



**FACULTY OF ENGINEERING
AND SUSTAINABLE DEVELOPMENT**

Supplier Management in Chinese State-owned enterprises
*A case study of bounded relationships from the perspective of
buyer*

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Abstract

Motivation: Chinese state-owned enterprises (SOEs) play an increasingly role in Chinese economy although, its management for its suppliers are yet not in an effective manner in the situation mentioned in this case. Even though the Kraljic (1983) matrix is commonly used as a guideline for how to manage suppliers, there is a lack of studies based on Kraljic that have analysed the situation where the buyer are bound to and unable to switch its suppliers.

Purposes: the purpose of this paper is to first to analyse the situation in the case by applying the Kraljic matrix, and second to explore the major challenges in terms of cost, communication and supplier selection in dealing with the supplier relationships. Specifically the analysis concern how factors like political risk, “Guanxi” and CSR restrict the way the case company manage its suppliers. In addition, appropriate supplier management strategies are formulated based on the findings.

Research methods: in order to achieve the purposes of this paper, first an extensive literature review related to this paper was conducted. Afterwards, a case study of a subsidiary of Sinopec was carried out. The discussion concerns different types of the suppliers who are categorized according to the Kraljic matrix. Interviews with these two managers are major source of data collection.

Findings: as indicated from the purpose the findings from the case confirm that Kraljic matrix is inadequate to capture the case of Chinese SOEs in this paper. The subsidiary does not either select or evaluate suppliers based on cost efficiency. Further, it is shown that political risk “Guanxi” and CSR influence the way the way the firms manage its suppliers.

Implications: training design including all levels of managers and exploiting the use of “Guanxi” is two of appropriate strategies recommended for improvements in current situation.

Key words: supplier management, supplier relationship, supplier strategies.

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Certainly, the University of Gavle offers the academic resource of the latest development in all areas so that I am able to search for the exact information I need.

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Chen li

Terms of definition

SOEs: stated-owned enterprises

Sinopec: China Petrochemical Corporation

ERP: enterprise resource planning

TCO: total cost ownership

ASP: Aspen Retail

RSO: resources optimization

CSR: corporate social responsibility

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1. Introduction

1.1. Introduction of Sinopec and its logistics reform

Based on the former China Petrochemical Corporation, the current China Petrochemical Corporation was established in July 1998. Due to its solely investment by the state, it is characterized as state-owned company, in which the state holds the controlling share of 75.84% , international shareholders with share volume of 19.35%, and with 4.81% share from domestic investment. Sinopec Group has a paramount position in Chinese Petrochemical industry and controls the up-stream and down-stream of petroleum activities from oil refining to transportation to its petrol stations network, playing an important role in national economy, ranked the 7th in Fortune Global 500 in 2010 (<http://www.sinopecgroup.com/english/Pages/AboutSinopecGroup.aspx>).

Nevertheless, such a supreme, state-owned, and high-productive enterprise is facing many bottlenecks like high running cost, inefficient organization, ineffective logistics, to name a few by the interviewee-Mr. Hu. During the interview with him, he explained that Sinopec had been conducting logistics reform since 2003 with three phases in order for an effective logistics operation in day to day business. The first phase accompanied with the establishment of local and central logistics center which, as its name indicated, concentrated the logistics management in a division. This largely changed the way it did in the past that the petrol delivery could be transferred by actual consumption amount as opposed to only planning. But here raised another problem, the center usually found it difficult to deliver the exact volume of petrol as requested by various petrol stations because even themselves were unable to report how much they lack and how much they actually need. Sometimes they request petrol delivery with too much petrol existence in oil tanks, while most of time they only call for petrol whenever they are going to run out of in a couple of hours. Hence, it is useless to merely set up logistics centers without actual control. Under this circumstance, Sinopec introduced the ERP system to assist logistics center in monitoring the supply of petrol and incorporated sales with petrol transportation as the second phase. Bringing this IT technology in addressing issues as mentioned above, to some extent, should be effective from Hu's experiences. He verified the fact that the disorder in the past for logistics management is largely improving in recent years because petrol stations are unlikely to ask for petrol as they like. Logistics center will automatically deliver petrol based on their sales as opposed to their claims. The last phase is proceeding with the optimization and management of suppliers (transportation providers), which is the most tough section in the reform project. As it is defined, Sinopec is a state-own company with certain political attribute, thus it is unable to completely to abandon either its former attached companies or employees as it develops. If it were not to so, thousands of its laid-off workers could provoke social unrest, so would other state-own enterprises in China.

1.2. Introduction of this paper

Sinopec is characterized as state-owned corporation group although there are other shareholders from the external. To some extent, its running and management has represented most of state-owned companies in China. In another word, the study for Sinopec could somehow reflect its current problems to other companies like it because they are in common in certain aspects. Nevertheless, the company like Sinopec with unbeatable position in various industries constitutes the basis of China economy, and plays profound role in the development of China's economy. On the one hand, the features of China's economy and politics hatched these nationalized companies, functioning as fundamental elements for economic development; on the other, these stated-owned companies usually perform the responsibilities of economy reform. But unfortunately they usually are unable to shake off the political influence from central or local government (Hassard et al. 2010). Hence, their effective operations and sustainable development will affect China's economic development in the long run. Todeva and Fu (2010) discussed the multiple investment projects in petrochemical industry and international business operations in China. Canling (1997) wrote the paper about internal auditing work at Sinopec to further discuss the theory of internal audit at such a state-owned enterprise. But few have mentioned the management of suppliers for Sinopec, particular in the situation where some of suppliers are unable to be switched off. Based on this motivation, this paper will narrow the topic down to the bounded situation in this case in combination with supplier management and strategies. In addition, Kraljic matrix will be reflected to the situation of this case.

As mentioned from Sinopec logistics reform, it is now experiencing the third phase: the optimization and management of suppliers. Even if the logistics reform had brought merits to Sinopec development like improvement in cost efficiency, sales promotion and system optimization, but the current bottlenecks like low effectiveness of organization and management for transportation providers are still left to handle. Whether or not that Sinopec is able to cope with the relationship between its suppliers will either enhance or slow down its competitiveness and future development according to the interviewee Mr. Hu. Another interviewee Mr. Chen claimed that sales are a comprehensive job which needs different parts to be in collaborative manner. Yet, logistics plays increasingly important role in sales. The level of management for suppliers would somehow determine the degree of development of Sinopec. Thus, it is significant and urgent to study the relationship between Sinopec and its suppliers with empirical example from one of its subsidiaries in city of Guiyang.

In the field of outsourcing, Tian et al. (2008) pointed out the good reputation of third-party logistics is the key to customer's trust and build relationships in china. Lau and Zhang (2006) studied that poor transportation management and control with local policies restricted china's outsourcing development. Jones (2009) further

discussed the impact of culture for outsourcing development in China. Nevertheless, very few of them have focused on the relationship, which bounds a company's development but is unable to be discarded, particular for these state-owned enterprises (SOEs) in China. Kraljic (1983) put forward a matrix that describes the relationship between company and supply market risk. It provided the direction to handle this bottleneck in certain situation. Hence, this paper based on interviews will discuss how to manage its suppliers and try to formulate strategy specific to this situation. Likely, other state-owned enterprises like CNPC (China national petrol corporation); CNOOC (China national offshore oil corporation) might meet the similar bottlenecks in such situation as Sinopec has. The study for issues in Sinopec might be reflected to these or other corporations as mentioned above.

The thesis could be separated into several sections. First, a short introduction for Sinopec and its logistics reform as mentioned could justify what this paper is about and help the author narrow the topic down to a specific field. Second, the purpose of writing this paper is able to be induced from introduction and motivation in the following section. Third, the literature review mainly concentrated on supply chain management, outsourcing, Kraljic matrix will be demonstrated in theoretical framework section. Fourth, the methodology applied for this paper is based on interviews from two managers in the field of logistics and sales at the subsidiary of Sinopec. Questions and answers will be formulated in the findings section in accompany with analysis at subsequent section. In the findings section, issues and bottlenecks would be found in details. Specific situation with its indigenous problems could be discovered. Fifth, discussion inspired from findings in combination with literature review will be elaborated afterwards. Possible strategy specific to this situation could be formulated during discussion. Finally, a conclusion overviews purpose of this thesis with limitations is supposed to reflect in this paper.

2. Research questions and purposes

According to the introduction section, the fact faced with the subsidiary of Sinopec is that it has to handle the relationship between itself and its suppliers, while currently some of its suppliers are its previous attached companies.

The purpose of this thesis is to add knowledge on outsourcing and supply management challenges for the buying firm when having suppliers who are bounded to the outsourcing firm and could not to be separated.

The research questions on focus are:

- I How could this situation be characterized by using the purchasing and supply management framework of **Kraljic matrix** (1983)?
- I What are the main challenges that affect the supplier relationship in this case?
- I How do “Guanxi”, political risk and CSR affect the relationships and the management of suppliers in such situation?
- I What supply management strategies could be used for improvements in this case?

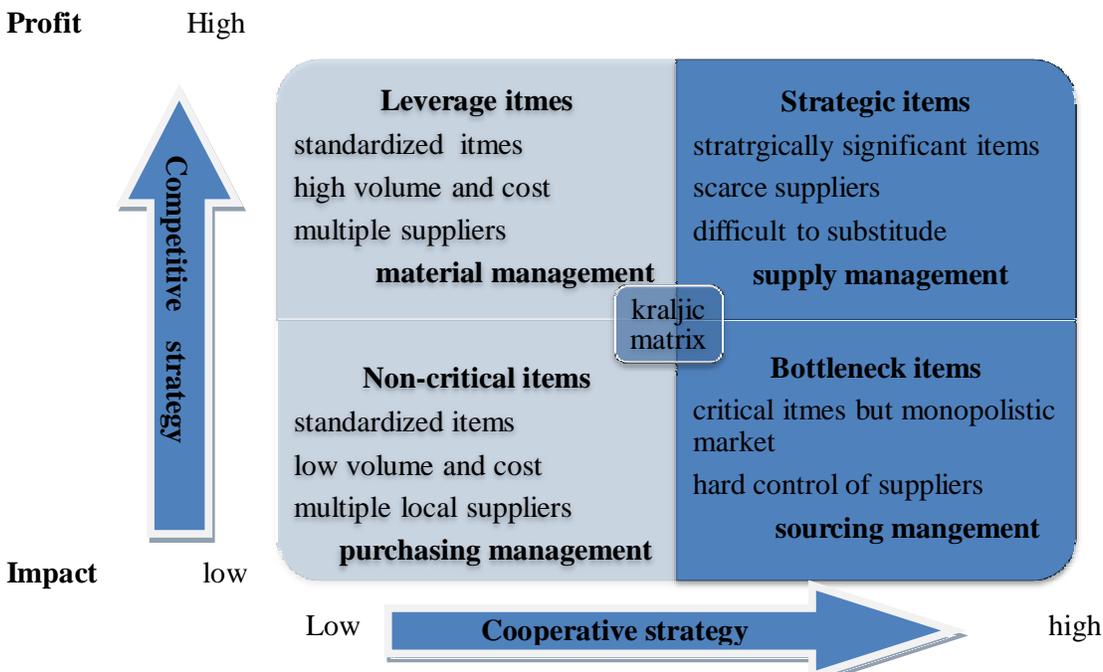
3. Theoretical framework

Theories of this paper are mainly focused on the field of Kraljic matrix, outsourcing management, supply chain management, relationship and strategy. In the first subsection, a literature review will be concentrated on Kraljic matrix and supplier dependence on how to cope with the relationship with suppliers. Second, the area of outsourcing and supply management will be elaborated with supplier’s selection and relationship in management in combination with supplier’s management strategies. The third subsection literatures are about other factors influencing the situation in this case. The method of how to proceed with literature review is elaborated in chapter 4.

3.1. Kraljic matrix and supplier dependence

3.1.1 Kraljic matrix about how to deal with suppliers

Described by Kraljic (1983), it is time for companies to substitute the perspective only focusing on purchasing into the concept of supply management to its own advantage. Supply management shall effectively identify and cope with the uncertain situation of relationship with suppliers. He mentioned that a company has to first understand what the strategic items to it are, and then how many suppliers it is able to choose in market so that different strategies could be formulated specifically. In order to achieve this objective, the company needs to categorize purchased items according to volume, quality, and supplier risk and so on. Hence, those items could be categorized into the area of strategic, bottleneck, leverage, and noncritical items. See the table below:



Supply risk

Diagram 1: Kraljic matrix (1983)

Second, the company is supposed to carry out the market analysis through deliberate evaluation for both its strength and that of its suppliers. Third, after definition of what are strategic items as demonstrated in the table above, the company might be able to formulate strategies specific to various suppliers in different items in the matrix, which describe the relationship between company strength and supply market strength. Once the company's strength is high but the supply market strength is low, the company would be aggressive in the position of negotiation surmounting the obstacles without much compromise and vice versa. Nevertheless, its action either by exploiting its supply market or balancing these two strengths, or diversifying the market has to be based on the specific situations; otherwise it will face the risk of losing its suppliers. Hence, a careful study on its supplier concerning availability, competitiveness, to name a few, is increasingly important and necessary rather than only concentrate on its market research. The following table will present the relationship with supplier based on three different approaches in more details.

Policy	Exploit	Balance	Diversify
Volume	Spread	Keep or shift carefully	centralize
Price	Pressure for reduction	Negotiation opportunistically	Keep low profile
New suppliers	Stay in touch	Selected vendors	Search aggressively
Substitution	Stay in touch	Pursue good opportunities	Search actively
Logistics	Minimize cost	Optimize selectively.	Secure sufficient stocks

Table 1 Source: strategic implication from Kraljic (1983)

Park et al. (2009) formulated a SRM (supplier relationship management) framework based on the concept of integration to enhance its efficiency and effectiveness. They further elaborated the steps in the generation of purchasing strategies according to Kraljic (1983) and discussed specific strategy in the situation where supply-risk is low or high. All in all, they proposed to establish a framework by the following steps: first, construction of purchasing strategies; second, selection of a supplier from the criteria of quality, cost, and technology; third, collaboration through information sharing and communication; fourth, assessment and development for suppliers as the criteria in selection; fifth, continuous improvement for supplier performance. Thus, the solution based on the framework could be worked out in the development of suppliers.

3.1.2. Supplier dependence and power

Carr et al. (2008) discussed supplier's dependence from their participation and performance. He mentioned that supplier training and development post positively impact on supplier dependence. Either to send managers to supplier's work place for training or the opposite could improve their quality, flexibility ultimately. In which

case, the degree of their participation in buyer's business will be enhanced. Once suppliers have to depend on buyers, they will comply with requirements made by buyers. Sanzo et al. (2007) studied the relationship between buyer's market orientation and attitude toward supplier's loyalty and dependence. As he referred, dependence is the key factor for a firm's loyalty and the necessity to maintain the relationships with its suppliers. He concluded his finding in the ways that both long-term and short term relationship are unable to consolidate tightly with those buyers who adopt the strategy of market orientation. Buyers usually select suppliers who are able to provide the best solutions both in quality and cost for their customers as oppose to how long they have been doing business.

Caniels and Gelderman (2005) did an empirical case study on each of the categories in the Kraljic matrix. They explained the relationship between power and dependence with their empirical test and put forward the hypothesis in different items. For example, in leverage items, buyer dominates the relationship; while in bottleneck items, supplier dominance is higher than other items, to name a few. Nevertheless, they challenged the belief that in strategic items according to their research, buyers and suppliers are interdependent on each other, which means the power and dependence is balanced. As suggested from their study, even though buyers are advantageous to suppliers in power and dependence, they are also supposed to look for alternative suppliers. Meanwhile, switching cost is also of significance to buyers in the relations of dependence. ..

3.2. Outsourcing and Supply chain management

3.2.1 Defining purchasing and supply management processes

According to Cousins et al. (2008), purchasing and supply chain are defined in a process including several couples of relationship like make-buy decision, sourcing strategies and supply market, supplier selection and development. Specific to this paper, some of these relationships will be defined as follows:

- Make-buy decision: it defines the boundaries of the company's operation. The company has to decide which to buy or leave to others through its general objectives.
- Sourcing strategies and supply market: based on his book, he introduced Kraljic matrix as the main instrument for developing sourcing strategies, and he mentioned that power relations, market availability, and buyers' power to name a few are considerably important factors in formulating supply strategies.
- Supplier selection: generally speaking, supplier selection has been proceed with four main stages, first is to initiate supplier qualification; second is to agree dimensions standards; third is to acquire associated information; last is to make selection. Certainly, more requirements are included in this process.

- Supplier development: buyers will proactively participate in the activities of their suppliers in order to reach the requirements or relevant performance of buyers.

3.2.2. Suppliers' selection in terms of cost

According to Van Weele (2002), suppliers' selection contains a few steps like decision for type of contract and payment term; quotation and evaluation. He also discussed the importance of contract in terms of specification of prices and delivery in selection. He listed the types of payment like fixed price, cost-plus, cost-reimbursable and price-adjustment. Furthermore, Cousins et al. (2008) mentioned that total cost of ownership (TCO) takes all the cost in the supply chain into consideration in the level of supplier, order and unit within the frame of TCO matrix. All the activities associated with the generation of cost are required to be identified by the firm. Micheli et al. (2009) discussed that cost reduction is not only dependent on corporative governance like quality control, organization, and contract management but also on risk management like delay, information system compatibility, safety to name a few. These risks are beyond the scope of traditional TCO, and should be incorporated into cost decision. Mudambi (1995) mentioned that a good communication between buyers and suppliers can lower the cost of transaction and the risk of switching current suppliers. As he implicated, both suppliers and buyers need to invest the mutual relationship in order for benefit and buyers are likely to lower the cost of supplier by keeping high level of communication with its suppliers.

3.2.3. Outsourcing management relationship

Tian and Daniel (2008) discussed how to build trust by logistics provider based on the survey of most Chinese logistics providers. They put forward that in order to establish a long-term and stable relationship with logistics user, logistics providers are requested to gain users' faith by promoting its reputation; invest relationship through open and effective communication; share information efficiently; and satisfy users by achieving objectives. All of this is significant to win the customer's loyalty and long-term relationship. Lau and Zhang (2006) conducted the research for drivers and obstacles for Chinese outsourcing practices. They found out cost reduction or saving could be deemed as economic driver for development of outsourcing practice. In addition, with the help of outsourcing practices, they could focus on their core competence; raise their flexibility, access to technology. Nevertheless, the following obstacles also restrict Chinese outsourcing development. Incapable provider with inability to effective transportation is major problem in Chinese outsourcing provider. Meanwhile, loss of control, poor transportation and IT infrastructure are also critical constraints to Chinese outsourcing development as compared with the western countries. Hong, et al. (2007) revealed the fact that Chinese logistics provide are much dependent on transportation and warehousing business but the importance of lead time performance is ignored to a large extend. On the contrary, value-added service and logistics information

management are insufficient. He used the survey made by the logistics center in china and discussed through questionnaires. In his conclusion, he found that most Chinese logistics provider are confined to cost strategy rather than providing comprehensive service in value added chain and information management. One of the possible solutions for most Chinese logistics provider is to establish strategic alliance in order for capital capability.

3.2.4. Suppliers management relationships

Power (2005) made the literature review about SCM integration and implementation. The literature review was formulated into supply chain integration, strategy and planning, and implementation. Within the area of supply chain integration, complexity in information flow could be solved through effective application of information technology, hence generate the use of software like ERP system. Meanwhile, the effective management of supply chains is built on a sound relationship with suppliers. Open communication, trust are significant to partnership, and the role of suppliers are needed to be characterized as arm's length or strategic partner. Information sharing is stressed in partnership. While in the area of implementation of supply chain, its complexity necessitates the new focus on a certain field either through organizational change and process redesign. Hence, certain framework like SCOR could be applied in implementation. Cited by Lundin (2010), misalignments resulted from hidden information and actions, badly designed incentives and goal conflicts in supply chain management could be solved by redesigning contracts, sharing information, empowering trust, to name a few. He proposed a framework with three steps within a loop presenting the symptom caused by misalignments. The first step is to find out changes in the supply chain, second is to perceive those misalignments and third is to identify symptoms.

3.2.5. Supply chain management strategy

As has been defined by Abrahamsson (2003), the logistics platform is a homogenous part of logistics system in which the decisions and control are able to be centralized by the organization and includes logistics operations, a physical structure and its activities as well as information. Treville (2004) pointed out that the integration shall include the supply chain integration and demand integration. However, to realize the platform integration, it is important to seek the integration respectively. The information technology and the third-party logistics as the bridge for the integration are mentioned by Murphy and Wood (2009).

In order to elaborate strategies in logistics, we will first understand the concept of strategy and supply-strategy making. According to the Nollet et al. (2005), the development of strategy has experienced more than 40 years and it is still on-going, while, the concept of strategies are concentrating on individual's involvement,

challenges practitioners and academia. The integration of strategies and the strategy-making process have been contemplated in three different levels, corporate strategy, business strategy and functional strategy, within which the former two are long-term-oriented, focusing on the continuity and integrity, while the functional one is medium-term plan, emphasizing on concrete and specific actions. The supply strategy-making, of course, will be framed and coincided with corporate and business strategies. Hence, as the functional strategies, supply-strategy will be taken as the source for competitive advantage through integration of strategy-making process within the hierarchical decisional framework. As Seuring (2009) put forward the 5Ps in the operation management. In order to facilitate the elaboration, we might look at the table 1 below, which demonstrates the original 5 Ps in operation theory and correspond them in supply chain.

Decision area	Decision taken
Products and services	Products and service offered, performance dimension, quality, speed, flexibility, etc.
Partner and partnerships	Selection of partners, building of partnerships, profit and risk sharing, etc.
Plants and stocks	Plant networks, logistics stocking holding points, inventories.
Process	Decoupling points and postponement
Planning and control	Information sharing, smoother material flow

Table 2: The five Ps of supply chain strategy

With the development of the dimension for material and information and the phase including product design, production or logistics and goods returned, the product-relationship matrix could be worked out in the following table 2.

Decision field of the product-relationship-matrix	Five SCM-Ps incorporated
I. Strategic configuration of product and network	Partners and Partnerships
II. Product design in the supply chain	Products and Service
III. Formation of the production/reduction network	Plants and Stocks, Process
IV. Process optimization in the supply chain	Process Planning and Control
V. Process optimization in the return chain	Process Planning and Control

Table 3: relating the product-relationship-matrix to focus

Therefore, based on the product-relationship-matrix, the aim of performance frontiers application could be much related to strategic product planning as well as partner.

3.3. Factors influenced Chinese business relationship (state-owned enterprise)

Before we start to explore those factors affecting business in China, let's first make an overview about the dimension of culture so that the following factors are easier to understand. According to Hofstede's dimension of national culture (cited by Senior and Fleming (2002)), it contains the five aspects: 1). **Power distance** is a matter of dealing with equity. Yet, China is a high power distance country. That is to say, inequities of power and wealth within the hierarchy are accepted by the top and the bottom; 2). **Individualism and collectivism** is a matter of relationships among individuals. China is a collectivism society, which means that the relations among individuals are closed to each other or the groups they engaged. Thus as individual in China, he or she won't have such freedom of action in contrast with people in others. 3). **Masculinity and femininity** is a matter of gender issue, which refers to sex's equity. 4). **Uncertainty avoidance** is a matter of time attitude, which takes the time as risk in people's daily life. 5). **Long-term and short term orientation** is a matter of belief of truth. Thus, according to those definitions above, the following factors are able to be proceeded with.

3.3.1 "Guanxi" in Chinese business practices

Cited by Szeto (2006), "Guanxi" is kind of interpersonal relationship with the features of favor, trust and interdependence influencing business dealings. He also suggested that social networking should be taken as a strategy in doing business in China. Also, a company's CSR needs to be combined with business ethics like "Guanxi". According to Lei (2005), the success and prosperity of most business are highly dependent on a sound "guanxi" network since the open policies. He discussed "Guanxi" in China are constituted by four levels and the last level call "xinren" (credit) will ultimately influence the rule of the law or written regulations, making them ineffectively and ignored. Based on the research made by Li and Wright (2000) on oil firms in China, many suppliers have such relationship (Guanxi) with oil firms. They provide the purchasing firms with products even without contract or bank guarantee, and these firms are in return only concentrating on purchase from them. They are tied with each other through "Guanxi". They found that "Guanxi" in China exists both in individual lives and organizational level, maintaining through personal "face" and social status. According to Chan's findings (2005), the word "Guanxi" is built on the block of face, which has a multifunction in the society. On one hand, it can promote one's public image, social diplomatic capability, prestige to name a few; on the other, it also exhibit one's social standing and privileges. Therefore, saving one's face has become a primary target in people's society rather than losing it in public.

3.3.2. Political influence for state-owned enterprises

Hassard et al. (2010) studied the organization restructure of these companies pointed out the political factor has hinder the rapid development for these firms. He mentioned that there are four major obstacles in the reform of Chinese state-owned enterprises. One is unclear property, second is enterprise debt, third is surplus labor, and the last is social welfare burden. Nevertheless, reduction for surplus labor is becoming increasingly significant to other three reforms as mentioned because Chinese government treats it as one of the most serious issue in social unrest. Hence, sub-companies as a realistic tool in absorbing unemployed state-owned workers during seem rather significant. According to Dongwei (2005), he mentioned even the government will remain political control for those newly-privatized state owned enterprises. O'connor et al. (2006) put forward that political constraints remain the leading force in organizational change and design for Chinese state-owned enterprises. They added that in the situation of socialist market, SOEs (state-owned enterprises) are supposed to have two types of capability, one is to transform into efficient enterprises; the other is to handle political limitations but in most cases political constrains are the dominance to drive the organizational change and reform. Nolan and Zhang (2003) discussed the development of Chinese SOEs at the background of globalization. They listed some of the issues raised in Chinese SOEs like policy inconsistency, bureaucracy in organization, planned economy, and ownership, to name a few. They appeal Chinese political leaders who should take the difficulties in political environment into consideration so that Chinese SOEs would be more competitive in the situation of globalization.

3.3.3. Company's CSR (corporation social responsibility) and technology application in logistics

According to the Sinopec's social responsibility report (see appendix B), it has been concentrating on its responsibility in terms of petrol supply, HSE (health, safety, and environment), employees development, and social donations. Specifically, it has to produce the petrol and other forms of oil in a manner that it guarantees the social needs for petro consumption with the attention to environmental protection, employees and equipments safety and health. During the course of corporative governance, employees' human rights and welfare are supposed to be protected and the company is also needed to make contributions to the society both at home and abroad. Baden, et al. (2009) mentioned that suppliers tend to be engaged in CSR under the pressure placed by buyers. If in the beginning they are forced to reach the specification for the CSR issued by its buyers, then this would be an effective strategy in achieving buyers' social responsibilities as the whole. Carter and Jennings (2002) discussed that purchasing social responsibility (PSR) is associated with supplier's performance. The more involvement that a supplier engaging in PSR from purchaser, the more positive cooperation and trust will be established, hence the increase of performance for the whole channel.

Jiming (2004) discussed the Sinopec reform and IT development. He mentioned since 2000, Sinopec was proceeding with ERP system reform, which combined different resources in business for planning and decision-making. As he pointed out in the future, integrated ERP system platform and Manufacturing Execution System (MES) will be set up to enhance Sinopec's competitiveness in globalization. Nevertheless, Lin (2007) mentioned organizational encouragement, quality of human resources, environmental uncertainty, and governmental support for logistics service providers are essential elements to influence Chinese logistics innovation. He mentioned that innovative technologies are highly critical in speeding up Chinese logistics development. Meanwhile, the external factors like environment uncertainty and government support should also be considered in conjunction with the internal factors when developing logistics in China. Thus the innovation in logistics could be achieved.

3.4 The summary of the literature review

In this chapter the spectrum of literature review has extended supplier management to other fields like political and other socio-culture elements."Guanxi" has penetrated into every aspect of business in China, and supplier management is no exception. In addition, the effect of "CSR" could be also use in supplier relationship. These three essentials have provide an insight to the source of problem like cost efficiency, mutual communication and supplier evaluation.

Based on the purposes of this paper, Kraljic matrix in the supplier management and dependence is discussed with a SRM (supplier relationship management) framework of Park et al. (2009). Outsourcing and supply chain management has focused this broad definition on the process of relationship management at the level of outsourcing and suppliers management. As one of the major challenges in the paper, supplier selection in terms of cost was also put forward in this chapter. Finally, supplier management strategies have been described as the final section as well.

4 Methodology

4.1. Chapter introduction

In this section, the method of how to proceed with the research will be illustrated. According to interviewees, it is extremely difficult to clearly distinguish the definition for its suppliers as only suppliers or outsourcing carriers because they usually take both responsibilities. A transportation carrier could be regarded as the supplier for delivery or the provider of outsourcing, thus in this case we will characterize them as suppliers in order for discussion and data collection. One of the objectives in this paper is to observe, to what extent, the situation could be reflected to Kraljic matrix. Thus, in that situation, the company is likely to adopt relevant strategies in developing their relationship with suppliers or carriers.

First, how to proceed with literature review will be demonstrated in this section. Since the focus of this paper is about supplier management, thus relevant literatures about the relationship between buyer and supplier, major challenges in management have been mentioned above. Also, factors like political risk, “Guanxi” and CSR are supposed to be studied as well in the literature.

Second, the research strategy carried out in this paper will be able to be discussed in this section. Based on interviews from the two managers working in the subsidiary of Sinopec, this general strategy for conducting the paper is the case study because that could focus challenges on an organization (Biggam 2008). In addition, how to conduct the data collection and what is needed will be elaborated also. Basically, these research objectives in this paper are supposed to be tested in empirical test rather than to be answered from literatures, thus only by means of case study specific to the subsidiary of Sinopec in this city could maintain the reliability and quality for this research.

Third, the actual situation engaging by Sinopec with its supplier at this research is much dependent on the facts and data from whom proving the original data. Those two managers have been working in the subsidiary for almost 20years with experience in different managerial positions. Their information therefore is highly reliable for the case study. One of the objectives for this paper is to identify in what situation that the company would like but is unable to switch its suppliers. Hence, the description from interviewees appears to be rather significant. The next question is to design how many times that interviews with both interviewees are needed and how far they are supposed to be carried out for study questions. In addition to that, the judgment for the selection of suppliers through calculation reflecting in the coordinates will be demonstrated in the subsequent section. The data for calculation is collected by Mr. Hu, who provides the figures based on monthly report

within the latest 3 months of the subsidiary. However, all of these questions are the prerequisites to replying the objectives of major challenges in this situation and working out possible strategies afterwards. Therefore, the complete data collection will be referred in findings section but the design will be discussed in this section.

Finally, research questions will be split into sub-objectives according to each general purpose for this paper. As the basis to answer research objectives, data acquisition mainly by means of documentation and interviews from the two managers will be mentioned in order for reliability and quality of this paper. In addition, limitations for this paper will also be mentioned in this section.

4.2. Research strategy

4.2.1. Method to literature review

Based on research questions in this paper, literature review are generally split into three parts as mentioned above. The first part is about Kraljic matrix and supplier dependence, which answer the first research question in conjunction with findings. The second part interpreted supply and outsourcing management in terms of relationship and strategies. These provide me a direction to explore the situation in the case. The third part mainly included different factors in the scope of culture and society. In which case, political risk, “Guanxi” and corporate social responsibility are interrelated to influence the relationship in the case. Those literatures are able to be searched in the school library website(www.hig.se/Biblioteket/University-Library---Learning-Center) in electronic format when you enter. There are a number of database in different subjects you can choose and download. In the course of selection for my theoretic framework, there are about more than 100 papers being scanned by myself based on research purposes in the paper. Relevant results are achievable by imputing key words like kraljic matrix, supplier management, political risk, and “Guanxi”, to name a few. Thus, I organized and wrote notes for these selected papers in a proper way so that I am able to use them in my paper. Thereafter, associated content in literature were referred in integration with research purposes. Finally, the literature review is done through this process.

4.2.2. Case selection

As mentioned in the introduction section, Sinopec is one of the largest companies in china. The intention of study Sinopec is not because of its size but on account of its significance. Since China’s economy is developing in a remarkable speed each year, one of the motivations is to exploit what is the triggered force behind this phenomenon. These state-owned companies in china play a critical role through their leading position in managing resource and investment. Nevertheless, under the background of globalization, the increasing number

of foreign companies engaging in China intensify the competition, thus many of these state-owned companies are facing challenges like work and cost efficiency in competition. Sinopec, as one of the leading state-owned enterprise could be characterized for this study.

Another reason of why selecting Sinopec is because of its availability and accessibility. According to the data provided by the two interviewees, underlying problems specific to Sinopec could be find out in certain situation. Thus strategies formulated in this situation might be also applied to other state-owned companies as well. Nevertheless, in order to narrow the focus for study, Sinopec will not be chosen for research as a whole. On the contrary, one of its subsidiaries in an administrative city will be concentrated at study because that is easier than investigating hundreds of its subsidiaries and departments. The subsidiary is simply structured based on its headquarter in Beijing and similar to others subsidiaries in other cities as well. Hence, it could be characterized as the study for other Sinopec subsidiaries. In addition, the interviewees engaged in this research are cooperative and reliable both in offering original data and delivering replies so that the availability and accessibility are able to be promised.

4.2.3. Case study strategy

In order to confine theories related to objectives of this paper, first the literature review was completed as referred to the previous section. In this case, the scope of research for this paper will be concentrated on supply chain management and outsourcing, especially both types of relationships. As demonstrated in the theoretic section, a wide range of literature among the areas of kraljic matrix, supplier dependence, supplier strategy, to name a few, has been illustrated, but little of them has mentioned the situation where the buyer are unable to switch its suppliers in the case of Chinese state-owned enterprise, hence this paper is to fill the gap in this field.

As cited by Biggam (2008), the characteristics of an individual unit like a company, school or a community are able to be contemplated in the life cycle with deep analysis. The general research strategy for conducting this paper is an empirical case study from the subsidiary of Sinopec in the city of Guiyang (the capital of Guizhou province)... The reason to choose the case study is based on the purpose of this paper. In order to understand the exact situation where the company is unable to switch its outsourcing carriers, particular in the scope of state-owned companies (SOEs), the root of this cause shall be obtained basically through what are being told by these two interviewees. In addition, major challenges in such situation might be identified specifically through case study together with associated data because challenges vary from company to company, even in the same company but different departments. Hence, only on condition that challenges are clearly identified in Sinopec, the related strategies specific to their problems could be formulated in this paper.

Based on case study strategy in this paper, the interview will be designed into three stages. The primary stage is to get to know what is their current status and rough situation. In the first stage, one of significant objectives is to find out how similar is to the situation mentioned by Kraljic. Is there any possibility to classify their suppliers in different areas? What is the problem like the transportation cost? This is significant to address the issue of selection of suppliers. The second stage is to understand specific challenges or dilemma they are facing. Could it be only the problem from their management or from other uncontrollable force? Questions for them might be either from the ones discussed in first stages but much more deeper, or drawing from the specific situation. Then the real situation could be identified. The third stage is attempting to find out strategies based on those existing ones adopted by them and formulate possible strategies based on theoretic section. They would be the same from which adopted by Kraljic or the combination with others. The method of carrying out interview is embodied in the following:

First, general information about suppliers in the subsidiary of Sinopec will be captured through the first-round interview. The intention of study for suppliers in Sinopec is to collect the data in the comparison with Kraljic matrix and suppliers dependence mentioned previously, and then the basic status of suppliers will be able to comprehend. The Kraljic matrix was first to introduced to both interviewees and they differentiated suppliers of the subsidiary in four axis boxes in Kraljic matrix according to their characteristics. During this phase, both replies from two interviewees (Mr. Hu and Mr. Chen) will be collected and described. Second, after the first-round interview, the subsequent round of interview will be concentrated on challenges both internally and externally. In which case, potential issues and uncontrollable force could be discussed by both of them, and then the situation of why not abandoning those suppliers might be understandable. Third, the last-round of interview will be able to discover what strategy is applied by Sinopec in the management of its suppliers based on their actual working experience. Whether or not possible strategies from previous theories could be used in this situation, or would it be necessary to formulate combined strategies based on this situation. The detailed interview questions and raw data are available in the appendix A, B

4.3. Data collection design

4.3.1. Acquisition of data

The data acquired for conducting case study is drawn from document including relevant figures and procedures or interviews in different stages. Based on the fact that both two interviewees are unable to speak English, thus all the questions in interview are translated into bilingual languages (English and Chinese). Both of their connections are listed in the appendix A. There are more details about source of data in the following:

- I Documents: the source of associated documents is largely drawn from Mr. Hu, who is the logistics manager of Sinopec in Guiyang subsidiary. He generally takes responsibility in both transportation organization and data collection from all the petrol stations in the city. Manager Hu provides us various documents as for cooperation with our research. These documents including diagrams and process of work and figures are significant to ensure the reliability of this paper. Such associated data related to this research shall be illustrated in the finding section.

- I Interviews: As the general strategy in conducting this paper, the quality of interview shoulder main obligations in finding out the problem externally or internally. Hence, in order to guarantee the quality of this strategy, the life cycle of the interview will be split into different phases with records in the appendix A, but still the main points of the interview will be extracted in the finding section. The prepared questions will be sent to both respective interviewee through e-mails or telephone. The two main interviewees as mentioned previously are Mr.Hu and Mr. Chen.

4.3.2. Framework for data analysis

Based on the acquisition of data collection, first the associated data will be collected in comparison with Kraljic matrix to observe if there would be any similarities in both situations. One of the objectives is to identify how many suppliers with different types working with this subsidiary. After that, those suppliers will be classified into four general categories in Kraljic matrix. On one hand, classification of suppliers will help us verify the actual situation of Sinopec and those suppliers who are unable to be switched from. On the other, to what extent Kraljic matrix with its strategies could be applied in that situation. Meanwhile, the judgment for supplier's selection will be captured in the coordinates where it demonstrated the relationship between the business percentage and delivery cost for each month. Second, based on what will have been discovered from raw data, challenges will be identified. Further interview will be proceed with insights to some specific challenges and. If it were to do so, underlying challenges or problems will be found out. Hence, by that time the major challenges for outsourcing activities in that situation could be replied. Third, a careful plan to formulate strategies based on strategies they are executing would be worked out during discussion. Those strategies are drawn from the deep analysis from collected data.

Nevertheless, only replying to research purposes generally in this paper is insufficient to find out the whole story about Sinopec. Thereby, these four purposes are proposed to be separated into different ways for conducting analysis. In order to clarify those sub-objectives, general purposes will be proceed with specific methods respectively in the following.

- I How could this situation in the case be characterized by **Kraljic matrix** (1983)?

- The first thing is to understand what is Kraljic matrix from literatures review
 - The number of suppliers and what they provide to the subsidiary are needed to be investigated according to the matrix.
 - The extent of dependence from buyer upon different suppliers in the matrix will be achieved by observing suppliers in this case.
- I What are the main challenges that affect the supplier relationship in this case?
- The relationship between transportation cost and business percentage is supposed to be taken into consideration when evaluating suppliers?
 - Communication problem will be found out based on interview
 - How the subsidiary manage its suppliers or carriers will be obtained
- I How “Guanxi”, political risk and CSR affecting the relationships when managing suppliers in such situation?
- Based on interview, uncontrollable force like political risk which impact Sinopec’s reform to its suppliers will be tested for approval.
 - Sinopec’s social responsibility will be asked about the relation with suppliers and how they actually carry out in business practices.
 - The influence of “Guanxi” will be discussed in the interview with them.
- I What supply management strategies are used for improvements in this case?
- Existing strategies they are using in business will be demonstrated in findings
 - Suggested strategies in managing different suppliers will be formulated based on findings and analysis.

4.4. Reliability and validity

Sinopec, as one of the largest state-owned enterprise in China, plays a key role in national economy. The study for its development and problems are necessary and urgent. Whilst it is difficult to study the whole organization of it, thus it is important to narrow the scope of the research into one of its subsidiaries as structured as Sinopec’s headquarter in an administrative region in China. The reliability of the study is based on interviews and data provided by the two senior managers working in the subsidiary. Two middle-senior managers who will fully engaged in the interview, thus the reliability of this paper is able to be guaranteed. Mr. Hu is the senior manager for logistics, who has obligation in managing logistics centre on daily basis. While Mr. Chen is the senior management executive with responsibility in sales and administration in two districts in this city (there are the total five administrative districts in Guiyang city). They are working in different fields in the same subsidiary although, their work are tightly linked with each other. Mr. Hu collects data from each petro station

in Mr. Chen's managerial district daily, while Mr. Chen is responsible to inspect such data delivered through ERP system to logistics centre and order the volume of petrol according to the demand. Not only will they receive interview through appointments and emails, but also they will provide us relevant data about logistics and sales.

By the same token, validity is also based on the data and problem description they contributed to this paper. All the records of interviews and written evidence are kept in good condition with trace. Most of the data they provided to me are the source of internal documents in their daily business and meetings, thus they are not allowed to be used commercially. Some of the data like Sinopec's social responsibility is open to the public. All in all the description of interviews and data are interrelated and guarantee the reliability and validity for the case study. In another word, the case study is also reliable to support other parts of the paper.

4.5. Limitation and potential problems

Although the reliability and quality are largely guaranteed by interviews and data provided by these two managers, both of them are from only the perspective of Sinopec (buyer). Hence, lack of the study from the side of suppliers for Sinopec might result in narrow view of this problem. In addition, there are only two managers included in the whole process of interview. Obviously, it is supposed to invite more managers from other aspects in the similar position for interviews. However, due to the accessibility and availability of looking for other interviewees, only those two managers were participated in this paper. In the future study there will be more interviewees invited and participated.

Meanwhile, possible strategies formulated based on data have to be examined in practice. There would be such a situation that neither of those strategies would be adopted. Perhaps it might be caused by the incompatibility with overall strategy or timeframe that Sinopec does not intend to do it immediately. Therefore, the limitation and potential problems will be part of the future study in this paper.

All in all, data collection plays an important role in promising the reliability, quality and validity of this paper. In order to facilitate and summarize this section, the following aspects will be worked out for recollection.

- I Research method: a case study for Sinopec subsidiary to reply the research purposes.
- I Data collection: interviews in phases with two senior managers in different areas for acquiring raw data for conducting data analysis.

- I Data analysis: Comparing the situation through data with Kraljic matrix in order for the understanding of dependence from the perspective of buyer, and then possible strategies could be formulated based on findings. During this process, major factors influencing their relationship could be identified.

5. Findings and analysis

According to the research purpose and strategy, this chapter has revealed the result of case study of Sinopec from mainly the two interviewees. The first section is about the information suppliers of the subsidiary in combination with Kraljic matrix. Issues of major challenges in terms of supplier selection and relationship have been analyzed. Last but not least, strategies of the subsidiary in managing its suppliers were illustrated below.

5.1. Case study of suppliers to a subsidiary of Sinopec

As complied with the purpose of this paper, we will examine the current supply situation of Sinopec in accordance with Kraljic matrix as mentioned above in order to understand the relationship in dependence and power of the suppliers. Consequently, we first have to investigate how many suppliers the subsidiary has and what they are. Furthermore, these suppliers will be categorized into different boxes according to their characteristics (which product or service they provide) based on interviews. Nevertheless, the paper is being put an emphasis on supply and outsourcing management based on research purposes, thus it is significant to proceed with the study of this case focusing on these bottleneck items as the final part.

It is necessary in this paper to interpret the structure and organization of Sinopec so that the managerial position and functions of the subsidiary is easily to be understood. To facilitate the description for Sinopec's structure, the following diagram has configured the simplified structure according to the whole organization as attached in appendix B.

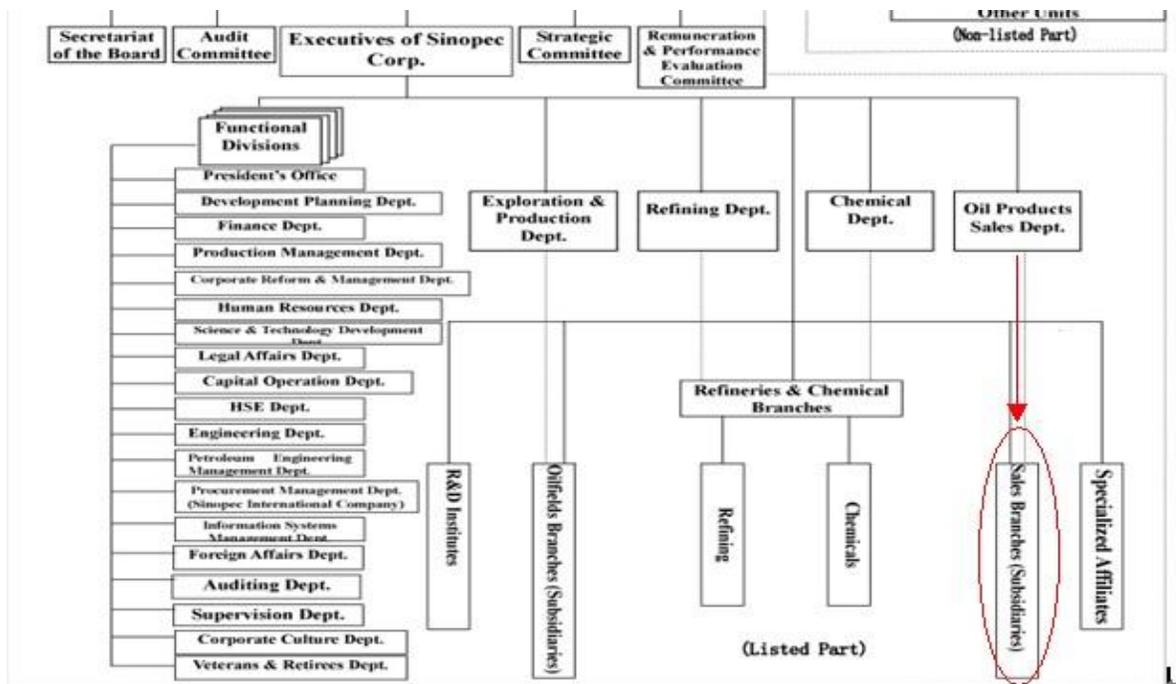


Diagram 2: the structure of Sinopec

As seen from the diagram above, the subsidiary belongs to the oil products and sales department. Also, the numbers of the subsidiary are determined by Chinese administrative regions. For example, if an administrative province has 3 or 5 municipalities, there will be one general subsidiary managing these 3 or 5 subsidiaries as compiled. Likewise, the following diagram explained its managerial scope of a subsidiary as in the case.

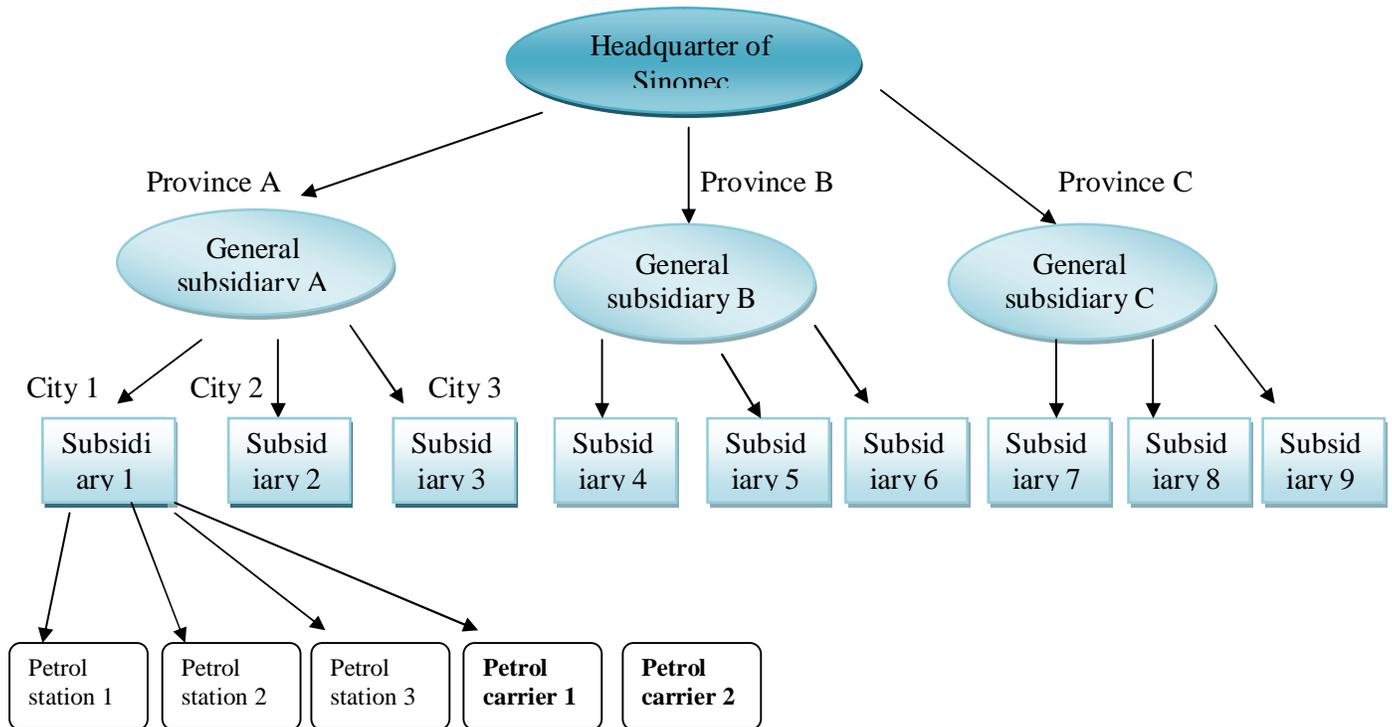


Diagram 3: the structure and organization from the top to the subsidiary (According to Mr. Chen's description for the structure of the subsidiary)

Based on the managerial scope of a subsidiary, its mainly responsibility is to manage petrol stations and its suppliers like petro carriers, reporting to the general subsidiary like A or B or C, to name a few. Thus, the study in this case is based on one of its subsidiaries in a city.

5.1.1. Information about suppliers of the subsidiary

In this section, I will collect the general information about suppliers both in quantity and characteristics in order to formulate the diagram based on Kraljic matrix. Prior to drawing this diagram, we have to first define what are strategic, bottleneck, leverage, and non-critical suppliers according to the interviews with both Mr. Hu and Mr. Chen. Although there is minor discrepancy in defining suppliers' characteristics, generally they are able to be contained in the typical axis boxes from Kraljic matrix.

- Strategic suppliers: providing petrol together with other kinds of oils as products for all stations and other associated equipments.
- Bottleneck suppliers: logistics carriers like oil tankers, trains and piping.
- leverage suppliers: providing daily non-petrol or oil products like water, food, cigarette, to name a few
- Non-critical suppliers: provide other service like cleaning, field maintenance.

Based on the information provided by both interviewees, numbers and location of these suppliers in the subsidiary shall be listed in the following table.

Characteristics	Numbers	locations
Strategic suppliers	2	Appointed by the headquarter
Bottleneck suppliers	3	Local previously reformed companies
leverage suppliers	4	Local suppliers
Non-critical suppliers	No data	Choosing by stations of their own

Table 4: the general information about supplier of the subsidiary

5.1.2. The matrix of suppliers classification

High

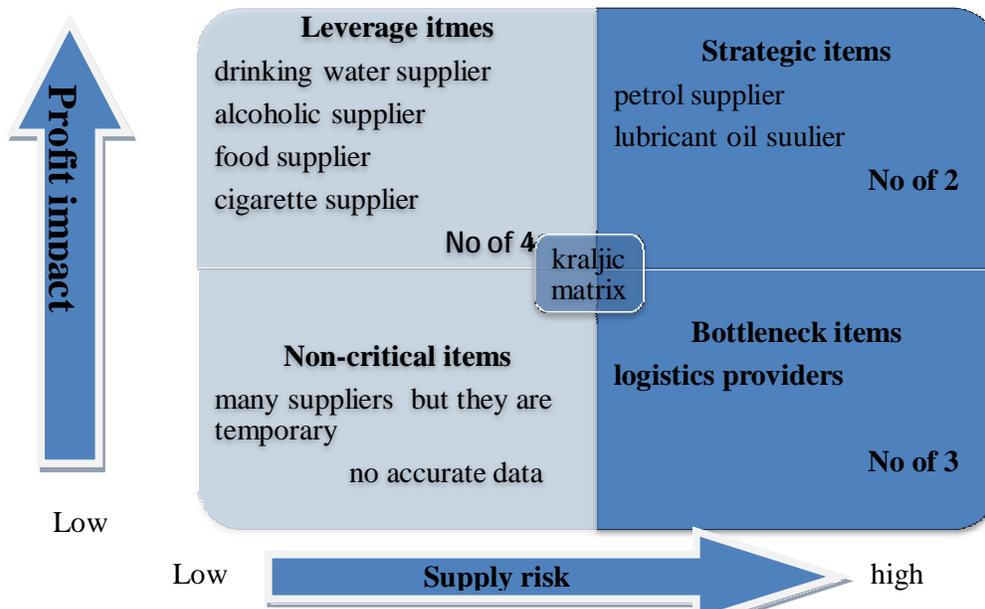


Diagram 4: Kraljic matrix reflection to the case

According to the above table and diagram, it is understandable that the subsidiary of Sinopec is highly dependent on its suppliers although it is deemed as powerful in negotiation. For strategic items, it has to merely obey the supply policy by headquarter with no choice for its strategic suppliers. Yet, even in the leverage items, there is only one supplier in each area of these products for the subsidiary according to the matrix. We will present the reason why even in this box the supply market is too narrow to choose from the interview afterwards. As to non-critical items, there are no specific and fixed suppliers. Each station is entitled to order or have such service on their own if need. Consequently, there is no accurate data of how many suppliers they could choose. In another word, these stations reserve the right to choose those suppliers according to their needs. In bottleneck box, there are only three suppliers (delivery carriers) to choose, and even the percentage for each of their business in the subsidiary is quite different. As referred by Mr.Hu, this kind of suppliers seriously influences day-to-day delivery of petrol and sales business. Currently, there are only few of them in the market for the subsidiary to choose. Even their value is considerably lower than petrol providers; they definitely affect the effect of daily business because without the delivery of petrol in time the sale is unable to proceed.

5.2. Major logistics challenges in the subsidiary of Sinopec

According to both Mr.Hu and Mr. Chen, major challenges in the subsidiary of Sinopec are various, but this paper will concentrate on logistics cost and its associated factors. Logistics cost and outsourcing management relationship for transportation carrier and suppliers have been demonstrated respectively, while the interface between logistics and sales is summarized from both interviewees. Comparable ideas about other factors influencing Sinopec logistics development are illustrated in the following.

With the importance of cost in supplier management being seen in large number of literatures, Mr.Hu also presented associated data about the investment in transportation and business percentage of each carrier. Nevertheless, this data does not indicate what the relationship between them is and how they work in such an interrelated way. Based on general data and their definitions (as seen from the table below), the cost in transportation and the volume of business of each carrier might be inferred and reflected at coordinates below. Thus, the coordinates might work as a tool for measuring the relationship and be used to evaluate or select supplier both at present and in the further.

5.2.1. Transportation cost and analysis for logistics carriers in the subsidiary

Based on the interview with Mr.Hu, the general information about its logistics providers will be presented as follows, the name of these logistics providers will be represented by “A, B and C”.

Logistics providers	The percentage of business in the subsidiary	Number of tankers they have	Transportation cost in the subsidiary (Chinese currency RMB)
A	80%	60	120 thousands to 130 thousands per month
B	10%	15	
C	10%	6	

- One RMB equal to one Swedish kronor.
- On average, each oil tanker has 1.5 times of delivery per day (as calculated by Mr. Hu, see appendix A)
- Each delivery of petrol cost around 500 RMB

According to the basic information from the table above, it is able to formulate the relationship through coordinates between the expected percentage of their business for the subsidiary and the amount of granted money in total cost. The cost covered all the items in delivery. The purpose for this relationship is to explore the challenge and selection of carrier in term of cost. Prior to drawing the coordinate, I shall first define parameters and list the table of how to make the calculation below.

Definition and calculation for the coordinates			
Definition of variables	Data and formula	Definition of variables	Data and formula
C: total cost	1.2 million RMB per month	A,B,C	Respectively represent each company
C _a : average cost for delivery per time	500 RMB per time	T _a : average time for per tanker per day	1.5 times per day

T: times for delivery per month	$C/C_a = 2400$ times per month	C(x): the amount of money	cost for delivery per month from 10 thousand to 120 thousand
T(x): the amount money versus average cost	$C(x)/C_a$	E(x): expected percentage	$T(x)/T$
N(x): number of tanker of each provider		T(A): times of provider A for each month	$C(x)/(C_a \times N(A))$
P(x): actual percentage of business for each logistics provider in the subsidiary	$T(A)/T$; $T(B)/T$; $T(C)/T$	T(B): T(C):	$C(x)/(C_a \times N(B))$ $C(x)/(C_a \times N(C))$

Table 5: the definition and formula for coordinates

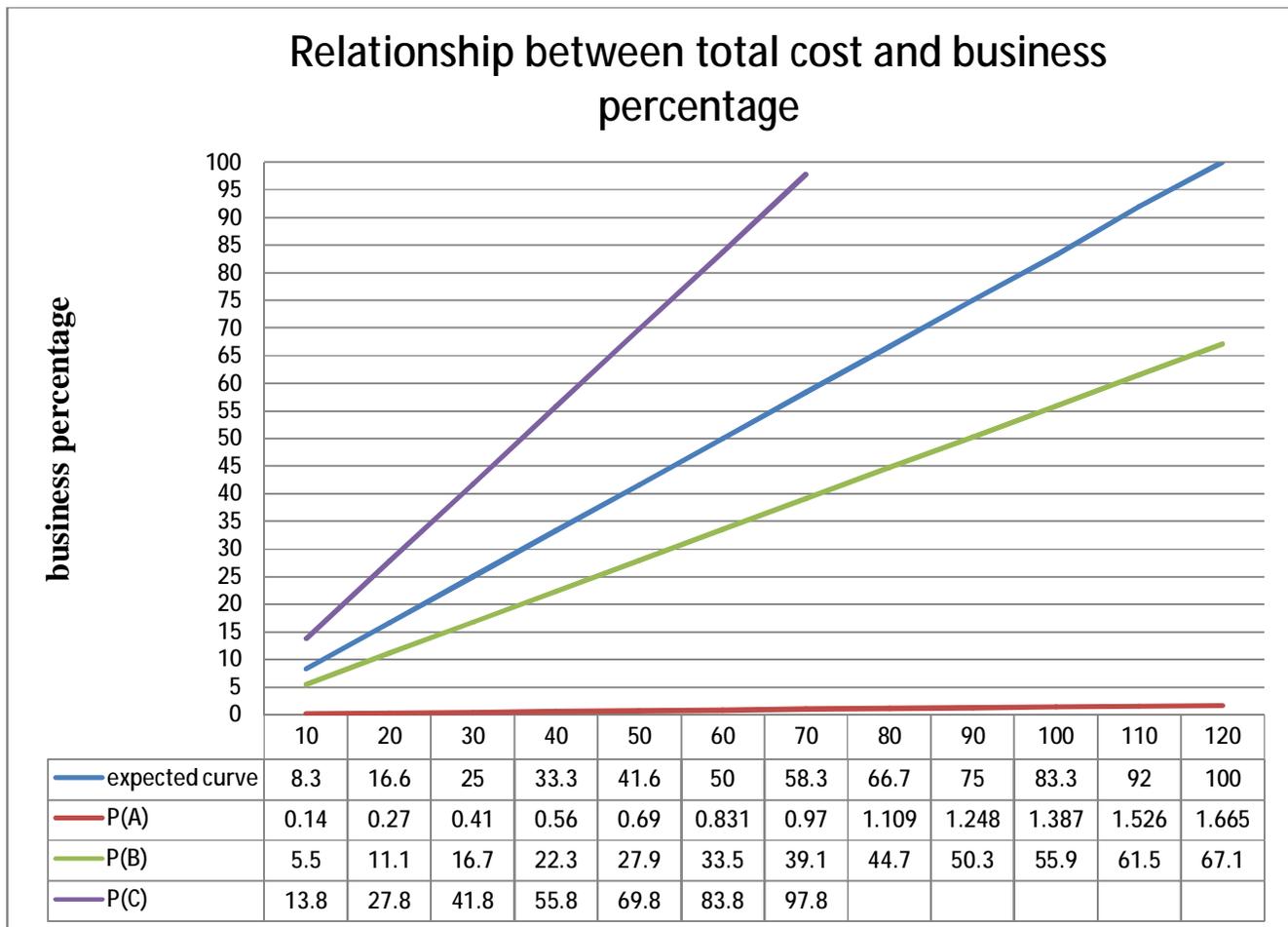


Diagram 5: the relationship between total cost and business percentage by each carrier

Seeing from the coordinates, the more tanker a company, the low percentage of expected business it will have. Yet, in actual situation, provider A accounts for more than 80% of business in the subsidiary, while other two

has only been granted 10% of business each month. Looking back to the coordinates, provider B is obviously close to the expected curve. In another word, its capacity of delivery and efficiency are comparably much reasonable than provider A or C. provider C is at the risk of its delivery capacity when it will be granted more than 70 thousands per month, while provider A needs to make tremendous improvements on its efficiency while not increasing the number of tankers. Here are other indications from basic information as follows:

- If the average time for delivery of each provider is 1.5 times and cost is 500 RMB per time, then Provider A shall have **135 thousands** RMB per month (60 tankers × 1.5times per day × 30 days × 500 RMB per time), while B shall have **33.75 thousands** per month, and C shall have **13.5 thousands** per month. If it were to do so, the total cost shall exceed **170** thousands. Nevertheless, the actual total cost from the subsidiary is 120 thousands to 130 thousands, within which 80% is granting to provider A, and the rest is equally assigning to B and C.
- According to Mr.Hu, the real problems are far more complicated than how much they need to invest to carriers. In actual work, Sinopec does not control the way of their work and how many tankers they are supposed to put at work also. The carrier manages its own tankers based on the order issued from logistics center, and organizes drivers randomly to deliver the petrol. Hence, the subsidiary does not neither control their management for tankers nor raise the work efficiency. Although Sinopec is trying to combine its ERP system with its suppliers, it takes time and efforts to construct this infrastructure and raise suppliers' awareness for logistics.

The subsidiary does not evaluate its carriers according to the relationship between their total cost of delivery and business percentage. In another word, the subsidiary invested too much on a carrier but without achieving corresponding return in delivery.

5.2.2. Outsourcing and suppliers management

Based on the interviews from the two managers, some obstacles in the area of supply management are identified through both their work experience and documentation. The purpose of logistics reform in Sinopec is to optimize the process and management of logistics; maintain the reasonable volume of petro stored in a station; improve the efficiency of transportation; reduce the cost of overheads according to the instruction (see appendix B) issued by headquarter. Hence, the management for suppliers and outsourcing transportation carriers are a necessity to the development of sales and business. Their response on current issues about suppliers and logistics providers will be presented respectively as follows:

I Discussion on outsourcing and logistics with Mr. Hu, senior logistics manager in Guiyang Sinopec

- *What the relationship between the subsidiary and its logistics carrier?*

With the development of Sinopec logistics reform, the former attached companies are requested to sign up the contract each year, although once they were certain part in the system. Carrier A was once the largest attached firm of the subsidiary, while B and C were transformed from other types of attached firms. Three of them now are working as petrol carriers for the subsidiary but with different business rate. On one hand, the rate of business is based on the number of tankers they have. On the other, business and interpersonal relationship are also significant. Carrier A had been the delivery carrier already before it has been separated. It had most tankers for delivery and kept good relationship with the subsidiary. Whilst B and C were once the purchased firms for maintenance, thus they had rather less transportation tools than carrier A. Also, they began to build their contact and relationship with the subsidiary since it had been reformed.

- *What do you think are the current restrictions to logistics and outsourcing provider (carrier)*

First, the approaches of management for their transportation are simple and single. Little or no alternatives could be presented to use. It does not make sense if we talk about carrier's loyalty because we do not allow to freely choosing the carriers we need. Second, information asymmetry incurred by inaccurate data collection constricts the full implementation of logistics schedule, even advanced information technology like ERP system and retailing optimization. Meanwhile, this is no real-time communication platform between sale and logistics. In another word, logistics center has to passively wait for information given by petrol station rather than inspect and monitor how much they actually need per day. Hence, some stations will receive more than they are expected so, while others have to receive less than their schedules. Third, the structure of transportation providers is loose with organization. Many tankers for delivering petrol are purchased by individuals rather than the company on its own, thus it is tough to let them upgrade or maintain those tankers.

I Discussion on logistics provider and supply management with Mr. Chen, sales and business manager in Guiyang Sinopec.

- *Is there sound relationship between logistics providers and sales from your perception? If not, to what aspect do you think they work poorly*

There is little communication between sales and logistics provider, thus their relationship is far looser than that with logistics center. Although they do not need to contact with these providers, but somehow, information should be shared within the party of sales, logistics center and providers. Now, we do not exchange information with providers and are becoming quite unfamiliar with whom and when delivering petrol per day. On the other hand, the ineffective transportation results in the increase of cost because we have to pay providers more than we are supposed to. Sometimes they change their delivery from one time of delivery up to two or more times with lots of excuses.

- *What do you think are current issues in relation with suppliers*

There are only a few suppliers we can choose. Normally, we classify our suppliers into three groups according to their supplies. The first category is oil supplier including lubricant oil, but there are only

two suppliers; one is for oil, the other is for lubricant oil. Nevertheless, both of them are also the subsidiaries of Sinopec. The second category is the ones mentioned as logistics providers who have been detached in the name of Sinopec but exist in some way as the only transportation suppliers for Sinopec. Once they are unable to meet our sales requirements, there would be the risk of stock out for petrol stations. In the long run, if that occurs frequently in daily business, we would resolve our advantage in market share. The third category is the ones who provide us non-petrol products like water, food, cigarette for grocery. We are entitled to negotiate and purchase these products.

In summary, Mr.Hu discussed the current issues with an emphasis on logistics management, particular in information exchange and sharing, while Mr. Chen described the relationship among sales, logistics providers, and suppliers. They demonstrated their perceptions on logistics or suppliers respectively.

5.2.3. The relations between sales and logistics

The primary mission for Sinopec is to sell the petrol to customers, thus sales is treated as the central task comparing with logistics. Nevertheless according to Mr. Chen, logistics is the life line for sales, without which sales shall not be guaranteed. In the meantime, the cost in sales is associated with logistics. Hence, I will also illustrate their points on both areas from their work experience.

Questions	Mr. Hu (logistics)	Mr. Chen (sales and business)
1. What the relation between sales and logistics?	The primary task for logistics is to support sales but with its independent work, achieving the maximum benefit for the company	Sales are unable to be carried out according to its schedule without the support from effective logistics. What's worse, the reputation of the company will be damaged in the long run.
2. What can logistics center assist in sales?	On the one hand, logistics and sales are separated from structure as clearly defined in responsibility. Managers and workers only have to perform their duties without considering other business. On the other, the effective logistics reduce running cost by meeting the lead time and accuracy. Indirectly it creates benefit for company	The most beneficial point for establish the logistics center is to promise the occurrence of petrol stock out. Running out of petrol is the worst thing for a petrol station because all the business has to be blocked, not to mention sales itself.
3. The biggest problem between sales and	Information asymmetry occurs from time to time, which impact the	Information distortion is perhaps the biggest problem between them because there might be

logistics?	accuracy in petrol delivering.	the contingency that powerful customer need petrol largely and immediately.
4. Whether training is helpful in improving logistics efficiency with sales?	Yes, but it is not simple as we expect to solve all the problems in practice. Raising the awareness for logistics and improving their capabilities should be implemented for the whole staffs in the system.	Training is one of the possibilities to improve both sales and logistics efficiency. But the sense of responsibility is hard to be developed from their heart. Both employees in sales and logistics are characterized with this problem
5. Whether the volume of petrol stored in stations should be set in a reasonable scope?	The reasonable volume of petrol on how much a station should store is dependent on actual situation where we have to consider things like weather, market, and people. It is difficult to set a fix volume in daily business.	It is important to keep a certain volume of petrol in a station for the resist of petrol stock out. Nevertheless, we have difficulty in remaining such volume calculated by automation system in station due to practical situation.
6. Is there any impact on sales if logistics providers do not meet lead time?	Yea, our responsibility is to prevent such a case happening in sales business. That's why we need sales to collect accurate data for us to make delivery schedules. We will bring in more advanced technologies to trace each tanker during delivery.	It is serious problem if they are unable to deliver petrol on time because the stations are at the risk of running out of business. On the other hand, market share will be captured by competitors.

Table 6: interview summary between sales and logistics

As observed from their response, logistics and sales are interdependent, without either of which, the operation of Sinopec daily business shall not be performed. The establishment of logistics center has achieved the strategy of management of centralization. Sales are the central business for Sinopec, while it is promised through effective logistics. As to logistics, transportation providers are its essential part, hence it is necessary to effectively manage these suppliers. All in all, the solution to issues between logistics and sales are requested to begin with transportation carriers.

5.2.4. Factors affecting the relationship with suppliers

According to those two interviewees, factors in Sinopec are able to be classified into political and social aspects.

- I When referring to political risk for logistics reform, their response in similarities and difference could be compared in the following:

- Similarities: 1). As the SOE, Sinopec is difficult to switch those previous attached companies because This is its responsibilities to support them.
2). It is difficult to deal with the relationships with those suppliers because once they were college.
3). Social unrest would be arisen by unemployment of low professional skills workers.
- Difference: 1). Hu stressed those political risks are from SOE structure where these reformed Companies keep associations with its parent company or leaders in some way and the parent company prefer assigning business to those detached companies rather than bringing in competition. Nevertheless, Chen insisted on the significance of personal rapport in dealing with their relationships. He mentioned for most Chinese SOE, interpersonal relation is much important in making decision than that through scientific management. They can't hurt the benefits of any parties. Yet, the personal rapport is the significant instrument to maintain and settle any problems occurring in business. As a manager it is impossible to ignore interpersonal relation, but for the SOE this is the primary factor in management in China.
2). Hu took political risk in consideration although, he insisted that the development of logistics for Sinopec is supposed to be carried out in various aspects, such as improvement on technology application like GPS, ERP system; scientific management in management and decision, to name a few. However, Chen believed that only if the beneficial rapport in daily work were cut off, the bottleneck for Sinopec logistics development would be completed. As far as observing from current situation, it is extremely difficult to change the way people work in Sinopec and cut their rappings.

I When asking about Sinopec CSR policy and its employees, Mr.Hu and Mr. Chen responses in the way as follows:

- We take seriously all safety issues in daily business. In order to minimize the probability of safety events, we formulated the evaluation for our supplier safety management and no one is able to ignore this case even there would be good “Guanxi” between them in terms of safety. The simple fact is that no one has right to make fun or look down upon other’s lives, and he or she is unable to afford such a cost of discarding someone’s life or treasure. That’s why we attach tremendous importance to our carrier’s safety and nothing could influence such an issue as others have.
- As local subsidiary, we proactively participate in the construction of local society and helps government deal with emergency and relief. We donated more than two million RMB to the society. In addition, we adopt unleaded gasoline for our supply. .

- Operators with little knowledge about ERP system are needed to be trained and improved; the inaccuracy of data collection is caused by their proficiency in using this or other software systems.

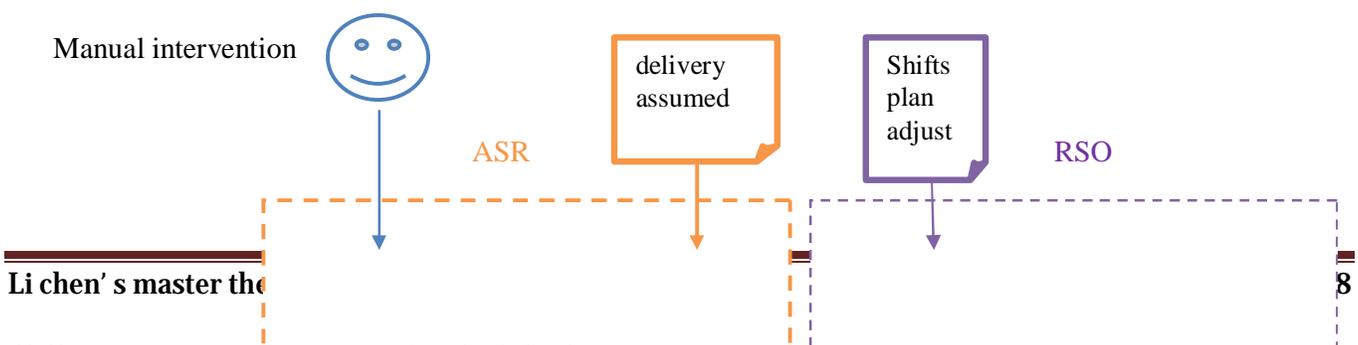
All in all, Hu and Chen both delivered the response from the aspect of political and social aspects. Hu admitted that political and social aspects are considerably influential factors in the development of logistics, but he preferred to mention other factors like transportation and technology application as well. On the contrary, Chen put the personal rapport as the primary factor in associations with management of suppliers. Work efficiency and cost reduction are likely to be improved after the degree of personal rapport shrunk. Either of them did not deny that political and “Guanxi” are two uncontrollable factors affecting almost everything in their business.

5.3. Strategies applied in the management of suppliers and logistics provider in the subsidiary

Based on interviews and documents provided by both managers, this section will concentrate on the discussion of strategies adopted in the management of suppliers and logistics providers and how they carry out these ones. First, I will present the instructions and requirements from Sinopec headquarter through document. Second, I will also present how they implement these instructions and requirements in the practical operation as well as obstacles they confronting.

5.3.1. Sinopec’s instruction and requirements for logistics reform

In order to optimize logistics management, keeping stock of petrol in a reasonable volume, improving the work efficiency of tankers and reducing the daily overheads, Sinopec with its software joint venture developed a system to realize the objectives in logistics response and market expansion. Two automation models are introduced into ERP system for optimization. One is Aspen Retail, working as filling the stock of oil in stations; the other is RSO (resource optimization) functioning as optimizing resource and cost reduction. The process of these two models will be illustrated as follows:



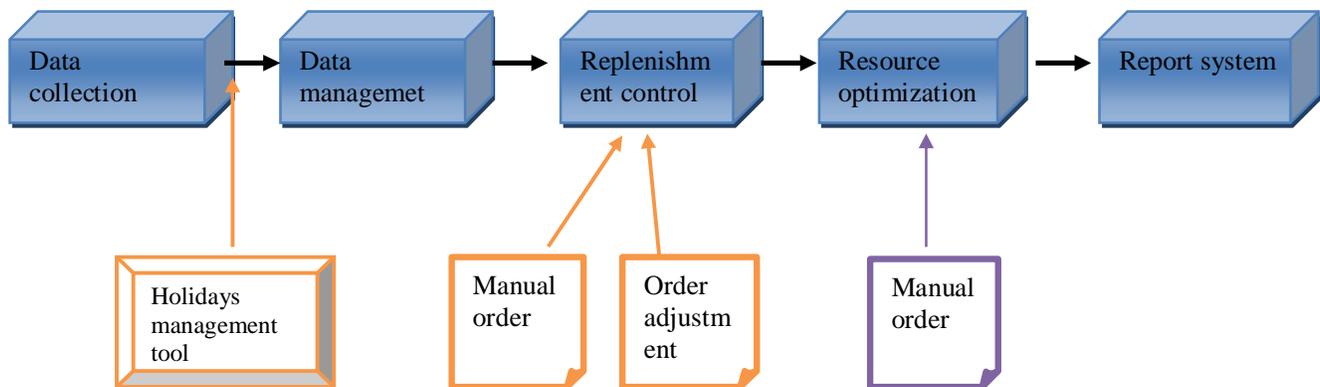


Diagram 6: logistics optimization instructions issued by Sinopec software (PCITC)

It is able to observe from the diagram that each working process has been designed and optimized so that operators only have to comply with this process. However, in the second process, there is a function isolated as manual intervention because the perfect implementation for data management is hard to achieve in current situation due to various reasons mentioned above like IT infrastructure, people's proficiency in using this system, to name a few. Consequently, logistics center has to deal with problems flexibly and pragmatically. One of the tough tasks is to collect real-time data from logistics providers and assign them delivery according to Mr. Hu. Nevertheless, neither tanker drivers nor the company could collect data in a manner required by Sinopec, thus the manual intervention has necessitated the extra management at logistics center. As it is indicated, even though Sinopec adopted advanced information technology applied in optimization for logistics, there is much more for local logistics centers to do.

5.3.1. Management strategies for logistics providers and suppliers in the subsidiary

As I mentioned above, since the information technology management is unable to solve all the problems specific to different petrol stations, logistics providers other suppliers, it is significant to formulate strategies specific to local subsidiaries on their own. According to Mr. Hu and Mr. Chen, management strategies will be illustrated in the following part.

- I Management strategies for logistics carrier in the subsidiary based on the interview with Mr. Hu.
 - *Contract management.* For most reformed transportation providers, the subsidiary requests to sign the contract with them. The shortest period of the contract is one year but the longest shall not exceed three years. If there is still a gap in meeting the regional transportation capability, a public invitation of bid for binging new providers will be carried out. Until now, there are other two providers are introduced into the subsidiary for competition with the previous one.
 - *Evaluation.* Mr. Hu described there has been a preliminary evaluation system integrated with contract renewal. The evaluation covers the basic areas for transportation management including safety, quality,

and work efficiency. The scope of each field is split into many sub-items inspected and supervised by logistics center. The logistics center will be able to grade each provider according to the check list and decide whether to renew the contract for next contractual period. The purpose of the evaluation is to request them to change the structure

- *Communication.* Mr. Hu mentioned that there is a dialogue meeting with logistics providers every quarter of a year about issues confronted in the last three months. Both parties will exchange information and problems in business. Usually, if there were any contingency in daily work, they talk to each other through telephone or emails.

I Management strategies for suppliers in the subsidiary based on the interview with Mr. Chen.

- *Negotiation.* As to those oil suppliers, there is little more we can do to bargain with them because they are the only candidates to supply oil with us. Different regional subsidiaries will be appointed an oil supplier in upstream and a lubricant oil supplier in downstream. As to these non-oil suppliers, we still stand in a less beneficial position in negotiation because few suppliers are willing to deliver their products in different petrol stations with their transportation.
- *Order and Check list.* We only order products we need from them and check if they provide us the right products after delivery. Actually, products ordered by us are even higher than sell them in supermarket, but we have no choice because they are the few suppliers who would like to be responsible for transportation.

Although these approaches are usually adopted in the management of supplier, they still lack effective approach in selecting suppliers. On one hand, political risk and “Guanxi” confine their selection of suppliers to external market. On the other, the subsidiary concentrates selection of suppliers on the cost, but even they do not perform well in the cost dimension according to the coordinates as mentioned above.

6. Discussion

In this section, I will review all the research objectives in this paper with relevant conclusions. The overall research purpose is to understand in which situation that the subsidiary is unable to switch its suppliers but differentiates in dealing with them. In order to achieve purposes of this paper, they are separated it into sub-objectives, and then each of these objectives will be discussed in combination with findings. Conclusions for each objective are able to be drawn from the discussion between literatures and findings.

Prior to beginning with our discussion, let us go through each sub-objective in this paper as follows:

- I How could the situation in the case be characterized by **Kraljic matrix** (1983)?
- I What are the major challenges that affect the supplier relationship in such situation?
- I How “Guanxi”, political risk and CSR affecting the relationships when managing suppliers in such situation?
- I What supply management strategies are used for improvements in this case?

Although there are sub-objectives in this paper, each of which are needed to be filled with specific questions as mentioned in methodology section. These specific questions will not be isolated for discussion but will be summarized in findings in combination with literature review.

6.1. How could the situation in the case be characterized by Kraljic matrix

According to Kraljic matrix (1983), the strength and market of supplier are captured in a matrix which classifies suppliers based on their characteristics. This matrix helps a company make supplier research in term of formulation of supply strategies, evaluation and selection so that a company will be profitable in business. Subsequently, this theory has been developed in various aspects like buyer’s power, supplier’s dependence and supplier’s evaluation, to name a few. Once the buyer’s power is higher than its dependence on suppliers, it could issue requirements for its suppliers and let them under control. Nevertheless, Caniels and Gelderman (2005) further studied the degree of dominance in each matrix. They found buyer is advantageous only in leverage items and non-critical items, while in bottleneck items they are less dominant than suppliers. Sanzo et al. (2007) mentioned the selection of suppliers is based on its quality and cost as opposed to the timeframe of their business. In this case, suppliers for the subsidiary are classified according to what they provide. As seen from the findings, there are total nine suppliers with different characteristics within the framework of Kraljic matrix. Nevertheless, in this case the subsidiary is restricted by both strategic and bottleneck suppliers. On the one hand, these assigned strategic suppliers by its headquarter results in the loss of initiative and opportunity to look for alternative suppliers. It contradicts with the literature that even in the box of strategic items buyers are

always looking for strategic suppliers according to their requirements. While in the case of Chinese SOEs, who should be the strategic partner are determined beforehand and they are interdependent on each other solidly. One the other hand, they have the dilemma in dealing with the relationship with bottleneck suppliers (carriers as mentioned and characterized by Mr. Hu) because the largest one accounting for 80% of business in the subsidiary is one of the previous attached companies. These attached companies have the common problem in both effectiveness and efficiency at work. They were separated from the subsidiary in name but they are actually part of this subsidiary. The subsidiary has brought in another two carriers in order to promote the capacity for daily delivery although, in fact based on the coordinates it is able to find out that is not the case as they claimed. It seems that the more tankers a carrier has for delivery, the less percentage of business it will account for in investment by each month. In another word, it is not because they are lack of tankers or capacity in delivery but the management in effective uses these tankers and organization for employees in the carrier. Let us return to the findings, the amount of investment for logistics provider A is far less than its expected investment if all tankers of A are effectively at work. Carrier A has most tankers but is less efficient than Carrier B and C. While the more the C has, the more difficult it will face with due to its delivery capacity. Carrier B seems to be the appropriate carrier in this situation because it is much closer to the expected curve, while it also has the problem in capacity. It would be supposed to purchase more tankers to meet the demand of delivery. What's worse, as mentioned in the literature that buyer are dominant in the leverage items but in this case there are few of suppliers the subsidiary can actually choose. In another word, they will not be able to have a favorable position in negotiation and selection. Few of these suppliers would like to deliver products to all petrol stations as far as they are with their own transportation. Certainly, the only abundant supply markets appear at non-critical items because each petrol station are empowered to order or have such service like cleaning, car washing, maintenance, to name a few.

All in all, Kraljic matrix has pointed the direction for how to manage suppliers based on their characteristics, and the subsequent literatures develops the relationship between suppliers and buyers in terms of dependence and power. **Nevertheless, in this case we found the previous literature could not be fully reflected into the situation of Chinese SOEs, and the subsidiary are highly dependent on almost all suppliers according to kraljic matrix.** Yet, what are these factors which control the situation so that the subsidiary would like to but are unlikely to deal with the relationship. I will proceed with the questions in the following section.

6.2. Main challenges that affect the supplier relationship in this case

In the literature review, according to Cousins et al. (2008) purchasing and supply chain management are in a process including supplier selection, involvement, and evaluation, to name a few. He incorporated different

level of cost with the TCO matrix and recommended all associated activities are supposed to be taken into consideration. Van Weele (2002) mentioned the importance of contract in the management of suppliers. While Micheli et al. (2009) discussed risk management are also needed to consider when applying TCO. Mudambi (1995) elaborated the effect of good communication in reducing the transaction cost in switching suppliers. Hence the cost of buyers, contract of performance and good communication are significant dimensions in the evaluation of suppliers. Also, Tian and Daniel (2008) studied that most Chinese logistics providers build buyers' faith and their reputation through both investment in the long run and open communication. Meanwhile, Lau and Zhang (2006) found that incapable provider with poor management constraint Chinese logistics development. Hong, et al. (2007) advised logistics providers to extend their business into value-added service and try to establish strategic alliance with its users. Furthermore, Power (2005) discussed the significance of cultivating the relationship in terms of trust and loyalty. Cited by Lundin (2010), the hidden information is detrimental for a sound relationship and ads up obstacles in achieving the common objectives.

Nevertheless, in this case based on interview with logistics manager Hu, even though the subsidiary has signed the contract with all carriers, it does not take the contract as an effective way in managing suppliers, particularly for carriers. What's worse, the subsidiary only uses the total investment as transportation cost to these suppliers but it does not contain any relevant cost evaluation for these carriers. Thus it would not be surprised to know why carrier A has most tankers but less efficiency at work. More importantly, according to the analysis from the coordinates the subsidiary does not select supplier based on their delivery efficiency. It just awards the money based on their transportation equipment (tankers) but does not consider how much work each carrier can actually perform. In another word, they have not selected their carriers scientifically. Thus, Carriers are unnecessary to cultivate loyalty because buyer has nothing to choose but keep cooperating with them. As mentioned above, it is in part because the incapable logistics provider with poor management that hinder the development of the whole industry in China, not to mention there would be good communication between them. In fact, they do not communicate with each other very often. Only if carriers are received the request for meetings, they would be likely to present issues during work. The lack of communication has resulted in little information sharing and exchange among sales, logistics center and carriers except data. Although logistics center is established with ERP and Aspen system which largely facilitate and automate the whole process of logistics work, problems from perspective of human are far more complicated than just collect data the logistics center from different petrol stations and send orders to the specific carrier. Hence, it is able to infer why the systems of Aspen Retail and RSO have to insert manual intervention. The establishment of logistics center has just solved the problem between actual sales and sales schedule, but it is supposed to play a significant and leading role in managing suppliers and carriers. Therefore, I concludes that the **current problems for the subsidiary are caused by lack of real communication in terms of information exchange, appropriate**

means of selection and evaluation for both carriers and suppliers and effective management for them.

Nevertheless, that is not the whole case as anticipated; uncontrollable factors as discussed in the following section are able to capture what actually restrict the subsidiary in dealing with relationship with its suppliers in an effective way.

6.3. Major factors when managing suppliers in this case

Based on the literature, there are generally three main factors that deeply influence most Chinese SOEs and the way of doing business in China. One is political risk that determines the orientation of corporation's reform and development, another is company's social responsibility, and the last but not least is the unique type of relationship "Guanxi" in every aspect of Chinese society and business. First, according to Hassard et al. (2010), most Chinese SOEs have the problem of surplus labor, but they are unable to switch or separate those employees. Otherwise, there will be serious problem of social unrest shaking the ruling party. He mentioned that these sub-companies of SOEs are working well as an effective instrument in absorbing the surplus employees. O'connor et al. (2006) found that political risk is the most significant factor for the organizational change of SOEs and restrict their reform into efficient enterprises. Nolan and Zhang (2003) suggested the SOE should take account of political risk in competition. Second, as cited by Szeto (2006), the unique type of relationship has penetrated into every aspect of Chinese society and business, even a company's CSR with no exception. Lei (2005) further mentioned that the first priority of doing business is to build up "Guanxi" either with local government, Chinese partners in a company's social networking. Li and Wright (2000) found that "Guanxi" plays an important role in the relations between suppliers and purchasers in oil firms. Their benefits are tied with "Guanxi". Third, according to Sinopec's social responsibility report, it has implemented this policy for years with the coverage in main four areas, from supply to social donation. Baden, et al. (2009) put forward that the CSR could be achieved by placing pressure to suppliers through buyers. Carter and Jennings (2002) mentioned the use of PSR in improving suppliers' performance.

Based on the findings in this case, both of them realize the problem of political risk and special relationship in their business. Mr. Hu found one of the difficulties in improving logistics efficiency is political risk. The subsidiary is unable to fully introduce the mechanism of competition in both selection and evaluation of carriers. The biggest share of delivery business is carry A, who is the former attached company of the subsidiary, but does not perform as well as other two carries and cost much of the subsidiary. However, the subsidiary is unable to do anything but just tell them to make improvements in management and delivery because the subsidiary is the state-owned enterprise having the responsibility to absorb surplus labor and stabilize the local society. More importantly, what has been beyond the political risk is the type of relationship-"Guanxi" which determine how

buyers should treat their suppliers and vice versa. This type of relationship is detrimental for the implementation of contract management and supplier evaluation. As Mr. Chen mentioned personal rapport is a critical factor in any decisions in business. Usually, the decision will not be harmful to the existing benefits of both sides; it is only the compromise from their relationship. Hence, as to the suppliers and carriers the first priority in dealing with the subsidiary is not to work out efficient and effective ways of carrying their business, but concentrate on how to build up a sound “Guanxi” between them. Last but not least, since the Sinopec issues the policy of social responsibility report each year, its subsidiaries are asked to join such job in its region. Based on the findings, the subsidiary has done much work in constructing the local society including social donation, environment protection. Specific to this case, the subsidiary always put safety as the first priority in evaluating their suppliers, particularly for carriers. On account of petrol the carrier delivers is the inflammable and dangerous products, thus, they take this matter very seriously, even without “Guanxi” in negotiation. It is concluded from the discussion above that **the political risk is intangible barrier that most influences the change and reform for most Chinese SOEs. Also, “Guanxi” is another challenge that it should not be ignored when doing business and dealing with relationship. Finally, carriers’ safety is the most significant responsibility that the subsidiary takes for and concerns with in their CSR.**

6.4. Supply management strategies for the suppliers and carriers

According to the literature review, Abrahamsson (2003) and Treville (2004) mentioned the strategy of centralization through the logistics platform respectively. The integration strategy incorporates all associated activities into a commanding place where those operations in logistics are coordinated in an efficient manner. Murphy and Wood (2009) stressed the importance of information technology and third-party logistics in the instrument of integration. Nollet et al. (2005) further elaborated the process of forming strategies in different levels. Seuring (2009) brought in the 5Ps in the management of suppliers and he formulated the relationship matrix between product and strategies.

In this case, it is able to see that Sinopec is taking the strategy of integration. It first developed two series of software combining with ERP system with the aim of logistics management centralization. ASR realized the automation of data collection so that the occurrence of petrol stock out is reduced to the minimum, while RSO helps managers optimize the reallocation of resource in compliance with each petrol schedule in daily business. Both of software are working together to realize the process of centralized management. Hence, it is able to understand why the logistics centers are established in local subsidiaries. One the one hand, logistics center has achieved half ways of this strategy because it works as the medium or coordinator between petrol stations and carriers. It guarantees the movement of information and products from one place to another place. On the other

hand, the role it is playing in the coordination with carriers and sales is not as expected as it is supposed to be. Actually, with the importance of logistics center, it is supposed to stand in the leading position for management of suppliers and carriers. Nevertheless, in this case, there are only a few approaches for the subsidiary to manage its suppliers and carriers. Contract management, negotiation and evaluation in the management are far less effective with the influence of political risk and “Guanxi”. These strategies present more in the formalism but less in actual actions. Thus, I might conclude that **Sinopec’s logistics strategy is generally aligned with the strategy of integration and centralization as mentioned in the literature. Nevertheless, under the influence of political risk and “Guanxi”, the subsidiary has neither various approaches in the management of suppliers and carriers nor plays a leading role in the communication with both parties.**

Based on the discussion above, it is able to put forward possible suggestions for this case as follows:

I Promoting communication by exploiting the relationships of “Guanxi”

Since “Guanxi” is a kind of relationship for social network and communication in China, why does not exploit such a relation that the subsidiary might enhance the control of its carriers? If the top management is able to take an advantage of this relationship in the management of bottleneck suppliers, these one have to listen to and implement what the subsidiary is requesting. Those managers could place the pressure for improvements of these carriers by means of talk, conversation, meetings, to name a few within the principle of “Guanxi” because people do want to lose their “face” or credibility in personal rapport. Hence, they will follow the requests made by the subsidiary, just like the implementation of CSR. No one can ignore the seriousness and escape the responsibility of discarding someone’s safety. Top management is likely to use CSR to shade the dominance of “Guanxi” away. In which case, the subsidiary might be able to request their improvements as they expected so. Certainly, improvements are likely to be obtained once in a little, rather than once for the whole thing through “Guanxi”. However, deep awareness and involvement of top management are first priority for beginning with the problem; otherwise it does not work at all.

I Establish and design the top-down training system.

As perceived from the case, various variables like lack of contract management, ineffective communication, insufficient awareness for supply management have resulted in the increase of cost, inefficient work, inappropriate petrol storage volume, thus it is rather important to appeal to set up an effective training system which involves all levels of managers both in the subsidiary and its suppliers to raise their awareness for this areas in a critical stage. This training system is able to carry out by beginning with top managers and passing to sub-levels of managers and suppliers so that they really realize the significance of the supply and outsource management. As expected, they might take what they perceived in training into work automatically either through “Guanxi” or responsibility.

6.5. The comparison between literature review and findings in the case

Ever since Kraljic matrix was put forward, it is being applied for decades and still an effective tool in developing and evaluating the relationship between buyer and supplier. In which case, this paper has also adopted the matrix to examine the relationship between the subsidiary and its suppliers. To my surprise, Kraljic matrix is unable to completely reflect the capture the situation in the case according to my findings. Although the case can be characterized based on kraljic matrix, strategies as it recommended are almost unable to apply in the case. The subsidiary is unable to either switch its suppliers or evaluate them in an effective way. It is understandable that major challenges as found in the case like cost efficiency, communication, and supplier evaluation lower down the effectiveness of the supplier management, but whether or not other aspects also affect the situation? As we concerned, the subsidiary affiliated with Sinopec is also characterized as State-owned enterprises(SOEs), thus political risk should be considered when it deals with relationship with suppliers. In most cases, political risk is the priority in China, particular for those SOEs. In addition, what has differentiated doing business in China? Given from the perspective of business management, culture factor is needed to be consider. Thus, “Guanxi” as a significant factor in various types relationships in China is supposed to be take into account. However, CSR provides us an arguable solution in exploiting the use of “Guanxi”

To summarize, Kraljic matrix provided a direction in dealing with the relationship with suppliers, but it does not guarantee its use in every situation. In this situation of the case, the literature review about Kraljic matrix has some discrepancy with the findings based on interviews and data.

7. Conclusions

In this chapter, a brief summary of this paper, the contributions to the literature and suggestions for further research will be done in the following.

7.1. Overview

The summary will be proceeding with the purposes in this paper. In this case of study, the subsidiary of Sinopec in terms of supply chain is taken as the empirical source for discussion. In the beginning, Kraljic matrix was brought to reflect the actual situation of suppliers in the subsidiary. Thus a conclusion that Sinopec is highly dependent on suppliers was made according to findings. However, the situation in the case has been characterized based on Kraljic matrix although, the matrix is unable to completely capture the situation and formulate strategies as it presents. Second, what influences the subsidiary to take an effective management for the relationship with suppliers is able to be concluded by low cost efficiency, communication lost and evaluation ineffectiveness based on the interviews made through two managers. These are three main challenges as found in the case. Third, in the sense of a company's development, it is required to switch or look for alternative suppliers who are unable to meet or follow the company's needs. However, political risk in terms of social unrest and the unique type of Chinese relationship—"Guanxi" are standing in the way of development for most Chinese SOEs. The central government does not allow its enterprises to separate its attached companies as they wish but command them to retain these attached companies as an instrument for absorbing surplus labor. Hence a certain degree of social stability would be guaranteed. Meanwhile, "Guanxi" plays an important role in the ways of doing business in China. According to the findings, the subsidiary appreciates the contract management and evaluation less than "Guanxi" in their daily business because it is able to bind both their responsibility and action, thus most of the problems are solved by it. As far as the subsidiary's social responsibility, it attaches the importance of the safety to all of its suppliers and carriers and makes no compromise even with "Guanxi". Hence, political risk, "Guanxi" and CSR are main factors which affect the company's decision in switching or substituting suppliers. These three factors are beyond the scope of Kraljic matrix and should be considered in a situation as mentioned in the paper. They last but not least, the subsidiary is unable to present effective strategies in supply management as concluded in discussion. In the case of "Guanxi" and political risk, contract management and effective evaluation are hard to achieve together with other approaches. Hence, recommendations in exploiting the use of "Guanxi" in dealing with relationship and establishing training system are made in discussion.

7.2. Contributions

This paper has made the contributions to the literature of Kraljic matrix in the situation of Chinese SOEs. As mentioned in the paper, political risk and special type of relationship (“Guanxi”) have commonly influenced the way of the case company treating their suppliers. Few of the literature have specifically mentioned how to develop the relations in this case of Kraljic matrix. **As been found, Kraljic matrix is unable to fully reflect in every situation of developing the relationship with suppliers, particularly if the matrix is influenced by political and “Guanxi” factors.** In addition, this paper has enhanced the understanding of the Chinese SOEs and the ways of doing business in China.

7.3. Limitations

As it has been mentioned in the chapter 4, the main limitation for this paper is the insufficient interviewees. There are only two interviewees assisting in this paper although they are senior managers in both relevant managerial areas. Another limitation is that the paper only studied the case from the perspective of buyer. It is inadequate to grasp the whole story from only the perspective of one side.

7.4. Future research

Although this paper has described the Kraljic matrix in the case of Chinese SOEs from the perspective of buyers, the perspective from suppliers almost did not mentioned at all. Meanwhile, this paper has just exploited this relationship in terms of cost, evaluation, “Guanxi” and political risk. Yet, other aspects of the relationship are also needed to be discussed further in order to understand this case in fully aspects. In this paper, I suggested using CSR to restrict the penetration of “Guanxi” as the reverse way, but more details could be developed in further study.

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Appendix A interview questions

Interviewees

1. Mr.Hu: senior logistics manager with responsibility in supervising logistics center and delivery planning, carrier management, to name a few. Contact by email: 413534122@qq.com
2. Mr. Chen: senior sales and administrative manager with responsibility of managing two districts in this city. Contact by email: chenbaoqing604@qq.com

Note: both of them are poor at English, please translated into Chinese if there are any questions.

Case study for suppliers in Sinopec

1. The numbers of suppliers and what they are. They could be classified in groups for what they provide?
2. As to products, if Sinopec has a clear definition on what they provide to be strategic? Bottleneck? Or leverage and non-critical?
3. To those strategic and bottleneck items, how much the Sinopec has to be dependent on these suppliers?
5. What the percentage of business volume for each carrier of the subsidiary?
5. What the average times for each carrier in delivery of petrol per day? How much is the cost per time?
6. What the total cost of delivering per month? Each carrier will be granted according to their business volume?
7. How many tanker they have for delivery by each carrier?
8. Is there any possibility of selection for suppliers? Or does your company have alternative ones in each axis boxes?

Major challenges in the development of logistics in Sinopec

1. To the problem of transportation, what aspect can't those suppliers catch up the requirements? Why?
2. Are there any problems on political factor or Sinopec's CSR that influence for elimination those suppliers
3. The problems in application of ERP with sales are caused by what? Store of petrol? Inaccuracy of data?
4. What is the definition of the platform of information sharing? Is any gap for communication among them?
5. What is the exact meaning of information stagnation in the process of exchange?
6. What is the problem in the management of those suppliers who are subordinate to Sinopec
7. Are there any issues resulted from structure?
8. What the relationship between Sinopec and its logistics service provider?
9. What do you think are the current restrictions to logistics and outsourcing provider (carrier)
10. Is there sound relationship between logistics providers and sales from your perception? If not, to what aspect do you think they work poorly
11. What do you think are current issues in relation with suppliers?

Relationship between sales and logistics.

1. What the relation between sales and logistics?
2. What can logistics center assist in sales?
3. The biggest problem between sales and logistics?
4. Whether training is helpful in improving logistics efficiency with sales?
5. Whether the volume of petrol stored in stations should be set in a reasonable scope?
6. Is there any impact on sales if logistics providers do not meet lead time?

Uncontrollable factors affecting the relationship with suppliers.

1. What do you think are the factors which influence the relationship with suppliers?
2. As Chinese stated-owned enterprise, Sinopec is a political-orientated enterprise? In terms of what?
3. What do you define the political risk to the logistics reform? What is effect of it?
4. Are there any other aspect influence the efficiency of supplier management and delivery?
5. What do you define the special type of relationship “Guanxi” in the way of doing business?
6. What does the social responsibility the subsidiary have in the city or to their employee?
- 7.

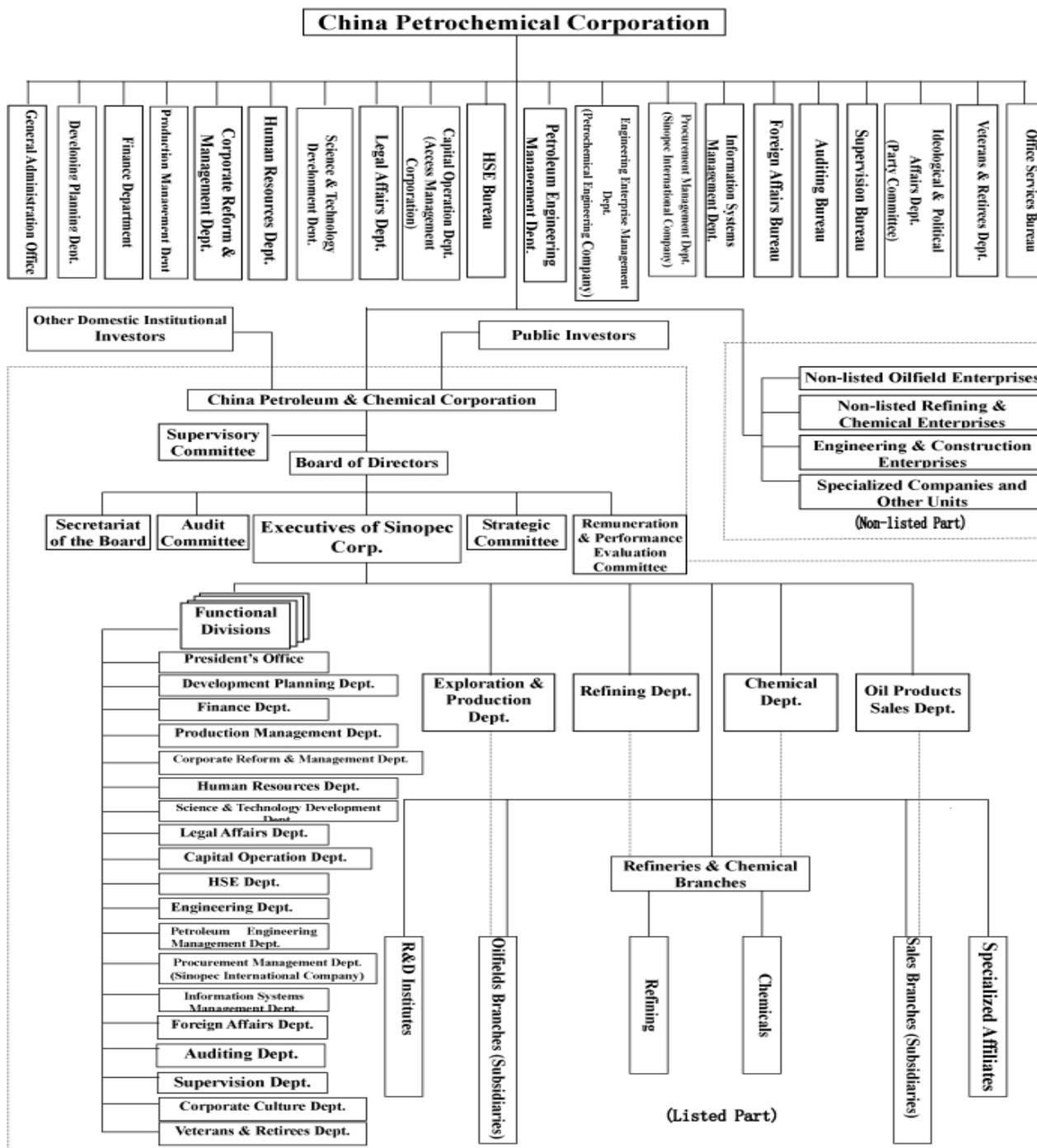
Strategies applied in the management of suppliers in the subsidiary

1. What is the general strategy for Sinopec to carry out its logistics reform?
2. In terms of IT infrastructure, what are the systems they are using?
3. Can you list the current approaches in managing your suppliers and carriers?
4. Is there an evaluation for suppliers? What it is or would be?
5. How often do both parties sit down for discussion? What is the normal approach when confronting contingency?
6. What would be the biggest force standing in the way of implementing strategies?

Appendix B: The structure of Sinopec and Sinopec social responsibility report

The structure of Sinopec

Organization Structure of China Petrochemical Corporation



Source from (<http://www.sinopecgroup.com/english/Pages/gsl-zzjg.aspx>)

Sinopec social responsibility report

There is a whole volume of content in the report; we would like to cut off the exact part of the content in order to capture our elaboration in the paper. Other paper will be attached as in the report but not shown in the appendix.

7.2.2 Information-oriented management platform

Information-oriented management platform for chemicals marketing Sinopec Corp has established a chemicals marketing information-oriented management platform at a domestic advanced level. This has formed a three major business support system which is an ERP system-based, and Customer Relation Management (CRM), Logistics Information System (LIS), Data Warehouse System (BW) and IC Electronic Delivery Card-integrated system. In addition, it also built business, logistics and operating management platforms to provide all-round supports to its service operation and operating management. To provide customers with better services, the Company took full advantage of the function of CRM system (website: <http://www.chemicals.sinopec.com>) to develop an information platform, in which the company can exchange real-time information with customers. With the platform, customers can not only fill what they need, give feedback and propose suggestions over the Internet, but also work on real-time enquiry of such key information as sales orders, capital transaction and loan balance. Accordingly, information sharing and communication/interaction with customers have been accomplished.

8.1 EMPLOYMENT AND DEVELOPMENT OF EMPLOYEES

8.1.1 Maintaining a good labour relation

The Company adopted the labour contract system to regulate the management of labour employment according to relevant requirements stated in the Labour Law of the People's Republic of China, the Trade Union Law of the People's Republic of China and other laws and regulations.

Enterprises subordinating to Sinopec Corp, under the principle of "equality, voluntariness and positive consensus", signed written labour contracts with employees which covers 100% of the employees. Labour contracts signed between the Company and employees are formulated strictly in accordance with the Labour Law, the Labour Contract Law, other applicable laws and regulations, as well as other relevant international rules and customs to specify the rights and obligations of the employees. In addition, each entity prepared supporting rules for the management of labour contracts to regulate the employment, safeguard legal rights and interests of the employees and ensure the execution of the labour contracts.

In 2009, the Company adopted the Labour Contract Law and the Regulation on the Implementation of the Labour Contract Law in an all-round way and formulated the Several Opinions concerning the Enhancement of Employment Management, which further consolidates the harmonious and steady labour relationship by improving the management of labour contracts, strengthening the construction of labour employment, and properly settlement of labour dispute.

5 HEALTH, SAFETY AND ENVIRONMENT (HSE)

Sinocer Corp's HSE policy is safety first, prevention foremost, participation of all employees, comprehensive treatment, environmental improvement, health protection, scientific management and sustainable development. By virtue of promoting and implementing HSE management system and making constant improvement, effectively control the incidence rate and casualty rate of severe disasters and accidents, reduce enterprise cost, save energy and resource, improve the relationship between enterprise, local government and community, and strive to realize the coordination and management of social, environmental and economic benefits.