

**CRANFIELD UNIVERSITY**

**FU JIA**

**GUANXI AS A SUPPLY RELATIONAL RISK SOURCE  
IN CHINA:  
A SYSTEMATIC REVIEW OF WESTERN FORMS OF  
RELATIONAL GOVERNANCE AND GUANXI**

**SCHOOL OF MANAGEMENT**

**MRES DISSERTATION**

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**ACADEMIC YEAR 2005-2006**

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RELATIONAL GOVERNANCE AND GUANXI**

**SUPERVISORS: PROFESSOR MARTIN CHRISTOPHER  
DR. CHRISTINE RUTHERFORD**

**AUGUST 2006**

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the degree of Master of Research**

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## **Abstract**

It is well known that China has become the world's manufacturing centre in the past two decades. More and more Western firms outsource their products, semi-finished products, materials and services to China. In this process, some are successful while others fail. It is true that there are various reasons for failure but one of the most important ones is the cultural differences between the West and China. The question is: what is the rationale behind the success or failure of dealing with the cultural differences?

Guanxi is one of the major dynamics in the Chinese society where business behaviour revolves around it. The objective of this paper is to review Western forms of supply relational risk management and compare them with Guanxi. First of all, a synthesized concept of supply relational risk is coined. Secondly, synthesized models of both Western forms of supply relational risk management and Guanxi are proposed. Ten sources of risk are identified based on the comparison; these are presented as assumptions to be tested through field research.

The main differences between the Western and Chinese forms of relationship management are: 1) Affection is an element of Guanxi which is missed by the Western business relationship management; 2) Chinese are responsible for family, while Westerners are responsible for society. 3) There are no such concepts as face and renqing in the West, which originated from hierarchically ancient China and are the key elements of Guanxi. Risk implications derived from these differences are presented.

Finally, the outcome of the review is the identification of two PhD research questions and limitations and learning points of this review.

## **Acknowledgements**

I would like to express my profound gratitude to my supervisors, Professor Martin Christopher and Dr. Christine Rutherford for their guidance and patience since I enrolled in the MRes program at Cranfield School of Management.

I would also like to thank my systematic review panel members: Dr. John Towriss, Professor Richard Wilding, Dr. David Denyer, Dr. David Partington, Mr. Melvyn Peters, Ms. Heather Woodfield and Dr. Omera Khan for their valuable comments and advice during the systematic review process.

I would like to give special thanks to Mrs. Wendy Habgood for her consistent support from the very beginning of my study.

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## 1. Introduction

In October 2001, China became a member of the World Trade Organization (WTO). This indicated that China's economic development had been recognized and her economic influence on the world could not be ignored. Over the last two decades, China has become the world's leading manufacturing centre. All kinds of goods are made in China; from shoes, clothes, toys, and electrical items to Jili cars recently marketed in the US. Since there are so many Western companies sourcing in China (some already have wholly owned operations there), it could be supposed that there would be plenty of literature on supply chain risk management focused on China, however surprisingly there is very little (<http://www.china.org.cn/english/features/>). This research looks at how one of the dynamics of Chinese culture - Guanxi - is influencing the supply relational risk management of Western firms.

In the West, supply chain management strategies have developed from arm's length relationship with suppliers to collaborative relationships, and from single company based to supply chain based. However, corporate risk management programs remain fixed on activities that reside within the legal boundaries of that organization. External sources and drivers of supply chain risks have been ignored by most of the organizations. As companies increasingly move toward inter-firm cooperation to achieve sustained competitive advantage, research in risk management began to examine risk management at the level of supply chains (Harland et al 2003).

Although research on China and supply chain risk management is very popular, there are very few works addressing the link between them. This research addresses this issue by linking supply relational risk management and Guanxi, the most important dynamic of the Chinese business environment.

Tsui et al (2004) claim that it is especially worrisome at this juncture that young Chinese scholars, who are strongly encouraged to publish in top Western Journals, will force Western management theories to fit Chinese firms, rather than searching for new concepts and theories that seek to explain the differences in management between the Western and Chinese contexts. To address this problem, they suggest that people recall how knowledge of Japanese management emerged in the late 1970s and 1980s. Many Western management scholars went to Japan to study their management. The understanding of any context new to a scholar or a field requires direct observation as well as historical and anthropological knowledge.

This review as well as my proposed PhD work, which will be an extension of this review, attempts to answer their call to compare the management approaches between China and the West and explain the differences.

The objectives of this review are to systematically review Western forms of supply relational risk management and Guanxi, and compare them to find out Guanxi related supply relational risk sources. It is believed that such research can help Western managers better understand Chinese cultural values, especially Guanxi, so as to find ways to reduce Guanxi related supply relational risks.

This thesis includes five chapters: Introduction, Methodology, Thematic Findings and Synthesis, Discussion and Conclusion. The methodology chapter includes the

systematic review protocol and descriptive findings. The thematic findings and synthesis chapter lists thematic findings and synthesizes them. In the discussion chapter, the PhD research questions are presented based on areas known and unknown. In the concluding chapter, overall findings are summarized and limitations and learning points of the review are discussed.

## 2. Methodology

The traditional literature review has been criticized for its lack of rigor and transparency to other researchers. As a consequence, systematic literature review methodologies have been developed initially in medical studies. This chapter presents the systematic review protocol of this review based on the systematic review methodologies. Descriptive findings are also presented.

### 2.1. Systematic Review Protocol

The protocol presented here is very similar to that produced for the MRes review. I have updated some of the data; however the content has not been changed.

#### 2.1.1. Review Details

**Title:** Guanxi as a Supply Relational Risk Source in China: a Systematic Review of Supply Chain Relational Risk Management and Guanxi

**Author:** Fu Jia

**Date:** 10/04/2006

**Supervisor**

Professor Martin Christopher

Dr. Christ Rutherford

**Panel**

Dr. Emma Parry (Chair)

Dr. Chris Rutherford (Supervisor)

Professor Richard Wilding (Chair of Supply Chain Risk Management)

#### 2.1.2. Consultation Panel and Process

**Table 1: Consultation Panel**

| Person                       | Title                                                    | Role in the review                            | *No. of meeting |
|------------------------------|----------------------------------------------------------|-----------------------------------------------|-----------------|
| Professor Martin Christopher | Professor of Marketing and Logistics                     | Supervisor                                    | 6               |
| Dr. Christine Rutherford     | Lecturer in Logistics and SCM                            | Supervisor                                    | 16              |
| Dr. John Towriss             | Senior Lecturer in Logistics and SCM                     | Advisor in systematic review and methodology  | 6               |
| Professor Richard Wilding    | Professor of Supply Chain Risk Management                | Panel member and advisor in systematic review | 3               |
| Dr. David Denyer             | Senior Research Fellow                                   | Advisor in systematic review                  | 2 portal Qs     |
| Dr. David Partington         | Senior Lecturer in Project Management                    | Advisor in systematic review and methodology  | 2               |
| Mr. Melvyn Peters            | Senior Lecturer in Logistics and Supply Chain Management | Advisor in scoping study                      | 1               |
| Ms. Heather Woodfield        | Librarian                                                | Advisor in literature search                  | 3 emails        |
| Dr. Omera Khan               | Research Fellow                                          | Advisor in scoping study                      | 1               |

Note: all are from Cranfield of School of Management. \* By July 28, 2006

## *Consultation Process*

I regularly met Professor Christopher and Dr. Rutherford to discuss my progress with this review. Dr. Towriss read my MRes paper and made some valuable comments. He suggested I add some articles written in Chinese. Following his suggestion, I have included the book called "*A short History of Chinese Philosophy*" by Fung, Yu-lan. Professor Wilding suggested I look at global sourcing, which originally was missed in my key word list. Dr. Denyer and Dr. Partington gave me guidance on the research methodology used. Mr. Peters advised me on what managers would like to know from a practitioner's point of view. Whenever I had questions on searching for articles or information source related questions, I would go to Ms. Woodfield.

I am unable to attend the 15th EDAMBA Research Summer Academy this year, due to School of Management financial constraints. This would have been a good opportunity to present my work and get some comments. There are no experts on my panel from outside the school.

### **2.1.3. Personal Statement**

My interest in the topic comes from my career in the logistics industry and my instinctive interest in Chinese culture. Just before coming to the U.K, I worked for a third party logistics provider in Beijing, China as a key account manager. Marketing was my profession at that time, when I had been working in the logistics industry for 5 years.

The reason why I chose to study for an MBA in Strategy and Procurement Management at the Birmingham Business School in 2003 was that I, as a marketer, wished to learn more about buyers' strategies and to get a holistic view on buyer-supplier relationships. Since I arrived at Birmingham Business School, I have become very interested in procurement literature. When it was time to do my dissertation, I was introduced by a former Chinese PhD student at Cranfield to Professor Martin Christopher. At that time, I intended to pursue a PhD in supply chain management. Martin gave me some valuable advice on the research proposal on supply chain risk management. And hence I decided to pursue a research path in supply chain risk.

Supply chain risk management is an ongoing research subject of Cranfield Centre for Logistics and Supply Chain Management. Western firms outsource more and more to developing countries such as India and China. In this process, many uncertain factors or risks emerge and face Western managers. The research on supply chain risk management is aimed to help Western companies solve these problems. My opinion on this is that cultural clashes exist between the outsourcing countries and the outsourced countries. This was identified as a suitable topic for my research.

As mentioned above, my interest also comes from my understanding of the Chinese culture. Chinese culture has been developing slowly but it has distinctive features. It was during the Spring and Autumn Period in Chinese history (770-476 B.C.) when the first Chinese organised philosophical thought came into being. There were three main schools of philosophy in China: Confucianism, Buddhism and Taoism. In the old days, before the P.R.C was founded, if a person was educated at all, the first education he or she received was in Chinese philosophy. When children went to

school, the *Four Books*, which consist of the Confucian Analects, the *Book of Mencius*, the *Great Learning*, and the *Doctrine of the Mean*, were the first ones they were taught to read and recite. (Fung and Bodde 1948)

The family system was the social system of China. In the *Erh Ya*, which is the oldest dictionary of the Chinese language, dating from before the Christian era, there are more than one hundred terms for various family relationships, most of which have no equivalent in the English language. A great part of Confucianism is the rational justification of this social system or its theoretical expression. (Fung and Bodde 1948) The Chinese are mainly responsible for their families, not society, so they do not care too much about laws, rules and contracts. The family here means the extended family including people with the same surnames and the mother's family too.

The aim of this research is to get a clear picture of what supply chain risk management and supply chain relationship management are in the West and what Guanxi is, compare them and find out what the differences are. The differences may be the sources of Guanxi related supply relational risks and these may also provide insight to the answers on how to manage Guanxi related supply risks.

One of the biases in the review lies in my partial understanding of Chinese culture. Chinese philosophy is so broad and difficult to understand sometimes, and I do not specialize in Chinese philosophy. Another bias exists because I only have six years of working experience, which is relatively short. I cannot confidently say that I understand the whole essence of Guanxi and the Chinese business environment. Somebody holding a senior management position and with a longer period of management experience in China could understand and practice Guanxi better than me. This is because Guanxi is implicit and practical in nature. The more one practices it, the better the skills and understandings are. The last but not the least bias is, as a Chinese person, that I may misunderstand what Western managers say when I interview them later during my field research.

In order to reduce the bias, I would like to read some essential books and articles on Chinese philosophy and Guanxi systematically in order to get a more comprehensive and in-depth knowledge of this area. I also would like to meet more Chinese and Western practitioners with senior management positions to get some second hand experiences of practicing Guanxi. In order to minimize the difficulties with understanding due to cultural differences and language barriers, I need to get in touch more with British practitioners to understand them better and overcome cultural as well as language barriers.

Without the supervision and advice of my supervisors, Martin and Chris, I cannot imagine how much more difficult the process would be for me. With their help, the journey towards my PhD is much more enjoyable and easier. All my advisors play a different role in the development of my ideas. John and Richard always give me full support for my research. Although they are not my supervisors, I am able to meet them whenever I have questions. Their answers are very helpful and important to my idea development. I would like to express my appreciation to Dr. John Towriss, who gave me valuable comments after his reading of the MRes paper.

My first decision is to choose on which aspect of Chinese culture I intend to do my research. I finally chose Guanxi because it is the most important dynamic of Chinese culture and it is a kind of relationship management, which could be compared with Western forms of supply chain relationship management. Second, which aspect of supply chain risk should I focus on? I decided to focus on supply relational risk management. It is also a kind of relationship management so can be compared with Guanxi. In the main, supply chain relationship management is becoming more and more important nowadays. Better relationship management can give firms competitive advantages over others.

My ideas develop by asking “so what” questions. So what is supply relational risk management? So what is Guanxi? So what are the links between them? So what do these differences between Guanxi and Western forms of supply relational risk management mean? Whenever I feel the questions are satisfactorily answered, the idea is developed.

#### 2.1.4. Scoping Study

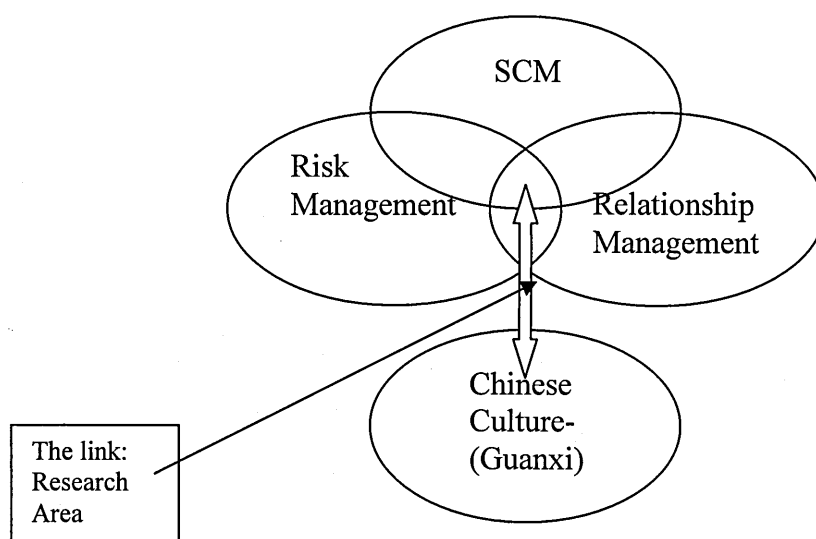


**Figure 1: Literature Domains**

The three areas of the review (except for Guanxi) are: supply chain management, risk management and relationship management. From the above, the overlaps between each pair are: supply chain relationship management, supply chain risk management and relational risk management. The overlap of the three areas, therefore, is supply chain relational risk management. Because relational risk management could be personal relational risk other than supply chain relational risk, it is removed from this review. Literature on Guanxi will be reviewed separately and its influence on supply chain risk management will be discussed. (Figure 1)

In order to address the problems of management research, which is fragmented in nature and creates a relevance gap (a gap between the knowledge producer and the knowledge user), a systematic review has developed an explicit and reproducible methodology. The methodology is embodied by this protocol (Denyer and Tranfield

2006). This review will present practitioners and academia alike with the evidence of Western forms of supply relational risk management strategies and constructs of Guanxi.

More and more companies choose to outsource their products or services in China. They have achieved their aim of cost cutting but they also face some problems such as long lead time, inconsistent quality, protection of Intellectual Property Rights, poor infrastructure, language barrier. These are hard problems with doing business in China. The soft problem of cultural differences between China and the West is a longstanding one compared to the hard problems.

Organizational buying in the West is dramatically shifting from the transaction oriented to the relational oriented philosophy and will shift from a buying process to a supplier relationship process (Sharma and Sheth 1997). When Western firms manage their relationships with Chinese suppliers, it is inevitable for them to face cultural clashes. This research aims to help Western managers solve the problems caused by cultural differences and add a cultural dimension to the supply chain risk management.

My aim is to link Guanxi with the overlap of the three areas above, namely, supply relational risk management. This limits my research to the supply side rather than the demand side, and relational risks rather than performance risks. Because the literature for the overlap of the three areas is very limited, I need to look at the overlap of each pair of the three areas. The first pair is supply chain risk management, which is a very new literature emerging after 2000, but which is gaining in popularity. From this literature, I would like to find out the concept of supply chain risk especially supply relational risk, and focus on risk mitigating strategies for relational risks. The second one is supply chain relationship management. This literature is a well developed one. I would like to find buyer-supplier relationship management strategies which have risk reduction implications.

There are not many debates for the supply relational risk management per se but there are a few on how the supply chain relationships are managed. There are mainly two streams of relational risk reduction strategies: one is based on economic exchange; another one is based on social context. The one based on economic exchange is represented by Transaction Cost Economics (TCE), Agency Theory and Power Regime School. While the one based on social context is represented by Agile School based on trust and resilience, Network Governance Theory and IMP Group.

There is so far no link between Guanxi and supply relational risk management in the literature. The method of setting up the link is to compare the constructs of each Western form of supply relational risk management with their counterpart constructs of Guanxi because Guanxi is a Chinese method of relationship management including both business and personal relationships.

The result appears to be that there are some common elements between them, although the concepts of those common elements may or may not be different. Both Guanxi and Western forms of relational risk management have their exclusive elements. Most of the Guanxi elements are potential risk sources for Western firms if they use their own way (Western forms of supply relational risk management) while

doing business in China. Hence in order to reduce supply relational risks, it is necessary to practice well in all elements of Guanxi.

### 2.1.5. Key Authors and Sources

**Table 2: Key Authors**

| Nooteboom 1996                                                                                                                                                                                                                                                                                    |                                           | Das & Teng (1996, 2001)     |                                  |                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|----------------------------------|--------------------------------------|
| Based on IMP group                                                                                                                                                                                                                                                                                | Based on opportunism (TCE & Power regime) | Based on trust & resilience | Based on control (agency theory) | Based on (social network governance) |
| Hakansson (1982)                                                                                                                                                                                                                                                                                  | Emerson (1962)                            | Ellram (1991)               | Eisenhardt (1989)                | Granovetter (1985)                   |
| Easton (1992)                                                                                                                                                                                                                                                                                     | Williamson (1975, 1985)                   | Sako (1992)<br>Sako (1998)  | Zsidisin and Ellram (2003)       | Granovetter (1992)                   |
| Anderson et al (1994)                                                                                                                                                                                                                                                                             | Krajic (1983)                             | Lane (1998)                 | Juttner et al (2003)             | Calton & Lad (1995)                  |
| Turnbull et al (1996)                                                                                                                                                                                                                                                                             | Ramsay 1994                               | Coutu (2002)                | Zsidisin (2005)                  | Grandori and Soda (1995)             |
| Ford (1998)                                                                                                                                                                                                                                                                                       | Ghoshal and Moran (1996)                  | Cousin and Crone (2003)     |                                  | Park (1996)                          |
| Brennan et al (2003)                                                                                                                                                                                                                                                                              | Shimizu 1996                              | Wilding (2003)              |                                  | Jones et al (1997)                   |
|                                                                                                                                                                                                                                                                                                   | Dyer et al (1998)                         | Zsidisin et al's (2003)     |                                  | Grandori (1997)                      |
|                                                                                                                                                                                                                                                                                                   | Bensaou (1999)                            | Christopher & Peck (2004)   |                                  | Granovetter (2005)                   |
|                                                                                                                                                                                                                                                                                                   | Cox et al (2000, 2004)                    | Arino et al (2005)          |                                  | Griffith and Myers (2005)            |
|                                                                                                                                                                                                                                                                                                   | Wagner and Johnson (2004)                 | Sheffi & Rice (2005)        |                                  |                                      |
|                                                                                                                                                                                                                                                                                                   | Watson et al (2005)                       | Zsidisin and Smith (2005)   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                   |                                           | Goffin et al (2006)         |                                  |                                      |
| <p>Zaheer and Venkatraman (1995), Jain and Dubey (2005) and Grandori (2006) integrate relational governance based on economic exchange and social context.</p> <p>Economic exchange includes TCE, agency theory and power<br/>Social context includes network governance, IMP Group and trust</p> |                                           |                             |                                  |                                      |

*Key theories are:*

TCE (based on opportunism and bounded rationality), social exchange theory (based on trust and interaction), IMP Group (based on interaction and adaptation), power

regime school, Agile school, agency theory, network governance theory, Confucianism and Guanxi

*Key concepts:*

Guanxi, supply relational risk, supply chain risk management, buyer-supplier relationship management, risk sources, risk mitigating strategies, opportunism, trust, control, network governance and relational governance.

The main questions that have been addressed are:

- The definition of supply chain risk management
- The classification of different supply chain risks (relational risks and performance risks)
- Various supply relational risk mitigating strategies (based on social context and based on economic exchange)
- various models of Guanxi

The main ontological ground of this supply chain risk management is social constructivism. Some works are based on interpretivism. This is because this subject is quite new and supply chain risk consequences are difficult to quantify. For Guanxi literature, there are a lot of works using quantitative methods because it is a well developed literature comparing to supply chain risk management. Some early works on Guanxi inevitably use qualitative methods such as interviews with CEOs. Overall both areas are new therefore most of the works take the ontological stance of social constructivism.

The knowledge of supply chain relational risk management is quite fragmented and multidisciplinary in nature. These subjects include transaction cost economics, power-dependence, economic sociology, social exchange theory and sociology (Fynes et al 2004). Knowledge of Guanxi is very much concentrated. Previous researches on Guanxi focus on the question of “what is Guanxi?” Current literature on Guanxi is about what Guanxi practice is like in China. Fan (2002) states that in the past few years, there have been a growing number of publications on Guanxi from the business perspective, focusing on two main theses: a) the business implications and benefits of Guanxi; and b) the possible links between Guanxi and some Western concepts such as competitive advantage, networking and relationship marketing.

#### **2.1.6. Aims of the Review**

The aims of the review are to:

- Explore supply relational risk concept
- Explore fully the concept of Guanxi
- Explore the Western forms of supply relational risk management
- Compare Guanxi with Western forms of supply relational risk management.

Specifically the objectives of this review are to find out answers to these questions:

- What is supply relational risk?
- What are the Western forms of supply relational risk management?
- What are Guanxi and its role in relation to supply relational risk?

- What risks can Guanxi cause in supply relationship management?

### 2.1.7. Search Strategy

**Table 3: Search Strings**

| Subject areas                                                           | Keywords                                                                                                                                                                                                                      | Justification                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. Supply chain management                                              | 1. supply chain management OR supply network OR supply web OR supply management<br><br>2. outsourc* OR global sourc* OR offshor* OR international sourc*                                                                      | Supply chain related key words<br><br>Outsourcing related keywords (because the review focuses on supply side risks)                                                                                                                    |
| B. Risk management                                                      | 1. vulnerab* OR risk OR uncertain* OR hazard OR hidden OR chaos<br><br>2. resilien* OR flexib* OR unexpected OR reliability OR security OR robust OR mitigat* OR respon* OR adap* OR agil* OR adjust OR security OR six sigma | Risk related keywords<br><br>Mitigating strategies related keywords                                                                                                                                                                     |
| C. Relationship management                                              | 1. collabora* OR trust OR opportunis* OR relation* OR close*<br><br>2. partnership OR strategic alliances OR relationship quality OR dynamics OR joint venture OR network* governance                                         | Concept of trust related keywords<br><br>Network governance structure related keywords                                                                                                                                                  |
| D. Supply relational risk management (overlap of the three areas above) | Relational governance                                                                                                                                                                                                         | This is the keyword I found during the search of literatures. It is a very important but tiny literature. In this review, it is interchangeable with the concept of Western forms of supply relational risk management)                 |
| E. Guanxi (Chinese culture)                                             | 1. Guanxi OR Chin* OR social network<br><br>2. collective* OR hierarchy OR renqing OR favour OR adapt* OR dependence OR ethics OR benefit OR closeness OR trust OR dynamics                                                   | Guanxi related keywords<br><br>Guanxi constructs related keywords (these are generated after the search of Guanxi. These keywords are for locating the definitions of each construct for the comparison with the western counterparts.) |

When all the key words were entered to form one search string, there were too many hits. Therefore I further grouped the keywords into two sub-groups under each domain. Guanxi and relational governance are both small literatures and I carried out search for Guanxi and relational governance separately. There were no hits when I combine Guanxi with any other keywords in the list as a search string.

**Table 4: Reporting the Search Results**

| Database/<br>source<br><br>Date of<br>search | Search strings      | Number<br>of hits | No of<br>relevant<br>Articles<br>after<br>applying<br>Inclusion<br>criteria<br>(based on<br>title &<br>abstract) | No. of<br>relevant<br>articles<br>after<br>applying<br>quality<br>criteria | Percentage<br>% for<br>each source<br>of relevant<br>articles after<br>quality<br>criteria |
|----------------------------------------------|---------------------|-------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| EBSCO<br><br>Nov 05 to<br>May 06             | A1 AND B AND C      | 576               | 8                                                                                                                | 6                                                                          |                                                                                            |
|                                              | A2 AND B1 AND C     | 419               | 7                                                                                                                | 5                                                                          |                                                                                            |
|                                              | A2 AND B2 AND C     | 410               | 5                                                                                                                | 3                                                                          |                                                                                            |
|                                              | D                   | 67                | 5                                                                                                                | 3                                                                          |                                                                                            |
|                                              | E                   | 186               | 23                                                                                                               | 11                                                                         |                                                                                            |
|                                              | Sub-total           | 1658              | 48                                                                                                               | 28                                                                         |                                                                                            |
| ABI<br>ProQuest<br><br>May 20-25,<br>06      | A1 + B1 + C1        | 366               | 15                                                                                                               | 11                                                                         |                                                                                            |
|                                              | D                   | 24                | 5                                                                                                                | 2                                                                          |                                                                                            |
|                                              | E                   | 146               | 17                                                                                                               | 9                                                                          |                                                                                            |
|                                              | Sub-total           | 536               | 37                                                                                                               | 22                                                                         |                                                                                            |
| Cross<br>references                          |                     |                   | 51                                                                                                               | 28                                                                         | 32.6                                                                                       |
| Panel<br>recommend<br>ation                  |                     |                   | 10                                                                                                               | 8                                                                          | 9.3                                                                                        |
|                                              | <b>Total Number</b> | 2194              | 146                                                                                                              | 86                                                                         | 100                                                                                        |

Searches in ABI/ProQuest produced thousands of hits if I use the same search strings entered in EBSCO, so I only run the three search strings in ABI/ProQuest. This is because of the diversified literature bases or multidisciplinary nature of the field of supply relational risk management. Many of the selected papers (42%) are from panel recommendations and cross-referencing. For Guanxi, there is only a small body of literature; therefore it was easy to review all the papers.

A total of 86 articles have been included for the review. Two databases were used: ABI/ProQuest and EBSCO; articles found in Web of Science were either duplicate of those found in these two databases or irrelevant. After consulting Ms. Woodfield, there is no special database for Chinese studies and she suggested that I use ABI/ProQuest and EBSCO because these two cover most of the main journals in my field of research.

ProQuest (ABI/Inform Trade and Industry) is one of the world's first electronic databases and has been a premier source of business information for more than 30 years. Most of the relevant articles are found in this database. It is the best one to start with according to Heather, my advisor on literature searches.

EBSCO (Business Source Premier), designed specifically for business schools and libraries, provided more than 3,600 full text scholarly publications including more

than 1, 050 peer-reviewed journals. Although there are some duplicates between ProQuest and EBSCO, they complement each other well. I identified 14 relevant articles from EBSCO.

**Table 5: Details of Other Sources of Information**

|                                                                     |                                                                                                                                       |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Journals not cited in the databases                                 | Supply Chain Forum, China quarterly & Supply Chain Practice                                                                           |
| Conference papers                                                   | Conference paper index (Cranfield Library)                                                                                            |
| Books                                                               | Amazon.com, Cranfield K.N library & inter-library loan                                                                                |
| Working papers or unpublished papers                                | Universities' websites                                                                                                                |
| Documents on the internet                                           | Search on internet (google scholar)                                                                                                   |
| Personal requests to knowledgeable researchers and/or practitioners | Cranfield faculty, members of The International Supply Chain Risk Management (ISCRIM) Network, experts in Chinese culture (Cambridge) |
| Recent PhD theses                                                   | ABI/ProQuest                                                                                                                          |

*Justification of the choice of database and sources of information*

For the references I have got either from cross referencing or from supervisors/advisors recommendations and cannot find the full texts in the above two databases, I could always locate the full texts in one of the five databases: Science direct, JISTOR, Tailor & Francis, Emerald and Google scholar. I also looked for some books on Amazon. I have included two book chapters by searching Guanxi and Chinese culture on Amazon. These book chapters are:

Gold, Thomas, Guthrie, Doug, and Wank, David. (2002) An Introduction to the Study of Guanxi. Gold, Thomas, Guthrie, Doug, and Wank, David. *Social Connections in China: institutions, culture, and the changing nature of Guanxi*. Cambridge, U.K, Cambridge University Press.

So, Ying-Lun and Walker, Anthony. (2006) The Future of Guanxi. So, Ying-Lun and Walker, Anthony *Explaining Guanxi: The Chinese Business Network*. New York, Routledge.

For articles without full texts or even the journals not cited in the databases, I placed inter-library loans request. Personal requests to knowledgeable researchers and/or practitioners are a very important source of information for me because Cranfield School of Management is the top business school in the world, and Cranfield Supply Chain Management Research Centre is the leading one in the field in Europe. I could always go to any faculty member in my centre or the school to get comments from them.

There is a hard copy of Supply Chain Forum at Kings Norton library. Supply Chain Practice is issued by my centre. China Quarterly has to be borrowed from inter-library loan.

There are no conference papers, working papers or theses included in this review because the ones I reviewed do not meet the inclusion criteria. However, I will continue to look for them during the PhD research.

### 2.1.8. Selection Criteria

After searches of the databases, the selection criteria were applied to each of the 2194 articles. This has been a continuous process from the beginning of the programme. Most of the articles were easily removed based on titles as they are out of scope. After applying the inclusion criteria, 146 articles were identified as relevant.

**Table 6: Inclusion Criteria and Rationale**

| Inclusion criteria                                                                                        | Rationale for inclusion                                                                                                      |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Academic papers and papers from acclaimed experts wherever they publish                                   | Most of the practitioner papers give no insight to the fields.                                                               |
| Papers not restricted to a specific sector                                                                | This research is not sector specific                                                                                         |
| No geographic restriction for the paper included                                                          | Finding out Western forms of SC relationship management is one of the objectives of this review.                             |
| Working papers from the leading business schools from 2000 onward                                         | Seek for more recent source of ideas.                                                                                        |
| Doctoral or master theses from 2000 onwards in the database                                               | One of the Guanxi paper and SC risk management originated from doctoral thesis. Both literatures are quite new.              |
| Both English and Chinese language literature will be included.                                            | The Research is related to Chinese culture. It is better to find out what the authors of the country of origin writes about. |
| Papers related to supply chain risk management, SC relationship management, SC relational risk management | These are the main areas of literature on which I am going to do the review.                                                 |
| Papers on Guanxi concepts, models and adding Western perspectives on Guanxi                               | One of the objectives of this review                                                                                         |
| Papers on both benefit/advantage of Guanxi and cost/disadvantage of Guanxi                                | To get a full picture of Guanxi                                                                                              |
| Papers writing about Chinese culture and economic environment and trend.                                  | Guanxi is rooted in Chinese culture. The economic environment gives me a general idea of the current Chinese economy.        |

**Table 7: Exclusion Criteria and Rationale**

| Exclusion criteria                                                                                      | Rationale for exclusion                                                   |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 1. Papers on Guanxi, which are related to relationship marketing and don't provide any Guanxi models    | Aim of the research is to find link between Guanxi and supply management. |
| 2. Papers written on Guanxi and Chinese cultures, which are too general or provide very simple models   | Give no insight on the understandings of Guanxi concept.                  |
| 3. Papers too focused on one small aspect of supply chain risk management for example performance risks | Specific tools reduce only performance risks.                             |
| 4. Papers too general without further discussion about supply chain risks and relationship management   | Give no insights to the understanding of review questions.                |

**Table 8: Selection Criteria for Full Text Papers**

**Conceptual / theoretical papers must contain**

|                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------|
| SC relationship management                                                                                               |
| SC risk classification, concepts and models                                                                              |
| SC relational risk management strategies                                                                                 |
| Papers on performance risk management are excluded but if the papers write on SC risk concepts, they will be considered. |
| Construction of a framework for linking different concepts (e.g., relationship management and SC risk management)        |
| A theoretical conceptual review of ideas about earlier work                                                              |
| Contain new constructs of key concepts and models of key themes                                                          |

**Methodological papers must contain:**

|                                             |
|---------------------------------------------|
| Comparative case studies or grounded theory |
|---------------------------------------------|

**Empirical papers must contain:**

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Explicitly describe the details of research design, i.e., the year range, place of study |
| Clearly state the contribution and findings of the studies                               |
| Contain a logical literature review of previous related studies                          |
| Include a discussion part, which gives some insightful arguments                         |

**2.1.9. Quality Appraisal**

In this section, the 146 relevant articles are evaluated using the quality appraisal criteria listed in Table 9. Following the evaluation of these articles, 86 articles remained for final review.

**Table 9: Quality Appraisal Criteria (selection criteria for full text)**

| Criteria | Quality indicators                                                                                                                                                                                                                 |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.Theory | Does the paper have a well-articulated theory that provides conceptual insight and guides hypotheses formulation?<br>Does the study inform or improve my understanding of the research areas?<br>Are the concepts clearly defined? |

|                        |                                                                                                                                                                                                                                                      |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2. Literature</b>   | Does the paper cite appropriate literature and provide proper credit to existing work on the topic?<br>Does the paper contain adequate literature?                                                                                                   |
| <b>3. Method</b>       | Do the samples, measures, methods, observations, procedures and statistical analyses ensure internal and external validity?<br>Are the statistical procedures used correctly and appropriately?<br>Are the statistics' major assumptions reasonable? |
| <b>4. Integration</b>  | Does the empirical study provide a good test of the theory and hypotheses?<br>Is the method chosen (qualitative or quantitative) appropriate for the research questions and theory?                                                                  |
| <b>5. Contribution</b> | Does the paper make a new and meaningful contribution to the literature reviewed in terms of: theory, empirical knowledge and management practice?                                                                                                   |

A check list approach to quality assessment was applied. The criteria listed above are mainly from the guidelines for reviewers by the Academy of Management Journal. This set of criteria was adopted because the criteria are more or less similar to each other under such titles as: theory, contribution, literature, methodology, data analysis and report. The advantage of this guideline is that it incorporates the Rose's ABCDE model, which is an easy to use evaluation method. We can see this from the term it uses: internal validity and external validity. It is better to refer to the ABCDE model evaluating the internal theoretical, empirical validity and external validity of the study

**Table 10: Number of the Excluded Papers and the Corresponding Reasons**

| <b>Reasons for exclusion</b>                                                                            | <b>Descriptions</b>                                                       | <b>No. of papers</b> |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------|
| 1. Papers on Guanxi, which are related to relationship marketing and don't provide any Guanxi models    | Aim of the research is to find link between Guanxi and supply management. | 133                  |
| 2. Papers written on Guanxi and Chinese cultures, which are too general or provide very simple models   | Gives no insight into the understandings of Guanxi concept.               | 166                  |
| 3. Papers too focused on one small aspect of supply chain risk management for example performance risks | Specific tools reduce only performance risks.                             | 356                  |
| 4. Papers too general without further discussion about supply chain risks and relationship management   | Gives no insights into the understanding of review questions.             | 1393                 |
| 5. Quality criteria (1, 2, 3, 4, 5)                                                                     | Details in Table 9                                                        | 60                   |
|                                                                                                         | <b>Total</b>                                                              | <b>2108</b>          |

Papers were excluded due to several reasons:

Exclusion criteria 1, 2, 3, 4 and quality appraisal criteria 1, 2, 3, 4, 5

## 2.1.10. Data Extraction

Categories of information that will be extracted:

- Citation information  
Author, Journal title, Article title, Author affiliation, Place of study, Document name, Date of publication
- Descriptive information  
Where was the study located? What was the context/industry?
- Methodological information, Abstract  
Empirical/theoretical, Epistemological/Ontological ground, what was the sample size? Method of data collection, Method of data analysis
- Thematic information (key concepts, ideas, theories, approaches etc).  
Key findings, Subfield of study, Keywords
- Quality assessment information  
Contributions, Literature review, Underlying theories, Methodology, Limitation/further research directions

The data extraction is conducted through the Procite software. The references are exported from citation databases to Procite. Customised work forms are created based on the above criteria. The information needed for the selected 86 articles are filled in the work forms manually. An example is as follows in Figure 2:

**ProCite 5 - [template:Edit Record]**

File Edit View Sort Select Groups Database Tools Window Help

Times New Roman 10 B U X

Workform: Journal Article (Cranfield) Record ID: 3050

Author of the article (01): Juttner, Uta // Peck, Helen // Christopher, Martin  
Title of the article (04): Supply chain risk management: Outlining an agenda for future research  
Document name (05): Juttner et al 2003  
Journal Title (10): International Journal of Logistics  
Author(s), Subsidiary (16): Cranfield School of Management  
Date of publication (20): 2003  
Volume (22): 6  
Month or season (23):  
Part (24): 4  
Page numbers (25):  
Empirical or theoretical? (26): Theoretical  
Where was the study located? (27): U.K. Part of the project undertaken by Cranfield Centre for Logistics and Supply Chain Management on behalf of the Department of Transport (DFT) in England  
What was the context/industry? (28): Multiple industries  
What was the sample size? (29): not provided  
Method of data collection (30): semi-structured interview, focus group discussion with senior supply chain management professionals  
Method of data analysis (31): Cross-case analysis  
Epistemological/Ontological ground (32): Constructivism  
Quality assessment 1 Contribution (33): Contribute significantly to supply chain risk management theory and management practice  
Quality assessment 2 Literature Review (34): appropriate literature chosen and adequate  
Quality assessment 3 Underlying Theory (35): improve the understanding of supply chain risk management  
Quality assessment 4 Methodology (36): some methodological information not provided such as sample size; description of methodology is too simple.  
Quality assessment 5 Limitation/Further Research (37): Outline the future research directions  
Database (38): Taylor & Francis  
Key concepts/ideas/theories/approaches (39): No systematic and structured concept of supply chain risk management before this paper  
Include yes/no (40): Yes  
Reason for exclusion (41): No.  
Key findings (42): the concept of supply chain risk management  
Abstract (43): In recent years the issue of supply chain risk has been pushed to the fore, initially by fears related to possible disruptions from the much publicised "millennium bug". Y2K passed seemingly without incident, though the

Ready

Start Systematic Review Proto... ProCite 5 - [template: Quick A-Z: databases, e...

14:00

Figure 2: An Example of Data Extraction

### **2.1.11. Synthesis**

#### *Justification of the application of narrative summary synthesis approach*

After comparing three main synthesis methods introduced by Denyer and Tranfield (2006), Pawson et al (2005) and Birnik and Bowman (2006), a narrative synthesis is applied in this review. Narrative syntheses focus on how studies addressing different aspects of the same phenomenon can be normatively summarised and built up to provide a bigger picture of that phenomenon (Denyer and Tranfield 2006: 219). Narrative synthesis develops understanding by building a mosaic or map. This is what I do in this review. The narrative synthesis process is flexible and depends on opportunistic search and selection and skills as well as prejudices of the reviewers.

This synthesis method is implemented both in the review of Guanxi literature and in the review of supply chain risk reduction mechanisms and supply chain relationship management literature. A bigger picture of Guanxi as well as western forms of supply relational risk management would be identified.

Realistic synthesis seeks to unpack the mechanisms of how complex programmes work in particular contexts and settings (Pawson 2005). This is not suitable for the objectives of this review. This review is not a very contextual one and there are no complex programmes. One of the objectives is just to find out different perspectives on mitigating strategies and produce a map or mosaic of them.

Meta-ethnography is translating the findings of some studies to the terms of another which is intended for ethnographic studies (Denyer and Tranfield 2006). This is not the aim of this review as well.

#### *Synthesis process description*

The synthesis process of this systematic review is not a straightforward one. In my MRes review paper, I have identified five broad themes under supply chain risk mitigating strategies and supply chain relationship management. However, during the systematic review, I have identified a small but important literature, which I have missed out in the MRes paper. It is called “relational governance”. Supply relational governance, which is inter-changeable in this review with Western forms of supply relational risk management, divides governance mechanisms into two broad categories: based on economic exchange and based on social context. I found that all the five themes identified in the MRes paper can fit into these two categories. This method of synthesis not only provides me with evidence in the literature, therefore justifying the synthesis, but also makes my review more sensible.

### **2.1.12. Project Plan**

From May 1st to June 22, I finished the review protocol and did a complete search of the literature for some recent conference papers, working papers and articles I may have missed before the MRes review.

From June 23, I began the data extraction and synthesis. The data extraction took about three weeks. The Data synthesis process took one and half weeks. Reporting

took a further 2 weeks. The first draft will be finished and submitted to my supervisors on July 28. The revision of the first draft will be finished by August 10 taking into consideration of the comments from my supervisors. The final thesis will be submitted on August 15. A detailed plan is included in Table 11.

Three meetings have been set with my supervisors; the first on July 6 for us to make sure everything is going alright and agree on a more detailed plan for the next stage. Chris and I will meet again on August 4 after her holiday and I will get comments on the first draft from her. I will also meet Martin on August 9 to get his comments on this first draft.

**Table 11: Systematic Review Project Plan**

|            |             | <b>Systematic<br/>Review<br/>Project Plan</b> | <b>June</b> |           | <b>July</b> |           |           |           | <b>August</b> |           |           |
|------------|-------------|-----------------------------------------------|-------------|-----------|-------------|-----------|-----------|-----------|---------------|-----------|-----------|
|            |             |                                               | S1          | S2        | S3          | S4        | S5        | S6        | S7            | S8        | S9        |
| <b>Sg.</b> | <b>Stp.</b> |                                               | <b>23</b>   | <b>30</b> | <b>7</b>    | <b>14</b> | <b>21</b> | <b>28</b> | <b>4</b>      | <b>11</b> | <b>18</b> |
| <b>1</b>   |             | <b>Planning the review</b>                    |             |           |             |           |           |           |               |           |           |
|            | 1           | Forming the review panel                      |             |           |             |           |           |           |               |           |           |
|            | 2           | Mapping your field of study                   |             |           |             |           |           |           |               |           |           |
|            | 3           | Producing a Review Protocol                   |             |           |             |           |           |           |               |           |           |
| <b>2</b>   |             | <b>Identifying and evaluating studies</b>     |             |           |             |           |           |           |               |           |           |
|            | 4           | Conducting a systematic search                |             |           |             |           |           |           |               |           |           |
|            | 5           | Evaluating studies                            |             |           |             |           |           |           |               |           |           |
| <b>3</b>   |             | <b>Extracting and synthesising data</b>       |             |           |             |           |           |           |               |           |           |
|            | 6           | Conducting the data extraction                |             |           |             |           |           |           |               |           |           |
|            | 7           | Conducting data synthesis                     |             |           |             |           |           |           |               |           |           |
|            |             | 7.1 Descriptive analysis                      |             |           |             |           |           |           |               |           |           |
|            |             | 7.2 Thematic analysis                         |             |           |             |           |           |           |               |           |           |
| <b>4</b>   |             | <b>Reporting</b>                              |             |           |             |           |           |           |               |           |           |
|            | 8           | Report                                        |             |           |             |           |           |           |               |           |           |
| <b>5</b>   |             | <b>Utilising the findings</b>                 |             |           |             |           |           |           |               |           |           |
|            | 9           | Informing research                            |             |           |             |           |           |           |               |           |           |

|  |    |                                   |  |  |                        |  |  |                        |  |           |  |
|--|----|-----------------------------------|--|--|------------------------|--|--|------------------------|--|-----------|--|
|  | 10 | Informing<br>Practice<br>Meetings |  |  |                        |  |  |                        |  |           |  |
|  |    |                                   |  |  | Jul<br>6 <sup>th</sup> |  |  | Aug<br>4 <sup>th</sup> |  | Aug<br>11 |  |

## 2.2. Descriptive Findings

In this section, some of the descriptive findings are summarized and presented with the tabular format. I am going to read and search the top ten journals in a regular basis from now on because these are the main information source of my research area. The papers reviewed according to country, industry and discipline show the comprehensiveness of this review and the trend in my research area.

**Table 12: Top Ten Journals Contributing to the Review**

| Rank | Journal                                                                          | Field                | No. of articles included |
|------|----------------------------------------------------------------------------------|----------------------|--------------------------|
| 1    | <i>International Journal of Physical Distribution &amp; Logistics Management</i> | Logistics & SCM      | 5                        |
| 2    | <i>Organization Studies</i>                                                      | Organization Theory  | 4                        |
| 3    | <i>Journal of Marketing</i>                                                      | Marketing            | 3                        |
| =3   | <i>Journal of Purchasing &amp; Supply Management</i>                             | Logistics & SCM      | 3                        |
| =3   | <i>Journal of Supply Chain Management</i>                                        | SCM                  | 3                        |
| =3   | <i>The Academy of Management Review</i>                                          | Management Theory    | 3                        |
| =3   | <i>The Journal of Business &amp; Industrial Marketing</i>                        | Industrial Marketing | 3                        |
| 8    | <i>Business Strategy Review</i>                                                  | Strategy             | 2                        |
| =8   | <i>European Journal of Marketing</i>                                             | Marketing            | 2                        |
| =8   | <i>Harvard Business Review</i>                                                   | Business             | 2                        |
| =8   | <i>Industrial Marketing Management</i>                                           | Industrial Marketing | 2                        |
| =8   | <i>International Journal of Operations &amp; Production Management</i>           | Operation Management | 2                        |
| =8   | <i>Journal of Business Ethics</i>                                                | Business Ethics      | 2                        |
| =8   | <i>Strategic Management Journal</i>                                              | Strategy             | 2                        |
| =8   | <i>Supply Chain Management</i>                                                   | SCM                  | 2                        |
| =8   | <i>Sloan Management Review</i>                                                   | Business             | 2                        |

There are total 15 journals listed. SCM and marketing are two areas with the most number of journals in this table. This means most of the articles written about relationship management are from these two areas.

**Table 13: Papers Reviewed according to Year of Publication**

| Year | No. Publications | Year | No. Publications | Year | No. Publications |
|------|------------------|------|------------------|------|------------------|
| 2006 | 3                | 1991 | 1                | 1976 | 0                |
| 2005 | 10               | 1990 | 0                | 1975 | 0                |
| 2004 | 9                | 1989 | 1                | 1974 | 0                |
| 2003 | 9                | 1988 | 1                | 1973 | 0                |
| 2002 | 5                | 1987 | 1                | 1972 | 0                |
| 2001 | 4                | 1986 | 0                | 1971 | 0                |
| 2000 | 6                | 1985 | 2                | 1970 | 0                |

|       |    |       |   |       |   |
|-------|----|-------|---|-------|---|
| 1999  | 2  | 1984  | 0 | 1969  | 0 |
| 1998  | 8  | 1983  | 1 | 1968  | 0 |
| 1997  | 3  | 1982  | 1 | 1967  | 0 |
| 1996  | 5  | 1981  | 0 | 1966  | 0 |
| 1995  | 5  | 1980  | 1 | 1965  | 0 |
| 1994  | 3  | 1979  | 0 | 1964  | 0 |
| 1993  | 0  | 1978  | 0 | 1963  | 0 |
| 1992  | 4  | 1977  | 0 | 1962  | 1 |
| Total | 76 | Total | 9 | Total | 1 |

Most of the papers are in the period from 1992 to 2006. In the three years period 2003 to 2005, there are 28 articles included. This is because both supply chain risk and Guanxi are quite new literatures.

**Table 14: Country Analysis of the Papers Reviewed**

| Country              | No. of Paper | % of Sample |
|----------------------|--------------|-------------|
| <b>Europe</b>        | <b>14</b>    | <b>16.3</b> |
| U.K.                 | 7            |             |
| Sweden               | 2            |             |
| Finland              | 2            |             |
| Germany              | 1            |             |
| Ireland              | 1            |             |
| Cross Europe         | 1            |             |
| <b>Asia</b>          | <b>23</b>    | <b>26.7</b> |
| China                | 23           |             |
| <b>North America</b> | <b>9</b>     | <b>10.5</b> |
| USA                  | 9            |             |
| <b>Cross World</b>   | <b>5</b>     | <b>5.8</b>  |
| <b>None</b>          | <b>35</b>    | <b>40.7</b> |
| <b>Total</b>         | <b>86</b>    | <b>100</b>  |

From the table, we can see China is the country on which the highest number of papers is based. This aligns well with this research because the focus of it is China. There are a high percentage of papers without country context. This is because a lot of theoretical papers are included in this study.

**Table 15: Industrial Analysis of the Papers Reviewed**

| Industry                        | No. of Papers | % of Sample |
|---------------------------------|---------------|-------------|
| <b>Manufacturing Industries</b> | <b>8</b>      | <b>9.3</b>  |
| Automobile Industry             | 5             |             |
| Aerospace Industry              | 1             |             |
| Packaging Industry              | 2             |             |
| <b>High Technology Industry</b> | <b>5</b>      | <b>5.8</b>  |
| Electronics Industry            | 2             |             |
| Telecommunication Industry      | 2             |             |
| Biotechnology Industry          | 1             |             |
| <b>Service Industry</b>         | <b>2</b>      | <b>2.3</b>  |
| Insurance Industry              | 1             |             |
| International Trading Industry  | 1             |             |
| <b>Multiple Industry</b>        | <b>19</b>     | <b>22.1</b> |
| <b>Non-industry Specific</b>    | <b>52</b>     | <b>60.5</b> |
| <b>Total</b>                    | <b>86</b>     | <b>100</b>  |

This table shows that manufacturing is the single industry on which the highest number of research focuses. This is because relationship management originated from industrial buying behaviours. A lot of the researches (22.1%) are multiple-industry based. This is because if researches on relationship management show generality, they have to be multiple-industry based. The reason why a high percentage of non-industry papers exist is because again, there are many theoretical papers, and a lot of papers on network theory and Guanxi are sociological papers.

**Table 16: Thematic Analysis of the Papers Reviewed**

| Coding     | Theme & Description                                       | No. of paper | % of Themes |
|------------|-----------------------------------------------------------|--------------|-------------|
| <b>1</b>   | <b>Introduction</b>                                       | <b>1</b>     | <b>1.1</b>  |
| <b>3.1</b> | <b>Supply relational risk concept</b>                     | <b>10</b>    | <b>11.6</b> |
| <b>3.2</b> | <b>Western forms of supply relational governance</b>      | <b>2</b>     | <b>2.3</b>  |
| 3.2.1      | Based on economic exchange                                | 12           | 14.0        |
| 3.2.2      | Based on social context                                   |              |             |
| 3.2.2.1    | Based on trust                                            | 20           | 23.3        |
| 3.2.2.2    | Based on network governance                               | 8            | 9.3         |
| 3.2.2.3    | Based on IMP Group                                        | 7            | 8.1         |
| 3.2.3      | Strategies combining economic exchange and social context | 4            | 4.7         |
|            | <b>Sub-total</b>                                          | <b>63</b>    | <b>73.4</b> |
| <b>3.3</b> | <b>Guanxi</b>                                             |              |             |
| 3.3.1      | Introduction to Guanxi                                    | 8            | 9.3         |
| 3.3.2.     | Guanxi models and constructs                              | 14           | 16.3        |
|            | <b>Sub-total</b>                                          | <b>22</b>    | <b>25.6</b> |
|            | <b>Total</b>                                              | <b>86</b>    | <b>100</b>  |

**Table 17: Studies by Discipline**

|              |           |           |
|--------------|-----------|-----------|
| Management   | SCM       | 50        |
|              | Marketing | 18        |
| Sociology    |           | 14        |
| Economics    |           | 2         |
| Anthropology |           | 1         |
| Politics     |           | 1         |
| <b>Total</b> |           | <b>86</b> |

From this table, we can see most of the papers selected write about supply chain management, then marketing and the third sociology. This is because 1) supply chain management is the broad area my research is going to contribute; 2) many papers on business relationship management are written from a marketer's perspective; 3) fundamentally this research compares the two different cultures, therefore some sociological papers are included.

### 3. Thematic Findings and Synthesis

This chapter is structured to answer the four review questions presented in section 2.1.6 (p15), present and synthesize the thematic findings of this review. First of all, the supply relational risk concept is coined by synthesizing the concept of supply risk, supply chain risk and relational risk in strategic alliances. Secondly, as the Guanxi and Western forms of supply relational risk have no overlap in the literature the synthesis of these two literatures is performed separately. The synthesized models for Guanxi and Western forms of supply relational risk are developed. Finally the link and comparison between them is explained.

#### 3.1. Supply Relational Risk Concept

Research into supply chain risk management did not appear until such disruptions as those caused by the Y2K millennium bug, foot and mouth disease in the UK and terrorist attacks on the USA occurred. However, most researches so far focus on the supply chain performance risks, very few on relational ones. In this section, a synthesized new concept, supply relational risk, is coined to fill the gap in the supply chain risk management literature.

Risk is defined by Mitchell (1995:116) as *“the probability of loss and the significance of that loss to the organization or individual”*. Mitchell expresses this as:

$\text{Risk} = P(\text{loss}) \times L(\text{loss})$

P (loss) is the probability of loss and L (loss) is the significance of loss.

Supply chain risk management is a topic which is increasingly receiving attention from both academics and practitioners (Juttner 2005). It is surprising that a systematic and structured approach to conceptualize vulnerabilities and supply chain risks can be traced only recently from Cranfield University. Supply chain vulnerability is the propensity of risk sources and risk drivers to outweigh risk mitigating strategies, thus causing adverse supply chain consequences” (Juttner et al 2003: 200).

Svensson (2002:169) defines vulnerability as a *“condition that is caused by time and relationship dependencies in a company’s business activities in supply chains. The degree of vulnerability may be interpreted as proportional to the degree of time and relationship dependencies, and the negative consequence of these dependencies, in a company’s business activities towards supplier and customers.”* The time dependence means that time issues have become increasingly important due to the Just In Time (JIT) production and demand driven supply chain. Relationship dependence informs the Industrial Marketing and Purchasing (IMP) Group’s concept of inter-dependence, which implies that firms are interdependent on each other.

In “Supply Chain Risk Management: Outlining an Agenda for Future Research”, Juttner, Peck and Christopher (2003:201), propose a systematic, structured concept of supply chain risk management. Supply chain risk management is defined as: *“the identification and management of risks for the supply chain, through a co-ordinated approach amongst supply chain members, to reduce supply chain vulnerability as a whole”*. It aims to identify the potential sources of risk and implement appropriate actions to avoid or constrain supply chain vulnerability. The four basic constructs of

the supply chain risk management concept are: assess the *risk sources* for the supply chain; identify the risk concept of the supply chain by defining the most relevant *risk consequences*; track the *risk drivers* in the supply chain strategy; and mitigating risks in the supply chain (*mitigating strategies*). Based on these four constructs, this review focuses on Western forms of supply relational risk management (mitigating strategies) and Guanxi related supply relational risk sources.

Harland et al (2003) argue that corporate risk management programs remain fixed on activities that reside within the legal boundaries of that organization. External sources and drivers of supply chain risks have been ignored by most of the organizations. As companies increasingly move toward inter-firm co-operation to achieve sustained competitive advantage, research in risk management began to examine risk management at the level of supply chains.

Hallikas et al (2005) state that although a lot of work has been done in the area of purchasing and supply there has been little research interest in risk management in supply networks. In the studies, risk management has been explored from the perspective of the buying company. However, in a network environment, it is essential to take into account the supplier point of view.

Norrman and Jansson (2004) propose a proactive supply chain risk management approach through a case study of a serious sub-supplier accident in Ericsson. Their contribution has been to stress the supply chain approach in supply chain risk management as a complement to more purchasing oriented studies and give a quite detailed description of how supply chain risk management (SCRM) could work in practice.

The above four articles set the scene of supply chain risk management research. The latter three articles propose considering risk management from a supply chain level rather from a single company level. In the following, I would also like to develop the concept of supply relational risk based on the supply chain risk management perspective.

Harland et al (2003: 53) define supply risk as one of 11 types of risk and adopt Meulbrook's definition of supply risk as "*adversely affects inward flow of any type of resource to enable operations to take place*"; also termed it as 'input risk'. Zsidisin et al (2000) define supply risk as transpiration of significant and /or disappointing failures with inbound goods and services. Zsidisin (2003a) builds on Harland et al (2003), Zsidisin et al (2000)'s definition of supply risk and multiple case studies and defines supply risk as

*"The probability of an incident associated with inbound supply from individual supplier failures or the supply market occurring, in which its outcomes result in the inability of the purchasing firm to meet customer demand or cause threats to customer life and safety"*(p222).

From a managerial perspective, Zsidisin (2003b) finds that supply management professionals perceive risk in terms of item, market and supplier characteristics. However, all the supply risks he identifies do not include any relationship risks.

Das and Teng (1996) argue that there are two independent and equally important considerations for entering into a strategic alliance: relationship and performance. Relational risk in alliances is concerned with whether the cooperation among partners will go smoothly. Performance risk involves the prospect of achieving the strategic goals of the alliance, given full compliance by all partners.

They define the relational risk of inter-firm alliance as “*addressing the possibility and the consequence that the partners in inter-firm alliances do not fully commit themselves to joint efforts*” (p831). They further explain that the motives of such discordant behaviour can be either rational or irrational. Rational motives refer to self-interest seeking or opportunistic behaviour. The solution for these risks is simple: equity alliance for high relational risk and non-equity alliance for high performance risk. These two are called governance structures. Equity alliances involve the transfer or creation of equity ownership and take two primary forms: direct investment and joint ventures. Non-equity alliances do not involve any equity transfer, so that they include all kinds of contractual arrangements.

Opportunistic behaviour, hidden agendas, cultural clashes and excessive contractual and managerial controls are just some examples of relational uncertainties and problems in strategic alliances. Apart from opportunistic behaviour, relational risk also arises from partner firm’s inability to make inter-firm cooperation work. Firms simply may not have the experience and knowledge to collaborate effectively with other firms. In addition, cultural differences between firms may pose serious problems for cooperation. (Das and Teng 2001a)

Delerue (2004) builds on Das and Teng’s (2001a) relational risk concept classifying it into two types: *Risks Associated with Cooperation* and *Risks Associated with Partner’s Behaviour*. Risks associated with cooperation are caused by disorder existing in the relationship. Risks associated with partner’s behaviour are associated with the likelihood of opportunism. She concludes that managers’ risk perception in alliance relationships is affected by three situational factors: the degree of relational capital, the structure of the relationship and the degree of asymmetry between parties.

Confirming the existence of risks associated with cooperation proposed by Delerue (2004), Holmlund-Rytönen and Strandvik (2005) introduce the concept of relationship stress, which is a hidden and tacit form of risk to relationship and built on the cumulative effects of negative experiences. It is linked to relationship satisfaction and relationship closeness. A mismatch between the seller’s and buyer’s perception of the stress in the relationship may often be hidden. Stress could be seen as a positive concept since it may raise the energy level leading to better performance. Similarly to an optimal stress level for humans, there may exist an optimal stress level in relationships, leading to better results than lower and higher stress levels.

Based on the above review and synthesis of the risk related concepts discussed, Supply Relational Risk (SRR) is therefore described as:

***SRR is the possibility and the adverse consequence of suppliers not fully committing themselves to joint efforts due to either problems associated with cooperation or problems associated with the supplier’s opportunistic behaviour.***

### 3.2. Western Forms of Supply Relational Risk Management

Jain and Dubey (2005) suggest that a governance-based perspective represents a more comprehensive way of studying the relationships in supply chains and their impact on supply chain performance. They explain that the term 'governance' refers to the processes and systems by which an organization or society operates. Modes of governance can be conceptualized, a continuum ranging from market-based contracts to hierarchies. Relational governance, falling in the middle of this governance continuum, outperforms formal mechanisms such as contracts.

Grandori (2006) claims that the most commonly analyzed aspect of relational governance (RG) is the concept of relational contracting, which refers to the completion of incomplete obligation contingent contracting through extra-contractual social and relational means. RG has been related to uncertainty, either of environmental, task (problem-solving intensity) or behavioural (unpredictable strategies of other actors) origin. From my point of view, supply relational governance can be seen as Western forms of supply relational risk management mechanisms.

In this section, Western forms of supply relational risk management are grouped into two categories: one based on economic exchange and the other based on social context.

#### 3.2.1. Based on Economic Exchange (Opportunism)

There are three perspectives on supply relational risk management based on economic exchange: Transaction Cost Economics (TCE), agency theory and power, all of which are based on opportunism. *Opportunism* is defined by Williamson (1985) as "*self-interest with guile*". Wathne and Heide (2000) classify opportunism as blatant opportunism or lawful opportunism under relational contracting. Blatant opportunism is a strong form of opportunism and the failure to honour a contract. It is related to the Williamson's original definition. Lawful opportunism is extended from the blatant one and linked with the concept of relational contracts or social contracts, which are often incomplete in a formal sense. Therefore lawful opportunism is used to describe violations that do not pertain to a formal contract.

All three perspectives aim to reduce the relational risks by curtailing opportunistic behaviours; therefore they assume that firms are intrinsically opportunistic. These three perspectives are discussed below.

##### 3.2.1.1. Transaction Cost Economics (TCE)

TCE is part of the New Institutional Economics and focuses on the economic institutions of capitalism, with reference to firms, markets and relational contracting. Opportunism and bounded rationality are two behavioural assumptions of TCE. There are two kinds of opportunism: *ex ante* and *ex post*, recognized in the insurance literature under the heading of adverse selection and moral hazard. They are also named as two kinds of transaction costs. The rationality is bounded or limited because of information asymmetry between exchange parties. (Williamson 1985)

There are mainly three governance structures according to TCE: market, hierarchy and hybrid. Market governance is the main governance structure for non-specific transactions. When cost of production exceeds the cost of market exchange, market governance would be considered. (Williamson 1985)

Adverse selection arises prior to the signing of a contract. This happens because first, the buyers are bounded rational, and second, the suppliers adopt an opportunistic behaviour against buyers. Moral hazard arises when buyers are locked in to transactions, in which they make a highly specialised investment. This investment may take the form of time, personnel and infrastructure. The lock-in situation is also called *asset specificity*. In order to provide protection from these potential risks, the TCE framework recommends using vertical integration when the transaction cost of market exchange exceeds the production cost advantages. A hybrid governance structure is to create a culture that supports firms working together for mutual benefit as self-interest gives way to common interest. (Williamson 1985)

However, TCE receives severe criticism from a number of authors. Ghoshal and Moran (1996) argue that learning and trust may well take the place that efficiency and opportunism occupy and criticize TCE that the assumption of opportunism can become a self-fulfilling prophecy, whereby opportunistic behaviour will increase with sanctions and incentives imposed to curtail it, thus creating the need for even stronger and more elaborate sanctions and incentives.

### 3.2.1.2 Agency Theory

Another perspective of supply relational risk management strategy based on economic exchange is related to agency theory. Agency theory is concerned with resolving two problems that can occur in agency relationships. The first is the agency problem that arises when the desires or goals of the principal and agent conflict and it is difficult or expensive for the principal to verify what the agent is actually doing. The second is the problem of risk sharing that arises when the principal and agent have different attitudes toward risk (Eisenhardt 1989). From this, we know that agency theory is used to curtail opportunistic behaviors of agents. The first agency problem involves the two aspects of supply relational risks: risk associated with cooperation and risks associated with supplier's behaviours.

The management of risk can be categorized by outcome and behaviour-based contracts. Outcome-based contract reflects the extent to which purchasing organizations emphasize results. Behaviour-based management efforts focus on process (Eisenhardt 1989). Zsidisin and Ellram (2003) propose several behaviour-based management techniques reducing the supply risk. One weakness of using a behaviour-based management method may lie in the undermining effect on the trust between the two parties, resulting in the opportunistic behaviour of the agent. It seems strange for Zsidisin and Ellram (2003) to regard buffer-oriented technique as an outcome-based management approach, because increasing buffer stock does not relate to the management of agents - it is an activity within the organization. On the whole, their techniques are for reducing performance risks, not supply relational risks.

Eisenhardt (1989) finds that when the contract between the principal and agent is outcome-based, the agent is more likely to behave in the interests of the principal.

This is because such contracts co-align the preferences of agents with those of the principal; therefore the conflicts of self-interest between principal and agent are reduced. This point is not addressed by Zsidisin and Ellram (2003). Control is a kind of mitigating strategy proposed by Juttner et al (2003). The two types of contracts, namely behaviour and outcome, are also two kinds of control.

### 3.2.1.3. Power

In his seminal work "Power Dependence Theory", Emerson (1962) defines the reciprocal power-dependence relation. In other words, "*power resides implicitly in the other's dependency* (p32)". The notion of reciprocity in power-dependency relationships raises the question of equality or inequality of power in the relationship.

There exist two schools of thought under this category: Portfolio Management School and Power Regimes School. These are discussed further below.

#### *Suppliers Portfolio Management*

Wagner and Johnson (2004) explain that a number of authors have addressed portfolio perspectives in purchasing relationship management; firms now face conditions of highly turbulent environments, rapid technology turnover, market restructuring and globalization that have made it necessary to rethink extant portfolio perspectives. They have also developed a supplier relationship portfolio model based on multiple case studies and define the concept of strategic supplier portfolio management as "*the management of an array of supplier relationships, each having various characteristics and each serving the firm in different ways*" (p717).

In the supply chain risk management literature, Kraljic (1983) first pressed for a move from purchase management to supplier portfolio management. He proposes a four-stage approach to devise strategies. The four stages are: purchasing management, materials management, sourcing management and supply management. Following this approach, a company classifies all its purchased materials or components in terms of profit impact and supply risk. Next it analyzes the supply market for these materials, and then determines its overall strategic supply position. Finally it develops materials strategies and action plans. The third phase, determining its overall strategic supply position, is based on the relative strength of company comparing to its suppliers. From this we know that this portfolio approach is based on power dependence theory.

Bensaou (1999) argues that a good practice of relationship management means first properly balancing a portfolio of relationships adapted to product and market conditions and, second managing each type of relationship effectively. He offers a portfolio management in terms of degree of specific investments of both buyer and supplier.

Dyer et al (1998) explicitly point out executives should strategically segment their suppliers into strategic partners and durable arm's length suppliers in order to allocate different levels of resources to each group. Since resources are a scarce commodity in any company, they should be allocated mainly to suppliers who fall into the strategic partner category. This portfolio management is based on importance of each relationship to the focal company.

## Power Regimes

The power regime school is a special kind of portfolio management based on the power positions of a buyer in relation to its suppliers or vice versa. Based on the same two assumptions as TCE, the power regime school of supply chain management introduced by a group of authors from the CBSP (Centre for Business Strategy and Procurement) of Birmingham Business School borrows the element of power from politics literature. Power here means the ability of a firm to own and control critical assets in markets and supply chains that allow it to sustain its ability to appropriate and accumulate value for itself by constantly leveraging its customers, competitors and suppliers. This power perspective can be seen as a proactive form of opportunistic behaviours

Their relationship management philosophy is “appropriateness”, which means that in order to be successful or manage relationships well, three things must be in place: An understanding of the power and leverage environments within which the relationships must be managed, a range of sourcing options and the relationship management styles. (Cox 2004)

Figure 2 shows the power matrix and that a buyer would have power over a supplier if two conditions held true. First, the buyer offers the supplier resources that are both relatively scarce and of high utility; second the goods or services provided by the supplier are regarded by the buyer as being relatively plentiful and of relatively low utility. If the exact opposite is true, in terms of resource utility and scarcity, then logically the supplier must have power over the buyer. The two remaining quadrants represent those circumstances in which there is no power relation between the buyer and supplier. The buyer and supplier are said to be interdependent if the relative utility and scarcity of the resources held by each party are high. Finally, a situation of buyer-supplier independence is created where the relative utility and scarcity of the resources held by each party are low. (Cox et al 2000)

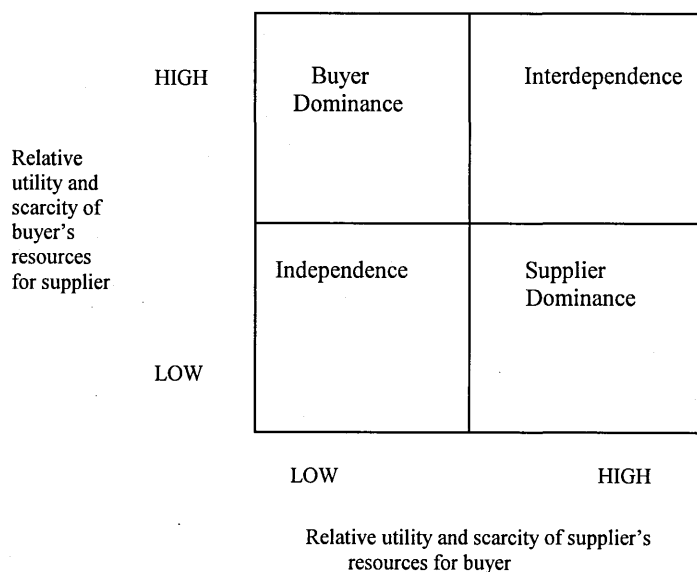


**Figure 3: The Power Matrix (Cox et al 2000)**

The power regime school is, in fact, a combination of resource dependence theory (resource based view), TCE, power and portfolio management.

### **3.2.2. Based on Social Context**

Larson (1992) argues that the social dimensions of the transactions are central in explaining control and coordination in the exchange structures. She explains the formation of the network by highlighting the importance of reputation, trust, reciprocity and mutual interdependence. The conditions firms use to construct alternative exchange governance structures are also presented. Economic incentives and mutually beneficial strategic rewards obviously must be present according to her. Critical to the development of network forms is the history of prior personal relations and knowledge of reputation that provides a receptive context for the initiation and evolution of economic exchange. The mutual orientation requires sufficient commitment of resources and time to develop knowledge of the prospective partner's business and respect for the other's interests through a learning and adaptation process.

In this section, three broad perspectives are presented; the first based on trust, the second based on IMP Group, and the last based on network governance.

#### **3.2.2.1. Trust**

In this section, the concepts of trust and resilience are explained. Both are supply relational risk mitigating mechanisms; however resilience is based on trust.

##### *Trust*

Trust is studied in different subject areas such as economics, management, industrial relations, philosophy, psychology and sociology. Trust may be viewed at different levels (Lane 1998):

- Trust at the micro-level: between individual persons and between organizations
- Institutional-based trust: rely on formal, socially produced and legitimated structures which guarantee trust.
- System trust: based on reliable functions of certain systems.
- Social trust: Macro-level

In business management, trust is considered as a social phenomenon to be studied in interpersonal, inter-organizational and systematic levels. This is the reason it is put under the title of 'based on social context' in this thesis.

As a concept, trust means many different things to different people. However most concepts of trust share three common elements (Lane 1998):

- Some degree of interdependence between trustor and trustee
- Trust provides a means of coping with uncertainty in the exchange.
- Trust is a belief or an expectation that the vulnerability resulting from the acceptance of risk will not be taken advantage of by the other party.

Das and Teng (2001b:256) define trust as a subjective state of positive expectation. They categorize trust as goodwill trust, which is "*the expectation that some others in*

*our social relationships have moral obligations and responsibility to demonstrate a special concern for other's interests above their own"* and competence trust, which is a partner's ability to perform according to agreements.

To explore the nature of trust, Nooteboom (1996:992) argues that *trust is associated with the non-egotistic sources of cooperation with loyalty to a partner due to ethics or bond of friendship or kinship rather than coercion or material self-interest*. He also accepts that trust is associated with a subjective probability that a partner will not misuse one's dependence. Trust among organizations is backed by social exchange theory. People may prefer to transact on the basis of trust. Social exchange relies more on unspecified, implicit obligations, which depend on shared systems of meaning, belief and ethics (Nooteboom 1996). He concludes that variability of trustworthiness and its opposite propensity towards opportunism, underlines the need to extend TCE with considerations of trust.

In long-term buyer-seller relationships, Sako (1992) finds it necessary to differentiate between *contractual trust*, *competence trust* and *goodwill trust*. Contractual trust rests on the moral of honesty and keeping promises. Competence trust is based on the expectation that the trading partner will perform its role competently. Good will trust is described as the willingness of the exchange partner to do more than they are expected.

Trust was more likened to that of confidence as opposed to blind faith as described by some authors. While a good working relationship was essential, this should not be taken too far into friendship. Personal trust was regarded as highly important and included characteristics such as integrity and open communication. Dependency was a key driver for setting up and maintaining strategic relationships (Cousin and Crone 2003).

Arino et al (2005) challenge the misuse of trust in inter-organizational level and ascribe to the view that trust is an inter-personal phenomenon. They instead propose the concept of relational quality as an alternative construct to the notion of inter-organizational trust. Relational quality is defined as "*the extent to which the principals and agents of alliance partners feel confident in dealing with their counterparts' organizations*" (p15). This means that in Western literature, authors tend to make a distinction between individual and inter-organizational trust.

Relating trust to business performance, Sako (1998) claims that trust may enhance business performance in a number of ways:

- Reducing transaction costs,
- Investment with future returns, and
- Continuous improvement and learning

### *Resilience*

Sheffi and Rice (2005) introduce the idea of the resilient enterprise and claim that in any company's supply chain, material flows from the supplier through a conversion process, through distribution channels and is controlled by various systems, all working in the context of the corporate culture (Figure 4). Each of the five elements represents an opportunity to introduce flexibility and create organizational resilience

(Figure 4). The most important element of the idea is the resilient culture an organization possesses. Culture contributes to resilience by endowing employees with a set of principles regarding the proper response when the unexpected occurs and when the formal organization's policy does not cover the situation at hand or is too slow to react. Flexible and fast responding companies align the employees' interests with the organisations at a fundamental level. Their employees identify deeply with their company and fulfil their personal needs when the company succeeds. The common cultural traits include:

- Continuous communications among informed employees
- Distributed power
- Passion
- Conditioning for disruption

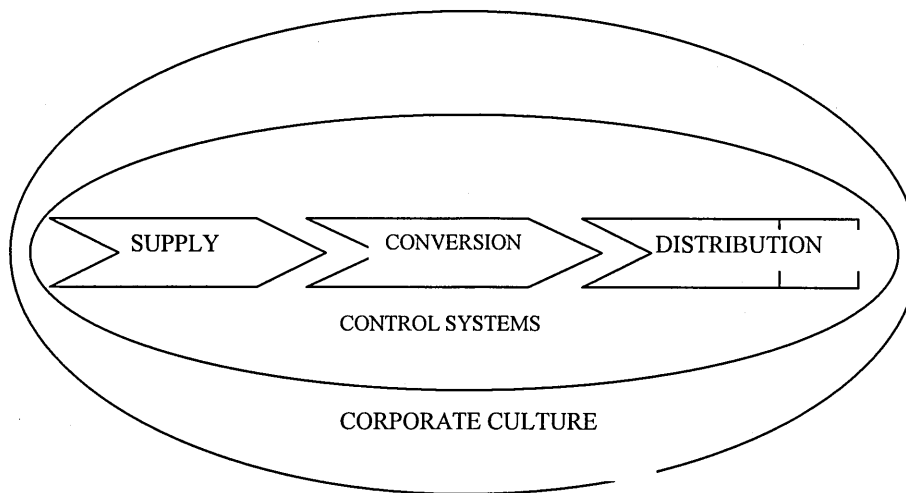


**Figure 4: Supply Chain Elements (Sheffi and Rice 2005)**

Christopher and Peck (2004) argue that in order to reduce supply chain risk, it is important to create a resilient supply chain. The difference between the resilience proposed by Sheffi and Rice (2005) and that proposed by Christopher and Peck is that the former is single company based while the latter one is supply chain based. The latter is much more difficult to achieve than the former because the members of the whole chain have to be resilient rather than just the focal company.

There are several principles about the resilience of supply chain according to Christopher and Peck (2004).

- High level of collaboration
- Agility
- The creation of a risk management culture, which includes the understanding that the biggest risk may well come from the wider supply chain rather than from within the business.

Resilience is defined as *“the ability of a system to return to its original state or move to a new, more desirable state after being disturbed”* (p2). Since a resilient supply chain requires high level of collaboration, the resilient supply chain philosophy is

based on trust. This is because without trust between the supply chain members, there would be no collaboration, although this point is not explicitly expressed.

While there has been a trend towards the reduction of the supplier base, single sourcing is dangerous in terms of resilience. A lead supplier and possible alternative sources should be available. It is strongly advocated that one of the key criteria for the selection of suppliers should be the risk awareness of the supplier. It may be appropriate to adopt a proactive strategy of supplier development to work closely with key suppliers to help them improve their supply chain risk management practices (Christopher and Peck 2004).

It will be apparent that since supply chain vulnerability is by definition a network-wide concept, the management of risk has to be network-wide too. A high level of collaborative work across supply chains can significantly help mitigate risks. The underlying principle of collaborative working in the supply chain is that the exchange of information can reduce uncertainty (Christopher and Peck 2004).

Supply chain agility can be defined as the ability to respond rapidly to unpredictable changes in demand or supply. Two key ingredients of agility are visibility and velocity. Supply chain visibility is the ability to see from one end of the pipeline to the other. Visibility implies a clear view of upstream and downstream inventories, demand and supply conditions, and production and purchasing schedules. The achievement of supply chain visibility is based upon close collaboration with customers and suppliers as well as internal integration within the business. Collaborative planning with customers is important to enable visibility of demand. Supply chain velocity is defined as distance over time. Reducing the end-to-end time, the time from when the focal firm places orders to when it delivers to its customers, would increase velocity (Christopher and Peck 2004).

The whole argument for supply chain resilience provides a way of mitigating supply chain risks; however it is a very optimistic view from the relationship management perspective because it assumes that the focal company's trust on its partners is not taken advantage of.

Collaboration, partnership and strategic alliances are the concepts referring to close relationships between exchange parties. The partnership literature, similar to collaboration, provides some important constructs to the resilience concept.

Goffin et al (2006) claim that supplier relationships range from transactional to close ones. Partnership-like relationships are context dependent rather than being an absolute concept. Several researchers have recognized that partnership-like relationships vary depending on how close they are. Therefore, the degree of closeness offers a way to both explore and explain relationships. *Closeness* has been widely identified as an important characteristic of relationships.

A purchasing partnership is defined by Ellram (1991) as "*An agreement between a buyer and a supplier that involves a commitment over an extended time period, and includes the sharing of information along with a sharing of the risks and rewards of the relationship* (p2)." Thus, she further explains a supplier partnership differs from

traditional supplier relationships in that it involves an inherent trust, as well as a mutual commitment and sharing.

Zsidisin and Smith (2005) take a step further from Zsidisin and Ellram's (2003) application of agency theory in supply chain risk management. They take the same line of thought by saying that supplier management may be dominated by outcome-based approaches at first, particularly with respect to cost cutting and then develop towards a behaviour-based orientation after the supplier selection decisions are made within the Early Supplier Involvement (ESI) process. The point here is that the formation of a long-term relationship has to undergo a process of relationship building.

Realising that there may be relational risks for the supply chain, Christopher and Lee (2004) developed a model of the risk spiral to explain the mechanism of the relational risk associated with cooperation (Figure 5). Confidence in a supply chain is weakened when the end-to-end pipeline is long. Associated with pipeline length is the lack of visibility within the pipeline. In addition to visibility and velocity, supply chain confidence requires the ability to take control of supply chain operations. In order to break the spiral and restore supply chain confidence, two basic elements of supply chain confidence have to be addressed: visibility and control. A few key levers are provided:

- Information accuracy, visibility and accessibility
- Alerts for out of control conditions
- Responsive corrective actions

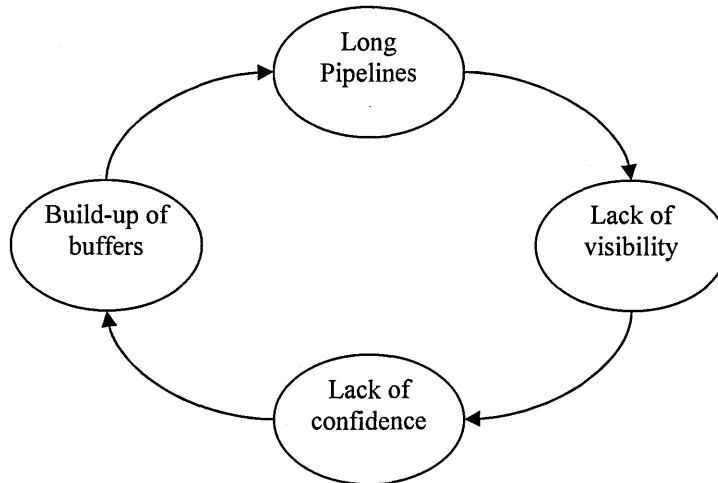


**Figure 5: The Risk Spiral (Christopher and Lee 2004)**

Taking a similar perspective, Wilding (2003) proposes the 3 Ts of highly effective supply chains. Besides visibility and velocity (Time and Transparency in his article), a third concept is introduced: Trust, which is explicitly explained as an element of the resilient supply chain. The relationships between them are explained.

Christopher et al (2002) argue that competition has shifted from single firm based to supply network. What makes the supply chain unique is the way the relationships are managed. *"In this sense, a major source of differentiation comes from the quality of relationships that one business enjoys compared to its competitors (p126)"*. Complex

networks need a network orchestrator or focal firm to drive and guide the development and delivery of customer values.

From a practitioner's perspective, Christopher and Juttner (2000) build up a six elements framework of relationship management (Figure 6).

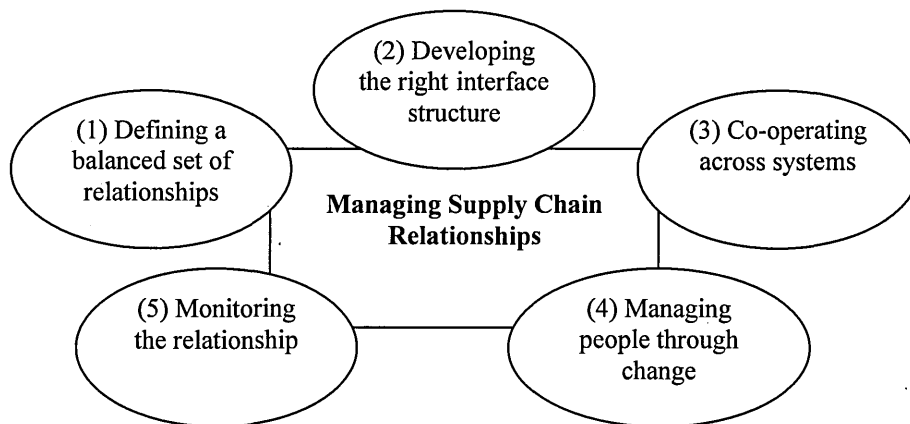


**Figure 6: Relationship Management Framework (Christopher and Juttner 2000)**

- *Defining a balanced set of relationships*: Every company maintains a variety of different relationships. Relationship value is not measured only on the basis of revenue and volume but other criteria such as substitutability.
- *Developing the right interface structure*: Interface could be buyer-seller interaction, close collaboration, close collaboration with involvement of several functions and blurred boundaries of companies.
- *Cooperating across systems*: This refers to all initiatives undertaken to improve the information exchange.
- *Managing people through change*: Building robust partnerships requires the commitment of all people involved.
- *Assigning a relationship promoter*
- *Monitoring the relationships*

Zineldin (2004) proposes the concept of TRM (Total Relationship Management) and argues that the challenge of TRM is how to coordinate the different internal and external parts of a business in an efficient and flexible manner. The philosophy of TRM focuses on:

- External and competitive analysis
- Internal analysis of all integrated activities within the organisation (internal relationships)
- High quality customer satisfaction and in turn long-run profitability
- Mutually beneficial relationships, communications and interactions outside the organization with suppliers, dealers, distributors and other collaborators

TRM highlights the role of quality and customer service and the impact of the external environment. The essence of any relationship is communication and interaction. The main philosophy behind the TRM approach is to facilities, create,

develop, enhance, and continuously improve appropriate internal and external relationships with customers, employees and collaborators (Zineldin 2004). The TRM concept puts relationship management in a very important position within the firm and heralds the era of relationship management. However this, again, emphasizes collaboration between exchange partners.

Gadde and Snehota (2000) argue that the degree of involvement with suppliers affects the economic consequences of supplier relationships. It is necessary to monitor and modify posture (low and high involvement) if the situation changes. The criteria of change are to decide whether the benefit gained from the kind of involvement is higher or lower than the investment cost. In practice, companies are confronted with a variety of situations in relation to suppliers and have to deal with them in different ways. Here is a list of arguments raised by them.

- There is no general best type of relationship.
- Assessing relationship consequences is difficult.
- High involvement is costly.
- Partnership benefits are not reaped automatically
- Low involvement is a viable option.
- Largest suppliers are not always the best partners.
- Overly detailed specifications kill innovation.
- Increasing involvement can increase conflict.

What the current authors on supply chain resilience miss out is intentional or unintentional ignorance of the existence of opportunistic behaviours in organizations. It seems that resilient perspective is too optimistic. This optimistic attitude of firms is based on trust in their business partners. There is no problem with this as long as such optimism does not distort firms' sense of reality. Coutu (2002) propose three characteristics, which are the keys to a resilient organization. First, resilient organizations have a staunch acceptance of reality. Second, resilient organizations seek meanings for what they do and possess strong value systems. This point relates to Sheffi and Rice and Christopher and Peck's idea of creating a resilient culture. The third building block of resilience is the ability to make do with whatever is at hand. When situations unravel, resilient organizations muddle through, imagining possibilities where others are confounded.

### **3.2.2.2. Network Governance**

There are a number of perspectives on network theory. However, in this section I only focus on two issues: the antecedents of network formation and network governance mechanisms. The former one informs the constructs of inter-organizational networks and the latter one is the governance mechanisms which are available for firms to reduce their supply relational risks.

Granovetter (1985) proposes his idea that economic behaviours are socially embedded. He criticizes sociologists' view as "*seeing the economy as an increasingly separate differentiated sphere in modern society, with economic transactions defined no longer by the social or kinship obligations of those transacting but by rational calculations of individual gains* (p482)". He also criticizes Transaction Cost Economics as "*deflecting the analysis of institutions from sociological, historical and legal*

*argument and show instead that they arise as the efficient solution to economic problems (p505)”.*

Granovetter (1992) answers the question of “how do firms come to exist?” and criticizes New Institutional Economics especially TCE’s stance that firms emerge when needed to reduce transaction costs and claims that they are constructed by individuals whose action is both facilitated and constructed by the structure and resources available in the social networks in which they are embedded.

Jones et al (1997) have synthesized the TCE and network theory, resolving the vague specification of network governance and adding social dimension to TCE. Network governance, defined by Jones et al, “*involves a select, persistent, and structured set of autonomous firms as well as non-profit agencies engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges*” (p814).

Jones et al (1997) further illustrate that TCE could explain why network governance emerges and thrives. The four exchange conditions, demand uncertainty, human asset specificity, frequency and task complexity, determine the extent of social embeddedness. Social embeddedness provides the foundation for social governance mechanisms which include: restricted access to exchanges, *macro-culture*, collective sanctions and reputation. These mechanisms provide safeguarding and coordination to the network members, increase the trust between them and therefore reduce the opportunistic behaviours. They could be used as mitigating strategies for supply relational risks. To summarize the four mechanisms, a good reputation improves a firm’s position and brings awards/incentives to the network, and a bad one would be punished either with collective sanctions or restricted access to exchanges so these mechanisms can be combined into one: *reputation/incentive/punishment*.

Granovetter (2005) explicitly explains how these mechanisms work and proposes that there are three main reasons why social networks affect economic outcomes: First, social networks affect the flow and the quality of information; second, social networks are an important source of reward and punishment; and third, *trust* emerges in the context of a social network.

Park (1996) points out that it is widely believed that managing a network is an extremely difficult task and that the costs of network disruption are substantial, and argues that the inter-firm network appears as an alternative governance form to markets and hierarchies, while maintaining the benefits of both governance structures. He further explains that the network is a governance structure based on *transactional reciprocity*. The presence of reciprocity helps the network to overcome the risks of opportunism from network members, to discourage the pursuit of sub-goals through a superior monitoring mechanism, to align incentives to reveal information, to share firm-specific know-how and technology, and to guarantee performance.

Griffith and Myers (2005) claim that the strategic fit of organizational relational *norms* in global supply chain relationships is becoming increasingly important as managers and academics examine the effectiveness of culturally founded relational governance strategies. Relational norms are a “*specific subset of norms relating to the underlying cooperative behavioural domain directed toward maintaining the*

*relationship and curtailing behaviour promoting the goals of the individual parties”* (p255). This concept is not far from one of the networks governance mechanisms: macro-culture.

They then argue that national culture plays an important role in the relational governance strategies because individuals operate based upon their cultural orientation when engaging in business practices. Given the cultural artefacts embedded in bilaterally established relational norms, it is theorized that a firm can enhance its performance by fitting its supply chain governance strategies to the culturally founded relational norm expectation across partners simultaneously. (Griffith and Myers 2005) This argument means there could be risks arising from strategic mismatch due to cultural differences.

Grandori and Soda (1995) have done the most comprehensive review on inter-firm networks, and identify the antecedents of network formation and organizational coordination mechanisms sustaining and regulating inter-firm cooperation. The ten network mechanisms are:

- Communication, decision and negotiation mechanisms
- Social *coordination* and control
- Integration and linking-pin roles and units
- Common staff (staff involved in the cooperation)
- Hierarchy and authority relations
- Planning and control systems
- Incentive system
- Selection system (selection of cooperation partners)
- Information systems and
- Public and infrastructure

Antecedents of the network formation include:

- Inter-organizational embeddedness
- Differentiation between the units to be coordinated
- Intensity of inter-firm interdependence
- Complexity of interdependent activities
- Flexibility

Calton and Lad (1995) argue that social contracting can best be understood and applied in organizational settings if it is perceived and treated as a network governance process. They further explain that social contracting within a network is, essentially, an interactive, participant-driven and developmental trust-building process. Social contracting is “*a process by which participants in a network define themselves and the meaning of their collective enterprise through the interactive pattern of joint rule-making that governs the common effort*” (p278). To the extent that implicit relational contracts are drafted and socially embedded in an evolving pattern of participant interaction, the hierarchically-defined boundary between the firm and its environment begins to dissolve. The theory of social contracting explicitly explains the rationale behind the network governance mechanisms. The social contracting emphasizes the interaction/communication element in the networks.

### 3.2.2.3. Industrial Marketing and Purchasing (IMP) Group

Harland (1996) indicates that much of the language from International Marketing and Purchasing (IMP) Group is used to describe the building blocks and nature of supply networks; therefore it can be viewed as a part of network theory.

The seminal work by the IMP Group “International Marketing and Purchasing of Industrial Goods” proposes an interaction model. It is built on a number of factors (Hakansson 1982):

- Both buyer and seller are active participants in the market.
- The relationship between buyer and seller is frequently long term, close and involving a complex pattern of interaction between and within each company.
- The links between buyers and sellers often become institutionalized into a set of roles that each party expects the other to perform.
- Close relationships are often considered in the context of continuous raw material or component supply.

The four elements in the interaction model are (Hakansson 1982):

- The *interaction process*: Long term relationships are built up through successive short term episodes.
- The *participants* in the interaction process: Technology, organizational structure, organizational experience and individuals
- The *environment* within which interaction takes place: market structure, dynamics, internationalization, position in the manufacturing channel and the social system.
- The *atmosphere* affecting and affected by the interaction: economic dimension and the control dimension.

The interaction process is influenced by the characteristics of the organizations and individuals involved. Interactions take place within an environment consisting of the vertical and horizontal market structure and general social influences. The interaction is conditioned by the relative power position of the parties to the interaction. At the same time, both conflicts and cooperation can characterize these relationships. This means that it is possible for a company to have a collaborative relationship and conflicts. Atmosphere is a product of these relationships. (Hakansson 1982)

Ford (1998), another IMP Group’s guru, explains how companies relate to each other and proposes some important constructs of the relationship:

- *Learning*: learn about each other’s uncertainties and abilities
- *Investment*: invest tangible and intangible resources by both parties
- *Adaptation*: make a unique investment to accommodate other’s party’s requirements.
- *Trust and commitment*: the level of trust and commitment vary widely in a relationship.
- *Distance*: social distance, cultural distance, technological distance and time distance

Turnbull et al (1996) do a comprehensive review on IMP Group perspectives. One of the themes they reiterate is the reviewing of relationships as a *portfolio*. Firms manage

a portfolio of relationships based on their network position and power dependence. Network position is the basis of a company's reputation, rights, limitations on behaviour and obligations in the network. His argument on portfolios adds a new theme to IMP Group's framework. This is, however, an attempt to combine the social network theory with power dependence theory based on opportunism and economic exchange.

Brennan et al (2003) claim that the competitive success in business to business markets often depends upon the ability of the firm to adapt specifically to the needs of a single customer organization. Then they define dyadic *adaptations* as "*behavioural or organizational modifications at the individual, group or corporate level, carried out by one organization, which are designed to meet the specific needs of one other organization* (p1639)." Finally, the study provides evidence in support of the social exchange framework, emphasizing mutual adaptations as a component of the trust-building process, and unilateral adaptations as a response to power imbalances within the relationship.

The early IMP Group's research largely focused on dyadic relationships as seen from the previous two IMP Group's classics - Hakansson (1982) and Turnbull et al (1996). Anderson et al (1994) extend the IMP Group's framework to a network context. From a network point of view, they introduce three essential components: activities, actors and resources. The activities of establishing a network are associated with the linking of activities, tying of resources and bonding of actors.

The final theme of the IMP Group, identified from this review, is that networking is a *dynamic process*. Easton (1992) argues that change is a central feature of many of the articles written about industrial networks. Network processes are dominated by the distribution of power and interest structures. Two dialectic processes in networks are competition and cooperation. Firms buying and selling from one another have to have a minimal level of cooperation in order to complete a single exchange. On the other hand, they compete over the ownership of resources. Therefore networks are stable but not static. The continuing process of integration between firms are stabilised since they take place within the context of existing relationships. However, such relationships are also changing, partly in response to events external to the relationship and partly because of the transactions which help to define them.

He further explains that new relationships are formed and old ones disappear. Evolution is the main mode; revolution is possible but unusual. Network inertia and interdependencies slow and shape the changes. Thus networks do not have lifecycle. Industrial systems exist to create product and services. Innovation is a major force in networks and renders network structure change. (Easton 1992)

Furthering Easton's thought, Dwyer et al (1987) propose a *relationship development process* model. According to them, relationships evolve through five general phases identified as awareness, exploration, expansion, commitment and dissolution. Fynes et al (2005) build on Dwyer et al's model and propose a conceptual framework which posits that initial activity in relationship development was communication. As communication grows in terms of frequency and intensity, trust develops which in turn leads to increased co-operation and adaptation. From a managerial perspective,

they also propose that firms need to identify at what stage they are at in terms of relationship development and act accordingly.

The IMP Group's methodology is based on mapping, comparing and contrasting the perceptions and behaviours of suppliers and buyers therefore it is a descriptive approach of relationship management. At best, IMP Group provides an analytical tool for the relationship management analysis and network analysis.

### 3.2.3. Strategies Combining Economic Exchange and Social Context

Das and Teng (2001b) suggest that trust and control are two separate routes to reduce risk in alliances. Trust can be seen as a more intrinsic source for lowering the perception of risk. Control may be viewed as a more active way of reducing risk. The two can and should be combined in specific ways for best risk management results. Trust is comprised of goodwill trust and competence trust while control consists of behaviour, output and social control. Behaviour and output control are the two kinds of contracts of agency theory. Social context is informed by network theory. They also find that certain dimensions of trust and control are more important than others in particular alliance types for purposes of risk reduction. (Table 18)

However, their model does not explicitly relate to network theory and only mentions social control mechanisms without much detail. It seems that this model is based on trust because it takes trust as a mechanism to reduce risk. In fact, it also takes opportunistic behaviour into consideration because it applies behaviour, output and network control to mitigate opportunistic behaviours. The model is a combination of agency theory control, trust and a little social network governance.

**Table 18: Risk Reduction in Different Alliance Types (Das and Teng 2001b)**

|                                         | Applicability to Alliance Types     |                          |                     |
|-----------------------------------------|-------------------------------------|--------------------------|---------------------|
|                                         | Joint ventures                      | Minority equity alliance | Non-equity alliance |
| Trust Building and Control Mechanisms   | <i>(A) REDUCING RELATIONAL RISK</i> |                          |                     |
| <i>(a) Goodwill trust-building</i>      |                                     |                          |                     |
| 1. Establishing mutual interests        | high                                | high                     | high                |
| 2. Individual and team-level trust      | high                                | moderate                 | moderate            |
| 3. Joint dispute resolution             | high                                | high                     | moderate            |
| <i>(b) Behaviour control mechanisms</i> |                                     |                          |                     |
| 4. Policies and procedures              | high                                | high                     | high                |
| 5. Reporting structure                  | high                                | moderate                 | moderate            |
| 6. Staffing and training                | high                                | moderate                 | moderate            |
| <i>(c) Social control mechanisms</i>    |                                     |                          |                     |
| 7. Decision-making process              | high                                | high                     | high                |
| 8. Rituals, ceremonies, and networking  | high                                | moderate                 | moderate            |

|                                      | <i>(B) REDUCING PERFORMANCE RISK</i> |      |      |
|--------------------------------------|--------------------------------------|------|------|
| <i>(d) Competence trust-building</i> |                                      |      |      |
| 9. Proactive information collection  | high                                 | high | high |
| <i>(e) Output control mechanisms</i> |                                      |      |      |
| 10. Setting objectives               | high                                 | high | high |
| 11. Planning and budgeting           | high                                 | high | high |
| <i>(f) Social control mechanisms</i> |                                      |      |      |
| 12. Decision-making process          | high                                 | high | high |

Nooteboom (1996) develops a process and control model for analysis of inter-firm relations to reduce relational risks and takes a comparatively balanced view on the trust/opportunism issue and clearly states that both opportunism and trust have to be considered. He aims to develop a model for exploring balances and imbalances of dependence between parties, mixes of trust and opportunism and of formal and informal forms of governance. He further explains that in contrast with TCE, he accepts the relevance of sociological categories such as trust, social cohesion and social exchange but also acknowledges possible inclination towards opportunism, and preserves notions concerning governances from TCE.

Zaheer and Venkatraman (1995) integrate economic and sociological perspectives to explain the determinants of relational governance. They are the first authors to introduce the concept of *relational governance* as “*inter-firm exchange which includes significant relationship-specific assets and is embodied in both the structure and the process of an inter-organizational relationship*” (p374). The determinants of the economic perspective represented by TCE are: the degree of transaction-specific assets, the level of uncertainty and the extent of reciprocal investment. The addition of the sociological perspective, captured in the trust construct, significantly enhanced the explanatory power of the model of governance process. What they propose is a combination of relational governance based on TCE and trust. However in this review, relational governance refers not necessarily to inter-firm exchange including significant relationship-specific assets and extended to relational governance of all exchanges.

Contributing to marketing channels literature, Heide (1994) proposes a governance typology of market and non-market forms of governance. However, he continues to explain, non-market governance is a heterogeneous syndrome. One of the non-market governances is an authority structure. Then he introduces social control as the third form of governance. He claims that the trichotomy delineates a conceptual sense of forms that inter-firm governance can take. A dynamic process of governance model is proposed to address the inadequacy of the practicality of the three governance forms. The process includes: relationship initiation, relationship maintenance and relationship termination.

### 3.2.4. Synthesis

Based on the above review, a synthesized model of Western forms of supply relational risk management has been developed. The structure and constructs of such concepts are as follows (Table 19). The diagram of this model can be found in Figure 10 (p61). This model is a part of a synthesized model of Guanxi and Western forms of supply relational risk management.

**Table 19: Western Forms of Supply Relational Risk Management Constructs**

|                                                    |                   |                    |                                 |
|----------------------------------------------------|-------------------|--------------------|---------------------------------|
| Western forms of supply relational risk management | Economic exchange | TCE                | Opportunism                     |
|                                                    |                   | Agency Theory      | Outcome and behavioural control |
|                                                    |                   | Power              | Supplier portfolio management   |
|                                                    | Social context    | Trust/Resilience   | Power regimes                   |
|                                                    |                   |                    | Trust                           |
|                                                    |                   |                    | Agility                         |
|                                                    |                   |                    | Collaboration                   |
|                                                    |                   | Network governance | Coordination                    |
|                                                    |                   |                    | Reputation/Incentive/Punishment |
|                                                    |                   |                    | Reciprocity                     |
|                                                    |                   |                    | Norm/Macro-culture              |
|                                                    |                   | IMP Group          | Dynamics/Process                |
|                                                    |                   |                    | Interdependence                 |
|                                                    |                   |                    | Adaptation                      |

Zaheer and Venkatraman (1995) classify relational governance into two categories: economic governance and sociologic governance. Das and Teng (2001b) combine trust from sociological perspective and control from economic perspective as two mechanisms to reduce risks and do not explicitly discuss opportunism. Nooteboom (1996) takes a balanced view between trust and opportunism and addresses what Das and Teng ignore on the opportunism issue. Heide (1994) proposes a governance typology of market and non-market forms of governance. They are the first ones who look at relationship management from both economic and social point of view; however their models are far from comprehensive.

From an economic perspective, there are three theories which need to be considered. The common characteristic of the three theories is that they are based on the assumption that organizations and individuals are opportunistic. TCE provides three governance mechanisms: market, hierarchy and hybrid. Within the market governance mechanism, agency theory offers us two kinds of contracts or control: behaviour and outcome. Power is another important element in relationships. Supplier portfolio management warns that firms should not take every relationship as equal, and allocate resources differently based on the degree of specific investment, strategic importance or power relationship. Power relationships inform the perspective from power regimes school.

From a sociological perspective, there are also three theories identified. The first one is resilience, which includes three elements: trust, agility and collaboration. Agility consists of two elements: velocity and visibility. The resilience theory is based on trust and the two elements agility and collaboration are all based on trust. Without trust, there would not be any collaboration or exchange of information. Visibility is the antecedent of collaboration and the aim of the collaboration is to achieve velocity:

speed to the market. However it is necessary to point out that this theory is too optimistic because it does not take opportunism into consideration.

The second theory from the sociological perspective is network governance. Coordination is needed to reduce the risk associated with cooperation. The reputation/incentive/punishment mechanism means that networks would give incentives and rewards to organizations that have a good reputation, and punish those with a bad one by either restricting them to the access of exchange or placing collective sanctions on them. Transactional reciprocity implies that if there are sub-goals or opportunistic behaviours existing in a firm, there will no more business for it. Norm and macro-culture are shared beliefs and values in the network. These values and beliefs regulate, coordinate and safeguard the network members' behaviours.

The third theory is IMP Group's perspective, which is the building block of network theory. It proposes adaptation as a mechanism to reduce risks, and regards relationship management as a dynamic process. The marketing and purchasing of industrial goods is seen as an interactive process between two parties within a certain environment (Hakansson 1982). Ford (1998) claims that companies are interconnected and interdependent. The interdependencies between companies in business markets largely determine the organization and operations of those companies. Interactions are the antecedent of interdependence.

In sum, Western firms would use either one or a combination of any of these mechanisms provided. However we must reiterate the importance of viewing relationships as a portfolio (Turnbull et al 1996). Nooteboom (1996)'s balanced view on trust and opportunism is adopted in this synthesized model. The Resilience mechanism should be used by the buyer when the buyer is in the dominant position or interdependent with the suppliers. Control is very important therefore Das and Teng's (2001b) model is adopted. IMP Group's perspective is the building block of network governance and an analytical tool. Social network governance plays an important role in protecting network members from opportunistic behaviours and problems associated with cooperation. However it does not mean that firms should leave economic governance behind. Such governance mechanisms as TCE, power regimes, agency theory and portfolio management should be taken into account because reducing cost and making profits are the aims of most economic organizations. Western firms that attempt to reduce supply relational risks should take all the constructs of this model into consideration and choose the appropriate ones based on the situation they are in.

### **3.3. Guanxi**

There is a large body of literature written on Guanxi. Most of the articles on Guanxi discuss its positive effects on organizational performance or relate it to relationship marketing. Some others define Guanxi by providing models and constructs. The literature search performed to date has not revealed any articles that explore the link between Guanxi and supply chain management. In this section, Guanxi is discussed by answering two questions: first, what is Guanxi? Second, what are the constructs of Guanxi? Finally a synthesized model of Guanxi is provided.

### 3.3.1. What is Guanxi?

Yang (1994), in her seminal book "Gift, Favours, and Banquets: the Art of Social Relationships in China" introduces the concept of *guanxixue* (*guanxiology*), which she describes as the art of personal relationships or art of Guanxi. Guanxixue is concerned with the tactics of Guanxi construction and cultivation.

Although the Chinese cultivation of Guanxi has become the focus of researchers' attention since the recent decentralization and privatization of the Chinese economy, its roots are deeply-embedded in the Chinese culture with a history of more than 2000 years (Luo 1997).

Researchers in the study of Chinese cultural values may find it surprising that Chinese values have formed a clear and consistent system for generations (Yau 1988). Chinese business behavior is driven more by its culture than by the competitive interaction of global business dynamics. The major force in Chinese culture, despite her communist political system, is Confucianism (Wong et al 1998). It has long been recognized that Guanxi (connection) is one of the major dynamics in the Chinese society where business behavior revolves around Guanxi. Any business in this society, including both local firms and foreign businesses, inevitably face Guanxi dynamics (Luo 1997).

In order to understand Guanxi, we have to understand some of the Chinese culture in which Guanxi is rooted. The Chinese culture emphasizes the teaching of Confucius. Relationships have therefore been explained in terms of harmony, hierarchy and development of moral potential and kinship (Buttery and Wong 1999). Therefore Guanxi is not only commercial but also social involving the exchange of *renqing* (social humanized obligation) and the giving of *mianzi* (face in the society) or social status (Luo 1997).

In order to understand Guanxi, people have to understand Confucianism, on which Guanxi is based. As a moral system, Confucianism focuses on the relationship between man and man, which is defined by five virtues: humanity/benevolence (*ren*), righteousness (*yi*), propriety (*li*), wisdom (*zhi*) and trustworthiness (*xin*). Another focus is on the five hierarchy relationships between father and son; ruler and ruled; husband and wife; elder brother and younger brother; and friend to friend. These are the virtues and relationships of a society where all are inherently kept in order. Apart from the performance of assigned duties, filial submission, loyalty, decency and reciprocity are also required. Confucianism requires a broad commitment to a harmonious operation and the welfare of the society (Luo 1997).

Gold et al (2002) claims that the very basis of a Chinese person's understanding of the world is the web of relationship in which he is embedded, a fact that naturalizes the manipulation of the relationships to accomplish tasks. He cites a Chinese scholar Liang Shuming's argument as "Chinese society is neither individual based nor society based. It is relationship based."

Parnell (2005) explains Guanxi as interpersonal, inter-group exchange or interaction. It is seen as a complex, multifaceted, socio-cultural phenomenon which is difficult to conceptualize. Yet he reckons that Guanxi networks are by definition informal. If they are made formal and explicit, then this unofficial entity will immediately become

dysfunctional. He also mentions a very important point on Guanxi by saying that *"what Chinese value are relations that mirror those inside the family, which are often warm, nurturing and very affectionate and the clan, delivering a relative security of the person and the capacity to achieve results which would not otherwise be obtained"* (p31). Here he emphasizes the affectionate element of Guanxi concept.

He then uses Lee et al's (2001:52) definition of Guanxi as it refers to a special type of relationship that bonds the exchange parties through reciprocal exchange of favors and mutual obligations. Reciprocity, based on *renqing* (favour), is the real dynamics behind the practice of Guanxi.

### 3.3.2. Guanxi Models and Constructs

Guo (2001), from a political point of view, proposes a four-dimension Guanxi model. The four dimensions of Guanxi are:

- Instrumental dimension: involves self-interested motivation and establishing a long-term relationship and a mutual sense of obligation with someone else.
- Etiquette dimension: is bound with ideas of reciprocity and means people need to follow etiquette and maintain harmonious relations with those who work with him.
- Moral dimension: is buttressed by the values of loyalty and righteousness or ethic of brotherhood. The concept of loyalty demands a follower's unconditional support and obedience to a leader. It is derived from filial piety.
- Emotional dimension: tends to emphasize affective and emotional identification rather than duty, loyalty or obligation. It is more personal.

He concludes that it is difficult for us to draw too sharp line between different dimensions of Guanxi as Guanxi often involves a complex combination of all four elements. This four-dimension model indeed helps understand the current debate on whether Guanxi is instrumental or affective.

As a continuation of Luo (1997), Park and Luo (2001) argue that Chinese society has been functioning as a clan-like network since Confucius codified societal rules, values, and hierarchical structures of authority during the sixth century BC. Chinese society places great stock on the importance of face (*mianzi*). *Mianzi* is an intangible form of social currency and personal status, which is affected by one's social position and material wealth. *Renqing* is another Chinese philosophy related to Guanxi. It is a form of social capital that provides leverage in interpersonal exchanges of favour. It represents an informal social obligation to another party as the result of invoking a Guanxi relationship. So and Walker (2006) summarize it as:

*"The fundamental principle of interaction and communication at the individual level is encapsulated in renqing ethics, which should be understood as first and foremost a set of moral norms that guide and regulate one's behaviour. Renqing is also the socially accepted pattern of emotional responses in the sense that one takes others' emotional responses into consideration."*(p12)

Leung et al (1995) propose a G.A.I.O model, which classifies relationships as insider (old friend and new friend) and outsider (associate and partner). It regards Guanxi building as an adaptation process.

Fock and Woo (1998) identify characteristics of Guanxi as perceived by Hong Kong business executives. Ranked according to importance, they are,; *Personal relationship, Mutual co-operation, Trust, Exchange of Favours/benefits, Exchange of information, Giving 'face' (respect), Social activities & entertainment and Commitment.*

Fan (2002) looks Guanxi as social capital and a process. To develop and maintain Guanxi is like putting one's money into a saving account or purchasing an insurance policy for the future. Guanxi is the process of social interactions that initially involve two individuals. However, the whole process is informal, complicated and non-transparent, which may create uncertainty in the process as the outcome of an exchange is not always predictable. He argues that a Guanxi, if a relationship is transferred, can only be passed on from one person to another person, not to the organization.

The empirical work of Buttery and Wong (1999) has identified the constructs of Guanxi: *adaptation, dependence, favour and trust.* Taking a similar view as Fan (2002), Wong and Tam (2000) explain the context of Chinese relationships and also emphasize that Guanxi is a dynamic process (Figure 7). The system of Guanxi has led to business success in Chinese societies, reflecting the ability to be flexible and adapt through the quick reaction within networks based on trust and promises of reciprocity. The building blocks of Guanxi have reflected Confucian teaching related to harmony, hierarchy, the building of moral potential and kinship.

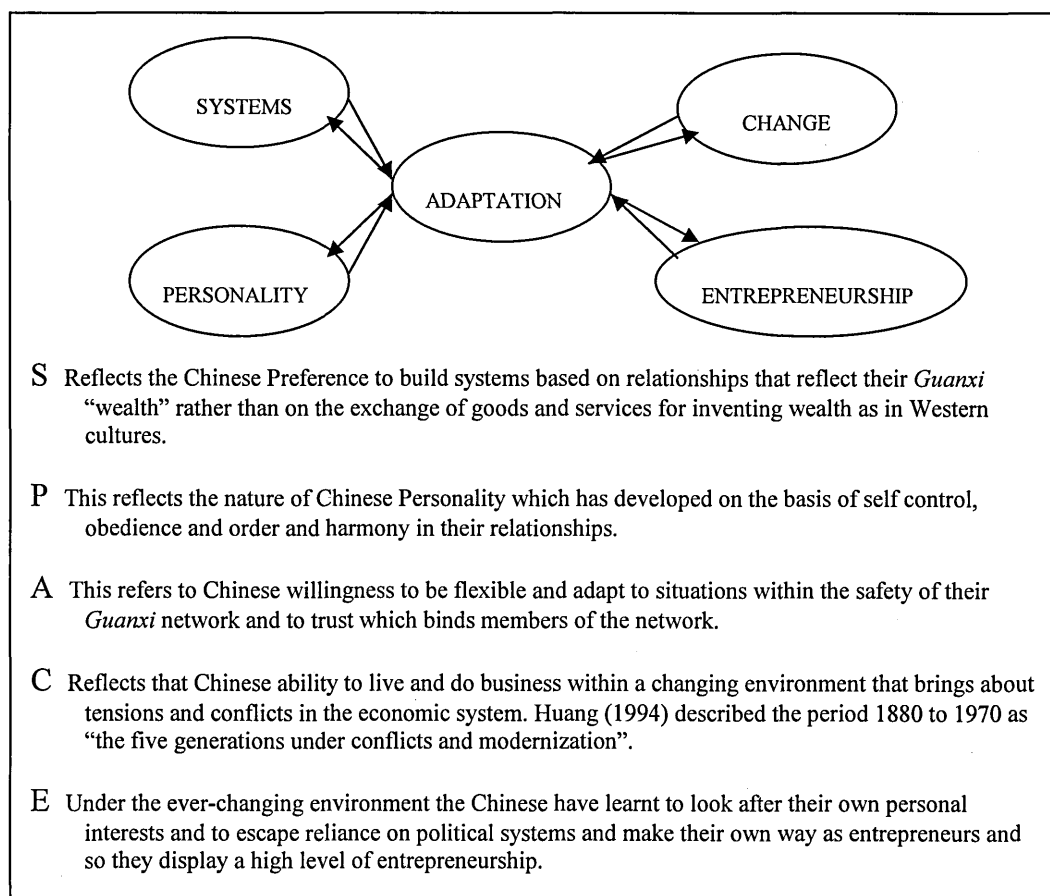


**Figure 7: SPACE Diagram Showing the Context of Chinese Relationships (Wong and Tam 2000)**

The process starts from Guanxi perceptual positioning, then Guanxi routing strategies to the implementation of Guanxi (Figure 8). Guanxi positioning illustrates the type of relationship in the insider/outsider dichotomy. To analyze the complex interactive behaviour of Guanxi, four outsider-insider “T” psychological concepts are proposed: testing, trial, teaming and trust. In the “testing” quadrant, each party tests other parties’ intentions or reactions. If two parties mutually accept each other as insider friends, they are regarded as “teaming” members. If a strong Guanxi relationship has been established after the parties enter the teaming quadrant, they may go to a higher stage and enter the “trust” stage with substantial relationship-specific investment. In the quadrant of “trial”, each party bargains with power, on which in turn depends how each party evaluates its dependence on and level of trust of the other party (Wong and Tam 2000). (Figure 9)

A routing concept is indicated. There are different routing strategies. The effectiveness of Guanxi development lies in the various perceptions of relationship types, namely: six “C” dimensions - contact, conflict, compromise, centrality, control and change. Contact, conflict and compromise variables are regarded as a mind approach, while centrality, convergence and creativity are regarded as a heart approach. The self-contradictory issue of mind and heart can be metaphorized into the ancient Chinese symbols of yin and yang, which are themselves self-sufficient and fuse to form a harmonious dynamism (Wong and Tam 2000). (Figure 9)

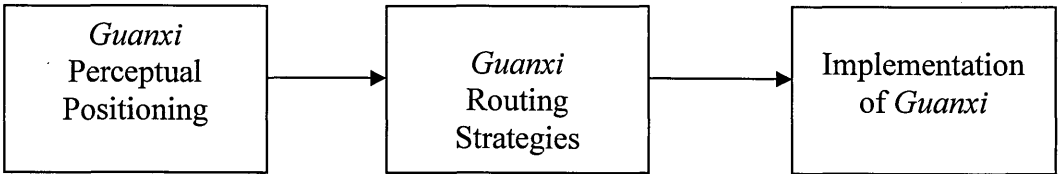


**Figure 8: Guanxi model-relationship strategic process (Wong and Tam 2000)**

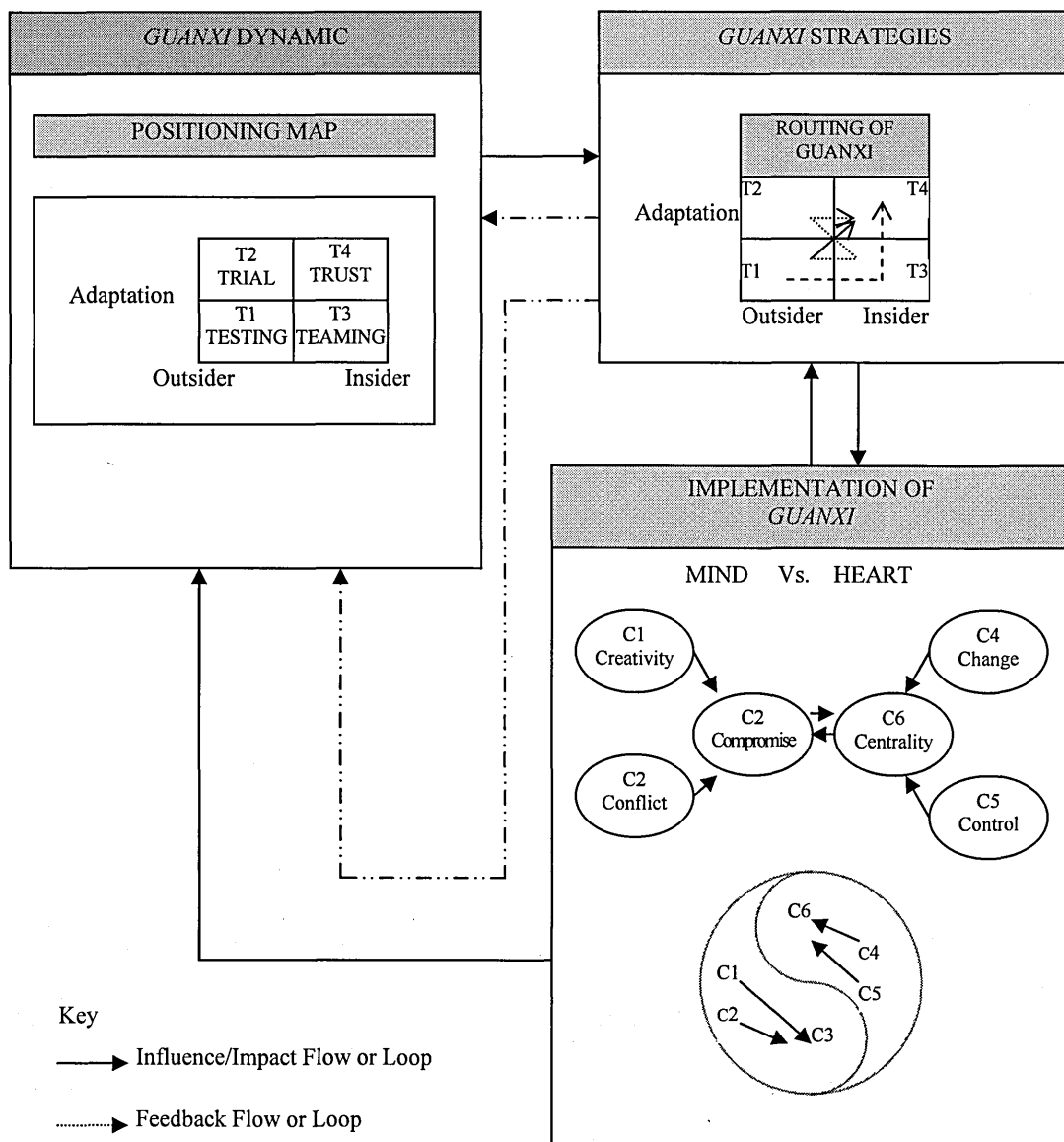


**Figure 9: An integrative Guanxi model: the links and feedback flows of various components (Wong and Tam 2000)**

Strutton and Pelton (1997) attempt to link war strategies with yin-yang philosophy. They explain that when relationships conflict, only two movements are available to either partner: to push or pull the door. The Chinese would take a strategy called yielding. If the other party tries to attach or 'push', then Chinese would defend or 'pull' and try not to confront the other party, and vice versa. This is called a complementary response. They warn Western managers that the Chinese may apply war strategies in business. The Chinese are heavily influenced by a book named "The Art of War" by Sun Tzu, who is a Chinese ancient war strategist. According to him, the essence of successful warfare is deception.

Chen and Chen (2004) seek to advance the theory of Guanxi by viewing Guanxi from a dyadic relationship angle, conceptualizing Guanxi in terms of its bases, functional components and the state; and again viewing Guanxi as a dynamic process rather than

a static one. Guanxi bases consist of three types, namely, common social identity, common third party and anticipatory bases, which are different from Wong and Tam's dichotomy of outsider and insider. However, it offers a very important dimension as does Parnell (2005): the affectionate element of Guanxi.

Chen and Chen (2004) also propose another important concept of the quality of Guanxi. While Guanxi bases refer to the foundation of relationship, Guanxi quality assesses the state of the relationship at a given point in time. To determine the predictors for a quality Guanxi they turn to two closely related Chinese concepts, namely *xin* (trust) and *qing* (feeling). Whereas *xin* refers to the trustworthiness of the other Guanxi party, *qing* reflects how well a given Guanxi satisfies the mutual affective and instrumental needs of the parties. Chinese interpersonal trust is sincerity-ability distinction, which corresponds well to the well-established Western distinction of trust in benevolence (good will) versus ability. There are two types of *qing*: *ganqing* (emotion) and *jiaoqing* (exchange interaction). The concept here is not different from the concept of favour, which also includes social/emotional favours and commercial favours.

A third construct proposed by them is *closeness*, which corresponds well with the notion of Guanxi differentiation. Guanxi quality is assessed by the distance between where the Guanxi partner locates in the psychological Guanxi net space and the centre in which the self is located. The more inner circle the Guanxi party is located on, the smaller the psychological distance between the Guanxi partner and the self, and the better the Guanxi quality is. There are three types of Guanxi based on closeness with "self": family ties (kinship) on circle one (inner most circle), familiar persons (e.g. former classmates and colleagues) on circle two (middle circle) and strangers on circle three (outer most circle). (Chen and Chen 2004)

Su and Littlefield (2001) argue that entering Guanxi seems difficult because it seems strange to Western business people. Guanxi emphasizes faith, which is based on personal feelings rather than commercial law to safeguard obligation. Based on the closeness of Guanxi, there are three rules:

- Obligation rule in the *jia-ren* (family member) Guanxi
- Reciprocity rule in the *shou-ren* (familiar and friends) Guanxi
- Instrumentality rule in the *sheng-ren* (stranger or unfamiliar) Guanxi

This typology of Guanxi is similar to what Guo (2001) and Chen and Chen (2004) propose.

Child (1998) claims that low trust prevails within China as a whole. The historical sources of this low trust within Chinese society lie in the capriciousness of imperial rule, the chaos and exploitation which accompanied its periodic breakdown, the lack of clear ownership rights, and the Confucian injunction to place loyalty to one's *family* above that to society. He classifies trust into two categories and notes that the basis for the trust is different within each of these categories. The first comprises the extended family, and to a lesser degree relationships stemming from a common formative experience in home town and school, all of which provide group loyalty and shared identity. This trust is based on blood and upbringing and the foundations of this trust are those of identification and affect. The second category, he continues, is the network, which is based on reciprocity of favours.

Hofstede (1980) argues that organizational cultures are influenced by national cultures. He attempts to replace the names of nations by explicitly defined variables and assumes that every person carries within him or her patterns of thinking, feeling and potential acting which were learned throughout their lifetime. These patterns of thinking, feeling and potential acting are called mental programs by him. The sources of an individual's mental programs lie within the social environments in which the individual grew up and collected their life experiences. A customary term for such mental software is culture. After analyzing the data from more than 40 countries, Hofstede (1991) concludes that these mental programs denote the existence of four underlying value dimensions along which these countries could be positioned into culture areas. The five dimensions provided by Hofstede (1991) are:

1. Power distance
2. Collectivism versus individualism;
3. Femininity versus masculinity;
4. Uncertainty avoidance;
5. Long term orientation

In Hofstede's (1991) empirical work, the Chinese economies ranked highly on power distance, which means that the Chinese are more willing to recognize and accept a hierarchy of authority than their Western counterparts, as well as depending on the decision of their supervisors without questioning (Buttery and Wong 1999). The high power distance or hierarchy in the society is one of the characteristics of Guanxi. It should be included in the Guanxi concept and defined as *"the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. Institutions are the basic elements of society like the family, school and the community; organizations are the places where people work"* (p28).

In the area of collectivism versus individualism the Chinese economies ranked high on collectivism while Western economies tended to rank high on individualism. This proves the argument of some authors (Wong et al 1998; Yau 1988; Hofstede 1980) that the Chinese are more dependent on each other and have group orientation. Hofstede (1980) indicates that the Chinese regard the kinship systems as a basis for relating to others. On the question of masculinity versus femininity the Chinese economies tended to be in the middle of the range while the American and Europeans tended towards masculinity. This means Chinese are more likely to be modest. In Chinese culture, this is translated into harmony and adaptation. (Buttery and Wong 1999)

In uncertainty avoidance, there was a similar view between major Western economies and Chinese economies. In long term orientation the major Chinese economies were at the top of the list compared to the major Western economies which means Chinese plan for the future (Buttery and Wong 1999). Fang (2003) argues that there are a number of drawbacks of Hofstede's fifth dimension. The most fundamental drawback is that it violates the Chinese yin-yang principle by taking one at the cost of another. In the yin-yang principle, values labelled as long-term oriented may not necessarily be so, and values labelled short term oriented may not necessarily be so either.

### 3.3.3. Synthesis

Combining the models and constructs reviewed above, a more holistic model of Guanxi could be developed (Figure 10). The constructs of Guanxi are as follows: Deception/war strategies, Closeness, Hierarchy, Trust, Exchange of information, Mutual cooperation, Reputation/incentive/punishment, Favour exchange, Relationship building, Dependence and Adaptation. Because Guanxi is regarded as a relationship building process, Wong and Tam (2000)'s Guanxi building process model is adopted in this synthesized Guanxi model.

### 3.4. Linking Guanxi with Western Forms of Supply Relational Governance

In this section, the synthesized results of Western forms of supply relational risk management and Guanxi are compared and contrasted. This is in an attempt to answer the fourth review question: What risks can Guanxi cause in the supply relationship management?

Wong (1998) brings TCE, trust and IMP Group's perspectives together and develops a Guanxi model based on them. Although his model captures four main constructs of Guanxi, it misses out some others. However, this way of developing a Guanxi model ignites another idea. Can Guanxi and Western forms of relational risk management be compared? Guanxi is a Chinese method of relationship management. Western forms of supply relational risk management are also a special type of relationship management. It seems that they can be compared. In fact, because of the common nature (both are special types of relationship management), they have similar constructs. The comparison is shown in Figure 10 and Appendix 1.

From the discussion and comparison above, we can conclude that Guanxi is a Chinese approach to relationship management applicable to both commercial and personal relationships. However, Guanxi can be a source of risk itself for Western firms because it is different from Western forms of relationship management. The problem or risk for the Western firms lies in the fact that they do not understand Guanxi and do not know how to practice Guanxi. Because Chinese people have grown up with practicing Guanxi, it is very challenging for a person who has not grown up in such an environment to practice it well.

We can see that Guanxi and Western forms of relational governance have some common constructs while they both include some exclusive ones. A number of risk sources emerge from the comparison and are explained below:

#### ***Risk source one (deception/war strategies)***

Western firms using an arms' length management approach based on opportunism will face a self-fulfilling prophecy in that they will be treated as outsiders and with opportunistic activities by their Chinese suppliers, and even with war strategies combined with yin-yang philosophy. War strategies have been widely applied in business in Asian countries including China, Japan and Korea (Ambler 1994).

### ***Risk source two (affection)***

Firms taking a collaborative approach to relationship management based on trust ignore the affectionate element of Guanxi. These firms therefore may be at risk because they do not understand that they need to build up trust based on affection and may be treated as outsiders. Because of the conservative nature of IMP, firms taking the IMP perspective do not take a proactive attitude to build up trust and guanxi, and may also be treated as outsiders. Parnell (2005) points out that exchange partners in Guanxi have affective and personal involvement in the relationship, resulting in effective commitment. In contrast, relational exchange partners in the West tend to have economic and impersonal involvement which leads to calculative commitment.

### ***Risk source three (family orientation, reputation/incentive/punishment)***

The core of Chinese society is family therefore individual Chinese people are only responsible for their families rather than the society as a whole. That is why it is accepted in Chinese culture to use deception and other war strategies to deal with outsiders (strangers and unfamiliar people), to practice Guanxi with insiders (family or somebody treated as family members), and not to take laws, policies and rules seriously. So the network governance mechanisms have no deterrent effects on the Chinese. Western firms using network governance mechanisms would find there is no network governance in China at all. The reputation/incentive/punishment mechanism in China is confined to the Guanxi network, which is family based while the reputation mechanism in the West is based on the social networks, which represents any group of people or organizations with common values, beliefs and norms.

### ***Risk source four (favour exchange, renqing & mianzi)***

Favour exchanges that take place between members of the Guanxi network are not solely commercial but also social, involving the exchange of renqing (social obligation) and the giving of mianzi (face in the society) in China. The feature makes Guanxi be often named as social capital. In contrast, networking in the West is virtually associated with commercial-based corporate-to-corporate relations. Guanxi is essentially personal and not corporate relations (Luo 1997). Western firms would not get the expected return if they do not appreciate the meaning of renqing and mianzi. That means they will see that no reciprocity exists when dealing with the Chinese. Things will get even worse and they will be treated as outsiders.

### ***Risk source five (closeness & hierarchy)***

Different from Western portfolio management, which is based on power dependence, Guanxi relationships are assessed by the concept of closeness, meaning how close the others are to the self. Western firms using portfolio management to manage their relationships with the Chinese would try to move their power position to a more beneficial one to themselves; for example, from buyer-supplier interdependence to buyer dominance. The Chinese would feel insulted and treat Western firms as outsiders, because the Chinese respect authority. What the Chinese would do is to approach the powerful party from a subordinates' position and not to change the power position which they are in.

### ***Risk source six (trust)***

Trust in China is on a person to person basis, while there also exists an organization level trust. Organization trust is more credible than personal trust from some Westerners' point of view. If Western firms place more trust on the Chinese organization in which the key personnel works, and less trust on that person, then they may be distrusted by the key person they are dealing with.

Chinese people employ defensive mechanisms in the development of relationships, particularly in the early stages of the development, when reciprocal trust is weak. Real trust will not be built up until Guanxi (trust or teaming) is set up. Westerners normally trust somebody based on that person or his or her organization's credit indicating that that person or organization has a good track record of dealing with others.

### ***Risk source seven (relationship building)***

Compared to different routing strategies of the Guanxi building process, Western forms of supply relational risk management are less flexible. The way Westerners do things is to go directly to the point, while Chinese would go for intermediaries, who have good relationships or Guanxi with both parties. The inflexible way of building up relationships would put Western firms doing business in China in trouble because the Chinese are reluctant to deal with people who have no Guanxi with them. Guanxi should be set up through intermediaries.

Nooteboom's (1996) model is used for an analysis of ways to initiate a relationship. However, this way of relationship building seems to be different from the building of Guanxi. The differences lie in that Nooteboom takes a dichotomy of choices between opportunism and trust all the way through to the end of the relationship, while Guanxi's ultimate aim is to build trust. Firms taking Nooteboom's model would be treated as outsiders if Chinese suppliers believe that they will be treated opportunistically.

### ***Risk source eight (control)***

The construct of control is unique to the Western forms of supply relational risk governance. Firms using Das and Teng's (2001b) approach, may still be at risk because control works with the Chinese only if Guanxi has been set up. The contract control does not work with the Chinese at all because the Chinese do not think contracts are as important as relationships. Therefore control may not be as effective as Western firms think it will be because the Chinese will use deceitful tactics to deal with outsiders.

### ***Risk source nine (exchange of information & collaboration)***

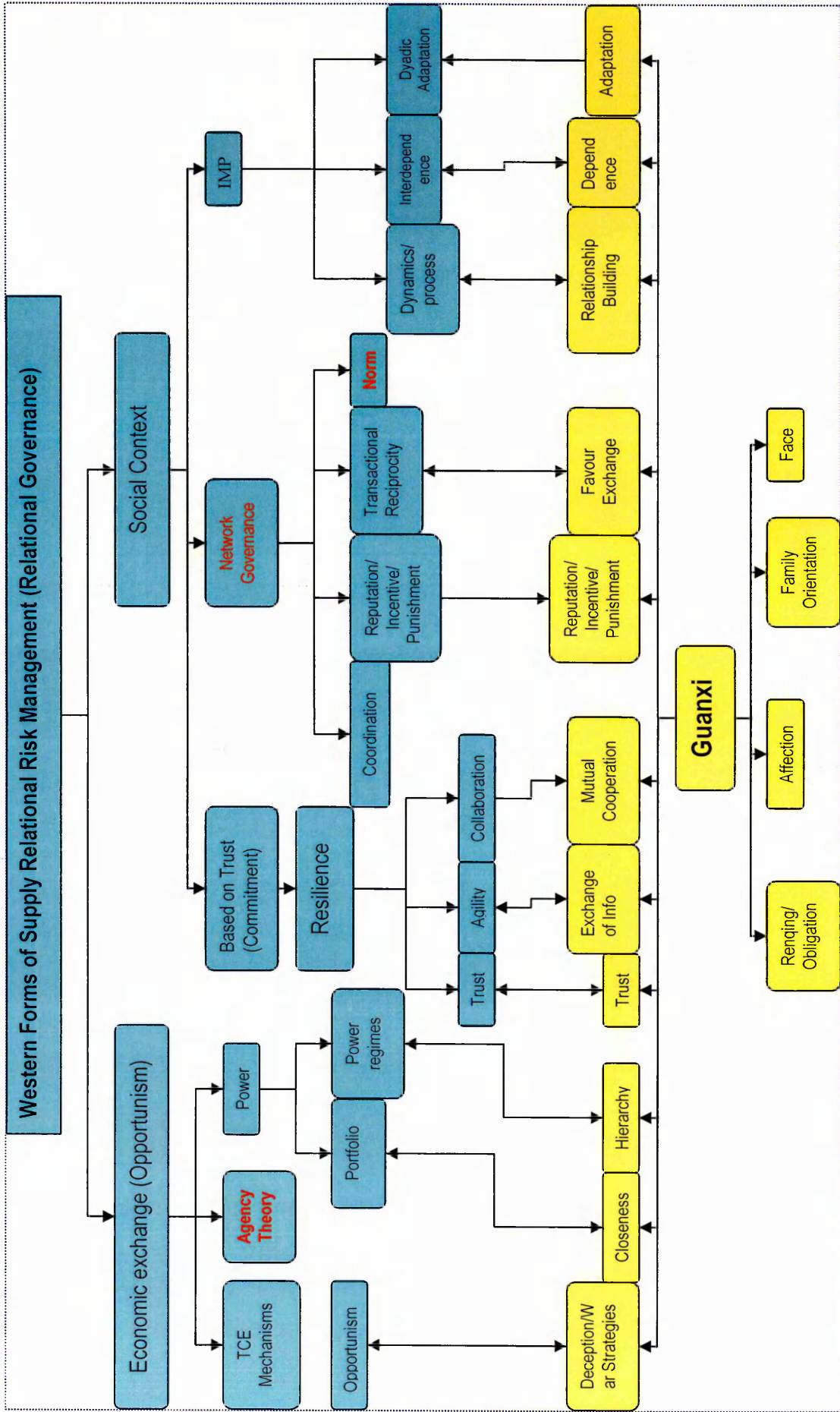
Exchange of information and collaboration in China is confined to a person to person basis. The aim of exchange of information and collaboration is for the benefit of self or his/her family. In the West, exchange of information and collaboration are organizational behaviours. Western firms, who want to communicate and collaborate with Chinese companies effectively, should communicate and collaborate with

individual Chinese staff. If they do not realise this, they will have communication problems.

***Risk source ten (adaptation & interdependence)***

The aim of adaptation and interdependence in China is to maintain the harmony within the Guanxi network, while in the West firms adapt to other firms because they are dependent on, or less powerful than, other firms. They seem to be forced to adapt. With the same thought in mind, if Western firms do not know how to maintain harmony with Chinese firms and try to force Chinese firms to do thing, they would be treated as outsiders.

Figure 10: Comparison of Western Forms of Supply Relational Risk Management and Guanxi



## 4. Discussion

Based on the reflections on how the four review questions are answered, this chapter summarizes what we know based on this review, and indicates what we do not know; therefore research questions can be developed based on what we know and what we do not know.

### 4.1. Areas Known and Unknown

Relating back to the methodology chapter, the four review questions are:

1. What is supply relational risk?
2. What are the Western forms of supply relational risk management?
3. What are Guanxi and its role in relation to supply relational risk?
4. What risks can Guanxi cause in supply relationship management?

The supply relational risk concept is coined by synthesizing the concept of supply risk, supply chain risk and relational risk in strategic alliances. The importance of this concept lies in its extension of relational risk from dyadic level to supply chain level and the addition of the relational dimension to supply risk concept.

Based on literature review, the Western forms of supply relational risk management are grouped into two categories: economic governance and social governance. The six perspectives on supply relational risk management are assigned to the two categories. It is claimed that both economic and social governance should be considered when firms develop their supply relational risk management strategies. Some authors attempt to combine the social and economic governance but their models are less comprehensive than the synthesized one. Each of the six perspectives plays its role in the relational risk management method and should not be ignored. Firms should choose the appropriate ones to develop their own supply relational risk management strategies.

Synthesized from the model of Chen and Chen (2004), Buttery and Wong (1999), Fock and Woo (1998), power distance concept of Hofstede (1980), Strutton and Pelton's (1997) attempt to link war strategies with yin-yang philosophy and Wong and Tam's (2000) context of Chinese relationships, a more holistic Guanxi model is developed. Previous models focus only on one or a limited number of constructs of Guanxi making it difficult to compare with Western forms of relationship management. The synthesized model contains almost all the elements or counterparts of Western forms of relationship management. The missed elements by Guanxi such as control, relational norms and social network governance are unique to Western society while the missing elements by Western forms of supply relational risk management such as renqing, face, affection and family orientation are unique to Chinese culture. The unique elements and the differences between the concepts are the sources of Guanxi related supply relational risk.

The ten Guanxi related risk sources emerging from the comparison between Guanxi and Western forms of supply relational risk management answer the last review question. However they are just assumptions, which need to be tested.

Based on the review and above discussion, what we know are:

- Supply relational risk concept ( a new coined concept)
- Western forms of supply relational risk management (a synthesized model developed)
- Guanxi definition (known from the review) and
- Guanxi constructs (a synthesized model developed)

What we do not know is the differences between Guanxi and Western forms of supply relational risk management. The differences identified from the comparison of the concepts are just assumptions. These assumptions need to be tested through field research. After we know what these Guanxi related risks are, we still do not know how Western managers mitigate Guanxi related supply relational risks. This is another gap in the literature.

Addressing such gaps in the literature and synthesizing the literature, there are a number of theoretical contributions of this research. Based on this review:

- A new and synthesized concept of supply relational risk is coined.
- A synthesized model of Western forms of supply relational risk management has been developed.
- A synthesized model of Guanxi, including both Western and Chinese points of view, has been developed.

This work is the first attempt to look at how Guanxi might influence the supply chain negatively and how firms might manage the Guanxi associated supply relational risks. Some of the Western forms of relationship management may still be appropriate but managers will need to adapt to the Chinese business environment.

This work contributes to the Supply Chain Research Centre's ongoing research on supply chain risk management. Practically, it is anticipated that this research will solve Guanxi related problems facing Western managers sourcing in China and also, to some extent, help Chinese suppliers better understand their Western buyers.

The contributions would add a cultural dimension to supply chain risk management, especially supply relational risk management. Specifically this research will contribute to management research by improving Western managers' understanding of, and providing a lens to looking at the Chinese method of relationship management and the risks associated with it.

## **4.2. Research Questions for PhD**

There are 14 constructs for both Guanxi and the Western forms of supply relational governance, and the relationships between them are complex. It seems that case study research methodology is suitable for constructing knowledge for such complex situations. On the whole, case study methodology is the best way to answer a research question asking "how" (Yin 2003). Supply chain risk management is a new literature and most of the articles I have reviewed so far use case studies including the ones by American authors. Since there is no evidence to date that any author has written on the link between Guanxi and Western forms of supply relational risk management before, the research is exploratory in nature, therefore a case study is justified as the

methodology. The epistemological ground of this research would be social constructivism.

Based on the obvious knowledge gaps identified in the previous section, my PhD research questions are as follows:

- *What are the Guanxi related supply relational risks?*
- *How do Western managers manage Guanxi related supply relational risks?*

The answer to the first question is the basis of the second one, because if one could only identify these Guanxi related risks, she or he would be able to understand the Chinese culture and adapt to Chinese business environment. These adaptations by the Western firms, without losing some of their advanced management technologies, are the mitigating strategies to Guanxi related supply relational risks.

## **5. Conclusion**

This chapter summarizes descriptive findings in chapter 2 and the thematic findings in chapter 3 and presents an overall summary of the findings. Finally the limitations and learning points of the review are presented.

### **5.1. Overall Findings**

This research is based on and developed from the supply chain risk management concept developed at Cranfield University. First of all, a supply relational risk concept is created and from the synthesis of the concepts of supply risk, supply chain risk and relational risk of strategic appliances. Although relationship management becomes more and more important in supply chain management, there is no such concept of supply relational risk so far in the literature.

Secondly, Western forms of supply relational risk management, also named as Western forms of supply relational governance have been identified, and a comprehensive model is developed based on the findings. This literature is multidisciplinary and borrows ideas from wide range of disciplines e.g. sociology, economic sociology, and economics. The fundamental principle behind it is that economic exchanges are socially embedded therefore, it is necessary to take both economic perspectives and sociological perspectives into consideration.

Thirdly, based on different models on Guanxi, a holistic model is developed and its definition is presented. Guanxi is a Chinese method of relationship management. Its uniqueness lies in that it is embedded in the Chinese culture especially and mainly in the culture of Confucianism. In order to understand Guanxi, one has to fully appreciate Confucianism culture.

Finally, a comparison is made between Guanxi and Western forms of supply relational risk management and some interesting findings emerge. Ten Guanxi related risk sources are identified. It seems that these risk sources consist of two types: those from the Guanxi constructs missed out by Western forms of supply relational risk management and others from the different perceptions of the same concepts e.g. trust and adaptation. These ten risk sources are the rationale behind the success and failure of Western firms doing business in China.

Following the reporting of the findings, the research questions are identified. Since such comparison between Guanxi and Western forms of supply relational risk management has not been performed previously, there is an apparent knowledge gap, which is Guanxi related supply relational risk management.

### **5.2. Methodology Appraisal**

The systematic review is a rigorous and evidence based approach of literature review on a specific topic. Setting the scene or boundary of one's topic, one could manage the review explicitly and efficiently. By explicitly, I mean every step is recorded, it is easy for supervisors and panel members to know what the problems are, and for later researchers to understand the research better. By efficiently, I mean that one could save a lot of time and become more focused on the topic.

I find that the identification of the key words and search strings is very important to create a good piece of research. Brainstorming with my panel helps me reduce the bias. For example, besides the supply chain risk mitigating strategies, relationship management literature provides some insights into my research and was ignored by me in the beginning.

This systematic review helps me form consistent criteria and the boundary of the topic for including and excluding papers. When reading the literatures, it is easy for someone to be lost in the sea of it. The only way to get out is to imagine that there is always a lighthouse ahead of you, in this case, the inclusion and exclusion criteria. When going through the process, I always think where my lighthouse is, therefore I do not get lost.

## **5.2. Limitations and Learning Points**

The first limitation of this study is the problem of the scope of the review meaning that even if a comprehensive search has been done; there may still be some missing themes for the Western forms of supply relational risks management due to the diversity of this literature. Resource based view and social exchange theory are two theories possibly missing from this review. Trust comes from social exchange theory and is put under the title of social context but what is the relationship between social exchange theory and social context? Answers to such questions may give me some insights on how trust, as a risk mitigating mechanism, curtails risks. Resource based view is the theory on which the power regimes school is based. It could explain the power relationships and should have been considered.

As I mention above, there are many perspectives on Western supply relational risk management. This makes a universal synthesis of ideas more difficult. The different perspectives in turn make the comparison between Guanxi and Western forms of supply relational risk complex, and therefore limit the generality of the findings. Some of the variables of Western forms of supply relational risks have been ruled out in order to compare with Guanxi.

Secondly because Guanxi and supply chain risk management literatures are quite new, the quality of the papers are sometimes not satisfactory. However the ideas of those papers provide insights into these two areas. That is why some of the papers from practitioner journals are included.

This review helps me define the boundary of my research. The PhD research questions naturally emerged from it. Most of the key papers identified in this review would be carried forward to the first review paper. From this perspective, this review is very efficient and successful in identifying PhD research questions.

For the methodology, I do not have any opportunities to get comments from outside the school. In my PhD research, I would get comments from outside this school, and especially I would get involved in some academic clubs for supply chain risk management and Chinese studies to widen my knowledge.

One of the learning points is that because Western forms of supply relational risk management consists of diverse perspectives from several disciplines, it is very difficult to identify all the keywords to cover such a wide area. Cross references represent another main source of the selected papers. However when some keywords are identified through cross referencing, they would be grouped with others into search strings to search the databases again. One of the examples is the keyword of “relational governance”, which was identified when I cross-referenced a paper. On the contrary, Guanxi is a well defined and focused literature. When I input Guanxi only as a keyword into the databases, I only got more than 100 hits for each database; therefore I could review them quickly.

Another learning point is that setting the boundary is a continuous process of refinement. If some new perspective is found, then the boundary has to be redefined. So before doing the real systematic review, it is definitely worthwhile to take some time to set the boundary. However, this is extremely difficult at the beginning of the review when one has not read much, and has a huge amount of literature facing him or her. At that point, the review panel would be important to help define the areas with their knowledge.

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## Appendix 1: Comparison of Supply Relational Governance & Guanxi

| Supply Relational Governance                                                                                                                                                                                                                                                                                                         | Guanxi                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Common constructs                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                      |
| <b>Opportunism:</b> is defined as self interest seeking with guile (Williamson 1980)                                                                                                                                                                                                                                                 | <b>Deception:</b> mislead opponents by showing false weakness or false strength (Strutton and Pelton 1997)                                                                                                                                                                                                                           |
| <b>Supplier Portfolio Management:</b> is the management of an array of supplier relationships, each having various characteristics and each serving the firm in different ways. (Wagner and Johnson 2004)                                                                                                                            | <b>Closeness:</b> represents the distance where the Guanxi partner locates in the psychological Guanxi net space and the centre in which the self is located. (Chen and Chen 2004)                                                                                                                                                   |
| <b>Power Dependence:</b> implies the mutual dependence between parties implies that each party is in a position, to some degree, to grant or deny, facilitate or hinder the other's gratification. Power resides implicitly in the other's dependency. (Emerson 1962)                                                                | <b>Hierarchy:</b> is the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. (Hofstede 1991)                                                                                                                                         |
| <b>Trust:</b> Some degree of interdependence between trustor and trustee; Trust provides a means of coping with uncertainty in the exchange; Trust is a belief or an expectation that the vulnerability resulting from the acceptance of risk will not be taken advantage of by the other party. Goodwill trust and competence trust | <b>Trust:</b> Chinese people employ defensive mechanisms in the development of relationships. Particularly in the early stages of development, reciprocal trust is weaker. (Wong 1998)<br>There are two categories of trust: 1. extended family trust based on blood; 2. network trust based on reciprocity of favours. (Child 1998) |
| <b>Agility:</b> is the ability to respond rapidly to unpredictable changes in demand or supply. Includes visibility and velocity (Christopher and Peck 2004) Visibility requires exchange of information.                                                                                                                            | <b>Exchange of Information:</b> implies personal exchange of information to get competitive edge and is regarded as a strategic marketing instrument complementary to the Western marketing mix. (Fock and Woo 1998)                                                                                                                 |
| <b>Collaboration:</b> is the underlying principle of collaborative working in the supply chain is that the exchange of information can reduce uncertainty. It also includes collaborative planning, forecasting and replenishment. (Christopher and Peck 2004).                                                                      | <b>Mutual Cooperation:</b> work place cooperation serves the interest of individuals. (Chen and Chen 2004)                                                                                                                                                                                                                           |
| <b>Reputation/incentive/punishment:</b> reputation safeguards exchanges because it relays the detection of and serves to deter deceptive behaviour. Incentive systems serve to encourage good behaviour. Collective sanctions and restricted access to exchanges punish the opportunistic behaviour.                                 | <b>Reputation/incentive/punishment:</b> Chinese are more motivated towards achieving the goal of the extended family or the group that they are affiliated with than with individualised self-fulfilment. The reputation/incentive/punishment system is only effective within the Guanxi network or extended family. (Yau 1988)      |
| <b>Transactional Reciprocity:</b> it works on the principle of reciprocity as a device to mitigate the defects leading to the failure of market and hierarchy. (Park 1996)                                                                                                                                                           | <b>Favour exchange:</b> means reciprocity, based on renqing, is the real dynamic behind the practice of Guanxi. (Parnell 2005)                                                                                                                                                                                                       |
| <b>Dynamics/Process:</b> network processes are dominated by the distribution of power and                                                                                                                                                                                                                                            | <b>Relationship building:</b> There are different routing strategies. Not necessarily following a                                                                                                                                                                                                                                    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| interest structures. Two dialectic processes are competition and cooperation. (Easton 1992)                                                                                                                                                                                                                                                                                                                                                                                                                                           | specific route. Intermediaries could be used to reduce the time taken to reach trust. (Wong 1998)                                                                                                                                                                                                                                            |
| <b>Interdependence:</b> It forms the problem for managers in those markets and largely determines the organization and operation of those companies. It affects the investments, resources relocations, strategies and the processes through which those strategies evolve. (Ford 1998)                                                                                                                                                                                                                                               | <b>Dependence:</b> suggests compromising individual interests and choosing social conformity, non-offensive strategies and submission to social expectations to maintain internal harmony. (Wong 1998)                                                                                                                                       |
| <b>Dyadic Adaptation:</b> is defined as behavioural or organizational modifications at the individual, group or corporate level, carried out by one organization, which are designed to meet the specific needs of one other organization. (Brennan et al 2003)                                                                                                                                                                                                                                                                       | <b>Adaptation:</b> refers to the Chinese willingness to be flexible and adapt to situations within the safety of their Guanxi network and to trust which binds members of the network. The Chinese adapt to others for two purposes: 1. For the benefit of Guanxi network; 2. To maintain harmony with other people. (Buttery and Wong 1999) |
| <b>Exclusive constructs</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                              |
| <b>Control:</b> Outcome-based contract reflects the extent to which purchasing organizations emphasize results. Behaviour-based management effort focuses on process. (Eisenhardt 1989)                                                                                                                                                                                                                                                                                                                                               | <b>Renqing:</b> is a form of social capital that provides leverage in interpersonal exchanges of favours. (Luo 2001) It is the socially accepted pattern of emotional responses in the sense that one takes others' emotional responses into consideration. (So and Walker 2006)                                                             |
| <p><b>Relational norms:</b> are a specific subset of norms relating to the underlying cooperative behavioural domain directed toward maintaining the relationship and curtailing behaviour promoting the goals of the individual parties. (Griffith and Myers 2005)</p> <p><b>Macro-culture:</b> is a system of widely shared assumptions and values, comprising industry-specific occupational or professional knowledge that guide actions and create typical behaviour patterns among independent entities. (Jones et al 1997)</p> | <b>Affection:</b> also called ganqing, refers to the degree of emotional understanding and connection, and the sharing of feelings of happiness and fears alike. Additionally, it refers to a sense of loyalty and solidarity, the willingness to take care of each other under all circumstances. (Chen and Chen 2004)                      |
| <b>Social network governance:</b> involves a select, persistent and structured set of autonomous firms engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges. The contracts are socially, not legally, bonding. (Jones et al 1997)                                                                                                                                                                                    | <b>Family Orientation:</b> Chinese are motivated towards achieving the goal of the extended family or the group that they are affiliated with than with individual self-fulfilment. (Yau 1988)                                                                                                                                               |
| <b>Coordination:</b> in the sense of deep and stable relationships based on group norms, reputation and peer control. (Grandori and Soda 1995)                                                                                                                                                                                                                                                                                                                                                                                        | <b>Face:</b> is intangible form of social currency and personal status, which is affected by one's social position and material wealth. (Luo 2001)                                                                                                                                                                                           |

## Appendix 2: Summaries of Reviewed Articles

| Article/Book chapter | Research category /Method | Location                | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                                                              | Quality  | Source                                                            |
|----------------------|---------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------|
| Tsui et al (2004)    | Theoretical               | China                   | Describe the empirical context of China today, review contemporary research on Chinese management and organizations, and describe the nine papers in this special issue of Organization Science. Recommend that scholars of organizations think deeply about China as a context and consider China as an empirical setting where the boundaries of existing knowledge on organizations can be extended.                                                       | All high | Cross reference/no Guanxi keyword in title or abstracts           |
| Harland et al (2003) | 4 case studies            | Netherlands, USA & U.K. | Provides a review of definitions and classifications of types of risk; a holistic view of risk assessment and management is taken here. A tool is provided and its testing and development in four case studies in the electronics sector is described.                                                                                                                                                                                                       | All high | Keyword search                                                    |
| Mitchell (1995)      | Literature review         | N/A                     | An attempt is made to organize, describe and appraise the current literature with a view to gaining a critical perspective for the benefit of future researchers. The discussion begins with the way managers view risk and factors which affect that perception and then considers the role of various risk reducing strategies employed in the organizational setting.                                                                                      | All high | Cross reference/no supply chain, relationship management keywords |
| Juttner et al (2003) | Case studies              | U.K.                    | Propose a systematic, structured concept of supply chain risk management. The four basic constructs of the supply chain risk management concept are: assessing the <i>risk sources</i> for the supply chain; identifying the risk concept of the supply chain by defining the most relevant <i>risk consequences</i> ; track the <i>risk drivers</i> in the supply chain strategy; and mitigating risks in the supply chain ( <i>mitigating strategies</i> ). | All high | Keyword search                                                    |

| Article/Book chapter     | Research category / Method      | Location     | Summary/findings                                                                                                                                                                                                                                                                    | Quality                                           | Source                                                     |
|--------------------------|---------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------|
| Svensson (2002)          | Mail survey                     | Sweden       | The concept of vulnerability is discussed from time and relationship dependencies meaning that time and relationship dependencies cause uncertainty.                                                                                                                                | Method not explicitly stated<br>Other: high       | Cross references                                           |
| Hallikas et al (2005)    | Empirical/<br>Factor analysis   | Finland      | Explore the differences in risk management and learning across supplier relationships classified through network risks. The exploitation of collaborative risk management and learning is highest among the most strategic supplier relations.                                      | Originality: medium<br>Other: high                | Cross reference/<br>search string grouping problem         |
| Norrman & Jansson (2004) | Case study                      | Sweden       | Propose a proactive supply chain risk management approach through a case study of a serious sub-supplier accident in Ericsson. Their contribution has been to stress the supply chain approach in supply chain risk management as a complement to more purchasing oriented studies. | All high                                          | Cross references/<br>from Juttner et al's (2003) reference |
| Zsidisin et al (2000)    | Multiple case studies           | USA          | Purchasing organizations often create contingency plans, and implement process-improvement and buffer strategies in response to perceived supply risks discovered in assessments.                                                                                                   | Literature: low<br>Methods: medium<br>Other: high | Cross references from Zsidisin (2003a)                     |
| Zsidisin et al (2003a)   | Multiple case studies           | USA          | Building on Zsidisin et al (2000), Harland et al (2003) and 7 case studies, a grounded definition of supply risk is given.                                                                                                                                                          | All high                                          | Keyword search                                             |
| Zsidisin et al (2003b)   | Multiple case studies           | USA          | Supply management professionals perceive risk in terms of item, market and supplier characteristics.                                                                                                                                                                                | All high                                          | Keyword search                                             |
| Das & Teng (1996)        | Theoretical                     | N/A          | Introduce the concepts of relational risk and performance risk. Find that equity alliance is adopted to control relational risk, while non-equity alliance is aimed at minimizing performance risk.                                                                                 | All high                                          | Keyword search                                             |
| Delerue (2004)           | Empirical/<br>statistical tests | Cross Europe | Perception of risk depends on several factors: the degree of relational capital, the structure of the relationship and the degree of asymmetries between partners.                                                                                                                  | Method not explicitly stated<br>Other: high       | Keyword search                                             |

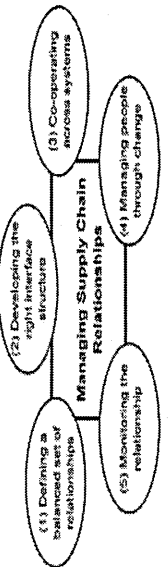
| Article/Book chapter                | Research category / Method            | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Quality                                                                  | Source                                                |
|-------------------------------------|---------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------|
| Holmlund-Rytönen & Strandvik (2005) | Qualitative interviews/repertory grid | Finland  | Introduce the stress as a risk factor, which measure how long and strong the relationship becomes. There exists an optimal stress level in relationships leading to better results than lower and higher stress level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | All high                                                                 | Cross-reference/Stress is not in the keyword list     |
| Jain & Dubey (2005)                 | Theoretical                           | N/A      | Suggest that a governance-based perspective in supply chains and their impact on supply chain performance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Method: medium<br>Contribution: Medium<br>Other: high                    | Cross-reference/no search string as SC AND Governance |
| Grandori (2006)                     | Theoretical                           | N/A      | Governance (RG) is the concept of relational contracting, which refers to the completion of incomplete obligation contingent contracting through extra-contractual social and relational means. RG has been related to uncertainty, either of environmental, task (problem-solving intensity) or behavioural (unpredictable strategies of other actors) origin.                                                                                                                                                                                                                                                                                                                                                                                                                      | Contribution: high<br>Other: low<br><br>Grandori is a guru in sociology. | Keyword search                                        |
| Williamson (1985) Book chapter      | Theoretical                           | N/A      | TCE (Transaction Cost Economics) focuses on economic institutions of capitalism, with reference to firms, markets and relational contracting. Opportunism and bounded rationality are two behavioural assumptions of TCE. There are two kinds of opportunism <i>ex ante</i> and <i>ex post</i> , recognized in the insurance literature under the heading of adverse selection and moral hazard. The rationality is bounded or limited because of information asymmetry between exchange parties. There are mainly three governance structures according to TCE: market, hierarchy and hybrid. Market governance is the main governance structure for non-specific transactions. When cost of production exceeds the cost of market exchange, market governance would be considered. | All high                                                                 | Cross-reference: seminal economic book.               |

| Article/Book chapter     | Research category / Method                                      | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                 | Quality  | Source                                                                                              |
|--------------------------|-----------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------|
| Wathne & Heide (2000)    | Theoretical                                                     | N/A      | Classify opportunism into: Blatant opportunism and lawful opportunism under relational contracting. Blatant opportunism is a strong form of opportunism and the failure to honour a contract. Therefore the lawful opportunism is used to describe violations that do not pertain to a formal contract                                                                                                           | All high | Cross-reference/search string problem; cannot catch all literature due to the diversity of the area |
| Ghoshal & Moran (1996)   | Theoretical                                                     | N/A      | Learning and trust may well take the place that efficiency and opportunism occupy and criticize TCE that the assumption of opportunism can become a self-fulfilling prophecy whereby opportunistic behaviour will increase with sanctions and incentives imposed to curtail it, thus creating the need for even stronger and more elaborate sanctions and incentives.                                            | All high | Panel Recommendation                                                                                |
| Eisenhardt (1989)        | Theoretical                                                     | N/A      | The theory has developed along 2 lines: positivist and principal-agent. Principal-agent researchers are concerned with a general theory of the principal-agent relationship. The management of risk can be categorized by outcome and behaviour-based contract. Outcome-based contract reflects the extent that purchasing organizations emphasize results. Behaviour-based management effort focuses on process | All high | Panel Recommendation                                                                                |
| Zsidisin & Elfram (2003) | Survey and questionnaire / factor analysis, regression analysis | USA      | Uses the framework of agency theory in managing supplier behaviours as a means to reduce supply risk and the impact of detrimental events and propose several behaviour-based management techniques reducing supply risk.                                                                                                                                                                                        | All high | Keyword search                                                                                      |

| Article/Book chapter    | Research category / Method                           | Location          | Summary/findings                                                                                                                                                                                                                                                                                                                                   | Quality                    | Source                                                       |
|-------------------------|------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------|
| Emerson (1962)          | Theoretical                                          | N/A               | Power resides implicitly in the other's dependency. The notion of reciprocity in power-dependency relations raises the question of equality or inequality of power in the relationship.                                                                                                                                                            | All high                   | Cross-reference/search string cannot cover the diverse areas |
| Wagner & Johnson (2004) | Multiple case studies                                | Cross world/ MNC  | Acknowledge that not all supplier relationships should be close partnerships, this article explores the development of strategic supplier portfolios. The strategic portfolio perspective considers risks, trade-offs, and interdependencies between the firm's array of supplier relationships.                                                   | All high                   | Cross-reference/search string cannot cover the diverse areas |
| Kraljic (1983)          | Theoretical                                          | N/A               | First pressed for movement from purchase management to supplier portfolio management. He proposes a four-stage approach to devise strategies.                                                                                                                                                                                                      | Method: low<br>Other: high | Cross-reference/search string cannot cover the diverse areas |
| Bensaou (1999)          | Theoretical                                          | N/A               | Offers a portfolio management in terms of degree of specific investments of both buyer and supplier.                                                                                                                                                                                                                                               | All high                   | Cross-reference/search string cannot cover the diverse areas |
| Dyer et al (1998)       | Comparative case studies/comp are automaker industry | USA/ Japan/ Korea | Point out executives should strategically segment their suppliers into strategic partners and durable arm's length suppliers in order to allocate different levels of resources to each group.                                                                                                                                                     | All high                   | Cross-reference/search string cannot cover the diverse areas |
| Cox (2004)              | Multiple case studies                                | U.K.              | Their relationship management philosophy is "appropriateness", which means that in order to be successful or manage relationships well, three things must be in place: An understanding of the power and leverage environments within which the relationships must be managed; a range of sourcing options and the relationship management styles. | All high                   | Panel Recommendation                                         |

| Article/<br>Book<br>chapter         | Research<br>category /<br>Method             | Location      | Summary/findings                                                                                                                                                                                                                                                                                                                                                                       | Quality  | Source                  |
|-------------------------------------|----------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------|
| Cox et al<br>(2000) Book<br>chapter | Multiple case<br>studies                     | U.K.          | There are four power positions: supplier dominance, buyer dominance, buyer-supplier interdependence and independence                                                                                                                                                                                                                                                                   | All high | Panel<br>Recommendation |
| Larson<br>(1992)                    | 7 Case<br>studies plus<br>grounded<br>theory | USA           | The social dimensions of the transactions are central in explaining control and coordination in the exchange structures. A process model of network formation is presented that highlights the importance of reputation, trust, reciprocity, and mutual interdependence. The network form is proposed as an alternative to vertical integration for high-growth entrepreneurial firms. | All high | Keyword search          |
| Lane (1998)<br>Book chapter         | Theoretical                                  | N/A           | Some degree of interdependence between trustor and trustee. Trust provides a means of coping with uncertainty in the exchange and is a belief that the vulnerability resulting from the acceptance of risk will not be taken advantage of by the other party.                                                                                                                          | All high | Cross-reference         |
| Das & Teng<br>(2001b)               | Theoretical                                  | N/A           | Proposes a comprehensive and integrated framework of the 3 constructs in the context of strategic alliances, contending that trust and control are the 2 principal antecedents of risk.                                                                                                                                                                                                | All high | Keyword search          |
| Nooteboom<br>(1996)                 | Modelling./si<br>mulation                    | N/A           | A process and control model is developed for the analysis and design of inter-firm relations, in which both opportunism and trust play a role. A partner's incentives toward opportunism depend on the uniqueness of the value that he offers, on one's own switching costs and on the partner's dependence on the relation.                                                           | All high | Keyword search          |
| Sako (1992)                         | Multiple case<br>studies                     | U.K/<br>Japan | Differentiate between <i>contractual trust</i> , <i>competence trust</i> and <i>goodwill trust</i> . Contractual trust rests on the moral of honesty. Competence trust is based on the expectation that the trading partner will perform its role competently. Good will trust is described as the willingness of the exchange partner to do more than they are expected.              | All high | Cross-reference         |

| Article/Book chapter      | Research category / Method        | Location | Summary/findings                                                                                                                                                                                                                                                                                             | Quality  | Source                                                     |
|---------------------------|-----------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------|
| Cousins & Crone (2003)    | Phenomenography                   | U.K      | While a good working relationship was essential, this should not be taken too far into friendship. Personal trust was regarded as highly important and included characteristics such as integrity and open communication. Dependency was a key driver for setting up and maintaining strategic relationships | All high | Keyword search                                             |
| Arino et al (2005)        | Theoretical                       | N/A      | Challenge the misuse of trust in inter-organizational level and ascribe to the view that trust is an interpersonal phenomenon. They instead propose the concept of relational quality as an alternative construct to the notion of inter-organizational trust.                                               | All high | Cross-reference/miss "relational quality" in keywords list |
| Sako (1998) Book chapter  | Theoretical                       | N/A      | Relating trust to business performance. <ul style="list-style-type: none"> <li>• Reducing transaction costs,</li> <li>• Investment with future returns, and</li> <li>• Continuous improvement and learning</li> </ul>                                                                                        | All high | Cross-reference                                            |
| Sheffi & Rice (2005)      | Multiple case studies             | USA      | Sheffi and Rice (2005) introduce the idea of resilient enterprise and claim that in any company's supply chain, material flows from supplier through a conversion process through distribution channels and is controlled by various systems, all working in the context of the corporate culture            | All high | Keyword search                                             |
| Christopher & Peck (2004) | Theoretical                       | N/A      | There are several principles about the resilience of supply chain according to: High level of collaboration, Agility and the creation of risk management culture                                                                                                                                             | All high | Keyword search                                             |
| Goffin et al (2006)       | In-depth interview/repertory grid | Germany  | Partnership-like relationships are context dependent rather than being an absolute concept. The degree of closeness offers a way to both explore and explain relationships. Closeness has been widely identified as an important characteristic of relationships.                                            | All high | Keyword search                                             |

| Article/Book chapter                     | Research category / Method | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                             | Quality                                                 | Source                      |
|------------------------------------------|----------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------|
| Elram (1991)                             | 6 case studies             | USA      | A supplier partnership differs from traditional supplier relationships in that it involves an inherent trust, as well as a mutual commitment and sharing. Provide definition of purchasing partnership                                                                                                                                                                                                       | Methods not clearly stated.<br>Other: high              | Keyword search              |
| Zsidisin & Smith (2005)                  | Rolls-Royce case study     | U.K      | Supplier management may be dominated by outcome-based approaches at first, particularly with respect to cost cutting and then develop toward a behaviour-based orientation after the supplier selection decisions is made within the Early Supplier Involvement (ESI) process.                                                                                                                               | Contribution: medium<br>Other: high                     | Keyword search              |
| Christopher & lee (2004)                 | Theoretical                | N/A      | Develop a model of the risk spiral to explain the mechanism of the relational risk associated with cooperation.<br>Confidence in a supply chain is weakened when end-to-end pipeline is long. Associated with pipeline length is the lack of visibility within the pipeline. In addition to visibility and velocity, supply chain confidence requires the ability to take control of supply chain operations | All high                                                | Keyword search              |
| Wilding (2003)                           | Theoretical                | N/A      | Proposes the 3 Ts of highly effective supply chains. Besides visibility and velocity (labelled as Time and Transparency), a third concept is introduced: Trust, which is explicitly explained as an element of resilient supply chain.                                                                                                                                                                       | Literature: low<br>Other : medium<br>Contribution: high | Panel<br>Recomm<br>endation |
| Christopher et al (2002)<br>Book chapter | Theoretical                | N/A      | Competition has shifted from single firm based to supply network. What makes supply chain unique is the way the relationships are managed. "In this sense, a major source of differentiation comes from the quality of relationships that one business enjoys compared to its competitors                                                                                                                    | All high                                                | Panel<br>Recomm<br>endation |
| Christopher & Juttner (2000)             | Multiple case studies      | U.K      |  <p>a relationship management framework</p>                                                                                                                                                                                                                                                                              | Methods: not clearly stated<br>Other: high              | Panel<br>Recomm<br>endation |

| Article/Book chapter   | Research category / Method | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                            | Quality                        | Source                                                       |
|------------------------|----------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------|
| Zineldin (2004)        | Theoretical                | N/A      | Proposes the concept of TRM (Total Relationship Management) and argues that the challenge of TRM is how to coordinate the different internal and external parts of a business in an efficient and flexible manner. The main philosophy behind TRM approach is to facilitate, create, develop, enhance, and continuously improve appropriate internal and external relationships with customers, employees and collaborators | All high                       | Keyword search                                               |
| Gadde & Snehota (2000) | Theoretical                | N/A      | The degree of involvement with suppliers affects the economic consequences of supplier relationships. It is necessary to monitor and modify posture (low and high involvement) if the situation changes. The criteria of changing are to see whether the benefit got from the kind of involvement is higher or lower than the investment cost.                                                                              | Methods: low<br>Other: high    | Keyword search                                               |
| Coutu (2002)           | Theoretical                | N/A      | Propose three characteristics, which are keys to be a resilient organization. First resilient organizations have a staunch acceptance of reality. Second resilient organizations seek meanings for what they do and possess strong value systems.                                                                                                                                                                           | Literature: low<br>Other: high | Cross reference                                              |
| Granovetter (1985)     | Theoretical                | N/A      | Proposes his idea that economic behaviours are socially embedded. He criticizes sociologists' view as "seeing the economy as an increasingly separate differentiated sphere in modern society, with economic transactions defined no longer by the social or kinship obligations of those transacting but by rational calculations of individual gains                                                                      | All high                       | Cross-reference/s each string cannot cover the divers areas  |
| Granovetter (1992)     | Theoretical                | N/A      | Criticizes New Institutional Economics especially TCE's stance that firms emerge when needed to reduce transaction costs and claims that they are constructed by individuals whose action is both facilitated and constructed by the structure and resources available in social networks in which they are embedded.                                                                                                       | All high                       | Cross-reference/s each string cannot cover the diverse areas |

| Article/Book chapter    | Research category / Method                                | Location   | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quality  | Source                                         |
|-------------------------|-----------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------|
| Jones et al (1997)      | Theoretical                                               | N/A        | Synthesize TCE and network theory resolving the vague specification of network governance and adding social dimension to TCE. Four network governance mechanisms are provided in response to exchange conditions.                                                                                                                                                                                                                                                                                                                                                                               | All high | Panel Recommendation                           |
| Granovetter (2005)      | Theoretical                                               | N/A        | Proposes that three main reasons that social networks affect economic outcomes: First social networks affect the flow and the quality of information; second social networks are an important source of reward and punishment; and third <i>trust</i> emerges in the context of a social network.                                                                                                                                                                                                                                                                                               | All high | Panel Recommendation                           |
| Park (1996)             | Theoretical                                               | N/A        | Argues that the inter-firm network appears as alternative governance to markets and hierarchies, while maintaining the benefits of both governance structures and explains that the network is a governance structure based on <i>transactional reciprocity</i>                                                                                                                                                                                                                                                                                                                                 | All high | Cross-reference/miss keyword "network control" |
| Griffith & Myers (2005) | Mail survey (sample size 92)/factor & regression analysis | Japan/ USA | Strategic fit of organizational relational <i>norms</i> in global supply chain relationships is becoming increasingly important as managers and academic examine the effectiveness of culturally founded relational governance strategies.                                                                                                                                                                                                                                                                                                                                                      | All high | Keyword search                                 |
| Grandori & Soda (1995)  | Theoretical                                               | N/A        | The most comprehensive review on inter-firm networks and identifies the antecedents of network formation and organizational coordination mechanisms sustaining and regulating inter-firm cooperation. The ten network mechanisms: Communication, decision and negotiation mechanisms, Social <i>coordination</i> and control, Integration and linking-pin roles and units, Common staff (staff involved in the cooperation), Hierarchy and authority relations, Planning and control systems<br><i>Incentive system</i> , Selection system, Information systems and, Public and infrastructure. | All high | Keyword search                                 |

| Article/Book chapter             | Research category / Method | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Quality  | Source                                                       |
|----------------------------------|----------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------|
| Calton & Lad (1995)              | Theoretical                | N/A      | Social contracting can best be understood and applied in organizational settings if it is perceived and treated as a network governance process. They explain further that social contracting within network is, essentially, an interactive, participant-driven, developmental trust-building process                                                                                                                                                                                                                                                                                       | All high | Keyword search                                               |
| Hakansson (1982)<br>Book chapter | Theoretical                | N/A      | The interaction process is influenced by the characteristics of the organizations and individuals involved. Interactions take place within an environment consisting of the vertical and horizontal market structure and general social influences. The interaction is conditioned by the relative power position of the parties to the interaction. At the same time, both conflicts and cooperation can characterize these relationships. This means that it is possible for a company to have a collaborative relationship and conflicts. Atmosphere is a product of these relationships. | All high | Cross-reference                                              |
| Ford (1998)<br>Book chapter      | Theoretical                | N/A      | Explains how companies relate to each other and proposes some important constructs of the relationship: Learning, adaptation, trust and distance. Also explain the stages of relationship building.                                                                                                                                                                                                                                                                                                                                                                                          | All high | Cross-reference                                              |
| Turnbull et al (1996)            | Theoretical                | N/A      | Do a comprehensive review on IMP group perspectives. One of themes they reiterate is the reviewing of relationship as a <i>portfolio</i> . Firms manage a portfolio of relationship based on their network level of position and power dependence. Network position is the basis of a company's reputation, rights, limitations on behaviour and obligations in the network.                                                                                                                                                                                                                 | All high | Cross-reference/search string cannot cover the diverse areas |
| Brennan et al (2003)             | Case studies & mail survey | U.K      | Provides evidence in support of the social exchange framework, emphasizing mutual adaptations as a component of the trust-building process, and unilateral adaptations as a response to power imbalances within the relationship.                                                                                                                                                                                                                                                                                                                                                            | All high | Keyword search                                               |

| Article/Book chapter          | Research category / Method      | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                           | Quality                                              | Source          |
|-------------------------------|---------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------|
| Easton (1992)<br>Book chapter | Theoretical                     | N/A      | Explains that new relationships are formed and old ones disappear. Evolution is the main mode; revolution is possible but unusual. Network inertia and interdependencies slow and shape the changes. Thus networks do not have lifecycle. Industrial systems exist to create product and services. Innovation is a major force in networks and renders network structure change.                                           | All high                                             | Cross-reference |
| Dwyer et al (1987)            | Theoretical                     | N/A      | Propose a <i>relationship development process model</i> . According to them, relationships evolve through five general phases identified as awareness, exploration, expansion, commitment and dissolution                                                                                                                                                                                                                  | All high                                             | Keyword search  |
| Fynes et al (2005)            | Mail survey/fact or analysis    | Ireland  | Propose a conceptual framework which posits that initial activity in relationship development was communication. As communication grows in terms of frequency and intensity, trust develops which in turn leads to increased co-operation and adaptation. From a managerial perspective, they also propose that firms need to identify at what stage they are at in terms of relationship development and act accordingly. | All high                                             | Keyword search  |
| Zaheer and Venkatraman (1995) | Mail survey/regression analysis | USA      | Integrate economic and sociological perspectives to explain the determinants of relational governance. The determinants of the economic perspective represented by TCE are: the degree of transaction-specific assets, the level of uncertainty and the extent of reciprocal investment.                                                                                                                                   | All high                                             | Keyword search  |
| Heide (1994)                  | Mail survey/fact or analysis    | USA      | Proposes a governance typology of market and non-market forms of governance. Explain non-market governance is a heterogeneous syndrome. One of non-market governance is an authority structure. Then he introduces the social control as the third form of governance. He claims that the trichotomy delineates a conceptual sense of forms that inter-firm governance can take.                                           | All high except that methodology is in another paper | Keyword search  |

| Article/Book chapter        | Research category / Method | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Quality  | Source          |
|-----------------------------|----------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| Yang (1994)<br>Book chapter | Theoretical                | China    | <i>Guanxiue (guanxiology)</i> is describes as the art of personal relationships or art of Guanxi. Guanxiue concerns with the tactics of Guanxi construction and cultivation.                                                                                                                                                                                                                                                                                                                                                                                                                                                              | All high | Cross-reference |
| Luo (1997)                  | Theoretical                | China    | Guanxi (connection) is one of the major dynamics in the Chinese society where business behavior revolves around Guanxi. Characteristics: transferable, reciprocal, intangible, utilitarian and personal. Guanxi roots in Confucianism philosophy.                                                                                                                                                                                                                                                                                                                                                                                         | All high | Keyword search  |
| Yau (1988)                  | Theoretical                | China    | Chinese cultural values may find it amazing that Chinese values have formed a clear and consistent system for generations. Five orientation of Chinese cultural values: Man-man, man-himself, relational, time and personal activity.                                                                                                                                                                                                                                                                                                                                                                                                     | All high | Keyword search  |
| Wong et al (1998)           | Theoretical                | China    | The major force in Chinese culture, despite her communist political system, is Confucianism. Confucianism is a way of living, incorporating the principles of humanism and the notion of filial piety. It also mentions the five cardinal relations, harmony and Neo-Confucianism's Principle of universal truth, order, law, production and reproduction. It assesses the implications of social inequality, social ritual, familism, guan xi (connections), face, and mutual trust for foreign firms. The paper then concludes that foreign firms wishing to do businesses with China need to understand the labyrinth of Confucianism. | All high | Keyword search  |
| Buttery & Wong (1999)       | Theoretical                | China    | The building of interpersonal relationships, or Guanxi as it is known in Chinese economies, is examined. Guanxi is a particular form of relationship in the Chinese culture and underpins much of the business carried out in the Chinese economy. Four constructs: Dependence, Adaptation, trust and favour                                                                                                                                                                                                                                                                                                                              | All high | Keyword search  |

| Article/Book chapter              | Research category / Method          | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Quality  | Source         |
|-----------------------------------|-------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|
| Gold et al (2002)<br>Book chapter | Theoretical                         | China    | Claims that the very basis of a Chinese person understands of the world is the web of relationship in which he is embedded, a fact that naturalizes the manipulation of the relationships to accomplish tasks.                                                                                                                                                                                                                                                                                                                                                      | All high | Keyword search |
| Parnell (2005)                    | Theoretical                         | China    | Guanxi as interpersonal, inter-group exchange or interaction. It is seen as a complex, multifaceted, socio-cultural phenomenon which is difficult to conceptualize. Yet he reckons that Guanxi networks are by definition informal. If they are made formal and explicit, then this unofficial entity will immediately become dysfunctional.                                                                                                                                                                                                                        | All high | Keyword search |
| Guo (2001)                        | Theoretical                         | China    | From a political point of view, proposes a four-dimension Guanxi model. The four dimensions of Guanxi are: Instrumental, Etiquette, Moral & Emotional dimension.                                                                                                                                                                                                                                                                                                                                                                                                    | All high | Keyword search |
| Park & Luo (2001)                 | Mail survey/<br>Regression analysis | China    | Chinese society has been functioning as a clan-like network since Confucius codified societal rules, values, and hierarchical structures of authority during the sixth century BC. Chinese society places great stock on the importance of face ( <i>mianzi</i> ). Mianzi is an intangible form of social currency and personal status, which is affected by one's social position and material wealth. <i>Renqing</i> is another Chinese philosophy related to Guanxi. It is a form of social capital that provides leverage in interpersonal exchanges of favour. | All high | Keyword search |
| So & Walker (2006)                | Theoretical                         | China    | Guanxi will gradually fall in importance and that there will be gradual development in the legal structure in China to allow an alternative to emerge for reducing transaction costs in business operation.                                                                                                                                                                                                                                                                                                                                                         | All high | Keyword search |

| Article/Book chapter | Research category / Method              | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Quality  | Source         |
|----------------------|-----------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|
| Leung et al (1995)   | Questionnaire and focus group interview | China    | Use the interaction process elements within the IMP group Interaction Approach together with distinct Chinese cultural factors to explain the relationship building process in the Peoples Republic of China (PRC) market. In addition, the adaptation process is also investigated. Findings indicate that the "Guanxi" relationship or the "Old Friend" approach is of paramount importance in the relationship marketing strategy to the PRC. A "G.A.I.O." framework is proposed to help marketers to build up the "Guanxi" relationship with their prospective counterparts in the PRC.                                                                                                                                              | All high | Keyword search |
| Fock & Woo (1998)    | Mail survey/ cluster analysis           | China    | Identify characteristics of Guanxi perceived by Hong Kong business executives. Ranked according to importance, they are; <i>Personal relationship, Mutual co-operation, Trust, Exchange of Favours/benefits, Exchange of information, Giving 'face' (respect), Social activities &amp; entertainment and Commitment.</i>                                                                                                                                                                                                                                                                                                                                                                                                                 | All high | Keyword search |
| Fan (2002)           | Theoretical                             | China    | Examines the ethical dimension of Guanxi by focusing on the consequences of Guanxi in business, from ethically misgiving behaviour to outright corruption. Guanxi may bring benefits to individuals as well as the organizations they represent but these benefits are obtained at the expenses of other individuals or firms and thus detrimental to the society. As Guanxi has an impact on the wider public other than the Guanxi parties, it must be studied in the context of all stakeholders. It can be argued that Guanxi is an inevitable evil under the current political and socio-economic systems in China. Its role and importance in business life will be diminished as the country moves towards an open market system. | All high | Keyword search |
| Wong & Tam (2000)    | Case study                              | China    | Explain the context of Chinese relationship and also emphasize that Guanxi is a dynamic process The process starts from Guanxi perceptual positioning then Guanxi routing strategies to implementation of Guanxi. Guanxi positioning illustrates the type of relationship in the insider/outsider dichotomy.                                                                                                                                                                                                                                                                                                                                                                                                                             | All high | Keyword search |

| Article/Book chapter      | Research category / Method      | Location    | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                      | Quality  | Source         |
|---------------------------|---------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|
| Strutton & Pelton (1997)  | Theoretical                     | China       | Link war strategies with yin-yang philosophy and explain that when relationships conflict, only two movements are available to either partner: to push or pull the door. Chinese would take a strategy called yielding. If the other party tries to attach or push, then Chinese would defend or pull and try not to confront the other party and vice versa. This is called complementary responses. | All high | Keyword search |
| Chen & Chen (2004)        | Theoretical                     | China       | Guanxi (personal connection) has been identified as a necessary condition to do business successfully in China. This paper seeks a clear conceptual understanding of this prevalent construct and proposes a three-stage model of Guanxi development so as to stimulate systematic research in this area.                                                                                             | All high | Keyword search |
| Su & Littlefield (2001)   | Theoretical                     | China       | Entering Guanxi seems difficult because it seems strange to Western business people. There are three rules: Obligation rule in the jia-ren (family member) Guanxi, Reciprocity rule in the shou-ren (familiar and friends) Guanxi, Instrumentality rule in the sheng-ren (stranger or unfamiliar) Guanxi                                                                                              | All high | Keyword search |
| Child (1998) Book chapter | Theoretical                     | China       | The historical sources of this low trust within Chinese society lie in the capriciousness of imperial rule, the chaos and exploitation which accompanied its periodic breakdown, the lack of clear ownership rights, and the Confucian injunction to place loyalty to one's <i>family</i> above that to society.                                                                                      | All high | Keyword search |
| Hofstede (1980)           | Questionnaire/ cluster analysis | Cross world | The mental programs denote the existence of four underlying value dimensions along which these countries could be positioned into culture areas: Power distance, Collectivism versus individualism; Femininity versus masculinity and Uncertainty avoidance.                                                                                                                                          | All high | Keyword search |

| Article/<br>Book chapter | Research<br>category /<br>Method   | Location | Summary/findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Quality  | Source         |
|--------------------------|------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|
| Fang (2003)              | Theoretical                        | China    | There are a number of drawbacks of Hofstede's fifth dimension. The most fundamental drawback is that it violates the Chinese yin-yang principle by taking one at the cost of another. In yin-yang principle, values labelled as long-term oriented may not necessarily be so and values labelled short term oriented may not necessarily be so either.                                                                                                                                                                                                                                                                                                                                                                      | All high | Keyword search |
| Ambler (1994)            | Theoretical                        | China    | From a managerial viewpoint, there are 3 ways of thinking about, or paradigms of, marketing - neo-classical, conflict, and relational. The Chinese believe that one should build the relationship and, if successful, transactions will follow. Westerners build transactions and, if they are successful, a relationship will follow. This difference underlies many joint venture negotiating failures. Chinese negotiators use time more consciously than their Western counterparts. The commercial legal system can be seen as a counterpart of Guanxi. Guanxi recognizes that, for many businesses, the life-time value of a well treated customer and his good opinion far exceeds any single transactional benefit. | All high | Keyword search |
| Wong (1998)              | Questionnaire/Correlation analysis | China    | There has been increasing interest in understanding the importance of relationships, particularly in Chinese behaviour. The topic of Guanxi has attracted attention. Guanxi is defined as "friendship with implications of a continual exchange of favours." Some businesspeople have viewed the Guanxi phenomenon as simply an emotional desire for the pursuit of personal interest, or as an "under-table" type of corrupt behaviour.                                                                                                                                                                                                                                                                                    | All high | Keyword search |

### Appendix 3: List of Excluded Articles after Applying Quality Criteria and Reading Full Text and Reasons (4 Exclusion Criteria and 5 Quality Criteria)

| Excluded Articles                                                                                                                                                                                                                                                            | Reason  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Arias, Jose Tomas Gomez. (1998) A relationship marketing approach to Guanxi. <i>European Journal of Marketing</i> 32(1/2), 145.                                                                                                                                              | E2 Q5   |
| Bakkeland, Gunnar and Berthon, Pierre R. (1997) The buyer's perspective on transaction costs and relational norms in the distribution channel: Propositions for research. <i>Management Research News</i> 20(5), 1.                                                          | E4 Q1   |
| Blackhurst, J, Craighead, C W, Elkins, D, and Handfield, R B. (2005) An empirically derived agenda of critical research issues for managing supply-chain disruptions. <i>International Journal of Production Research</i> 43(19), 4067.                                      | Q1      |
| Cavinato, Joseph L. (2004) Supply chain logistics risks; From the back room to the board room. <i>International Journal of Physical Distribution &amp; Logistics Management</i> 34(5), 383.                                                                                  | E3 Q1,2 |
| Chen, Chen and Godkin, Lynn.(2001) Mianzi, Guanxi and Western prospects in China. <i>International Journal of Management</i> 18(2), 139.                                                                                                                                     | E1 Q1,2 |
| Chopra, Sunil and Sodhi, ManMohan S. (2004) Managing Risk to Avoid Supply-Chain Breakdown. <i>MIT Sloan Management Review</i> 46(1), 53-62.                                                                                                                                  | Q4      |
| Christopher, Martin and Towill, Denis. (2001) An integrated model for the design of agile supply chains. <i>International Journal of Physical Distribution &amp; Logistics Management</i> 31(4), 235.                                                                        | E1      |
| Claro, Danny Pimentel, Hagelaar, Geoffrey, and Omta, Onno. (2003) The Determinants of Relational Governance and Performance: How to Manage Business Relationships? <i>Industrial Marketing Management</i> 32(8), 703.                                                        | E3 Q2   |
| Cousins, Paul D and Stanwix, Euan.(2001) It's only a matter of confidence! A comparison of relationship management between Japanese- and UK non-Japanese-owned vehicle manufacturers. <i>International Journal of Operations &amp; Production Management</i> 21(9/10), 1160. | E4 Q5   |
| Cross, Rob, Liedtka, Jeanne, and Weiss, Leigh. (2005) A Practical Guide to Social Networks. <i>Harvard Business Review</i> 83(3), 124.                                                                                                                                       | E3 Q5   |
| Delerue, Helene. (2005) Relational risk perception and alliance management in French biotechnology SMEs. <i>European Business Review</i> 17(6), 532.                                                                                                                         | Q1,2    |
| Fan, Ying. (2002) Guanxi's consequences: Personal gains at social cost. <i>Journal of Business Ethics</i> 38(4), 371.                                                                                                                                                        | E2 Q5   |

- Ganesan, Shankar. (1994) Determinants of long-term orientation in buyer-seller relationships. *Journal of Marketing*. 58(2), 1. E3 Q5
- Geary, S., Childerhouse, P., and Towill, D. (2004) Uncertainty and the Seamless Supply Chain. *Supply Chain Management Review* 6(4), 52. E3 Q2
- Giunipero, Larry C and Eltantawy, Reham Aly. (2004) Securing the upstream supply chain: a risk management approach. *International Journal of Physical Distribution & Logistics Management* 34(9), 698. E4 Q5
- Hallikas, Jukka, Karvonen, Iris, Pulkkinen, Urho , Virolainen, Veli-Matti, and Tuominen, Markku.(2004) *Risk management processes in supplier networks*. International Journal of Production Economics 90(1), 47. E4 Q1
- Hamel, Gary and Valiikangas, Liisa. (2003) The Quest for Resilience. (Cover story). *Harvard Business Review* 81(9), 52-63. E3 Q2
- Hammond, Scott C. and Glenn, Lowell M. (2004) The ancient practice of Chinese social networking: Guanxi and social network theory. *Emergence: Complexity & Organization* 6(1/2), 24-31. E1 Q2
- Hines, Peter. (1995) Network sourcing: A hybrid approach. *International Journal of Purchasing and Materials Management* 31(2), 17. E4 Q2
- Humphries, Andrew S and Wilding, Richard D. (2004) Long Term Collaborative Business Relationships: The Impact of Trust and C3 Behaviour. *Journal of Marketing Management* 20(9, 10), 1107. E3 Q1
- Hutchings, K. and Murray, G. (2002) Working with Guanxi: An Assessment of the Implications of Globalisation on Business Networking in China. *Creativity & Innovation Management* 11(3), 184-191. E2 Q1,2,4
- Johnson, M Eric. (2001) Learning from toys: Lessons in managing supply chain risk from the toy industry. *California Management Review* 43(3), 106. E4 Q1,2
- Keller, Gary F and Kronstedt, Creig R. (2005) Connecting Confucianism, Communism, and the Chinese Culture of Commerce. *The Journal of Language for International Business* 16(1), 60. E2 Q4
- Krapfel, Robert E. Jr., Salmond, Deborah, and Spekman, Robert. (1991) A Strategic Approach to Managing Buyer-Seller Relationships. *European Journal of Marketing* 25(9), 22. E3 Q5

- Kumar, Nirmalya. (1996) The power of trust in manufacturer-retailer relationships. *Harvard Business Review* 74(6), 92. E3 Q1,2
- Kwon, Ik-Whan G. and Suh, Taewon. (2004) Factors Affecting the Level of Trust and Commitment in Supply Chain Relationships. *Journal of Supply Chain Management: A Global Review of Purchasing & Supply* 40(2), 4-14. E3 Q1,2
- Lambert, Douglas M., Emmelhainz, Margaret A., and Gardner, John T. (1996) Developing and Implementing Supply Chain Partnerships. *International Journal of Logistics Management*. 7 (2), 1-17. E3 Q5
- Landeros, Robert and Monczka, Robert M. (1989) Cooperative Buyer/Seller Relationships And A Firm's Competitive Posture. *Journal of Purchasing and Materials Management* 25(3), 9. E3 Q5
- Lee, Dong-Jin, Pae, Jae H., and Wong, Y. H. (2001) A model of close business relationships in China (Guanxi). *European Journal of Marketing* 35(1/2), 51. E2 Q5
- Lee, Hau L. and Wolfe, Michael.(2003) Supply Chain Security Without Tears. *Supply Chain Management Review* 7(1), 12. . E3 Q5
- Lemke, Fred, Goffin, Keith, and Szwajkowski, Marek. (2003) Investigating the meaning of supplier-manufacturer partnerships: An exploratory study. *International Journal of Physical Distribution & Logistics Management* 33(1/2), 12. E3
- Lonsdale, Chris. (1999) Effectively managing vertical supply relationships: a risk management model for outsourcing. *Supply Chain Management* 4(4), 176. E3 Q5
- Lovett, Steve, Simmons, Lee C, and Kali, Raja. (1999) Guanxi versus the market: Ethics and efficiency. *Journal of International Business Studies* 30(2), 231. E1 Q5
- Mello, John E and Stank, Theodore P. (2005) Linking firm culture and orientation to supply chain success. *International Journal of Physical Distribution & Logistics Management* 35(7/8), 542. E3 Q5
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