

Research on measures to reinforce competitiveness through strategic alliance between Korean companies and global companies

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Affidavit

I, **HO HYUN KIM**, hereby declare

1. that I am the sole author of the present Master's Thesis, "RESEARCH ON MEASURES TO REINFORCE COMPETITIVENESS THROUGH STRATEGIC ALLIANCE BETWEEN KOREAN COMPANIES AND GLOBAL COMPANIES", 62 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted this Master's Thesis as an examination paper in any form in Austria or abroad.

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Abstract

This research is to apprehend the environment and method for successful strategic alliance between Korean automobile parts companies and global automobile companies so that the methods to reinforce the competitiveness of domestic automobile parts industry can be suggested. Therefore, this research used various advanced researches, books, research reports of relevant institutes based on business practice experience, to apprehend the market environment of automobile parts industry and built the theoretical foundation about Strategic alliance. Also, by analyzing the cases of Strategic alliance between companies, deducted the indications about the success factors of the alliance. Also, to raise the quality of the research performance, processed a survey to people concerned in the domestic automobile parts companies that actually constructed strategic alliance with global companies, to investigate the features of the company, contents, environment and performance of the strategic alliance recognized by them. And finally, focused on these research results, suggested the directions for improvement and development to reinforce the competitiveness of domestic automobile parts companies.

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1 INTRODUCTION

1.1 Background and purpose of research

In 2016, the production scale of automobiles (complete vehicles) was approximately 4.22 million cars. Considering the fact that Korea is the fifth largest automobile manufacturing country in the world, and the export scale of automobiles and parts is approximately 65 billion dollars, and the trade balance is approximately 50 billion dollars, automobile industry contributes to the state economy very largely, compared to other basic industries like vessel or petro chemistry industries. (National Statistical Office, 2017) Especially, since the automobile is manufactured by more than 20 thousand parts, it is an industry with the largest forward-backward linkage, and it occupies 11.59% of total manufacturing production, 10.93% of total employment, and 11.06% of total added value. (National Statistical Office, 2017) Also, it is an industry that has large production inducement and technology spillover effect not only on traditional industries like steel, machine, material industry, but also on new growth industries like information technology, bio technology, energy technology, environment technology that are connected to automobile industry.

Like this, as the automobile industry is using various technologies, materials, and parts, the automobile parts industry is producing various automobile parts and supplying them to automobile companies to carry out the role of rear industry of the automobile industry, and it is inducing a wide range of industrial connection effect with automobile and material industry. Therefore, automobile parts industry itself has also been developing with forming close relationship with material, petro chemistry, electronics, and machine field, and recently, as the convenience and environment friendliness of automobiles are being emphasized, the relation with information and environmental technology is increasing.

Automobile parts industry refers to the industry that manufactures the assembly in the middle level of composing a vehicle by manufacturing the parts that consists automobiles like power transfer devices, suspension, steering gear, braking equipment, electrical and electronic apparatus, and body parts, or by assembling

subunit parts. It is a typical compound industry, and it is subdivided according to function, process, material and other elements, so it is composed of groups of business manufacturing items with similar range of competition. Also, according to the features in the submarket of each item, intensity of competition, entry barriers, threat of substitution, front and rear bargaining force are very diverse.

However, since the production of automobile parts, except for special occasions like A/S(After-sales Service), mostly presupposes the production of specific models in automobile companies, it shows a high industrial connection with automobile companies. Especially, in case of automobile parts companies in Korea, they are mostly subordinate to automobile companies and the scales are small, so the bargaining power is inferior and they are closely related to the performance of their consumers. Therefore, the development of Korean automobile parts companies depended on the guide of automobile companies so far.

Therefore, automobile industry in Korea showed rapid growth, but the growth engine of the automobile parts industry is relatively weak. On the other hand, if you look at the cases of USA, Japan, Germany, that are known as powerhouses in automobile industry, not only global automobile companies like GM, Toyota, and Volkswagen, but also global automobile parts companies like Bosch, Denso, Delphi are showing rapid growth and good performance. Also, there are indications that Korean automobile parts companies pursued external development, instead of maximizing profit, which shows the internal fidelity of management. Therefore, the measures to improve the global competitiveness of Korean automobile parts industry are desperately needed. (Hyeong-Kook Cho et al, 2014). Related to this, alongside with the development of automobile industry, measures to develop and raise automobile parts industry are focused as important political issues. Currently, automobile parts industry in Korea is facing endless competition with Japanese automobile and automobile parts companies. With this, it is encountering economic recession, environmental pollution, and alternative energy issues, so it is hard to expect that the future of automobile parts is so bright.

In countries like USA, Europe, Japan, which are leading the world's automobile parts industry, development of machine industry is based on the background of automobile parts industry, so it was easy to develop the automobile parts industry either. This became the foundation of development of automobile industry, but in

case of Korea, many automobile parts companies have weak competitiveness in technology, capital, and quality, and relative predominance in wage expense is becoming weak, so there are many difficulties in come up to the expectations of automobile companies. This may lead to weakened competitiveness, so continuous development and continuance of Korean automobile parts companies are growing uneasy. (Korea Ratings Corporation, 2016).

Therefore, to reduce the pressure of huge R&D cost for developing new technology and danger followed by it, and to secure the economy of scale, M&A and strategic alliance with global automobile parts companies are actively discussed these days. This is, in order to develop and grow the Korean automobile industry in 21th century, strategic alliance to respond to the competitiveness of automobile industry in advanced countries is necessary. Recently, as the market range has been expanded into the whole world, competition between companies is intensified, and rapid development of new products and technologies is required by the customers. Therefore, companies are facing the uncertainty and danger caused by difficulties in expecting the supply, increased cost due to development of technology. In the managerial environment, the companies became aware that cooperative strategy based on mutuality is necessary to supplement deficient resource and capability, and to secure competitive advantage that can create value continuously. (Kyeong-soon Choi, Sang-wook Kim, 2013) In this point of view, Strategic alliance is considered as important type of cooperative strategy for the survival and competitive advantage of the company. Strategic alliance refers to the cooperative strategy that combines the resources and capability that are owned by each company to create competitive advantage. Generally, since strategic alliance has more strategic flexibility and the cost is lower, so it is considered as a method to acquire and transfer external knowledge.

Korean automobile parts industry has been growing dramatically in quantity so far. However, Korean automobile parts industry is now in a situation that is difficult to survive on itself, using its own competitive resources. So it is facing the necessity of pursuing cooperation between competitive companies or industries as a strategy.

Eventually, company's exploratory, applicational management actions basically require different organization structure, strategy and environment, and depending on where to put the strategic emphasis between the searching or usage of external

resources, the performance of the company can be completely different. So, based on these standards, the necessity to seek methods to reinforce the competitiveness through strategic alliance of Korean automobile parts companies, and to acquire detailed implications followed by it, it is necessary to search the condition and environment for the success of strategic alliance positively through analyzing the influential elements in performing strategic alliance and performance of companies.

Therefore, the objective of this research is to suggest the policy to reinforce the competitiveness of domestic automobile parts industry, by apprehending the environment and methods for successful strategic alliance between Korean automobile parts companies and global automobile companies.

1.1.1 Methods and contents of research

The methods and contents of this research are as below.

In this research, based on the researcher's business experiences in the automobile parts company, the market environment of automobile parts industry is apprehended, and the theoretical foundation of strategic alliance is constructed by using various advanced researches, books, research reports from relevant institutes. Also, by analyzing the status and cases of strategic alliances between Korean automobile parts companies and global companies, implications are deducted.

Along with this, to raise the quality of research performance, conducted a survey to the people concerned to domestic automobile parts companies which actually built a strategic alliance relationship with global companies, to measure the contents and performances of strategic alliance and features of their company recognized by them, and verified the hypothesis in statistical methods. Finally, with the research results on the center, this research suggested the policy to improve and develop the competitiveness of domestic automobile parts companies.

Especially, this research, as a positive research on influential elements and performances of strategic alliance of Korean automobile parts companies, has methodological features as below.

First, this research will deduct the factors that can influence the company's strategic alliance, by considering the internal features of the company, and examine the

performance through this. The strategic alliance of the company is a strategic action decided by various factors, so this research will set the factors as competitive strategy, task features, resources, and capability, and find out the influence on the strategic alliance, based on advanced research results.

Second, in the performance of strategic alliance, use task efficiency, task utility, task productivity, budget reduction rate, and in the process of analyzing the influence of systematic, partial features of individual companies, this research will also find out the moderating effect of level of cooperation and features of cooperative companies. This is, analyzing the mediating role in what influence the company's level of task sharing or dependence with outside through strategic alliance has on the performance, and apprehending the control effect according to suitability and control of the cooperative company in this relationship.

Third, for the survey data collected, verify the credibility and validity, examine the outline of the variables through correlation analysis, frequency analysis and descriptive statistics, and perform multiple regression analysis, hierarchical regression analysis, path analysis as concrete methods of verifying the hypothesis.

2 THEORETICAL BACKGROUND

2.1 Concept and features of automobile parts industry

2.1.1 Concept

Automobile parts industry is an industry that plays an important role of manufacturing various parts for assembling automobiles and providing them to automobile companies. The industry is composed of tier.1 suppliers and tier.2, 3 suppliers who supply parts to the tier.1 suppliers. Also, companies that deliver cast, forge products, processed materials to these companies are included in the industry. Generally, to manufacture one automobile, more than 20 thousands of various parts are used. And the number is increasing because of acceleration of electronization due to pursuit of convenience and safety. Among these, part that are included in the Automobile parts industry are limited to manufacturing essential parts in composing the automobile, this is, parts exclusively for automobiles. So, it is common to exclude things as glass for automobiles, electric components with general purpose, and paints from the range of automobile industry. In case of tires, since the portion of replacing tires is higher than that of manufacturing tires, so the connectivity with the automobile industry is declining, and the scale of the industry is dramatically growing, so it is classified as a separate industry. According to Korea standard industrial classification(NSO, 2017), Automobile parts industry refers to the industrial activities that manufacture automobile bodies, such as Automotive clutches, brakes, gears, shafts, wheels, transmission, radiator, bumper, exhaust, muffler, steering wheel and driver boxes, or components for automobile engine. Automobiles parts can be classified into automobile body parts and chassis parts roughly. Body parts can be subdivided into body, design, facility and electric devices, and chassis parts include parts other than body parts, including brakes, power transfer unit, steering device, and suspension. For material and process fields used in Automobile parts industry, processes like casting, welding, rolling, extruded, pulling, welding, heat treatment, and materials as steel, non-ferrous and non-metal materials are mainly used. It can be seen that the Automobile parts industry is an

integrated industry related to all process and material fields with large connectivity effect.

Automobile parts can be classified into OEM (Original Equipment Manufacturing) parts, manufacturing arts, repairing parts, exported parts according to their purpose. Manufacturing parts refer to parts that are supplied to automobile companies so that they can be used in assembling automobiles, and repairing parts refer to the parts used in repair or maintenance of automobiles release after manufacturing and assembling. Also, exported parts refer to the manufacturing parts supplied to overseas automobile companies or repairing parts for the automobiles operated overseas. (Jong-sang Park et al, 2011).

Also, automobile parts can be classified according to various standards such as manufacturing process, used materials, and form of usage.

2.1.2 Features

2.1.2.1 Technology-intensive industry

One automobile is composed of over 20~30 thousands parts. However, each part plays an important role in operating the automobile, so each one of them is extremely important. This is, the function of the automobile depends in the function of these parts. Therefore, automobile parts industry is a Technology-intensive industry which adopts the latest new materials and technologies. This intensity is growing higher as the function of the automobile is improving. And the change in concept of automobiles as a living space is requiring parts with more and more new parts with cutting-edge technology.

2.1.2.2 Intermediary product industry with large influence on related industries

Automobile parts industry is an Intermediary product industry which has a large influence on the front industry, the automobile industry. Automobile industry has a significant influence on the national economy, and Automobile parts industry has a close relationship with the Automobile industry, so the influence is not less than that of Automobile industry. Therefore, Automobile parts industry has great ripple effects in rear industries as materials, electricity, non-metal, steel industry.

2.1.2.3 Industry focused on medium and small sized business

Automobile parts industry in Korea is mainly composed of medium and small sized businesses, and they maintain dependent contract relationship with automobile makers. Automobile makers designate 2~3 parts companies as their suppliers for each item, for stabilization of parts supply and cost management. This is the main reason to disturb the growth and to weaken the bargaining power of domestic automobile parts companies. Therefore, the performance of domestic parts company is influenced by the performance of the automobile makers.

2.1.2.4 Industry depending on domestic demand

When you look into general sales portion of the Automobile parts industry, It can be divided into OEM, A/S sales and exportation, and OEM has the imperative portion in the sales. This is, most parts are manufactured to be delivered to the automobile makers for manufacturing, rather than exporting or repairing. Also, considerable part in exportation sales is also composed of exportations to overseas plants of domestic automobile companies, so the actual portion of exportation to overseas automobile companies is even smaller.

2.2 2.2 Current status and market environment of Automobile parts industry

2.2.1 Current status

Automobile parts industry in Korea is an important industry that account for 6.5% of total production in manufacturing industry, 8.5% of employment, 4.7% of exportation, and there are 247,000 employees, so it is an industry with high importance in employment field. (NSO, 2015).

Items	Volume of Manufacture	Added value	Number of employees	Number of business	Exports
Automobile parts manufacturing	97 trillion won	29 trillion won	247,000	4,340	266 billion dollars

Total manufacturing business	1,489 trillion won	485 trillion won	2,905,000	68,640	5,728 billion dollars
Portion in manufacturing business	6.5%	5.9%	8.5%	6.3%	4.7%

Fig. 2-1: Status of Korean Automobile parts industry (End of 2014)

Note) "Exports" refers to the total export amount in Korea.

Data: NSO(2015): Current status of Domestic Automobile parts industry, National statistics portal.

The market scale of Korean Automobile parts industry was 76.7 trillion won in the end of 2014, showing a growth of 2.5% in automobile parts sales of the first subcontractors compared to the previous year. And the amount was composed of OEM delivery to automobile companies, parts for A/S and exportations, and the scale and portion of each part was 52 trillion won(67.8%) in OEM, 3.1 trillion won(4.1%) in A/S, 21.6 trillion won(28.1%) on exportation. (Korean automobile industry cooperative, 2016).

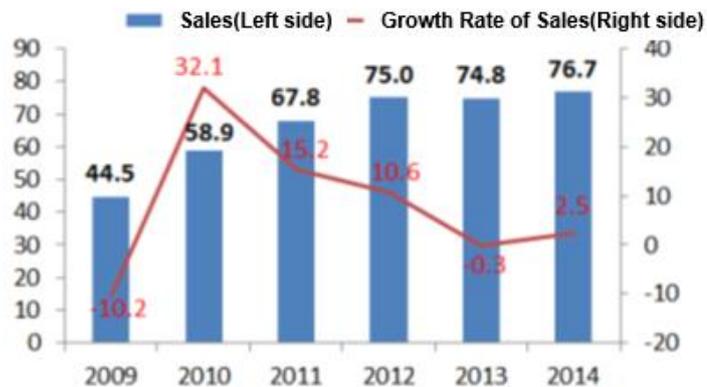


Fig. 2-2: Sales development of domestic automobile parts(trillion won, %)

Data: Korean automobile industry cooperative (2016): 2015 Automobile industry guide.

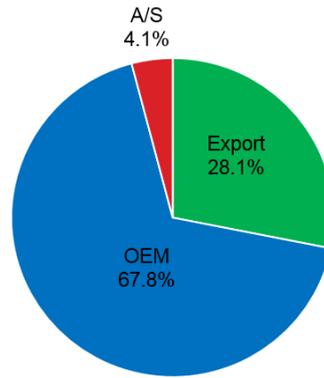


Fig. 2-3: Portion of each type of sales (%)

Data: Korean automobile industry cooperative (2016): 2015 Automobile industry guide.

As for the international competitiveness of Korean Automobile parts industry, 5 Korean automobile parts companies were selected as the world's top 100 selling automobile parts companies(in the end of 2014), so Korea is ranked in the fourth place in the national rankings. Hyundai Mobis(6th), Hyundai Wia(32nd), Mando(45th), Hyundai Powertech(54th), Hyundai Dymos(71st) are the companies included in these 5 companies, and 4 companies except "Mando" are the affiliates of Hyundai, Kia motors. On the other side, among the top 100 automobile parts companies, Japan came in the first place, accounting for 30 companies, and USA and Germany came in the second and third place, accounting 25, 18 companies each. For individual companies, Bosch of Germany, Magna of Canada, Continental of Germany came in the first, second, and third place. There were many changes in the second ~ fifth place every year, but Bosch of Germany has been holding the first place since 2010. (Korea Automobile Manufacturers Association, 2015).

Ranking		Name of company	Country	Sales	
2013	2014			2013	2014
1	1	Robert Bosch	Germany	40.183	44.240
3	2	Magna International	Canada	34.375	36.325
4	3	Continental	Germany	33.500	34.418
2	4	Denso	Japan	35.849	32.365
5	5	Aisin Seiki	Japan	27.125	28.072

6	6	Hyundai Mobis	Korea	24.677	27.405
7	7	Faurecia	France	23.950	25.043
8	8	Johnson Controls	USA	23.440	23.589
9	9	ZF Friedrichshafen	Germany	20.434	22.192
10	10	Lear	USA	16.234	17.727
35	32	Hyundai-WIA	Korea	6.741	7.368
43	45	Mando	Korea	5.145	5.373
54	54	Hyundai-Powertech	Korea	3.885	4.419
76	71	Hyundai-Dymos	Korea	2.434	2.833

Fig. 2-4: Current status of world's main automobile parts companies (million dollars) Note) According to OEM sales

Data: Korea Automobile Manufacturers Association (2015): 2014 World top 100 automobile parts companies

The number of first subcontractors of automobile companies in Korea is total 879 companies, and there are 231 major companies and 648 medium and small sized companies. In 2009, right after the global financial crisis, the number of companies was 910. So, in the last 5 years, total number of companies decreased, but the number of major companies increased more than double (Korean automobile industry cooperative, 2016). However, the portion of first subcontractors dealing exclusively with one company among the 7 automobile companies in Korea (Hyundai motors, Kia motors, GM Korea, Renault Samsung Motors, SSangyong motors, Daewoo bus, Tata Daewoo) is nearly 50 %. In details, the number of subcontractors dealing with one company is 430, and number of subcontractors dealing with two companies is 220, and each account for 48.9%, 25.0%. And the portion of subcontractors dealing with more than 5 automobile companies is staying in the moderate level of 8.4%. (Korean automobile industry cooperative, 2016).

Especially, the OEM delivery amount of domestic automobile parts companies for Hyundai, Kia motors accounts for 79.9%, which is stupendous portion. Followed by that, GM Korea accounts for 12.0%, and the portion of other companies accounts for 8.1%, which is an insignificant level. Eventually, the dependence of Korean automobile companies on Hyundai, Kia motors is crucial. (Korean automobile

industry cooperative, 2016).

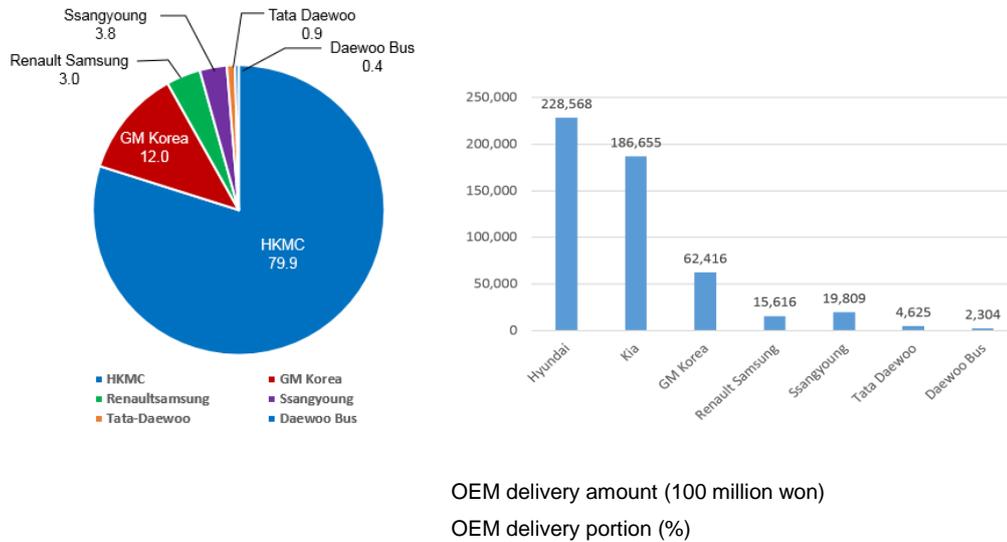


Fig. 2-5: Delivery scale and portion of Korean automobile parts companies for each automobile company.

Note) Total OEM delivery amount of first subcontractors to domestic automobile companies

Data: Korean automobile industry cooperative (2016); 2015 automobile industry guide

2.2.2 Market environment

Automobile parts industry plays a role to assemble and manufacture various automobile parts and to supply them to the automobile companies. Generally, 20~30 thousand parts are used for one automobile, and the quality of each part is directly connected to the quality of the automobile. Generally, these parts are clustered into modules according to their function when they are supplied to the automobile companies. Recently, the production of domestic automobile is standing still in the view of manufactured amount, and this is assumed to be influenced by domestic recession, strike due to confrontation of opinions between labor and management, encroachment of market by foreign cars. Accordingly, sales of automobile parts are increasing marginally or staying in the same place. Below is the list of current market environment of Korean Automobile parts industry and general problems followed by that.

2.2.2.1 Deficient adaptation to technical changes in automobile industry

Currently, the world automobile market is in the period where the competition related to the future automobile is becoming serious, and the competition to take the lead is becoming intensified due to complete entrance of It business in the market related to connectivity, automatic driving, sharing business. Also, in the view of technical aspect of automobile industry, significant changes are occurring. First, the period of gasoline automobiles, which have been ruling the automobile industry since the development of the automobile, is coming to an end because of electric automobiles. Second, the usage period of automobile is shortened, so revolutionary changes in manufacturing and production technology like combining the platform in order to secure profitability. Third, the period is now requiring smart cars, which are not just transportation, but focusing on stability, pleasures, and convenience.

2.2.2.2 Absence of mid and long term expectations of Korean Automobile parts industry

For now, it is hard to predict the future of Korean Automobile parts industry. This is because the technical changes of automobile companies are in process now. There are many problems for immediate popularization, and it takes time to solve these problems due to technical limits. These technical changes are common in the world automobile industry. There are no front or late runners in this field. This is, it provides the chance to face the new environment in a situation with similar starting points to the domestic automobile industry, so using this chance will become an important factor to decide the status of domestic automobile industry.

2.2.2.3 Excessive dependence on automobiles

Korean automobile industry actually has a short history. Since it showed drastic growth in a short period, Automobile parts industry has weaknesses in time, capital, and basic material to accumulate technology compared to advanced countries. For these reasons, domestic Automobile parts industry has several disadvantages compared to advanced countries, but these disadvantages can also become opportunities through overcoming them. Unlike advanced countries, domestic automobile parts industry grew up in a close relationship with the automobile industry. In this relationship, when the economic situation of the automobile

business is worsened, this has a direct influence on automobile parts business, and it can be a bigger problem for the automobile parts business, since it is relatively weaker. On the other hand, automobile companies recently changes the transaction form into dealing with more than once subcontractors to minimize production disturbance and to manager costs, and this became the factor to make the status of the automobile companies even unfavorable like weakening the bargaining power to the automobile companies.

2.2.2.4 Limits in accumulation of capital due to low profitability

The automobile companies tend to change the models rapidly to follow the fast-changing taste of customers. This requires changes in the parts used in the automobile. Frequent change in model requires small quantity batch production to the automobile parts companies, and this worsens the profitability of relevant parts companies and disturbs the growth. Also, high dependence on automobile companies, and automobile companies' dealing with several subcontractors worsen the bargaining power of automobile parts company. This also reduces the profitability of automobile companies and makes the accumulation of capital difficult.

2.2.2.5 Specialization and lack of big parts suppliers

Time and capital are required to raise the technical level, but Korean automobile parts companies lack in accumulation of capital through improvement of profitability. This makes continuous investment and R&D difficult, and weakens the responding capacity against changes in environment such as recession, to disturb the growth of companies into specialized companies with high technical level of big companies. On the other hand, big parts companies can also be made through major company's M&A, strategic alliance, the close relationship between automobile and automobile parts companies is one of the factors to make this method difficult. Lack of specialized and big automobile parts company is pointed out as the reason of deficient core technology in Automobile parts industry.

2.3 Review of theories about strategic alliance between companies

Including the competitive strategy theory of Porter(1980), traditional business strategy theories built based on neoclassical economic theories consider the relationship between the companies as competitive and hostile relationships. Considering the fact that the companies working in North America or Europe, where these theories were born and developed, share the individualistic values and regard free market competition natural, these traditional business strategies relatively have periodical suitability. However, after the 80s, as a strategic action to raise the competitiveness of companies with limited ability and resources, the frequency of alliance and cooperation is rapidly growing (Seung Ho Park & Gerardo R. Ungson, 2001) Situation of competitive companies cooperating to design, manufacture joint products, major companies affiliating innovative venture companies to share the resources and knowledge and to perform innovative R&D together, and these changes promoting the innovation of overall industry is now observed in almost all countries and industries. (Eisenhardt & Schoonhoven, 1996). Existing definition of strategic alliance refers to cooperative relationship between more than two companies in some business or field in specific function, sharing complementary competence or business resources to pursue joint strategic goals or to secure the competitive advantage. Set up the relationship between the companies participating in alliance or cooperative relationship as one axis, and the level of commitments for the alliance, or the existence of capital investment, to suggest the classification system of strategic alliance as <Fig. 2-6>

First, joint ventures is companies sharing profit by making an independent company through quota investment, and this can be classified into multilateral or bilateral relationships according to the number of companies participating. Joint venture is a representative form of strategic alliance, and it is also a field with the most researches about selecting a partner, confliction and trust between partners, management structure, and performance of alliance, stability, and convergence of culture. Alliance to own shares by investing to the other party's capital is also called as equity alliance. When a company acquires a certain part in the share of the other side, organic relationship is formed between the two companies, and generally, the cooperative relationship is increased and becomes closer. For this form of alliance,

researches are more animated in financial management field than business strategy field. Non-Equity Commitments alliance refers to a contractual relationship to cooperate in development, marketing, production, and sales process of product/service, but there are no equity investments or joint ventures. Licensing to use the brand or patent of the other party, supplier agreements to procure goods or service for the other party, partnership or agreements for joint R&D, marketing, production, sales between companies, franchising, outsourcing are included in the Non-Equity Commitments alliance. Alliance network is an agreement between many companies to share resources for common interests. Companies belonging to the network share knowledge and information to improve or innovate products and service.

	Equity Commitments	Non - Equity Commitments
Dyadic Relationships	<ul style="list-style-type: none"> • Joint ventures with two partners • Equity block ownership, Equity alliance 	<ul style="list-style-type: none"> • Licensing • Franchising • Supplier agreement • Outsourcing • R&D partnership • Marketing partnership
Multiple Relationships	<ul style="list-style-type: none"> • Joint ventures with multiple partners 	<ul style="list-style-type: none"> • Networks • Community firms

Fig. 2-6 Classification of strategic alliance according to the number of partners and existence of capital investment

Data: Culpán, R.(2009): A fresh look at strategic alliances: research issues and future directions, *International Journal of Strategic Business Alliances*, 1:1, pp.4-23.

Community of firms is the latest form of alliance, which is a community to generate innovative alternatives by cooperation between many companies. It is mainly formed to solve problems like product development or technical innovation, and it is also called as collaboration network.

On the other hand, in the view of market and hierarchy, a solid line based on the interdependence can be assumed, and the types of strategic alliance can be arranged in the solid line for identification. This is, the relationships can be classified based on the level of commitments to the interdependent resources.

For example, Lorange & Loos(1992) suggested the range of strategic alliance in the order of Mergers and Acquisitions - Independent Joint Ventures - Limited Cross Equity Ownership - Minority Equity - Broad R&D Agreements - Second Source

Agreements - Distribution Agreements - Know-how and Patent Licensing Agreements. Barney (2006) suggests the opportunity or potential performance that can be acquired by strategic alliance in three categories. First, the company can use alliance to improve performance in the current environment. For example, practicing economy of scale through alliance, performance improvement by learning from competitors, joint burden of risks and costs can be included in this.

Second, the company can choose alliance to generate favorable environment of competition to raise the performance. This is, preoccupying the market of relevant product and service by developing technical standard in common, or promoting tacit collusion to reduce the intensity of competition (Burgers et al., 1993). Third, strategic alliance can be used as a method to enter or exit a new market or industry (Singh & Mitchell, 1996). This is, companies can have strategic flexibility with a low cost in an uncertain situation. For example, joint venture has a character like real option to help the company enter the market or industry when there is a chance in uncertain situation. Eventually, strategic alliance lowers the risk or alleviates walls when entering a new market, divides the risks and costs in R&D, sales, production that require a lot of resources, and learn specific industry or technology efficiently to raise the competence of the company. Cooperation and alliance between organizations are essential for innovation, problem solving, and raising performance of the organization, and the question is not to affiliate or not, but it is to decide whom to affiliate with. Industrial organization theory, transaction cost theory, resource-based theory, knowledge-based theory, social networks theory and economic sociology are included in the theories to explain the motivation or purpose of strategic alliance.

View of Industrial organization theory or competitive advantage based on it emphasizes that the condition of industrial structure has a significant influence on the strategic actions of the company (Porter, 1980). Alliance between companies, in details, joint venture is a useful method to secure the economy of scale and to reduce risk, and companies can avoid competition and expect the effect of vertical integration through this alliance. In this point of view, Porter explains that many companies are forming coalitions between companies to present cooperative strategies rather than participating as a single company when they are entering the global market. Moreover, he insists that joint venture provides more strategic flexibility compared to exclusive subsidiary when considering the exit when there is

a high risk in business. By expanding the logics, it can be said that non-equity alliance provides higher strategic flexibility than joint venture. Transaction cost theory sets the market and hierarchy as the basic structure and method of the company to systematize economic activities, and explains the decision making about the selection of these two methods by the logic of minimizing the transaction cost. This is, hierarchy, or company appeared to reduce the high transaction cost required in transaction. However, if the transaction cost can be reduced more by affiliating with another company than market transaction or hierarchy, the company will choose alliance or company network, which can be referred as the third structure. This is, strategic alliance, which is a type of hybrid, can become a useful method to minimize cost in the process of acquiring resources and market required by the company. However, when dealing with external company continuously or repeatedly, which is not a market transaction, problems and costs of other dimensions occur additionally due to opportunistic action or bounded rationality. Young-Ybarra and Wiersema (1999) insist that it is important to increase mutual hostage as a method to reduce these internal problems. This is, increasing asset specificity through joint venture between companies or increasing mutual dependence by forming various alliances of different dimensions is necessary. In this context, alliance is based on close mutual interaction, the trust between the members has a significant influence on the success of alliance (Das & Teng, 1998). When there is trust between partners, this can control the opportunistic action of partners, solve the problems of asset specificity, and reduce the factors to induce conflicts between partners. Also, when mutual trust is built, awareness of sharing a common destiny is shared between the partners, and flexible operation of business is possible, so this can raise the convenience of alliance (Das & Teng, 2001).

The resource-based theory starts from the idea that resource that is valuable, scarce, and hard to imitate is the base of sustainable competitive advantage. It is important to develop the resource inside the company to use it, but complementary resources and knowledge can be acquired by alliance or Merger & Acquisition with other companies. However, in many cases of Merger & Acquisition, there are many overlaps between the resources of each company, or it is difficult to acquire the resources separately. Therefore, when it is necessary to acquire the resources of another company for a certain period, concluding an alliance with another company with the resources can be a useful method to acquire and maintain competitive

advantage. Eisenhardt & Schoonhoven (1996) insist that strategic alliance can be concluded when a company that is in a strategically vulnerable status requires the resources of the partner company, and when company with high social status is trying to create alliance using this. This is, alliance is a cooperative relationship moved by the logic of opportunity to use social resources and necessity of strategic resources. Therefore, the strategic position of the company in environments such as new market, many competitors, latest technology, social status and fame of the top management team are the factors that are important in concluding the alliance. Eventually, this can lead to a paradox that to secure the necessary resources from outside through alliance, internal resources with complementary characters required by the other party and social resources like fame and position are essential.

The view of knowledge-based considers the company as an organization system for integration of knowledge, and it emphasizes role of integrating, adjusting the information created and secured by the members (Grant, 1996). Therefore, based on the absorbing ability to acquire, learn, and use knowledge, active approach on new external sources of knowledge is necessary, and strategic alliance provides a chance to improve the strategic status by internalization of the external knowledge. Hamel (1991) insisted that the learning abilities of all partners are not identical, and this difference influences the relative bargaining power, and the process is a more important factor than the structure of alliance in the performance of learning through alliance. Muthusamy & White (2005) analyzed the properties of social exchanges like mutual immersion, trust, mutual influence are related to learning and transferring knowledge in strategic alliance positively. Also, they insist that approaching the knowledge is the main convenience of the alliance, rather than acquiring it. When creation or exploration and exploitation of knowledge are separated, alliance contributes to effective exploitation and integration of relevant knowledge in the process of using the knowledge like producing complicated products or service.

Recently, researches based on network perspective or relational view, along with the existing views about strategic alliance are positively processed. These researches emphasize the alliance network as a strategic alternative to secure competitive advantage compared to other companies, and explain the actions and performance of company based on the structure of the network which the company is embedded in and relationship between companies. The network perspective starts from the assumption that the economic action of the company is generated and continued in

the network composed by the relationship between the company and other companies, not in the abstract, conceptual market. The fundamental idea is that the relational or network resource that can be acquired only through strategic alliance network outside the company influence the performance of the alliance in addition to the internal capability or resources, and this can be another source that can provide competitive advantage to the companies in the network.

3 CASES AND INDICATIONS OF STRATEGIC ALLIANCE

What types are included in strategic alliance?

For successful strategic alliance, the purpose should be clear and strategic alliance suitable for the purpose should be promoted. Then, what are the types of strategic alliances? We classified the types according to the intensity of alliance between people concerned and mutual relationship.

3.1 Classification according to types of alliance

3.1.1 Classification according to the intensity of alliance

Strategic alliance can be classified into three types according to the intensity of alliance. The form with least intensity of alliance is the consortium. This is an alliance between companies with the same goals to secure the capability that is difficult for single company to procure by sharing the resources in each company. The case of Hyundai Heavy Industries and GE's expansion to overseas market by task alliance with various venture companies is included in this type. An alliance with a little more intensity than the consortium is the JV(Joint Venture). JV is not just sharing their own resources, but it is promoting mutual cooperation by establishing a new cooperate with quota participation. S-LCD Joint Corporation established by Samsung electronics and Sony is the typical case of this form. Equity alliance is one step further than establishing a new cooperate through mutual quota participation. Equity alliance is an alliance to reinforce the core business by solidifying the mutual relationship through equity investment to the partner. The alliance of Daimler and Renault, which are automobile companies, can be a good example of equity alliance.

3.1.2 Classification according to mutual relationship

Strategic alliance can be classified into four types according to the mutual relationship between the people concerned in concluding the strategic alliance.

3.1.2.1 Pro-Competitive

This is generally presented as an alliance between companies that are in vertical relationship on the Value Chain of one industry. The establishment of JV Corporation Hitachi Vehicle of the automobile company GM with the battery manufacturer Hitachi to reinforce the competitiveness in the electronic vehicles business is the representative example.

3.1.2.2 Non-competitive

Like the alliance between automobile company GM and Isuzu, this is an alliance between companies that are in the same industry, but do not consider each other as main competitors due to difference in the level of mainly manufactured models and target markets.

3.1.2.3 Pre-competitive

This can be found in alliances between different businesses for the development of new technology. This is promoting the development of new product through convergence of technology possessed exclusively by individual companies like Pepsi and Lipton's development of can iced tea, and Siemens and Corning's development of optical fiber cable.

3.1.2.4 Competitive

Alliance concluded between companies that are in direct competitive relationship in the final product market. This is the strategic alliance that has the most possibility of conflicts between the partners. The alliance between GM and Toyota concluded to share the manufacturing methods and factory operation methods is the representative example.

3.2 Various cases of strategic alliance

3.2.1 Cases of Strategic alliance to raise the synergy of certain fields

Strategic alliance is a strategy of growth to reinforce the competitiveness of the

company by securing integrated competitive advantage. Let's see how the advanced domestic and international companies used Strategic alliance to reinforce the competitiveness of the company in details.

3.2.1.1 Alliance between Hyundai capital & GE: Securing stable investment resources and improving external credit rating

September 2004, GE consumer credit took over 38% of the share of Hyundai capital with 430 billion won, and GE processed Strategic alliance by dispatching 3 directors, 4 executives, and a lot of working groups to Hyundai capital. Through this, GE decided to invest 1 trillion 51.5 billion won to Hyundai capital until 2006. After the Strategic alliance, the sales of Hyundai capital in the first quarter of 2005 raised by 10% compared to the previous year. The credit rating of Hyundai capital was appreciated to AA1 from AA3, so the corporate bond yield rate was reduced to 4.9% from 6.2%. At the time of the alliance, GE consumer credit was an excellent company with 32,000 executives and employees in 47 countries all over the world, and the amount of property was 151.2 billion dollars, net profit was 2.5 billion dollars in 2014, and the credit rating was AAA.

In the view of GE consumer credit, it was urgent to prepare the bridge to enter the growing Korean financial market. Hyundai capital, which was in the first place in market share of car loan and auto lease, and had credit rating of AA3 was the perfect partner. And it was a good opportunity for Hyundai capital to raise the external credit and acquire the advanced installment financial skills of GE. Hyundai capital acquired additional funds by Strategic alliance through equity investment, and raised the trust in market. Additionally, through personnel exchange with GE consumer credit, introduced advanced financial know-hows to secure competitive advantage in the market.

3.2.1.2 Alliance between Samsung electronics & IBM: Concentration of capability through sharing mutual patents

February 2011, Samsung Electronics and IBM concluded 'comprehensive mutual patent usage contract' to use the patents possessed by each other. Both parties were large patent holders, ranked in 1st, 2nd place in number of patents in USA, and both parties were able to promote shortening the development period for new

products, and reducing the cost related to patents. Also, it is expected to avoid exhausting competition and cooperate to lead the world standard so that they can focus on core capabilities.

Samsung Electronics hold over 100 thousand patents in extensive fields like semiconductors, cell phones, displays, household appliances. IBM is a leading patent holder that is acquiring the most patents in USA for 18 years in a row, based on 7,000 research manpower in Watson research lab, which is its own research institute. Through this alliance, Samsung Electronics can avoid the patent litigation of electronics business and secure the capability in communication, software field, which showed relative inferiority. IBM secured the basic patent for memory semiconductor that is necessary in diversifying the products and upgrading the performance.

In a market that requires severe competition like the electronics business, 'sleeping with the enemy' is a basic strategy. Like in the case of Samsung Electronics and IBM, concentrating the capability in developing new products than exhausting competition is a meaningful effect that can be acquired by the Strategic alliance.

3.2.1.3 Alliance between Posco & Nippon Steel Corporation: Achieve cost reduction through group purchase

Recently, fever of M&A is accelerating in steel industry. Mittal group, which is the world's top steel company, secured its current status through 29 M&As. Iron ore companies like BHP Billiton, Rio Tinto, CVRD and companies demanding steel like automobile companies are raising the bargaining power in sales and purchases through M&A.

In this flow, the necessity to reduce cost in steel business is now reaching the peak. The fact that Posco, the best domestic steel company and Nippon Steel Corporation promoted group purchase project to secure coal for coke making and Iron ore of good quality can be understood in this context.

At the time of the alliance, the world's top crude steel manufacturer, Posco and the world's second crude steel manufacturer, Nippon Steel Corporation processed joint investment to integrate, develop and expand mines and coal mines in Australia, Canada, India to maintain the cost competitiveness in the competition with

European, Chinese companies. Also, joint work in various fields like introducing joint electronic approval system for material importation. Through this, along with securing stable purchasing source of material, reduced costs to purchase materials and prepared the foundation to raise the price competitiveness, which is an important factor for success in steel industry.

3.2.1.4 Boeing & parts providers: Concentration on core capabilities through procurement alliance

Airline business requires huge business resources in developing product or technology. It is a field that Strategic alliance that can share the resources for investment cost, technique barrier, market securement is promoted positively, since it takes a long time to investment collection and the uncertainty in the schedule and scale of collection is increasing.

In 1990, Boeing succeeded in reducing the component error rate in manufacturing B777 from 15% to 5%, and the portion of self-component procurement from 70% to 30% through Strategic alliance with over 2,000 parts companies. Boeing reduced the inefficiency and cost caused by self-development, and concentrated its capability to designing airplanes and building systems.

Parts subcontractors acquired professional technology and experience from Boeing, and upgraded their capability. Also, they were able to have autogenic power by securing a stable demand, Boeing.

3.2.1.5 Star Alliance: Realizing economy of scale, range through alliance network

Alliance network is formed because of necessity to expand the market share and realize economy of scale through affiliation. Alliance group formed like this is just a collection of many individual companies through various cooperation contracts, and it doesn't have direct connection with specific company.

Star Alliance, which is an airline alliance, is a good example of alliance network to realize the economy of scale, range. Owing to alleviation of airline regulations in USA, airline's concentration on metropolitan terminals, economic integration in Europe, airline business raised the value of economy of scale, range in 1980~90s. The market changed into a structure that only large companies that can expand their

airlines to various countries can generate profit. Therefore, in order to reinforce the competitiveness and overcome the limit of individual capability, Star alliance, alliance organization of 25 airline companies including Air Canada, United Airline.

They achieved additional sales through integrated, joint marketing based on customers, and reduced cost for additional facilities in airports, procurement so that they could focus on raising the quality of service.

3.2.1.6 Toyota & GM: Improving productivity through dividing production base and sharing roles

Case of alliance that increased productivity drastically by providing production base, introducing business method and clear division of roles is the Nummi (New United Motor Manufacturing Incorporated) JV of Toyota and GM.

In 1983, Toyota and GM established a Joint venture company with portion of 50 to 50, and introduced Toyota's JIT (Just In Time) manufacturing method to Fremont, which had the least productivity among the factories of GM. Through this, the absence rate of employees was reduced from 20% to 2%, and inventory turnover rate was raised from 20 days to 2 days, and the productivity of the factory was increased over 50%. At the time of alliance, GM was the world's top automobile manufacturer, but it was trying to learn the prominent business method in Japanese company because the market share in its own country was falling. On the other hand, Toyota needed a manufacturing factory in USA to expand the business to USA.

Through the Nummi alliance, Toyota entered the USA market successfully. GM released Saturn after learning the business methods of Toyota.

3.2.1.7 Alliance between Corning & Siemens: Creation of new market through technical convergence

Alliance between Corning and Siemens in optical fiber field is a case Strategic alliance which is famous in marketing field.

Corning is a company that has secured prominent technology in glass, ceramic, Polymers, optics field since established in 1851. Corning developed the optical fiber technology in 1960s, but it did not reach actual usage level. In the early 1970s, Corning established a JV with Siemens, which was an international company that

has 160 sale positions through main businesses like communication, logistics, energy, medical products to generate the optical fiber cable market in communication market. Corning needed the marketing and sales capability for the optical fiber communication cable business, and Siemens wanted to bring additional growth engine to the communication industry. Through this alliance, they became the world's No1. optical fiber manufacturer. And Corning expanded Strategic alliance afterwards, and in the mid-1990s, generated 25% of the total profit in the Strategic alliance business.

3.2.1.8 McDonald's & Zynga: Raising the sales performance through joint marketing

The world famous fast food restaurant McDonald's composed a McDonald's town in Farmville, the representative game of Zynga, through strategic alliance with the world's biggest social game developer Zynga.

Farmville is a game that makes a farm in the virtual space and communicates with other users, and it is an online game used by more than one hundred million people a month. McDonald's is expecting an advertisement effect of its brand and product to customers all around the world secured by Farmville, and Zynga is expecting the expansion of traffic and additional profit generation followed by the usage of customers of McDonald's.

3.2.2 JV Success and failure in China

3.2.2.1 Decision and cooperation that brought success

3.2.2.1.1 Preoccupancy of the market by selecting suitable partner

In case of Volkswagen, which is the most successful case among the global companies entering the Chinese market through JV, shows the fact that higher the risk followed by entering the Chinese market is, bigger the performance is. JV between Volkswagen and Shanghai Automotive is the case to embrace the Chinese partner and make the best use of it. The decision to invest to the market potential was realized as preoccupancy of the market. Volkswagen accepted the request of Chinese government and entered the Chinese market through JV with Shanghai

Automotive, in 1985, which was the first among the global automobile market. The risk in the investment was large, but Volkswagen processed the Joint venture, considering the large Chinese market with potential. After establishing the JV, Volkswagen was selected as the official vehicle of local government for the first time among the vehicles manufactured in China, owing to the support of Shanghai government, and started to establish the brand image. In 1996, established R&D center in China, and succeeded in raising the image of the vehicle as the only vehicle sponsor of Beijing Olympics in 2004. As a result, it achieved the performance of the third highest global sales and the highest sales in China. Along with this performance, there was the effort of Volkswagen to overcome the inferior status of the initial Chinese automobile industry. At that time, Volkswagen arranged the entrance of European parts companies into China through JV and Strategic alliance. The suitable support of Chinese partner to raise the performance contributed largely to forming and maintaining amicable relationship with the Chinese government.

3.2.2.1.1.2 Securing the cost competitiveness in the field through JV

The case of Hitachi of Japan is the successful example of reducing cost through 36 JV, M&A or alliance in China. Hitachi was producing products of good quality, but it was not easy to sell the products in China because the price was too expensive. As a matter of fact, the cost competitiveness of Chinese companies is 20~40% higher compared to the global companies, owing to cheap personnel expenses. Volkswagen was recorded as the successful case of JV in China because it overcame the initial investment risk. Hitachi was able to advance in the Chinese market by forming cooperative relationship with Chinese companies with cost competitiveness.

3.2.2.2 Failure in field adaptation and conflict that led to evacuation

3.2.2.2.1.1 Conflicts with partners

The biggest conflict in JV is the issue about the management rights. When the field JV partner thinks that it has secured necessary capabilities like technology, the will to establish its own business arises. With degeneration of the relationship with the partner due to conflicts about management rights and public opinion, the position is

reduced and the partnership is worsened to irrecoverable status. Danone was caught up in litigation with the Chinese partner and the media was negative to Danone. The case of Danone and Wahaha shows the cautions in the alliance. Group Danone tried to enter the market through alliance with Wahaha group, the biggest drink manufacturer in China, and Wahaha wanted the alliance with Danone, which is an international French food manufacturer to acquire capital and know-hows. As a result, 5 JVs were established in 1996, and they were expanded to 39 JVs gradually. However, problems started to occur. There were disputes between Danone and Wahaha. Danone insisted that other companies established by Wahaha's business owner in 2005 sold products that are almost the same with the ones manufactured in Danone-Wahaha JV, and Wahaha started a legal process on the charge that the directors in JV designated by Danone took the positions as the board members in other Chinese competitors. Chinese people consider the Wahaha brand as a treasure of the nation, and most people consider the business owner as a hero. Eventually, Group Danone sold the share to the Wahaha group and evacuated.

3.2.2.2.1.2 Blind faith on brand and underestimation of market level

Whirlpool trusted the brand power blindly and failed to release products suitable for the Chinese market, and evacuated from the market after suffering. This is a case to show the fact that Chinese market is not an easy market, and it has severe competition for global brands. Whirlpool showed accumulated deficit of hundreds of millions from 1995, when it first entered the Chinese market until 2000. Considering the fact that the market share in China was only 0.3% in 1998, while the global market share was 14%, it can be seen how much trouble it had in China. When Whirlpool entered the Chinese market by the alliance with Beijing Xuehwa in 1995, Nitrogen free fridge market was rapidly growing in China. However, although Whirlpool had the technology, it underestimated the level of Chinese market and did not respond to it with new technology. And it clung to the American product design to the Chinese products, and imported most of the parts used in the washing machine instead of procuring them from China, so it failed to secure cost competitiveness. Also, they provided the reason to be left behind in the competition with Chinese companies because it took 2~3 months to make core decisions like marketing strategies through headquarters in USA. And they were not positive in promotion

because they believed that Chinese people are aware of the global brand Whirlpool. This was caused by excessive pride in brand and prejudice about the Chinese market. Eventually, Whirlpool evacuated from the Chinese market in 2002. However, Whirlpool decided to enter the Chinese market one more time by securing shares of Sanyo's Chinese corporate in 2013. This was because they cannot disregard the potential of the Chinese market. This decision was made based on the belief that the success in Chinese market determines the business for 100 years in the future. They judged that China is still an attractive market.

3.2.3 Successful cooperation cases of Korean small and middle sized companies

The representative example of successful cases among the many companies pursuing ICMS (Integrated Contract Manufacturing & Service) cooperation is the middle sized company A (Company Mobinix), which manufactured small LCD. This company manufactured small amount of products and provided them to domestic and international customers, but after receiving a large order from overseas, composed cooperatives to concentrate on R&D and sales, and consigned manufacturing. This company searched for cooperation because the pressure of fixed costs reflected to initial investment and cost when it is trying to develop, manufacture and ship the amount ordered by the overseas company on their own. On the other hand, this company acquired information from another company participating in the cooperative community in the process of cooperation, to develop a new demand in house construction market and verified provision and increased sales. The consigned manufacturers were able to reduce cost and price by realizing the economy of scale, and this led to increased profit and investment for developing new product for company A.

The TFT LCD module for game consoles made by company A was developed to aim for the slot machine and general game console market in Japan. With the LDC display with high resolution that provides clean and clear screen, it was equipped with external interface and game (display) engine so that it is easy to use by connecting the game console in technical aspect, so it was highly praised in Japan. At that time, similar products were used in Japan, but they only provided resolution of VGA level, and the game engine was not in One-chip form so the volume was big

and it was not applying standardized external interface like LAN.

Starting with this product, company A established a plan to develop the Japanese market by developing LCD modules that are suitable for the next generation's game environment by using technology competitiveness of companies participating in cooperation. Also, they established a plan to expand the market to America and Europe. Company A, hosting the cooperation has been manufacturing LCD TV, LCD monitor, monitor module, TV tuners, but in the cooperation, it agreed to take charge of R&D and marketing. 5 more companies participated in this collaborative filtering (CF), and this included company B (Kwangil Electronics), developing of electronic circuits, company C (Poly hightech.), developing molds, company D (Mugunghwa Electronics), electronics manufacturer.

Company A redesigned the organization system focused on R&D, and made professional companies in each field participate in cooperation to develop, produce and provide products. Before forming the cooperation, company A had manufacturing line of its own and operated the business by responding to the request of the customers in a form to deal with product development, manufacturing, and delivery on its own. Of course, tasks that cannot be dealt on its own like designing or making tools in the process of development were outsourced to other subcontractors to solve the problem, but it was just a simple subcontract, so the risk factors like investment cost was the burden of company A.

The biggest problem in the existing business operation was the increasing pressure of initial investment and fixed cost. To respond to various requests of customers, continuous product development was required, and the risk of delay in development because the company cannot develop several models at the same time due to the increased pressure of initial investment and lack of liquidity was always there. Also, as they only handled the quantity ordered for themselves, the operation rate of the manufacturing facility was low, so the pressure of fixed cost was big.

Problems caused by the absence of information or limits in technical skill were one of the biggest disturbances. The fact the industrial information required to solve the problem by finding professional companies with the source technology used in developing the product became a significant disturbance in securing the technical skill for the company.

Company A found the clue to solve these problems by discussing professional companies through participating in cooperative business with various issues that they were facing like the initial investment pressure, fixed cost and raising technical skill. First, company A redesigned the organization system focused on R&D, and decided to outsource the manufacturing part based on the positive cooperation of the cooperative. Also, made professional companies participate in the cooperation for each product and decided to develop, product and provide products.

The companies used the business form and system of the CF for the agreement, operational regulation and process. Along with periodical conference between companies participating in the CF, solved the problem by active communication whenever they required discussion or help from other companies or professionals, and when there are changes in the business schedule or process, informed the cooperative and other companies immediately to maintain the smooth flow of information.

The performance of the cooperation is the drastic improvement of management risk by reducing fixed cost and initial investment. By closing the manufacturing line and outsourcing the manufacturing, the fixed cost required to maintain the manufacturing manpower and facility and dumping order to raise the operation rate were no longer required. Instead, by converting the company in a system focused on R&D and marketing, it searched markets of products using LCD panel all around the world and found opportunities to focus on developing and providing competitive products through R&D, so that it can respond to the changes in market environment positively. It built a virtual company environment suitable for small quantity batch production by dividing the initial investment and sharing the profit with the companies participating in CF. As a result, it was able to develop, produce and deliver various products at the same time, which was impossible for a single company, and in this process, it dispersed the risk of initial investment and raised the technical skill based on the experts of other companies, to secure cost and technical competitiveness.

Also, through cooperation, company A formed an environment to focus on marketing and R&D, hired new experts and promoted the development of graphic board that is equipped with game(display) engine that is suitable for the operational environment of various game consoles in the process to develop the LCD panel for game consoles. The newly developed graphic board was exclusively for games consoles

and slot machines, and it had external interface so that it is suitable for LAN and serial communication environment, and it was designed so that it can be used in Digital TV or DMB in the future, so Japan showed big interest on it.

Like this, to succeed in cooperation, various factors like expert of participating companies, stability in management, positiveness of participation, close technical and informational exchange are required. It can be said that there are some factors that are essential for the success of the CF in the process of cooperation of company A.

First, the expert and business stability of the participating companies should be confirmed in the stage that the CF is composed. Companies without expert can disturb securing competitive technical skill and price competitiveness. Companies without business stability may have difficulties in positive participation while participating in CF due to internal issue, and this can lead to change of companies during the process. Also, although an order was placed to develop a product, if the company is not capable of paying the cost, it is almost impossible to process the business.

Second is the positive participation of professional companies participating in CF. CF business can succeed only when the capabilities of all companies are concentrated. Therefore, when any company participating is not willing to share the technical and capital risks generated in the development and production process and just show interest in future profit, positive participation of other companies cannot be promoted and the CF will go nominal.

Third, in the process to promote CF, positive technology and various information should be shared smoothly between companies. To raise the connection of technology between the companies, they should be aware of the other companies' technology accurately. Of course, for mutual cooperation, professional technology area of each company should be protected. The CF business can maintain its life force and be processed only when the companies share various information required in leading the business to success like product, component, status of competitors along with simple technical information to respond positively to the market.

Lastly, Through CF business, technical competitiveness and price competitiveness

should be secured. If the technology applied to the product is better, but the product loses price competitiveness, it is hard to expect that the product will be popular in the market. For this, the restructuring of the companies participating is essential to minimize the initial investment and fixed cost. For example, company A closed the manufacturing line and concluded a toll processing agreement for all products with company D, so company D was able to reduce the fixed cost by improving the operation rate and company A also reduced the fixed cost drastically to secure the price competitiveness of the product.

3.3 Issues with the Strategic Alliance of Automobile industry

Advanced companies are expanding their competitive units through strategic alliances between them with various aspects such as production, R&D, or others. And it pushes the companies from developing countries, such as South Korea, into the perimeter of the market. On the other hand, the difference of competition between advanced companies and emergence of new markets like Asia and East Europe raised the desire of the advanced companies to enter the developing countries to facilitate the transfer of technology. And It could be a chance to find more advantageous market opportunities by securing new markets that can be accessible with intermediate or elementary technologies instead of the advanced countries where require advanced technology.

The intercontinental, large-scale merges and strategic alliance in the automobile industry since the late 1980's and the demand for new technologies and the needs for environmental considerations in the 90's all contributed to the upward cost pressure. In order to tighten their control over the market, they were expanding their scope of influence through merges and coalitions. In the 2000's, the companies formed alliances in consideration of the development of next generation vehicles based on energy. And they've reconstructed to enhance managerial performance in response to slowing growth in the market.

With the environmental changing, the manufacturers who can survive in the 21st century would be the big 5 or 6 who have overall production capacity of 4 ~ 6 million around the world. On the other hand the remaining companies will be absorbed into the production and sales network of the major companies. With such theories of

international monopoly and the '6-company-survival' theory of the auto industry, the larger companies continue to merge and split among themselves.

Due to a global M&A, and strategic alliances in the Auto mobile industry, the procurement systems for Automobile parts are changing as well. Such a change in the procurement system originates from the intensifying competition and globalization of the automobile market, limitations in enhancing competitiveness, and deepening gaps in terms of competitiveness between Automobile parts companies. That is, in the face of globalization, intensifying competition, and weakening profitability, the need to dump the burden of cost saving to the automobile parts company arose. As a result, they are increasing the proportion of outsourcing instead of manufacturing themselves. At the same time, they are reducing their number of automobile parts companies in order to cut the managerial cost and enhance efficiency of development through the improvement of the procurement system. On the other hand, there is an opposite trend of increasing the number of automobile parts companies in order to trigger a competition between them. This is because they now understand that the competitiveness of an automobile not only depends on the capabilities of an automobile company, but also of the entire system, including automobile parts company. So the competition between automobile parts companies is getting intensified and choosing the automobile parts company as an automobile parts company became an important factor. It caused a necessity of a new parts procurement strategy to strengthen the business ties with the automobile parts companies with merits.

The automobile companies are seeking to a radical change of the parts procurement system in order to successfully actualize a parts procurement strategy as mentioned above. The basic direction of this is to establish a close and cooperative parts procurement system with the automobile parts companies, which is also called a strategic alliance. Especially, if the automobile companies and automobile parts companies are not in such a cooperative relationship, the limitations in the flow of knowledge or information are inevitable, while it is difficult to enjoy a synergy which creates new knowledge in the relationship.

It is believed that the reason why such a cooperative system can be maintained is because of the fact that Japanese auto industry, unlike its American counterpart where the single-layered affiliation system and competitive relationships prevented

close-relationships and communication of information, employed a system of sourcing based on multi-layered affiliation system between the automobile company and automobile parts companies, resulting in long-lasting, cooperative relationships. There is a tendency that automobile companies exploit the automobile part companies by using them as a buffer to absorb the impact of economic cycles, save the capital, and use cheap labor forces, putting these two in a confrontational relationship. However, Kawasaki and McMillan (1987) explained that, in the case of Japan automobile companies, they were actually taking the risks for the part companies, instead of exploiting them. They defined the coefficient of risk sharing as $\alpha=1-s/\sigma$ (the standard deviation of the margins/ the standard deviation of the costs). This is about how the profits changed as the cost did. If the profits were affected more readily by the changes in the cost, it means that the part company is taking most of the risks. If it is the other way round, then it is the automobile company that takes most of the risks.

In the case of Japan, the risk sharing coefficient of the automobile companies was higher than 0.9, which was significantly high. This can be interpreted that the automobile companies played the role of safety net, guaranteeing a certain level of profits, to the automobile parts companies. That is, the relationship between automobile parts companies and automobile companies is not an exploitative but rather cooperative. Also the automobile parts companies, which are economically weaker, receive support from the automobile companies.

Here, the authors intend to examine the cases of strategic alliances between automobile companies and automobile parts companies in South Korea and discuss their implications.

After Nissan was merged with Renault of France in March 1999, the new CEO, Mr. Carlos Ghosn announced his Nissan Revival Plan in October 1999 and engaged in a strong restructuring. In this plan, he assumed that the low profitability of Nissan was caused by having more employees than they needed and the relationship with the automobile parts companies that became affiliates. For this, Nissan set a goal to reduce the number of part companies that it owned from 1,394 to 600. The logic was that if the number of automobile parts companies are reduced, the delivery volume of a single automobile parts company will be increased, reducing the price accordingly. As such, the strategic alliance of Nissan was implemented as a part of a

strong restructuring drive of Western style, with the company being controlled by Renault of France. For this, they sold or outsourced the part affiliates or the part making operations of their own, forming the basis of the mobilization through outsourcing. The strategic alliance of Nissan is classified and defined in three stages as described below.

The first stage, 'structuralizing' is performed at the initiative of the automobile company, where the parts are changed into forms that would facilitate procurement or integrating multiple parts in a bigger unit. At this time the automobile company leads advanced development of the modular concept.

The second stage, 'system development' is to integrate parts that were provided by multiple automobile parts companies into a single system. The development of the entire module is outsourced to certain party companies. But, the development of the parts and production are to be conducted by individual automobile parts companies as before.

Step 3, batch ordering, is to focus the order placements to one automobile parts company instead of placing orders to each and every automobile parts company. The automobile parts company which received the batch order may purchase the parts from any source that it sees fit. This means the automobile company endows the automobile parts companies with the discretion to select their own secondary automobile parts companies. This stage aims at the fourth stage of strategic alliance, which is a total outsourcing.

Therefore, the strategic alliance of Nissan is more focused on batch ordering and total outsourcing, as they do in Europe, instead of focusing on their affiliates. In addition, the fact that this program was introduced as a part of re-structuring to revitalize the company explains the vigor with which they implemented this program.

On the other hand, Honda, of which the annual production was 2.9 million, ranking 7th in the world market, did not join the trend of large-scale merges and maintaining its strategy of independence. The secret behind this is the technical capability and globalization. Continued investments in new technologies and enhancement of efficiency allowed them to compete with larger companies. This was the biggest reason why Honda could survive in the frenzy of M&A. The strategy of Honda, which was the third largest automobile company in Japan was to form 'small-sized'

strategic alliances to promptly adapt to the changing environment.

Honda is a late comer in the Japanese automobile industry, as the company started its business with motorcycles first. Therefore, they could not build their own basis of automobile parts companies as other automobile companies in Japan did. So, while they were investing in some of their automobile parts companies, the level of affiliation was a lot less profound. For this reason, the self-supply rate of the parts of the Honda was around 20%, while the top ranks, Toyota, was 30%.

In this, Honda engaged in global positioning and the economy of size by working with world-class part companies to form a strategic alliance. And, in the domestic market, the company utilized its key capability and advantage, the technology to develop a convergence-type, advanced module on its own or jointly develop such modules with automobile parts companies but maintaining an upper hand using an indirect manner. Also, they are pursuing a strategy in which the functions of the parts are integrated or fused into a module, in order to enhance competitiveness. And, the definition of the strategic alliance of the Honda was divided into three stages based on the concentration of the functions.

The first step is 'binding', where the individually developed parts are fabricated in the sub-line sent to the main line. This has benefits in the logistics, the benefit due to the wage difference between the company's self-assembly workers and the outsourced assembly workers, and the transfer effect of management. However, according to Honda, they do not pursue alliance for mere assembly.

The second step is 'integration,' where the automobile parts companies are demanded to design an integrated module, which is composed of several parts, in order to reduce the mold cost and the number of parts. Through this type of alliance, Honda employed its rear suspension module, which was composed of rear suspension, sub-frame, and fuel tank, for its Accord model launched in September 1997.

The third step is 'conversance,' where different automobile parts companies work together from the designing stage to enhance quality, while concentrating functions such as integrating electronic parts, in order to save the cost in development. In the case of Honda, which is the most active in globalization and overseas production, it requires the world's most optimized procurement system. Therefore, the company

opens the door to the world's big Automobile parts companies that are capable of developing convergent modules strategically, so that they can participate in the modulation efforts of Honda. This is because, for someone who cannot tap on the economy of size as the annual production output is small, outsourcing a part of the development and production of the parts to a larger auto part company can save the cost and help them become more competitive in the world market.

The strategic alliance in the South Korean automobile industry is mainly focused on new models and a limited degree of assembly process cutback and logistics improvement. Recently, the strategic alliance with South Korea has been picking up, through companies like Mobis, under the initiative of Hyundai-Kia Motors Group.

It can be considered that the discussion of strategic alliance in the South Korean automobile industry started in earnest in 1997. At the time, Daewoo Motors adopted the module method at the first time for developing its new model, 'Nubira.' Reportedly, Daewoo Industrial Electronics, Daewoo Communication, and other big automobile parts companies supplied fan modules and suspension modules, etc. Daewoo had some advantages in its conditions to proceed with strategic alliance due to its special relationship with Delphi, which was a large part company that was established by GM, which was its partner, and the establishment of the new plant in Gunsan. However, all these efforts stopped when the Daewoo Incident occurred. However, after the company was acquired by GM, the company buys its parts from the factories in Gunsan, Changwon, and Bupyeong through Daewoo Precision. And, efforts in forging up strategic alliance continued through Delphi Korea.

On the other hand, Hyundai-Kia Motors tried to become a 'global company' based on the monopoly of the market in South Korea. For this, they took a more aggressive stance and have been actively engaged in strategic alliances. In early 1999, Hyundai Motors announced its plan to "the automobile business division of Hyundai Precision is to be transferred to Hyundai Motors and the railroad business is to be put to be 'big-deal' with Daewoo and Hanjin, turning the company into the largest part-specialized company in South Korea.' From then on, it declared a policy of "establishing modulation operation system for core parts which allow a mass-production system and have a higher technical value-added to enhance international competitiveness of the Automobile parts industry." After that, Hyundai Precision acquired the affiliate companies of Kia, such as Kia Precision Machinery, Kia Heavy

Industry, and Kia Motors, to establish a part-specialized company named 'Hyundai Mobis.' According to their announcement, this company was accounting for 30 to 40% of the total production of Hyundai and Kia combined. With this, it reduced the number of primary automobile parts companies which increased as Hyundai Motors acquired Kia, while they attempted to build a large part logistics complex and establish module-parts companies for engines and transmissions, such as Powertech.

Domestic automobile parts companies engaged in strategic alliance actively, along with the restructuring of the market centered on the Hyundai Motors Group.

And, the rate of forging these alliances is picking up as global part companies, such as Visteon, Delphi, or Valeo, enter the South Korean market. Deokyang Industry and Hanra Visteon, based on Visteon's investment, are now manufacturing modules that are the most technically advanced in South Korea. As foreign companies are expanding their investment in South Korean automobile parts companies and share the technology of the HQ to keep proposing modular deliveries for finished automobiles, they are affecting the proliferation of strategic alliance in South Korea significantly.

Accordingly the automobile parts companies in South Korea are investing more in R&D and cooperate with foreign companies and forger a stronger alliance to access more advanced technologies. However, it should be admitted that foreign companies, which are one step ahead of the South Korean counterparts, are more likely to have an upper hand in the domestic motor industry. In the face of such concerns, Hyundai Motors Group is proceeding with the reorganization of automobile parts companies and modules centered on Hyundai Mobis. And, this will further intensify the competition between specialized foreign companies in South Korea and Mobis. Many big companies, such as Mando, Hanra Visteon, Deokyang Industry, Seojin Industry, or Pyeonghwa Precision have been trying to forge an alliance under their relationships with Hyundai Mobis. That is, Mando, Seojin, and Hwashin surrendered their module factors to Mobis and assumed the roles of lower-level partners, covering up to the process before the final assembly. On the other hand, Visteon's investments, such as Hanra Visteon, Deokyang Industry, and other specialized foreign companies, such as Daihan Calsonic are selling their finished modules based on their own technology without associating with Mobis. Also,

Myeonghwa Industry, Iljin Industry, Pyeonghwa Precision, or other automobile parts companies are providing smaller modules or simpler modules which are mere assemblies.

The domestic automobile parts companies have become dependent to Hyundai Mobis as its subordinate partners or sub-assembly contractors. As a result, the benefits of the R&D and equipment investment are more likely to be monopolized by Mobis, while these companies are excluded from such effects. Therefore, many of the current primary automobile parts companies are at the risk of becoming secondary vendors of big module companies.

The biggest concern regarding the strategic alliance between domestic automobile parts company and global companies is that the original know-hows and existing technologies are transferred to the counterparts, resulting in leakages of technology and information. Also, the domestic part company needs to have room to invest the initial development cost, while they are also required to provide warranties for their parts. And, it is imperative for them to secure the facilities or equipment in order to assemble the parts, in addition to the testing equipment and manpower. Such investment in equipment and training of personnel becomes a significant burden as they increase the fixed cost for parting company. As such an increase in the burden may aggravate the managerial risks, it is necessary for the global companies understand such conditions and provide support to share the initial burden. Other obstacles for the part companies to form a strategic alliance include they have structural issues compared to the advanced part company, for being too dependent to the parent company and the fact that the number of large part companies that is above the minimum size required to develop and produce modules and system parts is absolutely insufficient, as many companies in the industry are too small.

4 RECOGNITION ANALYSIS ABOUT THE ENVIRONMENT AROUND THE STRATEGIC ALLIANCE OF AUTOMOBILE PARTS COMPANY

4.1 Research design and methods of investigation

In here, conducted a survey for people concerned to domestic automobile parts companies who built strategic alliance relationships with global companies, to investigate the features of the company, contents and environment of the strategic alliance, performance of the strategic alliance so that the current situation can be apprehended and implications can be suggested.

In this research, to verify the suggested hypothesis, a survey was used. The survey was pretested to hands-on workers of 4 companies taking strategic alliance with global companies among the domestic automobile parts companies, and was finally confirmed by supplementing the defects. The survey can be divided into 5 parts, and the first part is to measure the features of domestic automobile parts company, which is composed of the level of competition, financial ability and technical capability. The second part is to figure out the attitude about the strategic alliance, and it measures the necessity, importance, acceptance of pressure of strategic alliance. The third part investigated the level of dependence of each task department on strategic alliance, and the fourth part is composed of questions to find out the relationships with the partner companies and the performance of strategic alliance. And the fifth part questioned the requirements and improvement for the performance of the strategic alliance. The survey to measure the selected items is composed in a form that the respondents can respond by themselves, and Likert's 5 points scale, nominal scale and open response method were used as the scale of the survey according to the contents of the questions. On the other hand, the object of the survey in this research was executives and employees in headquarters, branches, and manufacturing factories of 6 automobile parts companies with more than 100 employees, who are in charge of domestic automobile companies that are maintaining strategic alliance with global automobile and automobile parts companies. In the process, efforts to make sure that the objects are not inclined to

specific age or targets and to reflect the answers of people participating in management, manufacturing and marketing work were made. 150 copies of the survey were distributed from 2017. 9. 11. To 9. 22. On 2 separate occasions, and among the 127 copies collected, 115 copies exempting the copies with unfaithful responses were used in final analysis. And frequency analysis was used to examine the response status of the collected data.

4.2 Basic analysis

The investigation objects of this research are 115 people in charge of domestic automobile parts companies with strategic alliance with global automobile or automobile parts companies. As a result of apprehending their general features, there were 98 males and 17 females, so the portion of males was higher, owing to the feature of the business. They were mostly over their 40s, and they were mostly university graduates. As for their career, more than 60% of the respondents had more than 10 years of career, so they were generally engaged in automobile parts business for a long time.

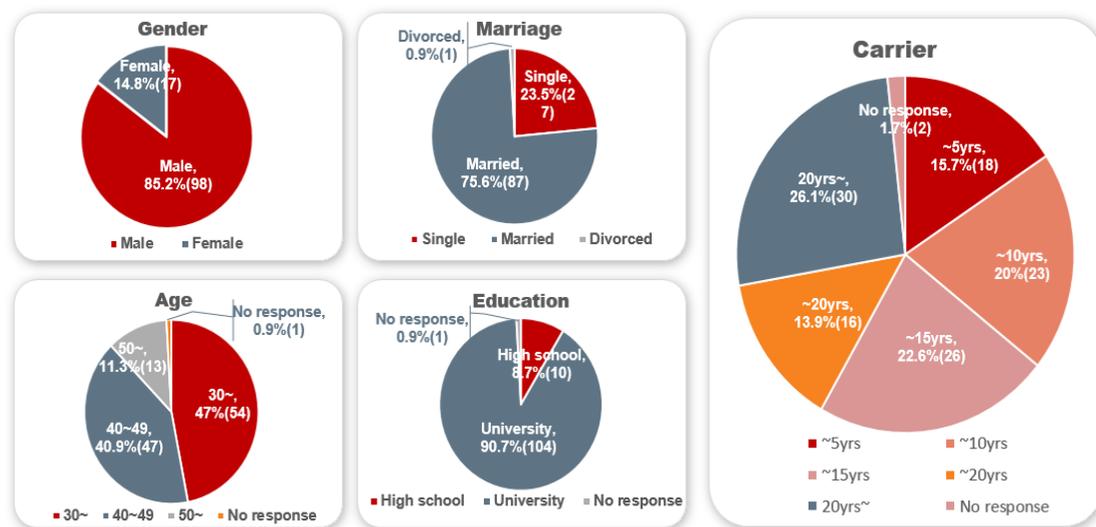


Fig. 4-1: General status of objects

4.3 Result of recognition analysis

4.3.1 Features of automobile parts company

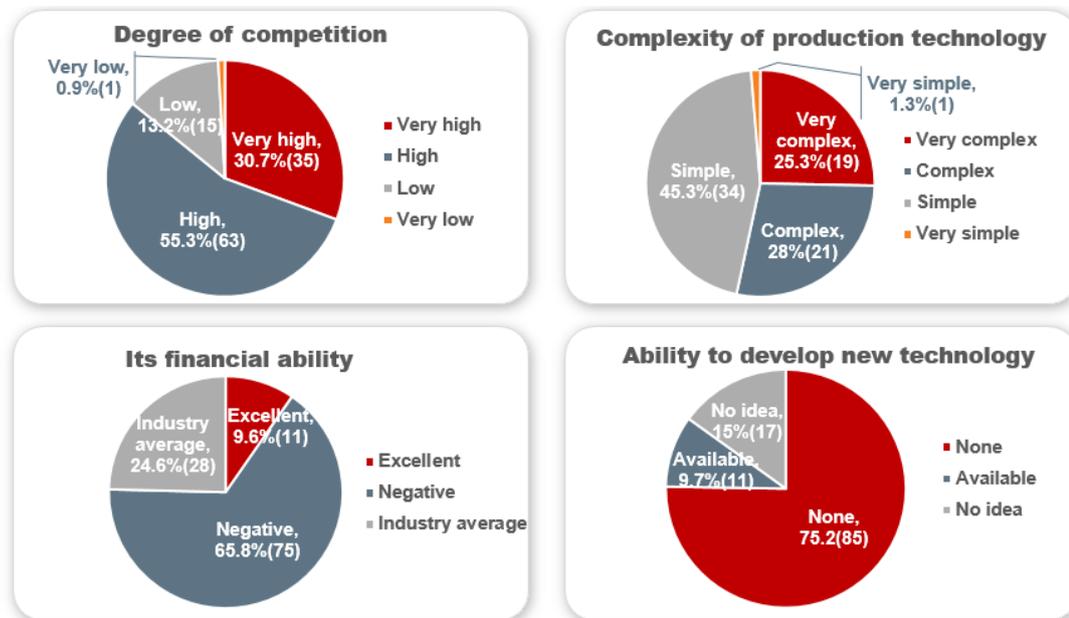


Fig. 4-2: Characteristic of automobile supplier

4.3.1.1 Level of competition in the market that the company belongs to

As a result of questioning the level of competition in the automobile parts industry appreciated by the respondents, the result was very high (30.7%), generally high (55.3%), so it was revealed that the respondents consider that the intensity of competition is high in the parts industry, and the industrial environment is difficult to survive without strategies to secure competitive advantage or differentiation.

4.3.1.2 Financial capability of the company

Financial ability is a basic resource of the company that includes financial integrity, liquidity, and ability to procure funds. As a result of questioning the financial ability, the portion of negative awareness was very high (65.8%). This is, it can be said that most of Korean automobile parts companies are in poor financial status, and this can be a risk factor in the continuity of the industry in the future.

4.3.1.3 Complexity of manufacturing technology used

Complexity refers to the level of professionalism, sophistication and modernization of a task. As a result of questioning the complexity of the manufacturing technology of the company recognized by respondents, the answer was in order of generally simple 45.3%, generally complex 28.0%, very complex 25.3%. Considering the fact that more complex the technology is, more prominent the status or competitiveness of the company, the technology complexity of the automobile parts company is judged to be in a simple level.

4.3.1.4 Possession of information/manpower/patent/know-how that can develop new technology inside the company

As a result of questioning whether the company is possessing information/manpower/patent/know-how that can develop new technology, 75.2% of the respondents said No, so it can be said that domestic automobile parts companies have poor foundation to develop new technology by themselves in order to accumulate competitive advantage. Therefore, it is judged that political, industrial, managerial strategies about this should be prepared.

4.3.2 *Attitude about strategic alliance*

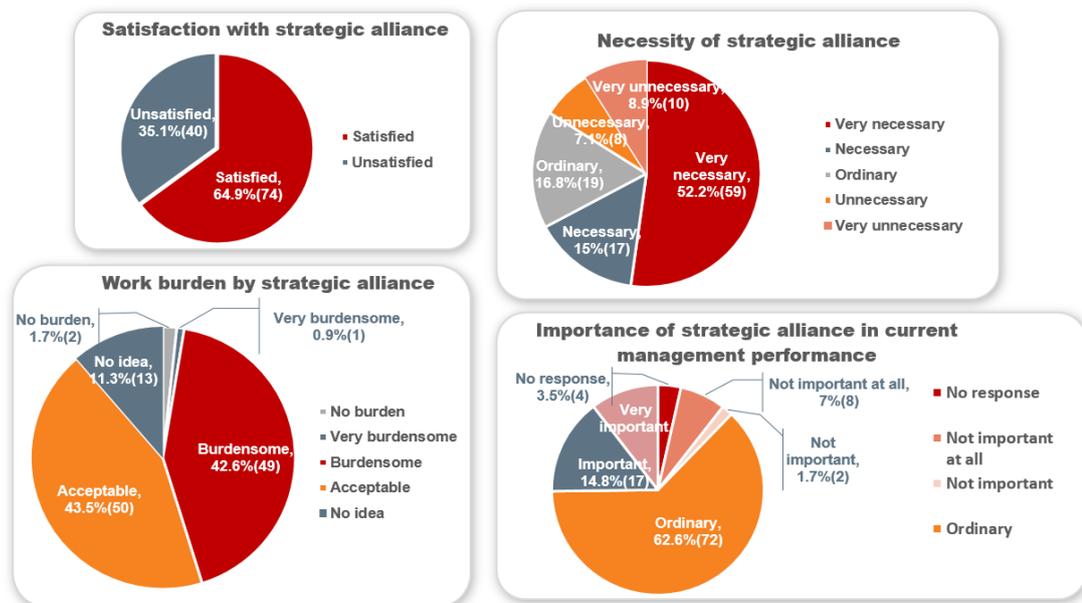


Fig. 4-3: Attitudes to strategic alliance

4.3.2.1 Satisfaction about the current strategic alliance

As a result of questioning the Satisfaction about the current strategic alliance of the company, 64.9% of the respondents said that they are satisfied, so it can be said that strategic alliance is generally satisfying. However, 35.1% of the respondents were not satisfied with the strategic alliance, so review on the reasons of the dissatisfaction is necessary, and systematic approach considering the features of the company is necessary.

4.3.2.2 Necessity of strategic alliance

As a result of asking if they think strategic alliance is necessary or not, 52.2% of the respondents answered that it is very necessary, so it turned out that people concerned in the automobile parts industry are generally sympathizing with the reasons and purpose of the strategic alliance.

4.3.2.3 Level of initial task pressure by strategic alliance

As a result of questioning the level of initial task pressure by strategic alliance, 43.5% of the respondents answered that it was partially heavy but acceptable, and 42.6% answered that it was somewhat heavy. When introducing a new system in the organization, the acceptance of the members plays an important role in the success of the system. Therefore, strategic alliance should not be a simple strategy decided by the upper part, but it should consider the awareness of the employees and various kinds of pressures from the actual work on them.

4.3.2.4 Importance of strategic alliance in current business performance of the company

As a result of questioning the level of Importance of strategic alliance in current business performance of the company, 62.6% of the respondents answered average, and 14.8% answered generally important, 10.4% answered very important. Considering the overall portion of the response, it can be said that the performance of the strategic alliance recognized by the respondents is in an average level, and this can be interpreted that there are actual performance, but the scale is not big as initially expected.

4.3.3 Level of dependence on strategic alliance

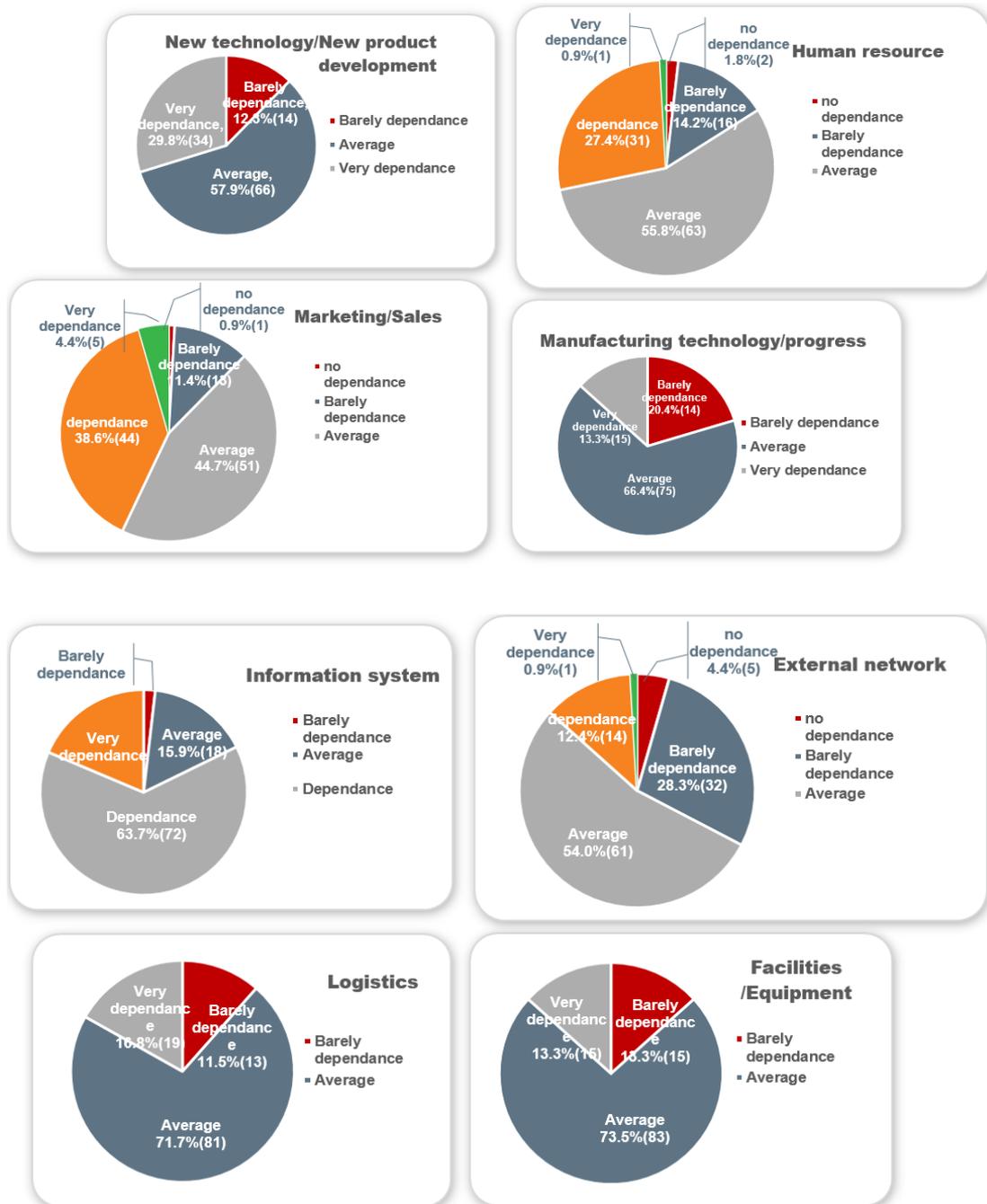


Fig. 4-4: Level of dependence on strategic alliance

4.3.3.1 Development of new technology/product

As a result of questioning the dependence in developing new technology/product in the strategic alliance, 57.9% of the respondents answered average, so it turned out

to be in average level.

4.3.3.2 Manufacturing technology/process

As a result of questioning the dependence in manufacturing technology/process in the strategic alliance, 66.4% of the respondents answered mostly dependent, so it turned out that the level of dependence is relatively high.

4.3.3.3 Marketing/sales

As a result of questioning the dependence in marketing/sales in the strategic alliance, 44.7% of the respondents answered average, 38.6% answered mostly dependent, so it turned out that this part is partially dependent

4.3.3.4 Manpower

As a result of questioning the dependence in manpower in the strategic alliance, 55.8% of the respondents answered average, so it can be said that exchange and provision of human resources are processed in an average level.

4.3.3.5 Information system

Information system is essential in the business management environment in the 21st century, and all processes and tasks are carried out by the information system. However, compared to major companies, small and medium sized companies are in a poor level in introducing or using the information system. As a result of questioning the dependence in information system in the strategic alliance, 63.7% of the respondents answered mostly dependent, so it can be said that the task environment using information system is relatively dependent.

4.3.3.6 Facility/tools

As a result of questioning the dependence in facility/tools in the strategic alliance, 73.5% of the respondents answered average, so it can be said that domestic companies receive help of facility and tools in an average level.

4.3.3.7 Distribution/logistics

As a result of questioning the dependence in distribution/logistics in the strategic alliance, 71.7% of the respondents answered mostly dependent, 16.8% answered very dependent, so it was apprehended that the portion of dependence on strategic alliance in this department is the highest. Eventually, significant part of the efficient supply chain system of the global company is expanded to Korean automobile parts company.

4.3.3.8 Overseas/external network

As a result of questioning the dependence in overseas/external network in the strategic alliance, 54.0% of the respondents answered average, 28.3% answered mostly not dependent, so it can be said that strategic alliance is not very helpful in making new business exchanges, building relationships and forming networks with departments other than companies (government, university, labs)

4.3.4 *Performance of strategic alliance and relationship with partner companies*

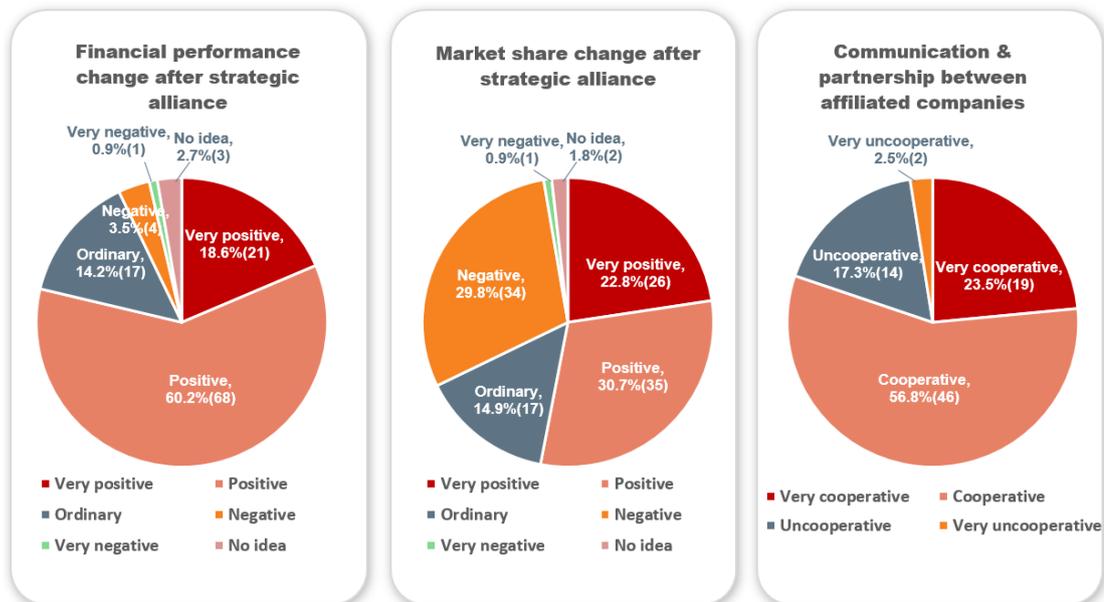


Fig. 4-5: Performance of strategic alliance and relationship with partner companies

4.3.4.1 Changes in financial performance after the strategic alliance

As a result of questioning the changes in financial performance after the strategic alliance with global companies, 60.2% of the respondents answered that there were mostly positive changes, so it can be said that strategic alliance was helpful in increasing sales and profits, and reducing cost in a certain level.

4.3.4.2 Changes in market share after the strategic alliance

As a result of questioning the changes in market share after the strategic alliance with global companies, 30.7% of the respondents answered that there were mostly positive changes, 22.8% answered that there were very positive changes. However, 29.8% answered that there were mostly negative changes. This negative opinion about market share includes the cases to supply the high value products to concentrated source of demand due to strategic alliance, and this may have an unfavorable influence on the long-term survival of the company, so efforts to diversify the market is required.

4.3.4.3 Communication and cooperative relationships with the partner company

As a result of questioning the communication and cooperative relationships with the partner company recognized by the people concerned in the automobile parts companies, 56.8% of the respondents answered generally amicable, and 23.5% answered very amicable. The relationship with the partner company can succeed when a balanced, equal partnership sharing the overall value and vision is formed, not just executing certain parts of business. However, in the strategic alliance with the global companies, if the relationship is concentrated on either side in capability or resource, or if the relationship is mutually subordinate, Korean automobile parts companies may experience a vicious circle depending on another object. Therefore, it is considered that the strategic alliance is positive so far, however, more careful recognition about the meaning of alliance is required to form a balanced alliance.

4.3.5 Requirements and improvements for the performance of strategic alliance

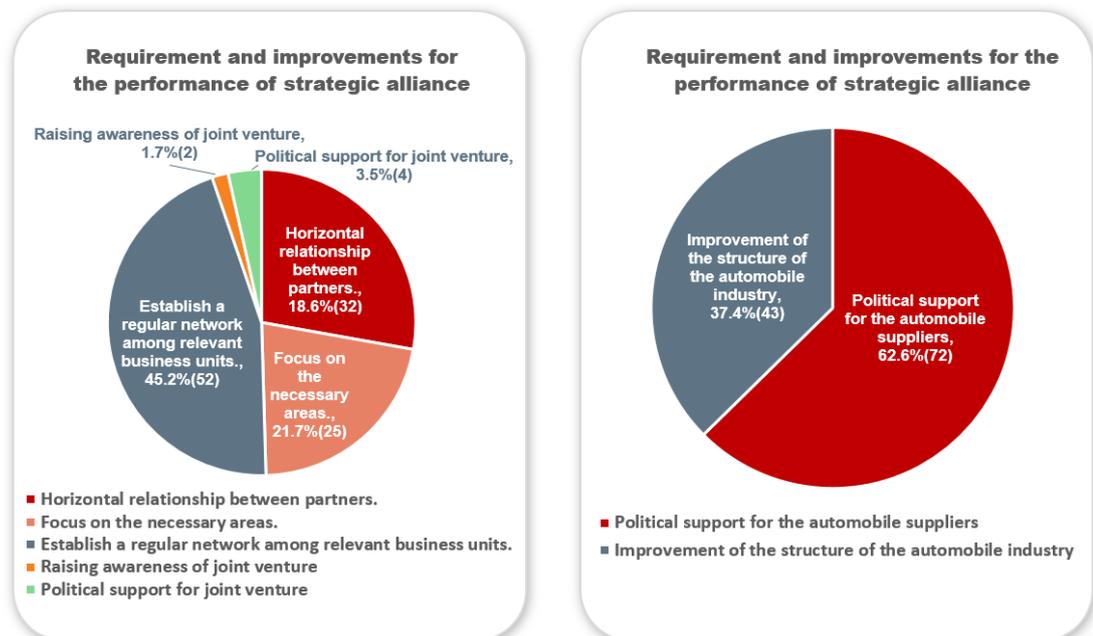


Fig. 4-6: Requirements and improvements for the performance of strategic alliance

To raise the performance of the strategic alliance, asked the respondents to answer the requirements and improvements in open form, and coded the points of the contents stated by the respondents and arranged them in each type.

Firstly, for requirements raise the performance of the strategic alliance, 45.2% of the respondents answered that preparing regular network system with relevant domestic and international businesses is necessary. 27.8% answered that Forming equal/balanced sharing relationship with the partner company is necessary, 21.7% answered that concentrating on necessary alliance parts is necessary. And there were answers saying that other political supports (3.5%) or raising the awareness of the strategic alliance (1.7%) is necessary.

Nest, as a result of questioning the improvements of the strategic alliance, there were two types of answers. 62.6% answered that political support related to funds, technology for parts companies is necessary, and 37.4% answered that improving the structure of automobile industry is necessary. This is, as discussed above, it can be said that the respondents are seriously aware of the situation that middle and

small sized parts manufacturers are losing their autogenic power because they are subordinate to some automobile manufacturers or large automobile parts companies. The results of recognition investigation, requirements and improvements above will suggest detailed indications and directions of improvement in further discussion and conclusion.

5 DISCUSSION AND CONCLUSION

5.1 Summary and indications

In order to survive in the market environment with infinite competition, the company should have the competitiveness by itself or procure competitive activities from the market. By focusing the resources in the field that can have competitiveness and by concluding strategic alliance in other fields that are hard to have competitiveness, the company can focus on the core capabilities in business.

The field of strategic alliance is expanded to information system and marketing field, which is growing its importance in business capabilities, along with the manufacturing, technology field. Therefore, this research is to seek methods to reinforce competitiveness through strategic alliance with global companies, focusing on domestic automobile parts companies.

The results of the research deducted analyzing results of case and recognition investigation processed in this research are as below.

First, as a result of analyzing the cases, in the successful cases of strategic alliance, there is a company that leads the strategic alliance, and each part took charge of professional roles in the field of alliance for choice and concentration. Also, balanced sharing of information, resources, and capabilities were found in equal relationship, and this prepared the opportunity of coexistence and coevolution, and also led to actual reinforcement of competitiveness and market performance. However, Korean automobile parts companies are subordinated to large parts companies or automobile companies as a subordinate partner or subsidiaries in charge of assembly, so the performance of the industry is not delivered to the parts companies fully, and it is facing a crisis that the first parts companies might fall into secondary businesses by losing the autogenic power due to intensified dependence. And the biggest concerns in strategic alliance between domestic automobile parts companies and global companies are the fact that information and technology are exposed since the know-how and technologies secured exclusively can be transported to the other party, the investment ability of domestic parts companies is

deficient, and due to structural problems like small scale of the companies and high dependence on mother companies, the number of large parts companies that have the minimum scale to develop, manufacture the module and system is definitely deficient.

Second, processed survey to the people concerned in domestic automobile parts companies that built strategic alliance with global companies, to apprehend the current status and get indications by investigating and suggesting the features of the company, contents, environment and performance of the strategic alliance recognized by them. As a result of analyzing the investigation, the level of competition in the market that the company belongs to is high, the financial status is poor, and the complexity of the manufacturing technology used in automobile parts companies is simple. Also, the foundation to have competitive advantage by developing technology in the company is very poor.

About the current strategic alliance, overall strategic alliance found to be satisfactory, but 35.1% was dissatisfied with the strategic alliance. And the respondents were mostly sympathizing with the reasons and purpose of the strategic alliance. As a result of questioning the level of task pressure in the introduction of strategic alliance, 43.5% answered that it was partially heavy but acceptable, and 42.6% answered that it was somewhat heavy.

Along with this, for the question asking how the respondents recognize the importance of strategic alliance in the business performance of the company, the result was in average level, and this can be said that it has actual performances but the scale is not as big as initially expected.

In the result that investigated the level of dependency in each task department on strategic alliance, the level was high in manufacturing technology/process, marketing/sales, information system, distribution/logistics, and this shows that the alliance is focused on short-term and visible departments. So, the necessity of exchanging the know-how of global companies in technical development or transportation of new technology, and domestic or international business network was suggested. As a result of finding out the performance of strategic alliance and relationship with the partner company, the changes in financial performance after the strategic alliance were positive, but negative and positive changes conflicted in

changes in market share, so it was found that the goal of alliance should be decided in a direction to expand the market in long-term point of view. Also, about the communication and cooperative relationship with the partner companies, the alliance has been positive so far, but the necessity to form a balanced relationship by considering the meaning of 'alliance' more carefully was suggested.

Lastly, for the questions asking the requirements and improvements required for the performance of the strategic alliance, respondents answered that building a regular network with domestic and international businesses related, forming a balanced, equal relationship with the partner company, concentration of strategic alliance to necessary departments, political support, raising awareness about strategic alliance are required. And for the improvements of strategic alliance, the respondents answered that political support related to funds or technology for parts companies is necessary, and improving the structural problems in Korean automobile industry is necessary. Through the result of this research, domestic automobile parts companies should focus on the level of strategic alliance to raise the effectiveness of the strategic alliance with global companies. In the field of strategic alliance, effort for each step to raise the level of alliance is required, and strategic alliance can be expanded in equal, exchanging relationship to raise the synergy. As shown in the result of the research, automobile parts industry, which is facing severe competition for survival, is processing strategic alliance with global companies positively to secure the advantages in technology and marketing, and to reinforce competitiveness, and according to the law of the jungle, Mergers and Acquisitions of the companies are pursued continuously. However, in the alliance, there are problems like conflicts in limits of resources and cooperation in tasks, and this makes the alliance difficult to reach the original purpose and expectations. Eventually, this can lead to decline in task immersion of the internal executives and employees, degeneration of financial performance of the organization, and even destruction of the alliance. Like this, the strategic alliance between companies has risks along with rewards. Generally, the alliance is the combination of interest between companies and the expansion of personnel relationships, so there are many conflict factors followed. Factors like market competition between partners, expansion of alliance range, deficient ability to use alliance, difference in culture, division of consensus, dominance relation between partners, difference in the view of evaluation about failures in achieving the goals, delay in decision making are

included in the detailed conflict factors that can be found in the alliance.

In order to terminate these conflict factors in advance, the purpose and range of the alliance should be decided clearly. Eventually, in order to overcome the risk followed by the alliance and achieve effective strategic alliance, the automobile parts company should follow the steps of ‘analyzing the strategic position and feasibility of strategic alliance → selecting the best partner → preparing guidelines for the negotiation for successful alliance → searching various negotiation strategies → materialization of contents in the agreement → conclusion of legal structure and financial relationship and thoroughly process acquisition, analysis, and evaluation of information. This becomes the condition of seeking and concluding the successful alliance.

5.2 Methods and proposals to reinforce competitiveness through strategic alliance

Methods to reinforce the competitiveness through strategic alliance between Korean automobile parts companies and global companies can be suggested through the result of this research. Necessary review points and improvement methods in the theoretical view of strategic alliance and the level of distinctiveness of the automobile part industry are as below.

First, sharing complementary resources is necessary as a point that should be considered important when concluding alliance with global company. However, since Korean companies are considerably left behind compared to global companies, troubles can occur. Also, the technical skills are noticeably deficient compared to the global companies, so it is difficult to expect animated productivity. In this point of view, complementary balance is required for Korean automobile companies and global companies.

Second, although strategic alliance should be concluded for cooperation required for business, too many alliances are concluded. Immersion has to be limited in strategically important business fields. So, when the company is pursuing excessive strategic alliances, this leads to negligence of alliance in business fields that are not important. Therefore, Korean automobile parts companies should consider the

strategic important in the process of pursuing strategic alliance with global companies and seek alliance in only core parts.

Third, selecting promising fields of alliance and integrated methods for support are necessary. Strategic alliance plays an important role in raising the national competitiveness and efficiency of the national economy, so the government should select the promising fields of alliance in each industry through systematic collection and analysis of information, and review the industrial technology policies of the government and alleviate the relevant regulations. Especially, to promote the alliance in R&D field, the government should select strategic technology fields and promote fund support to induce concentrated development and prepare ground of joint development between companies.

Fourth, cooperative relationship between major companies producing automobiles and middle, small sized companies producing parts should be established. Owing to measures to innovate the unfair practice, technical development of the government, status of middle and small sized companies is considerably escalated, but due to internal limits of venture companies like lack of technology, funds, and sales chain, it is difficult to say the relationship with major companies is equal. In order to develop into good alliance, balance of power with the major companies is somewhat necessary, but it is hard for middle and small sized companies to solve this problem by themselves, since they are in unfavorable position in many aspects. Therefore, the government should positively develop various supportive measures to build a foundation to promote the coexistence and co-prosperity of major companies and small, middle sized companies through close cooperative relationship.

Fifth, efforts for promoting exchanges between different businesses should ㄷ be made. Exchange between different businesses has advantages not only in technical development like process innovation, new technology, development of new product, but also in acquisition of various information required for business, expansion of personnel network, improvement of ability as an executive, creating new business opportunities, reinforcing personnel networks. Also, it provides good opportunity to activate strategic alliance between member companies. However, recently, the conclusion performance and the portion of strategic alliance with companies are low, so various supports to activate strategic alliance between difference businesses are required.

Sixth, in the aspect of automobile parts company, the executive members should clarify the purpose of alliance, and have the acting power to form the strategic alliance as a leading party. As the role of the executive changed from management to strategy, the direction is changing to emphasize the vision and acting power, and strategic alliance can become the touchstone that can test the vision and acting power of the executive. The most important part is to participate in the cooperative relationship with setting goals.

Seventh, automobile parts company should consider their competitors as companions, and try to learn their strengths to use them as the foundation of alliance. They should be aware of the fact that excessive hostility and imprudent competition will only bring damage to each other. Also, when the company is concerned about the other party's opportunistic action to much or inclined to its own profit, the possibility to fail the alliance is high, so it should be careful. In alliance between companies, parties tend to focus on their own profit and not consider the other party's profit, but they should care for the other party to play a Win-Win game.

Eighth, the company should secure core capabilities. Strategic alliance is maintaining good relationship by combining the core capabilities possessed by each company complementarily. When the alliance is simply for introducing technology or relative predominance is not continuously maintained, it is impossible to continue the alliance for a long time. For these reasons, relationship with foreign companies is staying in subordinate level like technical introduction, outsourced production, or sales agency. Especially, in order to conclude and succeed strategic alliance with the leading companies, accumulation of core capability is required, or the alliance would be impossible.

Ninth, the contents of the agreement for the alliance should be detailed and clear. When the contents of the contract is uncertain or when it is just an oral agreement, the alliance may be suspended because solution for trivial conflicts cannot be found. Contract about the overall activities in alliance like purpose of the alliance, range, profit-loss distribution, asset evaluation, decision-making authority should be made in details. Especially, clear standard in distribution of the performance from the cooperation should be made.

Tenth, business innovation movement in the company should be promoted. When

the culture of each company is not harmonized, it can cause personnel conflicts and mutual distrust, and it can have negative influence on absorbing the core capability, so along with the conversion of awareness of the employees, the structure of the organization should be altered according to the goal of the alliance. Also, the executive members should have positive behavior when selecting the partner and processing the agreement.

Eleventh, strategic alliance between domestic companies along with that of global companies should be positively explored. The necessity of strategic alliance between domestic companies is on the rise because of extended recession, market maturization, degeneration of payability of company, increased risk in development of new technology, however, domestic companies tend to have excessive sense of rivalry and to distrust each other, so the alliance is not positively processed. However, alliance between domestic companies has a high possibility to succeed due to homogeneity of language and culture, so it is necessary to find a partner among the domestic companies.

Twelfth, enlargement of parts companies is required. Due to smooth promotion of technical development, response to module order, and enlargement of advanced companies, enlargement of automobile parts companies is focused as an essential task, automobile parts companies are still in small scale. Especially, compared to parts companies in advanced countries like Japan, USA, and Germany, the difference in company scale is big. Environmental factors around Korean automobile parts industry, like the scale of domestic market and rapid changes of automobile industry, caused this situation, and also, the unique system in Korea and the government's policy to emphasize small and middle size companies also influenced the situation.

Due to recession of domestic market, and local production of exported amount, domestic market is congested, and due to reduction of first parts companies, the managerial situation is rapidly degenerated. In this situation, exportation of parts should be promoted positively as a method to overcome this situation.

The dissolution of vertical system through expanding the outsourcing from companies in advanced countries, and online purchase of components can provide new business opportunity to domestic parts companies, and as the opportunity for

delivery is growing followed by acquiring international certificates and registration of suppliers through quality assurance evaluation of parts companies that are foreign suppliers like Renault Samsung Motors, specialization of manufacturing to reinforce the core capabilities should be promoted. Therefore, the companies should realize economy of scale through specialization, and have international competitiveness in performance, quality, and price. Also, from merely focusing on simple manufacturing and processing, the companies should achieve independence in technical level like development of independent technology, and if technical independence is not available, deficient technology should be introduced through strategic alliance with advanced companies. On the other hand, to satisfy the verified taste of customers and increase market share, economy of scale should be realized by verification of products and enlargement of parts companies. Mega-large module parts companies emerging by reinforcement of competitiveness in the industry and enlargement of company scale should secure the total system technology including design technology and technology to manager the second and succeeding parts companies. Professional companies focusing on technology, which are second parts companies, should create high added value by developing products with high function, and parts companies focusing on processing should concentrate on reinforcing the capabilities in manufacturing technology.

Thirteenth, technical development and fosterage of technical manpower are necessary. Considering the small scale of subordinate contract of domestic automobile parts companies, the weakest point is the technical development and core technical manpower. However, domestic parts companies lack in prolonged stability and mutual trust in profitability, so they are not participating in investment for technical development and improvement of quality. Moreover, in case of core technical manpower, it is hard to secure prominent manpower because of poor salary and local location of factories. And even if the manpower is secured, there are many breakaways afterwards. So, systematic education and training for core technical manpower and site skill manpower is required more than anything. Independent foundation of competition should be formed through participating in development of core components and joint development shortly.

To reinforce the competitiveness of middle and small sized parts companies, verification in function should be processed through education and training of manpower. To respond to intellectualization of automobiles, manufacturing of

modules and cars for the future, manpower for design and planning and multifunctional manpower with skills are required than simple functional manpower. Therefore, in order to secure researching manpower, political care of the government is necessary (military service benefits, internship, hiring foreign engineers), and financial support on investment for technical manpower can be a method. In operating technology institutes, a lot of changes in awareness are required. Since most of Korean parts companies are operating the research institute nominally, so in order to have international competitiveness, changes in awareness in operating the technology institutes are required. Currently, automobile parts companies are processing enlargement and modularization internally and externally, so for modularization, the scale of company and securing technical skills are essential. Therefore, by actual operation of technology institutes and securement of research manpower, Korean automobile parts companies can assure their future by surviving as professional companies and producing parts companies with global competitiveness to accumulate technology

Fourteenth, like mentioned above continuously, improvement in vertical business relationship between automobile and automobile parts companies should be processed. In order to minimize the contraction of domestic automobile and parts industry, mind of horizontal coexistence between automobile and parts companies is essential, instead of vertical businesses. To reinforce the overall competitiveness of Korean automobile industry, reestablishment of roles between automobile and parts companies, technical cooperation of parts companies, advanced financial support for development cost are necessary. Currently, vertical and subordinate awareness of relationship is overflowing between automobile and parts companies. Also, the method of selecting subcontractors is the competitive bid for the lowest price, so the low-cost order leads to reduction of profitability due to increased cost in the view of parts companies. Therefore, most parts companies with small scale are in an unfavorable status in technical R&D and securing manpower compared to major companies. Also, continuous facility investment of automobile parts companies is required, but investment of domestic automobile parts companies are sensitive to business fluctuations of automobile companies, and the investment form is like a roller coaster rather than being stable, so when the business of the automobile companies are worsened, this is delivered directly to the parts companies, so this leads to management crisis in a financially unfavorable situation. In order to

overcome this problem, equal relationship should be re-established with the cooperative mind of coexistence, intentional order for professional companies in each field and objective technical evaluation should be processed in orders instead of price competition, and especially, methods to support a certain amount required in R&D of the latest components and continuous growth should be promoted, so that the way of coexistence to increase the quality of the automobiles can be found.

On the other hand, the meanings of this research are as below.

First, this research searched the methods to reinforce competitiveness through Strategic alliance of Korean automobile parts companies. Especially, focused on automobile parts companies accounting for a large portion in industry, but losing their position relatively in the degenerated managerial environments, it was meaningful to attempt to apprehend the success factors of strategic alliance.

Second, it is meaningful since it provided the basic data about the strategic alliance for the automobile parts companies that are managing the company just depending on the circumstances without data or know-hows through this research.

Third, through experiential analysis about factors required in the performance of Strategic alliance, the automobile parts companies, which are the demanders, found out what is required in the success of the alliance, and global companies will be able to find indications about what is important for automobile companies.

On the contrary, this research has limitations as below.

First, this research dealt with the current status of the strategic alliance focused on simple factual survey. Therefore, the methods of analysis should be supplemented using more meaningful statistical methods and structuralized standards.

Second, in this research, the targets and items of the investigation were decided by subjective judgment of the researcher. Therefore, in the follow-up studies, the omission of investigation items should be minimized using various internal and external factors not applied in this research.

Third, this research collected data in self-evaluation method using surveys. Therefore, it has the limit that it is difficult to avoid the tendency that the investigation result is under the control of the attitude of the respondent. Therefore, to overcome

this limit, multiple methods like observation, case studies should be introduced.

Fourth, the performance measurement of Strategic alliance was designed according to the subjective awareness level of performance of the respondents, instead of quantified figures. This method cannot avoid the risk that personal emotions of the respondents are involved in it. Therefore, in future studies, it is required to process more objective analysis using secondary data of the company like financial metrics.

Fifth, since the accumulated data about successful cases of Strategic alliance of automobile parts companies was deficient, this research gained indications from cases in other industries. But in the future, relevant data and cases will be systematically accumulated so that more direct indications will be deducted.

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8 APPENDIX

Questionnaire (Survey form)

Survey about the environment of Strategic alliance in automobile parts companies

Name of company:

Department:

Position:

Sex: Male. Female

Age:

Marriage: Married. Single. Divorce/ bereavement/ separation

Educational level: High school graduate. Over university graduate

Career in current business: years

I . Please answer your opinion about the features of current business environment of the company you belong to.

1. Level of competition of the market that the company belongs to

① Very high ② Generally high ③ Generally low ④ Very low

2. Financial ability of the company

① Prominent ② Negative ③ Average

3. Complexity of manufacturing technology used

- ① Very complex ② Generally complex ③ Generally simple ④ Very simple

4. Possession of information/manpower/patent/know-how that can develop new technology inside the company

- ① None ② Yes ③ I' m not sure.

II. These are the questions asking about the attitude towards the strategic alliance as a person concerned in your company

1. Satisfaction about the current strategic alliance

- ① Satisfied ② Not satisfied

2. Necessity of strategic alliance in business considered in general views

- ① Very necessary ② Generally necessary ③ Average ④ Generally unnecessary ⑤ Very unnecessary

3. How was the level of initial task pressure experienced by you or your co-workers when introducing the current Strategic alliance? (Write down your simple answers)

4. The importance of role of strategic alliance in the current business performance of the company

- ① Not important at all ② Generally not important ③ Average

- ④ Generally important ⑤ Very important

III. These questions are to find out the dependence on strategic alliance in each task department of the company. Please check the item that matches your company.

1. Development of new technology and product

① Not dependent at all ② Mostly not dependent ③ Average ④ Mostly dependent ⑤ Very dependent

2. Manufacturing technology and process

① Not dependent at all ② Mostly not dependent ③ Average ④ Mostly dependent ⑤ Very dependent

3. Marketing and sales

① Not dependent at all ② Mostly not dependent ③ Average ④ Mostly dependent ⑤ Very dependent

4. Manpower

① Not dependent at all ② Mostly not dependent ③ Average ④ Mostly dependent ⑤ Very dependent

5. Information system

① Not dependent at all ② Mostly not dependent ③ Average ④ Mostly dependent ⑤ Very dependent

6. Facility and tools

① Not dependent at all ② Mostly not dependent ③ Average ④ Mostly dependent ⑤ Very dependent

dependent ⑤ Very dependent

7. Distribution and logistics

① Not dependent at all ② Mostly not dependent ③ Average ④ Mostly dependent ⑤ Very dependent

8. Overseas and external network

① Not dependent at all ② Mostly not dependent ③ Average ④ Mostly dependent ⑤ Very dependent

IV. These questions are about the performance of the current Strategic alliance and relationship with the partners. Please check the item that matches your company.

1. Changes in financial performances after the Strategic alliance

① Very positive changes ② Generally positive changes ③ No changes
④ Generally negative changes ⑤ Very negative changes ⑥ I' m not sure.

2. Changes in market share of the company after the Strategic alliance

① Very positive changes ② Generally positive changes ③ No changes
⑤ Generally negative changes ⑤ Very negative changes ⑥ I' m not sure.

3. Overall quality of communication and cooperative relationship with the partner

① Very amicable ② Generally amicable ③ Partially dissonant ④ Very uncooperative

V. These questions are describing the requirements and improvements you consider to be necessary as a person concerned to raise the performance of

Strategic alliance. Describe briefly focusing on the main points of your opinion.

1. Requirements to raise the performance of Strategic alliance, things that are considered to be necessary in current status

2. Improvements required to promote Strategic alliance of automobile parts companies and to reinforce the competitiveness of the automobile parts companies through this

- Thank you. -