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The Sustainability of Joint Ventures between State Owned Enterprises and Global Firms for Car Making Business in China

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Abstract: Since 2009 China has kept the first place globally at the automobile production and the sales volume. The practical growth engine for China's automobile industry is Joint Venture (JV) makers between State Owned Enterprises (SOEs) and global makers which having concentrated on passenger car making business. The JVs' role at the passenger car business of China has been expanded continuously since early 1990s. Chinese government has strictly prevented a foreign maker from holding above 50% of whole equity of a JV at vehicle making business. It means that the strategic alliances like non-equity alliances, equity alliances or JV have been feasible options for global makers to take for entering China's vehicle making business. Therefore this study took a deep interest in how much sustainable the JV contracts in China, and tried to access the issues through industry based view and institution based view. At industry based view, this study analyzed which strategy is more desirable among three types of strategies; non-equity alliances, equity alliances and acquisitions. To do so this study applied the framework suggested by Dyer, Kale & Singh (2004) for deciding which strategy is relatively more suitable than others according to five factors; types of synergies, nature of resources, extent of redundant resources, degree of market uncertainty, and level of competition. At the institution based view, Chinese local governments' plans, governance structures of SOEs and JVs, policy regulations for automobile industry were examined. As a result acquisition turned out to be more suitable than equity alliance or nonequity alliance for vehicle makers in China under current development condition. But the sustainability of a type of equity alliances, JV will be maintained so long in future due to the institutional factors of China.

Key words: China's automobile industry; China's car making business; joint venture of China; strategy selection framework; Shanghai Auto (SAIC); First Auto (FAW)

JEL code: M16

1. Introduction

China has maintained the first place globally at the automobile output and sales volume since 2009. The annual vehicle output and sales volume of China in 2012 reached 19.27 million, 19.30 million respectively, and annual growth rates was 4.6%, 4.3% each (CAAM, Jan. 11, 2013). The CAGR (Compound Annual Growth Rate) for automobile production and sales volume of China from 2002 to 2012 were 19.3%, 19.2% each, which are about two times higher than the GDP increase rate of China for the same period. The global number one position

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of China at the vehicle making business will go on for a long time in future, and its growth engine role for world automobile industry will expand too. However the increase rate for vehicle production and sales volume dropped by 0.8%, 2.5% respectively in 2011, and the growth rate in 2012 was just 4.6%, 4.3% each. Many forecasts pointed out that the production and sales volume will surpass 25 million at around 2015, but explosive growing pattern was stopped abruptly in recent. The biggest reason for it is closely related with the industry policy change for vehicle sales promotion; tax reduction or government subsidies. So it can be a meaningful research topic for the automobile industry of China at the viewpoint of institution factor because formal institutions like regulations, rules or policies substantially affected the growing speed of vehicle making business.

Generally the study for China's automobile industry can be accessed by three sides; the firm resource based view, the industry based view, institution based view. When taking the industry based view or the resource based view it needs to focus on "top six vehicle makers" of China, large-sized SOEs (State Owned Enterprises) and other private makers with only concentrating on passenger car business. The former group includes SAIC (Shanghai Automotive Industry Corporation), FAW (First Automobile Works), DFM (Dongfeng Motor Corporation), Changan, BAW (Beijing Automobile Works), and GAIG (Guangzhou Automobile Industry Group). The latter group includes Chery, BYD, JAC (Jianghuai Automobile Corporation), GWM (Great Wall Motors), and Geely. However when accessing the automobile industry of China, Chinese government should be considered as another key factor because it creates most of the formal institutions (Choi, 2012b, p. 120; Gan, 2003, p. 544; Peng, 2000). In fact Chinese local governments have been deeply involved in major SOEs' operation, so the approach for local governments' behavior is a core part of institution based view for China's automobile industry.

In addition it needs to take a more interest in the difference of managerial features between entire vehicle making business and passenger car business when accessing China's automobile industry. Because the passenger car making business has played a critical role for automobile industry development since early 1980s as well as the major firms, key success factors and rivalry condition of it are different from the entire vehicle making business including commercial vehicles (Gan, 2003, p. 540). Especially most of major firms of passenger car business of China were Joint Ventures (JVs) created by collaboration contracts between SOEs and global makers (Min, 2005, p. 100). JV contract is a type of strategic alliances, more exactly to say one of equity alliances and most of JV contracts in China's passenger car business are effective until 2025~2030, the JVs' equity structures for SOEs and foreign partners are mostly 50:50.

Such intended outcomes by industrial policies or local governments intervention, JV contract has been a dominant collaborative type between SOEs and global makers. And now it needs to examine whether the JV contact is most preferable strategy or not for China's automobile industry because there exist many kinds of equity alliances except JV, and nonequity alliances or acquisitions can be more suitable strategy for present condition. To do so this study applied the strategy selection framework by Dyer, Kale and Singh (2004). In addition performance analysis for overall automobile industry as well as major vehicle makers of China was done, and then main issues for sustainability of JV contracts were reviewed on institution based view.

2. Theoretical Background

Strategic alliance exists whenever two or more independent firms cooperate in R&D, mass production, sales of products or services (Barney & Hesterly, 2010, p. 250). Through the strategic alliance all partners can share each firm's resource and capability or integrate business activities on value chain. Strategic alliance can be

classified into three types; nonequity alliances, equity alliance, and joint venture. Nonequity alliance happens the cooperation among firms is organized through contracts without cross-equity holdings or an independent firm being made. The equity alliance means the cooperative contract that supplemented by equity investment by one partner in other partner or reciprocated investment for each other.

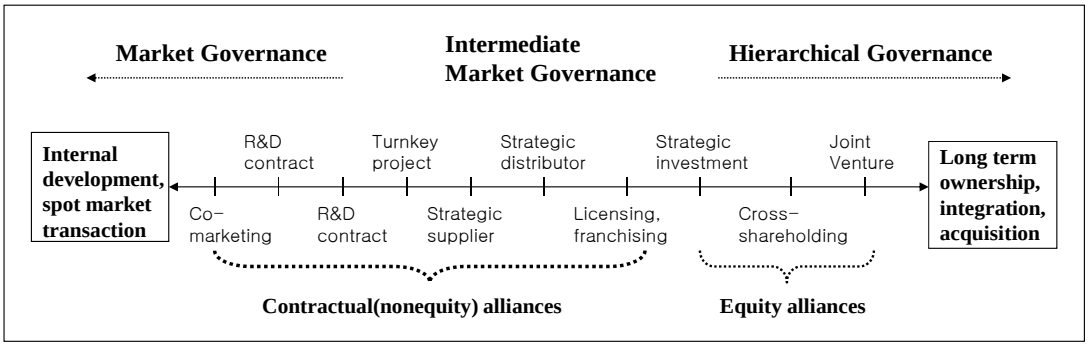

Figure 1 Governance Structure Comparison for Nonequity Alliance, Equity Alliance, Acquisition

Source: Peng Mike W. (2006). *Global Strategy*, Mason Ohio: South-Western, p. 255; Barney Jay B. & Hesterly William S. (2010). *Strategic Management and Competitive Advantage*, New Jersey: Pearson Education, p. 332.

Generally co-marketing, R&D contract, strategic distributor, licensing or franchising contract are classified into the nonequity alliance but the equity alliances cover the strategic investment, cross shareholding or Joint Venture (Figure 1). Among equity alliances, joint venture (JV) is a legally independent firm that made by cooperating partners, and all partners share any profit or loss of the JV. In addition the substitutes of strategic alliance include the internal development through the spot market transactions and the mergers & acquisitions (M&A), more exactly to say, acquisitions (Figure 1). However through the internal development a firm is able to start a new business when it tries to develop all the resources and capabilities for catching market opportunities or neutralizing market threats by itself. Such a "going alone" strategy would be a feasible option when there is almost no limit to easily acquire human resources, new technology, production facility or distribution network at any time form the market. In addition the market transaction cost should not be more than alliance negotiation or alliance management cost. If not so, the alliance can make more value than "going alone" strategy.

Acquisitions occur when a firm purchases a controlling share of a target firm or a majority of its asset in order to begin a new business or enter the existing business swiftly. So acquisitions are mainly used to do diversification strategy because a firm is able to gain effectively the economy of scale or the economy of scope through the vertical integration[1] on value chain. Actually acquisitions can be considered as a next step or another type of equity alliance at the point of the level of cooperation among partners because a partner is able to make the hierarchical governance structure whenever it wants a stronger relationship for the alliance contract. However alliance might be preferred to acquisitions when there are legal constraints on M&A or acquisitions restrict a firm's managerial flexibility under conditions of high uncertainty (Barney & Hesterly, 2010, p. 266). In addition when a firm's independence is more valuable than the integration or the unwanted organizational baggage of target firm is substantial, alliances might be preferred to acquisitions.

[1] The number of stages in a product's or service's value chain that a particular firm engages in defines that firm's level of vertical integration. The greater this number, the more vertically integrated a firm is. It can be divided into two types; forward-integration and backward-integration. Barney Jay B. (2002), *Gaining and Sustaining Competitive Advantage* (2nd ed.), New Jersey: Prentice Hall, p. 194.

Dyer, Kale and Singh (2004) suggested a framework that supports a firm to approach systematically before deciding whether to acquire or to ally with potential partners. Firstly they picked up three key factors which a firm should consider at decision making process for the collaboration options; nonequity alliance, equity alliance, acquisitions. Three factors include the resources and synergies they want, the marketplace they compete, and their competencies at collaboration (Dyer, Kale & Singh, 2004, p. 110). Among three factors, the resources and synergies were categorized by three sub-factors; type of synergies, nature of resources, extent of redundant resources (Table 1). In addition the marketplace they compete is accessed by two sub-factors; degree of market uncertainty and the level of competition. In result the framework was composed by such five factors but the competency of collaboration was not added in.

Table 1 Strategy Selection Framework for Nonequity Alliances, Equity Alliances and Acquisitions

Five factors	Strategy selection
1. Types of synergies	
Modular	Nonequity alliances
Sequential	Equity alliances
Reciprocal	Acquisitions
2. Nature of Resources (Relative value of soft to hard resource)	
Low	Nonequity alliances
Low, Medium	Acquisitions
High	Equity alliances
3. Extent of redundant resources	
Low	Nonequity alliances
Medium	Equity alliances
High	Acquisitions
4. Degree of market uncertainty	
Low	Nonequity alliances
Low, Medium	Acquisitions
High	Equity alliances
5. Level of competition (Degree of competition for resources)	
Low	Nonequity alliances
Medium	Equity alliances
High	Acquisitions

Source: Dyer Jeffrey H., Kale Prashant & Singh Harbir (2004). "When to ally & when to acquire", *Harvard Business Review*, July-August, p. 114.

In Table 1, the modular synergies among synergy type happen when business partners manage resource independently and share only when the collaboration generates a better performance. The sequential synergies are created when a partner finishes its task successfully and passed on the result for other partner to proceed the following task. However the collaborating firms can make reciprocal synergies if they integrate resources, customize them and complete tasks together through an interactive knowledge sharing system. The nature of resources means how much valuable of the intangible asset or soft resources like employees of the potential partner when comparing with the value of tangible asset like production plants.

The extent of redundant resources is related with the decision for a firm to be able to use the surplus resources for creating the economy of scale or to get rid of those resources for cost reduction. The degree of market uncertainty[2] is concerned with how much the payoffs are unclear when a firm tries to collaborate with the

[2] Generally the uncertainty exists when it is very hard to expect the future payoffs nor probability distribution of future values but the risk exists when a firm can estimate the probability distribution of future payoffs, that is the wider the distribution, the higher the risk (Barney, 2002, pp. 309-301).

potential partners. Specifically when a firm should select the collaboration type or pursuits the "going alone" strategy, it is expected that the collaboration's result is very uncertain or moderately unclear, a firm needs to apply a nonequity or equity alliance rather than acquisition because the alliance can limit the cost and time being necessary for maintaining the collaboration. Finally the level of competition suggests a firm should consider the acquisition more actively than alliance when the rivals or potential entrants try to involve in the game for some critical resources. In this case the acquisition might be the best option to preempt the intensive competition for resources. Basically it can be said that this framework takes the industry based view.

However the institution based view accounts for the performance difference by using external factors resulted from the state, government or a society like law, norms, ethics or cultures. Industry cluster[3] approach or Porter's diamond model[4] are representative tools for it. Douglas North defined institution as humanly devised constraints that structure human interaction, and Richard Scott used institution as a term for regulatory, normative, and cognitive structures and activities that provide stability and meaning to social behavior (Peng, 2006, p. 109). Regarding the former studies for institution based view, Peng (2001) traced the reason why firms' business strategies differ in different countries and at different times, and clarified the constraints of institution for business strategy selection through Asian firms' cases. In addition the dynamic relation among three factors, institutions, organizations and strategic choice was examined.

Peng (2000) also took a comparative approach for relationship between local governments and MNEs, and analyzed the performance of their JV makers at Chinese vehicle making business throughout 1980s. Peng (2000) regarded the central government of China as a principal who wants to control overall plan of automobile industry development while assuming that local governments and SEOs as agents which should do something beneficial for a principal. Peng (2000) compared the performances of three JV makers; Beijing Jeep, Shanghai Volkswagen, Guangzhou Peugeot, in result Shanghai Volkswagen was considered as the most successful case in local government's bargaining power for central government, management style of JV, problem solving capability of global partner, vehicle parts localization rate. Gan (2003) put emphasis on the externality costs of automobile industry like exhaust emissions or traffic congestion, and suggested more active policies should be made to reduce vehicle emissions and to promote environment friendly vehicle development. In addition it was argued that Chinese policy makers need to seriously reconsider existing policies for encouraging private car ownership that mostly preferred to vehicle makers in order for sustainable growth. Recently Choi (2012a) analyzed the formal institution of China, three representative policies[5] for automobile industry. Choi (2012a) classified each purpose of whole contents of three policies by using four factors of Porter's Diamond model; industry structure, demand condition, related industry, factor condition. As a result the main objects of three policies have been changed from the industry structure centric approach to vehicle buyer centric approach.

[3] Industry cluster is the critical masses in one place of linked industries and institutions from suppliers to universities to government agencies that enjoy unusual competitive success in a particular field (Porter, 1998, p. 78). It is a geographic concentration of interconnected companies and institutions to find out the functional commonalities or complementary in a particular field with low cost. In addition clusters encompass an array of linked industries and other entities important to competition (Porter, 1998, p. 81).

[4] Diamond model approach is generally used to analyze the competitiveness of a region or a cluster. Four factors of Diamond model are the context for firm strategy and rivalry, production factor conditions, related and supporting industries, and local demand conditions (Porter, 1990, p. 77).

[5] Choi (2012a) suggested "Automobile Industry Policy (*qiche chanye gongye zhengce*)" in 1994, "Automobile Industry Development Policy (*qiche chanye fazhan zhengce*)" in 2004 and "Automobile Industry Restructuring & Promotion Plan (*qiche chanye tiaozheng he zhenxing guihua*)" in 2009 as three key policies for automobile industry of China.

3. Governance Structure of JV Automobile Makers

3.1 Governance Structure Condition for SAIC, DFM, FAW and GAIG

In order to access the sustainability of JVs it needs to review the relationship between SOEs and local government of China because Chinese central government has strictly restricted global makers holding over 50% share of a JV's whole share through "Automobile Manufacturing Industry Policy" published in 1994. To begin with the governance structure for leading JVs of passenger car making business was examined, and then the involvement of local governments which closely related with major SOEs was reviewed. In particular among big six SOEs of vehicle manufacturing business, the governance structures for top one, two, three makers; SAIC, DFM, FAW were analyzed and GAIG were added to the analysis as a representative maker of Guangdong province, the most developed region in Southern China.

Firstly the SAIC Group (*shanghai qiche gongye jituan zonggongsi*), in short SAIC is a dominant shareholder of SAIC Motor Corporation Ltd. (*shanghai qiche jituan gufen youxian gongsi*), in short SAIC Motor which is also a holding company for thirty six subsidiaries including vehicle makers, components makers and financial support, R&D firms[6] (Figure 2). As of late 2012 SAIC holds 78.9% of total share of SAIC Motor, and SAIC Motor not only takes 50.1% share of SGM Wuling but also holds 50% share of SGM, 51% share of SVW. GM holds 49% share of SGM and 44% share of SGM Wuling. Volkswagen takes 50% share of SVW. However Shanghai municipal government has deeply involved in growing process of SAIC since 1978 when the first negotiation between SAIC and Volkswagen for making SVW started. The negotiation took seven years to reach the final agreement and during that time Shanghai municipal government had played a critical role that seems like an agent between Volkswagen and central government of China. For last thirty years the SAIC and its local government have successfully created an intimate & tacit cooperation structure.

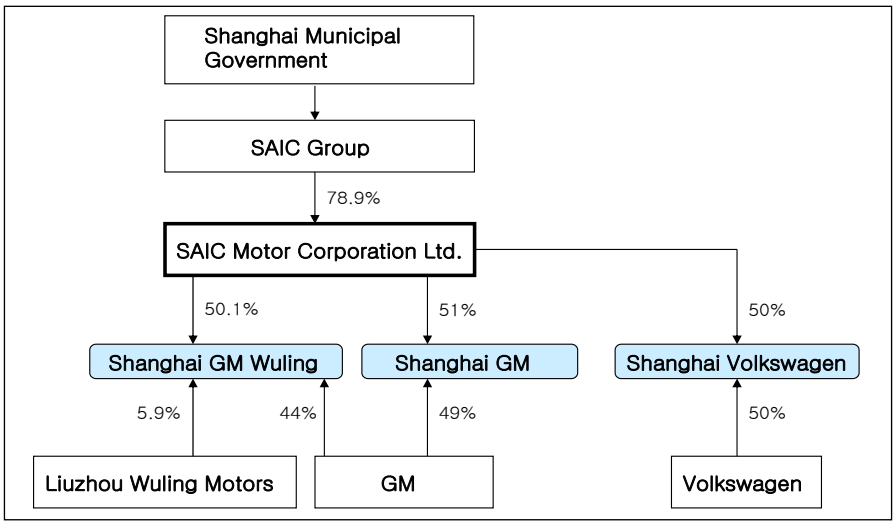

Figure 2 Governance Structure of SAIC Group

Source: *China Automotive Industry Yearbook 2012*, pp. 82, 422-423.

Secondly FAW Group Co., in short FAW is also a holding company that has eleven wholly owned subsidiaries and eleven partially owned subsidiaries, four branch firms until 2012. FAW takes 60% of total share

[6] By 2012 among thirty six subsidiaries of SAIC, the number of vehicle makers including two EV makers were sixteen, and the number of vehicle parts makers including three EV components makers were eleven.

of FAW-VW and 20% share of Tianjin FAW Toyota (Figure 3). In addition FAW holds 51% share of Tianjin FAW Xiali. However Toyota and Toyota China respectively holds 32% and 10% share of Tianjin FAW Toyota. Volkswagen and Volkswagen China separately holds 20% and 10% share of FAW-VW. It can be said that the operation of FAW has been mainly under control of Changchun municipal government and Jilin provincial government since the foundation of FAW in 1953. The inner Communist Party Committee of FAW has developed common goals together with local government as well as impacted on main managerial issues of FAW.

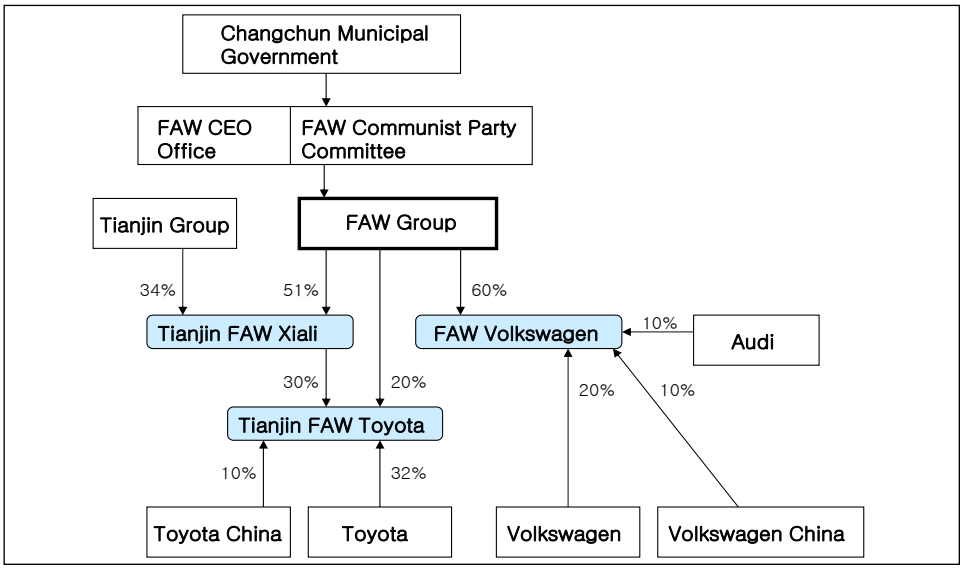

Figure 3 Governance Structure of FAW Group

Source: *China Automotive Industry Yearbook 2012*, pp. 80, 420.

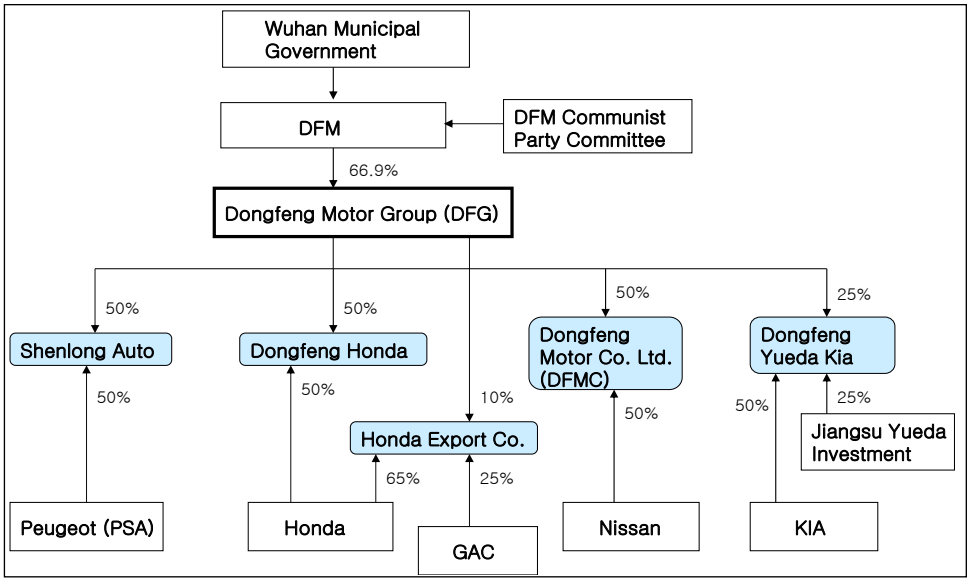

Figure 4 Governance Structure of DFM

Source: *China Automotive Industry Yearbook 2012*, pp. 81, 421.

Thirdly, DFM had made Dongfeng Motor Group (DFG) in 2001 through joint investment together with China Huarong Asset Management Co., and China Development Bank etc. In 2004 DFG had been transformed a

holding company, and after that it has developed to control sixteen major subsidiaries including vehicle producing JVs, parts suppliers and financing firms. As of late 2012, DFM holds 66.9% of total share of DFG which takes 50% share of Dongfeng Peugeot (Shenlong Auto), Dongfeng Honda, Dongfeng Motor Corporation Ltd. (DFMC) respectively (Figure 4). In addition DFG has 25% share of Dongfeng Yueda Kia and 10% share of Honda Export Corporation. Peugeot, Honda, Nisssan holds 50% share of Shenlong Auto, Dongfeng Honda and DFMC each, and KIA takes 50% share of Dongfeng Yueda KIA.

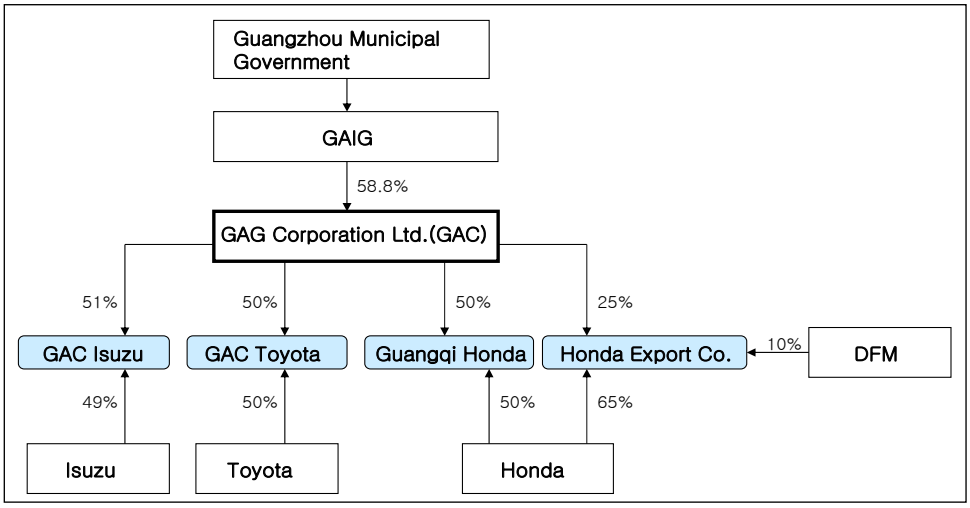

Figure 5 Governance Structure of GAIG

Source: *China Automotive Industry Yearbook 2012*, pp. 84, 425.

DFM has been under control of Wuhan municipal government and Hubei provincial government since the foundation in 1969 as the original name, "the Second Automotive Works". Like FAW, inner Community Party organizations of DFM have deeply involved in decision making process for important managerial issues like JV contracts, acquisitions or equity alliances.[7] Finally GAIG is also a holding company of GAG Corporation Ltd., in short GAC. Until 2012 GAIG takes 58.8% of total share of GAC which has eighteen subsidiaries including GAC Toyota, Guangqi Honda. GAC holds 51% share of GAC Isuzu, 50% share of GAC Toyota, 50% share of Guangqi Honda (Figure 5). Honda takes 50% share of Guangqi Honda, and 65% share of Honda Export Corporation. In addition GAC and DFM respectively holds 25% share and 10% share of Honda Export Corporation. Like other SOEs, local government has made a significant influence on GAIG's development since the foundation of GAIG in 2000. Especially after the end of JV partnership between GAIG and Peugeot in 1997, Guangzhou municipal government, as the owner of GAIG's assets, has actively supported GAIG get a performance at the JVs partnership.

3.2 Main Issues for Sustainability of Equity Alliance: JV Contract

The governance structure analysis for JV automobile makers of China suggests four main issues about the sustainability of them. Firstly at the point of SOEs their global partnerships for equity alliance mostly concentrates on two or three partners. Since 2000 the JV partnerships between SOEs and global makers have been stronger through JV contract extension or collaborative range increment. By using the partnership SOEs intended to develop their own new models as well as go abroad along with their new models rather than with existing models of global partners. However global makers put more emphasis on increasing their domestic market share in China

[7] As of late 2012, the number of Community Party organizations of DFM was one hundred fifty two, and their branch offices reached 1,694 with having 44,180 Community Party members.

through manufacturing capabilities mainly with existing models. Although there has been such a recognition gap between SOEs and global makers, basically they have shared a common goal; to survive continuously & to reinforce their market position in China. Currently core partners of SAIC's are Volkswagen and GM, FAW partners are Volkswagen and Toyota. In addition GAIG's global partners include Toyota, Honda and Isuzu but DFM keeps JV partnership not only with Honda, Toyota but also with Peugeot, KIA. Actually most of their JV contracts had been renewed in late 1990s, so the contracts will go on until 2025~2030.

Secondly global makers also have concentrated on a couple of Chinese partners but Chinese government intentionally limited the number of JV vehicle makers which global makers can establish, actually just one JV every one brand as well as total two JVs for each global maker. Both the article 29 of "Automobile Industry Policy (*qiche chanye gongye zhengce*)" in 1994 and the article 48 of "Automobile Industry Development Policy" (*qiche chanye fazhan zhengce*) in 2004 covered such restrictive conditions (Choi, 2012a, pp. 169, 172). However there was no limit for the number of JV that Chinese partners can establish at vehicle production business. In other words foreign partner did not have any way to build more than two JVs at vehicle manufacturing business of China. The select and concentration strategy of global makers for JV partnership resulted from involuntary activity by institution factor of China but SOEs' select and concentration strategy came from their own decision in which local government involved.

Thirdly it is necessary to look into carefully the role of Chinese local government for the sustainable growth of JV makers. At governance structure for SAIC, FAW, DFM, GAIG, each local government has deeply involved in its SOE's management. Local governments want their SOEs and JVs to be leading vehicle makers having nationwide brand power in China because its forward & backward influence on other industries is so big as to be a critical factor in regional economy. Currently key interests of local government for vehicle making business can be summarized as three points; creating the competitive advantage for its leading SOE, improving the independent model launch and vehicle parts production capability, facilitating the hybrid electric vehicle (HEV) or electric vehicle (EV) commercialization[8] (*China Automotive Industry Yearbook*, 2009, p. 10; *China Automotive Industry Yearbook*, 2010, pp. 8-11). So Chinese specific institutional factor, that is local government's role cannot be underestimated and the competition among local governments has made up another important part of overall rivalry structure for China's automobile industry (Choi, 2012b, p. 144).

For example Jilin province government together with Changchun city published "Jilin Province Automobile Industry Leap over Plan (*jilinsheng qiche chanye yuesheng jihu*a)" in 2009 to upgrade the competitive advantage of its leading maker, FAW (*China Automotive Industry Yearbook*, 2010, p. 148). Also Guangdong province government and Guangzhou city announced "Guangdong Province Automobile Industry Adjustment and Development Plan (*guangdongsheng qiche chanye tiaozheng he zhenxing guihua*)" in 2009 for supporting its leading maker, GAIG. Through the plan Guangdong government suggested specific goals for the number of vehicles made in Guangdong to be two million, to surpass the domestic market share 15%, and to export over 10% of total production (*China Automotive Industry Yearbook*, 2010, p. 174). Shanghai municipal government aggressively drives the local sourcing plans for vehicle components through twenty seven R&D centers in

[8] The commercialization performance for HEV and EV in China was much poor than what was expected when the promotion policies made in 2008. The sales volume for alternative energy vehicles only was 8,159 units in 2011. Among them the EV sales volume was 5,579 and the HEV sales volume was 2,580. In 2012 the sales volume for alternative energy vehicles was 12,791 units of which annual growth rate was 56.8%. However it can be said that it is too early to estimate the effectiveness of commercialization project or promotion polices of China (Montlake, 2013, p. 5).

Shanghai (*China Automotive Industry Yearbook*, 2010, p. 153). It also supports the R&D capability of SAIC through its core R&D complex, called the "Shanghai International Automobile City (*Shanghai guoji qichecheng*)".

Finally the 50:50 equity structures of JV makers cause controversy for who is a real owner of JV maker in future. Furthermore there have been many arguments for the effectiveness of industrial policies to limit on equity investment by foreign makers or the number of JV maker by them. Because the main objects of such policies, that is launching independent model or going abroad with those new models by Chinese local makers' own capabilities were partially achieved but the overall performances were not so good as expected (Barboas, Hattingh & Koass, 2010, pp. 117-118). As a result the "exchange domestic market with technology (*yishi changhuan jishu*)" planning by Chinese government was not realized well in vehicle making business. However the dominant equity holding position of Chinese partner or 50:50 equity structures for JV makers will go on for a long time, at least until 2025~2030 when current JV contracts expire. Above all local governments still worry about the loss of control for SOEs and JV makers due to the governance structure change by global partners.[9] In fact global makers have operated JV makers as their ways based on technical superiority or management knowhow even though Chinese partners were dominant equity holders. Therefore it would be very hard to expect any relax or abolishment of policy regulations on governance structure of JV maker in China for the foreseeable future.

4. Application of Strategy Selection Framework for China's Car Making Business

4.1 Types of Synergies

At the growth history of China's automobile manufacturing business, global vehicle makers began to enter China after early 1980s. A few global makers began to establish JVs through equity alliance contract with Chinese SOEs because Chinese government had not allowed for foreign makers to make wholly owned subsidiaries (WOS) nor to hold controlling share with over 50% in the equity alliances for car making business. SAIC and Volkswagen made the Shanghai-VW by investing 25%, 50% each of whole share in 1985 and GAIG and PSA set up the Guangzhou-Peugeot by taking 78%, 22% share respectively at the same year (Peng, 2000). However the nonequity alliances were much more than equity alliances between SOEs and global makers throughout 1980s in China. The main objectives of the nonequity alliances were the collaborative R&D, vehicle parts supplying contract or technology licensing for passenger car production. Therefore such alliances were more concerned with modular synergy or sequential synergy rather than reciprocal one because most of global makers partially involved in the passenger car making business by using their technical superiority.

Since early 1990s many global makers had entered China through equity investment for new JVs. Main business model of those JVs were to produce and to sell passenger cars which mostly the existing models of foreign partners. The expected synergies from the JVs were regular, continuous as well as beneficial for both partners. Chinese SOEs could accumulate the passenger car development and production knowledge, in contrast global firms were able to elevate their market shares as their own plans. Therefore it can be argued that reciprocal synergies were created between SEOs and global makers. Furthermore the alliance relations of them have been upgraded since early 2000s. The key objectives of JVs founded from early 1980s to late 1990s were to improve

[9] Chinese government considers that it has still diverse & effective ways to control the demand for vehicle like government subsidy, preferential treatment tax or environment protection tax, furthermore it is able to engage in automobile market whenever government role is needed (Tao, 2009, p. 10).

the manufacturing capability and local parts sourcing rate, but most of JVs after 2000s have been more interested in creating the multilateral cooperative relations than before. Such a movement was closely connected with the recognition change of global makers that China would become the biggest automobile market in the world. Therefore global makers had to reinforce the existing partnership as well as to search for something new collaboration model above alliances. Recently JVs began to not only launch new models by themselves through their R&D centers but also produce directly the core parts like engine or transmission in China.

In 1997 GM set up R&D center in Shanghai, called "Pan Asia Technical Automotive Center (PATAC)" together with SAIC of which equity structure was 50:50. Volkswagen, Toyota and Honda made new production bases for engine and transmission through JVs. Also in 2003 Honda made a JV with two SOEs; DFM and GAIG, called the "Honda Automobile China Company Limited" that intended to export all the vehicles produced in it. Honda had taken the controlling share, 65% of whole equity but DFM and GAIG got 10%, 25% share respectively. As a result Chinese government agreed that Honda became a dominant shareholder in car making business on condition that the JV would keep the 100% export requirement. Renault-Nissan made a JV with DFM in 2003, called "Dongfeng Motor Company Limited" of which equity structure was 50:50 between two partners, and the JV set up a R&D center which exclusively for launching new passenger cars.

It can be said that such JV partnership strengthening movements between global makers and SOEs means that the expected synergies created by JVs have developed from sequential synergy to reciprocal one. Although the contract periods of JV partnerships, the equity alliances usually were 25~30 years, at the point of synergy type overall development condition of China's car making business already stepped in the stage that acquisitions are preferred to alliances. The fact that GM has taken an aggressive position to acquire local vehicle makers through its JV, Shanghai GM, explains well the necessities for acquisitions. Since early 2000s Shanghai GM had established the subsidiary vehicle makers by acquiring local firms; "Shanghai GM Beisheng Automotive Limited" in 2004, "Shanghai GM Dongyue Automotive Limited" in 2003 and "Shanghai GM Wuling Automobile Company" in 2002.

4.2 Nature of Resources

In order to estimate the relative value of soft resources to hard resources in China's vehicle production business, it needs to check the labor productivity for vehicle manufacturing business in China because it reflects well the value of soft resources. In Figure 6, the labor productivity of car making business during 1990s was very low. The average sales amount of one employee 46 thousand RMB in 1990, went up 178 thousand RMB in 1995 and reached 336 thousand RMB in 2000. But the average profit of one employee did not go over 50 thousand RMB until early 2000s. That means that the relative value of human resources to production facilities in car making business was so low as to nonequity alliance would more desirable than equity alliance or acquisition. In fact lots of collaborations between SOEs and global makers had been concentrated on nonequity alliances like components supplying contract, co-development for new model or manufacturing technology licensing throughout 1990s.

However for recent ten years, from 2001 to 2010 the labor productivity for car making business had gone up rapidly due to the explosive "My Car" boom in China. Accordingly most of global makers increased aggressively the direct investment scale for China, and SOEs also tried to expand their production capacity as much as they can through their JVs. Most of JVs emerged as a growth engine of China's automobile industry while being major players of passenger car business as well as core linkages between SOEs and global makers. The average sales of one employee in car making business surpassed one million RMB in 2005, went over two million RMB in 2009 and reached 2.5 million RMB in 2010. The CAGR of average sales of one employee from 2001 to 2010 was 20%, and the CAGR of average profit for the same period reached 21.6%. In Figure 6 the index 1 was came from the

value of average sales of one employee for car making business dividing by average sales of one employee for whole automobile industry in China. As the same pattern, Index 2 was resulted from dividing average profit of one employee for car making business by average profit for whole automobile industry. Both Index 1 and Index 2 suggest that labor productivity of car production business had been relatively higher by 1.8~2 times than the labor productivity of whole automobile industry.

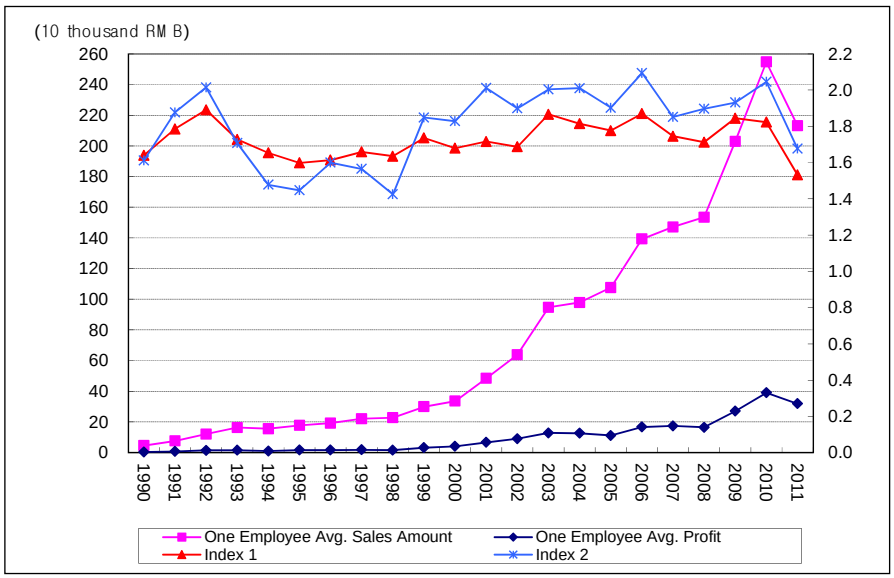

Figure 6 Labor Productivity Trend for China's Vehicle Making Business

Source: Data Reconstruction of *China Automotive Industry Yearbook 2006*, pp. 518, 528, 533; *China Automotive Industry Yearbook 2012*, pp. 492, 500, 505.

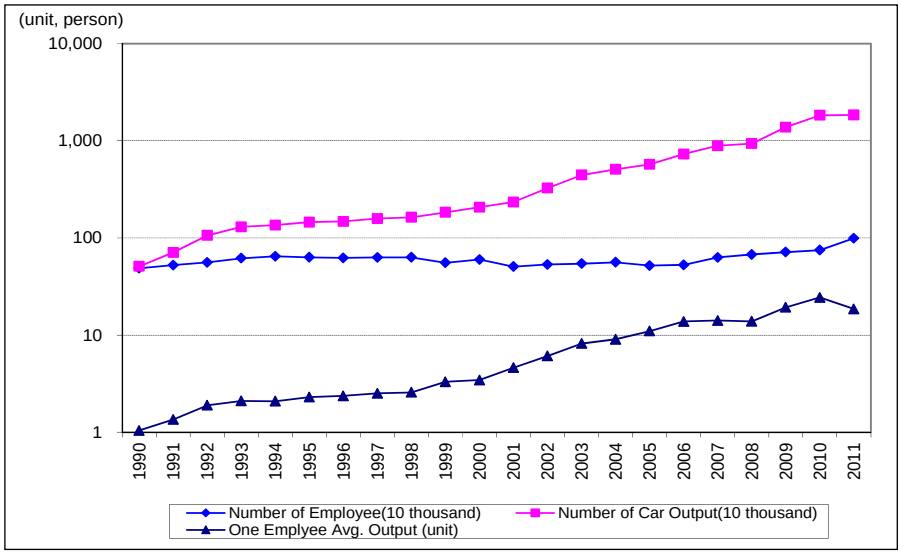

Figure 7 One Employee Avg. Output Trend for Vehicle Making Business of China

Source: Data Reconstruction of *China Automotive Industry Yearbook 2000*, p. 324; *China Automotive Industry Yearbook 2006*, pp. 504, 518; *China Automotive Industry Yearbook 2012*, pp. 479, 492.
All the values on Y axis are conversion values by Log calculation.

Labor productivity increase for car making business can be shown more clearly through Log calculation (Figure 7). Total number of employees for car making business had kept a stable condition at around 550~650

thousand for last 20 years except 2010 and 2011 (*China Automotive Industry Yearbook 2012*, p. 492). On the contrary the number of vehicle output had grown continuously, as a result the average vehicle output of one employee went up too. The average output of one employee for car making business was just 1.0 unit in 1990 but reached 11.0 units, went up to 24.4 units in 2010. However such a growing movement abruptly stopped in 2011 due to the annual growth rate of automobile sales volume went down to 2.5% in 2011 from 45.5% in 2009, 32.4% in 2010 (Figure 8). Further the growth rate of sales volume had still stayed on a low level in 2012, only 4.3%, so many analysts began to point out that a high growth period already had been over in China's automobile industry. At Figure 6, the fact that average sales amount of one employee fell in 2011 would be connected with the beginning of a low growth period. Consequently the relative value of labor in China's vehicle manufacturing business had gone up steadily at least before 2010 but came down in recent a couple of years even though it needs more time to see if such a decreasing trend is temporary or not. Based on the nature of resources of the framework, it is time that car makers in China should review seriously the equity alliance strategies mainly with JV contracts to turnover for acquisitions.

4.3 Extent of Redundant Resources

According to the strategy selection framework, if a firm estimates there exist a large amount of redundant assets or resources in overall industry, acquisitions are better than alliances. That gives a chance for a firm to be able to eliminate redundant resources easily on its own decision. For recent three years from 2010 to 2012 the growth rates of automobile production & sales volume showed a big downturn although total production & sales volume somewhat increased. Now such a low growth tendency requires vehicle makers as well as Chinese government change the existing management inertia being apt for a fast growing time. The necessity of restructuring for excess production capabilities more and more increases as time goes on but it became more difficult for Chinese local governments to defend local vehicle makers operated in their administration regions.

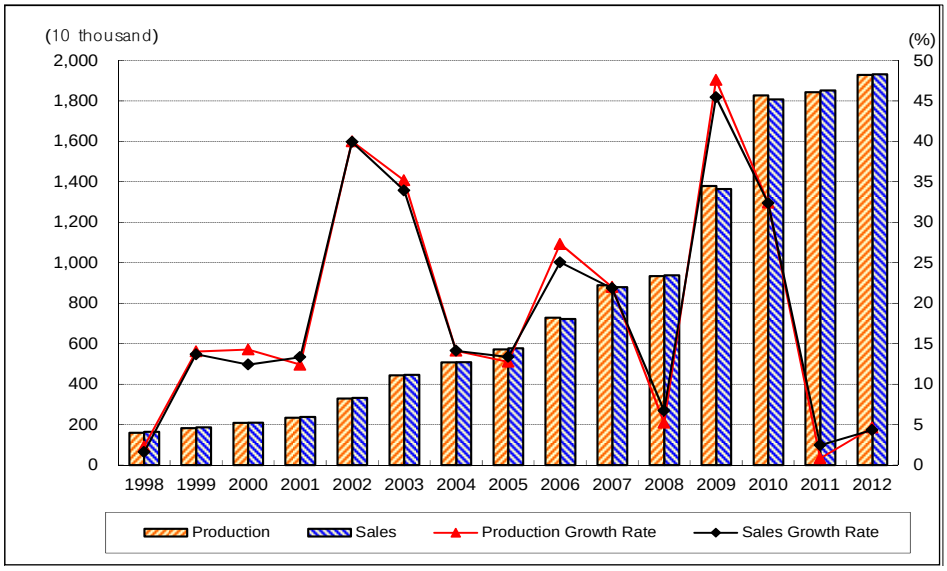

Figure 8 Automobile Production & Sales Volume Trend of China

Source: Data Reconstruction of *China Automotive Industry Yearbook 2011*, pp. 467-478; *China Automotive Industry Yearbook 2010*; pp. 513-514, *China Automotive Industry Yearbook 2009*, pp. 455-456; *China's Auto Market Almanac 2010*, p. 3; *China's Auto Market Almanac 2009*, pp. 37, 207; China Association of Automobile Manufacturers (www.caam.org.cn).

Table 2 Average Revenue & Average Profit Trend of Vehicle Makers & Parts Suppliers in China

(10 thousand RMB, %)

Year	Parts production (except engine)			Automobile production			Revenue ratio of parts suppliers to vehicle makers	Profit ratio of parts suppliers to vehicle makers
	Number of suppliers	Avg. revenue	Avg. profit	Number of makers	Avg. revenue	Avg. profit		
2000	1,480	3,998	575	118	170,720	21,008	2.3	2.7
2001	1,558	5,323	717	116	211,871	29,302	2.5	2.4
2002	1,540	8,189	1,136	117	291,179	41,436	2.8	2.7
2003	1,567	10,136	1,459	115	447,096	60,887	2.3	2.4
2004	1,670	11,740	1,377	117	469,274	60,547	2.5	2.3
2005	1,849	14,243	1,382	117	477,171	49,641	3.0	2.8
2006	1,971	20,914	2,154	117	627,282	75,359	3.3	2.9
2007	1,828	26,815	3,167	117	790,915	93,496	3.4	3.4
2008	1,851	27,842	2,504	117	885,120	95,179	3.1	2.6
2009	2,514	22,829	2,907	115	1,259,704	168,043	1.8	1.7
2010	2,519	30,611	3,607	115	1,658,435	254,348	1.8	1.4
2011	2,456	32,826	4,086	115	1,841,830	275,861	1.8	1.5

Source: Data Reconstruction of *China Automotive Industry Yearbook 2012*, pp. 468, 500, 505.

Table 3 Market Share Trend of Major Makers (Passenger Car & Commercial Vehicle) in China

(10 thousand, %)

Rank	2012			2011			2010			2009			2008		
	Firm	Sales volume	Market share	Firm	Sales volume	Market share	Firm	Sales volume	Market share	Firm	Sales volume	Market share	Firm	Sales volume	Market share
1	SAIC	446.1	23.1	SAIC	396.6	21.4	SAIC	356.4	19.7	SAIC	270.6	19.8	SAIC	172.1	18.3
2	DFM	307.9	15.9	DFM	305.9	16.5	DFM	261.5	14.5	FAW	194.5	14.3	FAW	153.3	16.3
3	FAW	264.6	13.7	FAW	260.1	14.1	FAW	255.8	14.2	DFM	189.8	13.9	DFM	132.1	14.1
4	Changan	195.6	10.1	Changan	200.9	10.9	Changan	238.6	13.2	Changan	187.0	13.7	Changan	86.1	9.2
5	BAW	169.1	8.8	BAW	152.6	8.2	BAW	149.0	8.2	BAW	124.3	9.1	BAW	77.2	8.2
Top five sum		**1,383.3**	**71.7**		**1,316.1**	**71.1**		**1261.3**	**69.8**		**966.1**	**70.8**		**620.7**	**66.2**
6	GAIG	71.2	3.7	GAIG	73.6	4.0	GAIG	72.4	4.0	GAIG	63.7	4.7	GAIG	52.6	5.6
7	Huachen	63.8	3.3	Chery	64.2	3.5	Chery	68.2	3.8	Chery	50.0	3.7	Chery	35.6	3.8
8	GWM	62.5	3.2	Huachen	56.7	3.1	BYD	52.0	2.9	BYD	44.8	3.3	Huachen	28.5	3.0
9	Chery	56.3	2.9	JAC	49.5	2.7	JAC	45.5	2.5	Geely	32.9	2.4	Hafei	22.4	2.4
10	Geely	49.1	2.5	GWM	48.7	2.6	Huachen	44.7	2.5	JAC	31.9	2.3	Geely	22.2	2.4
Top ten sum		**1,686.3**	**87.3**		**1,608.7**	**86.9**		**1,544.1**	**85.5**		**1,189.4**	**87.2**		**782.0**	**83.4**

Source: Data Reconstruction of *China Automotive Industry Yearbook 2009*, pp. 457-458; *China Automotive Industry Yearbook 2010*, pp. 515-516; *China Automotive Industry Yearbook 2011*, pp. 469-470; *China Auto Market Almanac 2010*, p. 19; *China Automotive Industry Yearbook 2012*, pp. 480-481; China Association of Automobile Manufacturers (www.caam.org.cn).

However the number of vehicle makers in China was one hundred fifteen until 2011 but the number only reduced by three when compared with the number in 2000 (Table 2). That means there had been almost no kicking out cases at China's car making business since 2000. The average revenue and profit per a maker went up to 18.4 billion RMB and 2,758.6 million RMB respectively in 2011 from 1,707.2 million RMB and 21 million RMB in 2000. However in recent the growing speeds of them became blunted, in contrast the market control powers of major makers have been reinforced continuously. In 2012 the sum of market share for top five makers; SAIC, DFM, FAW, Changan, BAW reached 71.7% that increased by 5.5% point compared with the sum of market share in 2008 (Table 3). In addition those top five makers have maintained their positions without going out of the top five raking circle since 2003 which means their controlling structure for automobile making business of China is

so strong as not to allow other players enter the structure for a long time.[10]

The sum of market share for top ten makers went up to 87.3% from 83.4% for the same period. As a result other one hundred five vehicle makers except top ten makers only took 12.7% of total sales volume in 2012, furthermore their market shares have gradually decreased as time goes on. Almost minor makers could not reach the 100 thousand line of annual sales volume, so their existences will be laid on the marginal condition if a low growing pattern continues in China. On the contrary such a situation will create many opportunities for major makers to acquire small & medium sized makers rather than to make alliances. Chinese government already has taken a proactive stance to restructure the automobile industry because it is deeply concerned about the fact that there are so many vehicle makers and vehicle components suppliers as for its domestic market size (Barboas, Hattingh & Koass, 2010, p. 116). The number of components suppliers except engine makers was 2,456 in 2011 but the average revenue of them only corresponded to 1.8% of the average revenue of vehicle makers (Table 2). The average profit ratio of local parts suppliers to the average profit of vehicle makers was only 1.5% in 2011.[11] Overall it can be said that the extent of redundant resources goes up at the automobile industry of China, therefore acquisitions are more preferred rather than alliances.

4.4 Degree of Market Uncertainty

In order to access the degree of automobile market uncertainty it needs to look into Return on Asset (ROA) or Return on Investment (ROI) at first. Returning rate for asset of automobile industry is closely concerned with market condition fluctuation. The ROA for China's automobile industry had moderately fluctuated so that it was 16.7% in 1994, 6.3% in 1999, 9.8% in 2005 but soared by 18.6% in 2011 (Table 4).

Table 4 Return on Asset (ROA) Trend for Automobile Industry & Car Making Business of China

Year	Total asset of automobile industry (A)	Asset of vehicle making business (B)	Total profit of automobile Industry (C)	Profit of vehicle making business (D)	ROA (C/A) (%)	ROA (D/B) (%)
1994	814.0	385.7	135.7	65.9	16.7	17.1
1999	5,086.7	2,660.0	318.5	180.8	6.3	6.8
2003	8,037.1	4,570.7	1,032.8	700.2	12.9	15.3
2004	9,270.6	5,260.5	1,063.6	708.4	11.5	13.5
2005	10,026.0	5,219.8	981.9	580.8	9.8	11.1
2006	13,482.1	6,086.8	1,482.3	881.7	11.0	14.5
2007	14,176.6	6,952.4	1,916.9	1,093.9	13.5	15.7
2008	15,107.5	7,549.0	1,821.6	1,113.6	12.1	14.8
2009	18,452.3	10,289.4	3,033.9	1,932.5	16.4	18.8
2010	22,591.8	12,979.6	4,205.5	2,925.0	18.6	22.5
2011	24,690.5	13,809.0	4,600.2	3,172.4	18.6	23.0

Sources: Data Reconstruction of *China Automotive Industry Yearbook 1995*, p. 111; *China Automotive Industry Yearbook 2000*, p. 344; *China Automotive Industry Yearbook 2004*, p. 423; *China Automotive Industry Yearbook 2005*, p. 496; *China Automotive Industry Yearbook 2006*, p. 522; *China Automotive Industry Yearbook 2007*, p. 487; *China Automotive Industry Yearbook 2008*, p. 492; *China Automotive Industry Yearbook 2009*, p. 474; *China Automotive Industry Yearbook 2010*, p. 531; *China Automotive Industry Yearbook 2011*, p. 485; *China Automotive Industry Yearbook 2012*, pp. 494, 505.

[10] In fact the GAIG, the ranking 6th maker in 2012, can be included as another member of the controlling structure because it has kept its rank successively since 2004. As a result it can be argued that Chinese automobile manufacturing business has been dominated by those "Big Six SOEs" for last 10 years.

[11] In fact vehicle parts makers of three countries, Japan, United States and German have occupied about 80% of global 100 parts maker ranking for a long time. In 2012 twenty nine Japanese parts makers got into the global 100 maker ranking, and United States, Germany was twenty five, twenty one each. But Chinese parts maker was only one, CITIC Dicistal Co., (ranking 92nd), therefore Chinese local parts makers have still a long way to go to reach the global level although China became number one country at vehicle production & sales volume (KAMA, July 2013).

The ROA for vehicle making business also showed a similar pattern as whole automobile industry but the returning rates of vehicle making business were relatively higher. However both ROAs have mostly showed a growing movement since 2005. That is the reason why so many vehicle makers in China still try to expand their production capabilities in spite of a growing concern for excess facilities. In other words many makers regard that continuous investment for their assets is inevitable to create a sustainable development basis in China, and the level of China's vehicle market uncertainty is not so high.

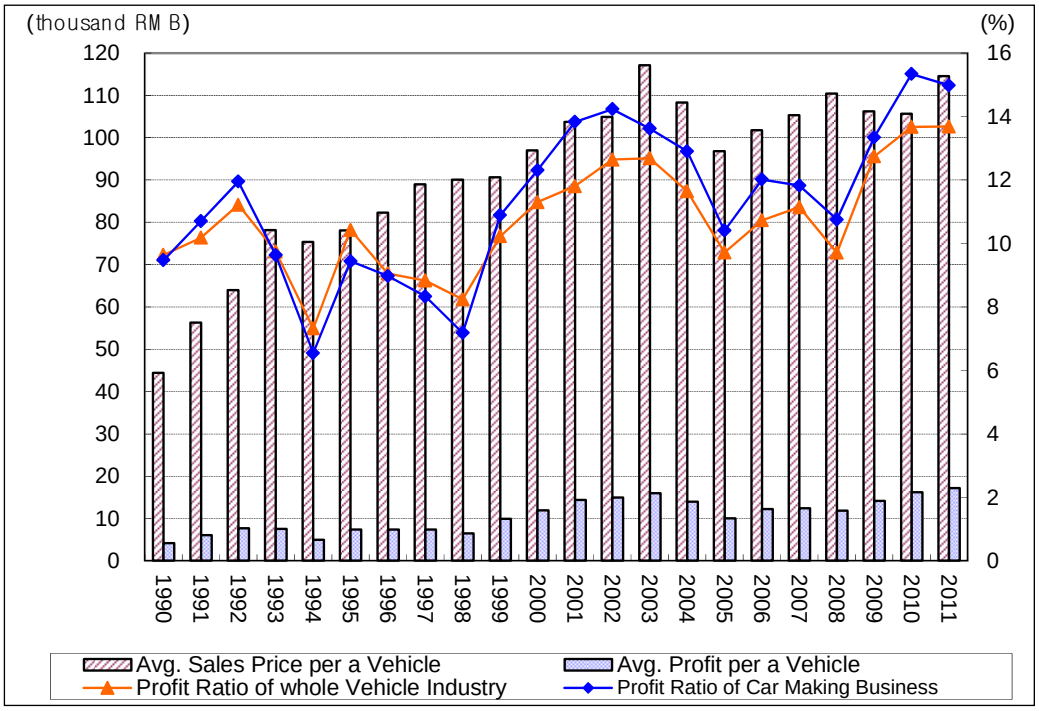

Figure 9 Average Sales Price & Average Profit Trend per a Vehicle in China

Source: Data Reconstruction of *China Automotive Industry Yearbook 2000*, pp. 324, 391; *China Automotive Industry Yearbook 2006*, pp. 504, 528, 533, 540; *China Automotive Industry Yearbook 2012*, pp. 478-479, 500, 505.

Such managerial opinions of vehicle makers about the market uncertainty might be more reasonable when considering the average sales price or the average profit per a vehicle of China. The average sales price per a vehicle continuously went up to 117.1 thousand RMB in 2003 from 44.4 thousand RMB in 1990 (Figure 9). But after 2003 it went up and down repeatedly at the range of 96.8~114.5 thousand RMB. The average profit per a vehicle generally maintained a growing momentum throughout last 20 years. It reached 17.1 thousand RMB in 2011 which higher than the average profit, 15.9 thousand RMB in 2003. Revenue to profit ratio for automobile industry of China moderately fluctuated and it reached 13.7% in 2011 which was the highest level for last 20 years. Revenue to profit ratio for vehicle making business exhibited a similar pattern as the profit ratio for automobile industry but it has been relatively higher since 1999. Consequently it is difficult to access the level of market uncertainty through revenue to profit ratio trend for overall automobile industry of China.

However it needs to look into the individual maker's revenue to profit ratio to clarify the competitive position of leading players in China. In addition it can help approach the dynamic relation between major SEOs and their JVs. Above all top six SOEs' revenue to profit ratios went down in 2011 as compared with the ratios of previous years, and other local makers; Chery, Geely and BYD also showed very poor performances in 2001 (Table 5). But

SAIC's profit ratios were relatively better than other SOEs, further most of its JVs took better places than other JVs. In 2001, the profit ratios of Shanghai GM Wuling, FAW-VW and Dongfeng Honda surpassed 20% but profit ratios of Tianjin FAW Toyota, Dongfeng Peugeot, Dongfeng Yueda KIA, Changan Ford Mazda did not reach 10% line. Actually most of profit ratios of major SOEs and their JVs had kept stable condition or showed rising tendency except 2011, so it can be said that it is too early to estimate the degree of market uncertainty at the point of each maker's performance. On the contrary most of major vehicle makers in China have few interests in market uncertainty while expecting more chances to grow in future. Accordingly acquisitions would be more desirable than equity alliances or nonequity alliances.

Table 5 Revenue to Profit Ratio Trend of Major Automobile Makers of China (%)

Major firms	2007	2008	2009	2010	2011
Shanghai Auto (SAIC)	**15.6**	**19.2**	**18.2**	**18.5**	**16.2**
Shanghai GM (SGM)	16.9	11.0	17.9	19.9	13.2
Shanghai VW (SVW)	14.1	12.0	15.8	18.5	14.6
Shanghai GM (SGM) wuling	11.0	16.1	14.4	15.1	22.4
Nanjing Automobile Co.	n.a	n.a	18.0	13.2	n.a
First Auto (FAW)	**15.5**	**12.7**	**16.8**	**17.8**	**9.0**
FAWVW	21.4	16.2	27.2	30.9	20.6
Tianjin FAW Toyota	15.6	15.5	17.1	18.8	8.5
FAW Car Co.	11.1	15.2	10.0	15.6	0.6
Tianjin FAW Xiali	9.3	6.2	5.5	7.0	2.7
Dongfeng Motor (DFM)	**14.2**	**11.6**	**16.1**	**18.7**	**12.9**
Dongfeng Nissan (Passenger Car)	13.7	13.1	16.3	23.9	16.6
Dongfeng Honda	22.4	28.7	28.2	25.3	25.1
Dongfeng Peugeot (Shenlong Auto)	12.2	8.0	15.4	19.4	8.1
DongfengYueda Kia	4.7	10.1	11.9	15.4	9.3
Changan Auto	**11.6**	**10.2**	**10.2**	**10.0**	**4.8**
Changan Ford Mazda	16.0	13.7	15.3	18.0	6.6
ChanganHafei Automobile	3.6	3.5	8.4	8.1	n.a
Jiangxi Changhe Automobile	7.1	n.a	9.5	8.8	n.a
Beijing Auto (BAW)	**7.9**	**8.1**	**11.3**	**13.6**	**8.8**
Beijing Hyundai	12.2	12.6	17.5	20.1	12.5
Beijing Benz Automotive Co.	10.2	13.4	10.6	19.0	12.5
Guangzhou Auto (GAIG)	**20.9**	**18.7**	**14.8**	**21.9**	**8.3**
Guangqi Honda	21.4	20.6	20.3	23.0	9.9
GAC Toyota	19.3	18.7	24.8	27.9	10.8
Chery	**9.5**	**6.2**	**6.4**	**5.4**	**1.5**
Geely	**13.4**	**13.6**	**13.6**	**14.3**	**6.0**
BYD	**15.0**	**15.5**	**20.4**	**10.6**	**2.4**
Automobile Making Business of China	11.8	10.8	13.3	15.3	15.0
Overall Automobile Industry of China	11.1	9.7	12.7	13.7	13.7

Source: Data Reconstruction of *China Automotive Industry Yearbook 2008*, pp. 498-501, 504-505; *China Automotive Industry Yearbook 2009*, pp. 480-483, 486-487; *China Automotive Industry Yearbook 2010*, pp. 536-538, 542-543; *China Automotive Industry Yearbook 2011*, pp. 490-493, 496-497; *China Automotive Industry Yearbook 2012*, pp. 500-502, 505-506.

4.5 Level of Competition

In order to access the level of competition for resources it would be necessary to review the market concentration rate of major makers in China. When looking into the market share sum of top five makers' sales volume in China, it has kept an increasing pattern even though there were some fluctuation for last ten years since 2003 (Table 6). It reached 71.7% in 2012 from 65.1% in 2003. Also market share sum of top ten makers' sales volume went up by 7.2% point for the same period. So it can be said that the rivalry condition of China's automobile industry has been rapidly reorganized mainly with top ten makers. In fact some meaningful competitions among vehicle makers happened only by them, so the competition would not so intensive as before. In particular market control powers of top six makers; SAIC, DFM, FAW, Changan, BAW, GAIG, have been more and more reinforced (Table 3), and they have made a big entry barrier with the supports of local governments for procuring key resources like fuel efficiency technology, electric vehicle commercialization knowhow, R&D capability, brand awareness, sales or distribution networks. Whereas market shares of other makers like private makers or small & medium sized SOEs have been more and more insignificant.

Table 6 Market Share Sum for Major Makers' Sales Volume (Passenger Car & Commercial Vehicle) in China (%)

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Top five makers	65.1	68.8	66.9	65.4	64.6	66.2	70.8	69.8	71.1	71.7
Top ten makers	80.1	83.6	83.6	83.9	83.1	83.4	87.2	85.5	86.9	87.3

Source: Data Reconstruction of *China Automotive Industry Yearbook 2004*, pp. 403, 407; *China Automotive Industry Yearbook 2005*, pp. 476, 480; *China Automotive Industry Yearbook 2006*, pp. 503, 506; *China Auto Market Almanac 2008*, pp. 41-42; *China Automotive Industry Yearbook 2008*, pp. 474, 476-477; *China Automotive Industry Yearbook 2009*, pp. 455, 457-458; *China Automotive Industry Yearbook 2010*, pp. 513, 515-516; *China Automotive Industry Yearbook 2011*, pp. 467, 469-470; *China Automotive Industry Yearbook 2012*, pp. 478, 480-481; China Association of Automobile Manufacturers (www.caam.org.cn).

Table 7 Market Share Sum of Major Makers' Sales Volume for Passenger Car in China (%)

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Top five makers	40.2	54.4	42.5	40.4	37.3	35.1	35.4	34.4	38.0	39.7
Top ten makers	55.8	76.3	68.8	66.3	57.7	58.4	58.6	56.6	58.5	58.5

Source: The same source as above (Table 6).

But the rivalry condition can be a different story if only focusing on passenger car sales volume. Market share sum of top five passenger car makers rarely changed for last ten years, 40.2% in 2003 and 39.7% in 2012 although it came down to 34.4% in 2010 (Table 7). All of top five makers were JVs; Shanghai GM (SGM), FAW Volkswagen (FAW-VW), SGM Wuling, Shanghai Volkswagen (SVW), Beijing Hyundai in 2012 (Table 8). In addition market share sum of top ten passenger car makers did not present a specific pattern, neither going up nor going down, with only 2.7% point change for last ten years. The market concentration level of passenger car manufacturing business has been relatively weak, therefore it can be inferred that many challengers still tries to enter top ten raking, and their threats are so strong as to disturb the market power increase of major makers.

If looking at the ranking change trend for top ten passenger car makers for recent five years, the competitions among top four JVs; SGM, FAW-VW, SGM Wuling, SVW were somewhat stable but the rivalry condition among other makers was relatively more intensive so that raking change occurred in every year. Electric vehicle (EV) launch oriented firm, BYD rapidly emerged as one of top ten makers with market share 4.3% in 2009 but stayed

outside top ten ranking in 2012 due to a poor performance of EV sales.[12] However Chinese government still considers that its industry condition takes a relatively better position for EV commercialization project than the industry conditions of developed countries (Dumaine, 2010, pp. 139-140).

Table 8 Market Share Trend of Major Makers for Passenger Car in China

(10 thousand, %)

Rank	2012			2011			2010			2009			2008		
	Firm	Sales volume	Market share	Firm	Sales volume	Market share	Firm	Sales volume	Market share	Firm	Sales volume	Market share	Firm	Sales volume	Market share
1	SGM	136.4	8.8	SGM Wuling	130.1	9.0	SGM Wuling	113.6	8.3	SGM Wuling	97.7	9.5	SGM Wuling	58.6	8.7
2	FAW VW	132.9	8.6	SGM	118.6	8.2	SGM	101.2	7.4	SVW	72.8	7.0	FAW VW	49.9	7.4
3	SGM Wuling	132.3	8.5	SVW	116.6	8.1	SVW	100.1	7.3	SGM	70.8	6.9	SVW	49.0	7.3
4	SVW	128.0	8.3	FAW VW	103.5	7.2	FAW VW	87.0	6.3	FAW VW	66.9	6.5	SGM	43.2	6.4
5	Beijing Hyundai	86.0	5.5	DFM Nissan	80.9	5.6	Changan	71.0	5.2	Beijing Hyundai	57.0	5.5	FAW Toyota	36.6	5.4
Top five sum		**615.5**	**39.7**		**549.6**	**38.0**		**472.9**	**34.4**		**365.3**	**35.4**		**237.3**	**35.1**
6	DFM Nissan	77.3	5.0	Beijing Hyundai	74.0	5.1	Beijing Hyundai	70.3	5.1	DFM Nissan	51.9	5.0	Chery	35.6	5.3
7	Changan	60.4	3.9	Changan	67.8	4.7	Chery	67.5	4.9	Changan	51.9	5.0	DFM Nissan	35.1	5.2
8	Chery	55.0	3.6	Chery	64.2	4.4	DFM Nissan	66.1	4.8	Chery	50.0	4.8	Guangqi Honda	30.6	4.5
9	FAW Toyota	49.6	3.2	FAW Toyota	50.0	3.5	BYD	52.0	3.8	BYD	44.8	4.3	Beijing Hyundai	29.5	4.4
10	Changan Ford	49.4	3.2	BYD	44.9	3.1	FAW Toyota	50.6	3.7	FAW Toyota	41.7	4.0	Changan	26.5	3.9
Top ten sum		**907.1**	**58.5**		**850.4**	**58.8**		**779.4**	**56.6**		**605.6**	**58.6**		**394.6**	**58.4**

Sources: Data Reconstruction of *China Automotive Industry Yearbook 2009*, pp. 457-458; *China Automotive Industry Yearbook 2010*, pp. 513-516; *China Automotive Industry Yearbook 2011*, pp. 469-470; *China Auto Market Almanac 2010*, pp. 28, 73; *China Automotive Industry Yearbook 2012*, pp. 480-481; China Association of Automobile Manufacturers (www.caam.org.cn).

Such a rivalry condition induced the price competition among passenger car makers in China. Lots of makers' average sales prices per a vehicle rarely went up for last 10 years. On the contrary some makers' average sales prices plummeted. For example the average sales price of SGM came down to 127 thousand RMB in 2011 from 161 thousand RMB in 2004, and the average price of SGM Wuling largely got down to 12 thousand RMB from 30 thousand RMB for the same period (Table 9). Besides Guangqi Honda, Beijing Hyundai, Changan Ford Mazda, Changan Hafei and FAW Xiali experienced the average price decline but Geely, BYD and Jiangxi Changhe showed stable price changes. Some makers' sales prices somewhat increased but if considering the personal income growth, consumer price rise or the performance improvement of passenger cars equipped with various high tech instruments, the vehicle price increase rate, 10~20% is hardly able to be considered a meaningful increase.

Accordingly it can be inferred that the intensive rivalry condition of passenger car business resulted in price competition with suppressing the price increase as much as possible in China. But it is hard to estimate the level of rivalry if considering overall rivalry condition of automobile industry including commercial vehicles. Based on

[12] Recently the sales performance of BYD was very poor and its EV and HEV models were still laid on weak position in domestic market as well as in abroad. The fleet sales contracts of EV for US or Europe were not realized yet until 2012, but BYD still tries to do the taxi fleet sales in Hong Kong. The reasons for such a sales depression of BYD are concerned with the technology deficiency of EV manufacturing, the delay of new model launch, the poor conditions of social overhead capital for EV operation (Flannery (a), Feb. 28, 2012; Flannery (b), Oct. 29, 2012).

the strategy selection framework it can be argued that equity alliance is more reasonable than acquisitions or nonequity alliances.

Table 9 Average Sales Price Trend per a Vehicle of Passenger Car Makers in China (10 Thousand RMB)

Major makers	2004	2007	2008	2009	2010	2011
SGM Wuling	3.0	2.9	3.0	3.3	3.4	1.2
FAWVW	13.6	13.9	16.7	13.9	15.1	15.4
SGM	16.1	13.1	12.8	13.1	13.0	12.7
SVW	10.9	11.2	10.7	10.4	12.5	13.2
Chery	5.9	5.2	4.7	4.5	5.2	6.7
Guangqi Honda	16.0	14.0	14.8	13.9	14.4	13.7
GAC Toyota	n.a	8.1	17.4	18.4	18.5	18.5
FAW Toyota	12.7	15.2	14.6	13.2	14.2	13.4
Dongfeng Nissan	n.a	11.8	11.8	12.5	12.4	11.8
Beijing Hyundai	12.1	10.2	9.0	8.4	8.9	9.8
Beijing Benz	16.0	31.7	29.9	31.9	43.1	40.0
Changan Ford Mazda	n.a	12.9	12.1	11.5	11.5	11.4
Geely	5.1	5.3	5.8	5.0	5.1	5.3
BYD	n.a	4.6	4.9	4.7	4.1	4.7
Dongfeng PSA	9.5	9.1	8.6	8.5	9.5	9.5
FAW Xiali	4.2	3.4	3.5	3.6	3.6	3.7
Changan Hafei	3.0	2.2	3.1	2.4	2.1	2.2
Dongfeng Kia	7.5	8.3	8.5	9.3	8.9	9.9
Dongfeng Honda	n.a	14.5	15.2	16.0	21.4	17.1
FAW Car Co.	n.a	14.1	16.1	14.0	13.0	13.5
Jiangxi Changhe	3.6	3.1	3.4	3.4	3.4	3.3

Sources: Data Reconstruction of *China Automotive Industry Yearbook 2005*, pp. 480, 503; *China Automotive Industry Yearbook 2008*, pp. 476-477, 499-500; *China Automotive Industry Yearbook 2009*, pp. 457-458, 481-482; *China Automotive Industry Yearbook 2010*, pp. 515-516, 537-538; *China Automotive Industry Yearbook 2011*, pp. 469-470, 491-492; *China Automotive Industry Yearbook 2012*, pp. 480-481, 501-502.

5. Conclusion

At present overall development conditions of automobile industry of China make acquisitions be more desirable than nonequity alliances or equity alliances. According to the strategy selection framework suggested by Dyer, Kale and Singh (2004) the automobile makers in China need to seriously consider the change of existing strategy mainly with JV contract, one type of equity alliances. Among five factors of framework, type of synergies, nature of resources, extent of redundant resources and degree of market uncertainty suggest that acquisitions are more required than alliances for vehicle makers in China. However at the level of competition it shows that equity alliances are relatively better than acquisitions. At the type of synergies, both Chinese SOE and global makers have created reciprocal synergies through comprehensive JV contracts since late 1990s because SOEs could accumulate R&D capabilities and manufacturing experiences for passenger car business, whereas global makers were able to strengthen domestic market position as their own wills. At the nature of resources, labor productivity of vehicle making business of China had gone up very fast throughout 2000s due to “My Car” boom in China even though it went down abruptly for recent a couple of years. However the labor productivity during 1990s was very low which means the relative value of human resources to production facilities was so low as to nonequity

alliances had been more effective. Currently the relative value of human resources in vehicle making business of China can be assessed as medium level.

At the extent of redundant resources, the number of vehicle makers in China reached one hundred fifteen until 2011 but the necessity of restructuring for excess production facilities increases continuously when considering a big downturn of growth rate for vehicle sales volume after 2010. In addition the number of vehicle parts suppliers in China is required to cut down too, so acquisitions take a better position to facilitate such restructuring assignments. At the degree of market uncertainty, ROA (return on asset) for China's automobile industry had moderately fluctuated but it showed growing movement after 2005. Not a few vehicle makers still regard the manufacturing capability expansion as essential of sustainable development in China and the level of its market uncertainty is not so high. Further each maker's revenue to profit ratios for recent five years did not support for the argument that level of market uncertainty is high.

Finally at the degree of competition, the market position of top six SOE makers is as strong as not to permit other makers enter their group. Not only the market share sum of top five makers but also sum of top ten makers at China's automobile making business has gone up continuously, so it can be said that actual rivalry occurs mainly with these top makers but market shares of other players are gradually insignificant, as a result the rivalry would be more and more weaken as time goes on. However the market share sum of top ten makers for passenger car business did not show any particular pattern, neither going up nor down while moderately fluctuating. The degree of rivalry for passenger car business was relatively higher than entire vehicle business including commercial vehicles for recent ten years. Such a severe rivalry condition of passenger car business turned out as price competition among popular passenger car models. Overall the competition level for automobile industry of China covers both sides, high and medium simultaneously.

Chinese industrial policies have regulated the number of JV that global makers can establish at vehicle making business as well as kept the equity holding of global makers be under 50% since early 1990s. In addition Chinese local governments have lots of interests for major vehicle makers in their administrative region to gain competitive advantages and to be a leading maker nationwide. Local governments have deeply involved in SOE management through inner communist party committees of each SOE. Also it would be hard to expect some change of existing regulations on global makers for the foreseeable future despite many arguments for the effectiveness of such restrictive policies. When considering the development conditions of automobile industry or the analysis outcomes through strategy selection framework for China's automobile industry, acquisition would be more desirable than nonequity alliance or equity alliance. But current governance structures of SOEs or 50:50 equity structures of JV makers will go on for a long time due to Chinese government intervention rather than market power or industrial variables' change. Therefore the institutional factors of China's automobile industry, in particular local governments' roles cannot be underestimated yet, further their engagement should be considered as the invisible key factor to access strategy selection of vehicle makers.

References:

Barney Jay B. and Hesterly William S. (2010). *Strategic Management and Competitive Advantage* (3rd ed.), Upper Saddle River, NJ: Prentice Hall.

Barney Jay B. (2002). *Gaining and Sustaining Competitive Advantage* (2nd ed.), New Jersey: Prentice Hall.

Barboas Filipe, Hattingh Damian and Kloss Michael (2010). "Applying global trends: A look at China's auto industry", *McKinsey Quarterly*, Vol. 3, pp. 115-121.

Choi Byunghun (2012a). "A study on institution factor for China's automobile industry: Focusing on industry policies' transition &

characteristic", *Chinese Studies*, Vol. 54, pp. 153-181.
Choi Byunghun (2012b). "A study on rivalry structure of automobile industry of China: Focusing on Shanghai, Jilin and Guangdong province", *East Asian Studies*, Vol. 31, No. 2, pp. 111-149.
Dumaine Brian (2010). "China charges into electric cars", *Fortune*, Vol. 162, No. 7.
Dyer Jeffrey H., Kale Prashant and Singh Harbir (2004). "When to ally &when to acquire", *Harvard Business Review*, Vol. 82, No. 7-8, pp. 108-115.
Gan Lin (2003). "Globalization of the automobile industry in China: Dynamics and barriers in greening of the road transportation", *Energy Policy*, Vol. 31, No. 6, pp. 537-551.
Min, Zhao (2005). "Five competitive forces in China's automobile industry", *Journal of American Academy of Business*, Vol. 7, No. 1, pp. 99-105.
Montlake Simon(2013). "China's auto industry eyes subsidies for electric, hybrid cars", *Forbes*, March 6.
Peng Mike W. (2000). "Controlling the foreign agent: How governments deal with multinationals in a transition economy", *Management International Review*, Vol. 40, No. 2, pp. 141-165.
Peng Mike W. (2001). "Cultures, institutions, and strategic choices: Towards an institution-based view of business strategy", *Handbook of Cross-Cultural Management*, MA: Blackwell.
Peng MikeW. (2006). *Global Strategy*, Mason Ohio: Thomson South-Western.
Porter Michael E. (1990). *The Competitive Advantage of Nation*, New York: Free Press.
Porter Michael E. (1998). "Clusters and new economics of competition", *Harvard Business Review*, Vol. 76, No. 6, pp. 77-90.
Flannery Russell (2012 a). "Buffett-backed Chinese automaker BYD eyes Hong Kong taxi fleet", *Forbes*, Feb. 28.
Flannery Russell (2012b). "Bumpy ride continues at warren buffet-backed Chinese automaker BYD: 3rd quarter profit plunges 94%", *Forbes*, Oct. 29.
Tao Jie (2009). "Review for Chinese automobile market development for 60 years since national foundation", in: China Association of Automobile Manufacturers (Ed.), *China Automotive Industry Yearbook 2009*, Beijing: Beijing Huazhonghua Press.
Korea Automobile Manufacturers Association (KAMA) (2013). "Global 100 automobile parts makers ranking in 2012", available online at: http://www.kama.or.kr/.
China Association of Automobile Manufacturers (CAAM) (2013). Available online at: http://www.caam.org.cn.
China Association of Automobile Manufacturers (1995). *China Automotive Industry Yearbook 1995*, Beijing.
China Association of Automobile Manufacturers (2000). *China Automotive Industry Yearbook 2000*, Beijing.
China Association of Automobile Manufacturers (2004). *China Automotive Industry Yearbook 2004*, Beijing.
China Association of Automobile Manufacturers (2005). *China Automotive Industry Yearbook 2005*, Beijing.
China Association of Automobile Manufacturers (2006). *China Automotive Industry Yearbook 2006*, Beijing.
China Association of Automobile Manufacturers (2007). *China Automotive Industry Yearbook 2007*, Beijing.
China Association of Automobile Manufacturers (2008). *China Automotive Industry Yearbook 2008*, Beijing.
China Association of Automobile Manufacturers (2009). *China Automotive Industry Yearbook 2009*, Beijing.
China Association of Automobile Manufacturers (2010). *China Automotive Industry Yearbook 2010*, Beijing.
China Association of Automobile Manufacturers (2011). *China Automotive Industry Yearbook 2011*, Beijing.
China Association of Automobile Manufacturers (2012). *China Automotive Industry Yearbook 2012*, Beijing.
China Automobile Marketing Association (2008). *China Auto Market Almanac 2008*, Beijing.
China Automobile Marketing Association (2010). *China Auto Market Almanac 2010*, Beijing.
Korea Automobile Manufacturers Association (KAMA), available online at: http://www.kama.or.kr.
China Association of Automobile Manufacturers (CAAM), available online at: http://www.caam.org.cn.