



# Master's degree thesis

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**Research on logistics outsourcing of enterprises in  
China**

**Suhao Cao 090373**

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## **Preface**

This paper is the Master thesis of Suhao Cao, students at Molde University College. This thesis research project is the last part of my two-year study program of Master of Science in Logistics at Molde.

My research has been carried out under the supervisor Mrs Chen Dayan, faculty of logistics economics in College of Science and Technology in Suzhou. I would like to thank her for the supportive introduction in thesis writing and research methodology, and for giving practical hints about appropriate literature. And thank her for her helpful feedback and coaching throughout my research and writing process.

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Suhao Cao

## **Abstract**

As an efficient path to promote the interflow of commodities, to save the logistics costs and to reduce the fund in float as well, the logistics outsourcing will bring an ocean of benefits to both sides indeed though lots of difficulties appeared at the very beginning in the process of practice. Confidence and good faith are of great significance to avoid the interruption and even failure before the relation is established and formed. However, many elements will preclude the development of the logistics outsourcing included the restriction by old system, human errors as well as the out-fashioned values and the technological deficiency etc. from both sides of the supply and demand. The paper mainly analyses both the benefits and risks which are brought by the logistics outsourcing and presents solutions afterwards to effectively guard against the risks as well as provides modernized management for logistics outsourcing agencies.

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Key words: logistics outsourcing, third-party logistics, enterprises in China

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## **1. Introduction**

Logistics outsourcing means the company will no longer do the logistics operation themselves and deliver the business over up to the third-party logistics suppliers to integrate as well as to use efficiently the limited resource that can get, to lower the costs, to strengthen the core competence and to improve the adapt ability and the innovation capability of enterprise. (Wang Shuyun, 2005)

Logistics outsourcing can be divided in various ways according to different conditions.

According to the level of enterprise outsourcing logistics demands, outsourcing can be divided into partial outsourcing and complete outsourcing:

Complete outsourcing refers to enterprises handing over all the logistics activities to external organizations. In reality, complete outsourcing can be divided into two conditions: 1. It is industry and enterprise's logistics demands that enterprises to give up self-operation, and hand over logistics business to the third-part logistics enterprise completely. 2. When a newly constructed enterprise forms, it declines self-operated logistics; instead, it hands over logistics business to external third-party logistics enterprise.

Partial outsourcing refers to enterprises handing over part of logistics business to external third-party logistics enterprise. Partial outsourcing also has two types: 1. For enterprises that possess certain logistics ability, with the development and expansion of enterprises, the original logistics ability can't completely meet their own demands, enterprises will hand over the part of logistics business that are beyond their ability to external organizations. 2, although logistics ability can meet enterprises' demands, the factor needs to be taken into consideration that certain logistics business is not enterprise core competence, therefore handing over those logistics activities that are not the core to external organizations belongs to partial outsourcing.(Li Hui, 2006)

In China, the third-party logistics company has a relatively short history, the third-party logistics is not mature enough, service scope is relatively narrow, functions and abilities are limited, as well as enterprise internal boycott, such as complete logistics outsourcing, logistics branches owned by enterprises will confront

downsizing, previous transportation and storage facilities need to attach much importance to personnel disposition. Especially those enterprises are also afraid to lose control over outsourcing business. Therefore, outsourcing logistics are currently adopted by most enterprises.

Over 70% enterprises in such developed countries as America, British, and Japan adopt the third-party logistics, which includes complete outsourcing and partial outsourcing.

According to integrating level division of enterprise outsourcing activities, logistics outsourcing can be divided into functional outsourcing and integrating outsourcing: Logistics functional outsourcing, on the one hand, authorizes relevant logistics service to logistics enterprise, which means purchasing relevant logistics service from the market, for example, having specialized Transportation Company being responsible for raw materials and product transportation. On the other hand, infrastructures of logistics service are owned by enterprises, but the operation is authorized to relevant logistics enterprises, for example, having store management company supervising storage, or logistics enterprises operating and managing dispersion outsourcing of each function.

Logistics integrating outsourcing refers to those enterprises in logistics demand integrate logistics business, which include transportation, storage, circulation and process, hand over to the third-party logistics enterprises.

As an efficient path to promote the interflow of commodities, to save the logistics costs and to reduce the fund in float as well, the logistics outsourcing will bring an ocean of benefits to both sides indeed though lots of difficulties appeared at the very beginning in the process of practice. Confidence and good faith are of great significance to avoid the interruption and even failure before the relation is established and formed. However, many elements will preclude the development of the logistics outsourcing included the restriction by old system, human errors as well as the out-fashioned values and the technological deficiency etc. from both sides of the supply and demand. The paper mainly analyses both the benefits and risks which are brought by the logistics outsourcing and presents solutions afterwards to effectively guard against the risks as well as provides modernized management for logistics outsourcing agencies.



After entering into the new era, the tide of the Logistics Industry is rising along with the rapid development of economy and the integration of the global finance. The logistics outsourcing, as an infant industry in China, will be the inevitable tendency of market economy due to the widespread use of the information technology in the logistics area. In order to gain the competitive edge, the companies have needed to invest a lot of time and efforts to develop their main products and reversely entrust these professional logistics companies with their agency by the contract to ensure the maximization of profits for them. Consequently, the logistics outsourcing service will gradually be understood, accepted and further utilized by more and more circles in the society. (Wang Shuyun, 2005)

## **2. Theory background and Literature review**

### ***2.1 Transaction cost theory***

Ronald Coase set out the transaction cost theory (Ronald Coase, 1937) in the book "The nature of the Firm". In his opinion, market and enterprise are two different ways of division of organizational labor. The cause for the emergence of enterprise is that the transaction costs of labor division of corporate organization are lower than the costs of labor division of market organization. On the one hand, as a kind of transaction, enterprise can use owners of various production factors and owners of products to form a unit to participate in the market transactions, in order to reduce number of traders and frictions in transactions, so that the transaction costs can be reduced; on the other hand, market transactions are eliminated in enterprise. As the complex structure of market transactions is replaced by entrepreneurs, and entrepreneurs direct production, market is replaced by enterprises. Therefore, whether the internal transactions of enterprise or market transactions, they all have different transaction costs; the reason that market is replaced by enterprises is the transaction costs of enterprise transactions are lower than transaction costs of market transactions.

Coase believes that the transaction is caused by informational asymmetry bound rationality, opportunism, uncertainty of transaction etc. On the basis of Coase, Oliver Williamson (1975) deepened the analysis of transaction cost. He thought that the decisive factors of transaction cost including human element (bound rationality, opportunism) and characteristic factor of transaction (uncertainty of transaction, complexity of logistics service, degree of asset specificity and frequency of transaction). Following are the specific introductions:

(1) Bound rationality: Williamson thought that human knowledge is “reasonable intention, but limited achievement” for the complexity and uncertainty of information. In other words, in the aspect of collecting and processing a great deal of relevant marketing information, human’s ability is limited greatly by themselves. For instance, because of the uncertainty of logistics environment, people can hardly know the coming transaction. Therefore, in the aspect of checking potential logistics suppliers and contract negotiation, people can hardly know the accidents which may happen in the future. For this reason, the cost of communication, negotiation and cooperation is produced. In addition, for the uncertainty of transaction behavior, the accidents may happen in advance or afterwards. It is hard to verify the real character of the potential logistics suppliers before contract, and not easy to monitor and inspect the performance of suppliers after the contract as well. Therefore, the cost of search and monitoring is produced.

(2) Opportunism: Williamson thought that transaction has the behavioral tendency in pursuing its own interests with deception because of human’s bounded rationality. It means that human beings are selfish, they try to profit at the expense of others.

For example, traders will cheat each other with unsymmetrical information situation or some kind of favorable bargaining. The third party logistics enterprises are easy to exert opportunism to increase the transaction cost of logistics demanding enterprises.

(3) Degree of asset specificity: The specific asset means the property which is invested to support some particular transaction. The specific asset cannot be used in another transaction if part of productivity is not sacrificed or the asset which is to

be used in new transaction is not increased. Specific asset includes asset specificity of ground, substance, manpower and special asset. Their common feature is that they are difficult to be used in other place once they are formed. Therefore, the two parties of transaction have great dependency. When one party breaks the contract, the other party will produce great transaction risk. The lower exclusivity of demanding logistics asset is, the easier the enterprise will be in finding a logistics service supplier. On the contrary, if the exclusivity of demanding logistics is rather high, or even needed the exterior logistics supplier to invest (both tangible or in tangible), the logistics supplier have greater chance to perform opportunism. The total cost of outsourcing will be increased greatly.

(4) Complexity of logistics service: the complexity of service and activity decide the difficulty of identifying and monitoring the transaction. The higher the complexity is, the greater the uncertainty of contract will be, and the negotiation cost will rises at the same time. The higher the complexity is, the asymmetry will always more outstanding. Generally, the informational asymmetry is very easy to cause opportunism no matter in the period of contract negotiation or contract execution (which is easier to cause). The higher the complexity is, the greater the enterprise will dependent on the third party logistics. Because enterprise will have great influence once the exterior enterprise stopped its service or degraded its service level. Hence, it is easy to cause increase of transaction cost for complex logistics service (including contract negotiation and execution).

(5) Uncertainty of transaction. In the dynamic and changeful environment, the increase of difficulty in creating prediction for industrial enterprises will produce the uncertainty of logistics. The higher the uncertainty of transaction is, the greater the cost and risk of internal operation will be.

(6) Transaction frequency and volume: generally, the higher the transaction frequency is, the greater the transaction volume will be, and for the industrial enterprise, the greater the transaction volume of demanding logistics service will be. Because of the batch rate, the industrial enterprise will obtain correspondent service with rather lower logistics cost. At the same time, the industrial can monitor the logistics better. Therefore, in order to obtain a large amount of business and

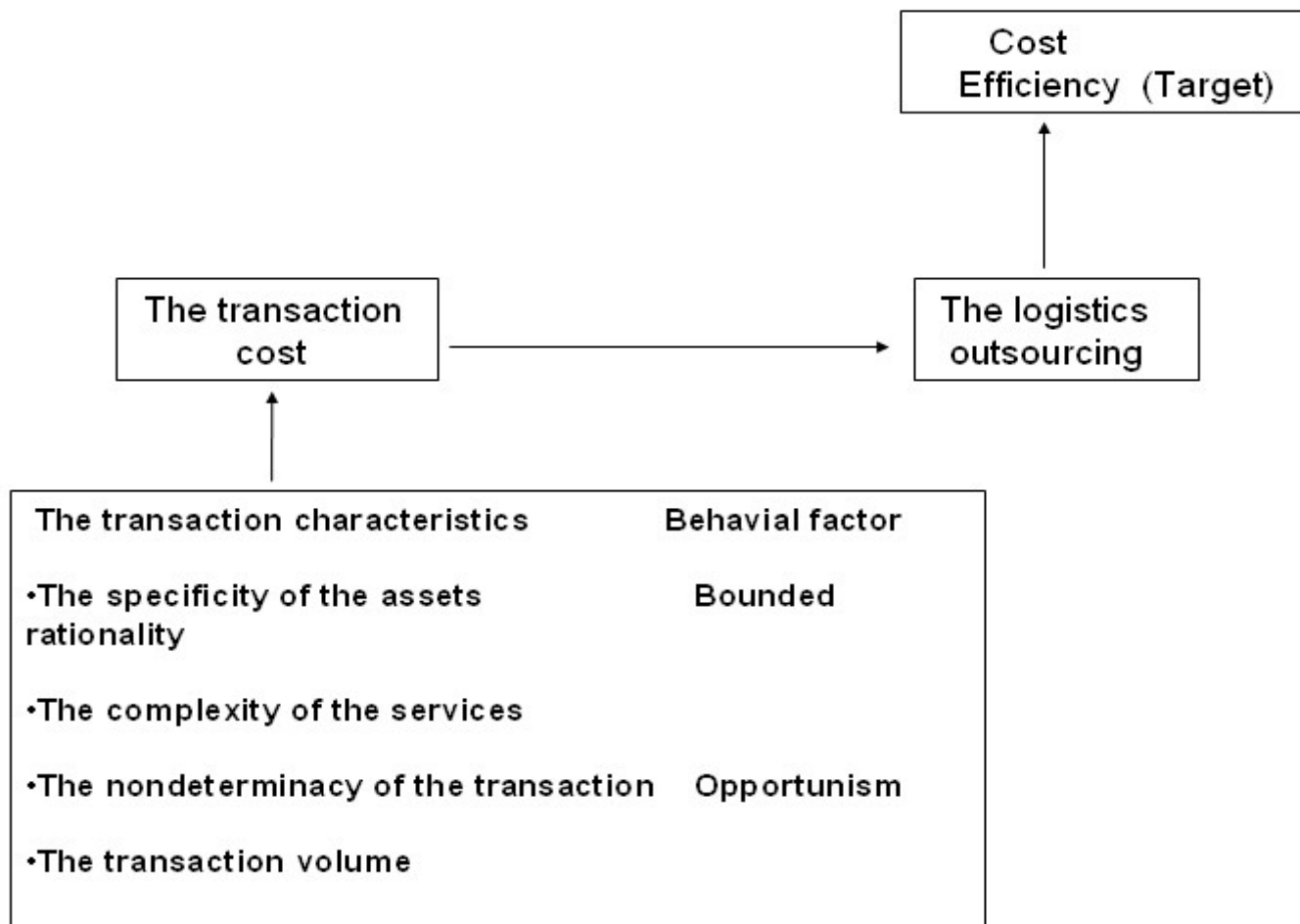
keep long term cooperative relationship, the logistics service suppliers will offer high-level and consistent service actively, communicate with enterprise initiatively and accept the monitoring of enterprise. In this way, the cost of negotiation and opportunism will decrease greatly.

### **Efficiency of transaction cost in logistics outsourcing**

On the one hand, logistics outsourcing can not only reduce the cost of production, generally (except that the asset specificity is very high and the uncertainty of market is great) it can also reduce the transaction cost. Because when the asset specificity is rather low, enterprise is very easy to find logistics service supplier. Therefore, the threaten form opportunism which is brought by the third party logistics enterprise is not exist. The efficiency of market transaction will higher than the vertical integration of agent efficiency. The cause of low interior integration of agent efficiency is the adoption of interior monopoly. Therefore, the logistics operation in house is easy to cover the low efficiency of interior operation. On the other hand, as the business volumes mostly dependent on the interior enterprise, logistics department is easy to have inertia. As time goes by, the quality, standard, and efficiency of logistics will have negative influence. Specially, the interior operation will also enlarge the scale of business organization, and add administrative organizations to strengthen the management function. Hence, it not will only have fairly high administrative expenses, especially with the increase of level of management, but also produce the bureaucratic style of work which decrease the efficiency of management and increase the administrative cost.

On the other hand, for those long term cooperative relationship of logistics outsourcing, both sides will keep communication. Hence, the cost in looking for the transaction partner will reduce greatly. In addition, the cooperative relationship which is established based on the personalized service provided by logistics partner can decrease all kinds of compliance risks. Even though any conflict arises in the process of service, both sides will solve through consultation in order to keep their long term cooperative relationship, thereby avoid endless bargaining and even the cost from lawsuit.

Moreover, the establishment of cooperative relationship of logistics outsourcing will prompt the third party logistics enterprise “organizational learning” which hence benefit for the third party logistics enterprise to improve the cognitive competence of uncertainty, decrease the transaction fee which caused by “bounded rationality”. At the same time, the establishment of cooperative relationship can restrain the opportunism behavior of the third party logistics enterprise to a large extent. Because one betray or cheat will lead to critical revenge and punishment in the long term cooperation. The third party logistics enterprise may loose the logistics business, which hence will decrease the transaction fee caused by opportunism to minimum level.

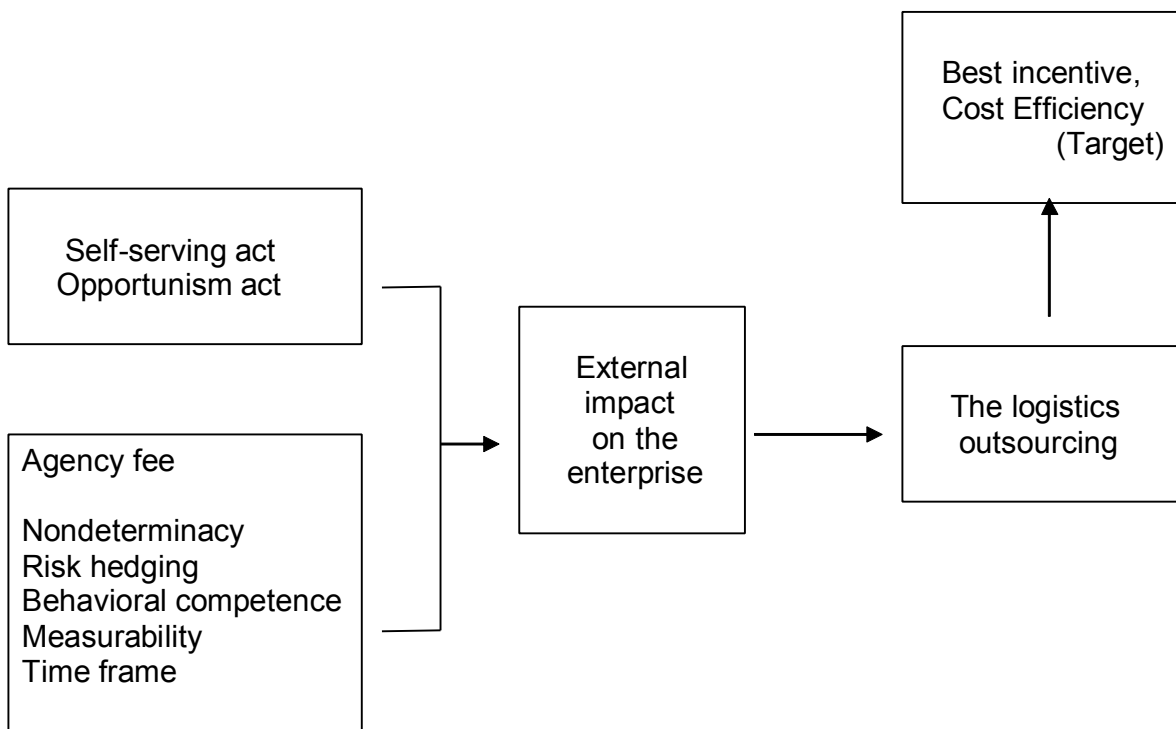


**Figure 1 Logistics outsourcing model based on transaction cost theory**

Overall, logistics outsourcing can not only reduce the cost of purchasing, but also control and reduce all kinds of transaction fee better. Through the whole process of transaction, purchasing logistics outsourcing can avoid blindness of transaction, and decrease the cost in looking for the information. Logistics outsourcing can reduce the cost of bargaining, effectively decrease the cost of supervision and execution in transaction, and decrease the cost caused by opportunism. Logistics outsourcing is benefit for both sides in increasing the strain capacity to respond to the environment of uncertainty and lower the transaction risk. At the same time, the cooperative relationship between logistics outsourcing enterprise and exterior enterprise are also good for the third party enterprise to improve logistics and market efficiency. Or else, enterprise may change its service partner and even apply Self-Build logistics.

## ***2.2 Principal-agent theory***

Principal-agent theory is based on “Asymmetric Information Game Theory” (James A. Mirrlees, 1976). Asymmetric information refers to the information that is known to some participants and not known to some other participants. The asymmetric information can be divided into the following two aspects: first is the time of occurrence of asymmetry, second is the content of asymmetric information. From the perspective of the time of occurrence of asymmetry, the asymmetry may happen before the signing of the parties concerned or after the signing of the parties concerned, which are known as preliminary asymmetry and post asymmetry respectively. The model of studying preliminary asymmetric information game is called adverse selection, and the model of studying post asymmetric information game is called moral hazard. From the perspective of the content of asymmetric information, the asymmetric information may refer to the action of some participants. The model of studying this issue is known as hidden action; it may also refer to hidden knowledge of some participants, and the model of studying this issue is known as hidden knowledge.



**Figure 2 Logistics outsourcing model based on Principal-agent theory**

### ***2.3 Core Competence theory***

In 1990, Robert Prahalad and Hamel released the "The Core Competence of the Corporation" (Robert Prahalad, 1990). In their opinion, the core competence is the source of sustainable competitive advantage and new business development of enterprises, which should be the strategic focus of enterprises. Only the core competence and core products could allow enterprises to achieve the lasting leading position in the global competition.

The main points of the theory: ① The competence of enterprise comes from the ability that the enterprise can establish core competence in the lower cost and faster speed than the competitor. ② Core competence is the compound of many elements, it is the combination of technology, management structure and collective learning. The core competence of enterprise is an ability which is scarce, difficult

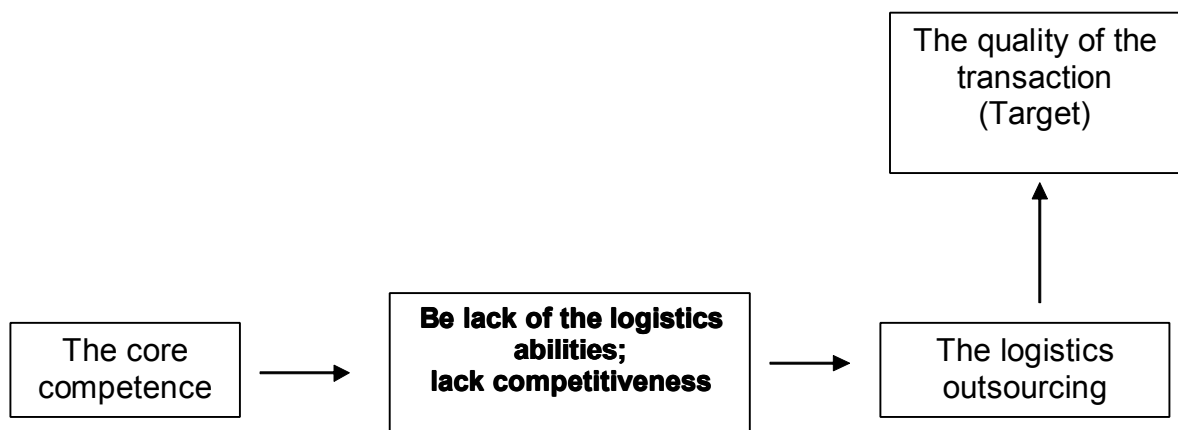
to imitate, valuable and extensible. The standards of inspecting the core competence are: Firstly, if it provides potential access which can lead to various market; secondly, if it brings obvious value for customers; thirdly, if it is difficult to be imitated by competitors. ③ Diversified enterprise is the combination of core competence, not the combination of products and career from Porter school. ④ Construct core competence and roadmap for the future of relevant technology. Keep the consistency of interior resource of enterprise through constructing strategy. The outstanding feature of this theory is to regard starting a new career as the focus of enterprise strategy, core competence as the sustainable competitive advantage of enterprise and source of developing a new career. From the basis of the theory, core competence is a concept of competition dominance based on resources, regards the enterprise as the combination of a series of unique resource.

As every enterprise has limited resource, it can not achieve competitive advantage in every industry. Some enterprises have core technology competence and core manufacturing competence, but they don't have core marketing competence, enterprise organization, coordination and management competence, or core competence of strategic management of enterprise. In the changeful market competition, the speed of single enterprise in self-adjusting with its won resource and ability is hard to catch up with the speed of market change. According to the core competence theory, in the enterprise economic organization, only the logistics resource is multi-purpose, is the core competence of enterprise which is scarce, difficult to imitate, valuable and extensible. What's more, logistics resource can be kept in the enterprise, so it should not be outsourced but should be operated by itself. If the logistics is not the core competence of enterprise, the logistics resource and competence are difficult to satisfy the requirement of itself and the customers. Enterprise should carry out outsourcing to give the logistics to the third party logistics enterprise to operate. The third party logistics enterprise is engaged in the specialized logistics service, it generally have its specialized knowledge and information network. In the aspect of service standard and service quality, it can achieve the competitive advantage. It provides service for numerous logistics demanding enterprises, and it can realize economies of scale which



brings the reduction of cost. Therefore, logistics operation is the core competence of the third logistics enterprise. Giving the logistics to exterior organization, enterprise can strengthen its core competence in the aspects of researching and developing products, production and marketing of the core components etc. At the same time, it can take full advantage of the core competence of exterior enterprise to achieve complementary capacities, improve transaction quality, to enhance the competitiveness of enterprise with the competitive advantage of the whole supply chain. (Quinn, 1992)

In a word, according to the core competence theory, only when the logistics is the core competence of enterprise, should the enterprise operate the logistics by itself. Only when the logistics is or close to be the core activity of enterprise, and when the logistics resource and knack in the interior enterprise of Group Company has the sustainable competitive advantage, can the enterprise carry out the interior outsourcing. Otherwise, enterprise should carry out outsourcing no matter how much logistics the enterprise has, as long as the logistics is not the core competence of enterprise, even if it is the core business of enterprise, it or the Group Company does have the sustainable competitive advantage in the logistics operation.



**Figure 3 Logistics outsourcing model based on core competence theory**

## ***2.4 Competitive strategy theory***

The founder and representative of competitive strategy theory is Michael Porter. He stressed that enterprise should connect with its own environment while setting its competitive strategy to point out that industry is the most direct environment of enterprise operation, and the structure of industry decides the competition rules, competition scope and strategic option. The core of enterprise strategy is competitive advantage which can be decided by two factors: the first one is the profitability of enterprise in its industry, which is the attractiveness of the industry. The second one is the relative competitive position in the industry. Therefore, enterprise should choose attractive industry if it want to obtain the competitive advantage. Surrounding this proposition, he presented the competition model of explaining and analyzing competitive condition and profitability which are based on five elements including supplier, purchaser, current competitor, substitute products and potential incomer. On the basis of this model, he allocated the selected industry and carried on the SWOT analysis (the interior strengths and weakness of enterprise, opportunity and threaten of industry) to the enterprise, provided three alternative competitive strategies: low cost strategy, variation strategy and centralization strategy (Porter, 1980).

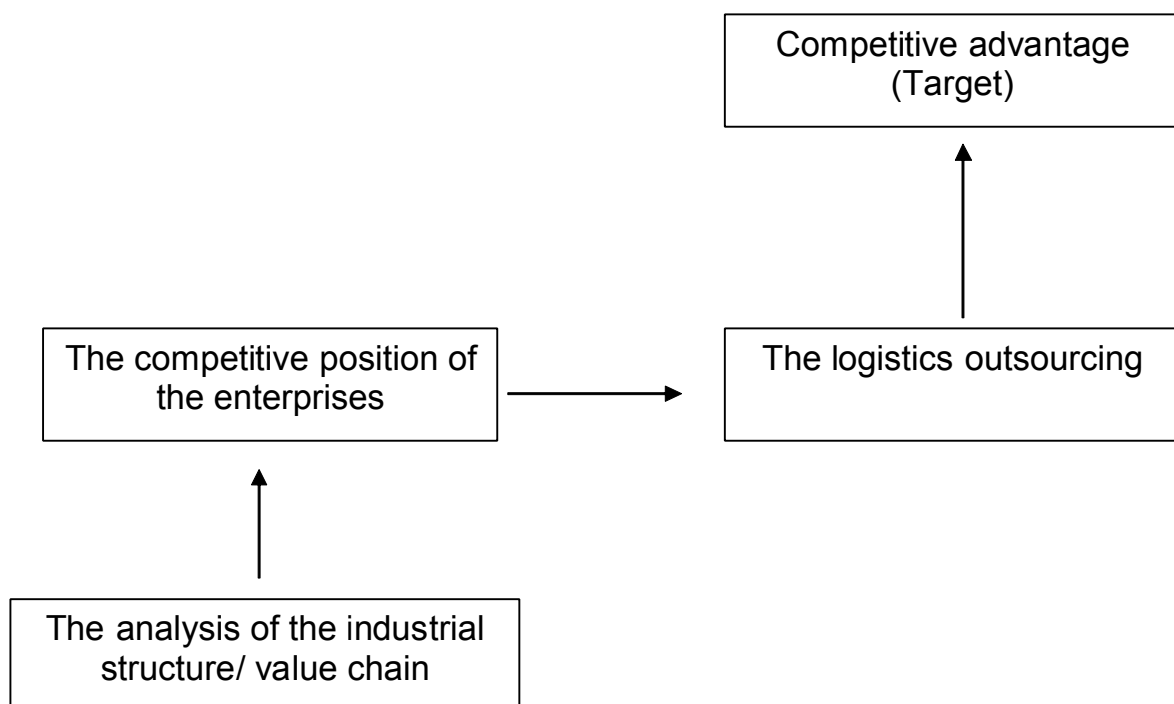
Then Porter presented concept of value chain in his book of **COMPETITIVE ADVANTAGE**. According to Porter's (Porter, 1985) concept of value chain, enterprise is a composite of design, manufacturing, sales, transport, management etc. Its process of creating value can be resolved into a series of different but correlative value-added activities which form the value chain of enterprise.

The value activity of enterprise can be divided into two broad categories: primary activity and support activity. The primary activity involves productions, sales, and after-sale service of transferring to the buyer which mainly includes five types: interior contradictions logistics (consist of purchasing logistics and production logistics), production and management, exterior logistics (consist of distribution logistics and reverse logistics group), sales and marketing and service. Support activity is one which has to assist the primary activity to finish its function which

mainly including infrastructure of enterprise, human resource management, technological development, purchasing etc.

Except the value activity, value chain also includes profit. Profit is the difference between the total value and the total of all kinds of value activities. Meanwhile, Porter presented that the value chain of enterprise is not isolated, it reflected in more extensive value system. Achieving and keeping the competitive advantage are decided by the value of enterprise, and the value system which enterprise belongs to.

In short, According to Porter's competitive strategy, enterprise should choose and enter into attractive industry to improve its profitability. In additional, enterprise should work out correct strategy to strengthen its competitive advantage in its own cost or differentiation based on the analysis of five elements which can influence the competitive position, deep analysis and value chain analysis of interior competitive strengths and weakness and exterior opportunity and threaten.



**Figure 4 Logistics outsourcing model based on competitive strategy theory**

## ***2.5 Game theory***

Game theory is a powerful tool for analyzing situations in which the decisions of multiple agents affect each agent's payoff (Gérard P. Cachon and Serguei Netessine, 2003). As a result, Game theory deals with interactive optimization problems. Credited as the fathers of modern game theory, John von Neumann and Oskar Morgenstern summarized the basic concepts in their classic book "Theory of Games and Economic Behavior" (von Neumann and Oskar Morgenstern, 1944), and since then Game theory has enjoyed an explosion of developments, including the concept of equilibrium by Nash (Nash, 1950).

Game theory is a science to study how several individuals or teams use strategies of relevant parties in the game under certain constraints, and implement corresponding strategies. It is a theory and method to study phenomena with fighting or competitive nature. It is a branch of applied mathematics and an important discipline in operational research.

In short, game theory is to study how decision-maker makes decision under the given information structure so as to maximize his utility, and the decision balance between different decision-making main bodies. Game theory consists of three basic elements: firstly the decision-making main body Player or participant; secondly, the given information structure, it can be understood as the optional strategies and action spaces of the participants; thirdly, the utility, it can define and quantify interests of the participants. It is also something that is concerned by all participants. The participants, strategy set and utility constitute a basic game.

## **3. The benefits and risks of logistics outsourcing and its development history in China**

### ***3.1 Background of logistics outsourcing generation***

The generation of logistics outsourcing has distinct era economic background:

First is the necessity to reinforce core competitiveness. Since 1990s, core competitiveness is regarded as the decisive force enterprises depend on to win and expand advantages in market competition, its abundant connotation reflects in technology resources, knowledge and culture, as well as organizations and management system. Because resource owned by any enterprise is limited, it is impossible to win competitive advantages in all business fields. Some enterprises possess core technological abilities, core manufacturing ability, but no core marketing ability, core coordinating and supervising ability in enterprise organizations, or core ability in enterprise strategic management. In the rapidly changed market competition, individual enterprises rely on their resource to conduct self-control, with the rate difficult to catch up with the rate of market change. Therefore, enterprises must focus limited recourse on core business, thus reinforcing their own core competence, and hand over business that they have no core competence in to external organizations via contract (outsourcing) or no contract (strategic alliances or cooperation). By sharing information, undertaking risks, and sharing profits with external organizations, the above five core competence can be integrated, thus winning competitive advantage with core competitiveness of supply chain.

Second is the necessity to transfer from enhancing internal efficiency to enhancing external efficiency. The improvement of enterprise management efficiency originates from two aspects. From the very beginning, enterprises seek for internal efficiency enhancement. Organizational performance can be improved from adjustment of enterprise internal organization structure, organizational flattening, and restructuring of business procedures. With further development, more and more enterprises are not satisfied with enhancement in internal efficiency, instead, they focus on external enterprises to seek for cooperation between enterprises, thus providing great opportunities for the generation of logistics outsourcing.

Third is the development of e-commerce and appearance of virtual organizations. On the one hand, with the appearance of Internet, Internet economy and e-commerce have been in rapid development, higher requirements have been hold toward logistics. Many enterprises that have successfully conducted e-commerce have first-class logistics service. For example, International Logistics Center

established by Haier, “one stream and three networks” of Haier logistics management completely reflect features of modern logistics. However, those enterprises that can actually establish modern logistics branch are rare, the more developed e-commerce becomes, the more logistics support it needs. Therefore, logistics outsourcing is expected to become the option for many enterprises. On the other hand, virtual organizations also began to emerge, whose operation need cooperation among many partners. Apart from information network, logistics network is indispensable, with very intense requirements toward logistics outsourcing.

Fourth is better handle challenges brought to enterprises by super competitive environment. The background of the so-called super competitive environment is economic globalization, enterprises from each country participate in the same market competition, which is reflected by competition among regional groups and countries in global market, such competition must take transnational companies' direct entry to domestic market as a reflection. Knowledge and information become important resource for enterprises. Due to uniqueness of these two types of resources, the competition property is different from previous products-competition within the scope of market competition. Competition is dynamic and diverse, opponents, modes in which opponents take part in competition, core competitiveness of opponents, and core competitiveness of enterprises are in rapidly changing, therefore, it is increasingly difficult to maintain continuous competitive advantages. Competitive strategies are diverse. In open market system, enterprises are confronting an all-around competition. The complexity of all the market system makes it difficult for enterprises to master current competition strategies and competition outcome in the future. Moreover, competition is no longer a fight in previous market competition, which opponents must fight until any party lost badly, seeking for win-win in competition becomes a mutual philosophy, and the most suitable mode of competition is cooperating competition. Therefore, in order to better handle challenges brought to enterprises by super competitive environment, enterprises begin to outsource logistics through cooperation with the third-party logistics enterprise. Giving full play to respective comparative advantages, not only appreciation service toward customers is achieved with low cost, thus enhancing enterprise competitiveness, but also mutual benefit is realized in cooperating competition, thus achieving win-win.

Fifth is the third-party profit spring. With continuous deepen and aggravation of market competition, the key of establishing competitive advantage has already transferred from “first-part profit spring”, which saves raw materials, and “second-part profit spring”, which enhances labor productivity to “third-party profit spring”, which establishing highly efficient logistics system. Therefore, logistics outsourcing appears, thus putting forward the third-party logistics and the fourth-party logistics.(Zang Jianmei, 1999)

## ***3.2 Logistics outsourcing service provider-the Development History of Third-Party Logistics Industry in China***

### **3.2.1 the Development History of Third-Party Logistics Industry in China**

No matter which forms of outsourcing is adopted, there are at least two subjects included in logistics outsourcing-logistics service customer and logistics service provider. Apparently, it is the majority’s hope that manufacture who outsources logistics business is logistics service customer, while the other subject-logistics service provider is the third-part logistics enterprise.

The concept of the third-part logistics was introduced to our country in the 1990s. After going through more than ten years’ development, the third-part logistics industry has achieved rapid development in our country.

(1) From 1990s to the beginning of 2001, the third-part logistics has been in a preliminary cognition and understanding phases in our country. With the introduction of the concept of third-part logistics to our country in 1990s, a batch of traditional storage and transportation enterprises have transferred to the third-part enterprise. For example, Cosco Group, which was established in 1993, has conducted integration on land cargo express enterprises in 1995, then Cosco International cargo express Co., Ltd was set up, thus forming a nationally uniformed cargo network. In 2001, it found Attend logistics Co., Ltd with

Guangdong Kelon Company and Wuxi Little Swan Company through joint venture. In 1994, Guangdong Baogong Storage and Transportation Company was established, which continued the biggest goods for everyday consumption production enterprise- American Procter & Gamble Company's logistics business in Chinese market. After several years' development and innovation, it has become a logistics group company which possesses over forty branch offices or agencies in Australia, Thailand, Hongkong, as well as main cities in China mainland, it provides International logistics service for more than forty transnational companies and a batch of domestic enterprises.

In terms of the scope and functions of service provided, our third-part logistics enterprises are still focused on such fundamental logistics business as transportation and storage, appreciation service, which includes process, delivery and customized service, takes very small ratio during this period. The cognition industrial and commercial enterprises have toward the significance of logistics gradually furthers in that they regard it as "the third profit source", and their demands for specialized and multifunctional third-part logistics become increasingly big. From 1999 to 2001, it is shown by the three sample investigations Chinese Storage Association conducted on supply and demand condition of logistics market that in finished products marketing logistics of manufacturing enterprises, the ratios the third-part logistics takes are 9.1%, 16.1% and 21% separately, which is in obvious ascending trend.

(2) From 2001 to 2003, the third-part logistics has been in starting and integrating phases in our country. In 2001, the first national logistics industrial association handed out its shingle, which took several important events as its symbol, including the establishment of logistics demonstration base, large scale of promotion and construction in logistics project in each city. This year is regarded as the "starting year" of Chinese logistics development.

The year 2002 is the first year that China entered the WTO, and it is regarded as the "Integrating Year" of Chinese logistics. Storage and transportation enterprises largely promoted the reconstruction of procedures and asset restructuring, as well



as accelerated transition to the third-part logistics enterprise in 2002. The third-part logistics enterprises widely developed merger connection, which took property right as its bond, with an aim to realize advantage complementation of resources as facilities, network and techniques, thus forming a batch of leading enterprises in the third-part logistics in our country. For example, one the foundation of integrating the previous Cosco International cargo express company and Chinese foreign goods agency company, Cosco Group built Chinese Cosco Logistics Co., Ltd, with asset of six billion yuan. The aim is to provide services from the aspects of International logistics, International shipping agency, International multimodal transport, storage and LCL. It has established many regional companies or representative offices in domestic and overseas, which formed logistics network system with complete functions. The four big brands-automobile logistics, home appliance logistics, item logistics and exhibition transport logistics have been put forward. Six groups have been established after asset restructuring of CAAC. After disconnecting with CAAC, a large-scale cargo express company joint ventured, prepared and organized by Air China International Corp. CITIC Pacific and Beijing Capital International Airport was founded on this basis, which possesses 2.2 billion yuan as its registered capital. It will be in possession with four Boeing 7470 cargo aircraft, approximately 1200 employees; it can fly to twenty nine cities in nineteen countries, including New York, America, Germany, Frankfurt and Osaka, Japan, the newly established company name is "CA Cargo Express Co., Ltd". In addition, it is announced by Chinese Logistics Company, which is affiliated to Chengtong Group that it will officially enter the market comprehensively with its powerful third-part logistics enterprise face. The biggest logistics enterprise in Chinese Railway System-Chinese Railway Logistics Head office and six domestic companies mutually launched the establishment of Chinese Railway Modern Logistics Science and Technology Co., Ltd, with total capital stock as 118.59 million. It has currently set up branch offices in ten cities in China, nineteen regional distribution center and 218 cooperating distribution center.

Despite of rapid development of these leading enterprises and continuous enhance in their power, as a whole, the majority of third-part logistics enterprises are not in very large scale, standard of service is not very high, the third-part logistics still rests on a certain lay or link, sweeping service from raw material

supply to the whole supply chain of commodity sales has not been achieved, the true sense network service hasn't been formed. There are several main issues underlying: 1. backward logistics perception, prominent phenomenon of self-operated logistics. Because of wrong cognition toward logistics as the "third profit spring" and influence from the perception of "large and all inclusive", "small and all inclusive", many industrial and commercial enterprises are afraid of not only loss of controlling on purchase and marketing, but also occupation of extra profit by other enterprises, they built their own logistics system and were not willing to ask for outward logistics service. According to an investigation Chinese Storage Association conducted on two thousand enterprises in 2001, the third-part logistics service takes only 21% and 13% in manufacture and merchandising enterprise. 2. Serious barriers between higher and lower levels or between, relatively small scales of enterprises. Our logistics enterprises have formed diversified logistics pattern due to planned economy in a long time. Apart from emerging foreign funded and private enterprises, the majority of third-part logistics enterprises have been transferred from storage and transportation enterprises in commercial, logistics, food and transportation branches in planned economy period. Serious barriers between higher and lower levels or between: lack of integration in enterprises, inconspicuous intensive management advantages and difficulty in realizing scale merit. 3. Impeded logistics channel. On the one hand, unreasonable network operation has spots but no nets. Lack of cooperation between the second-part logistics enterprises, as well as enterprises and customers, insufficient supply of goods, surplus transportation ability of traditional storage industry, waste is caused. On the other hand, backward information technology, logistics enterprises and customers can't completely share information resource, interdependent partnership is not formed, due to failure in wide application of information technologies, including Internet, barcode, EDI. 4. Incomplete service functions, the majority logistics enterprises can merely provide logistics service in single composition or phase, logistics functions are mainly rested on storage, transportation and city distribution, such appreciation service as relevant package, process and allocation are not very much, complete logistics supply chain can't be formed. According to an investigation conducted by Chinese Storage Association in the beginning of 2001, among those enterprises that adopt demands of the third-part logistics, there are 23% manufacturing enterprises and

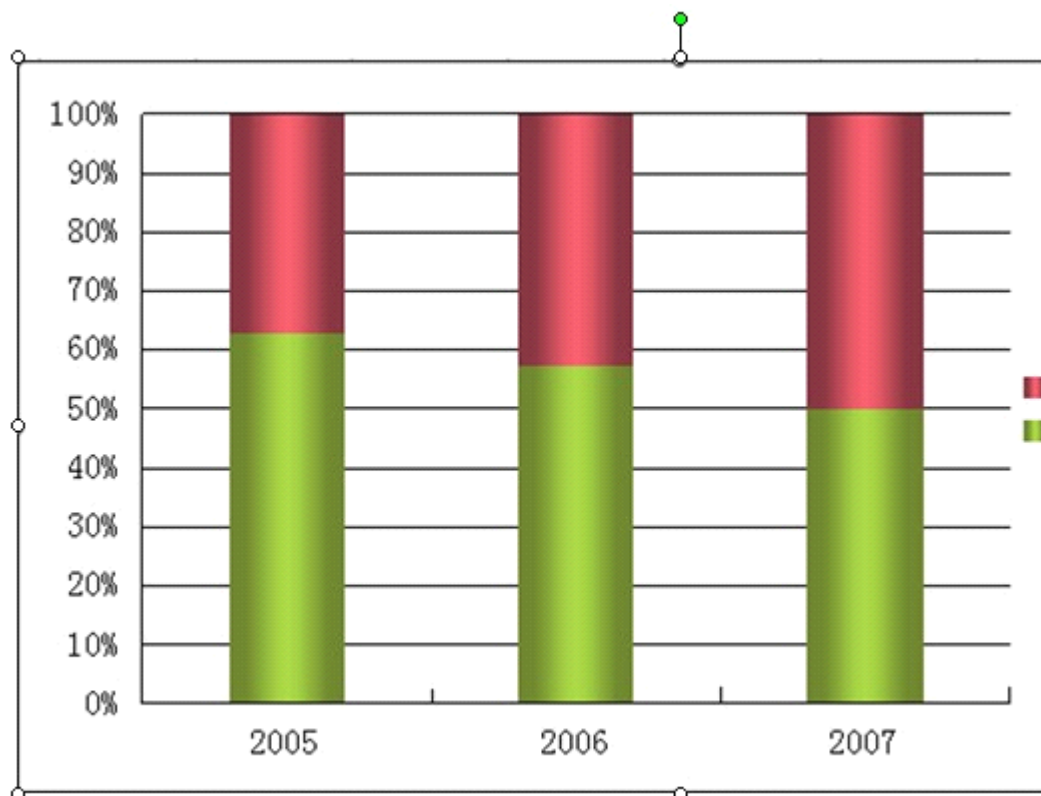
7% merchandising enterprises are not satisfied with the third-part logistics service. 5. Deficient in logistics talents, backward facilities, and relatively low management standard. Our logistics industry is still in the starting phase; higher education and vocational education have kept pace with it yet, deficient in talents and low in qualities: lagging logistics facilities and equipments, aging, low level of mechanization, which can't meet clients' specific requirements.

(3) Since 2004, our third-part logistics is in rapid development phase. However, no matter in scale, technological content or management modes, a relatively large gap do exists when comparing with that of developed countries. Our logistics industry still rests on the initial stage of industrial development. However, as we can see from logistics fundamental facilities, logistics market space and establishment of national policies and regulations system, the development of our third-part logistics possesses wide space.(Wang Shuyun, 2004)

### **3.2.2 The logistics outsourcing development situation of enterprises recently in China**

In 2007, the percentage of corporations implementing logistic outsourcing is 50.4%, which improved by 7.8% than 2006. It is the first time that more than 50% corporations introduce logistic outsourcing, which indicate a growing number of companies that accept this conception. The reasons of this is that the fury market competition caused by the shortened produce period, diversity of customers' requests, etc, which makes more corporations focus on the improvement of their core-competitiveness so that outsource their non-core competitive service just like logistics.

Particularly, with the firestorm of the US debt crisis in 2007, the real economy was shocked by the worldwide financial crisis seriously. The demand of the export produce from the major trade partners of China, for instance, the EU, has decrease sharply due to their economic depression.(Wang aihu and Zhong yuchen, 2010)



**Figure 5 The logistics outsourcing situation of business enterprises in China (red area: percentage of enterprises which already have implemented logistics outsourcing, green area: percentage of enterprises which have not implemented logistics outsourcing yet, data from “Modern logistics development report of China”, 2010 )**

From figure 5, we can see that the proportion of using the outsourcing logistics by the business enterprises is rising which indicated that the domestic enterprises become more familiar with the outsourcing logistics and the effect of the outsourcing logistics revealed gradually.

### ***3.3 The benefits and risks of logistics outsourcing***

#### **3.3.1 The characteristics of logistics outsourcing**

The appearance and development of the logistics outsourcing is of great significance for those enterprises to optimize the allocation of resources, to reduce the logistics cost and improve the logistics effectiveness. The characteristics of it also becomes more obvious among the development,

##### (1) The contract-oriented logistics service

First of all, the logistics outsourcing is quite different from the traditional logistics. The traditional logistics service only focus on one independent logistics function such as the providing the transportation service or stock service etc. The logistics outsourcing will provide a multi-functional logistics service according to the requirements of the contracts. And also the third party logistics will manage all those logistics services according to the contracts.

##### (2) The logistics service based on the modern technology

The logistics outsourcing service is based on the modern technology including the information technology, vehicles technology and some other technologies related to the management of the modern logistics. The rapid development of the modern information technology promotes the development of outsourcing logistics obviously. On one side, the development of the information techniques makes the communication between the suppliers and the third party logistics companies become convenient. All the information could be shared and flow rapid between the two parties and realizes the coordination as well as the cooperation in a short period. At the same time, with the expeditious development of the computer software, the logistics costs could be calculated precisely and the commodity-circulate could be managed by it which makes the outsourcing logistics be more available. On the other side, the development of the modern technologies make the messages be transmitted more quickly and accurately and bump up the automation level of the some logistics operations including the management of the warehouse, loading and discharging of the goods etc.

### (3) The individual logistics services

As the corporation nature, products characteristics, operation flow differs from each other of all the parties in request, the basic services provided by the traditional logistics could not meet the need of those parties anymore. The outsourcing logistics companies will provide the specialized logistics services and some value added services according to the different enterprises images, work flow, products features of all the companies. Moreover, the core operation is formed due to the influence of the market competition, logistics capabilities.

### (4) The professional logistics services

The professional levels should be shown in the logistics design, operation and management. This is not only the customer's requirement but also the inevitable requirement of its self-growth. The outsourcing logistics services could create a high technology, high services level, more safer but cheaper professional logistics service. Outsourcing

### (5) The logistics services with a new customer relationship

The aims of the enterprises to choose the logistics outsourcing is to reduce the costs, to improve the competitive strength and to look for value added services etc. Although all the approaches to cooperation between the auto manufacturers and logistics suppliers differ from each other, their objectives are the same which is to reach a "win-win" situation for both parties. For the same strategic target, the two parties share the information together and make the logistics plan including the enterprises sales plan, the inventory management plan, the production plan etc. The two parties are integrated and a new strategic partnership is formed afterwards. (Yan Huanghua and Li Jianwei, 2001)

## **3.3.2 The benefits of logistics outsourcing for enterprises**

Lots of benefits such as the improvement of the productivity effect, the reduction of the costs as well as the boost of the investment return can be gotten by

companies through the logistics outsourcing. More details are as follows. (Wang Shuyun, 2005)

**(1) It is helpful for enterprises to save the costs**

Nowadays, to save the costs and to increase the profitability as well have become the top priorities which the enterprises will seek after when they are competing in the fierce environment. Moreover, among all the costs, logistics cost constitute a high proportion. With the information management system, the global logistics network and large amounts of professionals in the logistics sector, the third-party logistics could make full use of its technical logistical facilities and managerial experiences to keep the logistics work reasonably and fluently and realize scale management. In other words, the investment on transportation, warehouse, documents and staff wages will be sharply reduced and the companies only need pay a little variable costs if they offer the transport and storage business conducted by themselves to the suppliers of the third-party logistics suppliers for operation. (Bowersox, 1990)

**(2) It helps enterprises to boost its core business and core competitiveness.**

The core competitiveness determine whether the enterprise could maintain the persistent competition advantage or not. The resource of a company is limited and it is unable for them to own the competition advantages on all areas. As a consequence, it is of great significance for them to concentrate their resources on their core business. What's more, the companies usually do not have the core competencies on logistics operations due to the limits on technology, information system and transportation network etc. However the third-party logistics is exactly the opposite. So the core competencies will be enhanced as well as the competitiveness will be increased if the enterprises can make the best of the advantages bought by the third-part logistics and focus on the improvement of their core business. (Robert Prahalad, 1990)

**(3) The customer satisfaction is going to be ensured and improved as well**

Customer demands become more and more harsh at the present days. The consumers want the enterprises to use the least money to meet their multifarious needs. Besides, a better service is also required to be provided by companies at

the same time. Nevertheless, it is of great difficult for those companies to meet the customer satisfactions by their own efforts. In contract the order processing could be fasted and the on-time or even advanced delivery could be realized by logistics outsourcing. The suppliers could monitor the on-way goods through their advanced technology and deal with the accident timely if it happens to make good on their promises. Last but not the least, as the third-party logistics enjoy a global network and the ready-witted reactions, the enterprise can provide them the related training and switch the after-sales service business to them afterwards to make sure stable as well as reliable service be offered for the customers. (Zhu Jun and Liu Renkui, 2005)

#### **(4) It is helpful for enterprises to improve the production efficiency**

With the service as the orientation, the third-party logistics suppliers can offer those companies professional logistical designs as well as management to save the companies' logistics costs. As a result, those firms could spend more objectives, money and manpower on the right courses such as the research and development and manufacturing and optimize the resources distribution as well as improve the production efficiency in the end.

#### **(5) It can help accelerate the flow of funds of the enterprises**

By logistics outsourcing, the enterprises can do their utmost to shorten the procurement cycle and to bring the 'zero inventory' as well as the 'terminal marketing' into effect. Hence, the turnover rate of the capital will be quickened and the mercantile rate of return will be dramatically increased.

### **3.3.3 Main risks exist in logistics outsourcing**

#### **(1) Inadequate control of the logistics outsourcing**

It is quite hard for enterprises to control their products and services and the indeterminacy of their normal production will be increased by logistics outsourcing. Moreover, the whole business will be influenced if it is out of control. (Kenneth B. Ackerman, 1996)



## **(2) The raised dependence of the outsourcing agencies**

A long-term dependence on a third-party logistics service will bring lots of compelling potential benefit for the enterprises to reduce their capital investment and to increase the efficiency. On the other hand, it can also easily breed the conceit and self-complacency among these outsourcing agencies so that difficulties will added when controlling them by the enterprises.

## **(3) Resistance by the internal staff**

An enterprise's internal business process reengineering is required and the enterprise's internal business processes will be affected by outsourcing. Moreover, it may cause negative and resistant employee attitude toward the enterprises so that a negative impact on the normal production and operation of enterprises will be brought about.

## **(4) Lower customer satisfaction**

As the over reliance by the logistics outsourcing enterprises, it will be to the disadvantage of enterprises to obtain the necessary information from the customers and the service is hard to be improved at the same time. By the look of long-term, the loss of the control of the logistics activities will week the relationship between the core business and logistics activities, thus the customer satisfaction is decreased.

## **(5) The damage of the enterprises' interest**

The third-party logistics service providers will misunderstand that the demand side is lack of expert technique and they will bid up the prices or provider poor services which will make the enterprises suffer the losses. (Kenneth B. Ackerman, 1996)

### **3.3.4 Strategies to Prevent Logistics Outsourcing Risks**

#### **(1) Enterprise's core competitiveness should be identified**

Outsourcing itself is not a strategy of enterprise development, which is only a way to achieve enterprise strategies. Enterprises should determine whether they have

competent and optional logistics providers. Otherwise, the implementation of logistics outsourcing will not be successful, and it will also bring a series of problems. (Robert Prahalad, 1990) Therefore, enterprises should conduct the in-depth analysis of internal logistics situations, explore whether the logistics is core competence of enterprise, and analyze whether logistics can bring external strategic economic interests for enterprise. Only under situations that enterprise has suitable partners, and the internal management layer of the enterprise has recognized the importance of outsourcing and clearly known the preparations for the outsourcing, can the enterprise determine whether to implement outsourcing.

## **(2) The selection of third-party logistics companies**

A very important issue in the logistics outsourcing decision is whom should be outsourced to, namely, the selection of outsourcing partner. (Wan Ying, 2005) First of all, the investigation, analysis, and evaluation of external possible logistics suppliers should be conducted. The management situation, strategic orientation, information technology support capability, plasticity & compatibility, and operation experience in the industry of logistics suppliers should be investigated. Their cost status of conducting logistics activities, long-term development capability, and credibility should be evaluated. Especially for the commitments and quotations of logistics providers, enterprises should carefully analyze them. The quotation should be based on the costs of the logistics provider, rather than market prices. The quotation is not just a sum total. It should include cost breakdowns of various operations. As for the commitments of logistics outsourcing, especially for the projects that involve government policies or strategies of logistics providers, they should be made by the top manager of logistics providers in order to avoid the inconsistencies in understanding relevant terms in process of fulfilling contracts. Based on the evaluation, the comparison among many potential logistics outsourcing partners should be carried out. Then, the most suitable outsourcing partner should be selected.

## **(3) The control of activities of logistics outsourcing**

The supervision and control of outsourcing activities are the important guarantee for the successful implementation of outsourcing. Even agreements are signed with third-party logistics suppliers, enterprises should also monitor the

performance of third-party logistics providers. Meanwhile, enterprises should provide them with necessary business information. (Petersen, 1993) The mutual communication between enterprises and third-party logistics providers should be paid attention to, and they should jointly develop the operation guidelines. Enterprises should not think that the logistics providers should take care of everything after the outsourcing. Enterprises and third-party logistics providers should jointly develop logistics operation flow, determine sources of information, and formulate operation guidelines for both parties. The operation guidelines can allow relevant personnel of both parties to coordinate with each other in the operation process. It also provides enterprises with criteria and basis to determine whether logistics operations are qualified. Therefore, enterprises should establish the control mechanism of logistics outsourcing, inspect the performance of outsourcing partners on a regular basis, and formulate standards to evaluate their performance.

#### **(4) The adjustment of enterprise internal organization structure**

Logistics outsourcing may be restrained by the original internal operation flow of enterprise. (Zhao Qilan, 2005) Therefore, the adjustment of enterprise internal organization structure focuses on the following: how to adjust operation flow and conduct functional transformation based on the seamless connection; how to conduct the sustainable and effective supervision of outsourcing logistics functions; whether does the corporate culture encourage innovation and transformation; what are the attitudes of enterprise leaders and employees towards transformation, and so on. In order to achieve the seamless connection and achieve the success of outsourcing strategies, the logistics outsourcing should be viewed from the strategic perspective, enterprises should be committed to find the best partner and establish a sound management system based on such a partnership.

## **4. Case study**

In order to relate these theories with my topics more effectively, the main approach is case study what I will apply into my paper. Personally, case study is a easy understanding way to analyze the topics.

I choose FAW-VOLKSWAGEN Automobile Co., Ltd as my case study's research object. In order to understand the logistics outsourcing status of FAW-VOLKSWAGEN, I collected second-handed information and did telephone interview. After that, I analyzed the situation and the feature of the logistics outsourcing of FAW-VOLKSWAGEN. Then I explained the benefits of logistics outsourcing for FAW-VOLKSWAGEN and the problems exiting in FAW-VOLKSWAGEN's present logistics outsourcing system, finally propose some methods to solve the problems.(All of the data is before year 2008 because the data during economic crisis would impact on my research)

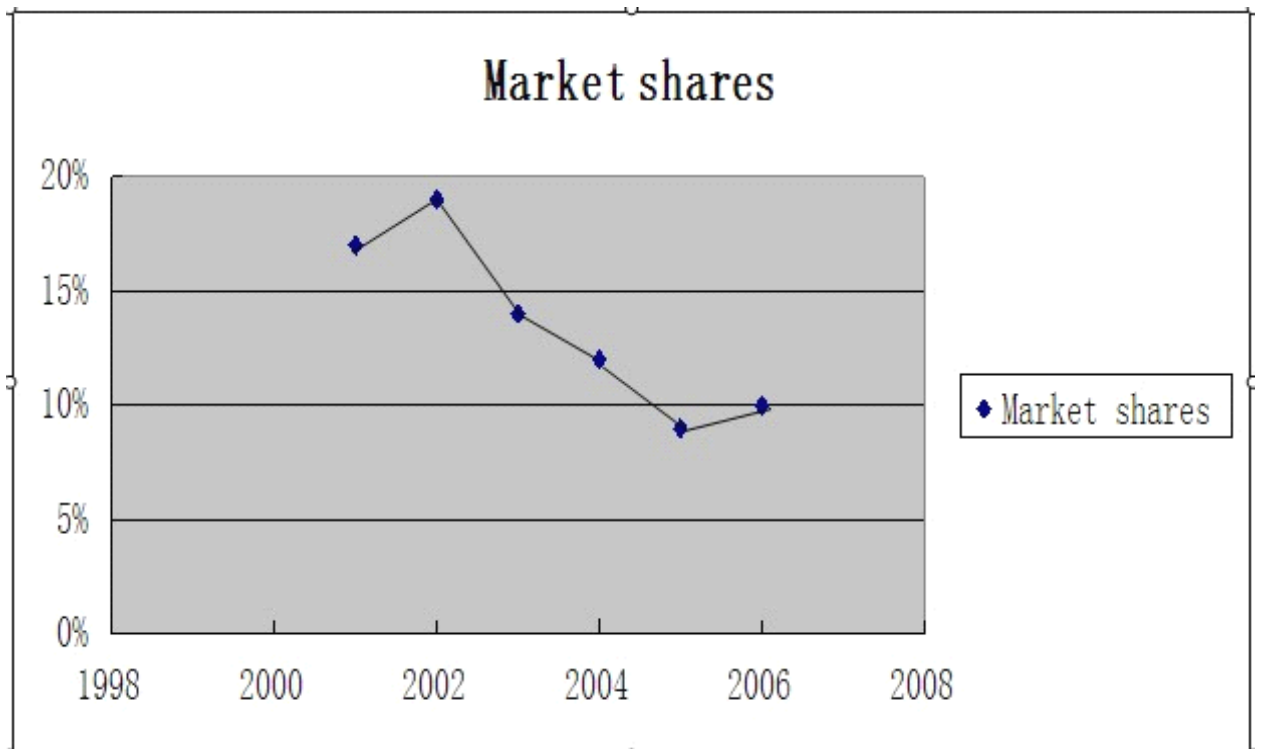
### ***4.1 The introduction of FAW-VOLKSWAGEN***

FAW-VOLKSWAGEN Automobile Co., Ltd. is a major passenger sedan joint-venture of FAW Group Corporation and Volkswagen AG, Audi AG and Volkswagen Automobile (China) Investment Co., Ltd. It is China's first modern passenger sedan industrial base of considerable economic scale. FAW-VOLKSWAGEN Automobile Co., Ltd. was formally established on February 6, 1991, and officially received by the State in August 1997. The company's Plant II for passenger cars officially began production on December 7, 2004. Through its continuous expansion, FAW-VOLKSWAGEN has become a company with a daily production capacity of over 1000 motor vehicles, with additional capacity for export of completely builded vehicles, assembly and component parts. (<http://www.faw-volkswagen.com/>)

In recent years, auto manufactures and retailers work hard in the aspect of innovation and marketing for the intensifying competition of auto market. In addition, there are many price-off promotion and sounds of falling market which make the limited auto profit and market share more dilutive.

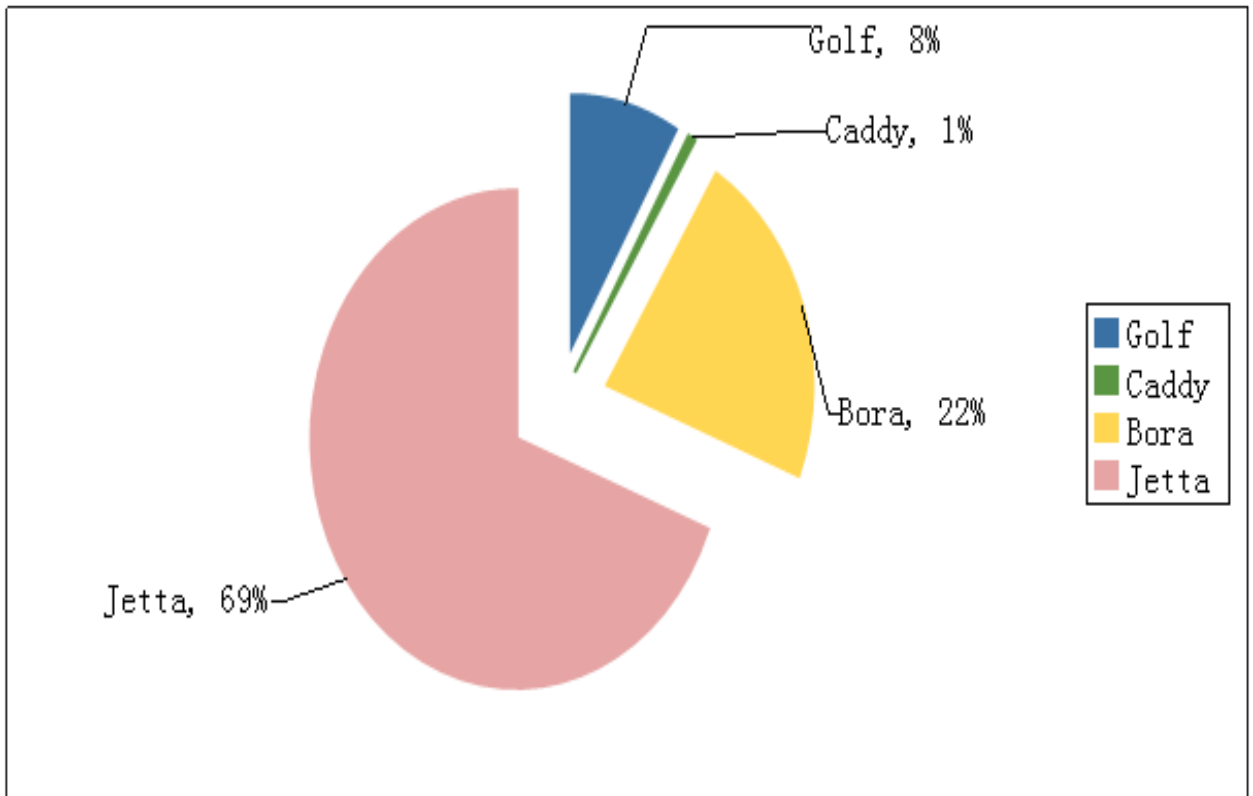
(1) The trend of the auto market shares was downwards. Though the sales volume of the cars of FAW-VOLKSWAGEN was soaring, its market shares decreased as

more and more car companies had joined into the allocation of the market shares.  
Refer to Figure 6



**Figure 6 The trend of market share of FAW-VOLKSWAGEN**

(2) The update of their products was slow. Although FAW-VOLKSWAGEN was giving their best shot also to release their new cars, the promotion effect was not good as it expected. People prefer the old Jetta cars more than all these new cars.  
Refer to Figure 7



**Figure 7 Jetta is the main product of FAW-VOLKSWAGEN**

In order to reverse the tide, the FAW-VOLKSWAGEN began to implement its new marketing strategy. The new market's orientation turned from products to sales skills and fired the first shoot in the auto market in 2007. Sales terminal prices came in vogue which laid the foundation for the implementation of the FAW-VOLKSWAGEN's new marketing strategy in the future.

However, internal management of the companies should be leaned and better controlled. To cut down the fabricating costs became extremely urgent to keep the companies' benefits as the prices reduction made huge influence on them. As the logistics costs is an important component of companies' operation costs, the FAW-VOLKSWAGEN always applied themselves to low these costs via different ways. Till now, the FAW-VOLKSWAGEN had used the logistics outsourcing for over ten years.

## ***4.2 The logistics outsourcing of FAW-VOLKSWAGEN***

The third-party logistics is a new industry emerging recent years. Nevertheless, in the early 1996, FAW-VOLKSWAGEN already had the plan of using the third-party logistics. At that time, FAW-VOLKSWAGEN had more than 300 suppliers. The costs of suppliers seemed to be too high if all the suppliers deliver the goods according to production plan mainly and the FAW-VOLKSWAGEN would suffer a huge stock if the suppliers deliver the goods themselves. The FAW-VOLKSWAGEN was torn between the two alternatives that time. However, the FAW-VOLKSWAGEN successfully solved the problem by finding a third-party agent which is called the third party logistics companies nowadays. The costs dropped as well as more detailed material delivery plan was provided by those professional outsourcing companies. The accuracy of the plan was improved which bought lots of benefits for FAW-VOLKSWAGEN without controversy.

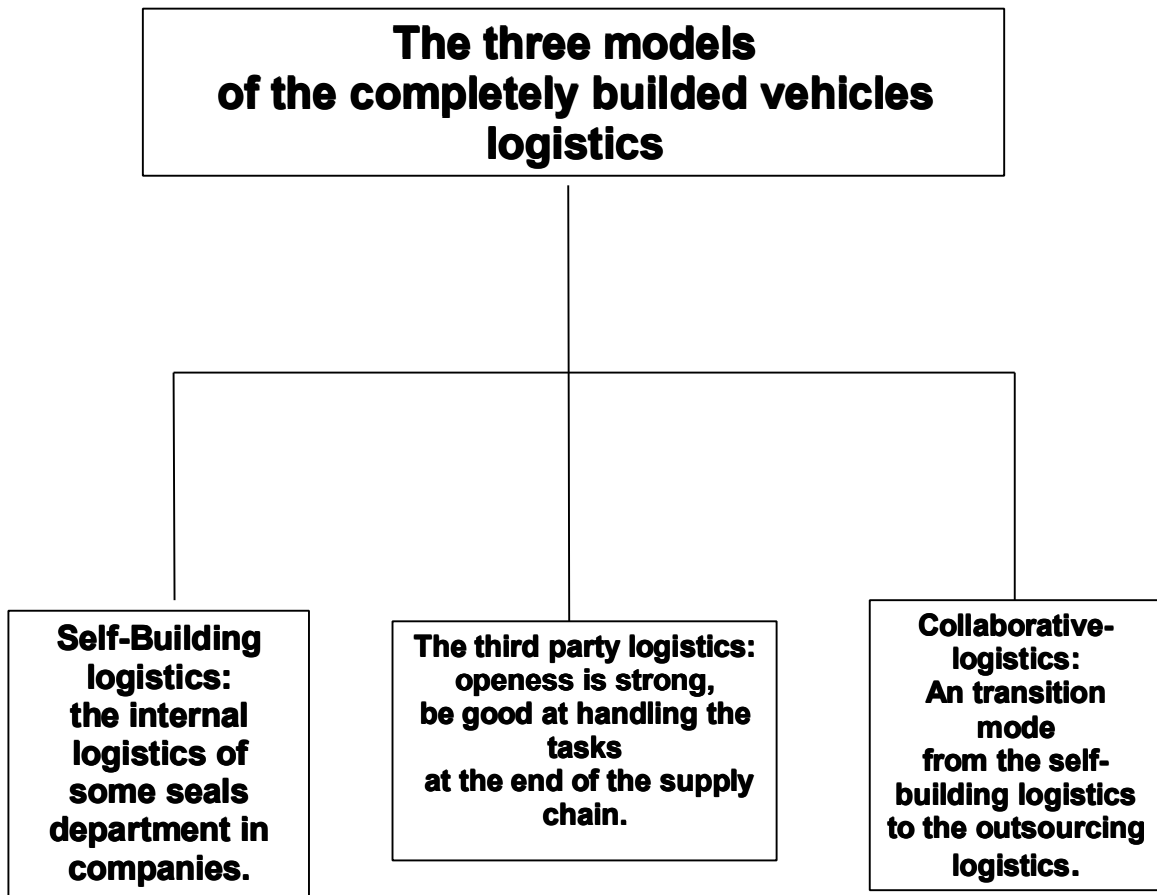
The third-part logistics outsourcing service not only included the simple business transactions, but also included some close cooperation with the agreements or contracts. As a type of the logistics outsourcing, the third-party logistics involved different enterprise entities. On the other side, it has an information system shared by three parties to make the delivery quickly, accurately and match the original plan as well. Till now, FAW-VOLKSWAGEN has developed the third party logistics system from the purchasing system to the after-sales service system. The current situation of FAW-VOLKSWAGEN's third party logistics will be introduced and the pluses and minuses will be analyzed in the following chapters.

### **4.2.1 The current situation of FAW-VOLKSWAGEN's logistics outsourcing**

FAW-VOLKSWAGEN was anxious to get rid of the loads brought by the logistics and expanded the outsourcing logistics scope as much as possible to resist the press made by other competitors. Nowadays, two main models of the outsourcing logistics are applied by FAW-VOLKSWAGEN as follows:

#### **4.2.1.1 The completely builded vehicles Logistics model**

The completely builded vehicles logistics model could be divided into three types, the FAW-VOLKSWAGEN's belongs to the second type which was quite mature at present.



**Figure 8 Logistics mode of completely builded vehicles**

The core business of FAW-VOLKSWAGEN is to manufacture and to sale cars, logistics is only one part of all the courses. Base on Core competency theory (Robert Prahalad, 1990), with their new resource consolidation strategy, FAW-VOLKSWAGEN finally transferred the completely builded vehicles logistics to some third party logistics companies and monitored as well as controlled the



logistics companies well through some information management means. What's more, we can also future divide the model into two models.

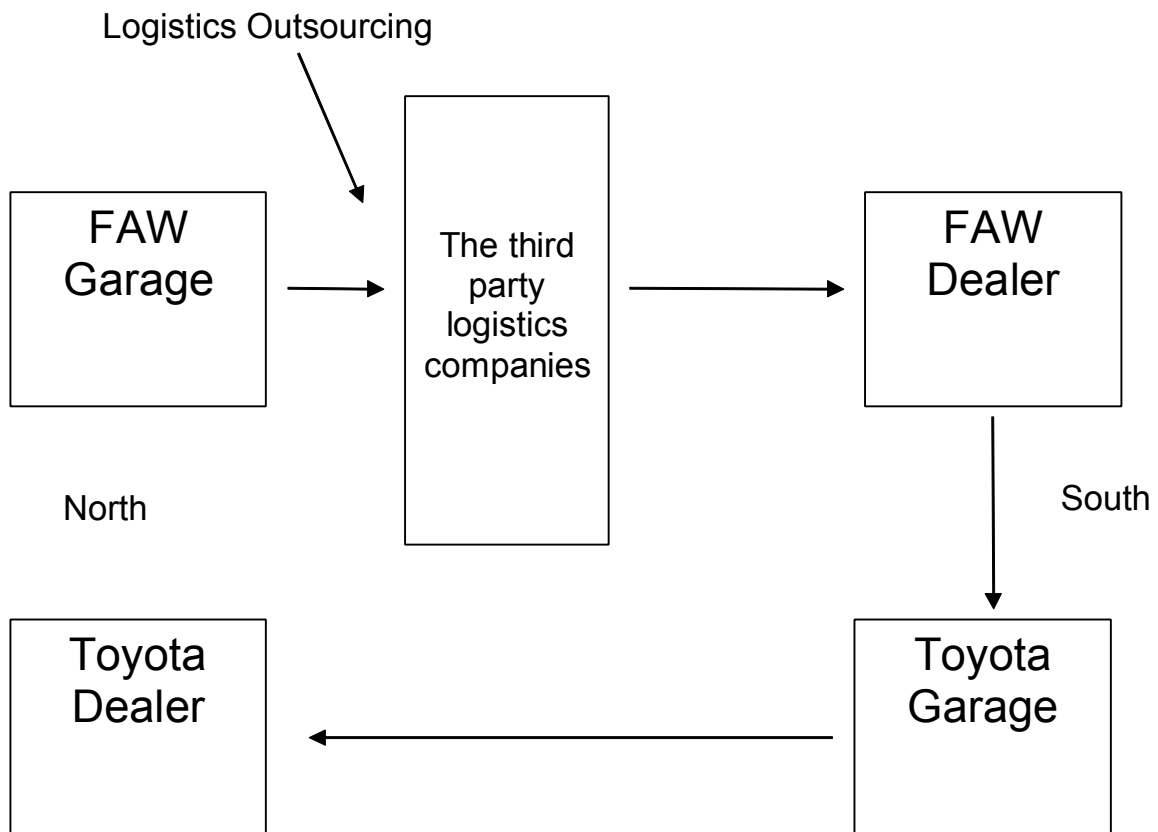
First of all, the current situation of the completely builded vehicles export logistics model. As a subsidiary company of the FAW Group, most of its logistics models was copied from their parent company. Dalian international logistics center was built and became the main third party logistics company of FAW-VOLKSWAGEN for export.

Secondly, the current situation of the completely builded vehicles logistics model for domestic business. Domestically, the production stations of FAW-VOLKSWAGEN lies in Changchun. Nevertheless, the five leading SBU (Strategic Business Unit) sales almost 3/5 of their cars to the south countries. Hence, it is of the utmost importance to reduce the transportation costs.

The radiation radius between FAW-VOLKSWAGEN's garages and the sales territories is very long. So the logistics cost would be really high if they run the logistics themselves. On the other side, compared with the benefits brought from the outsourcing logistics, the cost benefits is too good if they build their garages as well as the motorcades in the vicinity of the SBU. For these reasons, FAW-VOLKSWAGEN choose the third party logistics model and successfully achieved the transformation from the first party logistics to the third party logistics.

For example, more than 150,000 cars' logistics distribution of FAW-VOLKSWAGEN is arranged by CITIC Global Logistics Ltd from 1993. In 2003, the FAW-VOLKSWAGEN had totally switched its logistics business to the third part logistics companies.

In 2005, the logistics plan was updated. FAW-VOLKSWAGEN had found that most of the returned transportation cars from the southern cities are empty. In order to reduce the waste of the human resources and lower its costs, FAW-VOLKSWAGEN had begun to carry out sincere and rewarding cooperation with some south car companies.



**Figure 9 Vehicles logistics from North to South**

Thirdly, the current situation of vehicle return in logistics outsourcing, vehicle returning can be divided into two cases: vehicle recall and vehicle return. Vehicle recall means that the car makers come to regain the cars which have some kind of defect with the principle of being responsible to customers. While the vehicle return includes the vehicle recall of car makers and the case that the purchased cars have quality issues. Though they have the different nature, their logistics process is similar. Therefore, they are bracketed together to be analyzed.

**4.2.1.2 The components logistics outsourcing situation of FAW-VOLKSWAGEN ( Before sale )**

Because the limits of the quantity and specification, the components logistics' management seems much harder than the completely builded vehicles'. However,

it never prevents FAW-VOLKSWAGEN from using the logistics outsourcing to lower the cost and to develop its core business.

The components' logistics should also be divided into three parts according to the operation flow. This chapter will detailedly discuss the operation of the components logistics ( before sale ).

About the logistics situation of Components admission, when the components enter into the factory, the logistics operation differs if the output destinations are different.

First, we analyses the situation of the components admission logistics of the imported components. There are 20% of the components from FAW-VOLKSWAGEN's old style cars being imported and 40% of which from the new style cars being purchased overseas. Unluckily, the logistics channels of the both the imported and home-made components are widely divergent.

Usually, these imported components are delivered by containers to Dalian harbor every week. Then FAW-VOLKSWAGEN unload the goods and put them into the warehouse. Based on the calculation, there are around 500 containers' goods should be sent out when in the peak season which unnecessarily increases the logistics costs.

Then , the FAW-VOLKSWAGEN began to switch these business to the local logistics outsourcing companies. In 2004, Changchun Lujie Logistics Co. Ltd had took over all the logistics business from FAW-VOLKSWAGEN's hands. At present, Chuangchun Lujie logistics company is still offering the professional logistics services for FAW-VOLKSWAGEN.

But not all CKD (Completely Knocked Down) logistics business is past to Chuangchun Lujie logistics company. With the conglomerate integration recently two years, more partners could be selected by FAW-VOLKSWAGEN and it also can choose a better company according to its real time , places and production plans as well.

Besides , compared with the imported parts , the logistics of the home-made parts seemed to be more difficult. As the FAW-VOLKSWAGEN's suppliers located in difficult places, the FAW-VOLKSWAGEN started to outsource its components' logistics in the early 2--3 to reduce the costs. In 2004, the FAW-VOLKSWAGEN had finished its pilot work. In 2005, the outsourcing program is forced to be stopped due to its resource consolidation plan, however, the program enjoyed a rehabilitation and realized the entirely logistics outsourcing in 2006. The FAW-VOLKSWAGEN had hundreds of suppliers in china and most of which are located in the southern countries. The main transportation strategy is to collect the goods along the way. The third logistics company will provide the pick up service along the road with the consideration of the vehicle delivery route. What's more, if the suppliers are close to each other, the third party logistics company will choose an appropriate place to troop up the goods and deliver them afterwards according to the requires of the original equipment manufacturers.

#### **4.2.1.3 The components outsourcing logistics situation of FAW-VOLKSWAGEN ( After sale )**

After selling to the customer, the cars also come up with some parts logistics because of the car maintenance and replacement of car spares. The logistics outsourcing being discussed in this part mainly are spare logistics outsourcing and waste logistics outsourcing or recycle logistics outsourcing. Though the spare logistics outsourcing is not as popular within people as vehicle logistics, it really plays a big part for it is closely linked with the quality of after-sale service. The smoothness and promptness of replacement logistics affect the reputation and sales potential of enterprise. FAW-VOLKSWAGEN had earlier understanding and practice in this aspect, and took the lead in developing the logistics outsourcing activity compared with the domestic industries.

Firstly, spare components logistics outsourcing of FAW-VOLKSWAGEN. As early as 2002, the national spare support network which was build by FAW-VOLKSWAGEN with 7 third-party logistics spare centers had operated comprehensively, and constantly provided original package spare parts to hundreds of service stations of FAW-VOLKSWAGEN. It is a significant measure

that VW taken to improve the capacity of after-sale service and face the ever-fierce car market competition. The spare centers can provide original package spare parts to all cars of VW including Audi A6 series, Audi 200, City golf and Jetta series. The 7 third-party logistics spare centers are respectively established in Beijing, Guangzhou, Jinan, Wu xi, Xi an, Changchun etc. And their scope of supply covers all the service stations of VW across the country. The spare centers can provide original package spare parts to all cars. Though each center is the relatively independent third-party logistics center, their stock resource can be shared.

Secondly, waste components logistics outsourcing of FAW-VOLKSWAGEN. Waste logistics is the generic term of recycle logistics except the vehicle recall logistics. The service objects of this logistics may be the parts or devices, but mostly are the parts. Because the dumped cars will generally be split into parts and recycle them for the convenience of transportation and storage. Therefore, it is located in the broad category of parts logistics. Though it can not be precisely say that waste logistics of FAW-VOLKSWAGEN adopted the third party logistics outsourcing mode, it is the performance of logistics outsourcing from its handler of waste.

#### **4.2.2 The characteristics of the FAW-VOLKSWAGEN's logistics outsourcing**

Till now ,we can found that the FAW-VOLKSWAGEN is try his best to achieve its outsourcing plan, more details could be read in the following chapters.

On the whole, the outsourcing logistics business of FAW-VOLKSWAGEN is expanding. However, there are still many other logistics business which need the help from the third party logistics companies. Based on Zhao Qilan's theory (Zhao Qilan, 2005), FAW-VOLKSWAGEN had already stepped into the stage of strategic outsourcing which is particular over the harmony between the third party companies and the FAW-VOLKSWAGEN itself. FAW-VOLKSWAGEN transformed its most logistics business to the professional logistics companies. As

a consequence, we could not say that the FAW-VOLKSWAGEN had totally stepped into the strategic outsourcing stage.

FAW-VOLKSWAGEN still had a long way to go on the logistics outsourcing processes. The juvenility of the third party logistics' market as well as the auto market restrict its development. All things are interrelated and interact on each other.

### **4.2.3 The benefits of the logistics outsourcing for FAW-VOLKSWAGEN**

In terms of the treatise of reasons why companies will choose the logistics outsourcing by Sandor Boyson (Sandor Boyson 2005), the FAW-VOLKSWAGEN carried out this strategy in the following reasons: to obtain the first class capacity , to accelerate the increase of benefits, to reduce the costs and support the company's overall strategy in the end. With the practical situation, the FAW-VOLKSWAGEN got the following advantages:

#### **4.2.3.1 The reduction of the logistics costs and boost the core competitiveness**

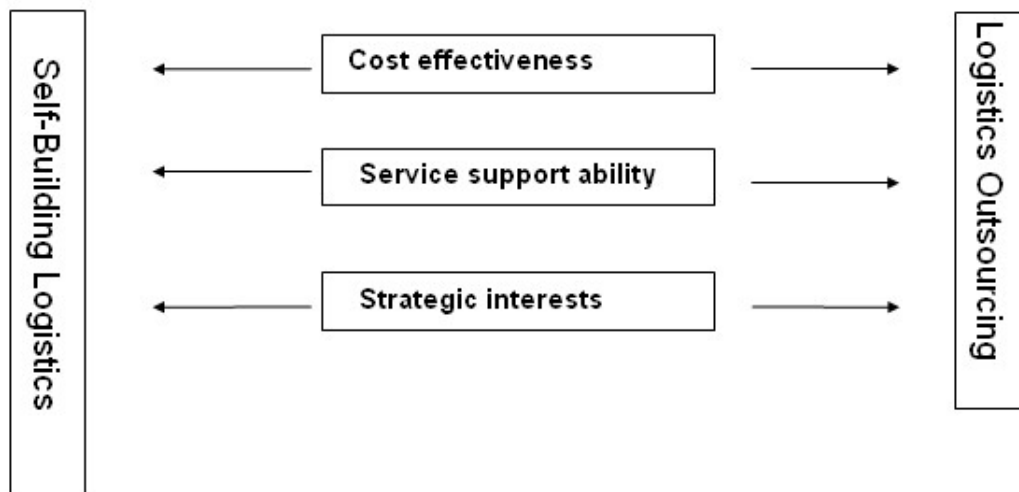
The logistics costs have great impact on the products costs and its competitiveness. Nowadays, the auto market has turn to be the buyer's market and the manufactures has increased dramatically. Due to the “bullwhip effect”, the production volume boosted although the sales volume also enjoy a certain growth every year. Under this situation, the FAW-VOLKSWAGEN's market shares dropped sharply year by year from 50% to 20% of the total volume. Actually, most Chinese people prefer the FAW-VOLKSWAGEN's cars more, but they flinched in the end in front of the high prices of FAW-VOLKSWAGEN's vehicles. So FAW-VOLKSWAGEN is urgent to reduce its costs to attract more customers and increase its market shares through this way. To separate the logistics business away from the company could reduce its costs and lower the risks so that the FAW-VOLKSWAGEN could only focus on its core business and improve the production efficiency afterwards. According to the investigations, the average performance of the logistics is highest in the auto area.

#### 4.2.3.2 The improvement of the after sales services

The FAW-VOLKSWAGEN is the first corporation who used the third party logistics model. In order to improve its after sales services, the FAW-VOLKSWAGEN has established its own spare components center. People consider the after sales services more with the strengthen of the consumer awareness. Hence, it is of great significance that the company could build a timely as well as efficient after sales services system. Now the FAW-VOLKSWAGEN has already owned its own spare components centers, they could get the spare parts with an acceptable price in any places in China which definitely improve the after sales services sharply and also is helpful for the growth of its sales volume.

#### 4.2.3.3 The cost effectiveness as well as strategic benefit of the FAW-VOLKSWAGEN

FAW-VOLKSWAGEN expanded its outsourcing logistics gradually according to some principles and will not parrot what others said always. The FAW-VOLKSWAGEN will choose the outsourcing business only if it can cause the cost effectiveness and can bring some benefits to the company itself. And of course, the costs lowered and the product competitiveness raised after the actions.



**Figure 10 The reason to the selection of logistics mode (Song Yingchun and Liang Jun, 2004)**

The above figure reflects the theoretical source of the outsourcing logistics. The enterprises choose the third party logistics companies instead of running the business themselves. At the present days , there are lots of professional logistics companies which could undertake the all the logistics activities along with the rapid development of the new industry. For FAW-VOLKSWAGEN, there is no doubt that it is a great message as the Germany cars always had the costs disadvantages when completing with other cars in the market. The concept of cost squeeze has been slowly filtering into people's minds in FAW-VOLKSWAGEN.

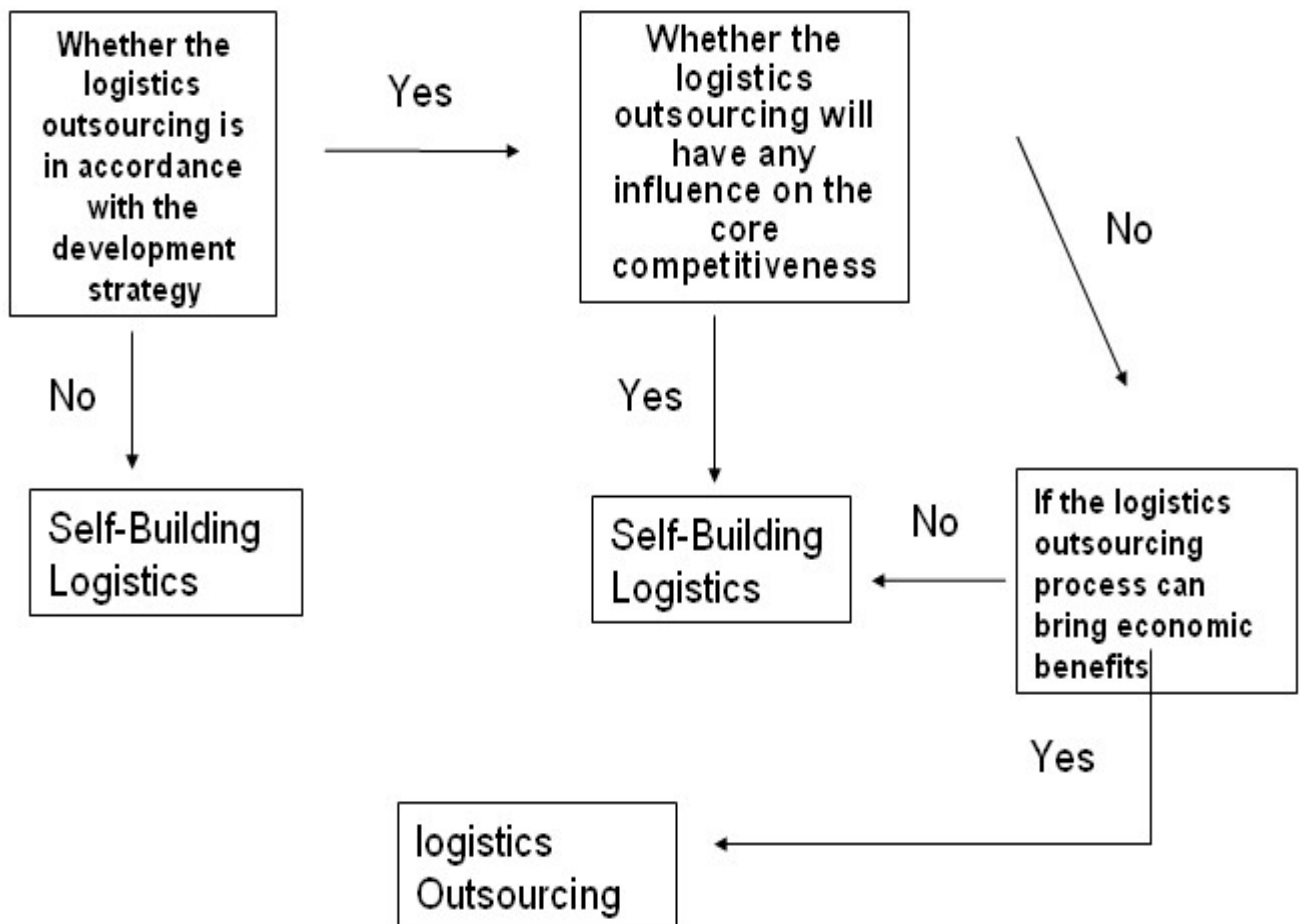
Firstly, the contrast of the cost effectiveness. To take the FAW-VOLKSWAGEN second plant as an example, it has developed into an international logistics center now and carry out the professional logistics outsourcing for FAW-VOLKSWAGEN.

Expense items	In-house logistics	Outsourcing logistics
Expense for warehouses	150 million ( including the expense for building the warehouses and investment of the forktruck, the information system , etc.	0
Labor cost	400-500 people ( RMB 4000-5000/PERSON)	20-30 people
Supply chain cost & Procurement cost	Pay the money to the suppliers according to its delivered prices	Pay the money to the suppliers and the third party logistics companies according to the factory prices.

**Comparison analysis between self-build logistics and logistics outsourcing of FAW-VOLKSWAGEN's second plant**

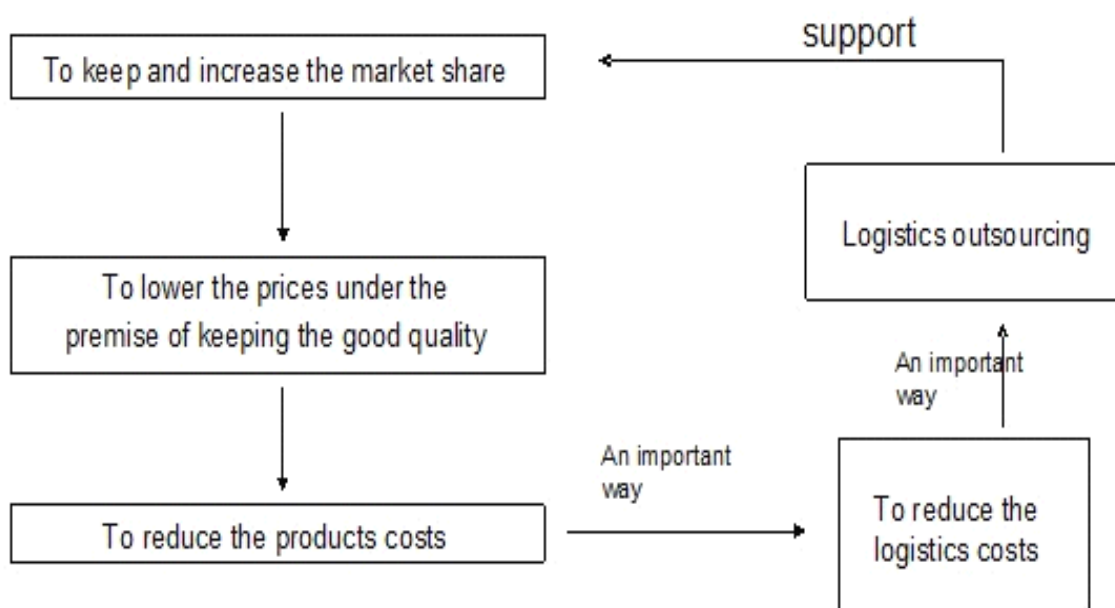


Secondly, the contrast of the strategic interests. When a company is making their decision whether they will choose the outsourcing logistics will consider as the Figure 11 showed. So did the FAW-VOLKSWAGEN. After ripe deliberation, the FAW-VOLKSWAGEN decided to switch its logistics models for the better development of the company. The decision has a far-reaching influence although its original intention is just to reduce the logistics costs and it played as a supporting role for FAW-VOLKSWAGEN and will be more important in the coming future.



**Figure 11 The decision-making model of logistics outsourcing for enterprises (Song Yingchun and Liang Jun, 2004)**

Recent years , with the rapid development of the automobile industries in China, the automobile market has also undertaken the earth-shaking changes. More and more new cars have swarmed into and the customer base have enlarged which makes the market competition become more and more intense. As the recent product strategy could not meet he requirements of the current market, the FAW-VOLKSWAGEN has faced the unprecedented challenges and the strategic orientationbe is imperative under the situation that time. Therefore, the FAW-VOLKSWAGEN has abate the prices of SAGITAR, the New Bora, Jetta etc. by a large margin and keep the prices in a long time afterwards. However , some people hold the opinion that the reduction of the car prices is like doing the milking. You can get a little every time. The milk would be milked one day if there is not any spring to supply it. In order to get one cake among all the sharers, FAW-VOLKSWAGEN planned the following strategy as Figure 12.



**Figure 12 The decision-making route of FAW-VOLKSWAGEN**

From the above chart , we can clearly see that the outsourcing logistics really provide lots of support for FAW-VOLKSWAGEN in the later period which just matches the core competence theory (Robert Prahalad, 1990). The companies should concentrate their energy on the special skill or suit which has the advantages in competition and switches the non-core business corporations. Obviously, the logistics business is not the core business in FAW-VOLKSWAGEN and more human resources as well as physical resources could be put into the research and design so that more benefits could be brought to them. All in all , compared with running the business itself, the FAW-VOLKSWAGEN has save plenty of costs after applying this model.

#### **4.2.4 The deficiency of the outsourcing logistics**

Although the FAW-VOLKSWAGEN has overcome the weakness of costs, enhance the competitiveness and improved the level of its after sales services after choosing the logistics outsourcing model as a main way to run its business, there are still a large number of potential risks and problems lying in it and we will discuss two main deficiencies which may cause these risks.

##### **4.2.4.1 The logistics controlling system is not perfect**

Now the FAW-VOLKSWAGEN has already fully realized the logistics outsourcing and even the spare parts logistics are finished by the third party logistics companies. There is a famous saying goes that, changing in quantity leads to changing in quality. On one side, the FAW-VOLKSWAGEN rely increasingly on the outsourcing logistics as it is the developing direction of all the auto manufacturing enterprises. On the other side, it will also bring lots of adverse effect if lacking of the management as well as well control of FAW-VOLKSWAGEN itself.

In fact, the FAW-VOLKSWAGEN is always keeping the improvement of the management and control of the outsourcing logistics. In its early stage, it has used the ERP system as the controlling system of outsourcing logistics but it still not

reached to a certain height till now. To illustrate, some 4S shops did not get any goods 6 months later after the new cars first come into the markets. From the case, we could get the conclusion that FAW-VOLKSWAGEN should improve its controlling system to evade the shortage of their products.

#### **4.2.4.2 The reduction of the customer satisfaction**

Though the FAW-VOLKSWAGEN has solved the problem and help customers could get their spare parts freely , there are still many other elements should be considered about such as to provide the information of the new cars for manufacturers and to communicate with customers directly, etc. Those elements are also really critical and will cause huge impact on FAW-VOLKSWAGEN if they are ignored by them always.

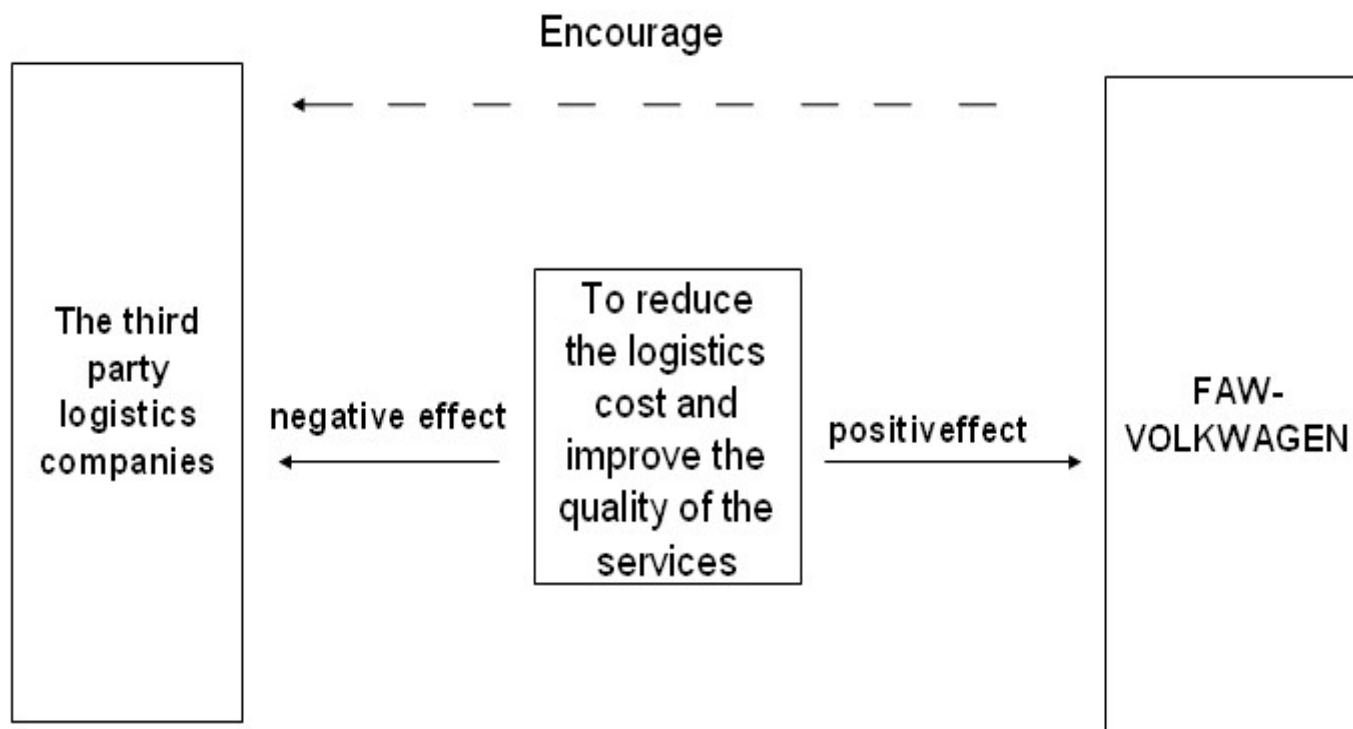
In 2006, there was a consumer complained that he was still unable to get the listed cars 4 months later in Foshan. On long terms, the logistics outsourcing will be out of control and make the customer satisfaction become less if the FAW-VOLKSWAGEN are unable to manage the third party logistics companies effectively.

### ***4.3 The analysis of the improvement of FAW-VOLKSWAGEN's logistics outsourcing***

It has been more than 10 years since FAW began to think about the logistics outsourcing to reduce logistics costs. It is said that logistics outsourcing is a continuous project in FAW. With the continuous improvement, the FAW has gradually get rid of the old way of management of state-owned enterprises , replaced by using ERP and other management systems and methods to improve production efficiency and product quality.

### 4.3.1 The relationship and risks of the logistics outsourcing for FAW-VOLKSWAGEN

FAW-VOLKSWAGEN's logistics outsourcing is a typical principal-agent relationship.



**Figure 13 The relationship between the third-party logistics company and FAW-VOLKSWAGEN**

The relationship between them like Game Theory relationship, it can be described as follow: the producers try to reduce logistics cost and improve the service quality to the best of their capacity. In the process of realizing this project, more information is accessed by the logistics providers rather than producer. However, the producers can only judge the effort of logistics providers according to the logistics cost and service quality which can be observed. Hence the problems which the auto producers have to solve are how to urge the logistics

providers to improve the service quality and low the cost in order to benefit from the logistics outsourcing.

### **4.3.2 The improvement suggestions of the logistics outsourcing for FAW-VOLKSWAGEN**

According to the analysis above, there are three main deficiencies lie in front of FAW. The logistics controlling system as well as the incentive and restraint mechanisms is imperfect which will cause huge problems in the outsourcing progress. Hence, FAW-VOLKSWAGEN could improve it to ensure the quality of the outsourcing logistics through the following ways.

#### **4.3.2.1 To strengthen of the service monitoring and the service performance after logistics outsourcing**

As the entrusting party of the outsourcing logistics, the primary method to avoid the risks is to choose the logistics suppliers carefully. Besides, the service monitoring and the service performance after outsourcing logistics should be strengthened to ensure that the third party companies could bring their professional ability as well as the scale merit into full play.

First, the service monitoring after outsourcing logistics should be strengthened. Lots of people took delight in talking about the logistics outsourcing as it embodied the economical efficiency after the social division of labor. Without a powerful logistics service monitoring, the advantage of the outsourcing logistics could not be reflected. So the FAW should also strengthen the monitor of the logistics operations and progress and develop its controlling system as well. Now the FAW have already owned information management system and started its zero inventory record through the application of the system. The FAW used its ERP system to monitor all the logistics procedures which undoubtedly saved the inventory costs enormously. What's more , as a continue improving project, the FAW could easily keep the logistics outsourcing in a high level if the logistics service operation as well as the progress could be reinforced again. Therefore, my suggestion is to build a special team to monitor the third party logistics companies and forced them to establish the standard operation procedure for all the tasks.

The members of the team could call a periodic meeting to gather all the related workers to study, to amend and to improve the SOP(Standard Operation Procedure) (Wang Limei, 2006) to make sure the security as well as the high efficiency of all the operations.

On the other side, the FAW should also tighten up the evaluation of the service performance such as whether the third party logistics service has reached to a prescriptive level etc.

#### **4.3.2.2 To strengthen the relationship management after implementing logistics outsourcing**

FAW-VOLKSWAGEN needs to strengthen the relationship management. They could use the normal strategy to establish the long term relationship to encourage the agents.

The third-party relationships could be looked as a game relationship. And as the entrusted agent, the auto manufacturers should let the logistics supplier receive this message and make them release the guard to keep them from violating the rules. The logistics suppliers will be the biggest loser if the third logistics suppliers did not follow the rules or could not bring any benefits for them. At the same time, the FAW-VOLKSWAGEN could also let the listing system manage this relationship. On one side, the FAW-VOLKSWAGEN need to carry out a go-ahead marketing strategy; on the other side, it should let the partners know the best inspection system and let the reputation system servers. What the FAW need to do is to make the method exist and develop gradually by this relationship management.

#### **4.3.2.3 To increase the interaction and the communication with the customers**

There is famous saying goes that the consumer is the king in the auto market. FAW-VOLKSWAGEN also always focus on the customers most without exception. All the days along, the FAW-VOLKSWAGEN paid great attention to the management of customers relationship and set up the customer service center to

deal with the customers complains and feedback the consumers timely to improve the satisfaction of them. However, the communication will reduced after choosing the outsourcing logistics and FAW-VOLKSWAGEN may not give the feedback to customers in the very first time. As a consequence, the FAW should increase the interaction and the communication with customers to maintain the good relationship and make up for the deficiency of the outsourcing logistics. FAW-VOLKSWAGEN could let the third party logistics companies play the role of the coordinator through training and recommendation and on the other side let the customers get familiar with the logistics suppliers to establish a trusting and harmonious relationship

#### ***4.4 Summary of case study***

FAW-Volkswagen has explored the logistics outsourcing for more than ten years. The company has always taken it as a continuously improved project, but it still does not fully enter the stage of logistics outsourcing. The main reason is the imperfect development of third party logistics services in China. What can FAW do under the real situations of current logistics outsourcing is to give full play to existing logistic outsourcing through appropriate incentives and constraints. On the one hand, it can reduce logistics costs. On the other hand, it can assist the core business and enhance the company's core competitiveness.

### **5. Conclusion**

In the late 20th century, especially in the 1990s, with the rapid development of modern science and technology and the acceleration of global economic integration, logistics has gradually become "the third profit source" in the new economic era. Logistics outsourcing is one of the top priorities for enterprises to reduce operational costs, develop core competitiveness and gain competitive advantage.



Logistics is not only the external condition of the survival and development of enterprises, but also the necessary important activity of enterprises. Therefore, doing a good job on logistics management is an important matter for all enterprises. Logistics outsourcing is the long-term, strategic, interpenetrating and mutual benefit business delegation and contractual implementation. To some extent, the proportion of third-party logistics to total logistics reflects the logistics development level of a country. Although the logistics outsourcing in China has enjoyed rapid development in recent years, it is still at the initial stage compared with that in developed countries. Therefore, we need to draw on the experience of foreign advanced logistics outsourcing concepts, integrate with logistics resources, train logistics personnel, and try to catch up with developed countries in the next few years.

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