. This is because Japanese customers do not see their capability to maintain production and to act quickly and flexibly enough when problems occur. Service around products and aftersales service has to be considered in any market entry roadmap.

5.9.3. You are not a partner, you are a supplier

Our European self-understanding as suppliers is that we are partners of our OEM customers or Tier 1 customers. Not in Japan. Here we are suppliers and are considered the lower, inferior company. European suppliers tend to walk into the offices of their Japanese customers reflecting this partner attitude. This is irritating for the other side, because they automatically expect the behaviour of an inferior who wants to serve them.

In case of the Japanese customer-supplier relationship, this has nothing to do with disrespect or arrogance; it is simply about attitude. If you show an overconfident, over-strong attitude, this will not sit well with the other side. If, however, you show the confident, open atmosphere of a person who likes his company, his products and is able to explain the technical and application advantages and accept questions and requests, you will be able to achieve your targets and place your products with this customer. Most of you will again say, "Just like in Europe." Please believe the authors of this report that this is not the case. Europeans do not automatically have the humility required to make the other side feel good.

5.10. HOW TO PRESENT TO JAPANESE CUSTOMERS

Presenting to Japanese customers is different from presenting to Western customers, in the following respects:

1. Content

A Western presentation will focus on having very little text trying to provide information verbally. This is not too different in Japan, but in order to impress and be convincing it is necessary to provide background data.

This makes many Japanese slides very busy and not really worth looking at during a presentation. In order to resolve this conflict, please prepare additional data in the background.
Prove what you say. As already mentioned, European suppliers often present by saying, "We are the biggest, we are the greatest, because we supply to BMW or Audi…." This is a nice foundation, but when presenting to J-OEMs you must focus on what exactly makes you so great. They need to see:

- Quality data
- Production volumes
- Continuous improvement
- Cost saving achievements, energy saving achievements
- Innovation prices
- Consistency in being innovation or quality leaders

It is time and money worth spending, to discuss your presentations with professionals before you give them.

2. Language
Internally, Japanese companies almost exclusively communicate in Japanese. If you want to help your customer to understand your presentation, make sure it is in English and Japanese or only Japanese. If possible, spare your customers from listening to a complicated translation process. Train your Japanese staff to give the presentation. Ask questions during the training to make sure they understand what they are talking about and discuss the topics in depth, so that your Japanese colleagues are able to answer first level questions.
It is difficult to sit in meetings, not understanding anything, especially if you are working with a new team, and having to rely on the information submitted. Therefore spend the necessary time prior to the meeting. Imagine the impression your customer gets when you present in English, your colleagues have problems translating and you begin discussions in front of the customer about their questions. In most companies that is the rule and not the exception. But this is also the first reason why customers do not award you projects – the local employees, who should be at the forefront, often look like cheap translators.

If you only speak English (not recommended), make sure that the other side can follow with questions. If you see that the answers do not make sense – change the approach.

3. Benchmarking
During initial presentations you have to benchmark. Compare your product to competitors and present it in an easily understandable way, e.g. following the Japanese system of O = superior, X = inferior, Δ = same level, no difference.

4. Introducing your company
Do not present a pure technology company, prepare a short story: why your company exists, what its values are and what motivates you to present to your potential customer. You have to be proud of your company and the customer has to feel this. Please do not be overconfident and do not speak ill of your competitors.

5. Summary
Japanese engineers very often have to report to their manager by summarising all the information on a single A3 page. If you have a chance to prepare your core message on an A3 page, this often does your counterpart a great favour.

5.11. THE JAPANESE HR MARKET

The Japanese human resources market is the bottleneck for foreign companies. It is highly regulated and connected to the school and education systems. Most Japanese families hope that their children will work for one of the big companies. And even though some of the big companies in Japan have barely been profitable for years, young people still want to start their career at such companies.

The top companies like Toyota, Denso, Honda, etc. can choose from hundreds of university graduates. Such graduates are, compared to those from European universities, literally useless. It is difficult to enter good universities in Japan, but once a student has been accepted those 4 years are considered the only free time a Japanese person has during his/her life. Students go through an almost brutal pre-selection process to enter good universities, and the suicide rate of students who do not meet their parents' expectations is still the 2nd highest in the world behind Korea. Top companies recruit from top universities and then they train their employees for 3 to 4 years to make them conform to the system. These people only begin to function in their employer's system, which is highly regulated, and up until director level the decision power and responsibility put on any given individual is low. Employees do not want to leave this system unless they have to. The market

has a lot of strong-seeming profiles from people who dropped out of big firms. European companies like to recruit these people at high prices, because they expect them to develop and manage their business. And though there are many positive exceptions, most of these people have never learned to manage or develop anything. They functioned in their system and survived from the relationships they had at university. Most of these relationships become null and void as soon as a person leaves the system.

Please remember that there are employees for whom it is undesirable to work for foreign companies. It is important to find the ones who enjoy responsibility and are able to adjust to your company culture. The most common mistake made here is thinking that strong English means strong skills. Please do not get fooled by strong English capability. Prepare clear job descriptions, develop a clear skill qualification matrix for your position and confirm the points important for the success of your business in long and diligent interviews.

Human resource development is the most important challenge. You will not get the human capital you need, you have to grow it. Yet most Japanese HR managers are actually HR administrators; they are not used to defining gaps in capabilities and developing systems to close such gaps.

If you do not have major budgets for recruitment, clear human resource development and training processes, your business case is probably not realistic. Note the following:

- Responsibility for results and relationships is not a common principle in Japan. People "hide" in corporations and function as groups.
- It is almost impossible to find employees who provide open feedback to headquarters or even begin to object when required.
- Employees who function well in the company culture of the foreign company might have completely the wrong attitude towards the customer.
- The word for foreign company is "gaishikei", and it is not a positive word. There are many job-hoppers who hop from gaishikei to gaishikei, because it is easy to find jobs when you speak English. A foreign company should be very careful to avoid typical gaishikei employees who want to enjoy high salaries and an easy life.
- Implement transparent and effective target tracing systems and connect them to remuneration. Many Japanese will tell you that this is not usual in Japan. This is not true. Good Japanese companies have performance dependent salaries.

Last but not least, no matter how good a company is, it will make major employment mistakes. It is almost impossible to fire people. Therefore it is important to have flexible salaries thanks to which expensive employees will want to leave the company if they stop receiving bonuses.

5.12. DIFFERENT COMPANY SETUPS IN JAPAN

In order to set up your business correctly, a deeper consideration of the definition of "customer" is required. Japanese customers produce worldwide, and many companies do not deliver a single part in Japan, but have considerable business with Japanese customers all over the world. So there must be a differentiation between a Japanese customer in Japan and a Japanese customer outside of Japan. Some companies who deliver to Japanese customers in Europe or the USA do not even have representation in Japan, but this is the absolute exception. This setup is possible and recommendable if:

- There are local competitors in Japan which are very strong and Keiretsu-based
  Remark: In this case, today it is extremely worthwhile looking into joint ventures or even M&A with these companies, because many of those without a global presence are too weak to survive.
- The customer wants this setup and it is the first experience with Japanese business partners (sometimes customers prefer this setup as it is easier to manage a cooperation outside of Japan, since people speak English....)
- The product does not require a complex application engineering process

In most cases this approach leads to very limited results. In the automotive industry the technical requirement for companies who can develop business with Japanese OEMs is very high. The products need expertise in Japan and the customer expects a local sales, engineering and support organisation. As soon as a European company reaches the conclusion that they need stronger representation in Japan, they have the following options:

5.12.1. Representative office

The most common approach to the Japanese market is to start with a representative office. A representative office has strict legal limitations, which prohibit participation in actual business transactions. Its functions are

limited to pure market information collection and representation functions. We would recommend it for customers who actually only want to work in the functions outlined above. Many companies do sales for years through rep. offices, but we would not recommend it for two reasons. One is that it is illegal; the second is that customers expect to do business with a legal entity in Japan, which a rep. office simply is not.

When analysing failure and success in Japan, we also very often found that rep. offices did not have a strategy to "grow or go", and are not able to overcome the chicken or egg discussion about Japanese business. These offices create and hold small businesses, but never really think about a large scale approach to Japanese customers.

5.12.2. Kabushiki Gaishya (Co., Ltd.)

The Kabushiki Gaishya (Co., Ltd.) is the most common business structure in Japan. To register a stock company is a fast and inexpensive act in Japan. It gives your business an official frame-work, is attractive to employees and customers understand the kind of legal setup they are talking to. Furthermore, all costs for the setup and the initial phases, in which you will probably not make too much money in Japan, can be loss-carried forward. Since you will have profit in Japan sooner or later, you can off-set such losses.

5.12.3. Joint ventures

Joint ventures (JVs) are an excellent option to overcome deficits which European companies have in Japan, like:

- Difficulty in finding capable staff
- High investment required for buildings and plants
- Low access to customers

But as simple as this solution looks, it is very difficult to manage. There are very few stable European-Japanese JVs which have lived up to expectations. European companies expect their partners to bridge the gap between customer expectations and product and service, but that automatically requires that both sides of the JV trust each other and enter seriously into a process of adjusting products to Japanese requirements. In most cases both sides fail. The Japanese side fails to explain why each adjustment is required, and the European Side fails to accept that the requirements put in front of them are necessary.

The energy, management involvement and management capacity required to handle a JV with Japanese partners are repeatedly underestimated. Yet, this form can be a very good option to grow in Japan, especially when it provides the opportunity to increase shares through common success. In most cases it should be the target of the European Partner to gradually take over the company.

5.12.4. Virtual Kabushiki Gaishya

The initial investment necessary to form a Kabushiki Gaishya might be too high for many companies: rent an office, hire a secretary, a senior manager and an engineer. 350 000 to 500 000 euros will quickly be spent in the first 2 years, and most of the energy does not go to the customer – most energy is spent on creating a company.

There are a few firms in Japan which will provide your office, senior Japanese and European management, support engineers, finance, etc. and your company can dispatch a single specialist who can effectively begin work on the day of his arrival. These companies are able to show a viable organisation to the outside from your first day in Japan, help you to grow the company and with rising success they will build your company in Japan and hand it over to you within 2 to 4 years.

5.12.5. Distribution / trading firms

Classical distribution or trade representatives are also a very good option for products which do not have an overly high technical complexity or which are not too difficult to service and to maintain. The higher the complexity of your products, the less recommended this option, as the chances that the distributor will support this product in a committed and confident way are low. In addition, most distributors/trading firms only have a very limited or segmented access to Japanese industry and specialise on clearly defined target customers. Toyota, for example, might even demand that suppliers do business through its own trading firm Toyota Tsusho, for currency hedging and logistical and many other service-related reasons.

5.12.6. Greenfield production

After initial success, companies often consider production in Japan. A greenfield approach is possible and, based on the experience of the authors, who have done it, even recommended. Having your own production site in Japan gives you the chance to create your own company culture in Japan, one which respects your

European DNA and interfaces well with interests of Japanese customers. The hurdles to succeed in this approach are extremely high, and they require an excellent management team in Japan and in Europe, which has years of Japanese experience.

Greenfield is also an interesting option because regional governments give heavy incentives to build production locations. The worker base available in Japan is excellent and extremely cheap. In typical automotive production areas, staff ranging from 900 yen per hour (blue collar assembly) to 1,600 yen per hour (excellent foreman) can be acquired.

5.12.7. M&A

There are currently many Japanese companies looking for partners or investors because they have lost global competitiveness, but they are aware of their value in terms of access to Japanese customers. A weak yen and "Abenomics" both support inbound deal activities. Times have never been better. But to close a deal in Japan is extremely challenging. There are major differences, beginning from the approach to the closing, as the motivation of the other side to sell the company might be very different from the expectation of the buyer.

In many cases a straight M&A deal is not recommended. In order to achieve the target of 100% ownership, it is often easier to go through multi-dimensional governance processes, in which the companies share assets or have cross-participation. Starting with a 50:50 JV in which the roadmap to 100% is defined in the JV contracts is often a good way to not make the acquisition target look like a loser. Many Japanese owners or shareholders need complex scenarios to help save face. Many deals in Japan are offered by Japanese banks, which quite often hold major shares in the targets. Their main goal is often to get liabilities off their books. A very thorough due diligence with market experts is essential.

Currently Japan and central Europe share one common phenomenon: many SMEs do not have a successor and family owners are trying to disinvest from very good companies. Their target is not only to make money, but also to secure the future of their life's work. These companies are very interesting targets for SMEs from Switzerland.

5.12.8. Networks and partnerships

It is also possible to enter non share-holding partnerships with Japanese partners who might currently work in different technologies, but have the potential and customer access to also represent new products to Japanese customers. Such partnerships are difficult to find and initiate, but can be very beneficial for both sides.

6. Interview with Masaru Otsuka



About Masaru Otsuka:
Masaru Otsuka is Japanese and studied Business Administration at Seikei University, Tokyo. He entered Nissan UD after graduation and later received a call to the diplomatic service in North Africa due to his language ability. Returning to the industry, he managed the growth of Tadano (a leading construction vehicle maker worldwide) in positions in and outside Japan. Through excellently managing the growth of Tadano in Europe, he caught the attention of Webasto AG Fahrzeugtechnik in Munich, the globally leading supplier of roof systems and auxiliary heating systems for cars. They hired M. Otsuka in 1992 to grow the global business with Japanese transplants of OEMs in Europe and USA. Starting his activities out of Europe, he grew the sales share of Webasto in Europe and USA with Japanese OEMs from zero to today's level.

In 1998 he moved to Japan as President and CEO of Webasto Japan. The aim was to reinforce the team in Japan for further growth of Webasto with Japanese OEMs not only in Japan but also in Europe, America and Asia. He drove the growth of Webasto using the strong Japanese engineering and production team based in Hiroshima to extend the business. By his retirement in 2013, Webasto's production sites in Asia had expanded from two production sites in 1998 to 8 production sites across Asia (Japan, Korea and China). The team in Japan has contributed to the growth of Webasto not only for business with Japanese OEMs but also for German and American OEMs in China supported from Japan with engineering and production capabilities. In addition, Mr. Otsuka used the presence of a strong team in Japan to grow the business with Korean OEMs Hyundai-Kia to become Webasto's biggest customer worldwide.

As a cross-border manager, his achievement is based on his skill in "letting cultures work for the benefit of the customer."

Mr. Otsuka retired last year from his operative tasks and is a permanent advisor to the global advisory board of Webasto, which is led by Mr. Kortüm, who served as CEO of Audi before he took the CEO position at Webasto in 1994.

Mr. Otsuka was interviewed by Markus Schaedlich on the 7th March, 2014.

Interview:
M. Schaedlich: Webasto is one of the most successful foreign suppliers with Japanese OEMs. What are the foundations of this success?

M. Otsuka: Early on, Webasto recognised the potential of globally growing this customer group and combined its global presence with the existing JV, which we had in Japan since 1978. We quickly began to implement Japanese customers' unique quality and cost requirements into our products and production processes and tried to leverage our know-how from Japan all over the world. Our Japanese customers benefited from this and so did we as a company.

M. Schaedlich: Mr. Otsuka, we showed you the report about the structure of the Swiss automotive industry. Where would you spontaneously recommend companies to look for opportunities?

M. Otsuka: It will be very difficult for Swiss companies to gain business with "Me too!" products. So innovation, technology, quality/cost leadership are the basis for success. If a Swiss company in any field of parts or services has gained a leading position in Europe (preferably in Germany, because it is easier to make the Japanese understand), they can consider offering such products to Japanese customers.

Japanese producers and suppliers are still not good at dealing with global non-Japanese suppliers and partners, and if a Swiss company can support the growth of companies with an existing global structure, this

alone can already provide a good base for cooperation. If a Swiss company is innovative and/or capable of delivering on several continents, the potential to gain business is high.

When it comes to customer requirements, the Japanese OEMs are not different from the Europeans. They are currently looking for technologies which support the automotive mega-trends: Japanese companies are looking for suppliers in new areas of auto parts and components, such as for new generation of electric or fuel-cell vehicles targeting fuel-reduction, weight-reduction, new bonding technologies, cost reduction methods in production and SCM and quality improvement; naturally also in machining and investment goods.

In all high-tech areas like, e.g. EVs or fuel-cell cars, Japanese companies have their own approach and solutions with accumulated expertise, so a patented technology which is superior to existing solutions is always a good first step to start considering selling.

M. Schaedlich: Do you see opportunities in engineering services or software solutions, which support efficiency in production and SCM?

M. Otsuka: Japanese OEMs and suppliers are looking with respect to Europe and the tier-x supplier relationship and understand that outsourcing and competence sharing is the basis for this success. Japanese OEMs and big tier 1 suppliers know that they have to consider outsourcing in order to reduce their engineering costs and gain speed. But it is difficult for them to implement this because of their history of having everything best fit for them in-house by continuous Improvement (KAIZEN), and because they are not used to working with external partners who they cannot completely control or adjust to their own culture. Many companies are trying to extend outsourcing at the moment. Many fail and are carefully trying to find a new balance. In addition, many European suppliers over-sold their capability and were not able to deliver in the same way they do in Europe. So yes, for engineering services and outsourcing from foreign suppliers, we do have a friendly climate at the moment, but foreign suppliers have to consider the ability of Japanese customers to manage an outsourcing partner and create a clear common understanding.

In the field of software for production processes or SCM processes, I do not really see a strong opportunity. This is the core and the culture of Japanese companies, which have been developed in-house with continuous company-wide improvement (KAIZEN) focussing on quality and cost improvement, and which is the core difference from European customers. If a company can gain business here, I think initially it will be mainly by consulting and giving presentations which Japanese companies find interesting and adopting their own platform in a specific field and later developing solutions. A JV with Japanese IT solution providers might be a good way here. Japanese producers are proud of their lean production and short lead-times, which is not only based on IT, but also on a highly backward-integrated development and production process through well-organized teamwork and sourcing strategy.

M. Schaedlich: Many European suppliers are and were not successful with their approach to Japan. Where do you see high risks for European companies?

M. Otsuka: In many cases it is the chicken and egg discussion, which makes it difficult. In order to be accepted by Japanese customers you need an organisation, but to build the organisation you need money and a certain security to get business. It is a Catch-22, and this combined with slow decision processes makes it very difficult to find the right approach.

There are several approaches to minimise these risks. One is to start by approaching transplants at first; another is to create virtual organisation, which look bigger than they are in Japan, with external service providers. In such setups a company can present to Japanese customers, get feedback and then make bigger investment decisions. It is important to act wisely and look capable in front of the customer at all times.
Another risk I see is human resources and their management. Foreign companies have severe difficulty in finding the right people, and most Japanese are risk-adverse and do not want to join small foreign companies. To find and manage a good team is a major bottleneck for most European companies.

Many European companies also underestimate the cultural aspect of dealing with failure. No customer is happy if things go wrong, but Japanese customers in particular consider failure as part of the business. If things go wrong, most European companies withdraw from contracts and close all doors. I do not advise companies to admit failure blankly, but it is part of Japanese culture to excuse in a special way and then immediately enter a proactive close cooperation with the customers to solve problems (this has to be managed by the Japanese). Not doing this does not create a direct cut to business relationships, but the customer will

turn away from such partners, and once such decision is made, it is irreversible. Many European companies do not even recognize that the decision was made!

But naturally the risks change based on the project phases companies are in. Once a company has gained business it is difficult to get money out of such projects. Japanese customers are world class in finding every single yen of cost reduction, and they are literally hunting such yen in advanced teams. Purchasing, engineering, production planning etc. all work together to optimize their products, and the customer quickly recognises whether this sort of approach is part of the culture of the company. Most European companies do not have this attitude, as they mainly functioning following Pareto, an approach which the Japanese barely understand. In front of a Japanese customer, it is very important to show how professional we are and how we cross-functionally manage the project by focusing on cost, quality assurance, response/speed and design work for cost and quality. Another very important element is to show how the team in Japan who have direct interface to the customer are managed with a strong leadership to make things happen in Japan as well as at HQ. We have to try to show in front of customers how we are able to achieve high level of QCDDM (the most important elements for customers) managing the whole team.

(Note: QCDDM is **Q**uality, **C**ost, **D**elivery, **D**evelopment and **M**anagement.)

Japanese producers also have a severe front-loading in projects and will implement changes to cut costs at an incredible speed until and even after mass-production. The workload and differences in project-management can easily break the financial neck of new comers.

M. Schaedlich: How can companies avoid failure?

M. Otsuka: This is difficult to answer concisely. Each product and process behind it is a little different. Role models are difficult to find. I think the managers who want to start with Japanese customers should invest considerable money in advance first and here I recommend not relying on a single source. A CEO who wants to make the decision to work with Japanese OEMs should have his management team work on concepts in which they build on the success of the company in Europe. Then they have to collect the requirements or different culture of potential customers in Japan or other parts of the world. They have to find the gaps themselves between the requirements of Japanese customers and their current customer base. This is the most difficult but important element, because customers will never specify their requirements. They are used to working with suppliers who already know the customer's requirements perfectly. Then they have to define how to close these gaps and if the company has the financial, organisational and managerial means to do so. A strategy which is thoroughly developed out of these elements will reduce risk.

Point of sale, point of R&D service, point of production, point of quality assurance philosophy, partnerships… these are the basic pillars of this kind of strategy. Clearly define the key success factors from the point of view of your potential customers and you will reduce your risk of failure.

M. Schaedlich: Patience and a long-term approach is important, this is what you can read in all publications.

M. Otsuka: Yes, it is definitely true that Japanese OEMs do not show any opportunistic behaviour for short-term savings or benefits. From their expansion to global production in the 70s and 80s, they know that they have to be careful with their partnerships and supplier selection, because only suppliers who understand the development and production philosophy of Japanese companies are able to deliver the right quality, design and price (QCD).

Having said this, I want to emphasise that a long-term approach does not mean that a company should not set clear targets and gates to implement a strategy. When defining your gates and targets, just assume that things will take 1.5 to 2 times as long as in Europe. If your team does not reach their gates, review strictly and pull the plug before losing too much money. But be aware that a Japanese OEM which you approached once and did not feel that you have the breadth to work with them will remember that you gave up. This makes the hurdles for a second chance high. As Japanese OEMs work as a team with different functions and most people work in the company until retirement, once you show inability to recover, they will remember such failure. Unfortunately, since most foreign suppliers have made such mistakes in the past, Japanese customers are very cautious to work with foreign companies. Newcomers have to set up their strategy bearing this in mind.

Due to characteristics of the car OEM business, with a model cycle of about 3 years, we can't escape the long-term view or strategy of at least 10 years before making money. And as long as it may take to get the business,

please be prepared that once the business starts, the requirements of your team – especially the speed requirements – will ramp up exponentially!

M. Schaedlich: It sounds difficult to make money with Japanese OEMs.

M. Otsuka: It is difficult to make money anywhere today, and why should people pay for companies if they are not the best? But you are right that for European companies the entry barriers to profitable business are high. For example, I have managed businesses with Korean customers with a long-term view, and today Webasto delivers the largest number of roof systems to Hyundai-Kia among all customers in the world. The Korean customers or industry are quite similar to Japanese customers of 10 years ago and very different from European or American customers.

The strategy of a Swiss company must consider whether they will ever reach the scale of business with Japanese customers necessary to break even. It is also more difficult to gain profits from production with Japanese OEMs than Europeans. Japanese cars are cheaper and have lower margins; the OEM normally makes less profit in Japan and has lower salaries, etc. The lower cost in the product is achieved through special design methods (design for cost) and a permanent compromise between R&D, purchasing, production, quality assurance, etc. If European companies are able to integrate into the process of value analysis and value engineering of Japanese customers, they can lift big potentials for their global profitability. So again I see big opportunities and risks here.

Let me give you an example. It is my experience that German engineers enjoy working on tolerance concepts which challenge what's possible. This approach drives production and quality assurance costs up. Japan is different; we focus on what is necessary to achieve the functionality target, and that drives costs down and ensures quality, which has a huge impact on costs. Designing to function and for cost is the key to becoming profitable. Unlike European customers, Japanese customers are very keen to evaluate design with an eye for design for cost and quality. It is essential to remember the target of Japanese customers is to ensure all functional quality for high volume of production with as wide a tolerance in parts design as possible (wider process capability index (CPK)) in order to avoid quality fluctuation or deviation in mass production.

M. Schaedlich: Is there still a chance for Swiss companies? Bosch, Conti and all the other big European suppliers are in Japan, and the reduction of supplier accounts is a big issue in Japan too.

M. Otsuka: Well, let me be honest. I see this as an opportunity and risk at the same time. Yes, Japanese OEMs are not enthusiastic about opening new accounts. But if a product is unique or the supplier is leading, then they do it. We may have more and more unique parts for cars due to the introduction of new car concepts like hybrid, EV or fuel-cell, for which new parts or components will be required.

I cross-read the swiss CAR-study about the Swiss Automotive Industry and most of the companies are mid-sized Tier 2 and Tier 3; Tier 1 is not their main focus. For such companies there are huge opportunities to go with their existing European partners or to approach the existing mega-suppliers in Japan and grow with them, expanding the Japanese OEM business worldwide. Around 30 of the top 100 global suppliers are Japanese. To serve them is a direct access to this market, and they need technology and innovation.

I also see strong chances with small Japanese suppliers who need technology and have existing accounts at Japanese OEMs. In addition, there is a big opportunity to help such companies globalise their portfolio. I feel that there are more opportunities than exclusions.

M. Schaedlich: What does a European supplier have to consider when promoting itself to J-Customers?

M. Otsuka: That is a good question. It is definitely not enough to just knock the door and say: "Hello, I am the best and deliver to Audi and Benz, please buy my products!" Many of you might smile now, but I have seen this many times, even at Webasto in Europe or America.

If a company wants to be successful in its approach, it has to show that it has deeply studied the customer's requirements, did its benchmarking homework, thought about the hurdles in respect to serving the customer in the right organisation and so on. Then material has to be prepared in English and Japanese and presented by a Japanese speaking expert who should definitely have in-depth knowledge about cost and quality driven

Japanese industrial culture, preferably Japanese, who understands how to sell and how to answer questions which are not being asked. Let me elaborate on this. Japanese customers know why European suppliers fail and they will not ask directly, if you have done your homework and considered your shortcomings. But if somebody shows that he understands the potential shortcomings and is working on them, the credit which a company receives for this is huge!

Do not oversell; show where you will have to learn in the process; ask for support, without exposing yourself to inferiority complexes. A confident approach based on know-how, facts, data, local competence and the acknowledgement of small gaps which need filling is a healthy formula for success.

Another factor which should be considered is that Japanese customers like consistency. Showing data proving that your company has delivered high quality over a long time, consistently won innovation awards, supported the functionality of systems or cars for years is a guarantee of success with Japanese customers. Do not forget that the product itself is only one part of a purchasing decision. A high capability in R&D, manufacturing, production, quality assurance management, SCM etc. underlined with data is what's persuasive. Do not forget to benchmark against your competitors, not only the product itself but how they manufacture or produce or assure quality/cost and find ways to beat or join them.

M. Schaedlich: What should be done if projects start in Japan?

M. Otsuka: Be quick and prepared. Clarify the specification and expectations behind the specification, because often text leaves a lot of room for interpretation! As Japanese customers are used to giving orders to their suppliers, they will not specify detailed requirements, not only for the product but also other requirements like delivery, spare parts, continuous cost reduction processes and so on. This is because most of their suppliers are well aware of those requirements thanks to long-term business relations.

Build your organisation as fast as possible and implement well-balanced steering committees which have the organisational power to react fast enough if things begin to deviate. As a top manager you have to learn to trust your local teams to make the right decisions.

Watch your project management and product costs and begin to implement Japanese cost cutting methods as quickly as possible – design to function for cost/quality and not for the sake of perfect engineering with rigid tolerance. Quote considering higher project management costs and discuss this with your customer to reach a compromise.

M. Schaedlich: Where do you think the biggest differences between Japanese and European OEMs and Tier 1/Tier 2 producers lie?

M. Otsuka: It is impossible to answer this question without writing a book. The differences between each OEM and each Tier 1 are so huge that an easy answer is difficult. What is important is that all big Japanese companies are looking to Europe at the moment, especially Germany and Switzerland, and trying to understand why these companies are successful. This means they will be asking the same question as you. We've mentioned many differences in this interview, and cross-reading your report, the major differences are covered. But it is these very differences which offer opportunities for Swiss companies in Japan. Many Japanese OEMs are open to utilising the potential which arises from differences. Toyota has clearly advised its Tier 1 suppliers Denso and Aishin to globalise and get more business with German OEMs, to lift technology and process potential as well as improve economies of scale by adding volume. You describe the "Galapagos Effect" in this report. This is a good starting point for any company looking for business with J-OEM. If you analyse the supply chain surrounding your products, you will quickly understand where the differences are and where you have opportunities. In general we do not have system suppliers in Japan like in Europe; the dependency on car manufacturers' in-house design is much higher in Japan. After World War II Japan had 11 car manufacturers. In order to compete and not share know-how, the vertical integration was huge. This vertical integration approach with in-house expertise at the manufacturer is still in place.

Another aspect described well in this study is the risk adverseness of J-OEMs. They are speed leaders and kaizen specialists and not product innovation leaders. I do want to extend my thoughts on the "Anzen dai-ichi" – security first thoughts – drawn in this study. When expansion to overseas started in the 70s and 80s, Japanese OEMs paid a high price for quality and function issues which arose from incorrect specifications or the misjudgement of market requirements. Detailed in-house specificationss and rules developed from these experiences. These specifications became their bibles for security. Unfortunately, these systems have not really reflected that markets and technologies are changing. Those specifications have been modified, focusing on

quality and cost improvement, but using well-known KAIZEN methods (continuous, incremental improvement but nothing dramatic). And due to rigid team organization, no engineers take risks to make sweeping changes. For engineers at the customers, it is safest to follow the rules and escape from any responsibility by sticking rigidly to the specifications. It is time well spent to try to convince Japanese customers that a new technology can be safe and good and improve function, manufacturing methods and cost. The environment to do this has seldom been better. But as always, proposing such changes has to be shown as a cost or quality improvement.

Another major difference I have observed in my career is production launch preparation. In Europe the ramp-up speed and quality is much lower than in Japan. Many European suppliers lose millions of euros because they cannot handle the speed and the change management during pre-launch and launch in Japan. Actually a product in Japan should be finished at pre-launch around 3 month before start of production (SOP). At this point you should not only have your production part approval process (PPAP) papers, you should have done your homework behind them.
If a supplier has problems in the period 5 months prior to launch or 5 months after launch, the OEM sends in quality teams to turn the company and the processes surrounding the product upside down, and these teams stay until the problem is solved. This can heavily involve sub-suppliers also design teams both at the OEM and supplier to adjust the design for cost and quality. Do not underestimate a launch with a Japanese customer.

M. Schaedlich: Many European companies prefer partnerships and JVs to enter Japan. What do you think about this?

M. Otsuka: Yes, this is a very good option as it greatly reduces the problems of opening accounts, learning the customer's processes and finding the right people. But do not underestimate the management attention and capacity which is required to manage a partner, particularly if you chose a weaker partner. This company might be weak for a reason and an injection of good technology alone might not be enough to compensate for years of poor management and an organisation which is not flexible enough to adjust to change. And don't forget that once you have "married" with a partner in Japan, a divorce can cost you everything you invested. Once you split, dependent on reasons, you will lose customers' confidence in your ability to manage business in Japan. So yes it is a good option, but it has to be managed extremely carefully. Before entering a doubtful partnership, I would instead recommend trying by yourself or not trying at all.

M. Schaedlich: Is there a difference between managing a European supplier and managing a Japanese supplier?

M. Otsuka: There are big differences, especially in managing globally. I see big challenges in managing a Japanese supplier from European headquarters, particularly for German suppliers who are currently strongly targeting global standardisation. For this standardisation, they always choose the way things are done in Germany. This eliminates the flexibility needed in Japan to meet customers' requirements. Standardisation should be a communality of best practises and look for benchmarks all over the world. Sorry this does not 100% refer to your question, but I thought it was important to mention this, because customers are also human and they have different characters and demands. Standardisation is very important but we should have room to be able to wisely adjust to the demands of the customer or market. We should give also freedom to local teams under well thought out standards from HQ in order to let local teams be motivated and creative for further expansion of local business with flexibility.

As for the management of a Japanese supplier itself, there are also huge differences. How to motivate and engage people, how to challenge them to go beyond the currently possible… all this is done differently in Japan and has a huge cultural aspect. Human resource management is the biggest difference. A European liberal management approach based on work-life balance targets often does not work. I have already mentioned many differences and requirements of Japanese customers. To implement such differences in your organisation naturally also requires a different management approach.

M. Schaedlich: Mr. Otsuka, thank you very much for the interview and your time. Is there anything else you would like to recommend Swiss companies?

M. Otsuka: Thank you very much for interviewing me. Yes, I would like to give a final message to Swiss companies: The image which Japanese people have about your country is very positive. Precision, technology, security, stability and wealth are associations connected with Switzerland. If you build on these associations and combine them with leading technology and the right approach, I see strong opportunities to gain business.

7. Suppliers and technology

This chapter refers to technologies, commodities or major systems and tries to provide a brief picture of the major categories in the automotive supply world. As mentioned before, to discuss every category in detail would go beyond the scope of this report. When Swiss companies begin to study the Japanese industry, they must connect with associations or experts in their field to gain a deeper understanding about the specific requirement of their sector.

7.1. PRODUCTION TECHNOLOGY / PRODUCTION SYSTEMS

As well as leading in production volumes, the Japanese automotive industry has also developed some of the finest production equipment and production machinery suppliers in the world. Some of these have become global players (Mori Seki, Howa, Okuma, Yasukawa, etc.), but many big players are still mainly focused on Japanese customers, without having a global network. While many Japanese production investment goods producers have become global players, only a handful of European producers have successfully made the step to Japan. The non-tariff barriers to enter the Japanese market with production equipment are extremely high:

- Planning, setup and installation
- Controller (the Japanese production standard is Mitsubishi controllers and the associated software)
- Documentation
- Language of manuals and operation boards
- Spare-part strategy
- Maintenance and local service
- Cost per unit calculation methods
- High energy savings or high reduction of emissions, pollution

But in recent years highly specialised production equipment specialists from Europe have become increasingly successful in Japan. One example is SCA Schucker, a company specialising in car-body sealing equipment. Their technology is so superior to Japanese competitors that they are gaining more and more customers. They have grown organically by entering a close partnership with a Japanese specialist in their field. Customers are buying the technology because of the large saving it offers.

If Swiss production equipment and machining producers have a technology which can majorly contribute to production cost savings and quality improvement, they should start an investigation about how to enter the market.

7.2. COMPONENTS / GENERAL SMALL PARTS

The component supplier industry is so diversified that it cannot be covered in a single report. Chapter 5 describes which suppliers should consider entering the Japanese Market in what ways. In short, here are the suppliers who could consider working with Japanese customers:

- Suppliers of a patented superior technology
- Suppliers of a global production network which supports the plant structure of J-OEMs, where Japanese competitors cannot provide such network
- Suppliers where only one over-dominant Japanese supplier exists, and there is a chance to become a second source for risk-hedging
- Suppliers with the opportunity to cooperate with a Japanese partner (JV, partnership, M&A) to gain a complete structure that allows supply in Japan or other core markets where they are not yet present

If one or several of these points apply, a consideration to supply to Japanese car manufacturers can be undertaken. Do not consider supplying “Me Too” products; the chance of gaining profitable business is very low. The industry is too mature for newcomers. There are a couple of specialised German suppliers which are very successful in supplying small parts to Japanese OEMs and Tier x customers because of their scale of business and global market leadership.

7.3. ENGINE / FUEL / EMISSION SYSTEMS / ENGINE CONTROLLER / OBD…

Japan has seen a major reduction in its competitiveness in the engine and engine component industries. Japan had leading engines around 10 years ago on account of their fuel efficiency. Today the German car

manufacturers have overtaken the Japanese manufacturers through their downsizing and turbo-charging concepts. These developments in Europe were combined with a huge effort in the fields of engine control and controller technology. The European industry is leading across the entire area of engine testing, engine calibration tools and test equipment. Many European suppliers and research institutes involved in engine materials science must also be considered interesting for Japanese customers. In the area of engine production technology Japanese OEMs are open to receiving new technologies and ideas, provided such ideas are compatible with their own production philosophy. However, it must be noted that the engine is considered the core technology for each OEM, and to gain access to this technology and become an accepted supplier is extremely challenging. Several German giants and specialised players are fighting for market share in engines, hardware and software. Bosch and Conti have garnered major success by acquiring Japanese companies. Most companies are currently struggling to find the right entry strategy.

Japanese manufacturers have basically abandoned diesel engine technology. Diesel engines and technologies are a field in which foreign suppliers can gain business with lower resistance. The exceptions are high volume truck and bus engines.

One company which very successfully bought its way into the Japanese market is Mahle, who bought two Japanese companies and injected its own technology. But at the same time, Mahle was able to gain huge advantages from their acquisitions by extracting the kaizen potential from Japanese operations worldwide. Changes in production synergy resulting from Japanese acquisitions are an effect which is frequently reported by BOSCH, who uses their Japanese production specialists to optimise plants in other regions (BOSCH has around 8,000 people in Japan).

7.4. POWERTRAIN / ROLLING CHASSIS

Transmission, suspension, ESP, etc. all components, systems, mechanical and electronic parts involved in the powertrain are well supplied by Japanese manufacturers like Denso or Aishin. However, many European suppliers find a profitable business here because differentiation through patents, technology leadership or competitive global production price can beat local Japanese competition.

7.5. BODY EXTERIOR / LIGHTWEIGHT / COMPOSITE MATERIALS / GLUING

Experts see the body as one of the major differences between European and Japanese cars. Here the complete difference in philosophy becomes clear. The bodies of comparable Japanese and European cars can have a weight difference of between 20 to 50 kg. The number of spot and laser-welding points is significantly different (-15% to 20% in Japanese cars). The torsional stiffness of the Japanese body is normally incomparably lower and the Japanese body is also incomparably cheaper. The body ultimately makes a major contribution to the drive dynamic of the vehicle, and here Japanese OEMs put a lower priority on dynamics and agility. Their targets are comfort and safety. These targets are easier to achieve for less money, and Japanese manufacturers accept the compromises which occur in dynamics and NVH (noise vibration harshness).

To our best knowledge there are no really successful European suppliers supplying body and structural parts to Japanese OEMs in Japan. Some hold a small market share and have an organisation which provides application engineering for transplants. Companies with good technology in bonding and gluing can approach Japanese OEMs.

Weight reduction is as important for Japanese manufacturers as any other. The efforts here are huge. TORAY is the global leading supplier of carbon fibre, and many Japanese suppliers have developed excellent solutions in Class A and structural parts. In raw material and production technology and engineering the Japanese market holds huge potential for all lightweight solutions, but be careful: Japanese customers are only interested in anything new, before a company can make money out of it, if the technology or process can beat existing concepts financially and in terms of quality and process security. Entering the Japanese market with solutions which have not succeeded in gaining major acceptance in Europe is not recommended.

Gluing technologies for the body and interior are becoming increasingly important, but the application of such technologies is still rare compared to Europe. So there are good opportunities for companies which offer leading technologies here.

7.6. STEEL AND MATERIALS

Japan has the biggest steel makers in the world and they have excellent formulations, defined using their own standards. When a supplier begins to supply in Japan, the customer will help him to define the right steel from local production.

Even though Japanese automotive manufacturers currently have their own specifications in all materials groups, it is normally no problem to match them with European standards and find a good compromise. Again, to enter Japan with new materials, it is necessary to demonstrate success elsewhere before trying Japan.

7.7. INTERIOR

Most interior components and systems are big, just in time volume parts, which have to be produced on or close to the site of an OEM. Business in Japan is normally only possible after acquiring a Japanese competitor, e.g. Johnson Controls. For leading suppliers it is worthwhile looking for business in Japanese manufacturers' foreign production sites and acquiring such business in Japan. One success story is the Swiss company Feintool (see chapter 4.2).

7.8. ELECTRONICS / ELECTRONIC PARTS

This is the domain of Japanese companies. A supplier needs a dominant leading position either through size or technology to even get a meeting with a Japanese OEM. However, the Japanese industry has a huge Galapagos effect here; leading suppliers have the opportunity to gain business, particularly in software tools, software and application technology. Companies like Panasonic or Hitachi are often looking for suppliers in Europe who are able to apply their hardware to European cars.

7.9. CAD, CAM, CAE, SIMULATION TOOLS, MBD, DOE…

Japanese developers have not created global standards across the whole Computer Aided Development environment, and so most development tools and software comes from European or American suppliers. The hurdles to introducing new systems to Japanese customers are huge, because the training, service, documentation and translation effort makes the solutions so expensive that very often there is no business case and customers prefer not to buy new technologies.

Naturally CAD, CAM and CAE tools are global standards today and the exchange between systems is also highly standardised. But Japanese customers show a more defensive and conservative approach, especially when it comes to statistical simulation tools, model-based development tools or DoE tools. German car manufacturers in particular have successfully integrated simulation of all vehicle areas into the development process. They have also developed processes to validate these virtual tools and confirm correlations with the real world. The Japanese development process relies much less on these tools. But Japanese OEMs are trying to catch up in these areas. The chances to develop viable business models here are improving, but to actually make money needs a clear and good business concept. Japanese OEMs are not very good at paying for expertise.

7.10. ENGINEERING SERVICES

Leading European Engineering companies have been trying to gain business from Japanese OMEs for several years, with very limited success. Japanese OEMs are interested in seeing how other companies develop, but the concept of outsourcing work packages is extremely alien to them. A European OEM will give a work package to an engineering company, receive the result and validation reports back, discuss them and then the business is complete. Japanese customers want to understand everything: which development tools are used, why the parameters are set as they are in a simulation process, which material cards are used and why, etc. The discussions and explanation of how results were achieved will often literally kill the business case. In fact, many Japanese customers outsource to learn new methods and suppliers have to protect themselves against this behaviour as soon as sales start.

But a major new trend has been seen, particularly in this industry. Japanese society is aging, fewer and fewer people study engineering, the Japanese automotive industry wants to maintain Japan as major engineering location, cars are getting more and more complex and new requirements are being established. Hence the industry has a major lack of engineers. The major Japanese automotive companies have defined the areas of the vehicle or their systems which are core technologies, and they will grow and nurture these areas in-house. For all other areas they want to use engineering service providers or capable suppliers. The chances to gain business here, especially by looking into joint ventures or M&A, are huge.

7.11. FOCUS ON ENVIRONMENTALLY FRIENDLY TECHNOLOGIES AND PRODUCTION

Most industries worldwide are following this trend, and the Japanese automotive industry is no exception. If a company can offer a proven, successful, profitable concept which supports environmentally friendly products, the opportunities are good. But remember: "Do not try to enter Japan with a product which is not yet successful in Germany or Europe."

7.12. OPPORTUNITIES FROM GLOBAL ALLIANCES

Previous chapters have already described the cooperation between Nissan and Renault or Daimler Truck and Fuso. Commonality of parts and systems is still a big issue at these companies, and suppliers who supply in Europe have extremely good chances to also supply in Japan, provided they find the right setup.

7.13. OPPORTUNITIES BASED ON THE SWISS AUTOMOTIVE INDUSTRY

The Swiss automotive industry does not really focus on a Tier 1 position and also contains many Tier 2 and Tier 3 suppliers. The attached overview of the 150 biggest Japanese suppliers and their core products will help you deliver to Japanese Tier 1 suppliers. Most Japanese OEMs have a major issue with handling business in English, but this often becomes even more difficult with Tier 1 companies. But these companies are normally extremely interested in growing their business relationships abroad and are willing to invest in new technologies and products which will help them to grow both inside and outside Japan. One often neglected aspect of business potential is that Swiss companies can look at the Japanese supplier landscape and look for potential partners whose products they could place in Europe to European companies.

8. Successful European suppliers in Japan

Before starting this chapter, the concept of "success" needs to be defined. Success can be measured by:

(1) Market share with Japanese OEMs
(2) Profit with Japanese OEMs
(3) Market share in Japan or the rest of world
(4) Building a successful presence in Japan
(5) Being considered a global system partner of a Japanese OEM

Suppliers can make money with Japanese OEMs inside or outside Japan or both. Many foreign suppliers have small sales offices in Japan, which supports the business approach for transplants outside of Japan. Few companies have only business with transplants without any kind of representation in Japan. With very few exceptions, these setups lead to comparatively small market shares but can be excellent door openers and a good market entry. One company has reached a global market share of 65% with Toyota despite having only 6 people in Japan.

Japanese OEMs have R&D centres outside of Japan, mainly in the US, Europe and China, but for the foreseeable future the majority of all development will be done in Japan. Like German companies, Japanese organisations are run in an extremely centralistic fashion; without influence at the centre, it is difficult to gain a major market share. Success in this industry is mainly measured in market share and profit. Japanese manufacturers produce 30% of global production volume, so it might be expected that successful global mega players would make around 20% to 30% of their sales with Japanese OEMs. But even after acquiring several companies in Japan, the best global player is far away from these figures. From discussions with many CEOs of some of the leading system suppliers, it is known that they achieve between 7% and 12 % of sales to Japanese OEMs. Most foreign suppliers are far under 5%, and two suppliers in the global top 10 have a share below 3%. These figures show that the growth potential with J-OEMs is huge, but difficult to realise. Most companies which do business with J-OEMs for more than 10 years are profitable.

8.1. EXAMPLES OF DIFFERENT SUCCESSFUL COMPANIES

8.1.1. Independent companies in Japan with clear profiles

This is the most common setup. Companies develop a certain business volume in Japan and deliver either globally to Japanese customers or only to Japan. They have gradually built an organisation in Japan which supports the business. Many of these companies enjoy successful business. A common problem is that they become satisfied with a 2 to 5 % market share with Japanese customers and do not consider strategies for growing further or acquiring partners or M&A. Examples of this kind of company include:

- Feintool
- Sika
- Brose
- Hella
- Benteler

8.1.2. Acquisition combined with core technology

These companies grow organically and make major acquisitions of Japanese companies. Bosch has been extremely successful by combining its core technology with production and engineering capacity they acquired in Japan. The following companies use the same strategy:

- Continental
- Mahle
- BASF Paint
- Johnson Control
- Magna Steyr

8.1.3. From representative office to greenfield production

Most European managers consider a greenfield investment in Japan impossible, because getting the right staff and setting up the right processes seemed infeasible. Yet the following companies have successfully achieved this in the component and system businesses:

- Kautex, a German fuel tank producer has set up a plant greenfield in Hiroshima.
- Karmann has set up a successful convertible plant in Japan, which was actually one of the most valuable assets for sale during the insolvency proceedings of the headquarters.

8.1.4. Joint ventures

JVs are still the most common method of expansion, but they are not easy, and normally not the most stable. The ability and management attention necessary to manage such JVs is often underestimated. Most JVs do not live up to their expectations and in most cases fall apart. In some very well-managed cases the foreign partner can take over the JV and use it as a base for growth. Successful JVs include:

- Webasto, the worldwide leading producer of sunroof and convertible systems. Webasto established a JV is Japan in 1978 and bought 100% of the shares in 1998. From that point on, Japan drove growth all over Asia and Webasto is one of the few foreign suppliers which is also market leader in its segment with Japanese manufacturers.
- Autoneum Nittoku
- Mikuni Pierburg

9. Aftermarket and accessories

The aftermarket business in Japan is the most difficult to enter. It is dominated by Japanese brands, distributors and retailers. Very few companies have successfully placed their own brand and products in this segment. Even huge players who are globally well established in this area, like Bosch and Conti, consider the Japanese aftermarket and accessory business a challenge. But it is not impossible to enter the Japanese market, especially if it is a product which fills a niche in the market.

The sales of foreign cars accounts for around 15% of domestic sales. These vehicles could be considered targets for foreign accessories. The owners of these cars mainly receive service through the same OEM sales channel which sells the accessories. Sales through the local national sales company (NSC) might be possible. The big sales and services shops like Autobugs or Yellow Hut stock almost no foreign products.

A successful foreign company in this segment is the Swedish company Thule (carriers, racks etc.). Another example of a European company succeeding in the accessory market is Eberspächer Thermocontrol. The company produces auxiliary heaters for trucks and has formed a JV with its former competitor Mikuni to grow its business in Japan. They sell their products directly to truck fleets or through OES channels. The Swiss company Brüggli might become another example of a foreign firm successfully filling a niche in the accessories market. They are currently working on a market entry in Japan with their 4pets products (high-quality products for the pet, e.g. safe and functional car-transport solutions for dogs), which are already available in Japan in a small scale.

10. Regulation

Many companies would expect major hurdles in standards and regulations, but apart from new technologies there are no major hurdles here. The automotive industry is driven by global standards, and most countries accept European and Japanese standards. In addition, most suppliers deliver their product to the assembly line, and the specification of the OEM or the Tier 1 clearly describes the features a product must have. The part then proceeds into the homologation process for the vehicle and is part of the care approval for different countries.

The components which a company wants to sell in the aftermarket have to comply with Japanese standards published by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT).[5] If there is no Japanese standard available, it is possible to apply for a product release. This procedure should only be taken if the product has high chance of regaining the cost of this registration.

[5] http://www.mlit.go.jp/en/index.html

11. Associations / fairs and shows

There are a huge number of institutions and events related to the automotive industry. The following provides an overview of the main ones:

11.1. ASSOCIATIONS

JETRO (Japan External Trade Organisation)

The Japan External Trade Organisation supports inbound and outbound business and can be a good support when it comes to incentives, contacts and locations. Yet the JETRO follows its own policies and it is recommended to manage these contacts and support via managers who have years of experience in Japan and with JETRO.

JAMA (Japan Automobile Manufacturer Association)

The Japan Automobile Manufacturer Association is only accessible for car manufacturers, but they provide excellent market information and might give you access to experts and specifications. Depending on the products and business, it might be worth building relationships here.
http://www.jama-english.jp/

JAPIA (Japan Automotive Parts Industry Association)

The JAPIA is also recommended for information and maybe contacts.
http://www.japia.or.jp/english/

JSAE (Japanese Society of Automotive Engineers)

The JSAE is a highly recommended environment if a company wants to understand Japanese engineering culture and wants to place products which have a high technical or engineering content. The JSAE also organises the most important Japanese car show, the JSAE show, which takes place in Yokohama every May.
http://www.jsae.or.jp/index_e.php

Other associations

There are too many automotive associations to list them all here. Depending on your product or service it is highly recommended to approach these associations as they can often provide support, but do not expect too much in early meetings and remember that you have to build a relationship with the people who interface with you before they will deliver information or contacts. Asking questions and showing curiosity is the best way to build these relationships.

11.2. FAIRS / SHOWS

Tokyo Motor Show

The best known Japanese show in the automotive industry is the Tokyo Motor Show, but it is also the least recommended show for suppliers. It is a consumer show where the OEMs present vehicles and big suppliers aim to show off their brands.
http://www.tokyo-motorshow.com/en/

Automotive Engineering Exposition

In recent years the JSAE Automotive Engineering Exposition has become the most important show for suppliers and technology providers. It is an excellent platform for inviting and meeting engineers and to promoting one's competence.
http://expo.jsae.or.jp/english/

12. Conclusion / next steps

Those Swiss and Liechtenstein companies who have read this report and believe they have a competitive advantage will need to conduct their own in-depth analyses to obtain a better understanding of the market opportunities available to them, along with possible challenges and risks.

Switzerland Global Enterprise (S-GE) and Swiss Business Hub Japan (SBHJ) offer customized solutions to support Swiss companies, especially small and medium-sized businesses hoping to expand their exports to Japan. We work in cooperation with industry specialists to help Swiss exporters throughout the entire exporting process step-by-step. Our services include:

- Gaining initial assessment from local opinion leaders of a product's chances in Japan
- Gaining regulatory, legal and cultural knowledge about the product's market requirements
- Gaining knowledge of potential customer groups, their purchasing behaviour, purchasing channels and expectations
- Gaining knowledge of national and international competitors and their market activities for the successful positioning of the product in Japan
- Supporting your specific sales activities
- Searching for possible distribution partners
- Setting up meetings with potential distribution partners as well as providing logistical support with traveling in Japan
- Assisting in the search for qualified staff
- Assisting in setting up business in Japan

To discuss your needs and identify the service(s) you will need to succeed in the complex Japanese market, please contact:

Stefan Barny
Senior Consultant Japan + South Korea
Switzerland Global Enterprise, www.s-ge.com
sbarny@s-ge.com
+41 44 365 54 82

13. Background of this study

ABOUT THE AUTHORS AND CBI PARTNERS

S-GE created this report with support and under the advice of CBI Partners Co., Ltd.

CBI Partners is a company with its roots in the automotive business. It has offices in Japan, Germany and England. The company has developed 4 business pillars necessary to support companies in succeeding in cross-border solution implementations:

(1) Operative consulting
(2) Merger and acquisition Support
(3) Interim Management
(4) Human Resource Development (no head-hunting)

CBI's customers range from mid-sized market players to global mega-players like Magna Steyr. All of CBI's services are close to actual operations of companies. They develop and implement solutions with customers. In many cases CBI runs their clients' companies during start up or crisis phases. Their team of European and Japanese consultants has:

- Built plants
- Fixed underperforming business
- Initiated, executed and implemented mergers and acquisitions
- Initiated, executed and implemented joint ventures
- Initiated, executed and implemented market entries
- Built cross-border teams
- Managed companies during restructurings
- and more

Founded in 2006, today they have a team of 27 specialists.

www.cbixborders.com

14. Appendix

JAPANESE TOP SUPPLIERS LIST

Japanese World-Top 500 Supplier (156)	
Company name	**Brief Profile**
ADVICS CO., Ltd.	Jointly established by Aisin Seiki, DENSO, Sumitomo Electric Industries, and Toyota Motor Corporation. Development and sales of automotive braking systems and their components.
Ahresty Corp.	A leading die-casting products supplier. Developed a new aluminium casting process, called New Injection process (NI), which enabled mass production of alternators with uniform characteristics in strength.
Aichi Machine Industry Co., Ltd.	An affiliate of Nissan Motor. 90% of its overall sales are from Nissan Motor. Manufacturer of engines and manual transmissions. Enjoying strong sales of HR series engines used in the Tiida and other models.
Aichi Steel Corporation	A member company of the Toyota group. Manufacturer of specialized steel material such as stainless steel and spring steel, forged products, electronic and magnetized components, and precision forged components.
Aisan Industry Co., Ltd.	A member company of the Toyota group. Manufacturer of engine components. Sales to Toyota account for 60% of its overall sales. The company established a production structure and a supply network consisting of four key areas: North America, Asia, Europe and Japan.
Aisin AI Co., Ltd.	A member company of the Toyota group. The Company manufactures manual transmissions (MT) and transfer cases for various type of vehicles made by Japanese and foreign OEMs.
Aisin AW Co., Ltd.	A member company of the Toyota group and an affiliate of Aisin Seiki. Japan's largest manufacturer of automatic transmissions.
Aisin Seiki Co., Ltd.	One of the core companies of the Toyota group. Manufacture and sales of major parts for engines and brakes. Holds world's No. 1 share of water pumps and oil pumps and has a high reputation for applying electronic technology to its automotive components.
Aisin Takaoka Co., Ltd.	A member company of the Toyota group and an affiliate of the Aisin Seiki. Iron and aluminium casting, machining and metal-forming operation, mainly for automotive products. Manufacturer of lightweight products using die quenching method, contributing in reducing environmental burdens.
Akebono Brake Industry Co., Ltd.	Japan's largest brake manufacturer. Independently operated.
ALPHA Corporation	Manufacturer of general locks. Core products among the automotive part business are key sets, exterior/interior door handles, radiator grills, hub caps, etc.
Alpine Electronics, Inc.	An affiliated company of Alps Electronics. Manufacturer of automotive audio systems and information systems. A leading supplier of car navigation systems.

Alps Electric Co., Ltd.	A large-scale electronics parts supplier. Focus in the automotive business is set on the body electronics segment, high frequency devices such as rear entertainment systems, and in-vehicle cameras and sensors.
Asahi Glass Co., Ltd.	Japan's biggest glass maker. The Company is one of the world's three largest auto glass suppliers, which control a combined 70 percent of the global market. The other two groups are the Central Saint-Gobain Group and the Central Glass Group.
Asahi Tec Corporation	Manufacturer of aluminium wheels, aluminium die casting, aluminium alloy casting, ductile cast iron, and other products. Supplies automotive parts mainly to Mitsubishi Motors.
Ashimori Industry Co., Ltd.	A member company of the Toyobo group. Manufacturer of plastic components. Established a wholly-owned subsidiary to produce seatbelts and airbags in Wuxi City, China in 2005.
Aska Corporation	Manufacturer of automotive floors, suspension arms, and exhaust pipes.
Asmo Co., Ltd.	A subsidiary of DENSO Corporation. Manufacturer of automotive system products such as small motors, wiper systems, and window systems.
Bosch [Bosch Corporation]	A Japanese subsidiary of Robert Bosch GmbH, a Germany-based leading automotive component supplier. A major manufacturer of fuel injection systems.
Bridgestone Corporation	One of the three major tire manufacturers in the world. (Goodyear, Michelin and the Company) Has a technical alliance with Continental AG of Germany in the area of run flat tires.
Calsonic Kansei Corporation	A member company of the Nissan group. Increasing sales of module products, such as cockpit modules and front end modules.
Chuo Malleable Iron Co., Ltd.	A malleable iron supplier. Manufacturer and sales of various types of brackets, hubs, steering, and gear boxes. Sales to Toyota account for roughly 50% of total sales.
Chuo Spring Co., Ltd.	A member company of the Toyota group. A major manufacturer of automotive springs, promoting also the development of non-automotive businesses. Has spun of its U.S. precision springs business into separate companies.
Clarion Co., Ltd.	A leading manufacturer of car audio and car navigation systems. One of Nissan Motor's major suppliers.
Daido Metal Co., Ltd.	The largest specialized manufacturer of bearing metals in Japan. Has the largest share of the engine flat bearings market in Japan.
Denso Corporation	A core component supplier in the Toyota Group and Japan's largest auto parts manufacturer. Conduct its business in five operating segments: Powertrain Control Systems; Electric Systems; Electronic Systems; Thermal Systems; Information & Safety Systems; and Small Motors
Eagle Industry Co., Ltd.	An affiliate of NOK. Main products are mechanical seals and special valves.
EXEDY Corporation	Manufacturer of manual clutches, torque converters and other automotive products. The previous name of the company was Daikin Manufacturing Co., Ltd. The company applies its expertise, accumulated through manufacturing clutches, to the automatic transmission division.
FALTEC Co., Ltd.	In 2004, Hashimoto Forming Industry Co., Ltd. and Altia Co., Ltd. consolidated management, establishing Faltec Co., Ltd.. The Company mainly manufactures automotive exterior parts made of resin, molding products, and sashes.
F.C.C. Co., Ltd.	A member company of the Honda group. Manufactures and sells motorcycle clutches, automotive MT clutches and automotive AT clutches. The world's

	number one manufacturer of clutches for motorcycles.
Fine Sinter Co., Ltd.	Manufacture of automotive powder metallurgy products in the Toyota group. Established through the merger between Tokyo Sintered Metals and Japan Powder Metallurgy in 2002.
F-tech Inc.	A member company of the Honda group. Manufactures and sells automobile suspension components and related dies, machine tools, etc.
Fuji Kiko Co., Ltd.	Manufacturer of steering parts, seat parts, shifter parts, engine parts, parts for large vehicles, and other products. Has capital and business alliances with Tachi-S Co., Ltd. and JTEKT Corp. of the Toyota group.
Fuji Machinery Co., Ltd.	A subsidiary of Fuji Heavy Industries (Subaru). Manufactures and sells transmissions and parts for light vehicles.
FUJI OOZX Inc.	Manufacture and sales of engine valves. Has strong ties with Daido Steel and TRW Automotive (USA).
Fukoku Co., Ltd.	Manufacturer of break seal products, anti-vibration products, and wiper blades. Has a dominant share of the automotive wiper blade market in Japan.
Furukawa Electric Co., Ltd.	A major manufacturer of cables, optical communication equipment, and aluminium rolled products.
Futaba Industrial Co., Ltd.	A member company of the Toyota group. A leading supplier of automotive mufflers. Manufactures and sells parts for automobiles and other vehicles, processed by stamping, welding, plating, etc.,
GKN Driveline Japan Ltd.	Formerly Tochigi Fuji Industrial Co., Ltd. Currently belongs to the GKN group of the U.K. Its core line of business is production of automotive drivetrain system components such as limited slip differentials (LSDs) and transfer cases.
GS Yuasa International Ltd.	A leading battery manufacturer. Manufacturing and sales of automotive batteries, industrial batteries, power supply systems, switch gear, lighting equipment, ultraviolet systems, specialty equipment and other electrical equipment.
G-TEKT Corporation	A member company of the Honda Group. Manufacturer and sales of automotive body stamped parts and thick precision stamped parts. Also produces dies, jigs and tools.
Harada Industry Co., Ltd.	Manufacture of automotive antennas. Also manufactures various actuators for use in headlamp levellers, door locks, trunk lids, air conditioning dampers, etc.
HI-LEX Corporation	A largest manufacturer of automotive control cables in Japan. An independent supplier
Hitachi Automotive Systems, Ltd.	Spun-off from Hirachi Ltd. in July 2009. A leading manufacturer producing an entire range of electrical equipment. Its automotive products are classified into four categories: engine management systems, electronic powertrain systems, drive control systems, and vehicle information systems.
Hitachi Cable, Ltd.	Manufacturer of four types of automotive products: highly functional materials and parts, information communication parts, environmental and hybrid parts, and safety and driving control parts. A Hitachi group company. In July, 2013, the Company and Hitachi Metals merged their operations.
Hitachi Chemical Co., Ltd.	A member of the Hitachi group. A leading manufacturer of semiconductor and liquid crystal display materials, wiring boards and wiring board materials, chemical materials and products, and automotive molding products.

Hitachi Metals, Ltd.	A member company of the Hitachi group. Manufacture of high-grade ductile iron casting, aluminium casting, aluminum wheels, heat-resisting casting, and special steel for automobiles.
H-ONE Co., Ltd.	A supplier of body frame components of the Honda group. Formerly Hirata Technical Co., Ltd. Re-established as H-One Co., Ltd. through the merger with Hongo Co., Ltd. in April 2006.
Ichikoh Industries, Ltd.	Manufacturer of automotive lamps, door mirrors, fender mirrors, wiper blades and arms, etc. Formed a capital alliance with Valeo of France.
Ichitan Co., Ltd.	Manufacturer of forged components for passenger cars such as engine products, transmission products, propeller shaft products, suspension products, and parts for air conditioners. The Company is a wholly-owned subsidiary of FHI.
Ikuyo Co., Ltd.	Manufacturer of synthetic resin products for automotive interior and exterior components such as weather-stripping, trim covers, radiator grills, etc.
Imasen Electric Industrial Co., Ltd.	An independently operated automotive parts manufacturer. Manufactures mechanical components and electronic components.
I Metal Technology Co., Ltd. (Formerly Automobile Foundry Co., Ltd.)	A member company of the Isuzu group. Automotive cast parts account for more than 90% of its total production. Manufacturer of cast parts (iron/aluminium) such as chassis/suspensions and engines for trucks and construction vehicles. The Company, TDF Corporation, and Jidosha Buhin Kogyo Co., Ltd. will establish a joint holding company in October 2013 by jointly transferring their equity shares.
Inoac Corporation	A leading supplier of resin products. Manufacturing and sales of automotive interior and exterior components made from polyurethane, rubber, plastic, and composite materials. They have a joint venture with Johnson Controls.
Iwata Bolt Co., Ltd.	A specialized manufacturer of screws, bolts, nuts, fasteners and other fastening parts.
JATCO Ltd.	A member company of the Nissan group. Manufacturer of transmissions and auto parts such as step for Automatic Transmissions (AT), belt for Continuously Variable Transmissions (CVT), Troidal CVT, Manual Transmissions (MT), and Hybrid Electrical Vehicles.
Jeco Co., Ltd.	A member company of the Toyota Group. Manufacturer of automotive clocks, automotive motors, driving equipment, display equipment and other motors.
Jidosha Buhin Kogyo Co., Ltd.	A member company of the Isuzu Group. Manufacturer and sales of engine parts, axle-related parts, control unit components, transmission system components, etc.
JTEKT Corporation	A member company of the Toyota Group. A manufacturer of steering systems and driveline components established through the merger of Koyo Seiko Co., Ltd. and Toyoda Machine Works, Ltd. in January 2006.
Kasai Kogyo Co., Ltd.	Manufacturer of interior components. Majority of its sales come from the automotive business. Core products are door trims.
Keihin Corporation	A member company of the Honda Group. Its products range from functional components of engines (especially fuel supply equipment), air-conditioners, and industrial valves. Keihin also produces leading edge electronic control units.
Kinugawa Rubber Industrial Co., Ltd.	A member company of the Nissan Group. Manufacturer and sales of automotive and other rubber products, also synthetic resin products: molding windshield, assist grips, axle bumpers, etc.
Kiriu Corporation	Main products are brake discs, brake drums, automatic transmission parts.

Koito Manufacturing Co., Ltd.	Japan's largest manufacturer of automotive lamps. Sales of higher value-added products such as Adaptive Front Lighting Systems (AFS) and High Intensity Discharge (HID) headlamps are steadily increasing.
Kojima Industries Corporation	A member company of the Toyota Group. Manufacturer of automotive stamping parts.
Kokusan Denki Co., Ltd.	Manufacturer and sales of electric products, generators and motors, especially for motorcycles.
Kayaba Industry Co., Ltd. (KYB)	A major manufacturer of hydraulic devices. Manufacturer of automotive products such as shock absorbers, power steering systems, suspension systems, and stay dampers.
Kyowa Leather Cloth Co., Ltd.	A member company of the Toyota Group. Japan's leading manufacturer of automotive interior materials. Developed water urethane synthetic leather without using any organic solvents.
LEAD Co., Inc.	Manufacturer of bumpers, spoilers, handbrake lever systems, doors, parking brake levers and other exterior parts. Sales to Fuji Heavy Industries, Ltd. account for more than 80% of its sales.
MAHLE Engine Components Japan Corporation	A subsidiary of MAHLE (Germany). Former name of the company was MAHLE Izumi Corporation. Manufacturer of pistons and cylinder liners for automobiles and other internal combustion engines.
MAHLE Filter Systems Japan Corporation	A subsidiary of MAHLE (Germany). Former name of the company was Mahle Tennex Corporation. Manufacturer of automotive air cleaners, oil filters, fuel filters, oil coolers, etc.
Meiwa Industry Co., Ltd.	Manufacturer of interior trim parts for floor, doors, and trunk rooms.
Metalart Corporation	Manufacturer of automotive components (knuckles, crankshafts, connecting rods, etc.) and precision forgings for construction machinery. Integrated production from forged materials to machining and assembly.
Mikuni Corporation	Major independent manufacturer of automotive carburettors. Manufacturer of fuel injectors, various carburettors, auxiliary equipment, and pumps.
MITSUBA Corporation	Manufacturer of various functional part products as in visibility-related, drive-related, control-related and actuator related parts.
Mitsubishi Electric Corporation	A comprehensive manufacturer of electric devices. The Automotive Equipment business conducts development and manufacturing activities in the following three segments: Environmental Technology; Safety and Security Systems; and Information and Entertainment Products.
Mitsuboshi Belting Ltd.	Manufacturer of belts and other products (building materials, synthetic resin materials, etc.). Major products are driving belts.
Mitsui Kinzoku ACT Corporation	The Company develops, manufactures, and sells door locks and other functional parts for automobiles.
Murakami Corporation	Japan's top supplier of rear-view mirrors for automobiles. Non-affiliated. Has over 40% share of the domestic rear view mirror market. Capable to handle almost all processes of mirror system manufacturing in-house, from finishing mirror surfaces to painting.
Murata Manufacturing Co., Ltd.	The Company develops, manufactures, and sells electronic components such as capacitors, piezoelectric products, high-frequency devices, electronics modules, and related parts. The Company supplies its products to suppliers producing car electronics equipment, audio-video equipment, telecommunications equipment, personal computers, computer parts, and electric home appliances.
Musashi Seimitsu Industry Co., Ltd.	A member company of the Honda Group. Manufacturer of automotive engine components, suspension components, and steering parts.

Nabtesco Corporation	Manufacture brake products and hydraulic clutches.
NHK Spring Co., Ltd.	Japan's number one manufacturer of automotive springs. Its core products are automotive suspension springs. Manufactures also seats and seat components, precision springs, and other products.
Nichirin Co., Ltd.	An independent, leading manufacturer of automotive hoses. Nichirin's strength lies in the field of hydraulic brake hoses for motorcycles.
NIDEC TOSOK Corporation	A group company of NIDEC Corporation. Manufacturer and sales of automotive parts, motors, semiconductor manufacturing equipment, and measuring devices. Nidec's ties with JATCO have strengthened its position in the automatic transmission and CVT business.
Nifco Inc.	Japan's largest manufacturer of industrial plastic fasteners. Manufacturer of fasteners and fuel system parts for automobiles.
Nippon Gasket Co., Ltd.	A subsidiary of Taiho Kogyo Co., Ltd. Main products are cylinder head gaskets used in automotive and industrial machinery engines.
Nihon Plast Co., Ltd.	A member company of the Honda Group. Manufacturer of automotive components related to auto safety and resin parts. Main products are steering wheels, air-conditioning parts, as well as airbags and air ducts.
NGK Spark Plug Co., Ltd.	Manufacturer of automotive products such as spark plugs and sensors as well as Ignition Timing (IT) related and ceramic products.
Nikki Co., Ltd.	Japan's first carburettor manufacturer. Expanding LPG and CNG businesses as main products and also manufactures automotive system components such as actuators.
Niles Co., Ltd.	Manufacturer of switches, sensors, mechatronics products, and relays. Valeo became the largest shareholder of the Company after acquiring the majority shares from RHJ International in 2011.
Nippon Piston Ring Co., Ltd.	Manufacturer of internal combustion parts, including piston rings, cylinder liners, and valve components.
Nippon Seiki Co., Ltd.	A major manufacturer of measuring instruments for automobiles and motorcycles. Manufacturer of general-purpose instruments, liquid crystal display devices, and general consumer products.
Nippon Sheet Glass Co., Ltd.	A member company of the Sumitomo Group. Japan's leading glass manufacturer conducting its business in three operating segments: Building Glass, Automotive Glass, Functional Glass, and other businesses. Owns a 100% share in Pilkington plc. of U.K.
Nishikawa Rubber Co., Ltd.	A major independent manufacturer of door seals.
Nisshinbo Holdings Inc.	A leading spinning company and a member company of "Fuyo-kai". Nisshinbo most profitable business segment is non-textiles, i.e. brakes, paper products, etc. Sales at the electronics products business segment largely grew after the company acquired New Japan Radio Co., Ltd. in 2005. TMD Friction Group S.A. (based in Luxembourg) into a wholly owned subsidiary in 2011.
Nissin Kogyo Co., Ltd.	A brake manufacturer belonging to the Honda Group. Manufacturer of vehicle and motorcycle brake systems, automatic transmissions, and proportioning valves.
Nittan Valve Co., Ltd.	Manufacturer of engine valves for autos, precision forged gears, valve lifters, and NT-VCP. Approximately 20% of its shares are held by Eaton Corporation of the U.S.A.
NOK Corporation	The world's largest and independent oil seal manufacturer. NOK has established a business alliance with Freudenberg - Europe's largest oil seal maker - since 1960.

NSK Ltd.	A leading bearing supplier. Took over Amatsuji Steel Ball Mfg. Co., Ltd. in 2006. Diversifying its business by producing bearings for industrial machinery, automobile related products, and precision machine related products.
NTN Corporation	A leading bearing manufacturer. NTN has a four-region supply system in the automotive constant velocity universal joint business. In 2001, NTN announced an all-inclusive association in the bearing business with FAG of Germany.
Ogura Clutch Co., Ltd.	Manufacturer of electromagnetic clutches, mechanical and special clutches, and clutches for automotive air conditioners. Ogura holds 30% share of the global air conditioner clutch market.
Oiles Corporation	Japan's largest self-lubricating bearing supplier. Manufacturer of bearings/bushings for automotive trunk hinges, shift levers, and steering columns etc.
OTICS Corporation	Manufacturer and sales of precision functional components for vehicles: engine components, suspension components, and transmission components. Meticulous production system in which even machine tools are developed in-house.
Owari Precise Products Co., Ltd.	Manufacturer and sales of precision products and screws (bolts, nuts, synchronizers, etc.) for vehicles as well as airplane components.
Pacific Industrial Co., Ltd.	The leading manufacturer of tire valves and valve cores. The Company consists of two business segments: Stamped & Resin Products Division and Valve Products Division.
Panasonic Corporation	Manufacturer of automotive systems and unit products such as navigation systems and AV systems. The automotive systems business is conducted at Automotive Systems, an internal corporation of the company.
PIOLAX, INC.	Manufacturer of automotive precision springs and industrial fasteners. A dominant shareholder of Saga Steel Works, which owns a majority share in the company. Also Piolax has business connections with Saga Work in the field of automotive fasteners.
Pioneer Corporation	A leading car audio manufacturer, holding the largest share in the Japanese car navigation system market. Plans to embark on the Chinese car navigation systems market in 2006.
Press Kogyo Co., Ltd.	Manufacturer and sales of auto parts (cross members, frame assemblies, brackets, etc.) and finished vehicles. Major customers are Isuzu and Mitsubishi Fuso Truck and Bus.
Riken Corporation	Manufacturer of piston rings, knuckles, camshafts, etc. Japan's largest supplier of piston rings.
ROKI Co., Ltd.	A specialized auto filter manufacturer. Manufacturer of air cleaners, oil filters, canisters. and other products.
Sanden Corporation	Manufacturer of automotive equipment, commercial refrigeration products, and others. Main product is compressors for automotive air conditioners.
Sanoh Industrial Co., Ltd.	An independent supplier of automotive tubes. Manufacturer of various kinds of processed tube products such as special steel tubes (double steel tubing and single steel tubing.)
Sawafuji Electric Co., Ltd.	An electrical products manufacturer affiliated with Hino Motors. Developing small, light, and high-powered electrical components that are in compliance with new regulations on mid-to-large-sized diesel-powered vehicles.
Shin-Kobe Electric Machinery Co., Ltd.	A member company of the Hitachi Group. Manufacturer of batteries and plastics. Products include automotive batteries, thermosetting molds, and

	thermoplastic molds.
SHIROKI Corporation	Manufacturer of seat components such as seat adjusters and recliners. A member company of the Tokyu Group. Major customers in the automotive business are Toyota.
SHOWA Corporation	A member company of the Honda Group. Manufacturer of shock absorbers, power steering parts, propeller shafts, gas springs, and other parts.
SNT Corporation	Japan's largest specialized manufacturer of forged products, focusing on components for construction machinery and automobiles, especially for trucks.
Stanley Electric Co., Ltd.	A leader in manufacturing and selling automotive lighting products and LED products. Products also include car electronics products, semiconductor products and IT equipment.
Sumitomo Electric Industries, Ltd.	Manufacturer of electric cables, special metal cables, powdered alloys, hybrid products, system electronics products, and electronic materials.
Sumitomo Rubber Industries, Ltd.	Manufacturer of tires, sporting goods, outdoor goods, marine goods, construction materials, gymnastic equipment, and precision printing components under the Dunlop brand. Formed commercial alliances with the Goodyear Tire & Rubber Company of the U.S.A.
Sumitomo Wiring Systems, Ltd.	Manufacturer of automotive wire harnesses. In August 2007, the Company became a wholly-owned subsidiary of Sumitomo Electric Industries.
Suncall Corporation	A leading manufacturer of valve springs for automotive engines. Started manufacturing transmission ring gears at its Thai subsidiary in 2005.
TACHI-S Co., Ltd.	An independent and leading seat manufacturer. A supplier for various automotive manufacturers including Nissan and Honda. Tachi-S has capital and business connections with Fuji Kiko and Johnson Controls Inc. It is looking to expand its overseas business.
Taiho Kogyo Co., Ltd	The leading manufacturer of automotive bearings in Japan. Main product lines include die-cast products and gaskets.
Takata Corporation	Manufacturer and sales of automotive seatbelts, airbags and child safety seats. Acquired more than 50% of shares in Petri AG of Germany in 2000, reinforcing its business structure in Europe.
TBK Co., Ltd.	Manufacturer of brakes, cooling pumps, lubricating oil pumps, engine camshafts, sub gears, and other components for trucks and buses.
TDF Corporation	A member company of the Isuzu Group. Manufacturer and sales of forged components for automobiles and construction machinery and also engages in machining of forged parts. Main products are large-scale parts for use in large- and medium-sized trucks. The Company, I Metal Technology Co., Ltd. and Jidosha Buhin Kogyo Co., Ltd. will establish a joint holding company in October 2013 by jointly transferring their equity shares.
Technol Eight Co., Ltd.	Manufacturer of body stamped components.
Teito Rubber Co., Ltd.	A consolidated subsidiary of Kinugawa Rubber Industrial Co., Ltd. Manufacturer of hoses such as radiator hoses, heater hoses, fuel hoses, and air hoses.
Tokai Rika Co., Ltd.	A member company of the Toyota Group. An interior parts supplier producing mainly switches and key locks. Also manufactures seat belts, ornaments, shift levers, automobile mirrors, and other products.
Tokai Rubber Industries, Ltd.	A major manufacturer of automotive anti-vibration rubber affiliated with Sumitomo Electric Industries Ltd. Tokai also manufactures and sells automotive hoses, sound isolation and interior products.

Tokyo Radiator Mfg. Co., Ltd.	A manufacturer of heat exchangers owned by Calsonic, a Nissan-affiliated parts manufacturer. Mainly produces radiators for trucks and also produces oil pans and fuel tanks. Owns a joint venture (with who) manufacturing radiators in Chongqing.
Topre Corporation	Non-affiliated stamped parts supplier. Supplies mainly to Nissan and Honda Expanding into the air-conditioning-equipment and the refrigerated-vehicle businesses.
Topura Co., Ltd.	An affiliate of NHK Spring Co., Ltd. The Company became a subsidiary of NHK Spring Co., Ltd. as of Apr. 1, 2012.
Topy Industries, Ltd.	An independent company, manufacturing and selling steel wheels, aluminium wheels, automotive stamped products, etc.
Toyoda Gosei Co., Ltd.	A member company of the Toyota Group. Manufacturer and sales of plastic and rubber parts, especially airbags. Also produces LED.
Toyota Boshoku Corporation	The only fabric supplier in the Toyota Group. Established through the merger of Toyoda Boshoku, Araco, and Takanichi in October 2004.
Toyota Industries Corporation	The founder of the Toyota Group. Main businesses include car air-conditioning compressors, car assembly, forklifts, and textile machinery. Also focuses on manufacturing of products for hybrid vehicles.
Toyo Tire & Rubber Co., Ltd.	Manufacturer of tires, chemical products and automotive parts such as anti-vibration rubber and seat cushions.
TPR Co., Ltd.	Manufacturer of sintered alloys, such as piston rings, cylinder liners, and valve seats.
T.RAD Co., Ltd.	A major manufacturer of radiators. Supplies its products to various makers as an independent corporation that does not belong to a certain business group.
TS TECH Co., Ltd.	The company is a member of the Honda Motor Group and manufactures seats and seat products for automobiles and motorcycles. 65 percent of the automotive seats it made were supplied to Honda. Sales at the company tripled over the last four years since Dec. 2002.
UNIPRES Corporation	Japan's largest supplier of stamping auto parts within the Nissan Group. Established through the merger between Yamakawa Industrial Co., Ltd. and Yamato Kogyo Co., Ltd. in April 1998.
Univance Corporation	Development and manufacturer of transmission systems, transfers, reduction equipment and machine tools for automobiles and industrial vehicles. Sales to Nissan account for over 40% of its sales.
U-SHIN LTD.	A manufacturer of electrical components. Three core product lines at the Automotive Components Division are lock sets, door latches, and air conditioning controllers.
Usui Kokusai Sangyo Kaisha, Ltd.	Manufacturer of small-size metal tubes for use as automotive components in passenger vehicles, buses, and trucks, etc. It also manufactures tubes for electric products, but more than 90% of production is for automotive use.
Valeo Japan Co., Ltd.	A leading manufacturer of automotive air conditioner systems such as full automatic air conditioner, compressors, and condensers. A wholly owned subsidiary of Valeo.
Yachiyo Industry Co., Ltd.	A member company of the Honda Group. Manufacturer and sales of fuel tanks and sunroofs.
Yanagawa Seiki Co., Ltd.	A member company of the Honda Group. Integrated production of aluminium components from die to finished products, focusing on automotive components such as engine related parts and manual transmissions.

Yasunaga Corporation	Manufacturer of engine and transmission parts in the Mitsubishi Group. Yasunaga has an integrated manufacturing system, ranging from production of casting materials to in-house development of processing technology to machining and logistics.
Yazaki Corporation	Manufacturer of automotive measuring devices (gauges), electric cables, gas equipment, air conditioners, solar-related and resource conserving devices. Yazaki holds the leading share of the global automotive wiring harnesses market.
The Yokohama Rubber Co., Ltd.	Associated with Continental AG of Germany in the tire business. Yokohama has two operating segments: the Tire Segment; and the Multiple Business Segment which handles industrial products and aerospace parts.
Yorozu Corp.	Manufacturer and sales of automotive mechanical components, auto body components and engine components. In-house production of dies, jigs and facilities.
Yutaka Giken Co., Ltd.	Manufacturer of exhaust and power train-related automotive parts as a direct affiliate of Honda. Yutaka has established a Four Region Production System - Japan, Asia, North America and Europe.

15. Bibliography

AHK (2013), „Trendbericht Elektromobilität in Japan“

AHK Japan (March 2014), recalled from http://www.japan.ahk.de/fileadmin/ahk_japan/Media-Daten/Member_Services/2013_Economic_Data_Japan_and_Germany.pdf

Bräunl , Thomas “EV Charging Standards” (March 2014), recalled from http://therevproject.com/doc/2012-EVcharging-s.pdf

CIA (March 2014), recalled from https://www.cia.gov/library/publications/the-world-factbook/geos/ja.html

CNN (February 2014), recalled from http://edition.cnn.com/2013/12/10/business/japan-abenomics-three-arrows/

Companies and Markets.com (March 2014), recalled from http://www.iii.co.uk/reports/140799/abenomics-key-japans-economy-2014

Daimler.com (February 2014), recalled from http://www.daimler.com/Projects/c2c/channel/documents/2287152_Daimler_Annual_Report_2012.pdf

E & E Publishing.LLC (March 2014), recalled from http://www.eenews.net/stories/1059984950

Electropedia (March 2014), recalled from http://www.mpoweruk.com/infrastructure.htm

ETH Zürich swiss Center for Automotive Research (swiss CAR) (2013), “Automobilindustrie Schweiz”

Eurotechnology Japan (April 2014), recalled from http://www.eurotechnology.com/2013/08/05/galapagos-2/

Fuji Heavy Industries.co.jp (February 2014), recalled from http://www.fhi.co.jp/english/ir/index.html

Global Suzuki (February 2014), recalled from http://www.globalsuzuki.com/ir/library/index.html

Greentechmedia (March 2014), recalled from http://www.greentechmedia.com/reports/read/japan-automakers-go-all-in-on-massive-ev-charging-plan

Honda (February 2014), recalled from http://world.honda.com/investors/library/

IEA (2013), “Global EV Outlook”

Interactive Investor (February 2014) recalled from http://blogs.wsj.com/economics/2014/02/25/for-abenomics-third-arrow-is-the-hardest/

Isuzu (February 2014), recalled from http://www.isuzu.co.jp/world/investor/financial/index.html

JAMA (2013), “The Motor Industry of Japan”

Just auto (March 2014), recalled from http://www.just-auto.com/news/automakers-to-fund-ev-infrastructure_id140000.aspx

The Economist (March 2014), recalled from http://www.economist.com/node/10424391

Marklines (January 2014), recalled from http://www.marklines.com/en/

Mazda (February 2014), recalled from http://www.mazda.com/investors/library/

Ministry of Internal Affairs and Communications (MIC) (March 2013), recalled from http://www.soumu.go.jp/english/index.html

Mitsubishi Fuso (February 2014), recalled from http://www.mitsubishi-fuso.com/jp/corporate/index.html

Mitsubishi Motors (February 2014), recalled from http://www.mitsubishimotors.com/en/corporate/aboutus/profile/index.html

Nissan Global (February 2014), recalled from http://www.nissanglobal.com/EN/IR/LIBRARY/YEARS/

OECD (March 2014), recalled from http://www.oecdbetterlifeindex.org/countries/japan/

OECD (April 2014), recalled from http://www.oecd.org/eco/surveys/Overview%20Japan%202013%20English.pdf

OECD (May 2014), recalled from http://www.oecd-ilibrary.org/economics/government-deficit_gov-dfct-table-en

Swiss Chamber of Commerce and Industry in Japan (SCCIJ) (March 2014), recalled from http://www.sccij.jp/news/overview/detail/report/2013/09/27/feintool-wins-by-localization-in-japan/

Toyota Global (February 2014), recalled from http://www.toyotagloal.com/sustainability/sustainability_report/highlights_in_fy2009_economic_aspects/financial_results.html

ExportHelp
www.s-ge.com/exporthelp
exporthelp@s-ge.com
T 0844 811 812



Switzerland Global Enterprise
Stampfenbachstrasse 85
CH-8006 Zürich
T +41 44 365 51 51

Switzerland Global Enterprise
Corso Elvezia 16 – CP 5399
CH-6901 Lugano
T +41 91 911 51 35

Switzerland Global Enterprise
Avenue d'Ouchy 47 – CP 315
CH-1001 Lausanne
T +41 21 613 35 70

www.s-ge.com