The Expansion of Western Auto Parts Manufacturers into Thailand, and Responses by Japanese Auto Parts Manufacturers[1]

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Abstract

The relationship between Japanese manufacturing companies' international management and the maintenance and strengthening of their manufacturing capability is emerging as an increasingly important issue. In due consideration of this issue, this paper examines and proposes strategies for the Japanese manufacturers to overcome the global competition, taking Thailand's auto parts industry as an example.

Many Japanese companies have accumulated capital through FDI in Thailand's auto parts industry, resulting in an industrial agglomeration. This leads many observers to view this industry as a Japanese companies' stronghold. In the late 1990s, however, these companies experienced drastic changes in the business environment. "Western" (American and European) auto parts manufacturers emerged as new rivals in the Thai market. Moreover, Japanese car manufacturers started to adopt the "Western"-style procurement policy, discarding the Japanese style. Facing such changes, Japanese auto parts manufacturers in Thailand need to simultaneously solve two sets of problems: i) how to cope with the new business environment exemplified by the collapse of vertical "keiretsu" and global purchasing; and ii) how to maintain and strengthen their traditional comparative advantage, i.e., the excellent manufacturing capability.

The strategies to cope with the new environment differ for each company. This paper categorizes the auto parts manufacturers into four groups, using business relationships and objectives and methods of manufacturing as two axes, and then proposes strategies for each of these four categories.

Introduction

Since 1996,[2] Japanese auto manufacturers and the industries surrounding them have been involved in global reorganization and alliances. Auto companies have been forming alliances for the past thirty years or more[3] and foreign companies have long had capital participation in auto manufacturing companies in Japan. Their participation dating back to the period between 1967 and 1973 was mainly a result of deregulation by the Japanese government, whereas recent moves are directly linked to their responses to

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1 This report is a summary of "Phase II Study of Asian Expansion by Western Corporations and Response from Japanese Manufacturers," a survey commissioned to Braxton Inc. by Japan Bank for International Cooperation and conducted in the period from August to October 2002. We would like to extend our most sincere gratitude to those from some thirty surveyed companies including seven Western companies, related organizations and other industry sources for their gracious cooperation to the survey, feedback interviews and study group meetings, while their names are kept anonymous for privacy reasons.

2 In this year, 1996, Ford acquired a significant stake in Mazda Motor Co., with 33.4% ownership. This was followed by GM's investment into Isuzu Motors in 1998 for 48.5% ownership and, in 1999, investment into Nissan Motor Co. by Renault, which originally acquired a 36.8% stake and later increased its ownership to 44.4%.

3 Examples include equity participation in Isuzu by GM with a business alliance agreement, equity participation in Mitsubishi Motors by Chrysler in September 1971, and in Toyo Kogyo (now Mazda Motor Co.) by Ford in November 1979.

safety and environmental technology issues, together with efforts to share the development burden and reduce procurement costs. The reorganization since the 1990s, therefore, has a more profound significance.

The business development of component manufacturers cannot be independent of global reorganization of the auto industry. The cross-border realignment of auto companies has brought home to Japanese auto parts manufacturers the need to deal not only with keiretsu companies but also with Western auto and auto parts companies, which have different management styles and corporate culture.[4] In other words, Japanese auto component companies need to analyze their positioning in a relative comparison with foreign peers, and to adjust their management policies and practices accordingly.

In this report, we will focus our analysis on Thailand, as many Western auto parts companies have recently ventured into this country which Japanese companies once dominated. This should make a good case study that can illuminate the strategies, strengths and weaknesses of the Western components manufacturers and indicate how Japanese companies can effectively compete or strategically tie up with them. With this goal in mind, the report consists of chapters as summarized below:

Chapter 1: What changes have been happening to the auto industry in Thailand in recent years?

Chapter 2: What influences have the reorganization in the auto industry exercised on auto parts manufacturers?

Chapter 3: What differences are there between Japanese and Western auto parts companies?

Chapter 4: What strategies can be proposed to Japanese component manufacturers based on the results of the case study in Thailand?

This report will also show the increasing importance for companies of formulating a strategy for their foreign operations, not on a stand-alone basis in a given country but on a global basis with active involvement of company headquarters.

Chapter 1: Auto Industry in Thailand and Expansion by Western Companies

(1) Industry Overview

Auto Production

Annual global auto production as published in June 2002 was broken down by region to 16.46 million units in Western Europe, 15.66 million units in North America and 16.02 million units in Asia and Oceania. In other words, Asia and Oceania accounted for approximately 30% of the global output. (See Figure 1.) This means that approximately three out of ten customers of auto parts manufacturers who sell to automakers are located in Asia and Oceania. Out of 16.02 million units produced in the region, Japan turned out some 10 million,[5] followed by 2.3 million by China and 1.14 million by ASEAN-4,[6] among which Thailand contributed a little less than 500 thousand units.[7] In the analysis of time series data over the past five years between 1997 and 2001, Thailand has now recovered the annual output level of half a million units it achieved prior to the Asian currency crisis, and is expected to turn out one million units a year by 2006.

Expansion by Japanese Companies

Industrial agglomeration in the Thai auto industry has largely been attributable to investment accumulation by Japanese companies. Expansion activities in automotive-related areas by Japanese companies including Toyota Motor Co. and Nissan Motor Co. started in the early 1960s, and many companies have since followed during the subsequent forty-odd years in response to the promotional and protective policies

4 In this report, European and American companies are bracketed as "Western" companies. Some local experts, however, commented that European and American companies have different philosophies with regard to manufacturing. While the authors agree with this opinion, due to other similarities including their history of and reasons for expanding into Thailand they are collectively referred to as "Western" companies in this report.

5 According to the figures released by the Japan Automobile Manufacturers Association Inc. (JAMA), annual production in FY 2001 was 9.8 million units and six-month production in the period between April and September 2002 was 4.99 million units.

6 Consists of Thailand, Indonesia, Malaysia and the Philippines.

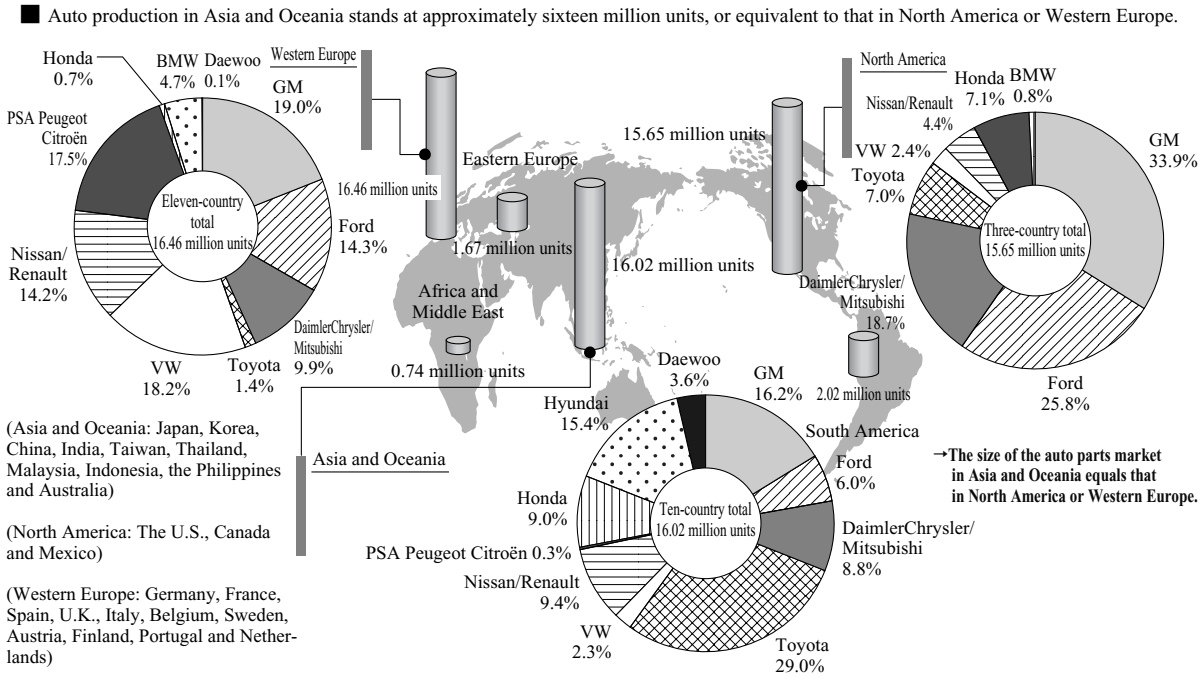
7 According to OCIA World Motor Vehicle Production by Country 2000-2001.

of the Thai government.[8] (See Figure 2.) The number of Japanese auto-related companies expanding into Thailand peaked twice, in the late 1980s and mid 1990s, bringing the total amount of manufacturing bases of Japanese auto parts companies in the country to the largest among Asian nations outside Japan.[9] In terms of product types, engine components including gaskets and electrical parts, including condensers, comprised the majority up to the late 1980s, whereas high-precision plastic components and molds took over in the mid 1990s. Against the backdrop of the need to increase local content and expand incentive policies to promote investment by small enterprises, there are future plans for Japanese manufacturers of high quality, sophisticated products including turbochargers and cylinder heads to expand into Thailand, which should help further broaden the supplier base supporting the auto industry there.[10]

Recent Changes

One of the most notable changes that have been taking place in the auto manufacturing industry in Thailand is its export growth. (See Figure 3.) Since the Asian currency crisis in 1997, shrinkage of the domestic market and improved export competitiveness due to the depreciation of the Thai baht, combined with the desire to maintain a high capacity utilization rate on the part of auto manufacturers, have made Thailand play an increasing role as an export base to the rest of the

Figure 1 Total Auto Production by Region and Production Share by Manufacturer by Region (2001 data, passenger and commercial vehicles combined).



Source: Braxton.Inc., based on FOURIN (2002)

8 For example, the Thai government, in 1971, required auto companies to convert their product assembling from Semi-Knock Down (SKD) to Complete Knock Down (CKD).

9 According to Toyo Keizai Inc. (2002), Directory of Japanese Companies Overseas (Kaigai Shinshutsu Kigyou Souran), Japanese auto parts companies in Thailand numbered approximately 300 in 2001.

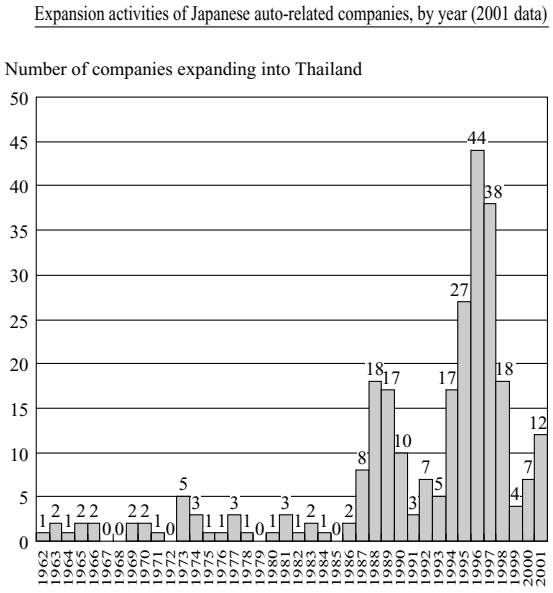
10 Forty years of industrial agglomeration in auto manufacturing and a broad base of supporting suppliers, on top of expertise in dealing with local secondary component manufacturers, give Japanese auto parts companies a competitive edge against their Western counterparts. Unmatched quality and high local content that results from this are unique to Japanese component companies and widely recognized by Western affiliates in Thailand, as they testified in our interview.

11 The auto production capacity of Thailand is forecast to further increase and, in 2006, reach a level more than double the current rate at approximately one million units. Toyota, for example, according to Nihon Keizai Shimbun, considers Thailand as the export base for Asia and Oceania, and intends to boost its production there to 300,000 units in 2004 from 77,000 in 2001.

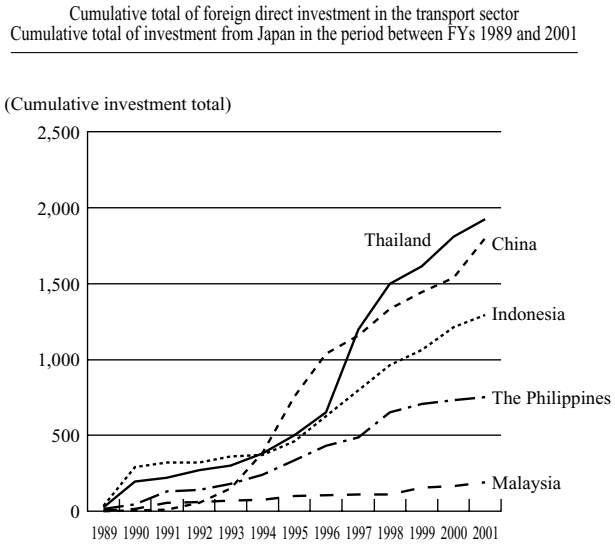
world as well as serving its domestic market. Close to 40% of the current auto production of Thailand is exported, and companies are expanding production in a recent move to consolidate capacity, both in Asia and for one-ton pickups worldwide.[11]

Thailand is also becoming an export center for auto component manufacturers. Thai auto parts exports have more than tripled in value over the past five years, as seen in Figure 4 which breaks down their component exports by destination. It also shows that more than half of the exports are for industrialized countries including Europe and the U.S. Exported items include sophisticated, high value-added products such as engines and OE components. These facts indicate that Thailand is playing the role of an export center for sophisticated,

Figure 2 Expansion Activities of Japanese Auto and Auto Parts Manufacturers into Thailand

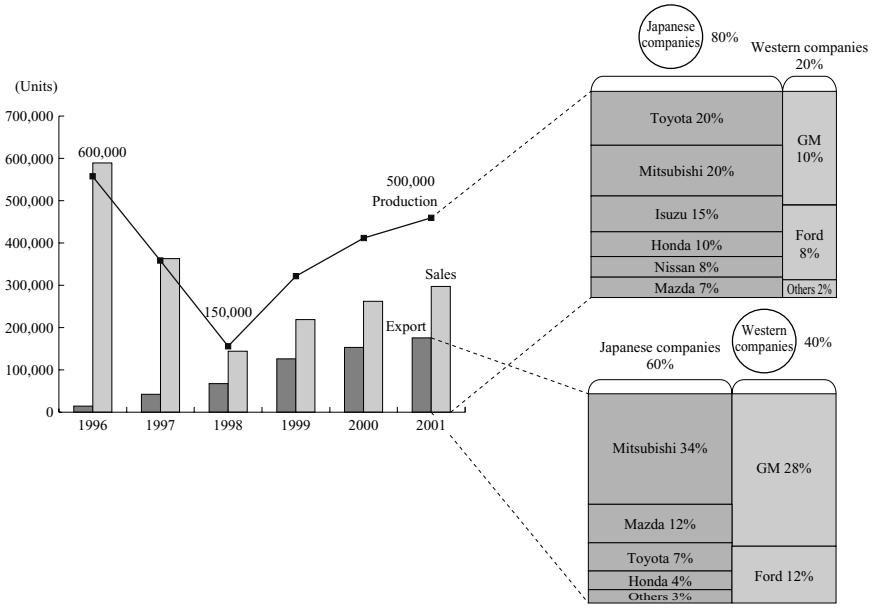


Source: Toyo Keizai (2001)



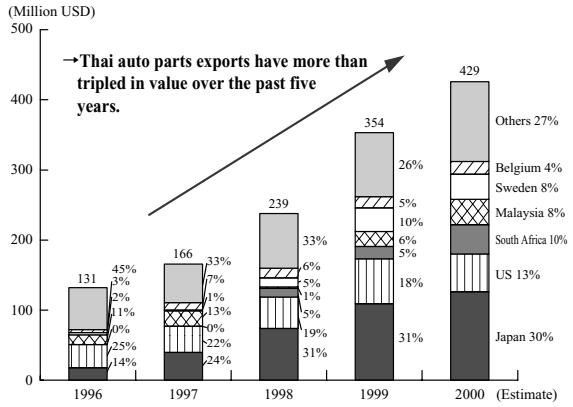
Source: Ministry of Finance, "Foreign Direct Investment (FDI) of Japanese companies overseas and FDI by foreign companies into Japan."

Figure 3 Thai Auto Production and Export, Total and Manufacturer Shares



Source: FOURIN Inc., 2002 Asian Automotive Industry (2002 Ajia Jidousya Sangyo), the Thai Automotive Industry Association and the Japan Automobile Manufacturers Association Inc. (JAMA).

Figure 4 Changes in Thai Auto Parts Exports and Destination Shares



Source: Department of Customs, Trade Statistical Centre

high value-added components for specific models to be assembled in developed countries.[12]

(2) Expansion by Western Companies

Expansion by Western Auto Manufacturers

In recent years, Western auto companies have been actively expanding into Thailand.[13] They plan to further boost their capacity in the country in order to respond to expected demand increase in the ASEAN region as a result of AFTA coming into effect, as well as to shore up market shares that have long remained at low levels.[14] This move has been causing intensification of competition with their Japanese counterparts, who had entered the market earlier. The recent activities of Western automakers represent their belated strategic development in East Asia, whose geographical distance historically kept them away.[15]

Many of them chose to build a production base in Thailand because 1) after the introduction of AFTA, they intended to consolidate production to Thailand and make it the base for exporting to other ASEAN countries, 2) expansion of many component manufacturers had already resulted in certain levels of industry agglomeration and 3) Thailand was one of the largest markets for one-ton pickup trucks[16] in the world, which made the country an ideal manufacturing location for domestic and export markets.[17] Figure 5 summarizes the production/marketing plans of auto manufacturers in Thailand in 2002 or later. It indicates that exports of finished cars and principal components from the country are intended for European countries, Japan and ASEAN and Oceania nations.

Expansion by Western Auto Parts Manufacturers

In tandem with Western automakers' expansion of their Asian bases, leading Western auto parts manufacturers have entered Thailand and have been expanding their local operations.[18] (See Figure 7.)

The objectives of Western auto parts manufacturers' expansion into Thailand are: 1) to coordinate with Western automakers' expansion and 2) to increase business with Japanese auto makers. The former objective has become especially active since the 1998 establishment of Auto Alliance

12 At the same time, component imports have been increasing, mainly from Japan. (Japanese imports accounted for 78% of total component imports in 2000). Due to the need to cut procurement cost and increase local content, component imports are not expected to grow as fast as their export.

13 While Japanese auto companies expanded into Thailand around the 1960s, most Western automakers started their expansion in the late 1990s. Ford established Auto Alliance as a joint venture with Mazda after the currency crisis in 1998, followed by the expansion by BMW and VW in 2000. GM established a production center following the elimination of local content requirements, also in 2000.

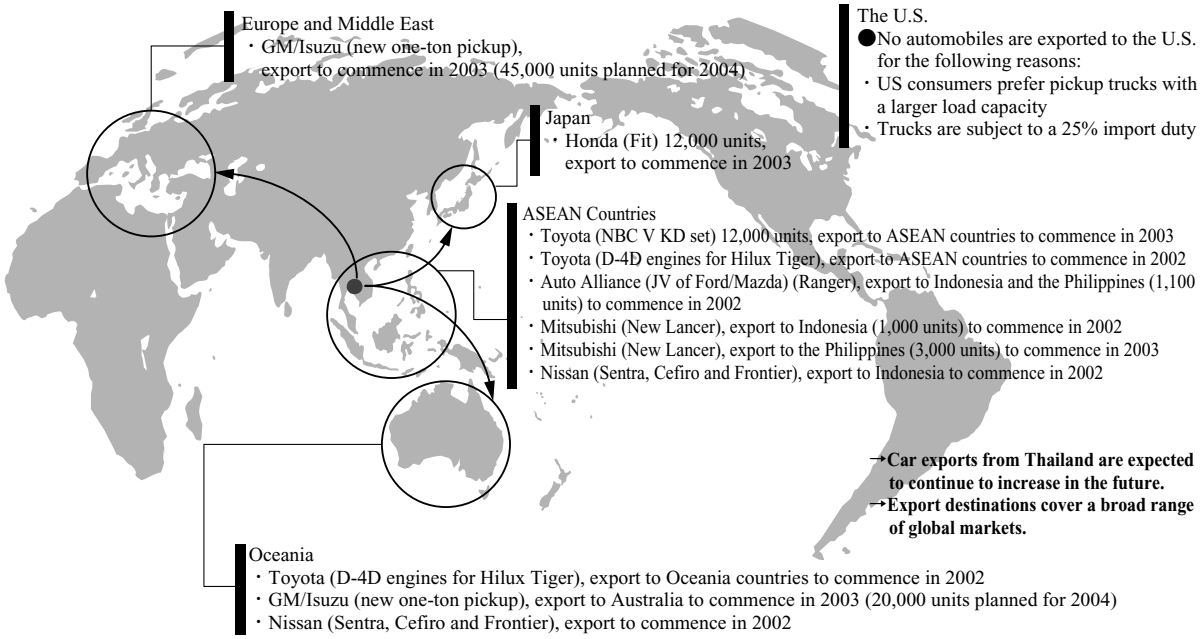
14 The global production share of Western auto manufacturers is 58%, while they register 28% and 22% market shares in Asia and Thailand respectively, which are much lower than those in other regions. It appears that their expansion strategy is based on the observation that 1) Asian markets have better prospects for growth than mature markets in developed countries and 2) low market shares today leave a large room for expansion.

15 In this regard, a resident expert in Thailand commented that Asian expansion of Western auto manufacturers was more for recovering the ground lost (to Japanese competition) than for entering a new market. Furthermore, a respondent from a Japanese component manufacturing subsidiary stated that it did not necessarily seem to be the case that Western companies were rapidly expanding into Thailand, citing the fact that production at Volvo and GM came in significantly below plan while Japanese companies were exceeding their production targets by 20 to 30%.

16 Pickup trucks account for approximately 60% of vehicle numbers in Thailand.

17 Total production of the Western automakers in Thailand has grown from 10,000 units in 1996 to approximately 100,000 units in 2001, of which 70,000 units were exported.

Figure 5 Export/Export Plans of Auto Manufacturers in Thailand in 2002 or later

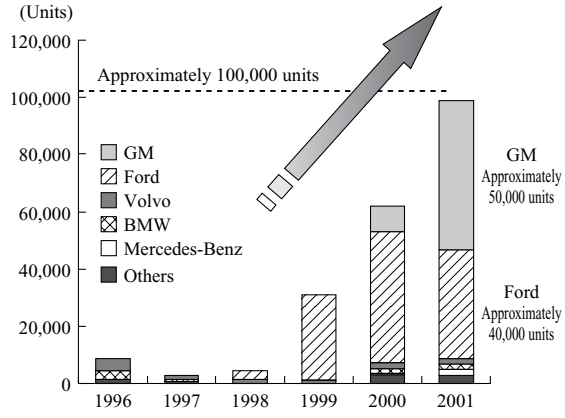


Source: Braxton Inc., based on various materials.

Thailand, a JV between Ford and Mazda. For the latter objective, Western parts suppliers aim to gain shares in an untapped market serving Japanese auto companies. Since Japanese auto manufacturers have already established high shares in markets around Asia, a Thai location will be very convenient to supply them and hence expand market shares in an efficient manner.[19] Against this background, we need to focus on market share expansion by Western auto parts manufacturers.

Furthermore, Western auto parts companies have the following two advantages over their Japanese counterparts. 1) Western companies enjoy a high degree of management freedom, owning a majority stake in local subsidiaries and controlling them from day one, as they entered the Thai market after the easing of restrictions on foreign ownership. (See Figure 8.) On the other hand, some Japanese affiliates, which are structured in accordance with the old joint venture rule, still face difficulty in winning control of their local operations. 2) Western companies were able to envision deregulation,

Figure 6 Unit production of Western auto manufacturers in Thailand

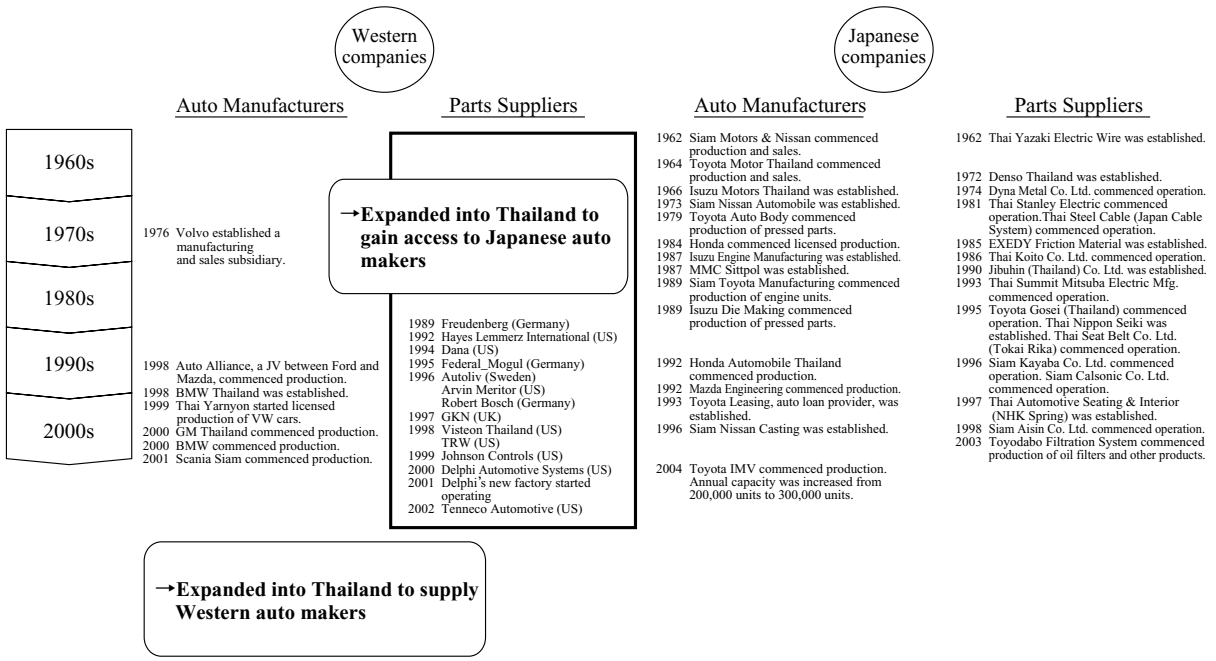


Source: FOURIN Inc., 2002 Asian Automotive Industry (2002 Ajia Jidousya Sangyo)

18 Major Western component manufacturers that expanded into Thailand include such titans as German-affiliated Freudenberg (expanded in 1989), US-affiliated Dana (1994), and after the currency crisis, Visteon (1998), Johnson Controls (1999) and Delphi Automotive Systems (2000). From the product standpoint, TRW offers integrated systems from the steering wheel to tires, and Visteon is probably capable of building cockpit modules. Johnson Controls is an integrated supplier of auto interior products.

19 Some Western auto parts companies have announced numerical goals. Delphi aims to increase non-GM sales to 50% of the total by 2005, and Valeo plans to derive 20% of the company's sales from the Asia-Pacific region.

Figure 7 History of Thai Expansion by Western and Japanese Auto-related Companies



Source: Braxton Inc., based on various materials.

Figure 8 Equity Ownership of Leading Western Parts Suppliers in Thai Subsidiaries

	Parent Company	Thai Subsidiary	Equity Ownership
European companies	Autoliv (Sweden)	Autoliv (Thailand)	50%
	Robert Bosch (Germany)	BJKC (Thailand)	100%
	GKN (UK)	GKN Driveshafts (Thailand)	100%
US companies	Dana	Dana Spicer Thailand	95%
	Visteon	VisteonThailand	100%
	Lear	General Seating (Thailand)	50%
	TRW	TRW Steering & Suspension	100%
	Johnson Controls	Johnson Controls & Summit Interiors	60%
	Delphi	Delphi automotive Systems (Thailand)	100%

→Secured a majority stake and control.

Source: Compiled from annual reports, company web sites and others.

including the easing of local content requirements and tariff reductions, as a result of AFTA coming into effect. This, in turn, has enabled them to concentrate their ASEAN investment in Thailand from the outset, positioning it as the export base in the region and achieving higher investment efficiency. Japanese companies, in contrast, need to strategically review their bases scattered in the region.

(3) Changes in Business Environment

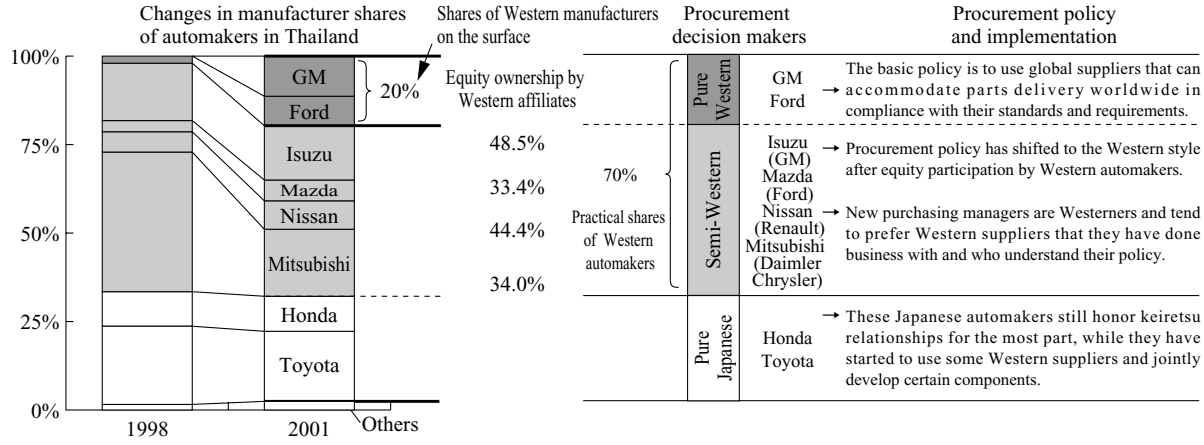
Market Shares of Western Auto Manufacturers

Now, let us turn to the business environment of the Thai auto industry, which those Western suppliers aim to serve. Component manufacturers in Thailand are more susceptible to influences from industry reorganization. This can be explained by looking at the breakdown of Thai auto production between Western and Japanese auto makers. Figure 9. shows manufacturer shares of Thai auto production. Apparently, the combined market share of the Western manufacturers, GM and Ford, only stands at around 20%, or 100,000 units.

When it comes to purchasing policies, some other automakers such as Isuzu, Mazda and Mitsubishi are under the influence of their Western partners, who have equity participation in them. Therefore, even though Japanese manufacturers have seemingly high market shares, it can be said that practically 70% of Thai Auto production is under the control or influence of Western automakers as far as their procurement policy is concerned.[20] When

20 Please refer to FOURIN (2001) p.5 for further explanation of selection of suppliers by automakers. In fact, according to interviews with several Japanese component suppliers in September 2002, there have been changes in the process of supplier selection and component procurement, or such changes are anticipated.

Figure 9 Manufacturer Shares of Western Automakers in Thailand



Source: Braxton Inc., based on data published by The Thai Automotive Industry Association and the Japan Automobile Manufacturers Association Inc (JAMA).

Western automakers decide to launch their cars in the region, the Thai factories of Isuzu, Mazda and Mitsubishi are expected to operate as the manufacturing center for supplying the cars. Against this backdrop, Japanese auto parts manufacturers may lose orders to their Western competition, which is well versed in the procurement policy of Western auto makers. Some Japanese parts manufacturers stated their concerns, saying, "There is no problem to speak of now, but we feel uneasy about what is going to happen at the next model change." At the time of a model change, there is no guarantee that auto companies will continue to buy from the same supplier based on the record of previous component deliveries. In other words, Western parts companies have in front of them a better opportunity to increase their market shares.

Changes in Business Environment

As has been previously discussed, the business environment surrounding auto parts manufacturers in Thailand has undergone a great transformation with two notable changes, entry of Western suppliers and shift in procurement policy. It is also worthwhile to note that the latter change is further influenced by the global reorganization of automakers, industry development remote from Thailand. With a relatively loose keiretsu alignment of automakers and suppliers in Thailand, such changes in the procurement policy of auto makers tend to surface quickly. Japanese component manufacturers, therefore, need to understand the background of the change and study how to cope with it. In particular, they need to have a comprehensive view on purchasing policy and the requirements and changes of automakers operating in Thailand. At the same time, they must set a strategic plan for the future with due consideration given to their product characteristics, market positioning and profitability, after carefully examining how Western suppliers compare with their Japanese counterparts and what advantages they enjoy.

Chapter 2: Changes in Procurement Policy and Their Influences on Thailand

(1) Changes in Procurement Policy

The largest incentive for automakers to change their procurement policy and practice is cost reduction in procured components.[21] Such cost reduction efforts, of course, have long been in place are importantly their methodology has been recently changing.[22] The reasons behind the changes include 1) westernization of component procurement policy, 2) global sourcing and 3) transactions beyond keiretsu relationships. Against the backdrop of these factors, Western parts suppliers have been increasingly making inroads into the market of Japanese auto makers. (See Figure 10.)

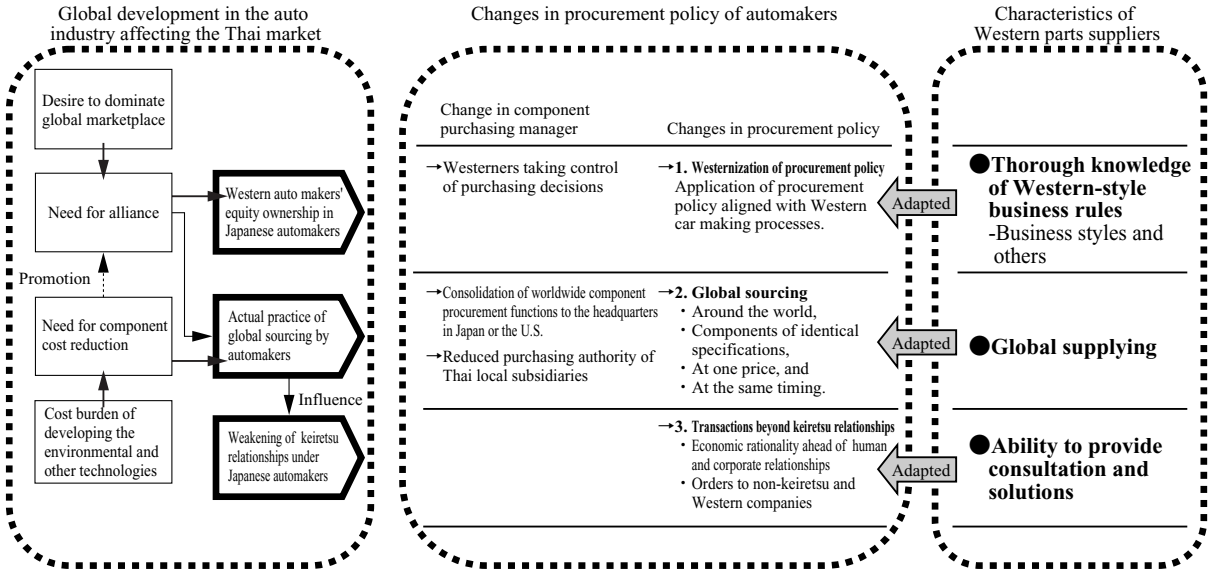
21 Procurement cost is said to account for approximately 60% of manufacturing cost.

Westernization of Component Procurement Policy

Amid global reorganization of automakers, Japanese auto companies that have received capital injection from Western companies have been radically shifting their procurement policy by hiring purchasing managers from Western automakers.[23]

For example, the component sharing arrangement between Isuzu and GM for different types of vehicles merits close attention to whether or not the move would work in favor of Western parts manufacturers under GM.[24] In the event of component sharing becoming widespread, it is possible for a Western supplier to receive a mandate in Thailand on the back of component delivery made in China or elsewhere. Under these circumstances, Western suppliers capable of adapting to the Western protocol may

Figure 10 Changes in Procurement Policy of Automakers and Response by Western Suppliers



Source: Braxton Inc.

22 Dr. Takahiro Fujimoto, an expert on supplier systems, wrote, "The primary means of manufacturing cost reduction was to increase efficiency in production processes up to the 1980s and streamlining of design in the 1990s. In recent years, however, amid intensifying global competition, there is a growing tendency to opt for outright reduction in unit procurement cost (e.g. unit component cost and wage). It will be interesting to see whether this development can coexist and flourish with the traditional Japanese production system in the future." (Excerpts from his article in Keizai Kyositsu, a column in Nihon Keizai Shimbun, June 19, 2002 edition.)

23 For example, Mitsubishi Motors aims to cut 60 billion yen from its annual cost through the introduction of COSMOS - a cost reduction program modeled after that of DaimlerChrysler. Nissan Motor, after the completion of Nissan Revival Plan (NRP), budgets for a 15% cut in component procurement cost over a three-year period between 2002 and 2005. Regarding joint purchasing initiatives, RNPO, a joint purchasing organization of Nissan and Renault, currently accounts for 30% of the combined purchase of the two companies and they aim to eventually increase the figure to 70%. Mazda, in addition to an organizational reform that consolidated overseas and domestic procurement departments, aims to increase the overseas procurement rate of Escape/Tribute to 30% with most of the purchases to be made from Western suppliers. Isuzu has also adopted WWP (World Wide Purchasing), a global purchasing system of GM, basing their purchases on evaluation standards common with GM. Furthermore, GM, Isuzu, Suzuki and Fuji Heavy Industries together established a joint purchasing organization called Alliance Purchasing Team. The list of items that the Team is slated to purchase includes auto glass products, generators, starters, flat steel sheets, precious metals, catalyst supports, audio speakers, antennas, electrical relays, horns, tire wheels (both steel and aluminum) and radiator hoses. (Based on press releases of the companies.)

24 In order to reduce procurement cost, automakers have been planning and practicing the sharing of various components including platforms. Having learned a lesson from the failure of the "Global Car Project" in the 1980s, components are so standardized that a vehicle meeting the varying needs of each country and region can be build around them. Their basic strategy for Thailand is to make it a regional manufacturing base for Asia for building cars on moderately standardized platforms that allow modifications according to regional specifications and vehicle types. According to this strategy, regional production in Asia has been consolidated to Thailand. Parts manufacturers, therefore, need to carefully watch the progress of this component sharing development involving the rest of Asia.

probably gain the upper hand.[25]

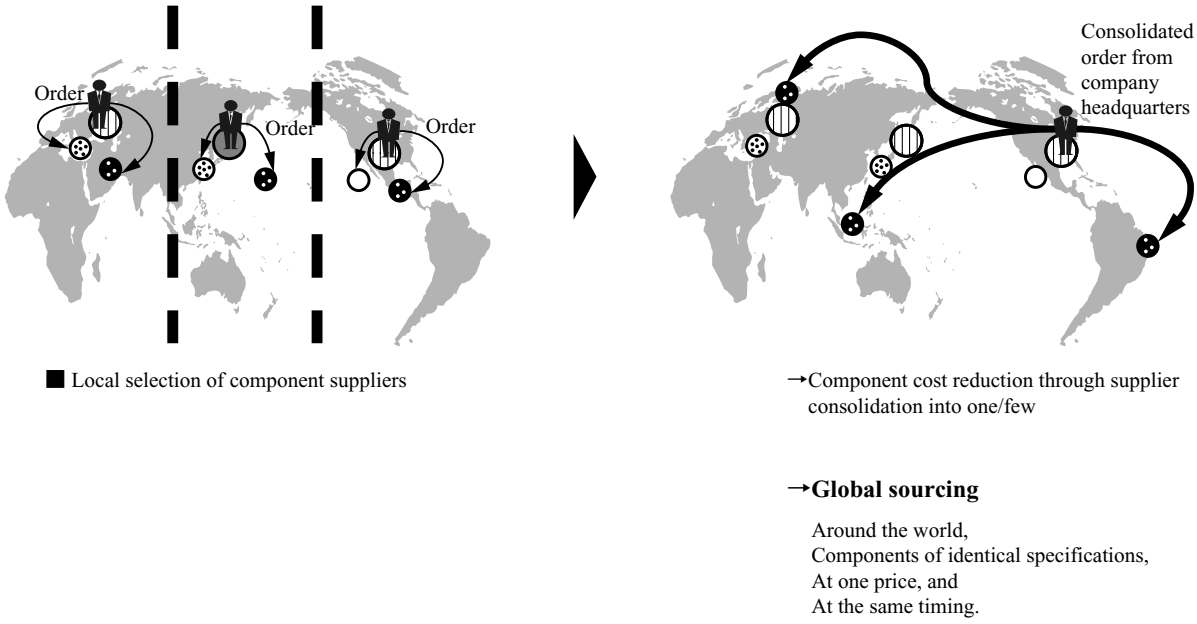
Global Sourcing

Fueled by zeal to reduce component cost, the general trend in component procurement is to look toward global sourcing.[26] (See Figures 11. and 12.) With this development, decision making regarding the selection of component suppliers, which used to take place at local levels, has been increasingly consolidated to company headquarters in Japan and the U.S. At the same time, component suppliers based in Thailand are required to be able to supply or to locally manufacture high quality components in other regions in order for automakers to achieve global sourcing.[27] Due to the changing requirements, Western suppliers with geographical reach and complementary organizational traits (to be described in detail later) will become a threat to Japanese component manufacturers.

Transactions Beyond Keiretsu Relationships

With the environmental changes mentioned above, collaboration between car makers and component suppliers is under review.[28] In the past, Japanese auto makers used to assign managers in charge of procurement and production management to suppliers to increase the efficiency of the manufacturing process and cooperatively design products. The billing cost of a component was determined on the basis of such cooperation, for the purpose of prosperous coexistence within a keiretsu framework. Nowadays, however, automakers often act in a more

Figure 11 Diagrams of Global Sourcing



Source: Braxton.

25 This does not mean the supplier system of the auto makers has been structurally and functionally Westernized. Further studies are required on this issue.

26 Component sharing arrangements can be classified into three levels - Thai-specific components, Asia-specific components and globally shared components.

27 Thailand is responsible for supplying vehicles and parts to the rest of the world including developed countries, as well as exporting finished cars to the rest of the region. Auto component exports from Thailand, by automakers and parts manufacturers combined, more than tripled in volume over the past five years. In recent years, this increase has been driven by Knock Down set export of pickups, a principal vehicle type produced in Thailand, and complementation of OE components within the ASEAN region utilizing AICO (ASEAN Industrial Corporation) since 1999. Exported items include sophisticated products such as engines and OE components. This illustrates that Thailand is starting to function as an export base for sophisticated auto components. (Examples include: Toyota will commence production of the NBCV and IMV in 2003 and 2004 and use Thailand as the principal manufacturing base of the components; Isuzu will consolidate its diesel engine manufacturing in Thailand using the common rail system.)

28 For example, Mitsubishi Motors dissolved Kashiwakai, a cooperative organization established with its component suppliers.

Figure 12 Global Sourcing Trends at Auto Manufacturers

Isuzu	**Introduction of Open cost method** Since 1998, Isuzu has openly disclosed a preset target cost base for selection of a supplier.
Mazda	**Consolidation of purchasing functions** In 1999, Mazda combined its purchasing and product planning divisions, and in 2000 its overseas procurement and domestic procurement departments.
Nissan	**Consolidation of procurement with Renault** In 1999, Nissan announced the introduction of Renault's Optima purchasing system. Based on synergy effects from combination with Renault, the company aims to achieve a $3 billion purchasing cost reduction by 2005. **Introduction of RFQ** A normalized bidding process of Requests for Quotation (RFQ) was adopted for the selection of suppliers.
Mitsubishi	**Global sourcing** Mitsubishi started global sourcing in 2000, limiting suppliers to one/few for thirty components and materials. Suppliers are also selected on a global basis with regard to other components. **Concentrated purchasing** In 2000, Mitsubishi decided to introduce a concentrated purchasing system for common components and materials shared between its passenger vehicle and commercial vehicle divisions.
Honda	**Transition from five-region sourcing to global sourcing** Honda changed its procurement practice from sourcing the optimal components on a regional basis to sourcing on a global network basis, which concentrates sourcing to one supplier per component and targets cost minimization.
Toyota	**Sourcing integration with group companies** In 1999, Toyota developed a database in collaboration with Daihatsu and Hino for integrally managing data on component and materials buying. Also in 1999, Toyota consolidated the component procurement function of its chassis assembling affiliates with that of the parent, targeting cost reduction on a group-wide basis through efficient component purchasing.

Source: FOURIN Inc., 2002 Asian Automotive Industry (2002 Ajia Jidousya Sangyo)

business-like manner. For example, an auto maker sets the billing cost basis first by designating a target in terms of percentage reduction, and will not buy from a supplier unless it can supply at the set price.

Stated differently, cost reduction is achieved, not through the adjustment process embedded in keiretsu relationships, which are a historical forte of the Japanese auto industry, but increasingly through a process beyond keiretsu relationships. Corporate relationships in Thailand were weaker than those in domestic Japan to start with, and more transactions are taking place based on economic rationale. That situation is more advantageous to Western component manufacturers, which excel at appealing to their strengths in a freely competitive, unobstructed transaction environment.[29]

(2) Case Studies of Threats from Western Suppliers

With the changes in the procurement policy of auto makers as mentioned above, some phenomena have been observed in Thailand, including 1) orders lost to Western suppliers, 2) aggressive business practice by Western suppliers and 3) changing procurement practice of auto makers. (See Figure 13.)

Orders Lost to Western Suppliers

There have been cases where components for a car jointly developed by Japanese and Western automakers are supplied by a Western company ahead of the Japanese manufacturer, or supplied not directly to the auto maker but through a Western component manufacturer, based on an instruction from the car company.

Aggressive Business Practice by Western Suppliers

A Western supplier acquired a Japanese supplier and leveraged on the existing relationships of the latter to initiate business with Japanese auto manufacturers. Another Western parts company recruited an employee from a Japanese automaker to initiate

29 An expert commented, "Keiretsu transactional relationships, represented by closed, exclusive transactional relationships and affiliation based on equity ownership and personnel transfer, has little to do with manufacturing competitiveness. A principal source of manufacturing competitiveness is the Japanese supplier system. It resembles keiretsu relationships but IS different. Western companies adopted the supplier system, not keiretsu, in order to improve their manufacturing capabilities. Therefore, it may possibly be said that Western companies have come closer to the Japanese model in respect of measures taken for manufacturing competitiveness.

Figure 13 Case studies of threats from Western competition[30]

	Points to check	Implications and backgrounds
Changing procurement practice of automakers	Is the auto maker increasingly ordering from non-keiretsu?	To grasp whether the change in procurement policy of the automaker is accelerating, and which component(s) the change is happening to.
	Who makes the final procurement decision - the Japanese side or Western side?	To understand which individual products the automaker has procurement authority for, and check to see if your own product(s) are subject to component sharing.
	Where is the decision made? Is it in Tokyo or Detroit, instead of in Thailand?	To see if you closely monitor the decision making processes for the procurement of individual components and make responses.
Competition with Western parts manufacturers	Does your Western competition have Japanese staff?	To see if quality management expertise of Japanese component suppliers has not been leaked to the Western competitor.
	Does the automaker instruct you to deliver components to a major Western parts manufacturer?	To assure if your products are not downgraded to modules to be delivered to a major component supplier.

Source: Various interviews.

business with the customer.

Changing Procurement Practice of Automakers

In selecting component suppliers, there is a growing opinion that Western suppliers are better positioned with their wider geographical coverage and strength in package deals in various general-purpose components, and that joint procurement by Japanese and Western auto makers will likely increase the possibility of contracts being awarded to Western suppliers. Japanese automakers, which have traditionally valued the benefits of keiretsu, are becoming active in dealing beyond keiretsu. These changes point to the fact that Western suppliers are taking root in Thailand.

Other Cases

In addition to what has been mentioned above, there were cases where engineers were head hunted from Japanese auto makers and suppliers in order to efficiently improve the quality of locally sourced and produced components. In these cases, there is a division of labor between Japanese engineers and Western management in which the former supervise quality management in the field while the latter take the role of strategic planning and organizational management. These types of recruiting activities by Western component manufacturers lead to an increase in their competitiveness through improvements in quality and production efficiency, and a loss in competitiveness on the part of Japanese manufacturers due to outflow of talent and quality management expertise, thus posing a medium-term threat to the Japanese companies. Despite a short history in Thailand, Western auto parts manufacturers are rapidly expanding their business and improving product quality. Depending on future developments, they can become a major threat.

Chapter 3: Comparison of Japanese auto parts manufacturers with Western auto parts manufacturers

(1) Preface for Discussion

Relationship of corporate organizations to their parts characteristics

In our local interviews it became increasingly clear that the Western auto parts manufacturers supplying their products not just to Thailand alone but also to

30 A careful study of the content of the Figure, and of statements regarding changes in ordering practice and recruiting of Japanese staff, should lead to the conclusion that it is difficult to write off fears of Western component manufacturers becoming a threat to Japanese parts suppliers in the future. In reality, some orders for general-purpose and mass products have been rerouted to Western suppliers, and a Japanese supplier was instructed by an automaking customer to deliver their products to a Western supplier. In order to verify what those signs shown in the Figure are likely to develop into, it is necessary to closely watch the situation and changes in procurement policy of automakers and the operations of Western auto parts manufacturers. While those changes will not necessarily happen to all companies, the Figure generally explains what changes are to be noted as important signs, and the authors hope the signs will help readers identify some changes.

the wider world have organizational strength as a property worthy of attention.[31] It is anticipated that Western auto parts suppliers will find themselves in a more advantageous position in manufacturing auto parts beyond the next car models, if their organizational strength and parts manufacturing structure are kept in appropriate balance. If this hypothesis is correct, in order to analyze businesses operated by the Japanese and Western auto parts manufacturers, studies are needed to establish the relationship between the way in which auto parts manufacturers are organized and the parts characteristics such organizations may apparently be best at.

Put another way, it is necessary to consider the characteristics of individual parts, including those requiring quality built in, those produced by component sharing and able to be mass- produced, and how companies should be organized to efficiently achieve production of such parts with individual characteristics. Focusing our attention on this relationship will enable us to discuss the current organizational strengths/weaknesses of Western auto parts manufacturers and Japanese auto parts manufacturers, and the future policies or strategies that both groups may possibly be contemplating.

Framework of analysis

To analyze the comparison between Western auto parts manufacturers and their Japanese counterparts from the standpoint of parts characteristics and corporate organizations, we will begin by observing the structural differences in businesses operated by both groupings from the two perspectives of "organization" and "operating method."

"Organization": Western auto parts manufacturers have global supply networks, boasting an overwhelmingly large scale of sales. By contrast, the operating size of most Japanese auto parts manufacturers is relatively small. What will be the effect of this difference in business size, and what characteristics will emerge?

"Operating Methods": Japanese auto parts manufacturers place emphasis on a manufacturing-driven approach, which is based on individuals' expertise and experience, and they pursue a high level of QCD by artificially controlling every minor aspect of manufacturing processes. In contrast, Western auto parts manufacturers manage their production by relying on control systems such as the QS9000/ISO, etc. What will be the effect of this difference, and what characteristics will emerge?

① Organizational Differences and their Implications

Differences in scale

The largest difference between Western auto parts manufacturers and their Japanese counterparts is the scale of their operations[32] (Figure 14).

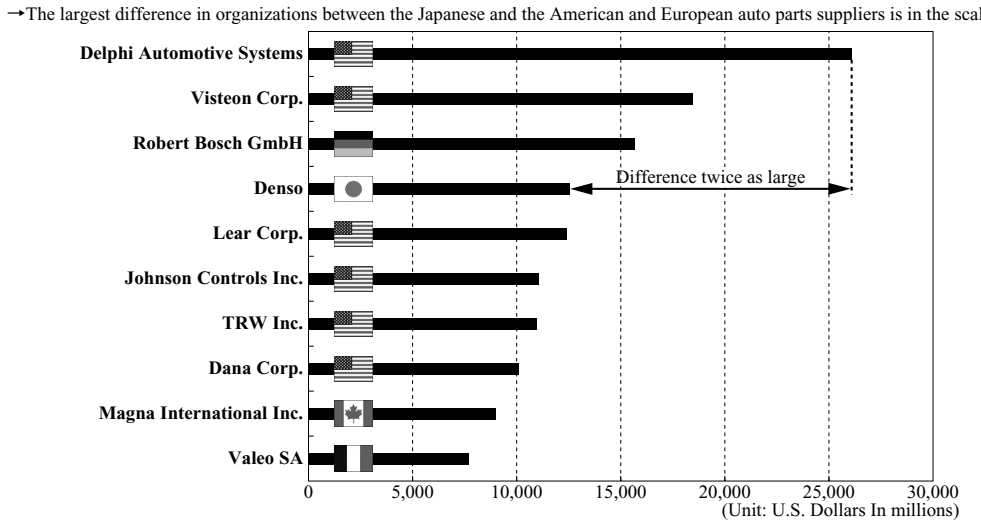
Among the reasons that the Western auto parts manufacturers have become so large-scale is their aggressiveness in mergers and acquisitions (M&A).[33] A comparison of the form of global expansion made

31 When asked in this survey about their ideas regarding management actions and decision making, the Japanese auto parts manufacturers in Thailand said that they were strongly conscious that "management=operation (manufacturing)=improvement on QCD." To illustrate, during our interviews with Western auto parts manufacturers, they were sufficiently cognizant of the high level of quality built in by the Japanese auto parts manufacturers. However, it was felt that under the rapidly and drastically changing industry environment the equation should be management=strategy (strategic actions)+operation (manufacturing).

32 The Western auto parts manufacturers are realizing large sales, ranking 9th in the top 10 of world auto parts manufacturer sales. In contrast, even Denso, with the largest sales among the Japanese auto parts manufacturers, sells slightly more than half (less than ¥2 trillion in value) that of Delphi (about ¥3 trillion in value). A look at the number of employees and manufacturing bases suggests how large the organizations are of the Western auto parts manufacturers (see the Figure).

33 To make M&A work effectively, a corporate culture of accepting and promoting it is essential. Overall, the service years of employees working for Western companies are shorter, and individuals are urged to achieve performances during a short period of time. Thus, the top executives and managers at work sites tend to consider how they can achieve greatest performance during the relatively short period of time they are in charge, rather than thinking of long-term corporate earnings. Western companies are characterized by their conception of companies as a gathering of independent individuals, which tends to keep the turnover rate high. Therefore, there seems to be less sense of resistance at work sites toward their company organizations growing larger through consolidation. Such an underlying environment makes M&A easier in order to realize economies of scale.

Figure 14 Top 10 Sellers of the World's Auto Parts Suppliers



Source: FOURIN (2001) "Global Production Structure of American and European and Japanese Auto Parts Companies"

by Japanese auto parts manufacturers and their Western counterparts proves that the Western auto parts manufacturers are leveraging M&A. Figure 15 compares the mode of entry into the global market after 1999 between the Western auto parts suppliers and the Japanese counterparts, in which M&A by the Western auto parts manufacturers is predominant in as many as 45 cases. The data shows that a large number of M&As have been launched in quick succession by the Western auto parts manufacturers during a short period[34].

Implications of being large scale

Being large-scale means that auto parts manufacturers will have stronger negotiating power with auto manufacturers, and have an expanded area as well as product coverage (Figure 16.). The area coverage means a regionally high supply capacity that can deliver ordered parts in every part of the world, with the same specifications, at the same price, and at the same timing. The product coverage suggests the capability to supply auto parts in semi-finished form, meaning that component suppliers are able to gather a large variety of individual parts manufactured both in house and outsourced, and as far as possible to assemble them into semi-completed automobiles before delivery to auto manufacturers.[35] Therefore, a large-scale operation realized by M&A makes it possible for parts manufacturing companies to build up their auto parts supply capability both in scale and scope, as it helps to enlarge both ends of the coverage.

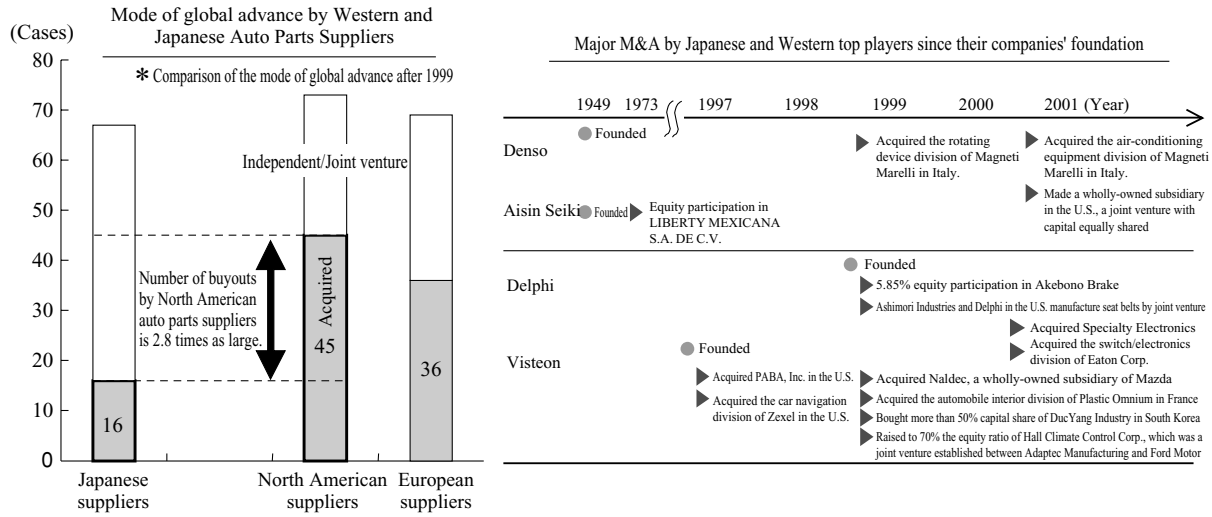
Scale of Japanese auto parts manufacturers

On the other hand, the Japanese auto parts manufacturers have formed a division of labor in the corporate grouping called a "keiretsu" relationship, which revolves around auto manufacturers, and have improved their parts quality and enhanced their workmanship by specializing in the roles and specific types of parts assigned to them to supply. It is for this reason that, overall, the operating scale of each auto parts manufacturer in Japan is not so large. Instead, they have become able to specialize in customization by establishing close corporate relationships with auto manufacturers, which has in turn enabled them

34 Delphi and Visteon both used to be in-house parts manufacturing divisions in GM and Ford. Thus, both were already large-scale operations when they became independent.

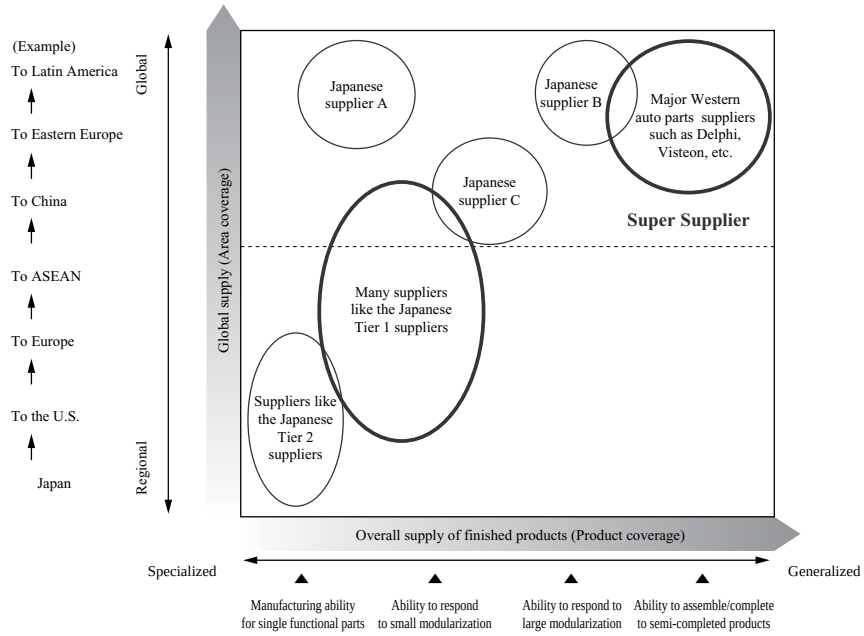
35 For example, the Western auto parts manufacturers such as Delphi and Visteon have coverage in major market areas across the world with wide product availability. In this connection, however, an interesting comment was made during the interview: "It is not generally acknowledged that they improved their manufacturing capability to supply half-finished products only because they have become larger in scale by means of M&A. They seem to be still struggling to manufacture quality parts even after consolidating their operations."

Figure 15 Western Auto Parts Suppliers Expanding Business Scales by M&A



FOURIN (2001): "Global Production Structure of American and European and Japanese Auto Parts Companies" reported on individual companies' web sites

Figure 16 Structures of Global Auto Parts Supply and Overall Supply of Finished Products



Source: Braxton.

to pursue specialization and continuous quality improvement.[36]

While the Western auto parts manufacturers have been widening their capacity to supply and manufacture auto parts through the pursuit of economies of scale, many of their Japanese

36 As one of the hypotheses to explain the competitive advantages held by the Japanese auto parts manufacturers, the following three factors may be cited: ① Long-term continuous transactions with the auto manufacturers, which make parts manufacturing and the overall assembly system efficient, ② Competition to build up supply competence among a few suppliers, not only limited to competition for price, but also to help boost supply capabilities, and ③ Holistic consignability as exemplified by putting into practice the approved vender drawings and delivering parts without receiving inspections (quoted from Takahiro Fujimoto (2001) "Introduction II to Production Management" p.160, published by the Nihon Keizai Shimbun).

counterparts have been specialized in manufacturing and supplying relatively few kinds of parts, centering on the world's three major markets. This background creates differences in organizations (and corporate management).

② Differences in Operating Methods and their Implications

Introduction of formalization and standardization

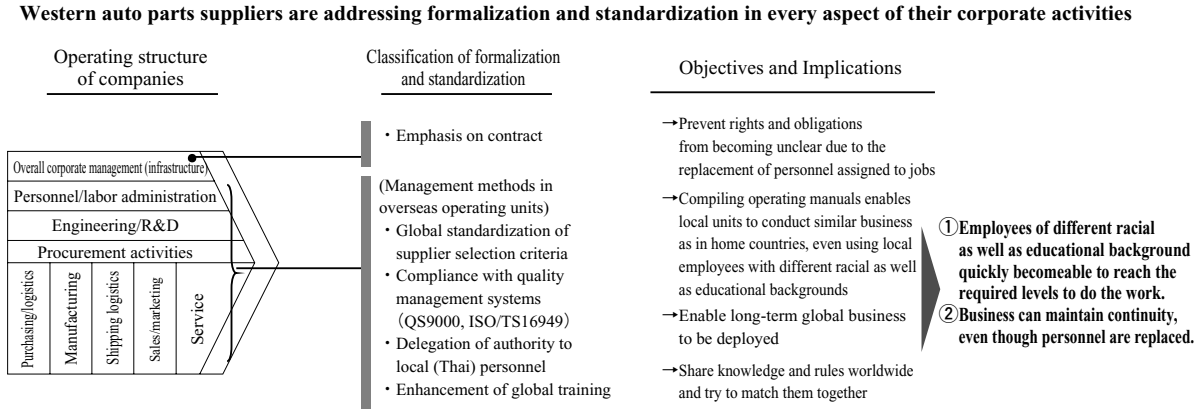
Introduction of formalization and standardization

What distinguishes operating methods (manufacturing) is that the Western companies are addressing the application of formalization and standardization to every aspect of corporate activities (Figure 17.). Among important issues for operating their businesses is maintaining stable production in Western auto parts manufacturers having large-scale organizations spread across the world, in which the local top management and the personnel working in the factories tend to be relatively frequently replaced. Such organizations mean that parts manufacturing operators have to have employees with different racial backgrounds or different levels of education carry out the same given levels of manufacturing operation worldwide during a short period of time. Thus, such operators should be able to continue their businesses without disruption, even if their employees are replaced.

Reflecting such a situation, the Western auto parts manufacturers are trying to build systems for every possible aspect [37] of doing their business, including emphasis on contract, delegation of authority to local personnel, enhancement of global training, global standardization of selecting auto parts suppliers, and compliance with quality management systems. Accordingly, they are operating such systems, and trying to realign the broad-based foundation with many parts manufacturers under their control, in every production center throughout the world.

For example, with regard to compliance of quality system management, auto manufacturers have their own standards, including the QS9000,[38] ISO/TS 16949,[39] etc., and so do auto parts suppliers. [40]

Figure 17 Classification of formalization and standardization



Source: Braxton

37 For example, overall corporate management, personnel/labor administration, procurement activities, purchasing logistics, manufacturing, shipping logistics, sales/marketing, service, etc.

38 The QS9000 is the specification administration system developed by the U.S. Big Three in 1994. It is a basic and specific system for the process of continuous improvement intended to prevent quality defects, emphasize reduction of waste, and cut costs.

39 The ISO/TS16949 has been compiled by ISO for the auto industry based on the QS9000 with the VDA6.1 (German specifications), EAQF (French specifications), and AVSQ (Italian specifications) consolidated. Since the Big Three in the U.S. uphold these standards of quality control as basic requirements for selection of their component suppliers, the Western auto parts manufacturers consider them important. The ISO/TS16949 is internationally recognized as the same as the QS9000, VDA6.1, EAQF, AVSQ, etc.

Implications of formalization and standardization

The specification administration systems play the role of strengthening the control of head offices over their overseas units, and also of bringing a wide scope of product quality to a given level during a short period of time.[41] As for delegation of authority to local personnel and enhancement of global training, the Western auto parts manufacturers are trying to share knowledge and rules among their (manager-level) employees across the world. For example, major Western auto parts manufacturers such as Delphi, Bosch, Arvin Meritor, etc., who are present in Thailand, have only a few personnel sent in from their home countries and actively promote Thai personnel to manager level, putting the human resource development programs to the best use.[42]

The element of emphasis on contract may be explained by the fact that Western auto parts manufacturers regard the written business contract as one of their tools, helping to make business transactions clear and allowing everybody to smoothly proceed with their work. As such, even if the personnel in charge are replaced, the written contract enables their replacements to continue operations in any country without disruption. On formalization and standardization of operations, they try to thoroughly eliminate any ambiguities by putting things in written form as manuals.[43]

The introduction of formalization and standardization may have some bearing on differences in management styles practiced in overseas units by Japanese and Western companies. As shown in Figure 18., the management of overseas units by introducing formalization and standardization makes it possible for the Western auto parts manufacturers to rapidly deploy their global business, and thereafter to achieve control. By contrast, the Japanese auto parts manufacturers, which deploy using a quality building/driven approach and by sharing experience and technical expertise, directly use Japanese management in their overseas units throughout the world, and Thailand is no exception. Differences in operating methodology (in manufacturing) are visible in this respect.

(2) Respective Superiority of Japanese and Western Suppliers

Superiority of formalization and standardization adopted by Western auto parts manufacturers

With these features born in mind, major differences in management styles in overseas units between Japanese auto parts manufacturers and their Western counterparts may be condensed to the following (Figure 19.). From the organizational aspect, Western suppliers try to turn the way of doing business into a stereotype (documentation), whereby their head offices strengthen control.

Thus, the Japanese suppliers rely primarily on corporate governance by transferring expertise and providing guidance through engineers, and on human relations built up between their head offices and overseas units. In the operating method (manufacturing), the Western suppliers delegate wide authority to local personnel, controlling parts quality by using manuals and in-house training,[44] while their

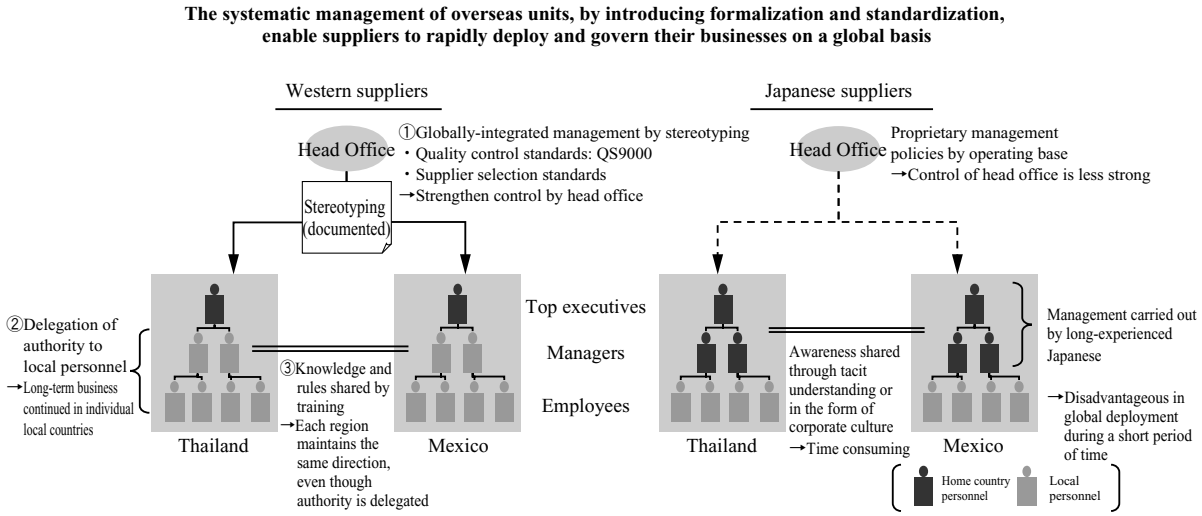
40 For example, Delphi has in-house standards named SPDP (Supplier Performance Development Program), used to select secondary component manufacturers.

41 As an example, formalization and standardization (of operations and processes) is largely contributing to increasing the local content ratio. Behind the boosting of local content ratio with a given quality level soon after their entry into other countries is the fact that Western auto parts manufacturers are making their quality control programs function effectively. This means that they are encouraging and supporting local parts suppliers to get qualified for and to comply with the quality control standards systems as a requirement of doing business, and thereby assure the supply of locally made quality parts over a relatively short period of time. In Thailand, parts suppliers-not limited only to local auto parts manufacturers-are actively trying to become qualified for these quality standards in general.

42 However, it may be premature to say that Japanese auto parts manufacturers in Thailand will not win the competition for globalization or cost reduction, losing their competitiveness, unless authority is delegated to Thai people, and that therefore they should promote more Thais to management level. It is only possible for Western auto parts manufacturers to delegate responsibilities to local people because their local management is complemented by systems. It should be noted that their business and management structures are fundamentally different from the manufacturing-driven structures practiced by Japanese component suppliers.

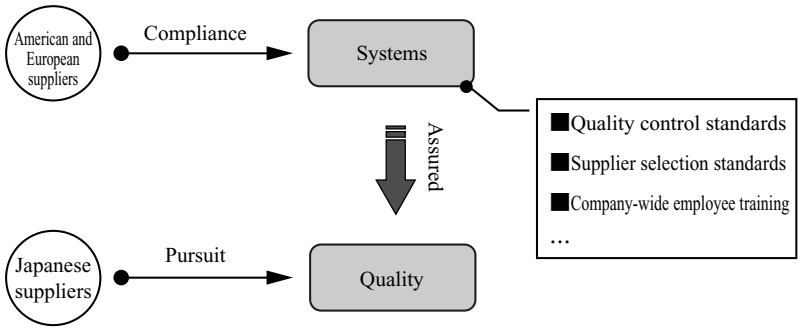
43 It was, however, said (at a local interview) that some customization is being made in the actual running of such systems.

Figure 18 Differences in Management Styles of Overseas Units between Western Suppliers and Japanese Suppliers



Source: Braxton

Figure 19 Formalization and Standardization "versus" Manufacturing



■Systems for quality assurance
■It is involved if systems compliance itself is likely to become fixated

Source: Braxton

Japanese counterparts chiefly resort to guidance provided by Japanese staff sent from the home country.

Whether systems are built into management styles seems to make a difference in the mode of doing business between Japanese and Western auto parts suppliers. In the advancing area of global sourcing and component sharing sought by auto manufacturers, Western auto parts suppliers are benefiting from their management mode of systems superiority. This is because such suppliers having production centers throughout the world have the organizational capabilities to meet whatever requirements auto manufacturers may demand.

Superiority of the manufacturing-driven approach of Japanese auto parts manufacturers

Compared with Western auto parts manufacturers having superiority in the global supply structure (area coverage) and overall product supply structure (product coverage) based on large-scale organizations, Japanese auto parts manufacturers

44 Western companies have detailed manuals in which guidelines on how to operate their business are defined, and their employees are required to do their jobs following such guidelines. Their training covers programs such as leadership theory and portfolio analysis that the overseas units of Japanese companies normally do not provide for local employees.

excel in QCD for product manufacturing, and they are striving to provide value-added to their products and service by flexibly responding to the needs of auto manufacturers.

The Japanese component suppliers' ascendancy in QCD depends largely on features like their organizational inter-company relationship. There are many local units of Japanese auto parts manufacturers in Thailand that have introduced the Western type of quality control systems such as the QS9000 or ISO/TS16949. However, in many instances, they have introduced these quality control systems merely because they are required in order to do business with Western auto manufacturers. The quality of parts they supply is still pursued through the experience and expertise of engineers. [45]

In other words, while Western suppliers have established global management structures by taking the systems approach, compliance with the systems, which should originally be complementing manufacturing activities in the field, appears to have become fixated as a final goal. On the other hand, although Japanese auto parts suppliers may be inadequate in conducting global corporate management, they are outstanding in retaining high levels of quality in a broad sense, including flexibility to meet the delivery time and needs of auto companies.[46] In fact, many Western auto parts manufacturers in Thailand comment that Japanese auto parts quality is higher than theirs.[47]

(3) Where Superiority Will Work Effectively

The differences so far described between Western auto parts manufacturers and their Japanese counterparts may be summarized in that the respective superiority in organizations and manufacturing of both will function most effectively under the following market environment (Figure 20.).

Firstly, the large-scale organizations and formalization and standardization operation methods used by Western auto parts manufacturers will be more suited to pursue scale economy in order to achieve mass production or production by module for the general-purpose products and shared components. Also, they will be better suited to supply such parts to Western auto manufacturers, and to Japanese auto manufacturers that have come under the umbrella of equity owned by the Western companies.

On the other hand, the benefits of the keiretsu-affiliated organizations and management methods pursuing high levels of QCD as adopted by the Japanese auto parts manufacturers will be maximized when they build quality into their products, closely communicating with auto manufacturers, and specializing in manufacturing products of high added value.

Chapter 4: Suggestions for Japanese Auto Parts Manufacturers

(1) Building of Models

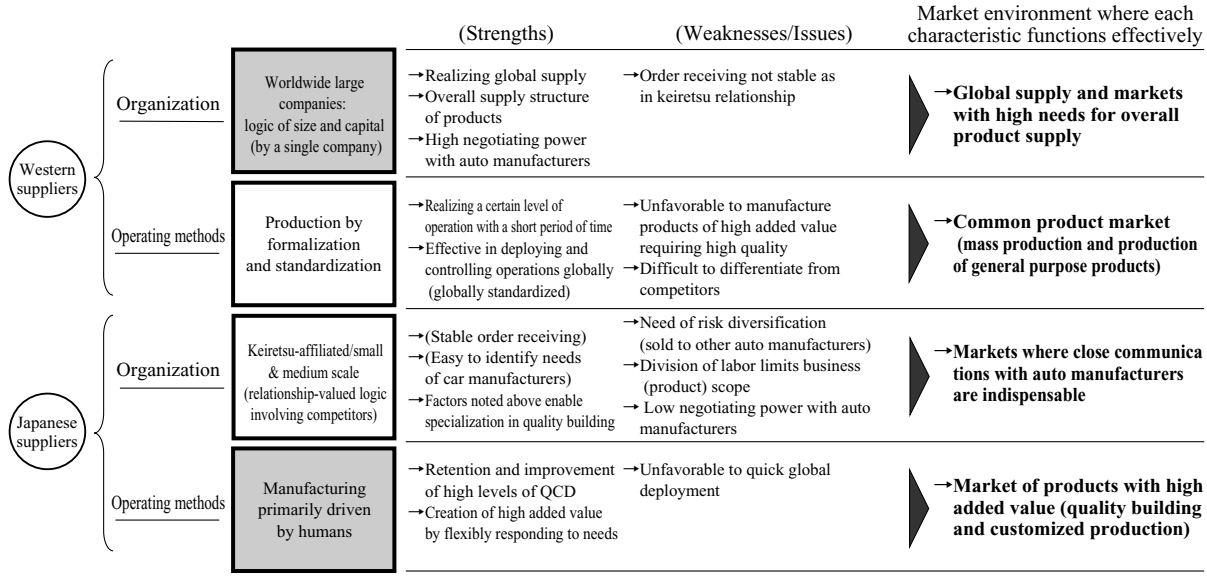
Based on the above discussion, the following suggestions are made to Japanese auto parts manufacturers that may be hoping to formulate their future business strategies. For that purpose, it may be effective to consider a direction that will fit the actual conditions of individual companies by dividing them into groups according to their respective characteristics. On the basic conceptual diagram (Figure 21.), actual auto parts companies will be

45 This was plainly commented upon by the purchasing manager of a certain Western auto parts manufacturer: "The difference between the Western suppliers and their Japanese counterparts is that the former values the system. Corporate management by unified systems will provide an advantage for companies that have high fluidity of labor, and deploy business globally. However, in the environment of knowledge-intensive management premised on long-term employment as used by Japanese suppliers, it is thought that human-driven information and technological management is better suited."

46 As another factor, the Japanese component suppliers, which have a long-standing presence in Thailand and are well aware of getting along with Thai employees, and independent and native Thai auto parts manufacturers that excel in QCD, are cited as superior in QCD.

47 One of the local units of the Japanese auto parts manufacturers commented about the relation between formalization and standardization (of operations and processes) and quality: "Even though Japanese parts suppliers send in their engineers to have local employees trained almost on a man-to-man basis, the fact is that less than half of their objectives are being achieved. Under the circumstances, very few employees work on their own initiatives according to the manuals or systems and it is questionable how much the Western methods will work out."

Figure 20 Summary



Source: Braxton

mapped (Figure 22.). [48]

Method of creating business value (horizontal axis)

On the horizontal axis of Figure 21., parts for general-purpose and mass production are indicated toward the right hand, with products of high added value toward the left hand. For parts production in pursuit of scale economy (the right-hand side of the axis), it shows that the Western auto parts manufacturers, which have parts supply by formalization and standardization and are achieving parts sharing, tend to find themselves in an advantageous position. Conversely, in order to manufacture parts requiring high added value (the left-hand side of the axis), the Japanese auto parts manufacturers, which have manufacturing prowess for quality products working together with auto manufacturers in design and engineering, tend to easily display their superiority. As auto manufacturers are seeking to reduce costs by sharing and generalizing the parts that used to be different according to auto parts manufacturers or vehicle models, the Western suppliers will likely see the scope of their parts application expand. It means that the threat from Western auto parts manufacturers will gradually increase from the right to left hand on the figure.

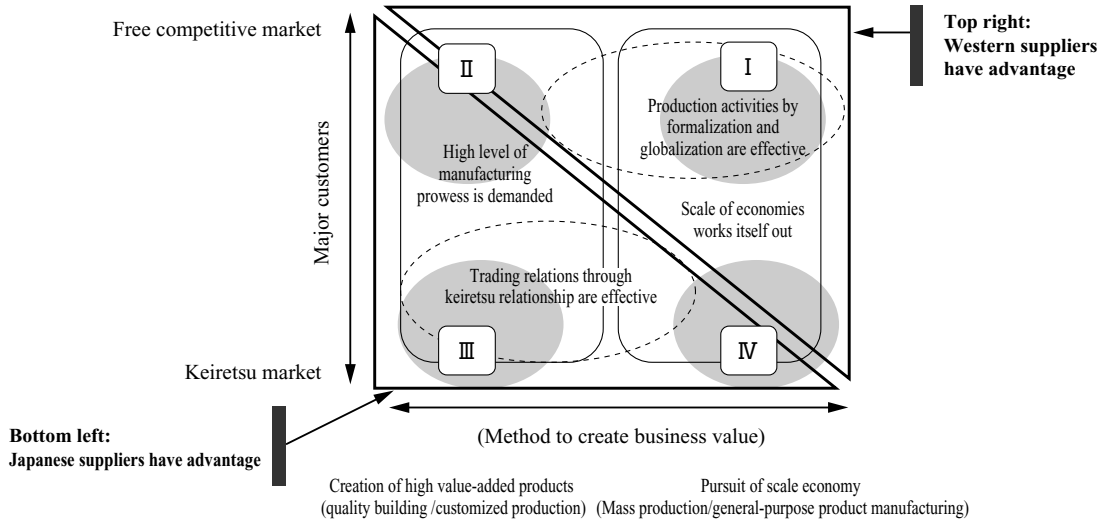
Major customers (Vertical Axis)

The vertical axis on Figure 21. shows that moving up on the axis means Western auto parts suppliers become more aware of the purchasing (including engineering processes) policies of Western auto manufacturers, and their business structures, which are ready to respond to such requirements, are more favorable. Moving down on the axis means that Japanese auto parts manufacturers are more aware of the purchasing policies of Japanese auto manufacturers and their business structures, ready to respond to such requirements, are more favorable. Western auto parts manufacturers are trying to approach the Japanese auto manufacturers, and are already successfully receiving orders from Japanese auto manufacturers that have gone under the equity wing of Western auto companies. From this fact, it may be said that the threat from Western auto parts manufacturers will expand from the upper to the lower portions.

This implies that in Figure 21., the higher component suppliers go up toward the top right (the

48 For the way of mapping, see Appendix 2 at the end of Chapter 4.

Figure 21 Summarization of Organizations and Parts Characteristics of Western and Japanese Auto Parts Manufacturers



Source: Braxton

position where products have high versatility and the trading auto manufacturers adopt Western-type purchasing policies), the better the manufacturing activities by formalization and standardization that fit business globalization and transactions with Western auto manufacturers function. As such, Western component suppliers stand in a more advantageous position. Conversely, the further suppliers go down to the left position offering products of high added value to the keiretsu auto manufacturers, the more favorably their long-term working relationship with the keiretsu auto manufacturers function, which is therefore more beneficial to Japanese auto parts manufacturers.

(2) Threat from Western Companies in Thailand

It may be summarized that, based on this model, the threat from Western auto parts companies in Thailand gradually begins emerging from position I.

The horizontal axis implies that a rapid progress of global purchasing is in many cases allowing the Western auto parts suppliers enjoying scale economy to rob the Japanese component suppliers of high versatility parts orders. The scope of parts favorable to the Western auto parts suppliers is likely to expand, because auto manufacturers are seeking to reduce costs by sharing and generalizing auto parts that used to be different according to vehicle makers and models (threats expand from the right to the left hand).

The vertical axis further suggests that Western component suppliers, which made in-roads into Thailand following the advance of the Western auto manufacturers (GM, Ford), are strengthening their approaches to the Thai units of Japanese auto manufacturers. There are examples of some of them having succeeded in receiving orders from Japanese auto manufacturers implementing purchasing policies westernized through equity participation by Western auto companies, and also orders for general-purpose components from Honda and Toyota who are relaxing their keiretsu relationships (threats expand from the upper to the lower).

From these facts, it may be summarized that the threat of Western auto parts companies in Thailand begins appearing from position I in the top right of the diagram.

(3) Characteristics by Position

Actual distribution

Consideration will be given to the basic direction and specific programs the groups in each position in the framework should take. In Figure 22., the individual Japanese auto parts manufacturers are quantitatively mapped, and grouped from positions I through IV.

Characteristics by position

Business environments surrounding positions I through IV can be generally stated as follows:

- I : The Japanese auto manufacturers, their major customers, have gone under the equity of the Western companies' capital, and thus their purchasing policies have changed from the past. It is feared that they may be exposed to harsh competition or buyout from their competitors, including Western auto parts suppliers, as their parts products are of relatively high versatility.
- II : Although the Western capital has gone into their major customers, making changes in purchasing policies, the keiretsu relationship is in many cases retained for now because of a relatively low degree of versatility, while needing specialized engineering for different car models.
- III: Business relationships stay relatively stable, as major customers value the keiretsu relationship. Their products have low versatility that has to flexibly respond to customers' requirements, and thus they remain immune from threats as long as they can meet their customers' requirements.
- IV: Operation is of large scale with some globalization deployed. There are no immediate concerns about receiving orders, as their major customers attach importance to the keiretsu relationship. In order for them to survive the competition from rivals and to become the leading companies, they have to widen their coverage and accelerate sales pitches to customers outside of the keiretsu relationship.

(4) Directionality of Individual Positions

The Japanese auto parts manufacturers have to execute programs that are fitting to their positions ahead of other companies (Figures 23, 24 and 25.). Programs may be different for every position. However, what can be commonly said is they should not be those which will be implemented 'inside the doors' of manufacturing plants (operational improvements). This is because the times when superiority of production operation would guarantee profit superiority at the same have already gone, as world auto manufacturers are taking for granted the best practice in manufacturing. What this means is that, building on the basis of outstanding production processes, Japanese auto parts manufacturers are being pressed to have strategic perspectives.

Position I

① Current state

With major customers coming under the equity wing owned by Western auto manufacturers, these auto parts suppliers are hammering out new purchasing policies unfettered by the keiretsu relationship by entering into position I, which makes a very competitive environment (Figure 23.). There is a tendency that smaller auto manufacturers draw smaller-sized component suppliers, and thus considerable differences are seen in the scale of operation as well as earnings when compared with the competitive Western rivals (Figure 22.). Japanese component suppliers in this position are likely to be bought out in the form of being swallowed up by Western component suppliers, after coming under their groups (Figure 24.). However, M&A by Japanese component suppliers with their survival at stake are not working well in many cases, and today correction is being sought in their M&A strategy as well as methods.

② Definition of success

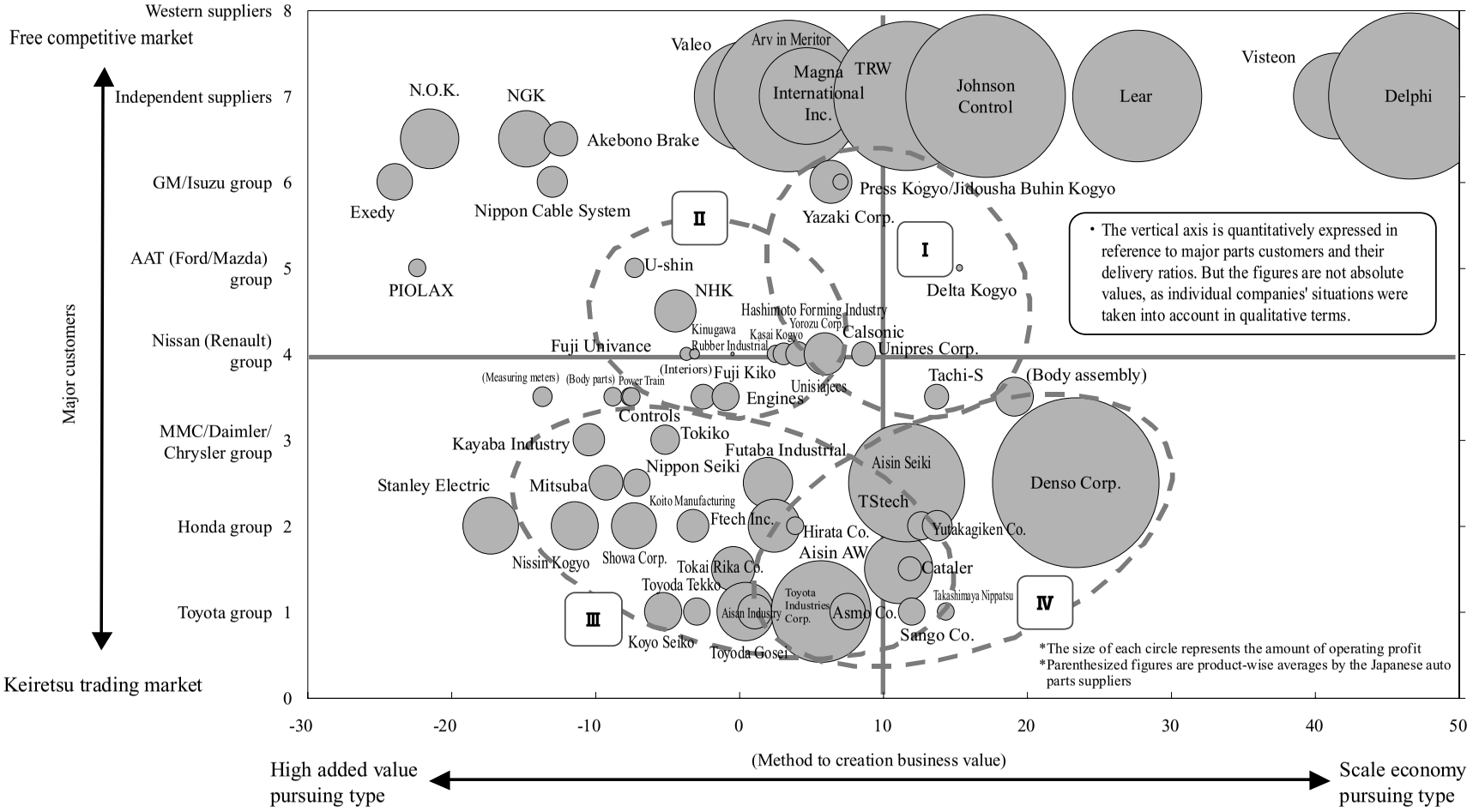
The Japanese component suppliers placed in position I seem to have a largely different understanding of the definition of success. Herein, success is defined by component suppliers being at least able to preserve what the management doesn't want to concede under any circumstances (ownership, continuity in business, employees' jobs, management positions, etc., which are different from supplier to supplier).

③ Directionality of strategy

The Japanese companies placed in position I will have to consider going into partnership through M&A or alliances with other companies, as they find it difficult to survive by themselves (Figure 25.). In the face of a tough competitive environment, a growing amount of M&A or alliances will be proposed by other companies. At that time, what is critical is that instead of being passive or impromptu in responding to such proposals as many Japanese

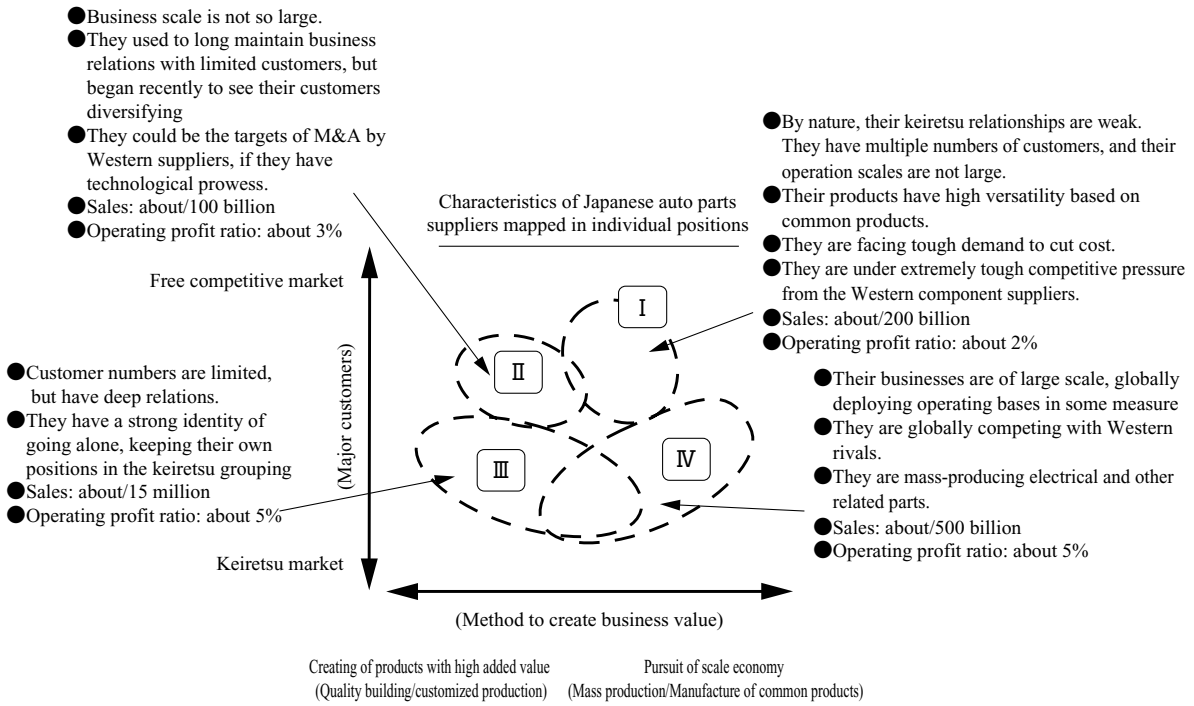
Figure 22　Quantitative Mapping of Auto Parts Manufacturers (Quantitative Presentation based on Figure 21)

■ Individual Japanese auto parts suppliers are quantitatively mapped, grouping their positions from I through IV in the following diagram



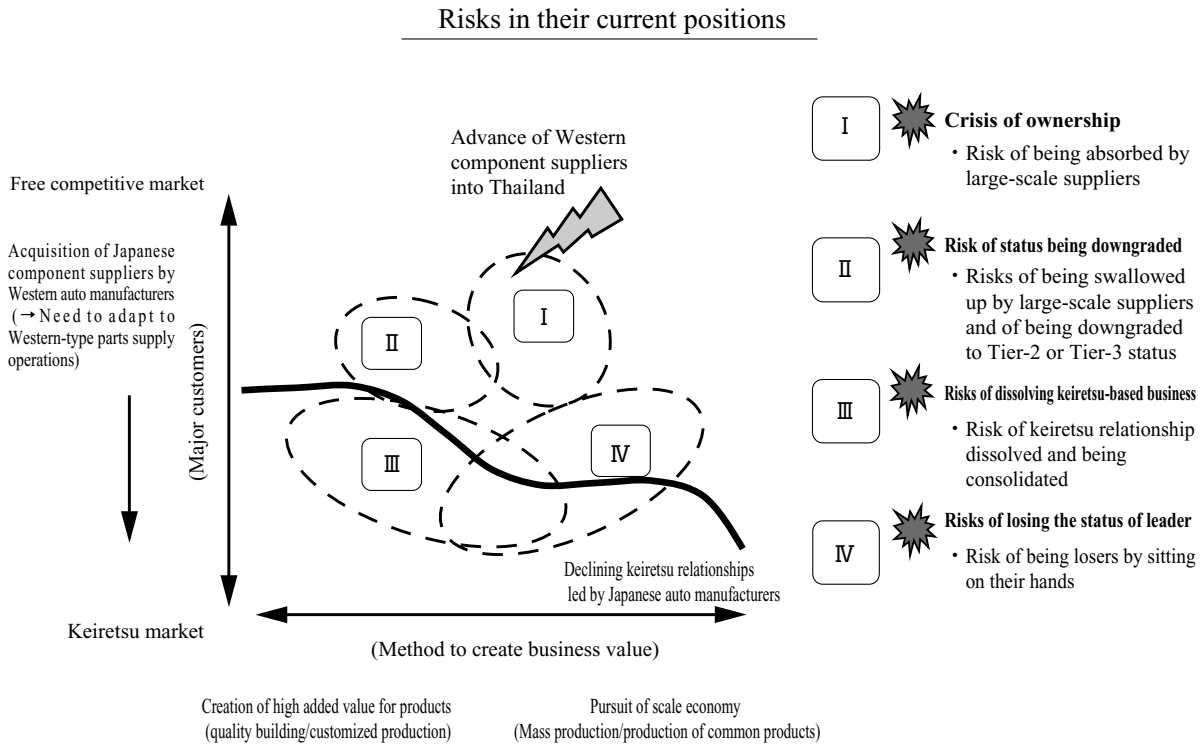
Source: A variety of publicly released financial data. Braxton analysis was made from the literature and through interview

Figure 23 Current State by Position



Source: Braxton

Figure 24 Risks by Position



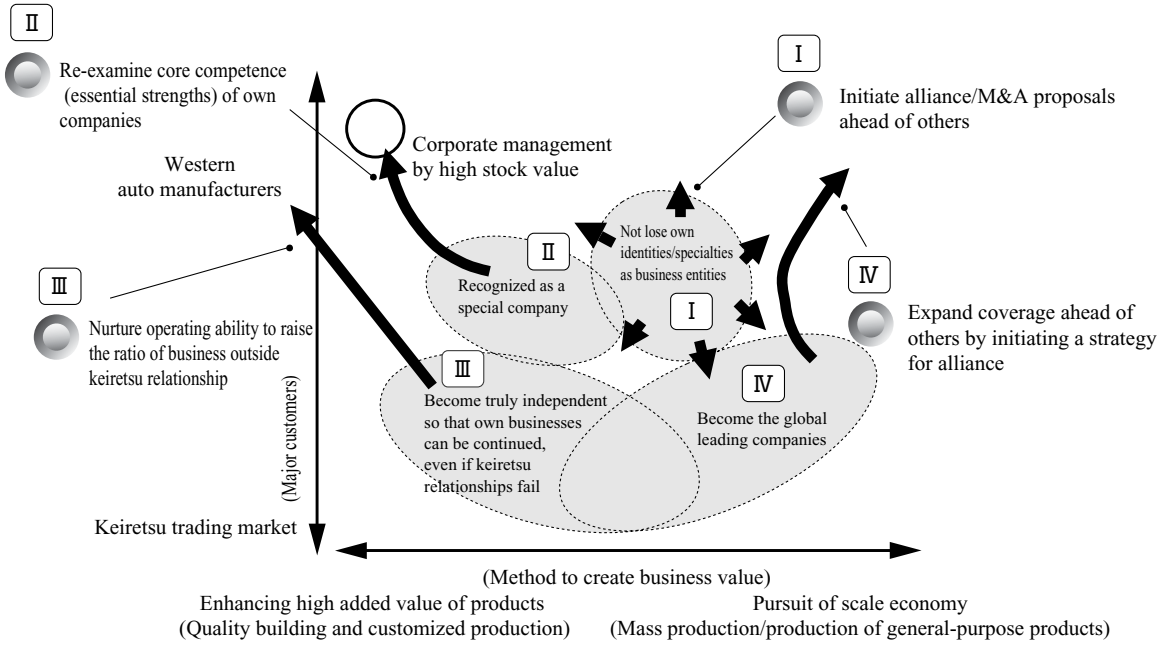
Source: Braxton

suppliers used to be, they should take the initiative of proposing these opportunities by making themselves the hunters, and should proactively make strategic moves in order to assure fruitful realization of M&A or alliances.

④ How to proceed with alliance strategy

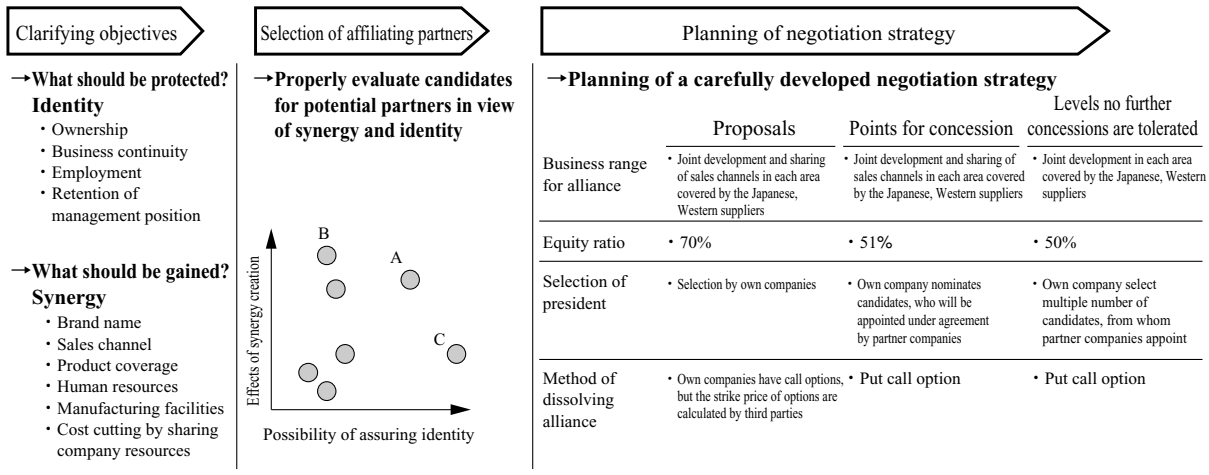
Planning for alliance strategies will require the three-phased approach (Figure 26.): clarification of objectives, selection of alliance partners and planning for negotiation strategy. In the phase of objectives clarification, consideration has to be given to what they want to protect and what they want to gain through alliance. In selecting the partners for alliance, target companies should be listed in line with the objectives for alliance, and the listed companies evaluated and prioritized from this standpoint to assure the potential synergies and identity of the selecting company. In the planning of negotiation strategy, thorough review should be made as to individual items such as specific proposals to be made, assumed points of concession, and levels

Figure 25 Directionality by Position



Source: Braxton

Figure 26 Position I (How to execute alliance strategy)



Source: Prepared based on Yokoyama/Honda (1998)

beyond which any further concession will not be tolerated (fall-back), and it is critical that the top management should be present at negotiations with a clear intention to get things done.

Some Japanese auto parts companies seem not to sufficiently consider in advance to what extent and on what items they will make concessions, although they have determined the initial proposals. In order to successfully realize M&A or alliance, a company's experience and business record are critically important. While the counter parties (many of them are Western auto parts companies) are being supported by professionals in M&A or alliance, there are many cases where the Japanese sides are represented by only in-house personnel, and as a result they tend to fail in negotiations. It is suggested as one of the alternatives that the Japanese companies use specialists from outside their companies to counter much-experienced negotiators from the counter parties.

Position II

① Current state

They are forced to alter their course of business from the conventional keiretsu relationship, following changes in procurement policies made by the major auto manufacturers (Figure 23.). Their business scales are smaller than those of Western auto parts suppliers, losing their current status of Tier 1 and sometimes being downgraded to Tier 2 status. Meanwhile, suppliers having proprietary technologies tend to become the targets of buy-out from Western component suppliers (Figure 24.).

② Definition of success

Differentiation from other companies gives them competitive edges, and enable them to preserve their Tier I status, as they can be recognized as "one and only" (irreplaceable) by the auto manufacturers.

③ Directionality of strategy

In position II, pursuing self-identity and differentiating from the other suppliers is an important element, and in this connection, the Japanese component suppliers are better off. In order to differentiate from other companies, it is essential that these suppliers widely and objectively recognize their own core competencies, and select and concentrate their businesses, thereby further sharpening strengths they already have (Figure 25.).

Auto parts suppliers will be able to realize differentiation from others in either the phase of ① strategy planning, or ② development, where they put their technical expertise to the best advantage and ③ the manufacturing phase where they make the best use of superiority in manufacturing and building quality into products (Figure 27.). In order to maintain independence, improving a company's operating structures by achieving healthy finance and personnel administration is equally important.

Position III

① Current state

Suppliers mapped in position III are characterized by generally optimistic, because they have long been protected by the keiretsu relationship (Figure 23.). Toyota and Honda have been sticking to traditional procurement policies without equity participation by Western companies. However, even such companies are moving to review keiretsu relationships so as to counter drastic cost reduction efforts attempted by competitors. Mere continuation of operating the current business is likely to endanger future growth of companies in the face of policy changes to be made by keiretsu auto manufacturers (Figure 24.).

② Definition of success

It is suggested that while maintaining trade through present keiretsu relationships, they should raise the ratio of business outside keiretsu relationships, and thereby become companies that will be able to grow without relying on keiretsu.

③ Directionality of strategy

While retaining the currently close keiretsu relationships with auto manufacturers, correct recognition of going beyond such relationships to grow their businesses is important. Especially to expand trading volume with Western suppliers whose influences are growing, they have to successfully clear the requirements those companies will propose, and enhance operating capabilities (Figure 28.).

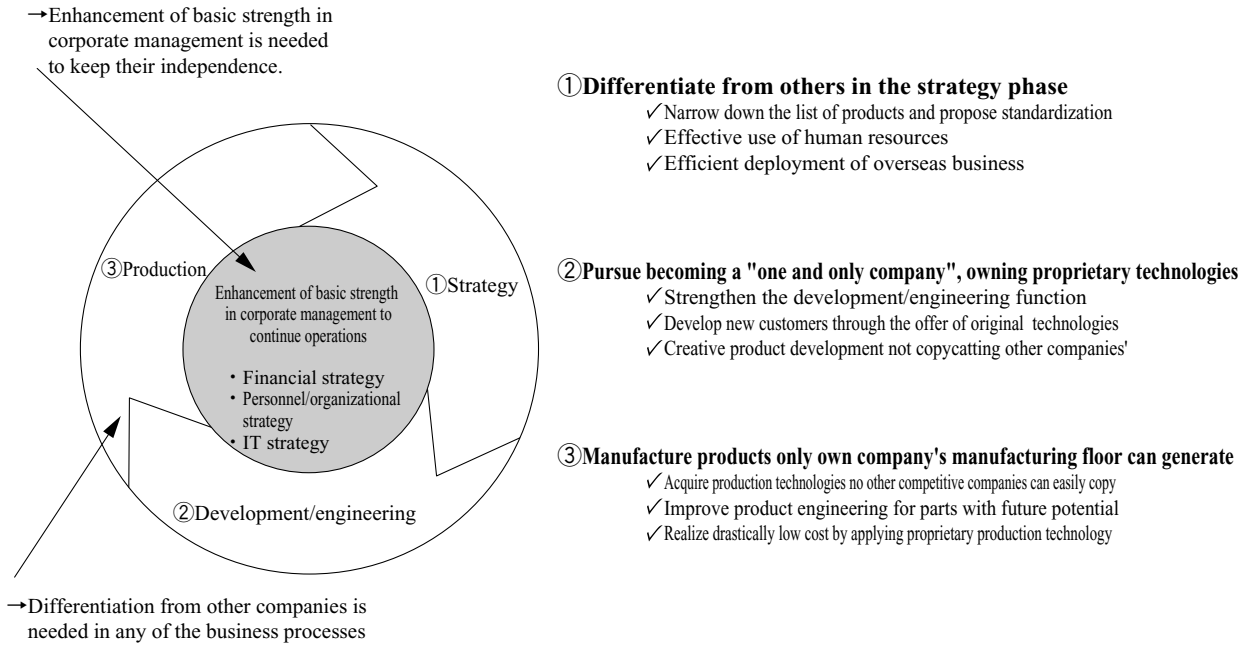
Position IV

① Current state

Those in position IV are represented by the top-ranking Japanese suppliers, which are trying to expand their businesses based on stable relations with

Figure 27 Position II (Directionality of Strategy)

Summary of programs the suppliers in position II are recommended to apply



Source: Braxton

existing major customers (Figure 23.). However, compared with the giant Western component suppliers that have rapidly expanded their scales through M&A, the range of their coverage is smaller and very likely to lose the competition in the long run (Figure 24.).

These suppliers have been reassigned their work by the auto manufacturers. Thus, they have come to operate on behalf of the auto manufacturers: product design from the early stage; selection of Tier 2 suppliers for parts whose importance is relatively low, and manufacturing as well as logistics for parts of a high level of generality.

② Definition of success

By assuring a broad coverage of product lines and market area and also establishing global supply structure, these suppliers should be able to compete with the giant Western auto parts suppliers on an equal footing. Also, they should be able not only to gain scale economy through an increase in sales, making it possible to expand trade beyond keiretsu relationships, but also to acquire a variety of benefits that may not be available from business within a keiretsu relationship.

③ Directionality of strategy

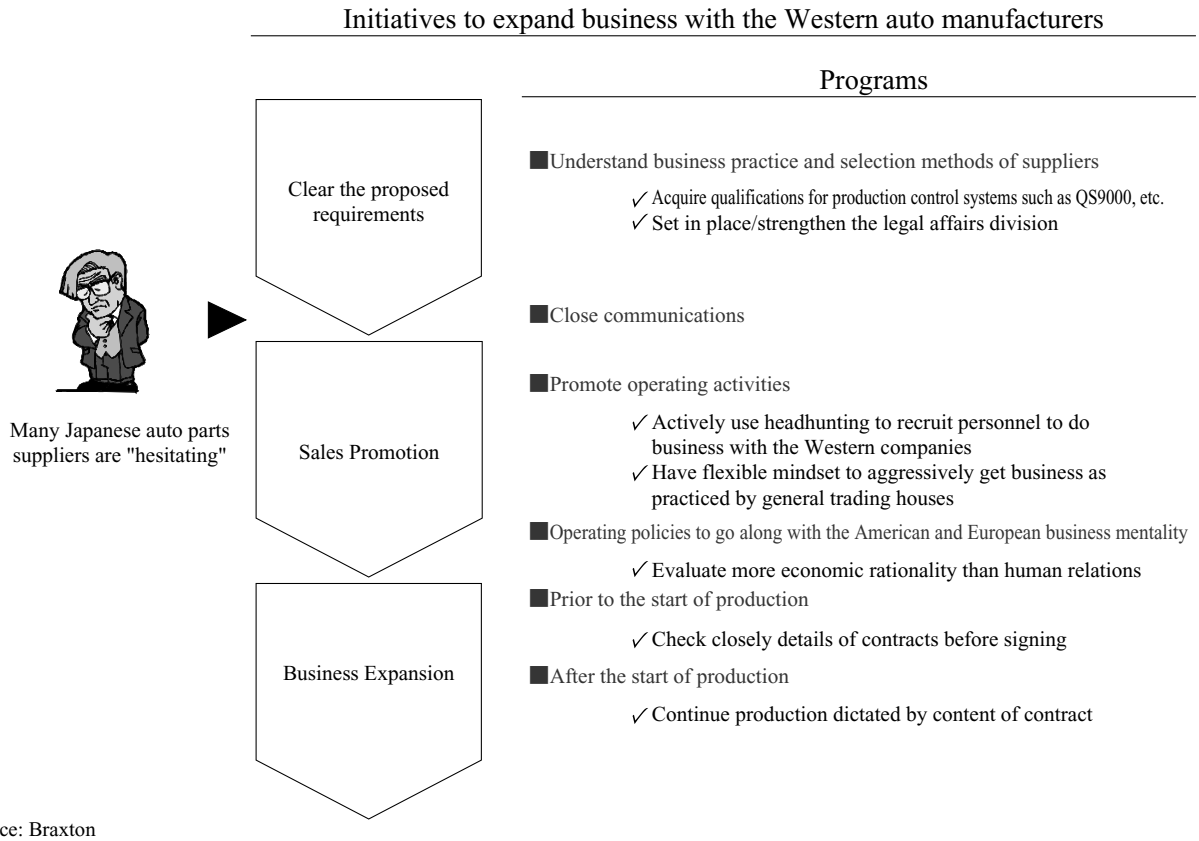
Aiming at becoming world-class super suppliers, they should plan and execute alliance strategies viewed from the widest possible vantage point. To make the alliance successful, becoming initiators of proposed alliances is more important than to passively act on what is proposed.

④ How to achieve the coverage

There are roughly three ways to achieve coverage: merger & acquisition (M&A), new investments (greenfield investments) and alliance. In many cases, Japanese component suppliers tend to walk into a variety of traps in each phase of M&A, including strategy planning and execution and management after M&A, since they are not generally used to the practice of M&A.[49] They have traditionally been making new investments in these cases, but it takes too long time before such investments of their own start to produce an outcome and raise new businesses amid a business environment in which the Western

49 For example, the stock premium (how much more expensive the buyout price than share price before the buyout) at the time of acquisition shows that the Japanese companies carry out M&A at a price 80% higher than the average M&A.

Figure 28 Position III (Directionality of Strategy)



Source: Braxton

auto parts manufacturers are rapidly expanding their businesses through M&A (Figure 29.).

⑤ Network type-administered structure through strategic alliance

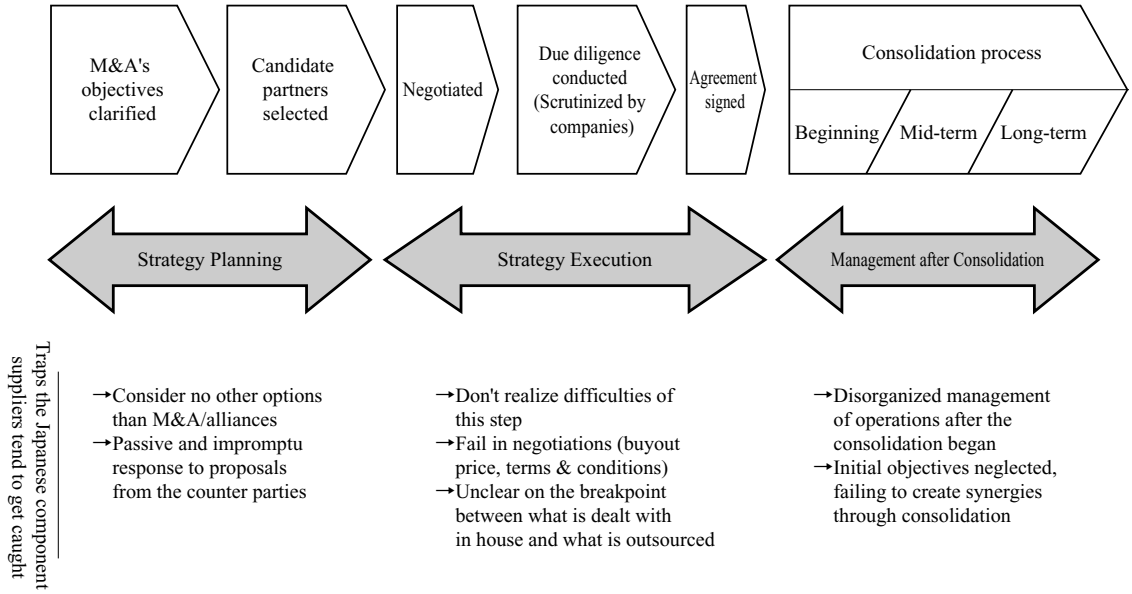
In many cases, it is desirable that Japanese component suppliers should adopt a network structure which will be based on mutually complementing to their own operations, instead of the centrally controlled structures provided by M&A that Western companies are good at (Figure 30.). The centrally controlled structure means that parent companies' headquarters will financially control the acquired firms, and manage them by implanting parent companies' systems. Meanwhile, the network type-administered structure is one in which component suppliers will build up so-called "win-win" relationships with individual partners under a business alliance, and thereby manage operations through developing long-term human relations. In order to make the best use of the characteristic that Japanese companies value human relations, the network type administered structure, in which mutual trust relations are developed from the top management to the factories through strategic alliance, will be more effective. The affiliated partners as a whole will find it possible to widely meet auto manufacturers' needs that may not be independently responded to, as the affiliated partners can complement one another in business functions (such as engineering, production and marketing) and range of coverage (including area, distribution channel and product availability.[50]

⑥ Benefits from business outside the keiretsu relationship

The Japanese auto parts suppliers mapped in position IV are able to acquire a variety of additional benefits,

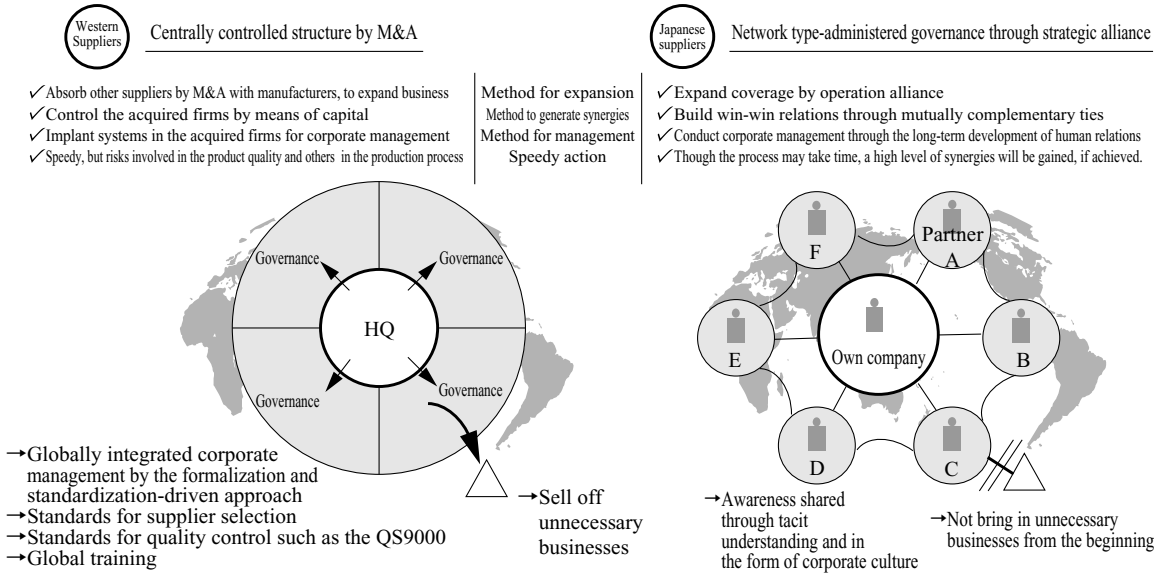
50 As an example of this, Denso is said to aim at realizing in-house global sourcing (as commented upon by a specialist in Thailand), in which it tries to exchange the best quality parts through cross supply between the different operating units, a departure from the conventional way with its head office in Japan playing the central role. Denso's case may prove to be a new business model for auto parts manufacturers in Japan.

Figure 29 Position IV (Directionality of Strategy①)



Source: Prepared based on Yokoyama/Yamamoto (1988)

Figure 30 Position IV (Directionality of Strategy ②)



Source: Braxton

including cost reduction resulting from scale economy, which will not be received from inside the keiretsu, because they can expand business volume unbounded by such a relationship. For example, the expected benefits will be the improved negotiating position with major customers, acquisition of operating expertise from auto manufacturers outside the keiretsu relationship, and technology development accumulated through the introduction of new technologies and ideas from other auto companies. The parent companies also can benefit from improved price competitiveness, as their keiretsu suppliers are expected to strengthen financial structure by dealing with non-keiretsu companies.

Conclusion

Beginning with our research into cataclysmic changes piling up in the auto industry of Thailand, we have developed discussions in this report extending to making suggestions for the Japanese companies,

while considering differences in management styles between Western and Japan. The report points to the importance of having strategic perspectives, suggesting not simply pursuing high quality and low cost in manufacturing, but applying these advantages to the structures of trading practices and operating organizations. It also was proven that these issues are not limited to Thailand alone.

While Japanese auto parts manufacturers are steadily committing themselves to address QCD, Western auto parts manufacturers are strategically expanding their coverage of products as well as market areas. To be sure, the Japanese companies excel in QCD, but no matter how hard they may continue improvements on individual aspects of the matter, it will be difficult for them to survive competition while a framework of overall strategies remains unclear. Nowadays, the concept that Western and Japanese component suppliers may possibly coexist begins to lose credibility due to the strategic alliances formed among auto manufacturers on a global basis. It therefore is suggested that the basic direction Japanese auto parts manufacturers should be heading in is not simply to continue looking to own companies alone, but that they also should take a wider view of the industry and build up optimal relations with others in order to occupy a position of competitive advantage, regardless of nationality. At the same time, this may be said to suggest how important it will be to realign relations between the aspect of manufacturing and that of management strategies, and to formulate management strategies inter-related to both ends for the good of Japanese manufacturing industry of the future.

Appendix 1. Limitations of the Study

Figure 31 Limitations of the Study

Tier-1 and Tier-2 classifications of Japanese suppliers	■ We originally attempted to classify Japanese suppliers into Tier-1 and Tier-2 by type of business relationships with auto makers, but it turned out to be difficult to apply such classifications as suppliers typically carry out operations of both Tier-1 and Tier-2 nature. As such, we classified their individual operations into Tier-1 operations and Tier-2 operations according to operational characteristics of respective products.
Thoughts on the Asian strategy of Western suppliers	■ Due to the limited history of active business expansion by Western suppliers in Thailand, there was limited qualitative and quantitative information available regarding their Asian strategy compared to information available for Japanese suppliers. ■ Interviews with major Western suppliers in Thailand were conducted contingent upon the confidentiality agreement we entered into. Pursuant to such agreement, disclosure of information that had not previously been made public via other media was restricted.
Classification of Western Suppliers	■ Among Western suppliers, there is great variance in management strategy and operational structure. In due consideration of the scope and objectives of the study, common characteristics, management strategy and operational structure were assumed for Western suppliers for the benefit of comparison with Japanese suppliers.
Hypothesis testing on qualitative data	■ In testing hypotheses in the study, we used various qualitative and quantitative data, except in the case of area and product coverage of Western and Japanese suppliers, where quantitative verification of mapping was difficult and the figure or table was depicted for an illustrative purpose only.

Source: Braxton

Appendix 2. Method of mapping

Figure 32 Method of mapping

■ In mapping Japanese suppliers to give a grouping framework, each supplier was quantitatively analyzed in order to determine in which quadrant it should be plotted.

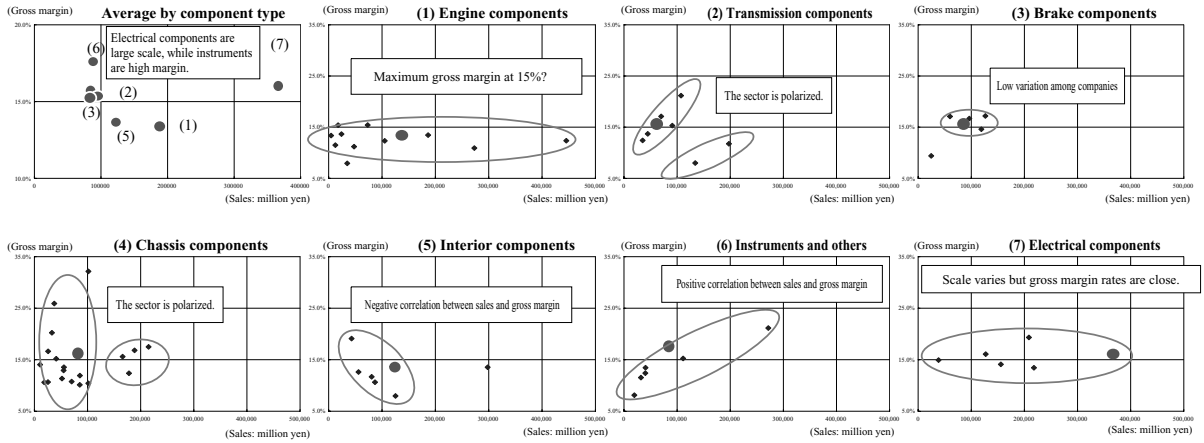
	Method of mapping		Notes
Step 1 Sampling	◆Japanese suppliers were sampled according to the following criteria. ・Sales exceed a certain amount (approximately 30 billion yen), ・Auto parts account for more than 65% of total sales, and ・There are no extreme differences in sales or profit between FY 2000 and FY 2001. Out of the companies meeting these criteria, those operating in Thailand were prioritized when selecting samples. ◆Among Western suppliers, major companies operating in Thailand were selected as samples, with the exceptions of Magna International Inc. and Valeo due to their exceedingly large size.		◆In sampling Japanese suppliers, the selection was conditioned upon the minimum amount of sales (approximately 30 billion yen), leaving out other small suppliers.
Step 2 Horizontal values	◆Values on the horizontal axis were based on 1) sales and 2) gross margin (or sales less cost of goods sold, then divided by sales) representing measures of scale economy and value-added created by a business, respectively. In order to adjust for fluctuations from year to year, an average of FY 2000 and FY 2001 data was used for each sampled company. ◆Specifically, data on 1) sales and 2) gross margin were normalized by converting them into standard deviation values and then the difference between 1) the standard deviation of sales and 2) that of gross margin was calculated. If 1) the standard deviation of sales was larger than 2) that of gross margin for a company, it was plotted on the right half of the axis. (A company of this type is characterized as a seeker of scale economy).	◆The standard deviation of sales for Company A is 44 with underlying actual sales of 55,608 million yen. ◆The standard deviation of gross margin for Company A is 48 with underlying actual gross margin of 13.5%. ◆As a result, Company A will be plotted at -4, or 44-48, on the horizontal axis.	◆The values on the horizontal axis were derived from average sales and gross margin over the period of FY 2000 and FY 2001, and so companies whose financial statements were not available were excluded from the analysis.
Step 3 Vertical values	◆Values on the vertical axis were based on a number of principal customers and their shares in total sales, quantified by the following method, indicating the orientation of a company in a range between free competition-oriented (Western style) and keiretsu transaction-oriented (Japanese style). ◆In the order of strength of keiretsu relationships, values of Toyota (1), Honda (2), Mitsubishi (3), Nissan (4), Mazda (5) and Isuzu (6) were given. Independent vendors with a wide range of clients were assigned a value of (7) and Western suppliers were given a value of (8). Vendors with multiple customers but which could not be called independent were individually quantified based on a qualitative evaluation of their sales data (principal customers and their shares).	◆Company A is a major automotive rubber component supplier of Nissan keiretsu. The company is plotted at 4, the value given to the Nissan keiretsu, on the vertical axis.	◆Although the values on the vertical axis are quantified representations of principal customers and their revenue shares for a given company, the assessment of the state of each company was qualitative in nature, hence those values lacked objectivity and precision.

Source: Braxton

Appendix 3. Categorization of Auto Components

Figure 33 Differences by Component Type in the Methods for Creating Value-added

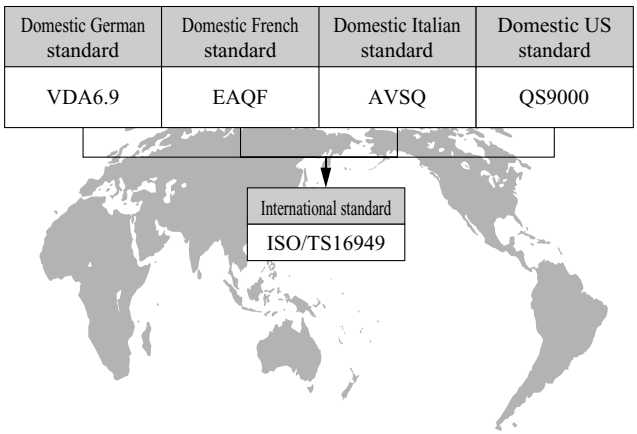
- Methods for suppliers to create value-added vary depending on the types of products they manufacture.
- Companies making components that are general-purpose in nature such as electrical parts or low value-added engine components (high value-added engine components are usually manufactured in-house by automakers) tend to seek economies of scale through mass production because of limited gross margin potential.
- Manufacturers of products customized to each customer to each model tend to seek high value-added/profitability because of limited sales potential.



Note: The average for (1) includes Aishin Seiki and that for (7) includes Denso.
Source: Braxton Inc., based on financial statements of the companies.

Figure 34 (Reference) Quality Management Systems Emphasized by Western Suppliers

→Western suppliers also emphasize systematic approaches in production management.



QS9000

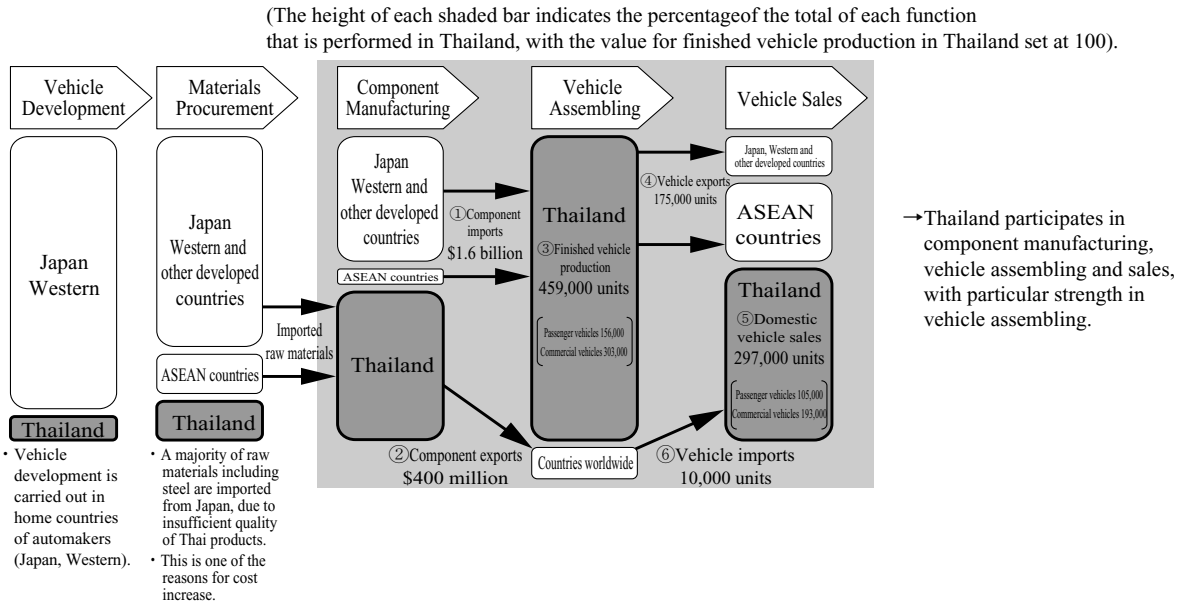
- Based on ISO9000, QS9000 was developed in 1994 by the Big Three auto companies of the U.S. as a quality management system for automotive suppliers.
- QS9000 is a basic, specific system defining continuous improvement that focuses on defect prevention and waste reduction and leads to cost reduction.

ISO/ TS16949

- ISO/TS16949 is an ISO quality standard specifically designed for the automotive industry. It is based on QS9000 and combines various aspects of VDA6.1 (German standard), EAQF (French standard) and AVSQ (Italian standard).
- The standard was jointly developed by the members of the International Automotive Task Force (IATF) and ISO/TC176, a technical committee of ISO (International Organization for Standardization).
- ISO/TS16949 is internationally acknowledged as the equivalent of QS9000, VDA6.1, EAQF, AVSQ.

Source: Braxton Inc., based on various materials.

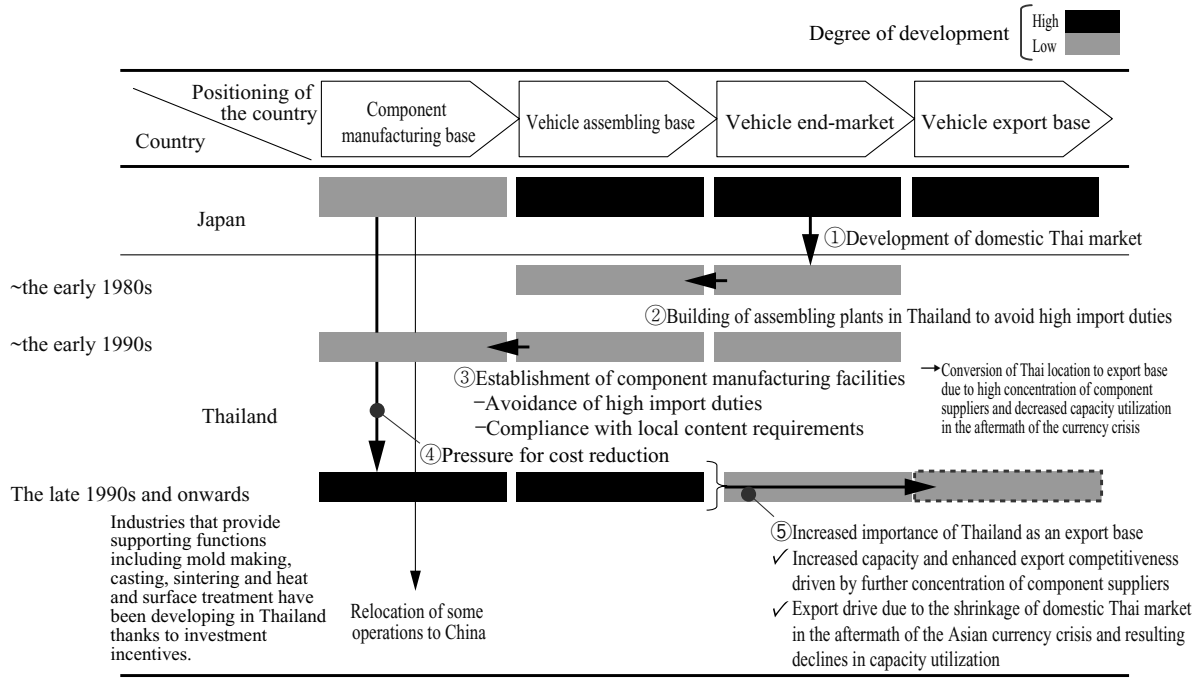
Figure 35 (Reference) Positioning of Thailand in a Supply Chain



Note: Domestic vehicle sales (⑤) include sales of imported vehicles. The difference between the sum of vehicle imports (③) and vehicle production (④), 469,000 units, and that of domestic vehicle sales (⑤) and vehicle exports (⑥), 472,000 units, represents a change in inventory and other factors. Inventory levels of commercial vehicles are relatively high, as there are post-manufacturing modifications that need to be performed on those vehicles in order to meet customer specifications before they are actually sold.

Source: Braxton Inc., based on various materials.

Figure 36 (Reference) Establishment of Thailand as an Export Base



Source: Braxton

Figure 37 (Reference) Scheduled Model Changeovers, by Automaker

● Full model changeover, New model

Automakers	Vehicle Types	Model (Year launched/Base model)	Price(10,000 Thai Bahts)	2000	2001	2002	2003	2004	2005
Toyota	Passenger vehicle	Soluna（1996.12）	49.0−59.1						
	Passenger vehicle	NBC V	n/a				●		
	Passenger vehicle	Carolla	69.1−99.5		●(May)				
	Passenger vehicle	Camry	118.9−147.9			●(March)			
	Pickup	Hilux Tiger（1998.6）	42.1−73.5						
	PPV	Sport Rider（1998.9）	106.0−122.4						
	Pickup/PPV	IMV	n/a					●	
	Light Truck	Dyna	53.7−67.8				●		
Nissan	Passenger vehicle	March/Clio based model	n/a					●	
	Passenger vehicle	Sunny Neo（1995.1）	71.5−80.9	●(September)					
	Passenger vehicle	Sunny Almera（Primera）	85.2−87.0		●				
	Passenger vehicle	Cefiro（1998.6）	129.0−163.9				●		
	Pickup	Frontier（Big M 1998.8）	43.5−67.0					●	
Honda	Passenger vehicle	City（1996.3）	45.1−66.8				(n.a.)		
	Passenger vehicle	Fit based model	n/a				●(January)		
	Passenger vehicle	Civic	66.7−84.4	●(October)					
	Passenger vehicle	Accord（1997.12）	110.80−169.0				●		
	SUV	CR-V	117.0−122.0			●(January)			
Isuzu	Pickup	Pickup（1997.2）	36.8−70.8				●		
	Passenger vehicle	Lancer（1996.8）	66.5−85.5			●(October)			
	Passenger vehicle	Z car	n/a					●	
	AUV	G-Wagon	95.5−109.5			●			
	Pickup	Strada（1996.2）	40.3−71.2					●	
AAT	Passenger vehicle	Laser/323 Protégé（2000.1）	65.6−81.2	●		×			
	Pickup	Ranger/B-Series（1998.6）	40.0−66.3						●
GM	Passenger vehicle	ChevoletZafira	98.9−132.9	●(May)					
	Passenger vehicle	Alfa Romeo 156	n/a			●(March)			
	Passenger vehicle	Suzuki Liana（Chevolet Cruze）	n/a				●		
BMW	Passenger vehicle	3 Series	113.4−240.0	●					
	Passenger vehicle	7 Series	n/a				●		

Source: FOURIN, 2002 Asian Automotive Industry (2002 Ajia Jidousya Sangyo)

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