THE INFLUENCE OF SUPPLY CHAIN RELATIONSHIPS ON QUALITY PERFORMANCE IN THE CONTEXT OF CHINA AUTOMOTIVE INDUSTRY

by

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PENGARUH HUBUNGAN RANTAI BEKALAN TERHADAP PENCAPAIAN KUALITI DALAM INDUSTRI AUTOMOTIF DI NEGERA CHINA

ABSTRAK

Industri pembuatan China kini menghadapi cabaran daripada persaingan global. Para pengilang China perlu mempertimbangkan peningkatan kualiti produk supaya dapat searas dengan pembangunan ekonomi dunia.Walaubagaimanapun, adalah mustahil syarikat boleh berniaga bersendirian, yang mana, syarikat perlu bergantung kepada pembekal untuk membolehkan mereka mencapai kedudukan persaingan yang lebih kuat. Oleh itu, tujuan kajian ini adalah untuk mengkaji pengaruh hubungan rantai bekalan terhadap pencapaian kualiti. Kajian ini dikaji daripada data yang dikumpul daripada 200 responden yang bertanggungjawab dengan bekalan rantaian di dalam sesebuah syarikat automotif di Negara China. Kesemua data ini dianalisiskan dengan SPSS. Hasil empirikal kajian menunjukkan hubungan rantaian bekalan dengan pencapaian kualiti adalah positif dan secara langsung. Kajian ini, maka mencadangkan syarikat agar mewujudkan pelbagai jenis hubungan dengan pihak pembekal melalui kepercayaan, komitmen dan komunikasi baik dengan mereka dan seterusnya ini dapat meningkatkan pencapaian kualiti.

THE INFLUENCE OF SUPPLY CHAIN RELATIONSHIPS ON QUALITY PERFORMANCE IN THE CONTEXT OF CHINA AUTOMOTIVE INDUSTRY

ABSTRACT

The global competition is becoming more furious for China manufacturing industry. China firms need to consider improving quality performance in order to continue with an economic growth. However, it is impossible for organizations to remain self-sufficient; thus, manufacturing organizations should rely on their suppliers to help them achieve stronger competitive position. Thus, the primary purpose of this study is to examine the influence of supply chain relationship on quality performance. This study is tested with data gathered from a sample of 200 respondents who are responsible for supply chain or operational department in China automotive industry. All data are analyzed with SPSS. The empirical result showed that supply chain relationships have a positive and direct impact on quality performance. The study, therefore, suggested that the company need to build various types of relationships with supply chain partners, by developing trust and commitment, improving communication and cooperation, a stronger relationship should emerge and eventually will enhance product quality performance.

CHAPTER 1

INTRODUCTION

1.0 Introduction

With the increase in globalization, competition in the business has increased at accelerated rates (Benton & Maloni, 2002). As consequence, increased competition has led to firms focusing more on their core competencies. This focus has led to increased specialization within the firm, which drives the need for firms to outsource more of their non-core functions. The reason is that manufacturers face increasing pressure from customer's requirements, mainly reflecting the quality of products. Thus, a firm must build more collaborative business relationships with suppliers beyond its formal boundaries. In conjunction with this, many studies have pointed out the importance of streamlining supply bases and improving supply chain relationships for superior quality performance (Ishikawa 1985; Deming 1986; Garvin 1988), it is imperative to study the causal relationship among supply chain and quality performance.

While different industries are in varying levels of quality performance, one of the more developed efforts is in the automobile industry. The import of high quality, fuel efficient, and competitively priced automobiles from Japan in the 1970's and 1980's forced Chinese automobile manufacturers to become more competitive or go out of business. Subsequently, one critical success factor in the industry has proven to be

effective supply chain relationships. Given these two elements, the supply chain relationships, quality performance and automobile industry in China served as an excellent source of study.

Thus, this chapter introduces the research outline of the study. It illustrates the background and problem statement. It also discusses on the objectives of the research, research questions to be answered, significance of the study as well as the definition of key terms.

1.1 Background

Some manufacturing industries have been growing very fast in China during the last two decade，especially after China became a member of the World Trade Organization (WTO) in 2001, it became obvious that there has been a rapid inflow of foreign direct investment into China, and multinational enterprises have been eager to set up production bases in China to serve regional and world markets. All Chinese firms, including the state-owned and those collective-owned, would have to adapt to an increasingly uncertain external environment, many firms have undertaken initiatives to enhance their competitiveness so that they can meet the global challenge. Chinese superb performance has been based on their competence of providing low-cost products in the past time. The cheap labor cost has also made Chinese manufacturing firms to enjoy a strong competitive position in global markets (Lee, 2000).

However, Chinese manufacturing industry can not be only content with their

past performance. They should be reminded that we are in a turbulent global environment. In the recent years the global competition is becoming more furious for China manufacturing industry; manufacturers in developed countries provide high quality products at reasonably low prices while other manufactures in developing countries are also seriously challenging Chinese firms by producing similar products at relatively less cost (Lee, 2004). Moreover, consumers from all over the world are becoming more and more quality-conscious and even knowledgeable. It will be increasingly difficult for Chinese firms to compete solely on the basis of price. It is obvious that, as quality improves, costs fall through reduction in failure and detection costs (Samuel, 1994). All of these recent developments force Chinese firms to consider quality management practices in order to continue a similar pace of economic growth. Regarding to Samuel (1994), manufacturers generally compete on three respects: quality, price, and delivery. Thus, China manufacturing organizations can not merely rely on low cost to develop their industry; they must develop a strategic shift from its low-cost-based strategy to a new competitive edge based on quality.

To meet the requirements of a market-driven economy, Chinese companies have been paying attention to quality management. The idea of how to improve quality performance is particularly attractive to manufacturing firms while they are entering the competing global markets where the quality of products serves as an “entry ticket” (Yeung & Chan, 1999). Thus, quality performance improvement has become a top management agenda in many organizations in their pursuit of positive business benefits,

such as less product costs, higher customer satisfaction and wider market share. Mandel et al. (2000) noted that quality is quite significant as the factor of international competitiveness. This is also true for China (Lee & Zhou, 2000). While Chinese quality management officials have noticed the success of quality in Japan, USA, and Europe, they have also found that many quality problems are existed in China. One significant reason of all is that many companies are not aware that they should combine the integrated quality management activities of partners in the supply chain to best satisfy their customers (Vickery et al., 1999).

There is little doubt that purchasing function plays very important role in the quality process, but the role of supply chain relationship in quality performance has not been directly investigated. This is an important area because it may be said that the essence of purchasing function is supply chain relationship (Carter, 1998). It seems logical, because as today's manufacturing environment are becoming more and more complex, the requirements associated with getting a product or service to the right place at the right time at the lowest delivered total cost have been intensified further. In the face of increasing competitive pressure, it is becoming harder for organizations to remain self-sufficient (Crossan & Inkpen, 1995). Therefore, manufacturing organizations should be looking to their suppliers to help them achieve a stronger competitive position. On the other hand, supply chain relationship is viewed as an integrative, proactive approach to managing the total flow of a distribution channel to the ultimate customer (Matthyssens & Van den Bulte, 1994). It not only aims to increase

customer service reliability, but also reduce inventory to lower uncertainty and costs (Lamming, 1993). It is also noted that maintaining good supplier relationships and teamwork among supply chain partners is a cornerstone of performance improvement.

However, many companies are not aware that they can achieve competitive edge with the cooperation of their suppliers, instead, they have been working on their own, even developing an arm's length relationship with their suppliers, they do not realize the need to help suppliers develop or to facilitate their suppliers' work (Vickery et al., 1999). They believe that they have to take advantage of their suppliers for their benefits, so, these suppliers are not often satisfied with the relationships with the companies and are not motivated to show their best service to companies (Alfred, 2002). Thus, in order to achieve such completive position, there are several important aspects for manufacturing organizations to attach importance to, which is to examine the role of supply chain relationships in quality performance. This study is the first to evaluate the influence of supply chain relationships on quality performance in Chinese manufacturing industry; in addition, we hope that the survey results will lead to some successful actions for improving quality performance in China. As China's economy continues to grow at an extraordinary rate, more study is needed to document and provide guidance for successful transition.

1.2 Problem Statement

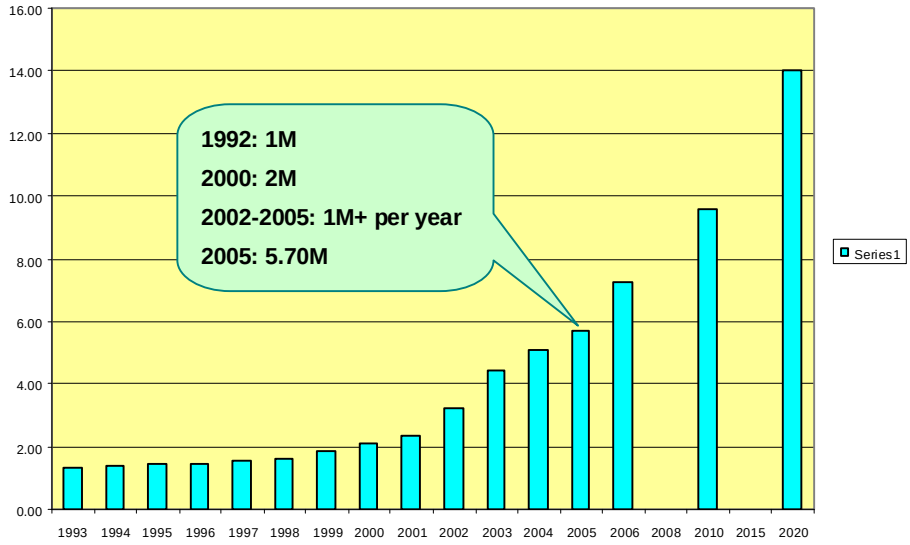
According to the Council of Logistics Management, Supply Chain Management

is defined as “the process of planning, implementing and controlling efficient and cost effective flow of materials, in-process inventory, finished goods and related information from point-of-order to point-of-consumption, for the purpose of conforming to customer requirements as efficiently as possible”. The importance of supply chain management as a means of bringing together all the team members under a common goal, allowing involvement in the entire project lifecycle and developing the benefits of better management and more innovative solutions (Patricia & Regina, 2006). The success of an organization has become increasingly dependent on the efficient functioning of its supply chain. Thus, supply chain management plays very important role in automotive industry.

However, the supply chain of automotive sector which constituted of automakers, suppliers, retailers and final customer have been going through significant structural and other changes. In view of the present globalization, implementation of lean production and the development of modularization have changed the relationships between automobile assemblers (OEMs) and their suppliers, especially those in the first tier (Chennai, 2006). Stiff competition among manufacturers will result in more mergers or acquisitions. The challenges automobile manufacturers and suppliers face include improving quality, meeting cost reduction targets and developing time to market (Chennai, 2006).

Since China implemented major economic reforms to create an open-door policy in 1978, its economic development has been impressive. The Chinese National Bureau

of Statistics (NBS) (2008) reported that GDP has showed growth of 11.9 percent in 2007. During this period, automotive industry, which is one of China's pillar industries, has experienced the fastest growth and is becoming one of the world's fastest growing markets for vehicle manufactures and services. As this study is focused on the automotive industry, Figure1.1 below clearly show to us that the total output is really increasing so fast from 1 million production units in 1992 until 7.28 million units in the year of 2006 (Eye for Transport, 2006).



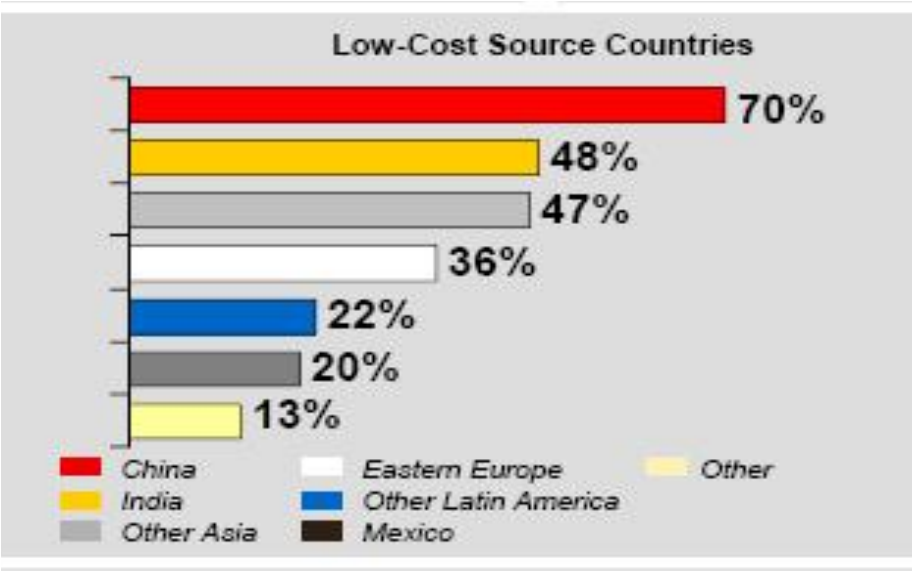
Source: Eye for Transport, 2006

Figure 1.1: **China Auto Development Trend**

According to Lubo (2007), although the multinational automakers have heightened quality consciousness among manufacturers and consumers alike, most

industry observers would agree that China's auto industry is still confronted with a quality challenge, and there is a lot of work to be done before it can achieve competitive standards on a truly global level. This is proven when J.D. Power Initial Quality Study (IQS) (2007) on the measurement product quality using a metric called "PP100," or problems per 100 vehicles, has discovered that China's industry average PP100 rating stands at 231, or almost twice the U.S. average of 124. And among domestic Chinese brands, quality problems are almost twice as frequent as locally built international brands (an average of 368 PP100 for domestic brands, compared with 189 for international brands). These gaps are particularly significant in such critical components as power train, driving experience, and handling, are areas that require heavy investment in research and development and production management systems.

Figure 1.2 depicts China is number one low cost source country compared to India, Mexico and other countries. Although China is successful in term of low cost source, there are still a lot of challenges waiting for them; one of the main issues is that quality is of low value (Li et al., 2003; Lubo, 2007). Based on Figure 1.3, we can know that the main problem for automotive industry is unreliability of quality which constitutes 51 percent of all risks. Since low-cost labor is competitive advantage for China manufacturing industry, the labor productivity is only one eighteenth that of Japan (Stephen, 2006). All of these forced us to do some study about how to improve quality performance.

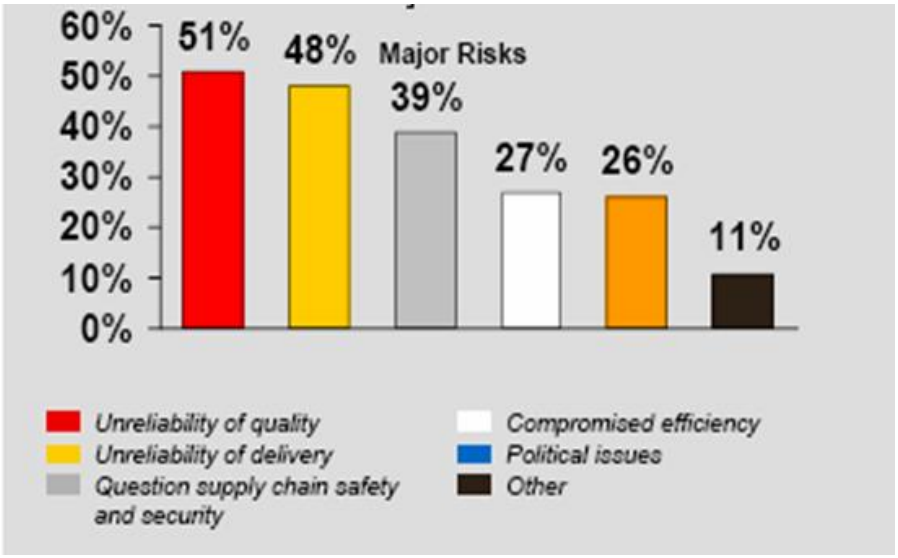


Source: Eye for Transport, 2006

Figure 1.2: **Low-Cost Source Countries**

Actually, quality issue was not only met by automotive industry, but also faced by other organization. Thus, all of them have recognized the requirement to improve product quality to succeed in the competitive international marketplace. They are also aware that the involvement of suppliers is critical to improve quality and satisfy customers (Alfred et al, 1999). From Figure 1.3, supply chain safety and security problem represent 39 percent of major risks. Therefore, it is impossible that they can maximize value if raw materials or semi-manufactured goods from suppliers are defective and late. Thus, they have been suggested to work closely with supply chain partners to achieve high standards of quality if they want to gain more productivity (Hines, 1994). However, most of the organization will pay less regard to this relationship; especially state-owned enterprises were relying too heavily on government

support, they believe that they can survive so that they have been working on their own. Moreover, most of private owned businesses are small or medium in size, having difficulties to serve large demanding company, this will make the supply suspend. On the other hand they do not perform R&D, technological competences are limited. Thus, the components from them do not meet the criteria for automakers. Studies have concluded that finding a capable and loyal supplier is crucial for success in China (The Institute of Manufacturing, 2002), but selecting the right supplier still remains more difficult than in the West, with lack of trust, communication, being a major barrier to efficient and effective operations (Dai et al., 2003). On the other hand, the efficiency of supply chains is relatively low, with logistics and transportation costs comprising some 20% of GDP (Easton, 2002), twice that of US. All of these reasons led to potential quality problem for automotive producers.



Source: Eye of Transport, 2006

Figure 1.3 Depicts the Major Risks in Automobile Industry

The creation and enhancement of a long-term cooperative supply chain relationship is a significant quality practice which has been prescribed as an indispensable part of any organization (Lascelles & Dale, 1990; Lambert et al., 1996). And organization can gain an invisible form of competitive advantage by making the most effective use of suppliers' capabilities. So they should identify suppliers as partners and build long-term relationships so that suppliers are motivated and able to provide the components needed to their ultimate goal (Derose, 1987; Harrison and St John, 1996). However, it is quite challenging to develop this kind of relationships in china. Since effective supply chain relationship demand manufacturing company to treat their suppliers as ongoing business partners, which is necessary to change in belief and a shift from traditional adversarial relationship to close partnership, then manufacturers and suppliers believe they can rely on each other to be honest and helpful (Harrison & St John, 1996). In academic literature, the exact nature of these relationships and how they can improve quality performance remain unexplored. Thus, our study will investigate the importance of supply chain relationships in quality performance in automotive industry so that it can be a guide for Chinese automotive organization that expects to be more successful in the future.

1.3 Research Objectives

The objective of this study is to examine whether supply chain relationships play

very important role in quality performance. Thus, this study intends to:

1. Examine whether there is a significant difference in term of quality attributes among automotive companies in China.
2. Examine whether there is a significant difference in term of dimensions of quality performance among automotive companies in China.
3. Examine whether trust has a positive impact on quality performance.
4. Examine whether commitment has a positive impact on quality performance.
5. Examine whether cooperation has a positive impact on quality performance.
6. Examine whether communication has a positive impact on quality performance.

1.4 Research Questions

In order to achieve the above-mentioned objectives, the following questions should be answered:

1. Is there a significant difference in term of quality attributes among automotive companies in China?
2. Is there a significant difference in term of dimensions of quality performance among automotive companies in China?
3. Does trust have a positive impact on quality performance?
4. Does commitment have a positive impact on quality performance?
5. Does cooperation have a positive impact on quality performance?
6. Does communication have a positive impact on quality performance?

1.5 Significance of the Study

The current study contributes to what is a very limited amount of studies about the effect of supply chain relationships on quality performance in general and in China in particular. In addition, this study also contributes to the literature by identifying factors that make close and long term relationships with suppliers successful and provides empirical support for working with suppliers together to improve quality performance. Therefore, this study will benefit both academic and business sectors, for it not only enhances the understanding of supply chain relationship theory in the supply chain management, but also is the guideline to how supply chain relationships develop in manufacturing industry. In addition, tracking the development of supply chain relationship could help to analysis the cause and effect of supply chain relationship between variables. It will also be much useful for the top management to know the factors that can lead to unsuccessful quality performance, then, think out the way of how to improve the said factors. The study also argues that effective supply chain relationship would lead to satisfied suppliers and more willing suppliers to help companies in their effort to improve the quality of products offered which in turn will lead to the improvement of business results.

1.6 Definition of Key Terms

For the purpose of this study, the following definitions were specifically referred to.

An arm's length relationship - a term used to describe a type of business relationship a corporation should have with a close associate to avoid a conflict of interest (Glossary, 2008).

Trust - the firm's belief that that another company will perform actions that will result in positive actions for the firm, as well as not take unexpected actions that would result in negative outcomes for the firm (Anderson & Narus, 1990, p. 45).

Commitment - an implicit or explicit pledge of relational continuity between exchange partners (Dwyer et al., 1987, p.19).

Communication - the formal as well as informal sharing of meaningful and timely information between firms (Anderson & Narus, 1990, p.44)

Cooperation - similar or complementary coordinated actions taken by firms in interdependent relationships to achieve mutual outcomes or singular outcomes with expected reciprocation over time (Anderson & Narus, 1990).

Design quality - the features, styling, and other product attributes that enhance fitness for use or 'utility' for the consumer (Fines, 1986).

Conformance quality - the ability to meet targets for quality within the manufacturing unit and operationalised as a construct using measures of defect rates, new product yield and scrap and rework (Flynn et al., 1994).

1.7 Organization of Remaining Chapters

Chapter 2 introduces the literature review on elements related to this research, important constructs and variables with definitions. Theoretical framework and hypotheses development are defined in this chapter. Chapter 3 discusses the proposed methodology which covers the research design, variables of the study, population and sample, procedures and data analysis. Chapter 4 presents in detail the profile of the respondents, descriptive analysis and the results of statistical data analysis. This study concludes with Chapter 5, discussing the results of the research, implications, limitations as well as the recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

The rapid changes in term of nature of supply chain relationship in today's very competitive environment may give arise to one question whether supply chain relationship plays an important role in quality performance. In order to understand how important supply chain relationship is quality performance. This study must venture beyond a simple definition and recognize previous research. As such, this chapter was organized in this manner to give an overview of literature, underlying theory, literature review, theoretical framework and the hypotheses development.

2.1 Quality Performance

In the academic literature, there have been a number of studies which investigated the relationship between the various dimensions of quality performance (Choi and Eboch, 1998; Forza and Filippini, 1998). In term of nature of quality performance, Flynn et al. (1997) stressed the need to differentiate internal quality performance in the plant from external quality performance in the marketplace. Internal quality performance are composed of design quality and conformance quality that organizations can enhance in order to satisfy their customers, while external quality

performance are made up of quality-in-use, customer value, and customer satisfaction (Fujimoto, 1989).

2.1.1 Conformance Quality

Conformance quality is the degree of match between the features of the actual product and its specification once it has been manufactured (Clark et al., 1990). It involves consistency in doing things right with minimum errors, finally is oriented towards efficiency. Thus, it is a more tangible and measurable since it deals with targets, such as the specifications and actual features of products (Gavriel et al., 2007). Lemmink (1994) identified that a substantial part of quality improvements could be contributed to concerning conformance quality. However, Foster (1996) explored the relationship between conformance and quality costs; he argues that improved conformance quality result in reduced organizational confusion concerning quality improvement, but prevention, appraisal, and failure costs have also increased as conformance quality improved.

2.1.2 Design Quality

Design quality is the extent to which the product's design (specification) fits customer's needs and expectations (Clark et al., 1990); it is achieved through deeper understanding of customer requirements and translates their requirements into actual product. Thus, Design quality not only represented technical attributes, but also an

interaction between these attributes and external factors (Gavriel et al., 2007). This is a bit surprising given that as much as 70 to 80 percent of future product decisions and costs are determined by the product's design (Stevens, 1993). Due to the importance of design，a good control of the design quality is of vital importance in the design process. Furthermore, Brian and Sean (2005) proved that design is not only a major cost driver, but also recognized as major determinant of quality because quality is designed into the product, and good design can improve quality and enhance the company's ability to compete in marketplace, there are also potential benefits with partnerships. Fleischer and Liker (1992) contends that deign quality makes major contributions to three primary results of cost, quality and timeliness.

2.2 Supply Chain Relationship

Supply chain relationship is accelerated as firms strive to achieve their goals; it has become an integral part of business-to-business operating strategies in the past years (Wilson, 1995). Supply chain relationship refers to a relationship formed between two independent entities in supply channels to achieve specific objectives and benefits (Michael and Benton, 1997). Jason et al (2000) explored that Relationship has great potential to provide an environment which facilitated improves in quality, productivity and safety. Regard to Ahire et al., (1996), close working relationships with a select few supplier are a prerequisite to quality practices, this is important for ensuring a close and long term supply chain relationship. Alfred et al. (1999) also found that supply chain

relationship can be useful for improving the quality products of manufacturers. Consequently, a review of literature revealed that there are still insufficient literature available dealing with the role of supply chain relationships in quality performance and in China in particular. Another problem is their attention was not focused on the dimensions of supply chain relationship or far less on the influence of supply chain relationship on quality performance with exception of Brian et al. (2005). As a result, this study can address the gap in the context of how relationships evolve and their impact on quality performance in our study.

Wilson (1995) assembled a list of dimensions that have been used with success in modeling different relationship situations in his integrated model about relationship. They are commitment, trust, cooperation, mutual goals, interdependence/Power imbalance, Performance satisfaction, structural bonds, comparison level of the alternatives, adaptation, non-retrievable investments, shared technology, and social bonds. Brian et al. (2005) have chose communication, trust, adaptation and cooperation as four dimensions of supply chain relationships to investigate the impact of supply chain relationships on manufacturing performance. But in our study, we will pick up four dimensions as our independent variables from many possible variables. This set will represent those variables that have theoretical and empirical support and shared very apparently in the different models. For normal situation factors one might add or delete from this set to capture the relationship situation. These four dimensions in our study are including trust, commitment, communication, and cooperation. This study

focus on each one of these four dimensions influences quality performance, then improve quality performance. Thus, we ignore interaction effect since all four dimensions are important. Next, we consider each of them in more detail.

2.2.1 Trust

Trust has been defined as a binding force in the literature, which plays a key role in supply chain relationship, especially critical when some uncertainty or asymmetric information take places in manufacturing activity (Ashish and Ravi, 2003). On the other hand, it can help to facilitate the relationships to weld into a stronger link among partners, where the strength of relationship leads to a longer relationship and one where some additional benefits can be achieved (Sahay, 2003). Anderson and Varus (1990) described trust as the belief that the partner will perform actions that will lead to positive results for the company and not to take expected actions that may result in negative outcomes. Thus, when trust exists, the partners are more willing to put themselves at risk, reliance on another party's promises or sacrificing current rewards for future values.

Regard to Ganesan (1994), There are three types of benefits if the trust has existed between partners: (i) reduces the perception of risk associated with opportunistic behavior: (ii) it increases the confidence that short-term inequities will be resolved over time; and (iii) it reduces the transaction costs in an exchange relationship. He also found that high levels of trust can enable the company to focus on the long-term benefits of

the exchange. Adam (2003) demonstrates that how the supply chain has dealt with the challenges by means of implementing different types of trust (Generalised trust, System trust, Process-based trust), the research supports that trust is an important construct of marketing philosophy and trust-installing activities and can lead to increased performance. Alfred et al. (1999) made the survey in the Hong Kong-China supply chain, they identified that manufacturers developing trusting, long-term relationships with suppliers indicated that the suppliers contribute very substantially to their quality improvement. Therefore, some companies are more successful than others if the degree of trust between the company and its business partners is high.

2.2.2 Commitment

Commitment is an essential ingredient for successful long-term relationship. Commitment implies that trading partners are willing to exert effort on behalf of the relationship and suggests a future orientation in which firms attempt to build a relationship that can be sustained in the face of unanticipated problems (Gundlach et al., 1995). Commitment is also termed as loyalty, where companies will not have second thought in selecting another business partner; eventually they will support each other's needs without hesitation (Thoo, 2004). Thus, it desires to continue the relationship and work to ensure its continuance (Wilson, 1995). Such implies that commitment represents an act of faith.

Yeh (2005) and Mohr and Spekman (1994) contend there was a positive

correlation between commitment and relationship success. Anderson and Weitz (1992) considered that commitment may represent the attitude of partners that develops and maintains a stable and lasting relationship. Wu et al. (2004) concluded commitment offers significant opportunities that create strategic advantage and achieve high levels of performance. Hardwick and Ford (1986) pointed that commitment assumes that the relationship will bring future value or benefits to partners.

2.2.3 Communication

The value of effective human and organizational communication has been recognized with more and more organizations (Eddie et al., 2001). It seems like everyone wants better communication within their team, between teams and across their organization. Frequent and timely communication is important, because it not only provide an understanding of exchanging partners' intentions and capabilities, and forming the foundation for relationship development, but also assists in resolving disputes and aligning perceptions and expectations (Morgan and Hunt, 1994), more importantly, it is also a process that leads to building of other dimensions of relationship such as trust and commitment of the exchange partner. Regarding to Monczka et al. (1995), effective communication is essential for successful collaboration, it can help alleviates anxiety and facilitates interaction between partners and ensures the smoothness of decision making process. Roethlein and Ackerson (2004) also noted that strong and frequent unidirectional communication exists between the manufacturer and

the supplier and between the manufacturer and the distributor when the supply chain is able to remain successful.

In the research by Eddie et al. (2001), multiple parties own different skills and each set out to be self-sufficient, thus, communication between parties plays a significant role in the success of construction alliance, in the meantime, it also shows that Communication between the parties of a construction alliance is composed of several aspects. Firstly, inter-organizational communication should happen in the alliance team. Representatives from individual organizations play the role of communicating with other members. Secondly, communication channels are capable to be created for either facial or distant contracts. The last but not least one is the choice of channels depends on the amount of information, how instant it needs to be, and the efficiency and effectiveness of communication. Regarding to Anderson (2001), the role of communication provides an understanding of exchanging partner's intentions and capabilities, forming the groundwork for relationship development; and the importance that holds together an inter-organizational channel of distribution. Research conducted by Hsu (2006), he identified that the climates for successful relationship enables the parties involved to focus on the long- term benefits of the relationship, thus, enhancing quality performance.

2.2.4 Cooperation

Cooperation is crucial to the success of supply chain management, it exists when

firms in exchange relationship work together to solve problems and achieve mutual goals (Anderson and Narus, 1990). One of the key elements in supply chain management is the notion of "co-operating to compete". As the focus of competition shifts from firm versus firm to chain (or system) versus chain, firms within a system can be better off by working together or cooperating (Michael, 1998). Based on Dutch potato sector, Martijn and Phillip (1998) found out that successful potato firms achieve substantial competitive advantages through cooperative inter-firm arrangement that gain access to high-quality raw materials, production capacity, and large customers, hence, managing inter-firm cooperation has become a strategic issue for firms in the potato supply chain.

Richard and Andrew (2006) in their research were surprised to find that 3C (Cooperative, Coordinating, Collaborative) played an important part in counteracting the potentially negative behavior within long-term, close collaborations. Jeffrey and Soonhong (2001) pointed out that, given instant accessibility to customers and suppliers around the world, firms appear to be turning away from control and integration towards networks of collaboration and cooperation. Cooperation in exchanging information on production schedules, new products/processes and value analysis can both cut down product costs and enhance product/process innovations (Landeros & Monczka, 1989). Thus, we believe, cooperation between supply chains partners can lead to higher quality performance.

In summary, the study contend that dimensions such as trust, cooperation,