MANAGING QUALITY IN THE CHINESE CONTEXT:

Case Studies of Shanghai Manufacturing Industries

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ABSTRACT

Most ideas of industrial Quality Management (QM) originated in the USA and Japan, and have since spread globally. New QM models and concepts have been developed, disseminated and adopted (or indeed adapted) in many countries. Considering the evolution QM thinking over the last few decades, many QM models and concepts involve both 'hard' and 'soft' aspects. The former may involve use of procedures and a range of tools and techniques; whereas soft aspects are concerned with human factors such as culture. Much current literature in the QM field tends to emphasize the hard aspects. The author, however, argues that it is important to understand and investigate the soft aspects (particularly the organizational culture and management practices, the relationships between QM and culture) in an organization, which are key success factors for successful QM implementation.

On the other hand, many researchers have studied QM dissemination and adoption phenomena from the perspectives of both management fashion and diffusion theory. Following Abrahamson (1996), this research proposed that QM initiatives can be considered as management fashions, disseminated from 'fashion-setter' (i.e. the supply side) to 'fashion-consumer' (i.e. the demand side), and the impact and results being influenced by various adoption factors. While trends in academic and professional publication rates related to QM initiatives can help to identify fashionable approaches on the supply side, there was lack of empirical evidence to explain the behaviour of 'fashion-consumers' on the demand side, in an international context (e.g. why do managers adopt certain QM tools? What are their criteria for decision-making on QM adoption?).

This research aimed to explore the behaviour of 'fashion-consumers', so as to fully understand the QM dissemination and adoption process, in a Chinese context. Because of its economic importance, large manufacturing industry and distinct culture, China plays an important role in the global supply chain, and has attracted academic interests from various fields. Therefore, the author focused on the management of quality in Chinese manufacturing industry; to provide insights into the relationships between QM, organizational culture and national culture;

and explain the phenomenon of dissemination and adoption of QM from the perspective of Chinese fashion-consumers, based on multiple case-studies of Shanghai manufacturing industry. The research was based primarily on interviews with managers at six case-study companies, supplemented by interviews with quality experts and professionals. The Competing Values Framework (CVF) was used to characterize organizational culture, in the context of this primarily qualitative study.

The key outcomes of this research relate to: 1) the development and current status of QM implementation in companies with different ownership types; 2) the organizational culture issues in companies with different ownership types; 3) the relationships between QM and culture; and 4) a dissemination and adoption framework for QM that contains nine observed dissemination and adoption factors, and is compatible with current theory relating to management fashions and also diffusion of innovations.

The research has made a contribution to knowledge in all these four areas, while extending general understanding of QM dissemination in the context of current theory. It has provided framework and a richer knowledge of dissemination, adoption and 'soft' aspects of QM in the Chinese context, and of relationships between QM and culture from organizational and national culture perspectives. The differences observed among enterprises with different ownership types are of particular note. The application of CVF to complement qualitative research is also considered a methodological advance.

JOURNAL ARTICLES

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5S	Seiri (sifting), Seiton (sorting), Seiso (sweeping), Seiketsu (standardise), Shitsuke (sustain)
ANSI	American National Standards Institute
ASQ	American Society for Quality
BSI	British Standards Institution
BPR	Business Process Re-engineering
BTO	Build-To-Order
CCC	China Compulsory Certification
CEIBS	China Europe International Business School
CI	Continuous Improvement
CNAB	China National Accreditation Board for Certifiers
CNACR	China National Accreditation Committee for Quality System Registration Bodies
CNIS	China National Institute of Standardization
CQA	China Quality Association
CSF	Critical Success Factor
CVF	Competing Values Framework
CWQC	Company Wide Quality Control
DMADV	Define, Measure, Analyze, Design, Verify
DMAIC	Define, Measure, Analyze, Improve, Control
DPMO	Defects Per Million Opportunities
DTI	Department of Trade and Industry
EFQM	European Foundation for Quality Management
EQA	European Quality Awards
FIE	Foreign Invested Enterprises
ISO	International Organization for Standardization
JIT	Just-In-Time
JUSE	Japanese Union of Scientists and Engineers
JVs	Joint Ventures
MOFTEC	China's Ministry of Foreign Trade and Economic Cooperation
M7	New Seven Management Tools

MBNQA	Malcolm Baldridge National Quality Award
MNC	Multi-National company
NASA	National Aeronautics and Space Administration
NIC	Newly Industrialized Country
OM	Operations Management
PDCA	Plan-Do-Check-Action
PMI	Print Media Indicators
PRC	People's Republic of China
POE	Private-Owned Enterprises
QSHE	Quality, Safety, Health, and Environment
QC	Quality Control
QA	Quality Assurance
QCC	Quality Control Circle
QC7	Seven Quality Control Tools
QFD	Quality Function Deployment
QM	Quality Management
QMS	Quality Management System
SAC	Shanghai Accreditation Center
SQA	Shanghai Quality Association
SQC	Statistical Quality Control
SOEs	Stated-Owned Enterprises
SAIC	State Administration for Industry and Commerce
RoHS	Restriction of the use of certain Hazardous Substances
TQC	Total Quality Control
TQM	Total Quality Management
UL	Underwriters Laboratories
WOFE	Wholly-Owned Foreign Enterprises

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"The past century will be defined by historians as the century of productivity. The next century has to be the century of quality. We have got a situation where we have locked ourselves in with the technological revolution. We have put ourselves at its mercy – 'life behind the quality dikes.' We have made dependence on the quality of our technology as a part of life."

Dr. Joseph Juran

CHAPTER 1 – INTRODUCTION TO THE RESEARCH

This chapter will outline the research background, provide an overview of QM in the Chinese context, identify the research gaps, and state the research aims and questions. The research methodology and design will be briefly explained. Finally, it will conclude with a description of the structure of this thesis.

1.1. Background

QM has been key to the globalisation of manufacturing for many years. Approaches and techniques have been adopted across the world, which have facilitated the international supply chains of today, by raising the performance of suppliers in developing and newly-industrialised countries to competitive levels.

Throughout the several decades of QM evolution, new QM approaches such as *kaizen*, Total Quality Management (TQM), and the ISO 9000 series of standards have been developed, disseminated and adopted or adapted internationally. Many countries have also introduced quality performance or Business Excellence awards (e.g. the US Malcolm Baldridge National Quality Award – MBNQA) (Evans and Lindsay, 2002). Considering QM evolution over the last few decades, it can be noted that many QM models and concepts involve both 'hard' and 'soft' aspects. The former may involve a series of procedures, and a range of tools and techniques, whereas the 'soft' aspects are concerned with human factors such as culture. While QM proponents have tended to emphasize the 'hard' aspects, there is some attention paid to 'soft' aspects in the literature of organizational culture and cross-cultural studies (Dale, 2003). There is an established literature regarding the debates on how and why culture matters to QM in these fields, especially when the Japanese has become a quality leader in manufacturing since 1970s and their success was felt and told in the West by the 1980s.

Today, some QM approaches or their derivatives are considered as current management fashions or trends, while others appear less attractive or are perhaps considered as obsolescent. However, the preference for QM initiatives varies from

country to country, influenced by different adoption factors. For example, companies in Asia consider *kaizen*, 5S, suggestion systems and ISO 9001 as popular paths to good QM practice; whereas in the USA, TQM and Six Sigma are preferred (Thawesaengskulthai and Tannock, 2008a).

Many authors have studied this adoption phenomenon from the viewpoint of management trends and fashions (e.g. Abrahamson, 1996; Kieser, 1997; Miller and Hartwick, 2002). Generally, it assumes that there is a market for effective QM initiatives, because they are rationally demanded by managers acting as fashion-consumers, and supplied by fashion-setters who are often academics and consultants (Czarniawska and Panozzo, 2008). Trends in academic and professional publication rates related to QM initiatives (Print Media Indicators – PMIs) can help us to identify fashionable approaches on the 'supply side'. However, Thawesaengskulthai and Tannock (2008a) argued that there was lack of empirical evidence to explain the behaviour of fashion-consumers on the 'demand side', in an international context (i.e. what is rational in QM adoption in a specific national context and why the preference for QM initiatives varies globally, in the perspectives of fashion-consumers). These authors believed that it is important to understand the demand-side phenomena related to dissemination and adoption, in the context of Newly-Industrialised Countries (NICs), which have a distinct culture, a different business environment and legal system.

1.2. QM in the Chinese Context: an overview

Over the last three decades the once closed and government-protected Chinese business environment has gradually transformed into its current form, as an open and (generally) competitive market. Because of its economic importance and distinct culture, there has been large amount of research about China and much academic publication in recent years, on a wide range of business and management topics (e.g. Bai and Xu, 2005; Hofstede, 2004; Meng and Kidd, 1997; Ralston *et al,* 1997; 2006; 2008). QM is one such topic, and several authors have examined Chinese QM developments using empirical data, surveys, and case

studies. Studies on QM introduction in China include Chin *et al* (2001), Hua *et al* (2000), Jenner *et al* (1998), Li *et al* (2003) and Zhang (2000). For example, according to Chin *et al* (2001), QM development in China has experienced three phases, namely the 'Russian-influenced period' (1950~1960), the 'Chinese-style period' (1960~1978), and the 'transformational period' (1978 onwards). Moreover, some empirical studies argued that the 'soft' aspects of QM (e.g. employee involvement and participation) reveal a common weakness in China, which links with some aspects of Chinese culture, organizational culture and indigenous management practices. Chiu (1999); Li *et al* (2003), in particular, criticized that Chinese culture elements, organizational culture and indigenous management practices often serve as barriers towards successful QM implementations. In some cases, however, conflicting results have been found. For instance, Noronha (2002; 2003) provided empirical evidence to demonstrate some possible congruencies between Chinese culture and QM in term of the positive and constructive side. These debates leave a series of interesting issues to be resolved. Specifically, it is necessary and important to investigate how the Chinese business cultures and Chinese context matters to QM – whether it is just a barrier to, or also has a positive influence on QM implementation, needs further systematic and intensive evaluation.

QM in China still seems to be at an early stage, compared with nations such as Japan, the USA (Li *et al*, 2003). The practices in the Chinese firms studied were mainly based on foreign QM theories and practices. Chinese firms may not fully understand the applicability, practicability and effectiveness of QM approaches, and may indeed tend towards 'nominal adoption' of advanced QM concepts such as ISO9001 and Six-Sigma (Lee *et al*, 2001; Zhang, 2000). Moreover, Liu's (2005) candid review of Chinese national quality progress gave the impression that QM development in China may not be as successful as officially reported, and Chinese businesses may face significant challenges in the adoption of effective QM approaches, especially by some of the State-owned Enterprises (SOEs). However, the literature on QM developments in China (or indeed international QM

development generally) typically does not provide a strong linkage to the relevant broader management theory, such as dissemination, adoption or management trends and fashions.

1.3. Research Aims and Questions

The key issue to be addressed in this thesis is managing quality in the Chinese context. The author aims to:

1. Identify QM developments and current QM status (the 'hard' aspect);
2. Explore and compare the organizational culture and managerial practices of firms with different types of ownership (SOEs, POEs, FIEs) (the 'soft' aspect);
3. Provide insight into the relationships between culture and QM implementation from both organizational culture and national/cross-cultural perspectives;
4. Investigate the dissemination and adoption factors of QM in China, and develop a model to help explain influences and causation.

The specific research questions are as follows:

1. What are the major QM developments?
2. What are the QM initiatives being implemented?
3. How effective is the adoption of QM initiatives, especially in terms of 'nominal adoption' and 'adaptive practice'?
4. What is the organizational culture in different ownership-type firms?
5. How and why does the Chinese context matter to QM?
6. How are the QM initiatives disseminated?
7. What are the key factors for QM adoption?

1.4. Research Methodology and Design

Considering the nature of the research questions that are to be addressed in this study, and the practical difficulties of conducting survey-based quantitative research in China, the author adopted a multiple cases study approach (Yin, 2003). The selection of case-study companies was on the basis of their relevance to the research questions, the nature of ownership, and practical considerations of

location and access, so as to provide a representative picture. The six collaborating companies in this research fall into three different ownership groups: two Chinese Private-Owned Enterprises (POEs), two Chinese SOEs and two Foreign-Invested Enterprises (FIEs), comprising a Joint Ventures (JV) and a Wholly-Owned Foreign Enterprises (WOFE). All of them have been established for eight years or more in the Shanghai region of China, with a minimum three-year ISO9000 registration. The six companies are operating in various manufacturing industries, including automobile, chemical, electronic and home appliance.

The fieldwork for this research took place in Shanghai during the period between May 2006 and February 2009, and consisted of three phases – pilot case studies, main fieldwork and theory validation. The pilot case studies were conducted between May and June 2006, which included documentation analysis of two case companies and three pilot interviews. The main fieldwork was undertaken from December 2006 to March 2007, during which, 14 managers were interviewed from six companies and three QM professionals from two consulting companies. Theory validation was carried out during January and February 2009, through respondent validation and face validation. The author discussed the main findings with three respondents from case-study companies, and held a panel discussion with three professors working in the China Europe International Business School (CEIBS).

Qualitative content analysis was used, incorporating qualitative data reduction and sense-making that aims to abstract from large quantities of relatively unstructured qualitative data; core consistencies, meanings, relationships and key terms (Patton, 2002). The following diagram (see Figure 1.1) depicts the research design framework (Please refer to Methodology Chapter 5 for detail).

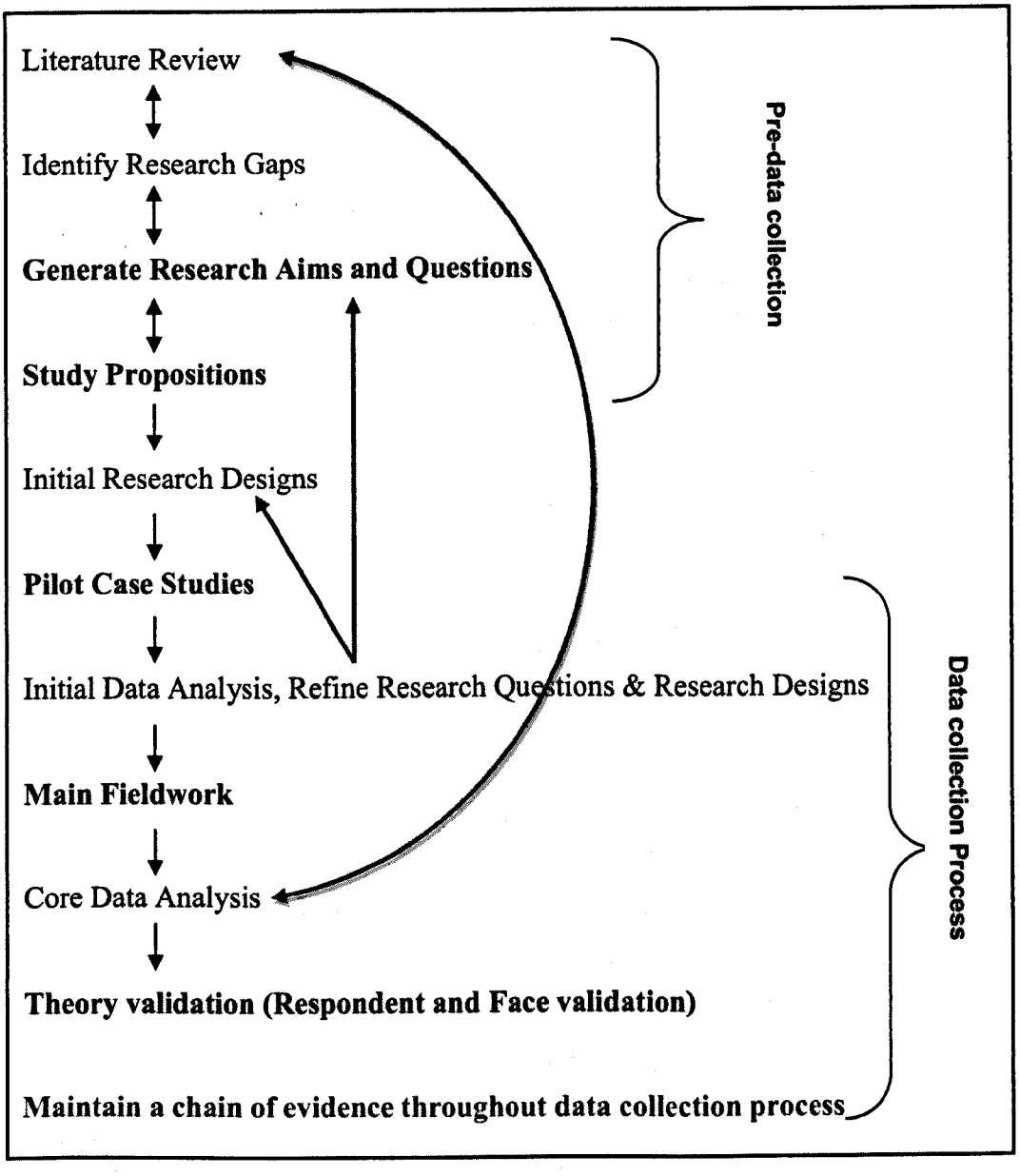

Figure 1.1: The research design framework

1.5. Structure of the Thesis

This thesis is divided into nine chapters, described as follows:

- Chapter One has introduced the readers to the research background and defines the research aims and questions.
- Chapter Two, Three and Four will review the relevant literature associated with this research, which provides the conceptual background. Chapter Two will review the relevant literature in the QM field. Chapter Three will examine the relevant culture and organization literature associated with the QM context. Chapter Four will address the issues of contextual factors in China, and their impacts on organizational culture, indigenous managerial practices and QM.
- Chapter Five will outline the research methodology and designs, and will briefly describe the case-study companies.
- Chapter Six, Seven and Eight will discuss the research findings and analyses. Chapter Six will discuss themes in QM development and the current status of QM in Shanghai Manufacturing Industries. Chapter Seven will describe the organizational culture in Chinese SOEs, POEs and FIEs respectively, comparing culture among these three different types of ownership, using the Competing Values Framework. Chapter Eight will explain various influencing factors on QM dissemination, adoption and implementation. Each of the three chapters aims to answer different research questions of this study, combining research findings with the relevant literature.
- Chapter Nine will discuss the main outcomes of this research and the validation feedback, followed by a summary of research contributions and future research work.

CHAPTER 2 – QUALITY AND QUALITY MANAGEMENT

This chapter will review the relevant literature in the QM field, which underpins this research. Section 2.1 will summarize the various perspectives about quality. Section 2.2 will discuss the major trends of QM evolution and revolution, including the main QM models, concepts and techniques across countries. Section 2.3 will explain the diffusion and adoption of QM practices. Section 2.4 will present a brief overview of the Critical Success Factors (CSFs) for QM.

2.1. Definitions of Quality

Quality has been a topical issue for a long time in both the manufacturing and service sectors. Practitioners and academics have, however, defined quality in various ways, based on their individual roles in the production-marketing chain or from their own briefs and experiences. According to Dale *et al* (1997) and Evans and Lindsay (2002), there are five main perspectives on quality, including: Transcendent (excellence); Product-based (amount of desirable attribute); User-based ('fitness for purpose'); Value-based (satisfaction relative to price); and Manufacturing-based ('conformance to specifications') (See table 2.1 below).

Although there is no single way to define quality, a worldwide acceptable definition has been stated in the American National Standards Institute (ANSI)[1] and the American Society for Quality (ASQ)[2] as:

"The totality of characteristics of a product or service that bears on its ability to satisfy given needs"

(See also Dale *et al*, 1997)

By the end of the 1980s, many companies had begun to use a simpler, customer-driven definition as: *"Quality is meeting or exceeding customer expectations"* (Evans and Lindsay, 2002).

[1] ANSI, originally founded as the American Engineering Standards Committee (AESC) was formed on October 19, 1918 to serve as the national coordinator in the standards development process as well as an impartial organization to approve national consensus standards (http://www.ansi.org)

[2] The ASQ was formed on February 16, 1946 by 253 members of 17 quality-related societies, originally called the American Society for Quality Control (http://www.asq.org)

Perspectives on Quality	Summary of the Perspectives
Transcendent/Excellence	Quality is ranked on a relative basis in the degree of excellence. In 1931, Walter Shewhart firstly defined quality as '*goodness of a product*'.
Product-based	Quality is a function of a specific and measurable variable. The differences in quality reflect differences in quantity of some product attributes.
User-based	Quality should closely relate to customers' expectations and requirements. It is defined as '*fitness for purpose*' by Dr. Juran.
Value-based	Quality product is the one that is as useful as competing products and with a lower price; or one that offers greater usefulness or satisfaction at a comparable price.
Manufacturing-based	Quality is defined as the desirable outcome of manufacturing practice – '*conformance to specifications*'.

Table 2.1: The five perspectives on quality

2.2. Evolution and Revolution of QM

The QM progression has been worldwide, headed by the U.S., then Japan and Europe. Since the 1900s, four main quality waves can be categorized: Quality Inspection; Quality Control (QC); Quality Assurance (QA); and Continuous Improvement (CI) (Dahlgaard, 1999; Thawesaengskulthai, 2007). Some authors, e.g. Dahlgaard and Dahlgaard (2001); Ghobadian and Gallear (2001) also argued that the aforementioned phases – Quality Control, and Quality Assurance could be viewed as the historical evolution of TQM. In each stage, new methods and concepts were generated, and the orientation and characteristics were different (as summarized in table 2.2 below).

2.1.1. Quality Inspection (1900s-1920s)

In the early 1900s, inspection was thought to be the only way or the primary means of ensuring quality (Evans and Lindsay, 2002). People used methods such as measuring, testing and gauging, to inspect one or more characteristics of a product and compare these with specified requirements to determine conformity. It was, however, an after-the-event screening process with no prevention at all, and was usually wholly in-house with no involvement of suppliers and customers (Dale, 2003).

Stages of Quality Movement				
Quality Waves	Inspection (1900s-1920s)	QC (1920s-1950s)	QA (~1950s-1980s)	CI (~1980s onwards)
Characteristics	Corrective action; Conformance to specifications	Performance data; Self-inspection; Product testing; Use of statistics; Paperwork control;	Product, process and system assurance ; Quality manuals Quality cost; Failure mode and effect analysis	'Quality culture'; Customer-focused; Continuously add value to organization's performance
Orientation	"Inspect" Quality	"Control" Quality	"Build-in" Quality	"CI in" Quality
Methods & Concepts	Measuring, examining, testing and gauging	Statistical tools; Kaizen; Do it right the first time	TQC/TQM; Just-In-Time; Lean production; QCC; QC7; M7; PDCA;	ISO9000 series; Six Sigma; Lean production; BPR Performance Excellence (MBNQA; EFQM; Deming's Prize); Benchmarking

Table 2.2: Four Stages of Quality Movement
(Adapted from Thawesaengskulthai, 2007)

2.2.2. Quality Control (QC) (1920s-1950s)

Using statistical application to monitor production process was arguably the first major advance in the QM journey. Walter Shewhart in 1924 first developed Statistical Quality Control (SQC). During WWII, the U.S military began using statistical sampling procedures and imposing stringent standards on suppliers (Evans and Lindsay, 2002). After WII two US 'quality gurus' – Dr. Juran and Dr. Deming responded to an invitation by JUSE[3], firstly propagated quality themes from US to Japan, and helped the Japanese to rebuild their quality control. With the support of top managers, the Japanese integrated quality throughout their organizations, and developed a culture of '*Kaizen*[4]' or 'Do it right the first time' (Evans and Lindsay, 2002).

[3] JUSE is the Union of Japanese Scientists and Engineers, established in 1946.
[4] *'Kaizen'* refers to a process of improvement involving small-scale incremental change, driven "bottom-up" by the workforce and associated with improved efficiency and the elimination of waste (Evans and Lindsay, 2002).

2.2.3 Quality Assurance (QA) (~1950s-1980s)

The third stage of quality evolution was moving from a detection-based approach towards a more proactive approach. Organizations started to place more emphasis on building quality into the product and service during the upstream design and planning process, so as to provide customers with sufficient confidence that a product or service would satisfy their needs and requirements (Dale, 2003). During this stage, modern concepts and advanced techniques have been developed especially in Japan. The experience and knowledge of QM in Japan were initially imported by U.S. experts, who undoubtedly have catalyzed the Japanese QM movement and success (Garvin, 1988). The Japanese, however, adapted them to serve the needs of the nation and placed different emphases from the Americans. The Japanese quality 'guru', Ishikawa developed a unique QM concept – Total Quality Control (TQC). Various tools and techniques also facilitate Japanese TQC, including: Seven Quality Control Tools (QC7); New Seven Management Tools (M7); Quality Control Circle (QCC); Quality Function Deployment (QFD); Deming's Plan-Do-Check-Action (PDCA); Just-In-Time (JIT); Taguchi's Statistical Robust Design Methods and Shingo's Poke-Yoke. However, Dale (2003) argued that the potential users should not simply transplant them because of the success in Japan. It is very important that users should always be aware of the main purposes of these tools and techniques when selecting them.

2.2.4. Continuous Improvement (~1980s onwards)

This era of quality development moved towards continuous business improvement and total business excellence. During this stage, the Americans started their quality revolution during the 1980s; the Japanese TQC continued to diffuse throughout the nation; the European community also caught up to be the followers in terms of QM. Additionally, the quality awareness of consumers, government and service sectors were growing rapidly. Many countries started to set up their Quality or Performance Excellence Awards, e.g. Malcolm Baldridge National Quality Award (MBNQA). Quality excellence has been recognized as a key weapon to win customers and to keep companies' competitive advantages (Evans and Lindsay, 2002; Krasachol and Tannock, 1999).

The US quality revolution: Since the 1970s, Japan has become a quality leader in manufacturing, and their success was felt and reported in the West by the 1980s, and their success in quality also increased global competition (Xu, 1999). The US manufacturers began to realize that they were behind the world-class standard and the only way for them to survive in this competitive market was quality (Evans and Lindsay, 2002). As a result, US companies made significant improvement in quality, including the launch of Total Quality Management (TQM) in 1981. Later in 1987, Motorola pioneered the concept of Six Sigma. Many American experts, such as Deming, Juran, Feignbaum and Crosby, also contributed to the development of QM techniques and methods (Dale, 2003). On the other side, the US Government recognized the importance of quality to the nation's economic growth, and therefore a series of actions have been taken – In 1984, the US government designated October as National Quality Month. In 1985, National Aeronautics and Space Administration (NASA) announced an Excellence Award for Quality and Productivity. In 1987, the MBNQA was set up. Over the years, many companies have adopted the MBNQA framework to achieve organization competiveness and excellence (Evans and Lindsay, 2002).

Japanese initiatives: The Japanese TQC continued to diffuse throughout the nation. The concepts were profound and placed more emphasis on customers. Additionally, by following an international-accepted practice, Japanese firms changed TQC to Total Quality Management (TQM). The key principles are as follows (Garvin, 1988; Dale, 2003):

- Place strong emphasis on customers' satisfaction and expectation, including consumers, external (i.e. suppliers) and internal customers (i.e. employee);
- Involve everyone at all levels and in all parts of the company (Company-wide);
- A corporate culture change to facilitate quality/continuous improvement;
- The planning for improvement must be consistent and thorough;
- A strong management leadership (top management commitment), and a highly-motivated and quality workforce;
- There are no quick fixes for the TQM success in Japanese companies. Improvement is a slow and incremental process;
- The appropriate application of QM tools and techniques.

To sum up, the Japanese nation achieved the greatest success in the application of QM and relevant tools and techniques (Garvin, 1988). It was the first management approach outside the US. By the 1970s, the Japanese became a quality leader in manufacturing (Xu, 1999). Their success suggested, principally, that QM initiatives need to be supported by a certain context, which influences the degree of effectiveness and success. As Garvin (1988) explained: "*...the impetus behind the Japanese achievement in the post-war period was due to the fact that Japan's motivation for quality is high.*"

European Initiatives: The quality revolution in Europe did not start until the 1980s (Evans and Lindsay, 2002). Since the intensive global competition became worldwide, the British Standards Institution (BSI) first published the BS5750 series as the UK standards for Quality Improvement. The International Organization for Standardization (ISO) followed in 1987 with a series of international standards (Dale, 2003). Additionally, the European series of Standards (EN29000 series) equivalent to the ISO series were issued in 1988. Over the years, the ISO9000 series have been revised several times on the basis of the international implementation experience. Based on Deming's Prize (1951) and MBNQA (1987), the European Quality Awards (EQA) was launched in October 1991 (Evans and Lindsay, 2002).

2.3. Diffusion and Adoption of Quality Management

Throughout the several decades of QM evolution, new QM approaches such as *Kaizen*, TQM and the ISO 9000 series of standards have been developed, most of which were originated in the USA or Japan, and then disseminated and adopted or adapted internationally. During the 1950s and 1960s, quality themes were firstly disseminated from USA to Japan, primarily through quality 'gurus' or experts, such as Deming and Juran. In the 1970s and 1980s, Japan became a quality leader in manufacturing, and their unique quality concepts – QCC, TQC, JIT and lean production were reported and transferred to the US and Europe, via various routes, e.g. academic or industrial publication, quality consultants, government. Since the 1990s, the world economy relies more on globalization and international trade, the Japanese TQM continues to diffuse in the West, and expand its footprint on the rest of the world. Meanwhile, QM initiatives that were

developed in the West, e.g. Six Sigma and ISO9000 also permeated to Japan and the globe, through different channels, such as customers, suppliers, internet and Joint-venture (JV) partners.

Today, some QM approaches are considered as current trends, while others are becoming less attractive or perhaps seen as obsolete. By using Print Media Indicators (PMI) in ProQuest Direct and industrial data collected by Bain and Company (2005), Thawesaengskulthai and Tannock (2008a) analyzed the trends of various QM and CI approaches and the adoption patterns across the globe from 1990 until 2004. Their studies suggested that TQM was among one of the most popular QM initiatives in the early 1990s: the interest in TQM however, gradually decreased from 1994. In comparison, the popularity of Six Sigma has been growing perceptibly during the period of 1997 to 2003. The interest in the ISO9000 series of quality systems standards has been quite sustained since 1992, and this may continue with its new and more comprehensive version. On the other hand, preference for QM initiatives varies from country to country, influenced by different adoption factors. Companies in Asia consider *Kaizen*, 5S, suggestion systems and ISO 9001 as popular paths to good quality practices (Wheatley, 1998; Thawesaengskulthai and Tannock, 2008a), whereas in the USA, Six Sigma and lean production are preferable concepts (Charlesworth, 2000; McNeil and Greatbank, 2002). In Europe, the ISO 9001 and TQM are the first choice QM practices (Thawesaengskulthai and Tannock, 2008a).

The author noted that there are two main theories which can explain the aforementioned phenomena. On the one hand, there is a considerable literature on the dissemination of management tools and systems in the context of the diffusion theory which provides valuable foundations and insights. If we consider QM practices as one type of innovation, indeed, many authors (e.g. Shortell *et al*, 1995; Zammuto *et al*, 2000) described QM practices as management innovation, the aforementioned process can be regarded as the diffusion of innovation, i.e. the process by which an innovation is communicated or spread through certain channels over time among the members, and become a set of generalizations (Rogers, 1995). The diffusion scholars argued that the adopter distributions of each successful innovation form a bell-shaped curve, which identifies five

categories of members' or adopters' innovation appetite, i.e. the degree to which an individual is relatively early in adopting new ideas than other members. These five groups range from innovators (i.e. people who are always the first to adopt innovation and enjoy being on the cutting edge); Early adopters (i.e. opinion leaders); Early majority; Late majority; and laggards. According to Rogers (1995), members in general, make their innovation-decision following a five-step process: 1) Knowledge and awareness, 2) Persuasion or the formation of favourable or unfavourable attitudes, 3) Decision – a choice to adopt or reject, followed by 4) Implementation and 5) Confirmation (See also Orr, 2003). Therefore, the opinions and experiences of innovators and early adopters regarding the effectiveness of innovation are valuable to the subsequent decisions of other potential adopters (i.e. potential adopters are persuaded or encouraged to adopt an innovation that benefits innovators or early adopters). Particularly, the decisions of early adopters/opinion leaders are critical to the spread of an innovation, as this is where the majority of remaining members start to adopt innovation. The rate of adoption rises dramatically at this 'tipping point' (Rogers, 1995). Similarly, Charlesworth's (2000), Clark and Greatbatch's (2004) and Weiler's (2004) research indicated that the knowledge and persuasion mostly came from colleagues' recommendation, conversation with peers, testimonial of successful implementers, competitors' financial results, case study of other companies' implementation and experiences. Although these authors did not characterize adopters' behaviour into five groups as Rogers (1995) did, their research suggested that people in a social system do not blindly adopt any innovation (in other words, it is a rational adoption). The interaction among people (i.e. social communication networks) impacts on the diffusion of innovation.

On the other hand, the authors have also studied adoption from the viewpoint of management fashions, considering irrational (e.g. Boje *et al*, 1997; Jackson, 2001; Sturdy, 2004) and rational adoption theories (e.g. Abrahamson, 1996; Miller and Hartwick, 2002). The author found that the rational theories of management fashions are compatible with Rogers' arguments on diffusion theory. According to Abrahamson's (1996) supply-and-demand framework for management fashions, one could consider QM approaches as management trends and fashions, disseminated from fashion-setter to fashion-consumer; adoption being influenced

by various adoption factors. First, on the supply side, fashion-setters who may be academics, 'gurus', consultants and business practitioners continuously develop management techniques that are presented as rational and progressive (Abrahamson, 1996). The knowledge and persuasion stages of management fashion dissemination may involve publications, the broadcast media, the internet, and contacts with opinion formers including colleagues, customers, supply chain partners, quality professionals and consultants. At this stage the adoption decision must be made, by managers acting as fashion-consumers (Cagliano and Spina, 2000; Weiler, 2004), based on various criteria (e.g. the benefits of implementation). Considering the demand (i.e. fashion-consumer) side, authors such as Gibson and Tesone (2001), Miller and Hartwick (2002) and Thawesaengskulthai and Tannock (2008b) shed light on the rational criteria of selecting QM or improvement initiatives, including pay-offs or expected outcomes, the company's competitive priorities, capability and resources. Particularly, Thawesaengskulthai and Tannock (2008b) focused on studying the pay-offs of six key QM and CI initiatives, namely TQM, ISO 9001, Lean, Six-Sigma, BPR and Business Excellence, based on an in-depth literature review. These authors suggested 29 possible benefits and ordered them into seven categories (See table 2.3 below).

In sum, both Rogers' (1995) theory of diffusion and Abrahamson's (1996) theory of management fashions implied that most people make a rational decision on adoption to enhance their utility. The social interaction among fashion-setters and adopters form communication networks, which provide fundamental context (i.e. channels or routes) for the diffusion of innovation. Additionally, with the technological advancement, mass media can fasten and broaden the diffusion process. People receive relevant information through internet searches, books, research papers and journal articles.

No	Suggested Benefits	
	Pay-offs Categories	**Suggested Benefits (Sub-categories)**
1	Shareholder benefits	Increase stock price
2	Company performance	Increase financial performance (profitability, cost reduction)
		Quality performance (reduce nonconformity, shorter lead-time)
		Operating performance (increase productivity, improve cycle-time)
3	Marketing performance	Increase marketing effectiveness
		Internationally recognised standard for QMS
4	Customer satisfaction	Increase customer satisfaction
5	Human resources	Reduce number of employees
		Reduce amount of resource usage
		Increase dexterity/flexibility of employees
		Provide rewards and recognition
6	Process improvement	Process innovation breakthrough
		Reduce process variation and create process stability
		Provide formalized, systematic and practical improvement methodology
		Provide a set of QI tools
		Promote procedural and standardisational work
		Foundation for process documentation and maintainable system
		Improve workflow, reduce Non-Value-Added activity and wastes
		Create fast, flexible and accessible information
		Enhance inventory management
7	Organizational impact	Improve competitiveness, effectiveness and flexibility of a whole organization
		Build a foundation of CI
		Create agile and learning organization
		Not interrupting operations
		Motivate intensive training
		Improve organization culture
		Articulate business needs for change and improvement
		Accelerate and maintain organizational improvement efforts
		Motivate quality awareness and increase total participation

Table 2.3: Possible Pay-offs of QM & CI initiatives
(Adopted from Thawesaengskulthai and Tannock, 2008b)

2.4. Critical Success Factors for Quality Management

CSFs for QM have been widely studied, particularly on TQM and business excellence models (e.g. MBNQA). The study of critical factors originated in Saraph *et al* (1989). The authors defined critical factors as *"critical areas of managerial planning and action that must be practised to achieve effective quality management in business unit"*, and derived a set of eight critical factors for QM based on the in-depth literature review, namely top management leadership, role of the quality department, training, product design, supplier quality management, process management, quality data reporting and employee relations.

Over the years, the study of CSFs has been investigated internationally by many authors, using different methodologies and with different purposes. For example, Badri *et al* (1995) replicated Saraph *et al's* (1989) study, but in the context of a Middle East country. Black and Porter (1996) developed a survey questionnaire from MBNQA criteria to explore a set of factors for successful TQM implementation. Based on a factor analysis of 204 survey results from members of the European Foundation for Quality Management, Black and Porter (1996) concluded that the CSFs for TQM implementation were: 1) people and customer management; 2) supplier partnerships; 3) communication of improvement information; 4) customer satisfaction orientation; 5) external interface management; 6) strategic quality management; 7) teamwork structures for improvement; 8) operational quality planning; 9) quality improvement measurement systems; and 10) corporate quality culture. Ahire *et al* (1996) derived 12 factors with 50 items, based on an intensive literature review, which could be used as constructs to measure the effectiveness of TQM implementation. Dayton (2001) aimed to test the 10 TQM critical factors that developed in Black and Porter's (1996) study, based on the survey results from member of the American Society of Quality. Dayton's (2001) findings suggested that all the 10 TQM critical factors are important in the perspectives of U.S. quality professionals. The sixth factor – strategic quality management (i.e. commitment and support of top management), is however perceived to be the most important factor.

Additionally, few authors conducted the researches of CSFs in China. Sun (2000) used the MBQNA model to compare CSFs for QM implementation in Shanghai and Norwegian manufacturing companies. The author concluded that company's strategy, leadership and employee participation are the three most important factors in both companies. Antony *et al* (2002) provided an empirical study on the identification of CSFs for TQM implementation in Hong Kong industries. They identified 11 success factors with 72 elements through a detailed analysis of literature and then tested these factors on 400 companies (more than 250 employees) in various industries in Hong Kong.

In this research, the author did not aim to develop a comprehensive list of CSFs for QM, as most of above-named authors did. Instead, the author found that the literature on CSFs provided valuable foundations and insights into the factors that may impact QM implementation. Findings from aforementioned studies suggested that these factors could be internal and external, such as management leadership and commitment, and employee management (e.g. quality and education of staff training) (Black and Porter, 1996; Dayton, 2001; Saraph *et al,* 1989; Sun, 2000), company's vision and mission (Sun, 2000) and external interface management (e.g. social, cultural and environmental context) (Black and Porter, 1996).

2.5. Summary

In this chapter, the author has discussed the various perspectives on quality, and reviewed the history of QM development. The author then used two main theories, i.e. Rogers' (1995) theory of diffusion and Abrahamson's (1996) theory of management fashions to explain the dissemination process and the adoption of QM. Finally, based on the literature of CSFs on QM, the author proposed some internal and external factors that might influence QM implementation. These literatures provide important ground on which the author can base her arguments.

CHAPTER 3 – CULTURE AND ORGANIZATION THEORIES ASSOCIATED WITH QM

Considering QM evolution over the last few decades, the author found that QM models and concepts involve both 'hard' and 'soft' aspects. The former may involve a series of procedures, and a range of tools and techniques, whereas the 'soft' aspects are concerned with human factors such as culture. Indeed, many researchers regarded 'soft issues' as the key success factors for QM (Gallear and Ghobadian, 2004). This chapter will examine the relevant culture and organization literature associated with the QM context. Section 3.1 will evaluate the impacts of organizational and national cultures on QM. Section 3.2 will discuss the dominant management discourse. Section 3.3 will examine various methodological approaches of analyzing organizational culture, and the author will propose a Competing Values Framework (CVF) to study the organizational culture of case companies in Shanghai.

3.1. How and Why Culture Matters to QM

The established literature concerning how and why culture matters to QM can be reviewed and analyzed from two perspectives, i.e. from the perspectives of 'organizational culture' and the perspective of 'national culture'.

3.1.1. Organizational Culture and Quality

The concept of culture originated from anthropological studies, which aimed to understand societies as a whole (Bright and Cooper, 1993). With passage of time, the concept of culture has been linked increasingly with the study of organizations, and has attracted sustained attention since 1980s (Pettigrew, 1979; Schein, 2004; Ulrich, 1984). Moreover, according to Hofstede *et al* (1990) and Barley and Kunda (1992), the notion of organizational culture has become the most recent surge of American management discourse, where QM has played a role in triggering its movement.

However, before going any further, one needs to have a clear idea about the nature of an organizational culture. A review of the literature reveals that there is

a lack of precision and consensus regarding its definition, mainly due to the different organizational culture elements or cultural levels that researchers have examined or studied, and the different research disciplines they come from (Gallear and Ghobadian, 2004). According to Schein (1992; 2004), organizational culture has three levels – 1) Artifacts (e.g. rituals, myths, ceremonies); 2) Belief and values; and 3) Underlying assumptions. The first two are the shallower layers of culture that are more accessible and explicit; whereas the underlying assumptions are deeply-hidden aspects of organizational culture, which is very subjective and unconscious. Despite the various definitions on organizational culture, it is necessary to propose a working definition and clarify the basis on which the author stands to analyze organizational culture (see section 3.3 for detail). Therefore, in this research, the author proposes to examine the second level of organizational culture as Schein (1992; 2004) mentioned. The author refers organizational culture as systems of shared values and beliefs by members of an organization, which can strongly influence the way people perceive what works and what does not; and what is right and what is not (i.e. the ways of working). These shared values and beliefs are regarded as the manifestations of underlying assumptions of an organization (Baker, 1980; Cooke and Rousseau, 1988; Enz, 1986; Pettigrew, 1979; Schein, 2004; Silverzweig and Allen, 1976; Zammuto and Krakower, 1991).

In the rest of this section, the author will evaluate how the variations in organizational culture and management practices impact on QM approaches, paying particular attention to the Western response to Japanese QM approaches during 1980s and 1990s. The area is significant to this study, because Chinese business has been subject to influences from both Japan and the West, including Japanese QM ideas adopted by Western companies.

Western Response to Japanese Approaches: During the period of the 1980s and 1990s, publications on Japan increased rapidly in number. The Japanese QM approaches, such as QC circles and TQM began to become popular in the U.S. and Europe, with articles and books advocating them, and companies and government promoting them (Kano, 1993; Oliver and Wilkinson, 1988). *"TQM has become something of a social movement in U.S...."* as Hackman and

Wageman (1995) wrote. On the other hand, however, QC circles and TQM received many criticisms in U.S. and other parts of the world concerning its failure to achieve 'breakthrough' results (Bradley and Hill, 1987; Tuckman, 1994). Some studies suggested that it is because the Japanese style of QM was conditioned by their values, beliefs and assumptions, their history and their motivation to quality improvement.

For example, Juran (1978) noticed that the organization structure, policies, top management behaviour and employee relations varied from Japan to the Western. The Japanese did a more complete "debugging[1]" to the Western, and heavily committed to teamwork concepts and practices (e.g. mutual trust and confidence, cooperation, joint commitment) to solve quality problems. In addition, Juran (1978) argued that the Japanese had strong motivation to rebuild quality after World War II, which stimulated their QM revolution at a national level. Morishima (1982) and Garvin (1988) made this point even more clearly. They argued that the impetus behind the Japanese achievement in the post-war period was because their need and motivation for quality improvement were very high – The Japanese had harbored a strong national aspiration to catch up with and to overtake the Western countries.

Some scholars have analyzed the impact of organizational culture on QC circles. According to Batstone and Gourlay (1986), QCCs were interpreted and implemented differently in some Western companies, which might be routed in their cultural difference. These authors suggested that the QC circles cannot transplant successfully if separated from the Japanese organizational designs and culture (e.g. structures, policies, employment system, top management behaviors and commitment). Additionally, Hill (1991) argued that the QC circle cannot survive on its own without implementing TQM, because it was insufficient to change or create the necessary 'quality culture'. The successful experience of implementing TQM in some UK companies, as illustrated in Hill's (1991) study, was because of a successful cultural change.

1 "Debugging" or "scrub-down" is the process that takes both investment and a good deal of time on the part of the managers, engineers and the workforce, to find and apply solutions to quality problems before products going to the market (Juran, 1978).

There was a special issue published in Journal of Organizational Change Management (JOCM) in 1993, regarding the pros and cons of TQM. For example, Boje and Winsor (1993) suggested that the downsides and the hidden agendas of American TQM movement were Taylorism. These observations were also evident in the works of 'Quality Gurus'. For instance, both Deming (1986) and Juran (1986) mentioned that the U.S. companies did not have the appropriate 'quality culture' to implement the Japanese TQM, which might be rooted in their traditional managerial practices – Taylorism or scientific management. It is necessary for the Americans to change their values and beliefs to cohere with TQM principles (Juran, 1986).

If we further examine the 'Post-TQM' initiatives developed in the West, we may find more evidence to support the aforementioned arguments. The Six Sigma concept pioneered by Motorola U.S. in 1987 was a highly statistically-based program to drive for zero defects. Six Sigma emphasized efficient systems rather than human or cultural issues. Moreover, the quality standards, such as ISO9000 series that were established in the West, required a great deal of time and effort to articulate work process and prepare quality manuals. These were procedure-based approaches that exemplified the depersonalization of roles in some Western organizations (Tuckman, 1994).

This literature demonstrated some aspects of the relationship between organizational culture and QM practices. The general propositions or agreement revealed are: QM approaches, especially the Japanese QC circles and TQM are conditioned by certain values, beliefs and ways of working. Gallear and Ghobadian (2004) argued that QM approaches can be considered as a management paradigm that contain their own set of values and are underpinned by behaviours or activities. Put another way, if the existing culture of an organization is at a desired state to implement QM approaches, the QM approaches are useful tools to maintain or reinforce its culture (i.e. make values and beliefs explicit to the daily activities). On the other hand, QM approaches are also useful tools to change organizational culture in the direction to a desired 'quality culture'. The cultural change or development is facilitated by various

channels or mechanisms, such as: strong leadership and vision, top management commitment an employee involvement (Gallear and Ghobadian, 2004).

3.1.2. Cross-Cultural Studies

This sub-section will discuss the relevant debates on how and why culture matters to QM, from the perspective of 'cross-cultural' studies. The general assumptions derived from the relevant literature are: organizations are assumed to be organisms existing within an environment. The national culture is regarded as a part of this environment that is imported into the organization through its members (Smircich, 1983). Hofstede (1994; 2004) described culture as the "collective programming of the mind" that distinguishes members of one group from another at country or national level. In other words, organizational culture and management practices (including QM) are influenced by socially- and culturally-determined factors.

Cross-cultural researches have been of widespread interest due to the over-increasing emphasis on international business and more recently on globalization. For example, the influential cross-cultural studies by Hofstede were on a large scale that involved more than 6,000 IBM managers from 74 different countries during the 1980s. He argued that national culture can be explained by five dimensions: *Power Distance; Individualism V.S. Collectivism; Masculinity V.S. Femininity; Uncertainty Avoidance; Long-term V.S. Short-term Orientation*, which constraints the organizational culture. The implication is that with other decision factors being equal, people from a particular national background will prefer a particular organization configuration, coordinating mechanisms and management style because these fit their implicit model. It is worthwhile mentioning that the fifth cultural dimension (Long-Term Orientation) was derived from studies in China and was used to study Confucius countries in particular (See Chapter 4 for detail) (Hofstede, 1994; 2004).

A more recent, comprehensive study of 23 countries by Trompenaars (1994) also developed an approach describing five cultural dimensions that is somewhat analogous to Hofstede's dimensions. However, Trompenaars particularly focused on deriving five relationship orientations that address the ways in which people

deal with each other, they are compared as: *Universalism V.S. Particularism; Individualism V.S. Communitarianism* (the key dimension in Hofstede's studies with the same basic meaning, but interestingly the findings are different, such as Mexico and Argentina are collectivistic in Hofstede's studies but are individualistic in Trompenaars's research, which perhaps indicates that cultural values may be changing rapidly over time); other three cultural dimensions are *Neutral V.S. Emotional; Specific V.S. Diffuse; Achievement V.S. Ascription.* (See also Hodgetts *et al*, 2006)

Bhagat *et al* (2002) and Sturdy (2004) highlighted the relationships between culture and cross-border knowledge transferring. They argued that culture can act as a bridge or barrier to transfer. Specifically, Bhagat *et al* (2002) defined four cultural patterns in terms of *horizontal individualism, vertical individualism, horizontal collectivism and vertical collectivism*, which are extremely important in understanding a multinational organizations' ability to effectively transfer and absorb knowledge across borders.

The GLOBE project (House *et al,* 2002; Javidan and House, 2001; Javidan and Carl, 2005), proved that the culture differences are scientifically valid in predicting the leadership behaviors. The GLOBE project provided readers with a new insight of the societal and organizational measures of cultures in addition to Hofstede's studies, based on experiences from 61 nations worldwide. According to the authors, there are nine cultural dimensions in terms of *Uncertainty Avoidance; Power Distance; Collectivism; Gender egalitarianism; Future Orientation* (all these are similar to Hofstede's cultural dimensions)*;* four additional dimensions are *Assertiveness; In-group collectivism; Performance Orientation; and Humane Orientation.*

However, a review of the literature indicates that the role of national culture has not been systematically investigated in the field of Operations Management (OM), with a few exceptions. Pagell *et al* (2005) was an attempt to use national culture as an explanatory construct in the OM area to explain the differences of operations decision-making. They confirmed the validity of using Hofstede's national culture model to explain the various behaviours of operating managers

and their decision-making process in similar plants of the same manufacture, but located in different cultural contexts. In this study, the issue of considering national cultural differences has been emphasized, which extended the readers' understanding of OM decisions in a global context. Flynn and Saladin (2006) also applied Hofstede's dimensions of national culture to examine the effectiveness of the MBNQA constructs across U.S., Japan, Germany, Italy and U.K. The authors suggested that the quality awards or initiatives should be developed and applied sensitive to national culture (i.e. cultural sensitivity of management).

With a significant amount of literature tending to side with the 'national specificity' arguments, a different voice was raised by Rungtusanatham *et al* (2005). According to their empirical findings, the adoption of certain management practices appears to transcend national culture boundaries. However, Rungtusanatham *et al's* (2005) arguments were based on a study of developed countries – Japan, USA, Germany and Italy. What will be the case for developing countries, such as China that used to have a centrally-planned economy, but gradually transform to a market economy? For example, Ralston *et al* (2008) questioned the feasibility that a multinational corporation (MNC) to be integrated into a common set of values to create a universal corporate culture and practices. They argued that the degree of success to create a universal corporate culture may depend on the various local operations in terms of their capabilities to converge toward a common set of values.

The aforementioned literature helps the researcher to address cross-cultural dimensions of organizations in different countries, and illuminates the role of national culture in the implementation of management practices (e.g. QM). The author proposes that people from different cultural backgrounds are likely to place various emphases on QM implementation (e.g. 'adaptive' practices), according to their perceptions of rationality, and to serve their practical objectives. Put another way, culture is one of the contextually-determined factors which influence QM implementation and development.

In chapter 4, the author will examine the Chinese context and cultural dimensions, and evaluate their impacts on QM development and implementation in China. This is an important basis for this empirical study in Shanghai.

3.2. Dominant Management Discourse

According to Barley and Kunda (1992), the themes of American managerial discourse have alternated between two contrasting sets – normative and rational management theories and practices. The rational set includes scientific management and systems rationalism, which placed emphasis on the efficient use of systems, methods and technologies; whereas human relations and organizational culture/quality discourses emphasized normative control, thus stressed human factors (e.g. organizational culture, employee relations and attitudes). In the section 3.1, the author introduced the 'organizational culture and quality discourse'. This section will review other dominant management discourse – the author will outline the Human Relation discourse that advocates similar issues to organizational culture and quality discourse, followed by consideration of Scientific Management and System Rationalism. In the author's viewpoint, these organization theories remain relevant to and useful for understanding QM theories and applications.

Firstly, it would perhaps be useful to clarify the meaning of 'management discourse' used in this research. The importance of language in the study of social phenomena has been increasing appreciated across a range of social science disciplines, spawning an interest in the concept of discourse (Alvesson and Karreman, 2000). However, many definitions of discourse are evident in the literature, ranging from a 'narrow-' or 'micro-discourse' (Thomas, 2003) – 'all forms of spoken interaction, formal and informal, and written texts of all kinds' (Potter and Wetherell 1987), to a deeper and wider interpretation – the 'social construction of reality' (Alvesson and Karreman, 2000). On the other hand, as management thinking has drawn considerable attention in the past 20 years, discourse is also emerging as a key approach to understand and study organizational and management phenomena (e.g. Alvesson and Karreman, 2000; Fairclough, 2005; Grant *et al*, 1998; Iedema and Wodak, 1999; Oswick *et al*, 2007). Thus, the author claims that management knowledge, ideas, or thinking

can also be considered as a form of discourse – the discourse (the 'talk that is talked') that accompanies management practices to persuade and explain how organizations rationally pursue shared and valued goals.

3.2.1. Human Relations

As early as in the 1920s, industrial psychologists paved the way for the emergence of a human relations discourse that advocated similar issues to the more recent organizational culture and quality discourse. It placed a great deal of emphasis on employee relations, attitudes, welfare and emotions, which marked the normative control movement of American managerial discourse (Barley and Kunda, 1992).

Elton Mayo was considered as the human relations movement's founder. Since 1926, Mayo has involved in the human factors studies at Western Electric's Hawthorne plant together with his Harvard colleagues (McGregor, 1985). The fundamental concepts that discovered under Mayo's studies pinpointed the importance of social environment and employee's social needs to productivity, thus switched the focus away from the individual and physical considerations to the importance of groups at work requiring sociological and psychological consideration, and showed the employee motivational theory was opposite to the systematic, rational and logical model, and sole monetary rewards under Taylorism. Mayo's studies were followed by many other human relations proponents since late 1930s. For example, Abraham Maslow's theory of the hierarchy of needs; McGregor's Theory X and Theory Y; Herzberg's Motivation-Hygiene theory; and Hackman and Oldham's job enrichment theory (Barley and Kunda, 1992).

Human relation discourse, from a psychological perspective, shed lights on why people behave in certain ways and how to motivate them to take a course of actions to achieve goals, which can help us understand more about the human factors side of QM theories and applications, especially the concepts of TQM. As aforementioned, cultural change including altering how people actually behave at work is the foundation of TQM success. On the one hand, these motivational theories can tell us how to manage human factors and motivate them to behave in

a desired way when implementing QM practices. On the other hand, these motivational theories may imply that QM practices (TQM in particular) can generate some sources of human motivation when the appropriate assumptions about human beings are made.

3.2.2. Scientific Management and System Rationalism

The phases of Scientific Management and System Rationalism, surges of the American rational managerial discourse that contrast with the Human Relations and Organizational Culture/Quality discourses, appeal to the importance of using carefully articulated procedures, methods and systems (Barley and Kunda, 1992).

The Scientific Management discourse originated by Frederick Taylor, was the dominant thinking and practice of management for the first half of the 20th Century in the U.S. and much of the world. Its still has influence today. Taylor's rationalism led a new theory of systematic management (Evans and Lindsay, 2002). This management was underpinned by motivational wage-payment systems. Taylorism represents the classical management style (Theory X), embedded hierarchical elements of organizations, and makes highly rationalistic assumptions about individuals, organizations and society.

By the late 1950s, increasing interests in operations research and management science, and the advancement of information technology, created the context for the Systems Rationalism discourse (Barley and Kunda, 1992). Systems rationalists assumed that programmatic techniques or universal operational principles would enable managers to plan and more effectively. This supplied the elements of a new approach rational organizational culture, which again is still evident in many organizations.

Barley and Kunda (1992) considered that previous management rhetorics potentially left lasting traces in organizational culture, and were not wholly obliterated by subsequent surges. Barley and Kunda (1992) were considering only the U.S situation, and it may be that other national cultures will adopt and retain such management discourses on different timescales.

3.3. Analyzing Organizational Culture

In this section, the author will start evaluating the methodological approaches towards organizational culture analysis, followed by the analyses of the Competing Values Framework (CVF). The CVF is the theoretical framework adopted in this research to understand and examine the organizational culture in Shanghai manufacturing industries. A critical evaluation of the strengths and limitations of the CVF will be used to justify its suitability for the empirical study in China.

3.3.1. Methodological Approaches

There is a lack of consensus on the definition of organizational culture, derived mainly from the different organizational culture elements or levels that researchers have examined or studied, which therefore causes the controversies in the methodological approaches towards organizational culture analysis. Schein (1992; 2004) summarized five conceptual origins or research streams towards organizational culture analysis, which can be viewed as quantitative, qualitative and mixed-methods approaches.

Researchers in the qualitative stream, such as Glick (1985); Ott (1989); Schein (1992; 2004), have argued that the most important thing to study and interpret culture is to decipher shared basic assumptions (i.e. the deepest level of culture). The quantitative assessments presume generalizability and form a *priori* questions coupled with researchers' own perspectives, which may not be appropriate to identify the deeply-hidden aspects of culture and not broad enough to cover the cultural dimensions that are unique to a particular organization. The proponents in the qualitative approach typically use methods of in-depth and open-ended interviews, and ethnographic observation, which allow informants to describe organizational phenomena in their own terms and can obtain intensive and in-depth information about organizational culture (a thick description of an organizational culture) (Smircich 1983; See also Cooke and Rousseau 1988; Kwan and Walker 2004).

While some scholars insist on using qualitative methods, a number of researchers, e.g. Ashkanasy *et al* (2000); Cooke and Rousseau (1988); Kwan and Walker

(2004); Rousseau (1990a; 1990b); Xenikou and Furnham (1996), have criticized qualitative methods as often complex, expensive and time consuming, and noted the qualitative data is often non-parametric, precluding any multivariate analysis so it is exceedingly difficult to make systematic comparisons. Thus, there is also a need to use quantitative measures that rely on the robust and valid instruments to increase the understanding of organizational culture, especially for the cross-sectional assessments and comparisons (Cooke and Rousseau, 1988; Xenikou and Furnham, 1996), which also provide a common articulated frame of reference for interpreting data. Furthermore, as Rentsch (1990) argued, these behaviours and values are determined not by 'objective reality' but by actors' perceptions of reality, thus the survey questionnaire with organizational characteristics can allow respondents to record their own perceptions of reality.

It is not difficult to understand why using quantitative methods is acceptable to or proposed by many researchers, in the light of Schein's multilevel concept of organizational culture (Schein, 1992; 2004). Most researchers of this view generally examine the shallower layers of organization culture, and often regard organizational culture as *types of values* or *patterns of beliefs* organization members shared (e.g. Enz, 1986; Glaser, 1987; Sashkin and Fulmer, 1985;), or the *behavioral norms* in organizations (e.g. Allen and Dyer, 1980; Ashkanasy *et al*, 2000; Cooke and Lafferty, 1986; Kilmann and Saxton, 1983). In other words, quantitative researchers do not seem to attempt an exploration of the underlying assumptions of an organizational culture.

It is worthwhile mentioning that there are a number of studies in organizational culture that have used mix-methods (e.g. Hofstede *et al*, 1990; Siehl and Martin, 1988; Zammuto and Krakower, 1991; Zammuto *et al*, 2000). These studies demonstrated that qualitative and quantitative methods can be complementary approaches to examine the organizational cultures and attributes, which can provide the readers with different information and reflect triangulation terminology – the quantitative data provide an overview of general relationships between organizational culture and other organization's characteristics; whereas qualitative data has distinctive advantages to provide a substantive picture of the nature of these relationships and show how they manifest themselves within

organization, which allow a substantive picture for greater accuracy and understanding of the phenomenon (See Methodology Chapter 5 for a detailed discussion).

The aforementioned literature provides grounds for understanding and analyzing organizational culture, but also brings challenges in selecting an approach towards organizational culture analysis for this study. In the author's viewpoint, both methodological approaches are appropriate for studying organizational culture. The appropriateness of choosing an approach to analyze organizational culture therefore relies on the elements of organizational culture that to be studied, and equally important, the selected measure should be empirically validated for a study in China, the geographic location for this research. Obviously, if time and resources available, it would always be a good idea to combine structured and articulated quantitative instrument or framework with some intensive interviews or observations, which could not only capture the broad picture of organizational culture and characteristics, but also address the unique or distinctive aspects of organizational culture. For this research, as indicated before, the focus of analyzing organizational culture is to examine the systems of shared values and beliefs by members of an organization, the author therefore proposes to use the CVF that was initially developed by Quinn and his colleagues during the 1980s (Quinn and Rohrbaugh, 1983; Quinn and McGrath, 1985). The CVF is a conceptual framework to assess the organizational culture, and a method to compare the variations of organizational culture across different organizations in China. The following two sub-sections 3.3.2 and 3.3.3 will introduce and analyze this framework, with a critical evaluation of its strengths and limitations to justify its suitability for the empirical studies in China.

3.3.2. The CVF: U.S experience

The application of CVF in organizational culture analysis was originated by Quinn and Rohrbaugh (1983), which provided the basis to guide subsequent studies in organizational analysis. Quinn and Rohrbaugh (1983) focused initially on categorizing general organizational phenomena in relation to organizational effectiveness and concluded with an overarching framework – the Competing

Values Framework as an approach towards organizational analysis. In their viewpoint, the reason for choosing organizational effectiveness literature as groundwork was because this literature represented a central theme of U.S organization theory in early 1980s. Additionally, as Quinn and Rohrbaugh (1983) assumed that organizational effectiveness is a socially-constructed abstract notion carried in the heads of organizational theorists and researchers, their empirically derived approach therefore did not emerge from the observation of actual organization (between-subjects research designs), but from the ordering, through multivariate techniques of criteria that organizational theorists and researchers used to evaluate the performance of organizations. Figure 3.1 below is a simplified presentation to depict the theoretical framework – it is a four-quadrant typology of organizational models, represented by the internal process model, the human relations model, the open system model and the rational goal model.

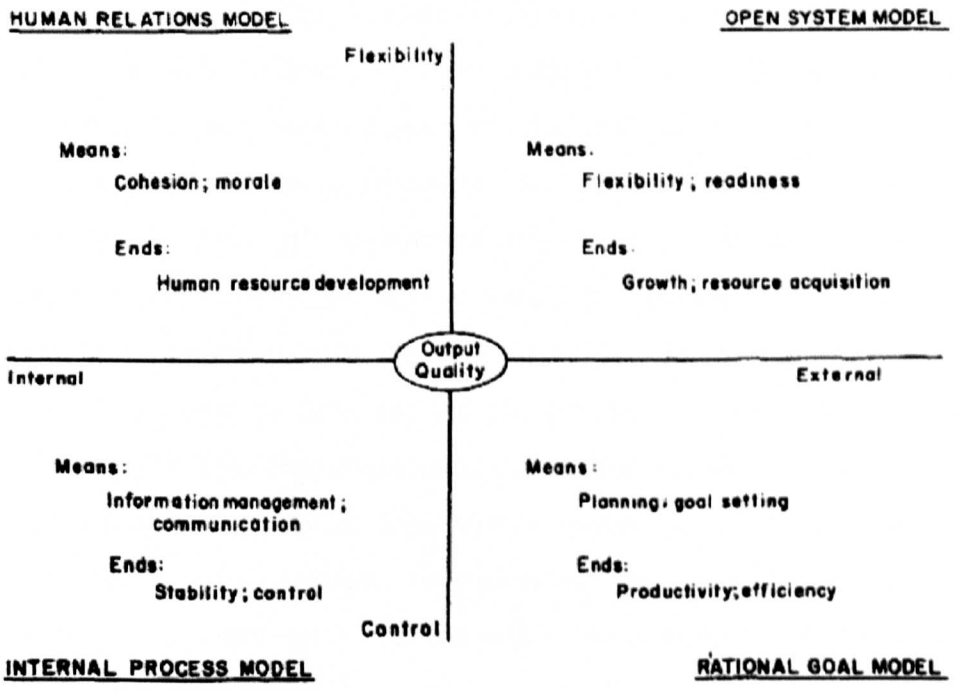

Figure 3.1: An overview of CVF
(Quinn and Rohrbaugh, 1983: p369)

However, given the fact that the CVF is presented as an integrative and theoretically-based framework to underpin the literature on organizational analysis, there are two concerns remaining. First, the CVF was derived mainly on the basis of organizational effectiveness literature, how relevant is this, when researchers apply it for organizational culture analysis? Second, Quinn and

Rohrbaugh (1983) assumed that organizational effectiveness is socially constructed, thus the CVF emerged from the perspectives of a wide and mixed range of knowledgeable and competent organizational theorists and researchers rather than being empirically tested in organizations (between-subjects research). When applying in actual organizational environments, can researchers use the CVF to capture real-life organizational phenomena? In order to answer the above questions, it was necessary to review a series of subsequent researches: Cameron and Ettington (1988); Cameron and Quinn (1999); Chang and Wiebe (1996); Quinn and Kimberly (1984); Quinn and McGrath (1985); Quinn and Spreitzer (1991); Shortell *et al* (1995); Zammuto and Krakower (1991); Zammuto *et al* (2000) who all applied this framework as a basis, but modified and extended it accordingly to examine the organizational culture of different organizations.

Quinn and Kimberly (1984) subsequently extended the CVF to examine organizational culture. They renamed the Quinn and Rohrbaugh's (1983) organization models to four respective cultural types – Hierarchical culture, Group culture, Developmental culture and Rational culture. Each of the cultural type contained its own value dimensions and reflected different organizational characteristics in terms of compliance, motivation, leadership, organizational structure and decision-making. Here it should be mentioned that there are two important assumptions underlie the CVF of culture. First, organizations can be categorized according to their cultural characteristics in terms of compliance, motivation, leadership, organizational structure and decision-making. A second assumption is that in reality no organization is likely to reflect only one type of organizational culture. Instead, organizations are more likely to have a combination of values and characteristics to respond to a wide set of environmental contingencies.

Cameron and Ettington (1988) and Zammuto and Krakower (1991) used the CVF as a survey instrument to assess organizational culture in higher education institutions throughout the United States. Cameron and Ettington (1988) and Zammuto and Krakower (1991) proposed that the culture of an organization is reflected and interpreted in four organizational attributes, namely, broad or dominant organization characteristics, leadership, means (the organizational

bonding) and ends/objectives. The respondents were asked to distribute 100 points among the four descriptions of each organizational characteristic depending on how similar they are to their institutions. The procedure of obtaining an institutional profile is by summing the individual respondents' rating on all descriptions for each organization type, and then dividing by four, which can generate overall score for each type of organizational culture from each individual, and finally averaging each of the four scores across respondents within each institution. These two researches demonstrate that the CVF is a theoretically-based and an empirically validated instrument for assessing an organizational culture as well as for cross-sectional comparisons in the U.S context, with an advantage of graphically mapping out organizational culture profiles. Moreover, Zammuto and Krakower (1991) discussed the usefulness of the CVF when in conjunction with qualitative research methods, such as with in-depth interviews, where different points of leverage in organizational culture can be obtained and compared to achieve 'triangulation' terminology and research validity.

Based on Zammuto and Krakower's (1991) modified version of CVF, Shortell *et al* (1995) applied it to analyze U.S. hospitals with QM implementation. Quinn and Spreitzer (1991) and Chang and Wiebe (1996) also confirmed the validity of the CVF for assessing organizational culture in U.S context, but modified it to a Likert-type version. A more recent research conducted by Zammuto *et al* (2000), applied the CVF to study and analyze differences in organizational culture across seven U.S. hospitals. More importantly, their research also matched the CVF cultural dimensions with Barley and Kunda's (1992) theory of management discourse. Zammuto *et al* (2000) argued the CVF value dimensions provide an important basis for distinguishing among American managerial discourses. Each cultural type of the CVF is coherent with an American managerial discourse, and taken together, the CVF's four organization's models map out the major shifts that have occurred in the American managerial discourse.

Numerous studies have established the construct validity of the CVF, as an instrument to study and analyze organizational culture, but are primarily based on U.S context. The advantages of the CVF include:

1. It can explore the mixed types of culture of an organization because most organizations in reality may conform to a mixture of types though they have a dominant type;
2. It can be used to compare the similarities and differences of organizational culture across different organizations descriptively and graphically;
3. It can allow respondents to record their 'own perceptions of reality' and can provide the author with a common articulated framework to interpret data;
4. In the author's viewpoint, it is also useful to combine with qualitative research to increase research validity.

However, the evaluation of the CVF must be considered within the context of both its strengths and weaknesses, so as to justify its suitability for the empirical studies in China. Having discussed the advantages, the use of CVF is not without limitations, specifically for a study in China. One of key concerns is that as the CVF was theoretically derived from U.S. literature and was empirically applied in the U.S. context, it might not be able to explain some 'unique' characteristics arisen from the cases in Shanghai manufacturing industries. Further, as discussed in the previous sections 3.1 and 3.2, American management theories may not be as universal as it is often portrayed to be in the global context. In this respect, the validity of applying the CVF in the cross-cultural context is challenged. Specifically, one could criticize whether this is an appropriate and robust instrument to examine the organizational culture in China. Therefore, in the next sub-section 3.3.3, the author will review a series of studies (Al-Khalifa and Aspinwall, 2000; Prajogo and McDermott, 2005; Sousa-Poza *et al*, 2001) that have used the CVF outside the U.S. context. More importantly, there are three studies (Deshpandé *et al*, 2004; Kwan and Walker, 2004; Ralston *et al*, 2006) empirically supported the validity of the CVF, as an instrument to assess organizational culture in China.

3.3.3. The Validity of CVF in Cross-Cultural Context

In recent years, there have been extensive cross-cultural researches using the CVF as a basis to assess organizational culture, and to investigate the influence of organizational culture on QM practices. For example, based on a survey of 141 organizations in Qatar, Al-Khalifa and Aspinwall (2001) argued that the CVF could be used to assess cultures of different organizations with TQM implementations in various Qatar industries. Sousa-Poza *et al* (2001) and Prajogo and McDermott (2005) further supported the validity of CVF in cross-cultural context by conducting a comparative study of the different impacts of organizational cultures on TQM implementations in the U.S, Switzerland and South Africa, and an exploratory study of the relationships between TQM practice and organizational culture in Australia respectively.

The CVF has also attracted increasing interests in Asia. Deshpandé *et al* (2004) used CVF to conduct a cross-cultural study in Tokyo, HK, Bangkok, India, Shanghai and Vietnam in relation to organizational performance analysis. Kwan and Walker (2004) validated the application of CVF for assessing organizational culture in China, based on an empirical study of 459 academic staff from 7 government-funded higher education institutions in HK. They argued that the CVF is a theoretically based and empirically validated instrument to describe and differentiate (cross-sectional comparison) the culture of various organizations in HK. Ralston *et al* (2006) used the CVF to compare SOEs, POEs and Foreign-Controlled Businesses (FCBs) in China, in the context of their organizational cultures. Their study illustrated that the CVF addresses multiple dimensions of organizational culture, which is empirically validated for researches that conducted in China, and is a useful instrument especially for cross-ownership (SOEs, POEs and FCBs) comparison of organizational culture in China.

Hence, the author argues that the CVF has been empirically validated not only in U.S context but also in relevant cross-cultural contexts. It is an appropriate, robust and useful instrument to examine the organizational culture in China, allowing for cross-ownership (e.g. SOEs, POEs, JVs and WOFEs) comparison of organizational culture in China. It is the only one, among various organizational culture frameworks, that has been extensively used in Asia, particularly in China.

It has attracted increasing attention in a number of international studies, to investigate the relationships between organizational cultures and QM implementation. However, the applications of the CVF have been dominated by quantitative approaches with the aim of seeking the 'generalization' of organizational phenomena, which provide readers a broad picture of cultural characteristics of an organization and general relationships between organizational culture and QM implementation, but neglect the 'unique aspects' of culture in an individual organization and is lack of 'richness' or 'thick description' of organizational phenomena. Therefore, for this study, the author will use the CVF in conjunction with a qualitative approach, i.e. face-to-face interviews. This methodological approach allows for greater accuracy and more detailed understanding of the phenomenon. Additionally, the author can possibly extend and modify the CVF with 'Chinese characteristics' for future studies in China.

3.4. Summary

This chapter has examined the relevant culture and organization theories in the context of QM, which are the building blocks to understand the 'soft aspects' of QM theories and practices. Firstly, the debates regarding how and why culture matters to QM have been introduced from two perspectives – from 'organizational culture' and 'national culture' research themes. Further, the author has reviewed other three American management discourses, namely Human Relations, Scientific Management and System Rationalism. Finally, in order to examine the organizational culture and compare the similarities and differences of organizational culture among case companies in Shanghai, it is necessary to rely on a theoretically-based and empirically validated framework. The author therefore used the CVF and combined it with face-to-face interviews, so to capture a more substantive and accurate picture.

CHAPTER 4 – QM IN THE CHINESE CONTEXT

In this chapter, the author will address the issues of contextual factors in China, and their impacts on organizational culture, indigenous managerial practices and QM. The chapter will address the multiple explanatory sources (i.e. social, business-environment and national cultural factors) that contribute to forming the distinctive Chinese context. Section 4.1 will outline the institutional background in three major phases. Section 4.2 will examine the Chinese cultural dimensions, and indigenous managerial practices in SOEs and POEs. Section 4.3 will present an outline of QM development in China, and discuss the influence of the Chinese context on QM implementation.

4.1. The Institutional Background

The institutional background in China will be considered in three phases: Pre-'Open Door' Policy (1949 until 1979), Post-'Opening and Reforms' (1980 until 2001) and China entry to the WTO (2001 until present), examining the changes regarding business environment, government policies and economic system, and the reforms in SOEs.

4.1.1. Pre-'Open Door' Policy

From the time when People Republic of China (PRC) was inaugurated and before its opening and reforms (1949-1979), the country was under a centrally-planned economic system. The SOEs totally dominated the domestic market and played a vitally important role to serve country's economy. There was no competition among the SOEs, because all of them acted as plants in a giant organization, centrally-planned and controlled by the Communist Party in government. Moreover, the SOEs had a multitude of standardized procedures and regulations – prices, quantities and technology were determined by the government planning bureau; strategic and operational decisions were all made centrally; outputs were sold to the state at a government-set price; wages of employees and managers were determined according to a uniform grade wage system; and employment was for life – the so-called '*iron rice bowl*' tradition (Bai and Xu, 2005; Fleisher and Yang, 2003; Meng and Kidd, 1997).

The influence of Communist Party on SOEs went further, reaching deep into each business organization. As Lockett (1988; 1990) pointed out, each SOE had a Party Committee and labour union, which had been the most powerful management body since the 1950s. In theory, the Party Committee was only responsible for broad policy-making, and educating employees' political ideas and work. In practice, however, the role of the Party went well beyond this, and participated in day-to-day management and decision-making, e.g. formulating strategy and supervising the operation of the enterprise, because the Factory Director was under the control of the Party Committee, although formally they held different responsibilities.

4.1.2. After 'Opening and Reforms'

From 1978 onwards, China started on its evolutionary path of 'opening and reforms', led by Deng Xiaoping. This was intended to bring China from a closed nation to the global market (Li *et al,* 2003). China's reform over the last two decades can be summarized as consisting of systems decentralization, 'marketisation', ownership diversification, liberalization and internationalization (Chung, 2003). The economic system gradually transferred from a centrally-planned economy to a 'socialist market economy'. Over the last twenty years, China's average annual GDP growth was over 8 percent, and foreign trade was growing at an annual rate of 15 percent (Brown and MacBean, 2005).

Driven by entrepreneurs, private businesses have been gradually permeating the domestic economy. However, these POEs had to operate in a restricted business environment until quite recent – they could not operate in certain industries, were required to pay higher taxes, had limited access to market information, land and loans from the state banks (Ralston *et al,* 2006). Notwithstanding this less-than-favourable institutional environment, the POEs were considered to be the most dynamic component in China's economy, as evidenced by the sector's high growth in productivity and very significant contribution to the country's GDP growth. For example, according to the statistics published by the State Administration for Industry and Commerce (SAIC), Chinese POEs employed 140 million people in total, with an annual output value of RMB 4 trillion in 2008 (http://www.saic.gov.cn/zwxxq/zwdt/zyfb/t20090320_45368.htm, accessed on

30th March 2009]. Regarding the organizational culture and managerial practices in POEs, they developed distinctive characteristics of organization structure and management style, which were different from the SOEs (Ralston *et al,* 2006) (see section 4.2.3 for detail).

On the other hand, China's open door policy made foreign investment become a key component of the country's overall development plan. The government offered preferential policies to attract foreign capital. As a result, thousands of JVs and WOFEs have been flourishing in the Chinese market (Studwell, 2002), which in turn, propagated foreign technology, management theories and practices to the nation, with the biggest encouragement and support from the Chinese government (Sun, 1999). Over the last few decades, China has attracted more Foreign Direct Investment (FDI) than any other developing country (Brown and MacBean, 2005). Compare to the SOEs and POEs, JVs and WOFEs had more exposure to foreign culture and managerial practices. However, JVs might be influenced by both the Chinese and foreign partners in terms of management and culture, e.g. relationship between Chinese and foreign partners, Chinese criteria for employee evaluation and work assessment (Miyagawa and Yoshida, 2005; Yang and Lee, 2002; Zhang and Goffin, 1999).

The emergence of POEs and the rapid growth of JVs and WOFEs brought unprecedented external challenges to SOEs. The role of SOEs was also shrinking. Consequently, in most industries, SOEs have faced intense competition and pressure to become more productive and efficient. Further, as part of the reform policies, the government listed some large state firms, downsized and restructured many SOEs, and sold off some small SOEs to private individuals in the early 1990s (Ralston *et al,* 2006). In addition to these external reforms and challenges, considerable efforts were made by the government to change organizational culture and indigenous managerial practices in SOEs, with the emphasis on improving their efficiency, profitability and productivity. In this respect, SOEs could become more competitive and adaptive to the challenges of the external environment. The internal reforms of SOEs included the launch of a labour contract system, incentive wage schemes, profit retention schemes, the profit responsibility system, the application of advanced technology and systems and the

enhancement of management autonomy on decision-making, in terms of investment, finance, human resource and suppliers (Bai and Xu, 2005; Child, 1990; Groves *et al*, 1995; Lewis, 2003; Meng and Kidd, 1997). However, the reforms in SOEs were also partly constrained by government authorities, Communist Party representatives, political and legal regulations (O'Connor *et al*, 2005).

4.1.3. China Entry to the WTO

On 11th December 2001, China became the 143rd member of the World Trade Organization (WTO). WTO accession was another important milestone for China. On the one hand, it was a key step forward to catch up with the advanced industrial world (Magarinos and Sercovich, 2002). On the other hand, it however, brought increasing challenges in terms of laws, regulations, competition and management practices.

The operational mechanism of the WTO is based on a market economy. China's economic system was therefore subject to the restrictions of WTO rules to a certain extent – the government would have to bring China's regulatory environment in line with the WTO system (Liang, 2003; Panitchpakdi, 2002). For instance, China's Ministry of Foreign Trade and Economic Cooperation (MOFTEC) announced in May 2002, that more than 2,300 domestic laws and regulations had been amended to comply with the WTO obligations, and 830 domestic laws and regulations have been abolished since 2001 (China Business Review, 2002). Furthermore, in order to fulfill the WTO obligations, China could no longer manage its commercial practices in the traditional way. A market system with open and orderly competition was being established in a gradual process, which, in general, indicated that the Chinese market was becoming liberalized and truly market-oriented (Liang, 2003). Undoubtedly, there is now greater competition between Chinese firms and foreign companies in the domestic market. China's accession to the WTO has resulted in even more competition in formerly protected sectors such as financial institutions, telecommunication, automobiles, pharmaceuticals and petrochemicals (China Business Review, 2002; Liang, 2003). Facing these changes, the reform of SOEs must speed up so they can survive in the new open, competitive and market-oriented business environment. In addition,

they called for big changes in the business thinking and approaches in all Chinese enterprises.

In terms of growth in business numbers, the statistics published by the SAIC, indicated that the number of POEs and FIEs was continuing to grow; whereas the number of SOEs was decreasing gradually between 2002 and 2008. In particular, the number of POEs increased dramatically during this period, and has represented more than 50 percent of the total number of enterprises in the Chinese market since 2005.
(http://www.saic.gov.cn/zwxxq/zwdt/zyfb/t20090320_45368.htm, Accessed 30th March 2009]

Year	Types of Enterprises ('000)				
	Total No of Enterprises	Chinese enterprises		Foreign enterprises	
		SOEs	POEs	WOFEs	JVs
2002	734.26	444.51	263.83	25.92	
2003	769.57	412.36	328.72	28.50	
2004	813.81	379.76	402.41	31.64	
2005	856.90	349.65	471.95	35.30	
2006	919.07	337.26	544.14	37.67	
2007	963.97	320.27	603.05	40.64	
2008	971.46	270.54	657.42	25.75	17.74

Table 4.1: The Status of Chinese Market 2002-2008
(Source: SAIC, 2009)

4.2. Chinese Culture and Indigenous Managerial Practices

This section will consider the distinctive elements of Chinese national culture, based on cross-cultural literature. The organizational culture and indigenous managerial practices in SOEs and POEs will also be examined.

4.2.1. Chinese Cultural Dimensions

China has a civilization spanning more than 5000-years, in which Confucianism has had a long-term and major influence on people's beliefs and behaviours (Li *et*

al, 2003), thus shaping social relations and economic development in China (Schlevogt, 2002). Today, the Chinese are still being educated in Confucianism, as an ethical system. It could therefore be argued that Chinese culture is rooted in the Confucianism (Jenner *et al*, 1998). The author will therefore provide a brief overview of Chinese Confucianism, as a foundation for analyzing Chinese culture.

The Chinese Confucian principles promote benevolence, justice, ceremony, wisdom (knowledge) and faith; but benevolence is believed to be the most important virtue. Benevolence is centred in two essential components: 1) respect one's parents and seniors, take care of them and act according to their wish; and 2) harmony, i.e. people's behaviours should be compatible with others and social system (Hall and Xu, 1990). Additionally, Confucian doctrine stresses kinship ties, and therefore promotes the ethics of a family-centred society (Schlevogt, 2002). All of these principles imply that Confucianism places a great emphasis on family values and group-orientation. As shaped by Confucianism, the Chinese cultural characteristics, according to studies by two influential cross-cultural, show specific features.

For instance, based on Hofstede's (1981) studies, China scored very low on Individualism and Uncertainty Avoidance cultural dimensions, considerably higher on Power Distance and Masculinity dimensions, and highest on the Long-term Orientation dimension (Hofstede, 2004) a culture dimension introduced later, explicitly to describe Chinese culture. His study implied that people in China place strong emphasis on in-group benefits, and are likely to extend families relationships to take responsibilities for other fellow members in the group. Additionally, a high value is place on social control and hierarchical systems. However, it is worth mentioning that Hofstede's results on Long-term Orientation (i.e. the fostering of virtues oriented toward future rewards) might not be so reliable nowadays, based on the author's experience, expert interviews and some of the case-study results. Anecdotally, business people tend to be short-sighted, and focus on short-term profit. The underlying reasons could be: the continuing impacts from the Cultural Revolution, changes in business and social environments, and reforms in SOEs.

According to Trompenaar (1994), China scored very high values on Particularism, Communitarianism and Ascription cultural dimensions, and fairly high values on Emotional and Diffuse cultural dimensions. These results suggest that the Chinese place greater emphasis on relationships and social connections than on formal rules and orders; and people in China are more likely to regard themselves as part of a group, and stress in-group members' interests and matters. In this respect, Trompennar's (1994) findings were similar to Hofstede's (1981) results.

Apart from the Chinese cultural characteristics that have been stressed in such cross-cultural research, the concept of family and family values are also crucial for Chinese culture. A family for the Chinese means blood-linked relationships or kinship. Consanguinity is considered the most fundamental and reliable social relationship, which defines an individual's sense of identity. Moreover, there is a strong distinction between members of the family, who can be trusted, and non-members, who cannot be trusted (Hall and Xu, 1990; Schlevogt, 2002). Further, as Lockett (1988) and Schlevogt (2002) pointed out, traditional Chinese culture emphasizes the importance for a gentleman to 'keep face and harmony'. Keeping harmony, e.g. behaving in accordance with group, is essential for saving face, as inconformity with group can be regarded as eliciting shame (loss of face).

4.2.2. Organizational Culture and Practices in SOEs

As discussed in Chapter 2, for this research the author adopted the CVF as a theoretical model to study organizational culture in the case-study companies. Ralston *et al* (2006) conducted a research in an associated area, but using quantitative methods. They found that the organizational culture and management practices in reformed SOEs reflected a combination of both hierarchical and rational cultures embedded in the CVF. Other scholars have also attempted to study the organizational culture and practices in SOEs (e.g. Child, 1990; Glover and Siu, 2000; Lewis, 2003), and observed the following characteristics:

***Power-oriented and Hierarchical organization*:** Most SOEs are power-oriented and place strong emphases on hierarchy and seniority, which lead a high degree of centralization and a top-down command structure. Top management plays a key role, and usually develop a condescending master-servant relationship with

employees. All decisions have to be referred to the senior executives, with lower levels obeying upper levels (Lewis, 2003). Employees are not involved in decision-making, not fully and appropriately committed, and accept little and sometimes unclear or overlapping responsibilities, leading to problems of low job satisfaction and employee involvement (Glover and Siu, 2000). Moreover, communication is likely to flow from top to bottom, and it is often virtually no flow of horizontal communication across departments, thus team-working is not preferred (Child, 1990).

The Importance of Relationships: Originally, 'Guanxi' referred to family ties, but nowadays, the meaning is broader, referring to any type of personal relations or connections, and is a sort of social investment within SOEs (Child, 1994). Managers and employees establish guanxi with other persons through the exchange of favours that tends to be more utilitarian than emotional (Lockett, 1988; Schlevogt, 2002). Externally, guanxi is considered as a network among various organizations and government officials, which is a foundation in ensuring business success, e.g. minimizing risks, frustrations and disappointments, achieving a long-term competitive standing. As Xu *et al* (2005) pointed out SOEs have more formal and official network resources than any other types of enterprises in China. Moreover, 78 percent of SOEs indicated in a survey that their largest suppliers were another SOE, and 60 percent said that their largest customers were another SOE.

Keeping Face and Harmony: People place great importance on 'Mianzi' (face), harmony and consensus, which often leads a low level of honesty and openness in SOEs. There is often no open and effective communication, especially upstream to the senior level. The leader is likely to consider himself as an expert in all important aspects, so as to keep face and to be respected (Lockett, 1988; Schlevogt, 2002).

4.2.3. Organizational Culture and Practices in POEs

Domestic private businesses boomed in China from later 1980s, and became the most dynamic component in China's economy. The POEs display distinctive organizational culture and management practices that are different from SOEs

(Ralston *et al*, 2006). A review of literature reveals that some interests have been made to study the traditional Chinese family business. A number of researches (e.g. Hall and Xu, 1990; Schlevogt, 2002; Ralston *et al*, 2006) demonstrated that POEs in China is a fruitful area that should call for intensive research. These researches also shed light on the organizational culture and practices in Chinese POEs.

The work of Ralston *et al* (2006) concluded that Chinese POEs tend to operate as family-oriented businesses and on a much smaller-scale than SOEs. The owners of POEs generally have an entrepreneurial style and are risk-takers. The culture of POEs in general possesses a combination of group and developmental values embedded in the CVF. Other cultural characteristics of POEs include:

Family and family-related values permeate POEs: A majority of the domestic POEs in China are family-based business, with trusted family members such as spouse and children often in key managerial positions, and other employment posts are usually given to those having family ties or relations with the owners. It is common that members of a POE are divided into categories according to their relationships with owners, such as family members, clan members, in-laws, close relatives, distant relatives, or even school-mates and friends. The closer the distance to the centre, the more likely it is that a member of the POE will be trusted and promoted. (Hall and Xu, 1990; Schlevogt, 2002)

Group orientation and relationships: Because of the family-managed nature, group orientation and relationships within POEs are extremely important. They are the devices to create strong cohesiveness in organizations. The meaning of relationships differs from that to SOEs, which refers to trust-based rather than reciprocity-based relationships among organization members. Members in POEs do business based on mutually trusted and long-term relationships rather than formal or written contracts (Schlevogt, 2002). Developing a wide range of informal networks is an essential vehicle for competitive edge and successful business.

Strong centralization but low bureaucracy: Usually within a Chinese POE, there is a high degree of centralization but a little bureaucratic management with no

well-defined hierarchical structure. This means POEs usually have simple and lean management structures, with less standardized rules, policies and control systems, and low levels of formalization and specialization. In other words, the owners of POEs prefer to exert personal control – often with little or no written documentation defining specific roles of employees, who seem to have no specialist positions and few routine works, and are required to do whatever the boss asks them to do. The seamless structure often permits rapid decision-making (Schlevogt, 2002). Clearly, this informal management style can present difficulties in companies which grow to a larger size, and hence may be gradually replaced with more formal systems.

4.3. QM in the Chinese Context

This section will briefly discuss the QM development in China, and evaluate the impacts of economic, environmental and cultural factors on QM practices in China.

4.3.1. QM Development

Chin *et al* (2001) categorized QM development in China into three phases, namely the 'Russian-influenced period' (1950s), the 'Chinese-style period' (1960s) and the 'transformational period' (1978 onwards). With limited information regarding the first two phases, the author will focus on discussing the third phase, the 'transformational period'.

Yu *et al* (1998) stated that the visit of Japanese quality guru Ishikawa provided an early stimulus for Chinese business people to learn modern QM methods. Ishikawa first propagated TQM themes from Japan to China in 1977, and supported by the State Economic Commission, China's TQM programme officially started in 1978. Since then, the QM development in China has experienced three stages – Quality Circles, 'Chinese' TQM and Quality certification (See table 4.2 below) (Li *et al*, 2003; Liu, 2005; Sun, 2000).

QM development (1978 onwards)	Events
I. Quality Circle	• In 1978, the first Quality Circle was established in the Beijing Internal Combustion Engine Factory. • On 31st August 1979, the China Quality Association (CQA) was established to cooperate with government to promote QM. Various training courses on QM theories, techniques and methods hold nation-wide. • By 1985, there were 38,000 enterprises implemented Quality Circles. • By 1997, there were 12,840,000 Quality Circles registered in China, with 430,000 in Shanghai. QC teams in China usually included managers, engineers and workers. However, many of those Quality Circles may be considered 'adaptive practices'
II. 'Chinese' TQM	• The Shanghai Quality Association (SQA) was established in 1982 and started providing TQM training, seminars, show cases and TV programs in 1985. • In 1986, Chinese government decided that all large and medium-sized SOEs had to carry out TQM. • The 'Chinese' TQM was based on three 'totals' – total people, total procedures and total organization, which focused primarily on production efficiency rather than customers' satisfaction and requirements, and was government-directed instead of market-driven
III. Quality Certification	• To standardize QM practices, Chinese government has implemented a campaign of introducing the ISO9000 series. China National Accreditation Committee for Quality System Registration Bodies (CNACR) was established to regularize quality accreditation to international standard. • Shanghai headed the movement towards ISO9000. In 1992, the first Chinese ISO9000 certificate was awarded by SQA. • In 2001, the first 'China Quality Award' was launched, and 25 organizations have won the honour over the first four years. • The Quality Supervision Division and China National Institute of Standardization (CNIS) published GB/T19580-2004 as Criteria for Performance Excellence, which was effective in Jan 2005

Table 4.2: The three stages of QM development – 1978 onwards
(Sources: Li et al, 2003; Liu, 2005; Ping, 1992; Tuan and Ng, 1998; Sun, 2000)

Moreover, according to the 2007 ISO survey of certification, the number of certified companies to ISO9000 standards has rapidly increased worldwide, during the period December 2003 until December 2007. Up to the end of December 2007, there were more than 950,000 certificates issued in 175 countries; China was the top country for achieving ISO9001:2000 certificates, with the total number of 210,773 (i.e. 22% of the world total). In terms of the automotive industry QMS (TS16949), there were 35,198 certificates issued in 81 countries by the end of 2007. China ranked as the number one country for achieving TS16949:2002 certificates in 2006 (Certificates: 4758) and 2007 (Certificates: 7732), replaced the top position of USA in 2005. (http://www.iso.org/iso/iso9000-14000/pdf/survey2007.pdf, Accessed on 28th March 2009)

ISO 9001:2000 principal results

World results	Dec. 2003	Dec. 2004	Dec. 2005	Dec. 2006	Dec. 2007
World total	497 919	660 132	773 867	896 929	951 486
World growth	330 795	162 213	113 735	123 062	54 557
Number of countries/ economies	149	154	161	170	175

ISO/TS 16949:2002 certifications

World results	Dec. 2004	Dec. 2005	Dec. 2006	Dec. 2007
World total	10 019	17 047	27 999	35 198
World growth	–	7 028	10 952	7 199
Number of countries/ economies	62	80	78	81

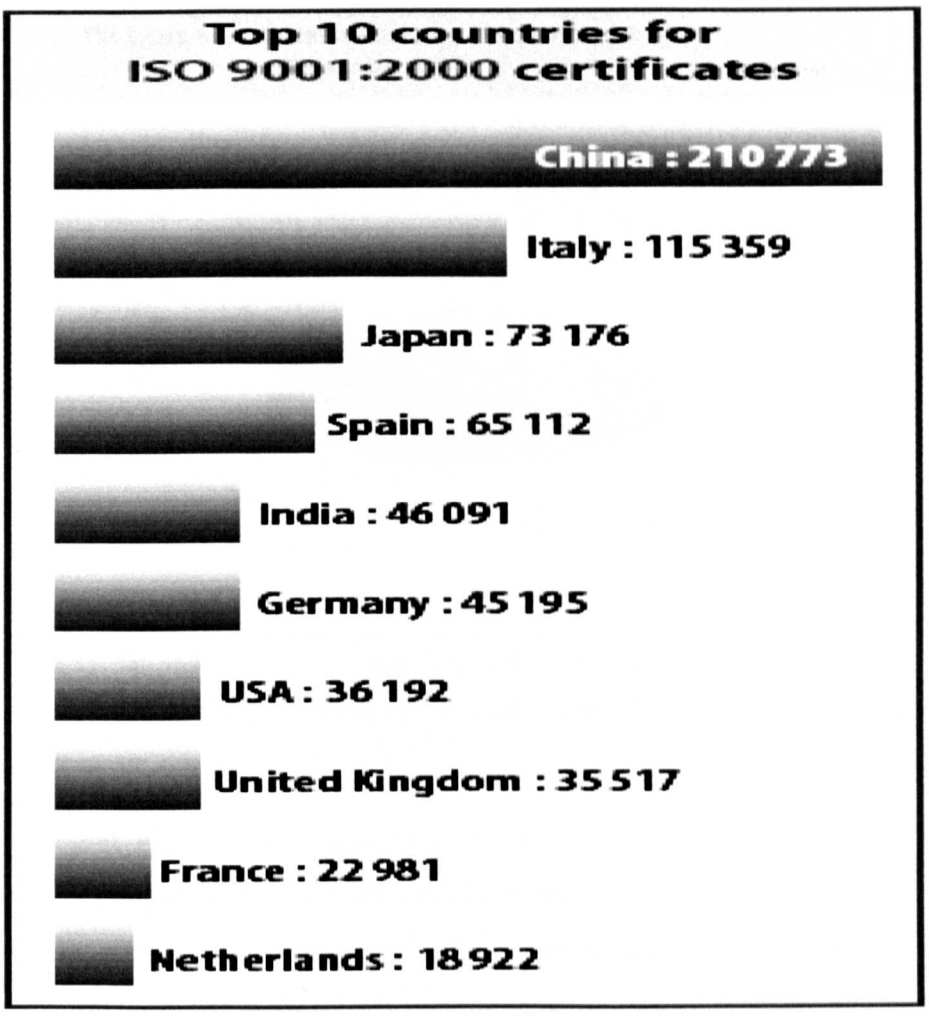

Figure 4.1: ISO9001 & TS16949 global picture
(Adopted from the ISO survey of certification 2006)

According to the statistical data from China National Service for Conformity Assessment (CNAS), there were almost 500,000 certificates issued in China by the end of December 2007. These included 212,496 CCC/3C product certificates (43.1% of the China total), 210,773 QMS certificates (42.8% of the China total), and seven other types of certifications (e.g. ISO14000; represented only 14.15% of the China total) (See figure 4.2 below):

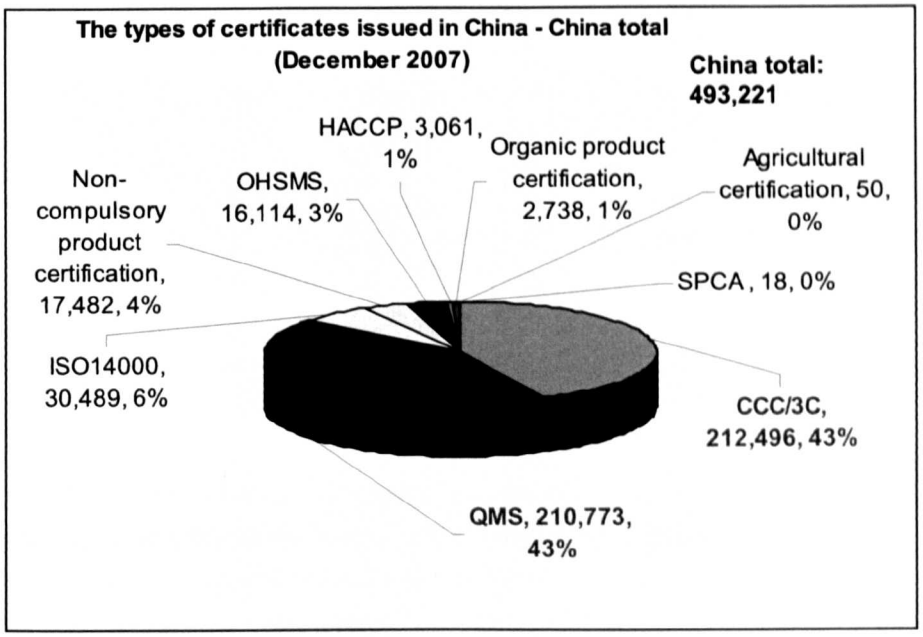

Figure 4.2: The types of certificates issued in China
(Adapted from CNAS Statistical data 2007)

Table 4.3 and Figure 4.3 below show that there has been a dramatic growth (+178%) in the number of issued QMS certificates in China during December 2002 till December 2007. Notably in 2004, the total issued certificates jumped to a six figure number 132,926, which represented an increase of 36,211 (+37.4%) over 2003. Although the growth rate slowed down in 2005 and 2006, it rebound in 2007 with a growth rate of 29.1%. Comparing the number of issued certificates in terms of geographical areas, Shanghai was only ranked as the 7th top city for qualifying QMS certificates in 2007. This might due to the fact that Shanghai headed the movement towards ISO9000 in China, and the number of certificates issued has levelled out compared with other cities in China during recent years.

Year	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
QMS Total	75,755	96,715	132,926	143,823	163,298	210,773
QMS Growth		20,960	36,211	10,897	19,475	47,475
QMS Growth Rate		27.67%	37.44%	8.20%	13.54%	29.07%
A Five-year Growth%						*178.23%*

Table 4.3: QMS Certificates issued in China (December 2002 to December 2007)
(Adapted from CNAS Statistical data 2007)

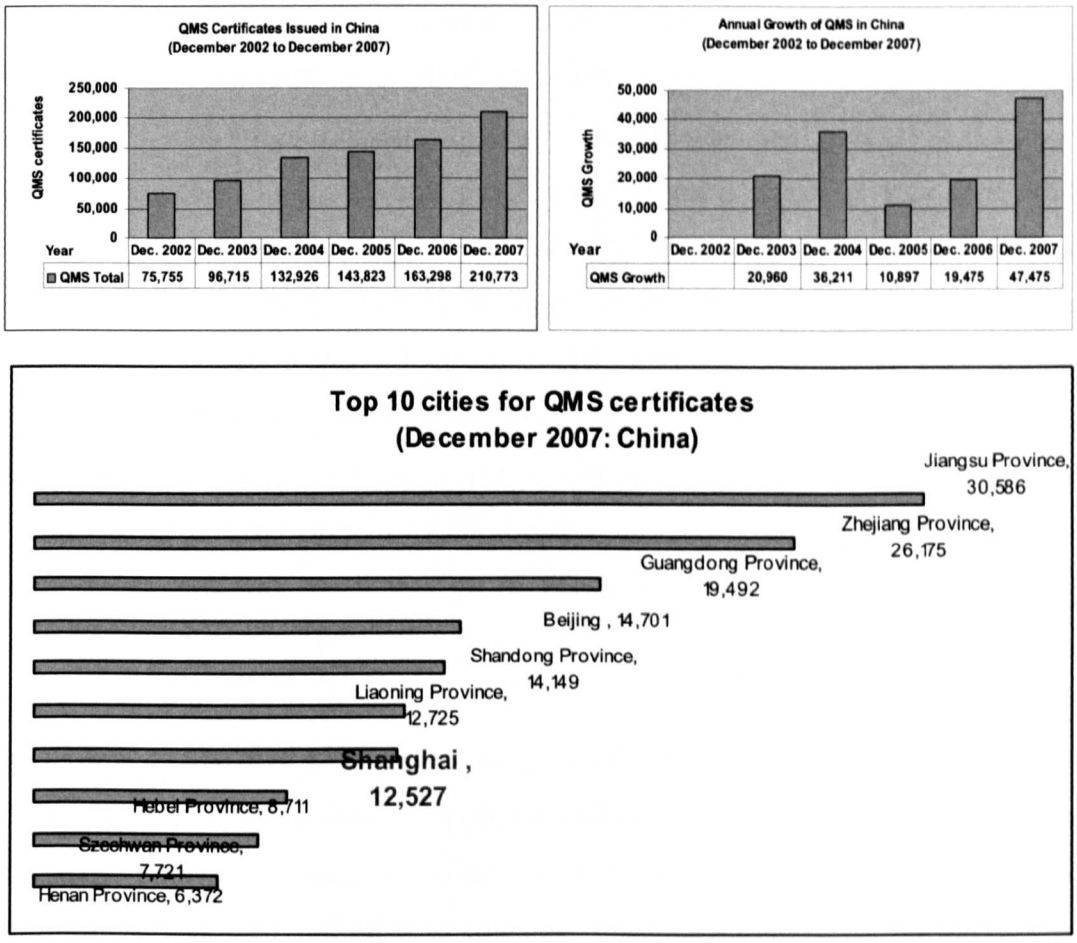

Figure 4.3: QMS certificates – China picture
(Adapted from CNAS Statistical data 2007)

Central and local government, quality associations and professionals, foreign QM theories and practices that may be disseminated via customers, suppliers and JV partners, have all contributed to QM development in China. For example, Tuan and Ng (1998) pointed out how modern technology and the management know-how from FIEs have spilled over into Chinese companies. The quality associations and quality professionals have also played an important role of disseminating foreign QM knowledge and experiences in China, as well as assisting Chinese enterprises to improve quality. The quality associations have also taken responsibility for setting up Quality Awards, e.g. the China Quality Award, Beijing Mayor Award and Shanghai Mayor Award. Liu (2005) also considered the potential role of government in three areas: 1) the Government could maintain a good environment for the functioning and development of quality; 2) the Government could exert its power to do quality supervisory sampling inspection; and 3) the Government could ban faked goods so as to rectify the market for both consumers and producers.

There has been considerable progress in terms of QM development, however most Chinese firms are still at a relatively early stage in their 'QM journey' in comparison with foreign companies (e.g. U.S, Japanese, and their JVs) (Li *et al*, 2003; Zhao *et al*, 2006), and some problems still remain unsolved (Hua *et al*, 2000; Lee *et al*, 2001; Zhang, 2000). For example, *Hua et al* (2000) conducted an empirical study on QM practices in China, based on the study of 71 Shanghai manufacturing companies. Their research findings suggested that people management and staff training seem to be weak in China – employees did not get adequate QM training, so many of them could not fully understand and implement quality tools and techniques. Additionally, most of the employees were not properly empowered, who had little chance to take part in quality strategy planning.

According to Lee *et al* (2001) and Zhang (2000), the QM practices in the Chinese firms were mainly based on foreign QM theories and practices. Chinese firms may not fully understand the applicability, practicability and effectiveness of QM approaches, and may indeed tend towards 'nominal adoption' of advanced QM concepts such as ISO9001 and Six-Sigma. Specifically, Zhang (2000) suggested that it is difficult for Chinese manufacturing companies to obtain sufficient information and knowledge to understand and support their QM implementation, because few empirical researches have been conducted in the area of QM implementation in Chinese manufacturing industries.

Moreover, Liu's (2005) candid review of Chinese national quality progress gave the impression that QM development in China may not be as successful as officially reported, and Chinese businesses may face significant challenges in the adoption of effective QM approaches, especially by some of the State-owned Enterprises (SOEs). At a QM conference in Shanghai, Liu (2005) presented evidence showing that there had been a slight decrease in manufacturing quality performance between 1995 and 2005, with smaller enterprises performing worst, based on National Supervisory Sampling Inspection data from government sources.

4.3.2. The Impact of the Chinese context on QM

A review of the literature shows a lack of recent empirical studies on QM in China, among which, few attempted to investigate the impacts of the Chinese context on QM in detail. Nevertheless, the limited number of studies available suggested that QM practices in China were considerably influenced by the business environment and Chinese culture (Chiu, 1999; Jenner *et al*, 1998; Li *et al*, 2003; Magarinos and Sercovich, 2002; Panitchpakdi, 2002).

The change of business environment (i.e. from a government-protected market to an open and competitive market) has had an impact on QM practices in China, especially since China's accession to the WTO that is believed to bring important changes in domestic business environment for QM practices. As Magarinos and Sercovich (2002) commented, China has an important gap in the adoption of state-of-the-art quality and standards-related systems, which they considered relates to a tradition of considering quality as an object of discretionary decisions. In terms of WTO entry, quality has to be viewed as a response to fierce market competition and demands, i.e. the fair and open competition heighten the pressing needs of many Chinese enterprises to accelerate the improvement of production processes and QM (Panitchpakdi, 2002). Further, international trade in both products and services, has been increasingly subject to new types of 'trade barriers', such as requirements of quality standards and various forms of certifications. For example, to comply with WTO national treatment requirements, China unified its two certification systems for foreign and domestic products. The old "CCIB" mark for imported products and "Great Wall" mark for domestic products have been replaced by a unified "CCC" (China Compulsory Certification) mark.

In terms of cultural impacts, a few authors have suggested that Chinese national culture might be a barrier to QM progress and successful implementation. For example, Jenner *et al* (1998) conducted a multiple case study of ten U.S-China JVs, which suggested that from the perspectives of U.S. partners, the values and behaviour patterns (i.e. culture) of Chinese managers and workers contradict the modern QM principles or concepts. Therefore, they are unwilling to accept or implement QM techniques wholeheartedly, which lead to unsuccessful or less successful QM implementation in the company. Chiu (1999) investigated the

practice of employee involvement in six TQM companies in Hong Kong. He concluded that management practices in indigenous Chinese firms conflicted with TQM principles, because business owners and top managers in these firms feel threatened by the idea of delegating authority and empowering employees, which generally leads to low level of employee involvement and commitment. Li *et al* (2003) studied TQM practices in China, based on a survey of 428 firms with different forms of ownership in Northern China. They suggested that the 'soft aspects' of TQM in China seem to be troublesome, which is closely linked to Chinese culture. For instance, TQM requires changes in organizational culture and members' behaviours. The Confucian system, however, tends to value stability over change. Additionally, Chinese traditional culture emphasized power and hierarchy, which also tends to contradict TQM principles.

The aforementioned studies suggest that implementing QM will be difficult or problematic if the relevant national culture is not harmony with QM principles, and indeed they also may criticize Chinese cultural elements. The author, however reserves her opinion on this debate, believing that a full absorption or direct replication of QM practices that are imported from overseas does not necessarily lead to success. Indeed, 'adaptive practices' may be more in line with national cultural values, and therefore result in more successful implementation and outcomes. These propositions accord with the cross-cultural literature discussed in Chapter 3. For example, Noronha (2002; 2003) provided empirical evidence to support the proposition that QM initiatives that are tailored to China's national culture will be more successful than those that are imported intact from Western countries. This does not mean that implementing QM will not lead a cultural change, but suggests that organizations should take Chinese culture elements into consideration, namely harmony with people and nature; abasement as an expression of modesty and humility to seniority; respect for authority and hierarchical relationships; adaptiveness or realism; the rules of proper behaviour entailing rights and responsibilities, and the appreciation of collectivism or interdependence, when creating a 'quality culture'. Noronha (2002; 2003) concluded that 'quality culture' is an important intermediary for bridging cultural values into QM practices and results. It is important for Chinese companies to realize the two-side (positive and negative) nature of Chinese cultural values –

they should take advantage of positive side to integrate them fully with QM practices, trying meanwhile to gradually mitigate the negative aspects.

4.4. Summary

This chapter has evaluated the distinctive Chinese context and its impact on organizational culture, indigenous managerial practices and QM. It should be clarified that the author stressed the importance of context, and proposed that QM theories and practices, just as other management theories and practices, should be context sensitive, rather than prescriptive or imperative. Indeed, it is reasonable to argue that context-specific or 'adaptive' QM practices in different countries can enhance the level of successful implementation.

CHAPTER 5 – METHODOLOGY

This research used a multiple-case studies approach. In this chapter, the author will address methodological issues from theoretical and practical perspectives. Section 5.1 will discuss the ontological, epistemological and methodological debates, which provide theoretical underpinnings of the specific research methods and designs adopted in this study. Section 5.2 will describe the specific research methods and designs in detail, and provide an overview of collaborating companies. Section 5.3 will illustrate data analysis techniques.

5.1. Theoretical Underpinnings

Social science research has been subject to the discussion around the long-standing debate about the most appropriate philosophical position from which methods should be derived (Easterby-Smith *et al*, 1991). Social science research can generate rich knowledge at paradigm level and contribute to paradigm development, which is considered as the 'philosophical dimension' of social science research (Johnson and Duberley, 2000). A paradigm is a set of assumptions on the nature of social world or reality (*ontology*), about how we can come to know that world or reality (*epistemology*), and about what constitute proper techniques or methods for inquiring into that world or reality (*methodology*) (Guba and Lincoln, 1994; Punch, 2005). However, there has been a long-standing debate in paradigm development regarding issues such as: how can we produce knowledge through research, and what are the relationships between different research designs and their results, from a philosophical perspective? (Pfeffer, 1993).

5.1.1. Ontological and Epistemological Debates

Ontology is a technical term in philosophy, which relates to the question of whether social phenomena exist independently or separately from social actors *(Objectivism)*, or if they are produced through social interaction (*Constructionism*) (Bryman, 2001). Once the ontological assumptions and position have been identified, a key question for the researcher is 'how to find out about the things that are out there?' In other words, how do we create knowledge? This is an epistemological question. *Epistemology* is the philosophical enquiry into the

nature and scope of human knowledge, concerned with developing the criteria by which to distinguish genuine knowledge from belief, prejudice or faith (Benton and Craib, 2001).

At epistemological level, the fundamental distinctions have been variously referred to, such as, '*subjectivism and objectivism*' or '*interpretivism and functionalism*'; '*phenomenology and positivism*' (Easterby-Smith *et al*, 1991). Patton (2002) argued that the adoption of either of these paradigms involves a different view of the nature of social world, arising from their different ontological perspectives. In a broad sense, the epistemological paradigms can be categorized as positivism and anti-positivism. Positivism advocates the application of the methods of the natural sciences to discover and measure independent facts and value-free reality (Bryman, 2001). Positivism is commonly characterized by a deductive method of inquiry and emphasizes using prior theory as a foundation for the hypothesis test or development (Shah and Corley, 2006), with the aim of seeking causality and generating laws (Riege, 2003). On the other hand, anti-positivism requires the social scientist to grasp the 'insider's' meaning of social action. The role of the social scientists is therefore to gain access to people's 'common-sense thinking' and interpret their actions and their social world from their point of view (Bryman, 2001). For example, Bogan and Taylor (1975) considered phenomenological inquiry as one of the main intellectual traditions that has attempted to explore things from the insider's viewpoint because human behavior is a product of how people interpret the world. The implication is that an anti-positivism approach is concerned with a comprehensive understanding of human behaviour; replication and theory testing are not stressed, instead, constructing meanings and developing theories are important (See also Shah and Corley, 2006). In other words, multiple social realities can exist, and a researcher's own values, knowledge and experiences impact on interpretation and research results. Indeed, Bryman, (2001: 15) pointed out, "*...There are at least three levels of interpretations going on in an anti-positivism approach, i.e. the researcher is providing an interpretation of others' interpretation, and the researcher's interpretations have to be further interpreted in terms of the concepts, theories and literature of a discipline...*". By placing oneself in the context where the phenomenon is occurring, and developing

interpretations of a phenomenon based on the insider's experiences, the researcher's personal experiences and the existing literature, the researcher can provide a deeper and more comprehensive insight into a social phenomenon ('thick descriptions').

The fundamental distinctions may seem to be very clear at ontological and epistemological level. Burrell and Morgan (1979) however, argued that when it comes to the application of quantitative or qualitative methodology and detailed research design, the distinction breaks down (See also Easterby-Smith *et al,* 1991). Alasuutari (1997); Silverman (2005) and Shah and Corley (2006) also suggested that researchers should adopt a flexible approach so as to gather data through a multiple methodological lens. In this regard, qualitative methods can be combined with quantitative methods so that a deeper understanding of organizational phenomena can be obtained. With the basis of ontological and epistemological discussions in place, the author will evaluate the methodological aspects of research, and demonstrate how '*triangulation*', as an established technique of data validation, contributes to methodological development.

5.1.2. Methodological Debates

Quantitative Vs Qualitative: Quantitative and qualitative are the two traditions in research methodologies. Quantitative methodology generally relates to natural science, and is considered as the dominant paradigm in the established ground. Kuhn (1962; 1970; 1996) argued that, there have been two types of research period in science – normal and revolutionary. Research during periods of 'normal science' can be thought of as solving a puzzle within a general pattern already outlined by the major theories of that science. However, as more and more of the puzzle pieces were put together, a researcher found out some new bits of information that have been verified by the methods of the science but did not fit into the prevailing paradigms, which then brought us into a period of science revolution – this is a major paradigm shift in the methodology of science, from Quantitative to Qualitative research methodology (see Figure 5.1 below).

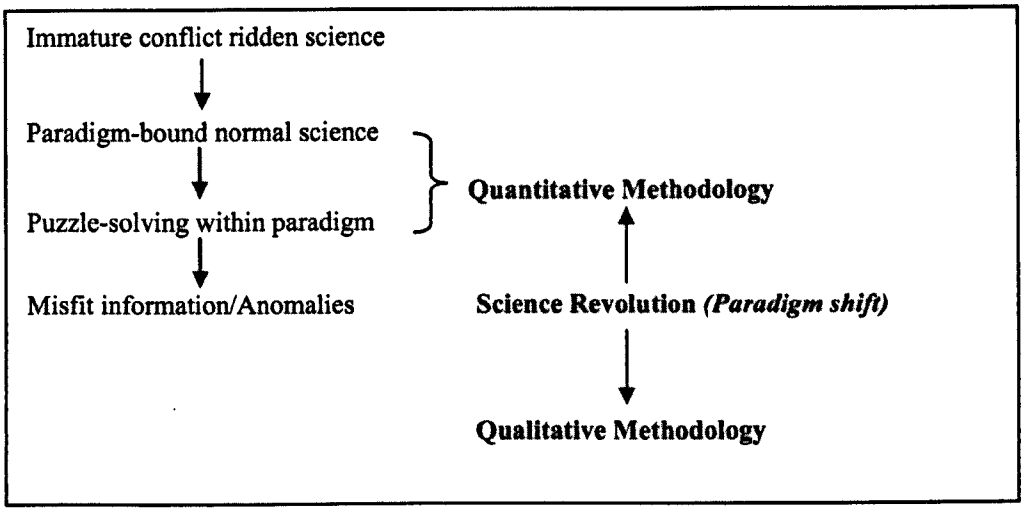

Figure 5.1: Kuhn's Puzzle-solving debate
(Adapted from Kuhn, 1996)

Bryman (2001) discussed quantitative and qualitative methodology in the context of their principal orientation to the role of theory in research, their epistemological and ontological orientation (See table 5.1 below).

Orientation	Quantitative	Qualitative
Principal orientation to the role of theory	Deductive; Theory/hypotheses testing	Inductive; Generation or development of theory
Epistemological orientation	Natural science model; Positivism	Anti-positivism: Subjectivism; Interpretivism; Phenomenology
Ontological orientation	Social reality is an external and objective reality: Objectivism	Social reality is a constantly shifting emergent property of individuals 'creation: Constructionism;

Table 5.1: Quantitative and qualitative methodology
(Adopted from Bryman, 2001: 20)

Further, some scholars have evaluated qualitative and quantitative methodology in respect to the specific methods or techniques that are being implemented. In Chapter 3, the author has laid some groundwork of the different methods and techniques advocates by qualitative and quantitative research respectively. Broadly speaking, quantitative research commonly uses questionnaires and statistical analysis to quantify the results of these observations while context is not central (in other words, to generate the mathematical significance relying on the instrument or measurement) (Maykut and Morehouse, 1994). In contrast, qualitative research is sensitive to the idea of process and/or social context (Punch,

2005), based mainly on the methods of in-depth interviews, and ethnographic fieldwork. The methodology itself emphasizes 'thick descriptions' of these observations and elicits experiences (i.e. getting insights into other people's experiences), meanings (i.e. how to interpret the significance of others) and representations (i.e. what kinds of techniques can be used to demonstrate the work of others).

Qualitative and quantitative methodologies each, arguably, have their strengths and limitations. Quantitative research, on the one hand, enables standardised and objective comparisons to be made, and the measurements of quantitative research permit overall descriptions of situations or phenomena in a systematic and comparable way, thus allows generalization and replication of the results (Punch, 2005). On the other hand, quantitative research may fail to distinguish the differences between the social and natural world. Other criticisms argued that the nature of quantitative research possesses an 'artificial' process, which has some dangers, such as ignoring the fact that sample members may interpret key terms in a questionnaire differently; or may not have the requisite knowledge to answer questions (Bryman, 2001).

Qualitative research is associated with reflexivity, flexibility and interpretation. According to Shah and Corley (2006), qualitative methodology began to take root in the social science in the early 1900s. In sociology, the Chicago School adopted a qualitative approach to studying group life (Barley, 1989). In anthropology, scholars including Bateson, Boaz, Evens-Pritchard, Malinowski and Radcliffe-Brown, established a tradition of fieldwork (Denzin and Lincoln, 1994). Lincoln and Guba's (1985) 'naturalistic inquiry' also played an important role in the recognition of qualitative research as a legitimate way of conducting research (See also Maykut and Morehouse, 1994). The primary benefits of qualitative approach, as Shah and Corley (2006) pointed out, is that it allows the researcher to discover new variables and relationships, to reveal and understand complex processes, and to illustrate the influence of the social context. Punch (2005) suggested that qualitative methods can easily obtain insiders' perspectives. It can be used to study the meanings for people and their experience, and usually the data can provide thick descriptions. However, in a similar way to the criticisms that have been

leveled at quantitative research, qualitative methodology is often criticised as subjective, complex, expensive and time consuming; qualitative findings are based on a small number of cases, and rely too much on the researcher's own views, experiences and interpretations, which makes it more difficult to replicate or generalize from a qualitative study (Bryman, 2001).

Given the fact that neither of the two methodological approaches is without limitations, the appropriate methodological selection may be determined by the nature of the research aims and questions. For example, Patton (2002) tabulated a range of possible theoretical perspective within qualitative inquiry, and the appropriate central question that each perspective would address.

Triangulation Strategy: a review of literature reveals that there is a trend of pairing qualitative and quantitative methodology to challenge the critiques and contribute to theory development – *'triangulation'*. From a methodological perspective, the *'triangulation'* terminology may indicate a combination of quantitative and qualitative (sometimes called 'mixed') methods to investigate the same phenomenon within a study, which can provide information from different angles and give researcher a greater understanding of the research studied (Patton, 2002; Shah and Corley, 2006). In any case, the *'triangulation'* strategy means using multiple sources of evidence (Yin, 2003). For example, gaining different sources of data (e.g. interviews, observation and documentation analysis); inquiry into the same phenomenon from different perspectives (different level of employees) and using multiple cases to develop external validation (Bryman, 2001). The process of *'triangulation'* is one of the important aspects helping to establish the validity and reliability of research (Stake, 1995).

5.2. Research Methods and Design

Flick (2002) suggested that a clear formulation of research aims and questions can help to validate the appropriateness of methodological decisions, from the following aspects: 1) Whether a qualitative or quantitative methodology is more appropriate? 2) What specific research methods and design are necessary to answer the questions? 3) Is it possible to address the research questions with chosen research design and methods?

The nature of this study was an exploratory research, and the author would like to obtain insiders' perspectives – to understand their interpretations and experiences, with the aims of generating new arguments, theoretical propositions and relationships, and developing a theoretical framework to explain the phenomenon. Therefore, it was considered more appropriate to use an anti-positivist, primarily qualitative approach, using case study methods and specifically a multiple-case study research design (Yin, 2003). This methodological decision also took important practical issues into consideration. In particular, the availability of resources and the difficulties of conducting survey-based quantitative research in China, e.g. the author had access to a relatively small number of companies and the survey response rate is usually low, with a poor quality of respondent questionnaires. However, the author has also supplemented the case study approach with a method (i.e. the CVF) which is usually considered to belong to the 'quantitative camp', in the interest of triangulation, and as recommended by certain authors (Shortell *et al,* 1995; Zammuto and Krakower, 1991; Zammuto *et al,* 2000).

The rest of this section will focus on discussing the specific research methods and design and set out criteria for evaluating qualitative research findings.

5.2.1. Case Study Method

Yin (2003) suggested that multiple-case research design has the advantages of providing more compelling evidence and more robust results to provide a rich picture of events and influences. It is a comprehensive research strategy, which helps investigators to understand complex social phenomena and allows them to retain the holistic and meaningful characteristics of real-life events (Yin, 2003). Assisted by further background information and interviews with QM consultants and industry experts, the multiple-case approach can provide substantial triangulation, i.e. the simultaneous display of multiple, refracted realities (Denzin and Lincoln, 2005).

5.2.2. Case Study Designs

A research design is a framework or plan that guides the execution of data collection and analysis (Bryman, 2001). Choosing a research design depends

largely on the type of information desired, the availability of resource, the capability of researcher, and very importantly, on a set of criteria for evaluating the research quality. In other words, a carefully designed research plan should enable a researcher to generate reliable and valid results that are '*best matched*' research aims and objectives with the available resources. Figure 5.2 below illustrates the overall research framework for this study, and the author will discuss each component within this framework in detail.

Component 1 – The research aims and questions:

As stated in the introduction, the key issue addressed in this thesis was managing quality in the Chinese context. The author aimed to:

1. Identify QM developments and current QM status;
2. Explore and compare the organizational culture and managerial practices of firms with different types of ownership (SOEs, POEs, FIEs);
3. Investigate the dissemination and adoption factors of QM in China, and develop a dissemination and adoption model.

The specific research questions are as follows:

1. What are the major QM developments?
2. What are the QM initiatives being implemented?
3. How effective is the adoption of QM initiatives, especially in terms of 'nominal adoption' and 'adaptive practice'?
4. What is the organizational culture in different ownership-types firms?
5. How are the QM initiatives disseminated?
6. What are the key factors for QM adoption?

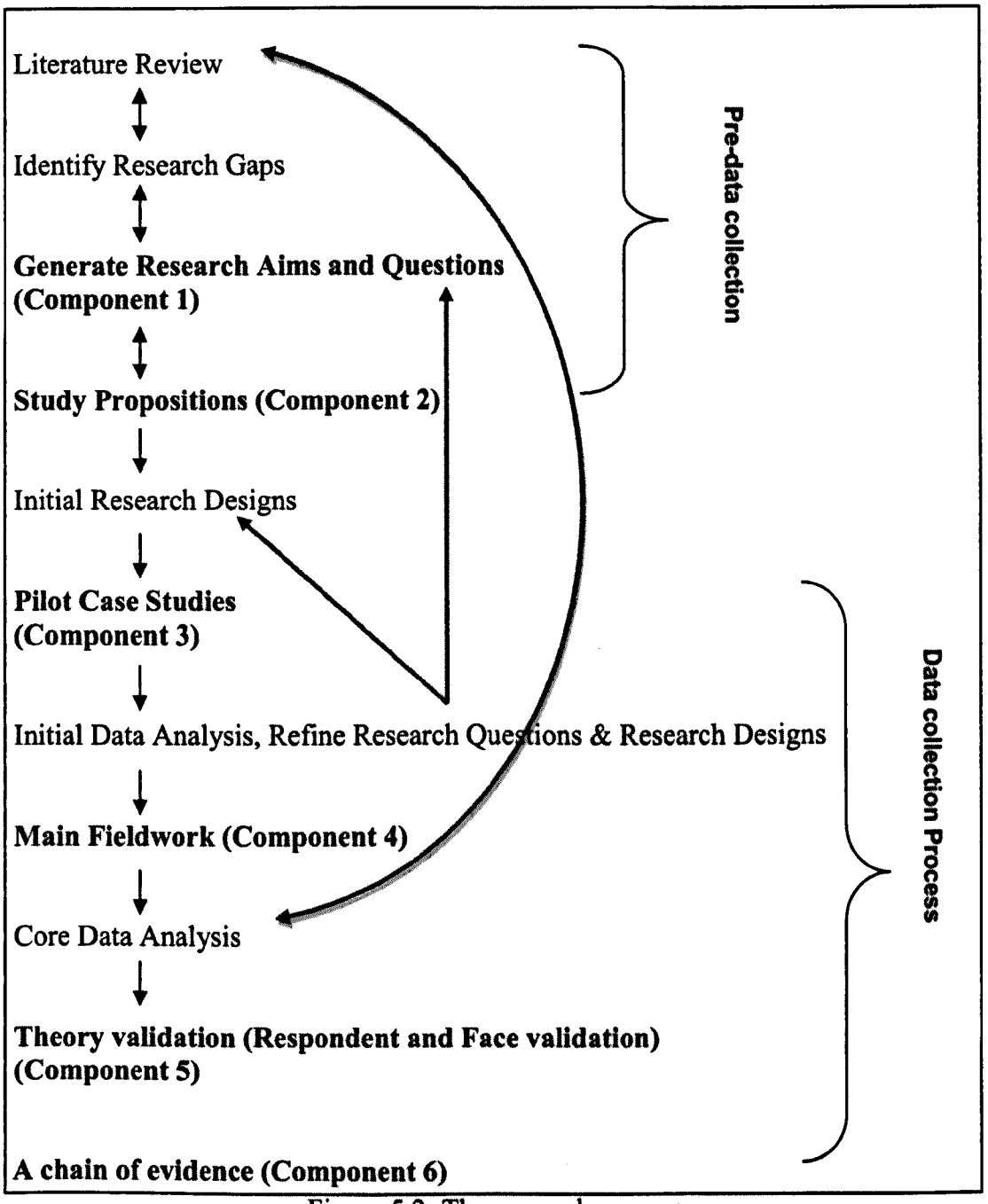

Figure 5.2: The research process

Component 2 – Study propositions:

Yin (2003) mentioned that each proposition directs attention to something that should be examined within the scope of study, which may reflect a theoretical issue, and guide the researcher where to look for relevant evidence. For this study, the author, however, argues that it is not necessary or appropriate to have clearly-defined initial propositions, due to the nature of this study as an exploratory research: the author aimed to generate new arguments, theoretical propositions and

relationships, and develop a theoretical framework. Having said that, the author, however, did establish a firm theory foundation based on an in-depth and comprehensive literature review. For instance, the author studied the dissemination and adoption process of QM in the context of Rogers' (1995) theory of diffusion and Abrahamson's (1996) theory of management fashions. The author proposed the phenomena of 'nominal adoption' and 'adaptive practices' in China, which relate to its national context.

Component 3: Pilot case studies

The pilot case studies were conducted between May and June 2006, which included a documentation analysis of two case companies and three pilot interviews. Pilot case studies provided the author with an opportunity to practice interview skills and techniques; to work out how good and appropriate the interview questions were; to refine initial research questions and designs; to identify the best possible data analysis approach; and to make a plan for the main fieldwork. (See Appendix 1 for pilot interview list and summary)

The author generated some preliminary findings based on the pilot case studies, which created the basis for the development of the overall theory in this research. After a detailed discussion with her supervisor, the author refined the initial research plan in the following respects: 1) Adopted CVF as a theoretical framework to analyze the organizational culture, allowing for systematic comparison across cases; 2) Studied the dissemination and adoption process and factors of QM in more depth, and in the context of relevant theories (Abrahamson, 1996; Rogers, 1995); 3) Designed a set of interview questions for quality consultants and industry experts in Shanghai, so as to gain external validity.

Component 4: Main fieldwork

The main fieldwork was undertaken from December 2006 to March 2007 in Shanghai, and was based on the study of six manufacturers (two of them were also pilot cases, see section 5.2.3 for details). The selection of each case (i.e. unit of analysis) was on the basis of their relevance to the research questions, the author's theoretical position and the theory that is being developed (Silverman, 2005). In total, 14 managers were interviewed from six companies, and three QM

professionals from two consulting companies (See Appendix 1 for main fieldwork interview list and summary). The interview questions were discussed with the author's supervisor to check on the clarity and appropriateness. Discussions were also held with quality professionals in Shanghai Quality Association for translation issues.

The primary data derived from main fieldwork consisted of:

1) Semi-structured interviews with both top management and quality managers from within each company; and with quality consultants in training, consultant and auditing firms in Shanghai. An interview protocol consisted of three different sets of questions for different peoples (set I for senior managers; set II for quality managers; and set III quality consultants, see Appendix 2 for detail). Furthermore, an audio-recorder was used to support manual notes-taking. It proved to be a good tool to capture the actual words of interviewees and provide a more accurate rendition of interviews.

2) Documentation analysis – Documentary evidence was collected during interviews, in the following categories: companies' brochures; photographs; internet pages; presentations; DVDs (video recordings); newspaper articles; and industry reports. It was used in conjunction with semi-structured interviews to develop a better understanding of the phenomena. Additionally, some of the documents were historical evidence, which were useful to understand the QM developments and relevant contexts in the case-study companies.

Silverman (2005: 212) suggested that "*...Qualitative researchers should where appropriate, use quantitative measures. Simple counting techniques theoretically derived and ideally based on members' own categories, can offer a means to survey the whole corpus of data ordinarily lost in intensive qualitative research. Instead of taking the researcher's word for it, the reader has a chance to gain a sense of the flavour of the data as a whole. In turn, researchers are able to remove nagging doubts about the accuracy of their impressions about the data.*"

Therefore, the author adopted CVF in conjunction with face-to-face interviews, to assess the organizational culture of the case-study companies. Respondents were asked to distribute 100 points among 4 items in each dimension, depending on

how similar the description was to their own organization. Respondents had to use all 100 points for each dimension, and for each item, respondents could give any points count between 0-100 (0-not the same at all, 20-30 somewhat similar but less than half; 50 half right; 70-80 very similar; 100 all the same). The author summed the respondents' rating on all items for each organization type, and then divided by five to generate an overall score for such type of culture (e.g. summing the points items 1a, 2a, 3a, 4a and 5a then dividing 5 can obtain an overall hierarchical culture) (Cameron and Ettington, 1988; Zammuto and Krakower, 1991; Zammuto *et al*, 2000). Additionally, during the interviews, the interviewees from the case-study companies were also asked to provide a numerical score indicating the influence of the potential dissemination and adoption factors discussed, using a Likert scale (1=the least influential, 5=the most influential) as a general indication of relative importance.

These data collection methods provided an opportunity to corroborate the findings about each case company from different internal and external perspectives, which are more likely to be convincing and accurate, and provide for within-case and across-case triangulation.

Component 5 – Theory validation

Theory validation was carried out during January and February 2009, through respondent validation and face validation. The author developed a high-level relationship diagram and validation notes that summarized the overall research findings (see Chapter 9 for detail). The author discussed them with three respondents from case-study companies. It was considered important to have these analyses and findings reviewed by interviewees, so as to ensure there was no misunderstanding or misinterpretation. The author also held a panel discussion with three professors working in the China Europe International Business School (CEIBS) – Prof A is a professor of Decision Sciences and Six Sigma black belt; Prof. B is a professor of Operations Management; and Prof. C is working in the institution of Supply Chain Management. They all have extensive research experiences in the relevant field and active engagement with local enterprises in terms of consulting (e.g. QM implementation, supply chain management) as well. In this respect, the author aimed to increase the validity and reliability of results.

Component 6 – A chain of evidence

For each case study, a chain of evidence was prepared, including interview lists and summary, source recordings, case companies' documents and photos, unprocessed Chinese transcripts, and edited and analysed transcripts. Finally, the key findings and quotations were translated into English. In this way, the author kept a complete record of all phases of the research process in an accessible manner, to demonstrate the whole procedures of this research and for later inspection if required.

Criteria for Establishing Validity and Reliability:

Traditionally, a set of design tests or criteria, namely construct validity, internal validity, external validity and reliability, is used to judge the quality of a research design, and is well-known from quantitative research approaches. Writers from the interpretivist perspective have argued that these traditional notions of validity and reliability are inappropriate to evaluate the quality of qualitative research. For example, Lincoln and Guba (1994) furnished an alternative set of criteria that can be used to evaluate the trustworthiness of qualitative research, namely Credibility, Transferability, Dependability and Conformability (Bryman, 2001; Riege, 2003; Shah and Corley, 2006). Table 5.2 below summaries a set of traditional criteria, an alternative and parallel set of criteria, and a set of actions or techniques that the author has adopted in this research to meet the requirements for validity and reliability.

Traditional Criteria (e.g. Yin, 2003)	Trustworthiness Criteria (e.g. Lincoln and Guba, 1994)	Techniques for meeting criteria
Internal Validity	Credibility	• Triangulation of data types • Respondent validation • Do within-case analysis, then across-case pattern-matching • Explanation-building (e.g. Display of illustrations and diagrams)
External Validity	Transferability	• Thick description (rich accounts of the details) • Using multiple-case designs for a "analytic generalization" • Compare findings with extant literature
Objectivity/ Construct validity	Conformability	• Establish a chain of evidence (Interview transcriptions; Clear notes on theoretical & methodological decisions; Accurate records of contacts and interviews) • Use multiple sources of evidence • Respondents validation
Reliability	Dependability	• Keep complete records of all phases of the research process • Informants confidentiality protected
Note: The techniques summarised here is not a completed list, the author selected them from different sources as they were adopted in this research		

Table 5.2: Selected Techniques for establishing validity and reliability
(Sources: Bryman, 2001; Riege, 2003; Shah and Corley, 2006)

5.2.3. Collaborating Companies

The six collaborating companies in this research fall into three different ownership groups: two Chinese Private-Owned Enterprises (POEs), two Chinese SOEs and two Foreign-Invested Enterprises (FIEs), comprising a Joint Ventures (JV) and a Wholly-owned Foreign Enterprises (WOFE). All of them have been established for eight years or more in the Shanghai region of China, with a minimum three-year ISO9000 registration. The six companies were operating in various

manufacturing industries, including automobile, chemical, electronic and home appliance. The size of the case-study companies was quite similar, with two exceptions – Company B and D, as they were listed in the Shanghai Stock Exchange. (See Appendix 3 for photos taken during fieldwork)

It is virtually impossible to obtain good access to case companies in China, without some prior relationship of trust and confidence. Access to all six case companies was secured through personal contacts on the basis of confidentiality. Hence, the identity of the companies and individual participants has been concealed. The case studies companies were unwilling to sign the consent letters, though the respondents agreed the author's access to their companies. The author, however, informed all the participants of the purpose of the interviews, how the data would be handled, the use of audio recorder during the interviews and the confidentiality issues at the beginning of each interview.

Company A (RSHEP) was a chemical manufacturer, originally founded as a JV. In March, 2006 it restructured as a WOFE without the Chinese partner, and also opened a new plant at Shanghai Minhang Industry Centre. The company had about 150 employees. Its major product was polyamide engineering plastics with five main markets. The automotive market was the most important, being more than 50% of production, but it also supplied plastics for industrial specialties, consumer goods, electric/electronics and fibres manufacturers. Its QMS certifications were: ISO9001 first certified in 1994, QS9000 first certified in 2002 and its successor TS16949, first certified in 2006.

Company B (SHRL) was a Japanese JV that specialized in producing air-conditioning compressors, and was listed at the Shanghai Stock Exchange. A Chinese SOE held the majority of its shares (75%) and a Japanese company held the remaining 25%. This company first achieved an ISO9000 series standard in 1996, and upgraded to ISO9001 in 1998. The size of this company was quite huge with more than 3,500 staff.

Company C (SZ) was founded in 1997 in Shanghai's Pudong District, and was a State-Owned and Welfare Enterprise operating under the Shanghai Civil Affairs

Bureau. The company had nearly 400 employees, and produced four types of automotive components: battery cables, plastic inner parts, hot pressed products, and rubber seal products. It was a major component supplier for leading companies including Shanghai GM, Shanghai Volkswagenwerk, MG Rover, Jinbei Auto, Chery QQ and Chong Qing Visteon Corporation. They have had an ISO9000 series certificate since 1998, VDA 6.1 since 2000, QS9000 certified in 2002 and TS16949 since 2004.

Company D (SDEC) was founded in April 1947 in Shanghai. It was a mechanical manufacturer – a traditional Chinese SOE with a 60 year history. It was founded in April 1947 in Shanghai. The company was involved in developing, designing and manufacturing diesel engines. In 1993, SDEC experienced restructuring and was listed on the Shanghai Stock Exchange. The company had more than 4,000 staff, and produced five series of diesel engine products, mainly supplied to coach and lorry manufacturers, and construction mechanism equipment companies. In terms of QMS; SDEC obtained its first ISO 9000 series certificate in 1994, upgraded to ISO 9001:2000 and QS9000 in 2002, followed by TS16949 in 2006.

Company E (DJ) was a POE that produced colour televisions. It was established in 1994 in Shanghai. During the first couple of years, DJ only traded electronic components in the Chinese market. Due to its strong growth and development, the company started to export its products overseas, including North and South America, Europe and South Africa. DJ was one of the 300 largest enterprises in Shanghai Electronic Industry that has about 160 staff. Additionally, DJ set up a TV factory in Suzhou (a place near Shanghai) in early 1997 with approximately 500 employees. The company obtained ISO9001 in 2000.

Company F (LL) was a POE, was established in Shanghai in 2000, with around 400 staff. The company specialized in manufacturing Electric Bicycles, and obtained ISO9001:2000 standard in 2002. Over the years, LL has achieved 13 patents on its innovation, e.g. intellectualized battery, environmentally-friendly electrical machine, etc. At the time of interview, LL had two automatic production lines with the capability of producing 0.3 million Electric Bicycles per year. The company had more than fifty different types of electric bicycles on the market, and

could achieve the sales target of 8000 bicycles every month in Shanghai. It was the market leader (has 20% of the market share) in Shanghai Electric Bicycles industry.

5.3. Data analysis techniques

Qualitative content analysis was used, incorporating qualitative data reduction and sense-making that aims to abstract from large quantities of relatively unstructured qualitative data; core consistencies, meanings, relationships and key terms (Patton, 2002). Individual findings were discussed by the author, in an iterative process, as she sought where possible to triangulate, and/or replicate findings using more than one source.

5.3.1. Within-case Analysis

To start with, the author analyzed each individual case, and wrote an individual case summary. The author analyzed all the relevant information or data under themes established through the literature review, and summarised in the detailed research questions, so that a standard pattern for each case analysis could be created. Each further case was then analyzed on the basis of this established pattern. In this way, the author was able to treat the evidence fairly, aiming to produced compelling analytic conclusions, focus attention on key data, and distinguished between alternative interpretations. Two specific analytical strategies used were: explanation-building and thick descriptions. Explanation-building was to explain a set of casual links about a phenomenon (e.g. adoption factors), with display of illustrations and diagrams, based on extensive analysis of information. Thick descriptions explained key terms, concepts and quotations generated from interviews. These explanations provided insights into theory, leading to recommendations and contributions to theory building (Silverman, 2005).

5.3.2. Cross-case Analysis

The author used the 'constant comparative method', as Silverman (2005) suggested that *"...the qualitative researcher should always attempt to find another case through which to test out provisional theoretical propositions or statements."* The other important strategy that used for cross-case analysis was

using appropriate tabulation and diagrams – the author used word tables and matrices that display the data from the individual cases in a uniform framework. For example, summarizing and comparing different QM techniques and tools being implemented in case-study companies. This can also be regarded as cross-case synthesis.

At this stage of the data analysis, the author aimed to produce interpretations and compare findings with extant literature, so as to develop new arguments, theoretical propositions and a theoretical framework.

5.4. Summary

This chapter has described the theoretical and practical issues that associated with research methodology. On the basis of the theoretical underpinnings, the author has argued the necessity for using a case study strategy to achieve the research aims and questions, and discussed the case study design and its rationale. Finally, the author has explained the data analysis techniques, in terms of within-case analysis and cross-case comparisons. Data analysis results will be presented in the following chapters (Chapter 6, 7 and 8).

CHAPTER 6 – QUALITY MANAGEMENT PRACTICES

This chapter will present the analyses of QM practices derived from fieldwork. Section 6.1 will discuss the common and likely path of QM development. Section 6.2 will outline the current popular QM approaches. Section 6.3 will evaluate the effectiveness of QM adoption, especially in terms of 'nominal adoption' and 'adaptive practice'.

6.1. QM Development Paths

Table 6.1 below summarises QM developments within the six case-study companies. It is notable that all companies launched ISO9000 series (ISO9000 and 9001) as a starting point of their QM journey, regardless of their manufacturer type and the market or industry within which they were operating. Different companies then adopted various forms of QMS standards (e.g. QS-9000, TS-16949) and also product-specific standards, which were largely determined by the industry sector within which the company was operating, its major customers and markets, and its growth and development.

For instance, all three companies (RSHEP, SZ and SDEC) that were operating in the automotive supply chain, had implemented automotive-industry QMS standards: QS9000[1], TS16949[2] and VDA 6.1[3] Interviewees from these three companies considered that they were important and prestigious standards; and mandatory requirement for participation in the global automotive industry. The GM of RSHEP said that:

> *"...We are a chemical manufacturer, and our main product is Engineering Polyamide. We are operating in several markets, for example, Automotive; Consumer goods; Electric and Electronics; etc. The majority (over 50%) of our products are however, supplied to Tier 1 car manufacturers, who do require us to achieve the QS-9000 and TS-16949 certificates. I think it is a mandatory requirement in the automotive supply industry..."*

1 QS9000 was developed by Daimler-Chrysler, Ford and GM. It was first published in 1994 and re-issued in March 1998. It is an essential QMS for suppliers of production parts, materials and services to automotive industry (http://www.bsi-uk.com/automotive).
2 TS16949 was developed by the International Automotive Task Force (IATF) in 1999. The purpose is to encourage a world-class product quality, productivity and competiveness in the global automotive industry.
3 VDA6.1 is a Germany automotive QMS.

The QM of SZ gave an example that illustrated the way in which customers impact company's QM development:

> *"...The Company specializes in producing four types of automotive components, including battery cable, plastic inner parts, hot pressing products and rubber seal products. Over the years, we have passed ISO9000, VDA6.1, QS9000 and TS16949 QMS, which is largely determined by our customers. For example, previously we only supplied our components to Shanghai Volks Wagenwerk, who required us to get VDA6.1, the Germany automotive QMS. After a couple of years, we managed to build a supplier-relationship with Shanghai GM. We had to achieve QS9000 and TS16949... I guess that we may need to pass some new certificates if we cooperate with firms from other countries, such as France..."*

RSHEP and SZ are differentiated from each other in terms of their ownership, sale and production models. RSHEP not only designed and produced the specific products and amounts in accordance with customers' requirements and sales orders, but also developed and sold a range of new products based on its anticipation of market demand. On the contrary, SZ designed and developed product and process based on customers' samples, blueprints and requirements. Build-To-Order (BTO) was the only production approach SZ adopted. Nevertheless, both companies stressed the significant impacts of industry sector, customer requirements and market pressure on their QM developments. This was also highlighted during the interview with QM and Chief Engineer at SDEC. They described that:

> *"...QM developments in our company are largely determined by customers and markets. For us, we have two main groups of customers – Automotive and Non-automotive customers. In terms of Non-automotive customers and products, for example, the construction mechanism companies, electric power generation, etc, we implemented ISO9000 series... As early as in 1994, we passed ISO9000 that certified by China Quality Certification Centre...We were the first company in China's combustion engine industry that certified ISO9000 standards. In terms of Automotive customers, we had to implement the QS-9000 and TS-16949 systems. They are prestigious standards in the automotive supply industry...So in 2002, we employed QS-9000 system, which was replaced by TS16949 in 2006..."*

Types of Ownership	FIEs		SOEs		POEs	
Cases	RSHEP (WOFE)	SHRL (JV)	SZ	SDEC	DJ	LL
Industry Sectors	Chemical / automotive supply chain	Electronic/ Home appliance	Automotive Component – Tier 2	Mechanical	Electronic/ Home appliance	Civil/Home appliance
Main Products	Engineering Polyamide 6.6 and 6	Air-conditioner compressor	Battery cable; Plastic inner parts; Hot pressing products; Rubber seal products	Medium motive-power diesel engine	Colour Televisions	Electric Bicycle
Major customers & Markets	Automotive (Worldwide)	Electronic/ Home appliance (Worldwide)	Automotive (Domestic)	Lorry & Construction mechanism (Domestic)	Electronic/ Home appliance (Domestic, North and South America, European areas)	(Domestic)
QMS/ Product certificates	ISO9000 (1994); QS9000 (2002); TS16949 (2006);	ISO9000 (1996); ISO9001 (1998); UL; RoHS;	ISO9000 (1998); VDA6.1 (2000); QS9000 (2002); TS16949 (2004);	ISO9000 (1994); ISO9001 (2002); QS9000 (2002); TS16949 (2006);	ISO9001 (1999); UL; RoHS; *CCC/3C[4];	ISO9001 (2002);
QM methods	QCC; TQM; Six Sigma	QCC; "3N, 4M, 5S"; Total Performance Excellence; Quality Pyramid; BPR; Six Sigma;	Rationalize operations (suggestion)	5S; QCC; Rationalize operations (suggestion) ; TQM	6S = (5S + Safety); Suggestion;	Suggestion;

Table 6.1: QM developments of case-study companies

On the other hand, the two electronics manufacturers (SHRL and DJ) had instead to qualify for electronic product-specific standards – UL[5] and RoHS[6], in conjunction with ISO9000/9001, so as to sell their products in the global market.

4 CCC/3C stands for "China Compulsory Certification". It is the Compulsory Product Certification System (CPCS) jointly announced for statutory implementation by the State General Administration for Quality Supervision and Inspection and Quarantine (AQSIQ) and the Certification and Accreditation Administration (CNCA). This new system has been implemented since May 1st, 2002 (http://www.ccc-cn.org/).

5 UL (Underwriters Laboratories) is the American's most prestigious and independent product safety certification organization (http://www.ul.com).

According to the Head of GM office at DJ, the company was established in 1994 in Shanghai, and specialized in producing colour televisions. He said that:

> *"We have been developing rapidly over the years, and became one of the 300 largest enterprises in Shanghai electronic industry. Nowadays, we mainly focused on exporting, so we must have UL and RoHS, plus ISO9001...it's the market force, customers and industry requirements. To sell our products overseas, particularly in North America and Europe...definitely, [having these certificates] is compulsory. I think if our company is not an Electronic appliance manufacturer...or we are only doing businesses in the domestic market, the ISO9001 might be enough."*

The QM of DJ also described how eager the top managers were to get the RoHS.

> *"When the top management heard this new regulation from our customers and consultants, they really emphasized that we need to get it as quickly as possible. Top executives actively involved, allocated resources and budgets to us [the Quality Assurance department], and invited consultancy company to offer training and assistance. In early 2006, we managed to pass the RoHS certificate...otherwise we would have problems of selling our TVs in the EU market."*

Clearly, evidence and quotes from case-study companies indicated that the ISO9000/ISO9001 is a 'necessity' of doing businesses globally, driven by market pressure. They also suggested the sector of industry could drive and shape company's QM development. Of course, the sector of industry also largely determines a company's major products, customers, market pressures and competitors, all of which can be regarded as background commercial considerations that motivate companies to adopt QM practices. (See Chapter 8 for a more detailed discussion on adoption factors of QM approaches)

6.2. Current Popular QM approaches

In terms of the current popular QM initiatives, table 6.1 above shows that the companies studied have tended to favour Certification-oriented approaches (e.g. ISO9000/9001) than Non certification-oriented approaches (e.g. Six Sigma, TQM). There were two important observations:

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6 RoHS stands for the Restriction of the use of certain Hazardous Substances in electronic equipment. The RoHS Directive came into force in EU market on July 1st, 2006 (http://www.rohs.gov.uk).

Firstly, the general picture shows that all case-study companies have implemented one or more QM methods, however only certain basic QM techniques, e.g. Quality Circles or suggestion schemes, have been used in all companies. Half of the companies claimed that they had adopted 5S/6S management, TQM and/or Six Sigma. Only one company (SHRL) launched self-assessment practices on the basis of the China Quality Award (CQA)[7] Performance Excellence Criteria GB/T 19580-2004, to achieve Total Performance/Business Excellence, and have been honoured with the 'CQA' twice in 2001 and 2002 (see figure 6.1 below).

Figure 6.1 – China Quality Awards

Secondly, the author argues that this phenomenon (i.e. the studied companies in Shanghai tend to favour certification-oriented approaches than general QM methods) is particularly evident in Chinese companies. It should be noted that the two FIEs (i.e. RSHEP and SHRL) implemented more 'advanced' QM methods than the domestic enterprises (i.e. SZ, SDEC, DJ and LL). Comparing the usage pattern of QM methods in terms of ownership type, both FIEs adopted TQM, Six Sigma and self-assessment practices; among four Chinese enterprises, however, only SDEC used TQM, others only implemented 5S/6S management, QC and/or suggestion system. These Chinese companies, however, did not achieve any less in terms of quality systems standards than the FIEs. Here, it is worthwhile recalling that SDEC is a large, Shanghai stock market-listed SOE, which started to implement TQM as early as the 1980s (as required by the Chinese government, all large and medium sized SOEs had to carry out TQM since 1986).

7 In 2001, based on the experience of international Performance Excellence Models (i.e. Deming's Prize, MBNQA and EQA/EFQM), and in line with the China's Law of Product Quality, China Association of Quality acquired the commission of the State Administration of Quality Supervision, Inspection and Quarantine to set up a model of excellence – the National Standard of Criteria for Performance Excellence GB/T19580—2004, and launched 'China Quality Award' on this criteria basis (http://www.caq.org.cn/).

Furthermore, when the author asked respondents regarding their current QM practices, all the quality managers from Chinese companies mentioned that their QM was mainly based on the ISO9000/ISO9001 and/or TS16949 frameworks plus specific customers' requirements. For example, the QM from SZ and SDEC described their current QM approaches were guided by the TS16949 framework:

> *"The management of quality is based on TS16949 and VDA6.1 systems... we haven't yet implemented QM methods, such as Six Sigma. We have neither participated in the quality awards competitions in China, e.g. China Quality Award. We focus on meeting customers' requirements. For example, different customers have their own supplier management rules and policies...We therefore continuously consummate our quality management system on the basis of their requirements." (Quality manager, SZ)*

Similarly, the QM at SEDC explained that,

> *"Currently, we are classified as an automotive-related supplier. Therefore, the current QM approach in our company is based on TS16949... The whole product development process, including marketing, product development and design, production process, sales and customer services is on the basis of TS16949 system. For TQM and Six Sigma, we attempted ... As regulated by Chinese government, we started implementing TQM in 1986...Six Sigma...this "so-called" method, we intended to implement it few years ago ...Part of the employees were sent to study. However, unlike some foreign companies, we didn't implement to the end...didn't reach a mature stage...neither very effective..."*

The QM at DJ mentioned that their current QM approach was based on the ISO9001 system.

> *"To meet the market and customers' requirements, and to sustain the co-operation with our clients, we used ISO9001... implemented in accordance with system documentations. We invited the consultancy firm to offer us training, to assist us in doing internal audit, and to compile the quality manuals, documentations, etc for us..."*

These observations illustrate that these companies still had greater interest in ISO9001 series, and suggest that QM development in China might be still at a 'quality certification' stage. This evidence accords with the literature (Li *et al,* 2003; Liu, 2005; Ping, 1992; Sun, 2000; Thawesaengskulthai and Tannock, 2008a; Tuan and Ng, 1998) and published industry data (ISO survey of certification 2007; CNAS statistical data 2007), previously presented in Chapter 4. The popularity of certification-oriented approaches (i.e. ISO9000 series, specific industry Quality Management System certificates, and specific product

certificates) in China was highlighted from both the interviews and secondary data. Additionally, on the basis of this research, the author considers that Chinese-owned enterprises were more likely to favour certification-oriented approaches than FIEs; and they had correspondingly less interest in the implementation of more advanced QM methods, such as TQM and Six Sigma. The underlying reasons may relate to the institutional background and people's perception of QM (Please refer to Chapter 8 for a detailed discussion).

6.3. Effectiveness of QM adoption

As mentioned in the literature review chapter, the author was interested in observing any evidence of the phenomena of 'nominal adoption' and 'adaptive practice' during the fieldwork in Shanghai. This section will address these two interesting issues, discussed in the context of the effectiveness of QM adoption.

6.3.1. 'Nominal adoption'

Based on the case studies results, the author did not observe any evidence showing 'nominal adoption'. All case-study companies clearly stated their Quality Policy and objectives, which were set up by top or senior managers (CEO, GM or GM). The author found these quality policy and objectives being displayed in company's front entrance, corridor, GM office or QM office. The quality policy highlighted the importance of customer satisfaction and continuous improvement.

Additionally, under the general guideline of QM models or systems, all case-study companies launched some quality tools, techniques and activities to support quality and process control, continuous improvement and problem-solving. The widely-deployed tools and activities included: surveys of customer and employee satisfaction; management reviews; quality theme meetings and suggestion systems; Advanced Product Quality Planning (APQP); Production Part Approval Process (PPAP); Failure Mode and Effects Analysis (FEMA), Statistical Process Control (SPC), Control Plans, Quality Manuals, 7 Quality Tools (e.g. check sheets, Pareto analysis, cause and effect diagrams, control charts) and process capability studies (e.g. CpK assessment). Moreover, all case-

study companies assigned a certain person as their Quality Representative, and set up Quality Assurance or Management teams or departments to take on the responsibility of, or coordinate quality-related issues. (See table 6.2 below)

Hence, from the perspectives of senior managers and quality managers, there was no evidence suggesting 'nominal adoption' within the case-study companies. However, whether or not they wholeheartedly adopt QM methods, and strictly follow the procedures and documentation in daily life, remained questionable. In the author's viewpoint, to identify the true situation, an observer might need to spend a considerable amount of time in the company. The author also interviewed some quality consultants regarding their viewpoint on 'nominal adoption' of QM practices. They believed that the phenomenon still existed in Shanghai, especially in small businesses. The following discussion was based on the interviews and informal chat with five quality consultants and industry experts.

According to quality consultants and industry experts, possible reasons that might lead to 'nominal adoption' could be:

1. People's perception and attitude to QM:

Some companies in China have focused more on the certificate itself, rather than the improvement of quality and business performance. Indeed some companies have aimed at certificates only, which served as a 'permit' or a 'pass' of doing business. The certificates were powerful evidence to show that a company met a certain quality standard, which could help it to enter, sustain and expand its market, and to satisfy its customers. These observations implied that people in some Chinese enterprises might not fully understand or appreciate the purpose of QM, and did not have appropriate attitudes towards QM, which caused a danger of 'nominal adoption'. The underlying reasons might relate to the changes of business environment in China – a generally open market with fierce competition (e.g. price and quality) and intensive requirement for quality certificates.

2. Low quality consciousness, knowledge and experience:

One of the quality consultants commented that *"some companies hardly participate in making quality manuals and QM program documents...They just take orders exactly as what you told them to do...They don't really understand "why"[we need to implement QM approaches] and "how" [to implement QM approaches."* Moreover, another quality expert said that, *"lots of Chinese companies, especially those small ones, hardly had any employee who really understands "Quality" and "Quality Management"...The boss or managers simply want to get the certificates to satisfy their customers. When I go to some companies, they are really in a mess...no system, no allocation of responsibility, no quality consciousness...you have to teach them from the very beginning. I think the major problems are their consciousness, experience and knowledge."*

3. The 'humanization' factor:

As mentioned by all quality consultants, the quality auditing and certification process in China was felt to be 'humanized' and adapted for traditional Chinese business approaches, where personal relationships, respect and mutual trust are very important. Both the auditors and companies might involve trust relationships and economic benefits in 'negotiating' the certification process. For example, it was reportedly very common in China that companies would invite their external quality auditors for dinner. These observations implied that the auditing process was less formal and strict, suggesting that some companies awarded QMS certificates might not fully meet the required quality standards.

4. Lack of legal constraints:

As commented by two quality consultants, there has been little sanction or severe punishment for those firms who made poor quality products, even those that could seriously damage health or even life, particularly in rural areas. The legal system and the business infrastructure are still developing in China, and many regulations are idiosyncratic to different regions.

5. Short-termism:

Quality consultants suggested that many companies, especially small companies, regarded profit as the foremost objective of running a business. The owner or

managers wanted a quick financial return from QM, which in reality was not likely to be forthcoming. Hence in daily work, companies may not follow the quality manual strictly, as the costs would be too high, or it would cost too much for company to rework or scrap faulty goods.

The above-noted reasons suggested by quality consultants and experts are also evident in the literature. Based on Liu's (2005) paper, product quality in China was still below international standard, especially in small-sized businesses. The data he revealed from the National Supervisory Sampling Inspection records indicated that the substantial differences in product quality exist between large, medium and small businesses, and the situation has not improved over the last ten years. The underlying reasons, as Liu (2005) suggested, could be the poor quality of workers, the low quality consciousness of workers and owners, loose process control (e.g. do not follow standards in the production process) and inadequate management. Liu (2005) also highlighted problem of 'price competition' in China, which could also lead to low quality. Some producers felt that they simply could not afford the cost of effective QM.

Quality Representative / QA team	Quality tools, techniques & activities	Production process/ Lines	Quality Policy	Cases	Types of Ownership
Quality manager; Black & Green Belts; Quality inspectors, internal auditors and supervisors	QCC; Quality theme meeting; WCM; QFD; Customer and Employee satisfaction survey; Management Review; DPA; PDCA; FEMA; SPC; Control Plans; Quality Manuals; QC7; CpK Hourly inspection and sampling; Internal Audit; Cost control	Physical or chemical changing process; Compounding (Automatic/ Manual)	Announced by the CEO of company's Polyamide Business unit; Integrated with company's mission and vision; Emphasized Customer, Continuous improvement, Quality, Hygiene, Safety and Environment	RSHEP (WOFE)	FIEs
Head of Six Sigma & Performance Excellent Unit; Quality manager; Black & Green Belts; Quality inspectors, internal auditors and supervisors	QCC; "3N, 4M, 5S"; Total Performance Excellence; Quality Pyramid; PDCA; FEMA; SPC; Control Plans; Quality Manuals; Customer and Employee satisfaction survey; Management Review	Jointing & Assembling process (automatic production lines)	Announced by the GM; Reflected company's mission to be the world leading supplier of air-conditioner compressor; Emphasized brand image; superior performance and innovation	SHRL (JV)	
Deputy GM; Quality manager, quality inspectors, internal auditors and supervisors	Rationalize operations; Quality month; Employee Satisfaction Survey; Management Review; DPA; APQP; PPAP; Inspection and sampling; FEMA; SPC; Control Plans; Quality Manuals; QC7; CpK; Internal Audit; Cost control	Moulding & Assembling process (Automatic/ Manual)	Centred in the idea of making continuous improvement and pursuing first-class	SZ	SOEs
Deputy GM; Quality manager, project manager, quality inspectors, internal auditors and supervisors	Rationalize operations; QCC; Quality month; Scorecard; Employee Satisfaction Survey; Management Review; APQP; FMEA; PPAP; SPC; 5S; 8D; MSA; QC7; CpK; Inspection and sampling; Internal Audit; Control Plans; Quality Manuals; Quality cost analysis and control	Machining, hot-working & assembling process (Automatic/ Manual)	Announced by GM; Reflected company's mission and values; Emphasized Brand image, Quality culture and Customer satisfaction	SDEC	
Deputy GM, Quality manager, quality inspectors, internal auditors and supervisors	APQP; PPAP; PDCA; 6S; QC7; Quality theme meeting; Inspection and sampling; Internal Audit; Control Plans; Quality Manuals; JIT; Customer satisfaction survey; Employee Satisfaction Survey;	Jointing & Assembling process (3 automatic production lines)	Announced by GM; Emphasized Customer satisfaction Product conformance and management systems	DJ	POEs
Quality manager; Chief engineer, quality inspectors, internal auditors and supervisors	Inspection and sampling; Internal Audit; Control Plans; Quality Manuals; Suggestion system;	Assembling process (Automatic/ Manual)	Announced by Chairman; Emphasized Customer satisfaction, Innovation and Performance excellence	LL	

Table 6.2: QM tools, techniques & activities of case-study companies

6.3.2. 'Adaptive Practices'

The author will discuss the issue of 'adaptive practices' in the following two respects: SOEs' 'Rationalized Operations'; and considerations from SOEs and POEs regarding the possible benefits of such practices.

SOEs – 'Rationalized Operations'

The concept of 'Rationalized Operations' was revealed from interviews with respondents at two SOEs – SZ and SDEC. According to them, this quality concept or activity is a 'Chinese-style' QCC, which encourages full employee involvement, cross-functional communication and continuous improvement. For example, the DGM and QM at SZ described that the concept as follows:

> *"Rationalized operations aimed to continuously improve business performance (e.g. quality, productivity, techniques, etc) and encourage full employee involvement. The rationalized operations is a Chinese-style QCC...When the management team feels that the company does not perform well or efficiently in certain aspects, they will hold meetings and ask all employees to give advices and suggestions. These suggestions will then be appraised by a team of expertise, which consists of three deputy managers, a quality manager and the manager from engineering department. If the ideas can be put into practice, and can help company to improve productivity, profitability or quality, then such person can receive rewards or recognition...This is a good way to encourage the 'bottom-up' communication and increase staff motivation."*

Similarly, the QM and Chief Engineer at SDEC stated:

> *"At the beginning, we implemented QCC, it was however replaced by Rationalized operations. QCC is developed by Japanese companies, based on their national context. The key concepts of Rationalized operations are similar to QCC, to encourage full employee involvement and continuous improvement, so...everyone should care and improve 'bagatelle' around them. Rationalized operations is held regularly in the company. Each time, our GM raises or announces an "improvement theme"...Every employee is encouraged to participate and improve "bagatelle" around them, under the umbrella of the "improvement theme"...If every small thing has been improved, our overall performance should then be improved...Of course, those people who contributions will receive rewards or recognition."*

Compare with Chinese 'Rationalized Operations', Japanese QCCs are usually formed by small groups of people from the same workplace who meet voluntarily to carry out quality control activities on their own initiatives. The groups' objectives are to provide a forum for self-development and mutual

education among their members and to ensure the involvement of all staff in the improvement process. The QCCs utilize quality techniques to control and continuously improve their workplace with the full employee participation, and at a low cost. The key differences between Chinese 'rationalized operations' and Japanese QCCs are that QCCs are organized by employees themselves, though facilitated by management during company time, whereas 'rationalized operations' is initiated by senior managers, and employees are motivated by incentives, such as promotion and rewards. This seems to be an 'adaptive' QM practice which has developed among Chinese companies. Here it was evident to two SOEs, which have been exposed to Japanese-style TQM ideas since the 1980s, as mentioned previously. It should be noted that many derivatives and adaptations of QCC have appeared worldwide, as companies in different countries sought to develop versions of the QCC concept which were well suited to their national and organizational cultures (Dale, 2003).

SOEs and POEs – Possible Benefits of 'Adaptive Practices'

Apart from the 'Rationalized Operations' revealed in Chinese SOEs, the following quotations based on the interviews with managers at POEs and SOEs, indicated the potential benefits associated with 'adaptive practices'.

The Quality Manager at SDEC said that,

> *"The current implementations of QM methods or systems...or TQM, which we used to do, are all developed by foreign companies. These are very advanced models, which might be reached at a mature level in foreign countries...But I think really, the Chinese enterprises, such as us – a large SOE, should cooperate together and try to develop a "Chinese" QM model, on the basis of foreign QM concepts, experience and models, but integrated "Chinese context" as well. This can increase the effectiveness of QM and boost the competiveness of Chinese enterprises...Such as the Japanese, who developed their QM approaches, e.g. QCC, TQM, and QC7s. Actually, I think we are moving towards the right direction...our 'Rationalized operations' and the China Quality Awards."*

The QM at SZ thought that QM has no fixed model, and there is no single way. It always needs to be improved in accordance with company's context and situation. Moreover, the QM at DJ considered that, *"it is necessary to implement QM approaches, which can help us to perform better...Better than no*

system...We are able to standardize our enterprise and management according to the requirements and QM documents/manuals. However, there are some artificial factors that limited our performance, so that some foreign models can not be completely or exactly adopted. We must localize them...in short, what can help us to achieve the highest profits are the best."

Observations discussed in this section suggested that the effectiveness of QM adoption may be affected by 'nominal adoption'. On the other hand, the observations regarding 'adaptive practice' implied that a full absorption or direct replication of QM implementation that is imported from foreign soil does not necessarily lead to success – 'adaptive practices' may result in more successful implementation and outcomes. Of course, it may be very difficult to distinguish between nominal adoption and adaptive practices. In some case, an appropriate simplification of a foreign QM practice may be adaptive in a positive sense, in that it makes the practice more effective or easy to implement. In other cases, nominal adoption of a QM practice could be an attempt to gain business advantage by donning the garments of effective QM without changing the business performance.

6.4. Conclusions

The knowledge outcomes generated in this chapter included:

1) QM development paths – All case companies launched ISO9000 as a starting point of their QM journey, regardless of their manufacturer type and the market or industry within which they are operating. Different companies have then adopted a wide range of quality systems standards and product specific standards, which are largely determined by the industry within which the company is operating, the types of products that company is producing and company's growth and development (these relate to the factors for QM adoption that will be explained in detail in Chapter 8).
2) The current QM approaches – the author argued that companies studied have tended to favour certification-oriented approaches (e.g. ISO9000/9001) than non certification-oriented approaches (e.g. Six Sigma and TQM). Particularly, Chinese-owned enterprises were more likely to favour certification-oriented

approaches than FIEs – they had correspondingly less interest in the implementation of more advanced QM methods.

3) The effectiveness of QM adoption – the author discussed this issue in the context of 'nominal practices' and 'adaptive practices' observed in the current study. Additionally, the author argued that some underlying reasons might relate to the specific Chinese context, which will be evaluated in detail in Chapter 8.

CHAPTER 7 – ORGANIZATIONAL CULTURE

The analyses in this chapter set the scene for understanding the 'soft aspects' of QM, i.e. 'quality culture', which are generated from the Competing Values Framework (CVF) results as well as the follow-up discussion during the interviews. Firstly, sections 7.2, 7.3 and 7.4 will describe the organizational culture in Chinese SOEs, POEs and FIEs respectively. Secondly, section 7.5 will explore and compare the similarities and differences of organizational culture among SOEs, POEs and FIEs. As mentioned in the literature review (Chapter Three), there are numerous studies showing that the CVF is a useful instrument to examine the culture of an organization in the context of quality management improvements, such as TQM. Finally, using evidence from these published journals and articles, the author will compare the culture in different types of ownership enterprises with a concept of an ideal 'quality culture' that significantly supports quality improvement implementation.

7.1. Chinese SOEs Business Culture

This section will present the organizational culture of two Chinese SOEs – Company C and Company D using the CVF method described in Chapter 3. The similarities and differences in the two companies' CVF profiles are illustrated in figure 7.1 below. Clearly, both enterprises scored high in hierarchical culture and rational culture. Comparing the two cases, Company C however placed much more emphasis on rational culture than did Company D, and had more distinctive differences of hierarchical culture and rational culture compared with group culture and developmental culture. Company D had relatively-equal scores among rational culture, group culture and developmental culture. In the rest of this section, the author will discuss the two case-study results in detail.

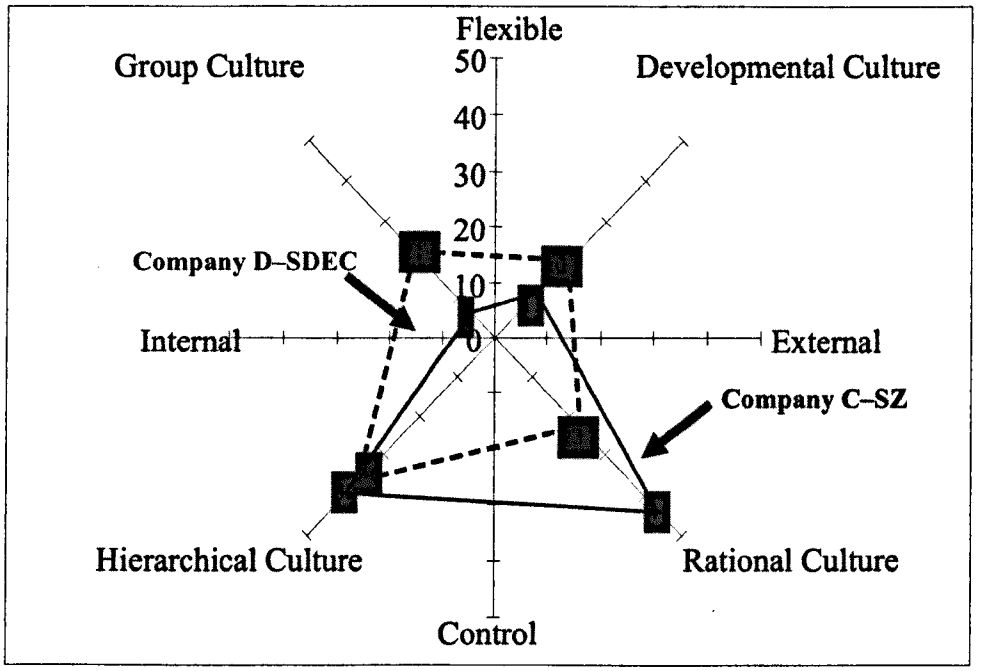

Figure 7.1: CVF profiles of SZ and SDEC

7.1.1. Company C (SZ) Business Culture

CVF Profile

According to the CVF results of Company C, its culture reflected a rational-type orientation mixed with aspects of a hierarchical culture. From a theoretical perspective, this suggests that Company C focused on achieving measurable goals and objectives through planning and goal-setting. It would also rely on formal rules, policies and internal control systems to achieve smooth, efficient and stable operations. The leader of Company C would consider himself as a producer, and should be decisive, task-oriented and work-focused to initiate and direct actions. Structurally, Company C tends to be a formal, centralized, rule-rounded and bureaucratic place, with routine tasks and centralized decision-making process, and vertical communication emphasized (Top-to-Bottom).

Consistent with this theory, the actual case-study results showed that Company C placed a great emphasis on productivity and efficiency, through the means of planning, task setting and accomplishment, and relying on the efficient use of systems and technology. For example, as the DGM said:

> *"We have board of directors and a chairman, who are selected by the government. They focus on planning, strategic decision-making and target/goal setting, without participating on specific affairs..."*

The rational values of Company C were reflected in the following respects. According to the DGM, the company had a 'piecework system' for shop floor workers, implemented as a 'wage-plus-bonus system'. Managers gave shop floor workers detailed instructions of the tasks that they needed to complete, including how and when to complete them. In this way, the shop floor workers received a guaranteed minimum wage, and they were able to receive additional bonus on top of the basic wage for each additional standard piece made within working hours. In other words, the more pieces a worker make, the more money he or she could get, as long as the piecework meet the required quality standard. The high-level managers used this 'wage-plus-bonus system' as an incentive mechanism. On the one hand, it could motivate workers to accomplish predetermined tasks within the standard time. On the other hand, it also increased labour productivity within the firm. Additionally, Company C adopted 'rationalized-operations system' with the main aim of continuous improvement of company's performance, such as productivity and efficiency (Refer to Chapter 6 for detail). This is a classic Scientific Management payment and motivational approach which could have been advocated by F.W Taylor.

Furthermore, Company C relied on information management and technology (e.g. computer programs) to replace many manual works so as to improve company's efficiency (e.g. increase productivity, reduce cost) and to support company's external growth and development. As the DGM mentioned:

> *"From technology perspective, we employ more engineers, technicians and university graduates to ensure the successful implementation and manipulation of advanced technology. It is also important for us to improve the capability of machinery, equipments, facilities and technology. For instance, we are now using computers and computer programs to handle customers' requirements, deal with internal files, plan and control. We have the UG-3D design software that can design products (e.g. size, shape, function) to meet and satisfy our customers' requirements. We increase the use of equipments and/or machinery to replace manual work, because automatic-production can ensure the product quality, and definitely it is much more productive, and it is much easier for us to use systems and programs to control the process."*

In terms of the hierarchical side of the company, Company C was evident in its organizational structure and decision-making process. Company C had a hierarchical and formal structure, where all decisions had to be referred to the senior executives. The targets or objectives were set by the top level; all the tasks were planned by the upper level, and then allocated to the lower levels – high levels of downward communication. The lower level employees had restricted autonomy – they followed rules and procedures, and were supervised and monitored by the upper levels. The DGM described it thus:

> *"[Our] company has a distinct hierarchical structure. We place a strong emphasis on the hierarchy, level by level from top to bottom. We have board of directors and a chairman, who are selected by the government. The GM takes orders from chairman, allocates tasks to three DGM, and takes charge of target accomplishment. The three DGM take branched responsibilities of marketing and sales, production and purchasing, quality and technology respectively. They take orders from the GM, set specific tasks and allocate them further to departmental managers. The departmental managers involve in accomplishing specific tasks, and in charge lower level of staff...The GM is therefore the top executive, and the DGMs are the second level executives, followed by the departmental managers, who are the third level executives. The staff within different departments follows the rules and procedures to accomplish specific tasks."*

The Company C organization chart to illustrate its hierarchical organization structure is shown in figure 7.2 below:

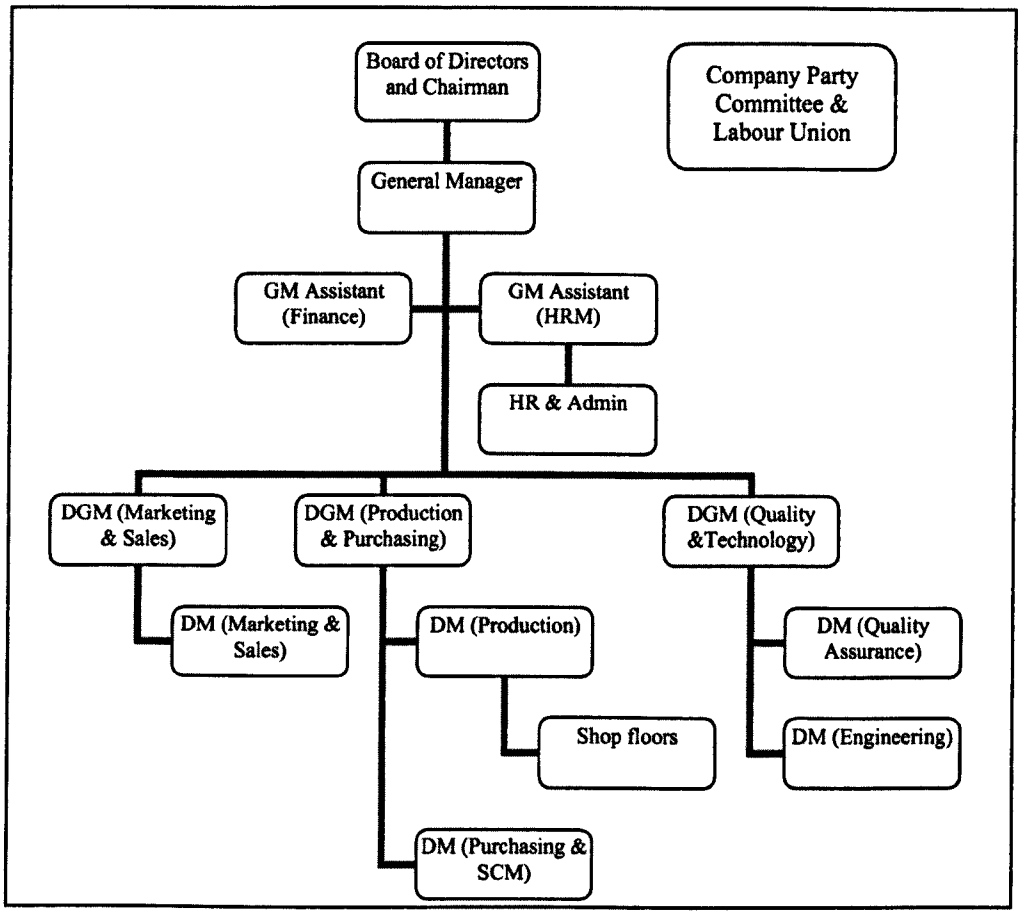

Figure 7.2: Organizational chart of Company C

Overall speaking, the organizational culture of the company reflected the interaction of rational and hierarchical values, where a high premium was placed on achieving measurable goals, efficient and stable operations. Structurally, the organization emphasized internal control as evidenced by its formal and centralized decision-making system.

7.1.2. Company D (SDEC) Business Culture

CVF Profile

Similar to Company C, Company D culture stressed hierarchical and rational values. Unlike Company C, Company D however placed relatively-balanced emphases among group, rational and developmental culture. From a theoretical perspective, the CVF predicts that Company D would rely on centralization and formalization as control mechanisms to achieve stable and efficient operations. However, unlike Company C that focused strongly on planning and goal-setting to attain productivity and efficiency, Company D placed relatively-equal values

on people (cohesion and morale), task/goal setting and accomplishment, and adaptability and innovation.

Consistent with this theory, Company D's results indicated that the hierarchical elements of culture were reflected in its formal structure (See Figure 7.3 below for its organizational structure). Like Company C, Company D had a very hierarchical structure, and both SOEs had set up a 'Party committee and Labour union' within the organization. As mentioned in Chapter Four, the influence of Communism Party on state enterprises could not be disregarded. As Lockett (1988) pointed out, each Chinese SOE has a Party Committee, which has been the most powerful management body since the 1950s. In theory, the Party Committee is only responsible for broad policy-making, political work and internal Party organization. In practice, however, the role of the Party goes well beyond this, and participates in day-to-day management and decision-making, e.g. formulating the strategy and supervision of operations, because SOE implements Factory Director Responsibility under the Party Committee.

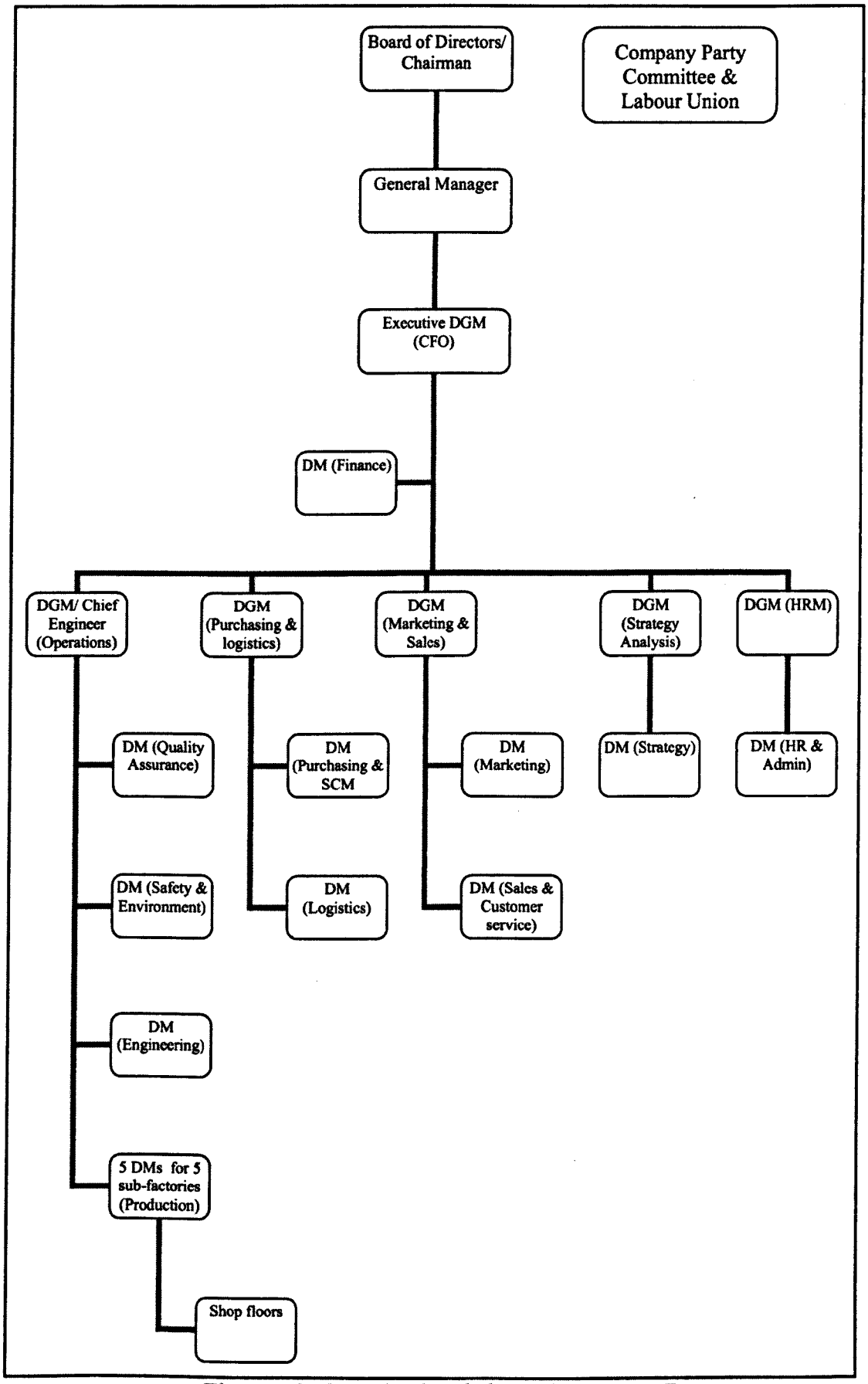

Figure 7.3: Organizational chart of Company D

Additionally, the author noted that Company D was a formal and bureaucratic place, with a centralized decision-making system. The lower levels had very little autonomy. For example, according to the DGM of Company D, though it was a listed company, the majority of its shares were controlled by the government, and therefore many rules and regulations were determined centrally by the government. All the senior members within the company were Party Representatives selected by the government. Furthermore, during the interview with QM and Chief Engineer, they provided two specific examples that highlighted the hierarchical features of company culture. The Chief Engineer commented on company's annual employee satisfaction survey:

> *"The employee satisfaction survey shows very positive response, I think it is over 95% this year...The employee satisfaction survey has been done by the Party committee, not an independent institution/third party, and all the employees have to sign their name on the questionnaires."*

This observation suggests that leadership in this organization can exercise the power to affect employees' expressed views, and there could also be significant control over many other matters. The trustworthiness of the survey results can be questioned. Additionally, the QM said that,

> *"As being allocated in this position, I have the delegation of responsibility and authority... However, I think it remains limited; the decision-making process is centrally-controlled. Whenever I want to propose something, for example, if I would like to increase human capital in the department because of increasing numbers of projects, I have to ask upper levels for instructions. Firstly, I need to arrange a meeting with my head, and then write reports. My boss then proposes these reports to his head, and then he needs to report to, maybe another upper level...It can take a while to finalize the decision."*

On the other hand, the case study data showed rational values of Company D's culture. The company emphasized attaining production and efficiency through the mechanisms of planning and task/goal-setting. For example, Company D held two main 'Management Review' meetings every year – At the beginning of every year, the senior managers (Chairman, GM and DGMs) held a meeting to set the company's objectives and plans for the coming year. At the end of every year, the senior team would hold another meeting to appraise and summarise the annual achievements, e.g. what the proposed targets and plans were; what the actual results were; and what the gaps between the proposed and actual outcomes

were. Moreover, according to the DGM of Company D, a new GM has been appointed a few months ago,

> *"I heard that he will pay more attention on company's efficiency, although the final documents have not yet been released...He (i.e. the GM of company D) will soon establish series of plans to increase production and profit, to control and reduce the cost."*

In addition, the QM at the Company D also mentioned the 'rationalized operations system', as did Company C, with the objective to improve company's overall efficiency. However, as the QM commented, using the 'rationalized operations system' could also increase cohesion and affiliation – employees support the shared goals and it helps to generate group values in Company D. Therefore, the author collected some evidence that illustrated the group culture of Company D. For instance, one symbol of this was the employee training system. As the Chief Engineer said,

> *"[Our company] has the 'employee education fund'. Each staff can get certain amount of money per year in accordance with his or her position. This allows them to attend training courses, buy books, equipments (e.g. laptop, software), etc"*

Additionally, when the author asked the Chief Engineer to comment on interpersonal relations within organization, she said:

> *"I think we have a quite strong sense of team-working, from management team to employee. We regularly organize company trips and sports matches to get everyone together... Every month, we produce 'monthly company briefing/newsletters' as an instrument to facilitate the communication of company's information, including production activities, the 'Best performed staff', productivity or quality improvement ideas and suggestions. The newsletter is for every staff, which can be found on company's website, and is being displayed on the windows..."*

The author confirmed the above-mentioned facts by checking the company's website and display boards during the trip to Company D. The other important observation was that when the author visited the company's refectory at lunch time (the company provided free lunch for employees, including 2 dishes, 1 bowl of soup, a portion of rice and fruit), she saw many staff were gathering around big square tables, having lunch together, chatting and laughing. It seemed to the author that people were very friendly to each other, and this served as a vehicle to bring staff at different departments and different levels together. It allowed staff to sit down and converse with others in a flexible and pleasant atmosphere.

In short, on the one hand, both SOEs shared emphases on hierarchical and rational values, which was reflected in their hierarchical organization structure (i.e. with many layers/levels from top to bottom); their high levels of centralization and formalization (i.e. power-oriented at the top; limited delegation of authority to lower levels; rules, regulations and procedures govern what people do in the organization); and their emphases on productivity, planning, goal-setting and organization efficiency. On the other hand, Company D was differentiated from Company C in terms of its emphasis on group culture. This aspect of Company D's culture was revealed in its employee training system and interpersonal relations.

7.2. Chinese POEs Business Culture

This section will present the organizational culture of two Chinese POEs – Company E (DJ) and Company F (LL). As illustrated in figure 7.4 below, the two companies had very similar CVF profiles. Both companies scored the highest in developmental culture; placed relatively-equal values on group culture and rational culture; and placed the least emphasis on hierarchical culture. Therefore, instead of presenting the two cases results separately, the author will discuss them together in detail.

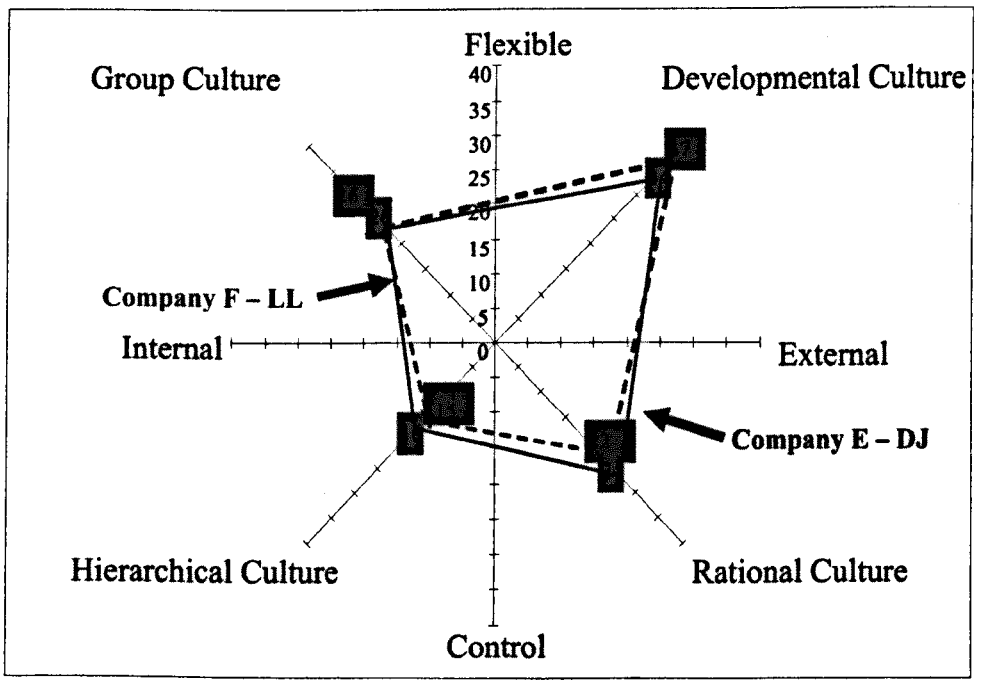

Figure 7.4: CVF profiles of DJ and LL

CVF Profiles

According to the CVF profiles of these two Chinese POEs, their culture should reflect a developmental-type orientation mixed with aspects of rational and group cultures. CVF theory predicts that the two companies should be characterized as innovative, entrepreneurial, aggressive and adaptable places; with employees like family members, who are willing to share and socialize with each others. The leaders of the two companies would consider themselves as innovators and risk takers, who envision changes and acquire resources. They should also be very caring and empathetic, just like a father or mother figure to facilitate interactions within the organization. On the one hand, the valued outcomes for the two companies are growth, acquiring new recourses and meet new challenges through means like change, innovation, adaptability and readiness; On the other hand, the two companies would also place a high value on achievement, production and efficiency through means of planning and goal setting. Structurally, the two POEs should tend to have fewer standardized rules, policies and procedures. Interpersonal relations are marked with higher levels of trust, morale and leader credibility, and smaller degrees of conflict, disagreements, friction and resistance to change.

Consistent with their similar CVF profiles, the case study results showed that both Company E and Company F emphasized growth/development and meeting new challenges, and relied on innovation, adaptability and readiness to change. These aspects of their culture were strongly shaped by organization leadership (i.e. the owner of the company).

According to Company E's brochure, *"continuous improvement, innovation, integrity and development"* were company core values, while Company E emphasized *"to survive on the basis of quality, to develop on the basis of innovation"*. The pursued goal was to continuously improve the capability of technology innovation, so as to be a leading technical design centre in the world color television industry and an international procurement centre in China. Additionally, according to the DGM of Company E, the owner (i.e. Chairman and GM) of a POE is a forceful character/symbol to shape its organizational culture and strategic orientation. The DGM of Company E observed his boss as

an entrepreneur, who was very energetic, driving, determined and adaptable to changes:

> *"He is very entrepreneurial, and he is good at innovation/creativity. He always tells us that innovation means continuous failures, negation and outperforming...He explores and develops opportunities, he leads us to grow...In everyday life, he upgrades his managerial discourse in accordance with the broader picture (i.e. market/external business environment) and company's own goals and objectives."*

Similarly, the author found that the owner of Company F placed strong emphasis on change, adaptability and innovation. During the interview, the GM said that,

> *"I think as a POE, innovation and change are the key competiveness that we need to pursue, from four main aspects – policy/system, managerial discourse, operations and technology. As we all know, nowadays if a company doesn't have a sense of change and innovation, it is impossible to develop and grow; it is hard to survive...We must be ready to the changes and be adaptable to the market. We must achieve this..."*

The GM presented some clippings from newspapers and company's brochure to the author, which also illustrated Company F's developmental culture. According to company's brochure, Company F invested a large amount of money and technology capacity to innovate more than ten different types of electric bicycles each year. At the present, there were more than fifty different types of electric bicycles on the market, so as to meet the demands of people with different age range and in different locations of China. Furthermore, according to the 'Jiefang Daily' and 'Xinmin News'[1] – Over the years, Company F has achieved 13 patents for innovation, e.g. intellectualized battery, environmentally-friendly electrical machine. In Shanghai electric bicycle industry, it is the market leader with market share of 20%.

On the other hand, the group culture of the two POEs was evident in their leadership role and interpersonal relations. The DGM of Company E said that,

> *"[Our] chairman wants to make company to become a more personalized place. This year, he raises a slogan, i.e. work harder together for a better tomorrow...So this year, we particularly stresses on cross-departmental communication and cooperation, we emphasize team spirit, cohesion and employees' sense of responsibility"*

[1] Jiefang Daily and Xinmin News are the two most authoritative and popular newspaper in China.

The QM of Company E mentioned group trips and the company's study allowance. The company's trips were organized every year and paid by the company. These provided a vehicle for people from different departments and levels to communicate and socialize with each other, outside the working environment. According to the QM, the company also provided a study allowance to those people who essentially need it. The company set up a long-term co-operative relationship with "Shanghai Tong-ji University" to train its staff regularly.

Similarly, Company F organized group trips and sports match every year. From the top level (i.e. chairman) to the bottom level staff (i.e. shop-floor workers) all enthusiastically participated in these activities. There were many stories and photos shown in Company F's brochure (See Appendix 3 for companies' photos). Moreover, the GM of Company F thought that as the leader of a POE, it was essential to build a family-oriented culture. It is important to continuously 'absorb' people with high capabilities and train them so as to improve people's quality and strengthen company's cohesion:

> *"As the owner of a POE, I must let my employees feel the lovingness and warmness of a family. Because an individual strength is limited...We must rely on the whole group to develop sustainably in a long-term – cohesion, loyalty, morale, team spirit..."*

He continued saying that,

> *"[LL] pays great attention on human resource management; allocate right people to the right positions. As the owner of a POE, I have 'shiny eyes' (i.e. I know clearly who has the capability and who has not)...We reward and promote our staff in accordance with their performance, not based on the 'relationships', as determined by the nature of company (i.e. private-owned not state-owned), and I believe most of other POEs are like that...We all attach to shared goals, making great efforts on creating more profit, rather than wasting time on 'gossiping'..."*

Structurally, the two POEs had only a few layers from top to bottom (See Figure 7.5 and 7.6 below). Both POEs adopted a 'management of responsibility' system instead of relying on formal rules, procedures and regulations, so as to motivate their staff, and to enhance employees' sense of responsibility.

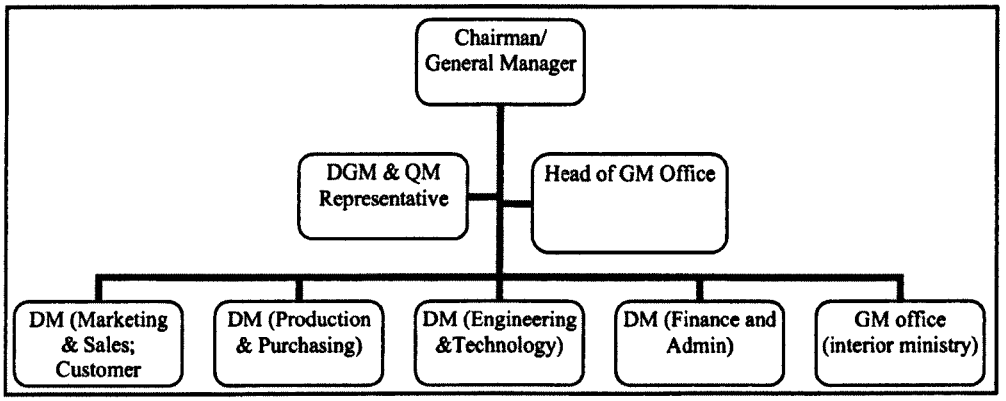

Figure 7.5: Organizational chart of Company E

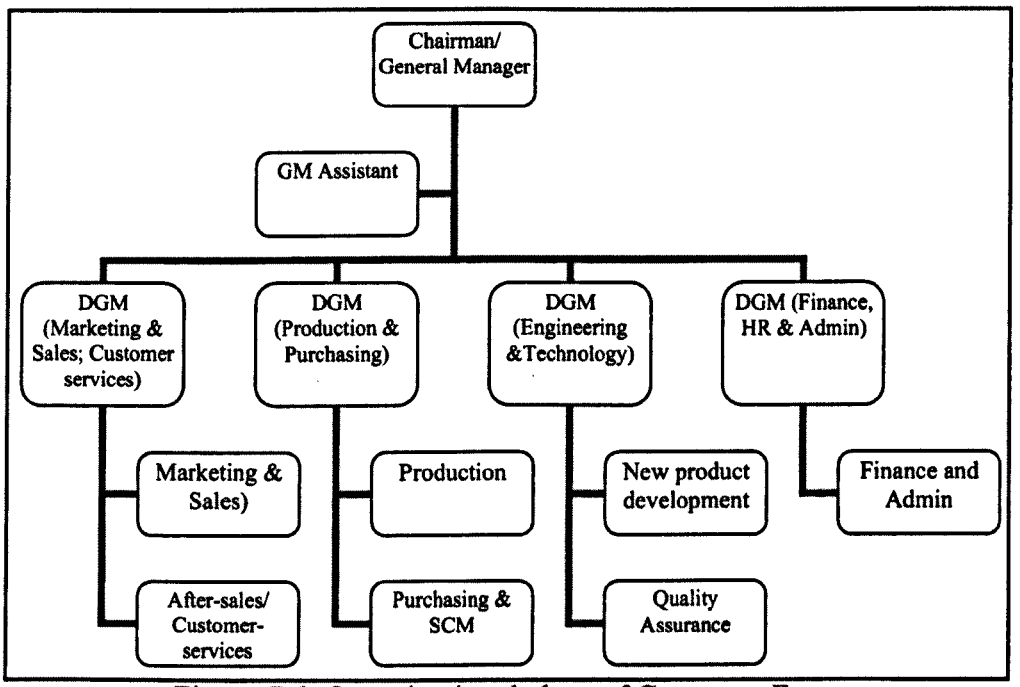

Figure 7.6: Organizational chart of Company F

Interestingly, although as previously noted, both POEs had flexible and lean structure, the top level (i.e. the owner of company) still held most of the authority (i.e. a centralized decision-making system). The two POEs were centralized in this regard, but did not have formal/hierarchical structures. For example, Mr. Qian of Company E mentioned that he participated in the weekly meetings together with other departmental heads, to discuss important issues. These were ratified by the Chairman. As a departmental manager, Mr. Qian considered that he has a certain level of authority in accordance with his responsibilities, but he still needs to report many decisions to the Chairman. It seems to the author that Company E managers have only a nominal autonomy in important decision-making. For Company F, the Chairman gave an example of how the company

made decision on supplier selection, which again suggested a centralized decision-making process,

> *"Two DGMs, one is responsible for Production and Purchasing, and the other is responsible for Technology and Engineering, firstly inspect, examine and appraise potential suppliers. The DGMs have to fully consider the performance of potential suppliers in five main respects, e.g. QMS, Productivity...The DGMs then write me proposals respectively. I finally decide which ones can be our suppliers..."*

The aforementioned case-study results generated are partly in conflict with the CVF theory. According to this theory, a company that employs developmental and group cultures should also have a flexible structure with decentralized decision making approaches. The origin of these companies as traditional Chinese family-based enterprises may have a bearing on this finding, which accords with some other literature regarding the Chinese POEs' business culture discussed previously (Schlevogt, 2002).

In summary, evidence of a developmental culture was very strong in both POEs, which was shaped mainly by the owner of the two companies. The group values of the two companies' culture were reflected in their leadership roles and interpersonal relations. The companies used group trips and sports matches to enhance cohesion and loyalty. Their emphases on productivity and efficiency demonstrate their rational aspects of organizational culture. They relied on planning, information management, technology and science to create modernized enterprises.

7.3. FIEs' Business Culture

This section will present the organizational culture of the two FIEs – Company A (RSHEP) and Company B (SHRL). The differences in the two companies' CVF profiles will be immediately evident in figure 7.7 below. Company A was a WOFE that placed a high premium on developmental and group cultures, and scored the lowest on hierarchal culture. On the contrary, Company B placed the most emphasis on hierarchical culture and scored the least on group culture. This may result from its structure of ownership. Company B is a JV, which was set up between a Chinese SOE and a Japanese company. The Chinese SOE held a majority of its share (75%) and the Japanese partner only controlled 25% of its

shares. On the other hand, the two companies shared some common characteristics in its culture, i.e. the degree of emphasis on rational culture. The differences of organizational culture identified in these two cases suggested that the organizational culture of FIEs may vary from case to case, depending on its structure of ownership (JV or WOFE), the JV partner's culture and the percentage of its share controlled by local and foreign partners, etc. In the rest of this section, the author will discuss the two case-study results in detail.

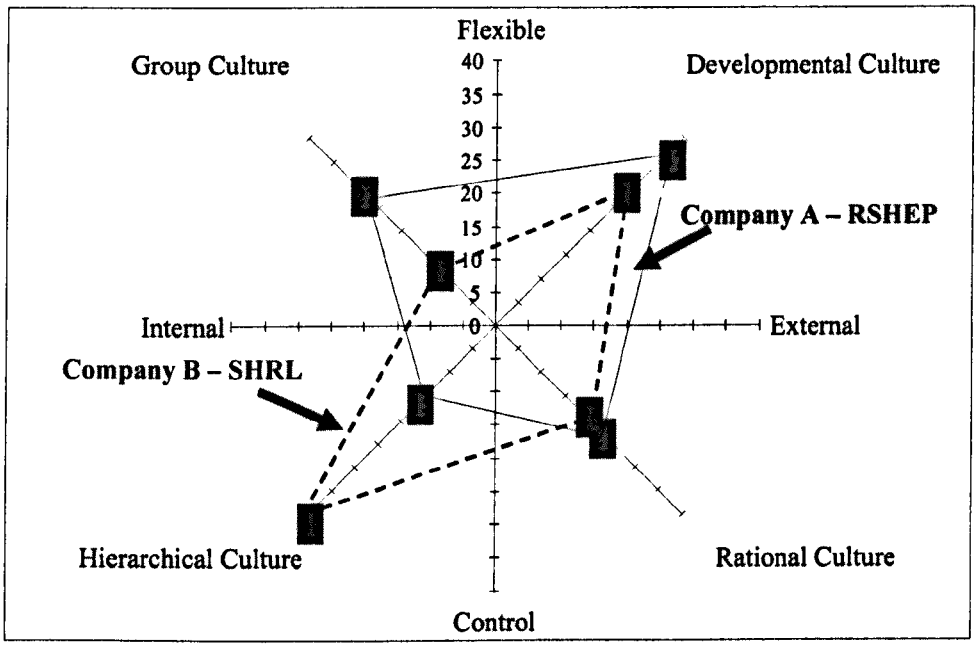

Figure 7.7: CVF profiles of RSHEP and SHRL

7.3.1. Company A (RSHEP) Business Culture

CVF Profile

The CVF Profile for Company A indicates that it should reflect a developmental culture mixed with aspects of group and rational cultures. This suggests that Company A is an aggressive, adaptable and innovative place but also focuses on achieving goals and objectives. The leader is considered as an innovator or risk taker who envisions changes and acquires resources, but is also very caring and empathetic to facilitate interactions within the organization. The valued outcomes are growth, acquiring new recourses and meeting new challenges through means like change, innovation, quality, adaptability and readiness; but Company A would also place a high value on achievement, being productive and efficient through planning and goal setting. Structurally, Company A tends to have decentralized decision-making and control system, with fewer

standardized rules, policies and procedures. Communication is often horizontal. Interpersonal relations tend towards higher levels of trust, morale and leader credibility, but relatively small amounts of conflicts, disagreements, friction and resistance to change.

The case study data generated consistent results to this CVF theory prediction. The developmental culture of Company A was reflected in the following respects. The company's Leadership Framework, (a written documentation collected during fieldwork) stated that Company A was a proactive organization and emphasized its readiness to meet new challenges. For example, it stated that *"every employee in the organization should take their initiatives and should act in a proactive way by taking action and not simply thinking about future actions. Every employee should not only react to situations but also anticipate future opportunities or problems, and act upon them well in advance. Every employee should be open-minded and be motivated to learn more about the environment, things and people, by asking probing questions, or doing ad hoc research to gain a better understanding of the context."* Moreover, the stated goal of company A is to be *'a leading Engineering Plastic supplier worldwide'*. This indicated that the organization placed a high value on growth through means like globalization, innovation, quality, change, adaptability and readiness.

The group culture of Company A was evident in its emphasis on people/ human resource development and interpersonal relations. According to the Leadership Framework document, team-working stands at the heart of the organization, which means staff should not only proactively cooperate with each other, but develop others as well, i.e. help individuals identify their short and long-term development needs and encourage their individual learning by providing them with appropriate support. Various training programs are available for people at different positions and levels, who wanted to continuously update their knowledge and capabilities. As the QM told the author:

> *"We put a high premium on personal and career development. We have yearly appraisal based on the 'Performance Measurement System', meeting with staff to review their performance, and to identify their training needs and career development opportunities. Employee explain what they want and discuss with the management to reach a mutually agreement, including*

'Yearly Employee Education and Training Plan' (training contents, lengths, methods, etc), job rotation and promotion. The exchange learning program with Korean plant is also available when appropriate."

Moreover, the interpersonal relations within Company A were marked by high levels of trust and leader credibility, medium level of morale and low levels of conflicts, disagreements and friction. As the GM commented that, *"The level of trust is high. I trust my people, e.g. if there is a task which needs to be done and I know my person is capable of and wants to do it, then I will let him/her do it. I will only intervene if the person is not able or not willing to do."* From the GM's perspective, high level of trust comes from a flatter structure and less centralized control. The QM also told the author that, "*...We have the common objectives, and everyone clearly understands the company's objectives and focus on achieving them. For example, everyone is focusing on achieving the high quality standards and fixing the quality problems to satisfy our customers."*

Evidence of the rational cultural aspects of Company A revealed in its emphasis on achievement. As the GM mentioned during the interview,

"Achievement and winning spirit are two of the core values of the organization. We want to succeed and meet objectives. The achievement drive means to meet or exceed ambitious performance objectives and quality standards, deliver business results and continually make sustainable improvements in methods and processes... We are very much project-based, i.e. we have goals and objectives, we set up tasks and we have to be the project plans. People will be rewarded when they well in charge of their own tasks."

7.3.2. Company B (SHRL) Business Culture

CVF Profile

According to the CVF profile of Company B, its culture reflected a hierarchical-type orientation mixed with aspects of a developmental culture. From a theoretical perspective, this suggests that Company B places strong emphasis on formal rules, policies and internal control systems to achieve smooth, efficient and stable operations. Additionally, it tends to have a hierarchical structure. On the other hand, Company B would be an adaptable and innovative place, with valued outcomes of growth, acquiring new recourses and meeting new challenges. In the author's viewpoint, this was an interesting finding to discuss.

Although the CVF theory suggests that any company in reality possesses mixed cultural elements embedded within the CVF, it seemed unlikely that a company would place a high premium on both the hierarchical and developmental culture (Quinn and Kimberly, 1984; Zammuto and Krakower, 1991)

The case study results indicated that the hierarchical culture of Company B was reflected in its organizational structure. Similar to the two SOEs, Company B had a very hierarchical structure, and a 'Party committee and Labour union' within the organization. The Chairman was a Party representative selected by the government, and the Board of Directors was made up of the Chinese and Japanese partners. (See figure 7.8 below)

However, the developmental culture of Company B was also evident, in its emphasis on innovation and meeting new challenges. According to the DGM, at the initial start-up stage, the company introduced technology from a Japanese JV partner and focused on production only.

> *"We were only the manufacturer for the Japanese partner, and paid them the patent fees for each product we sold. However, we thought this was very passive, and not an appropriate way of doing business – We could not expand and grow rapidly, and we were very dependent on our JV partner... Over the years, we continuously pursued innovation and technology, and aimed to develop our own brand air-conditioning compressors. In 2004, we successfully managed to create our first patent. Our vision is to become the world number one supplier in air-conditioner industry, based on the strategy of brand image, superior performance and innovation."*

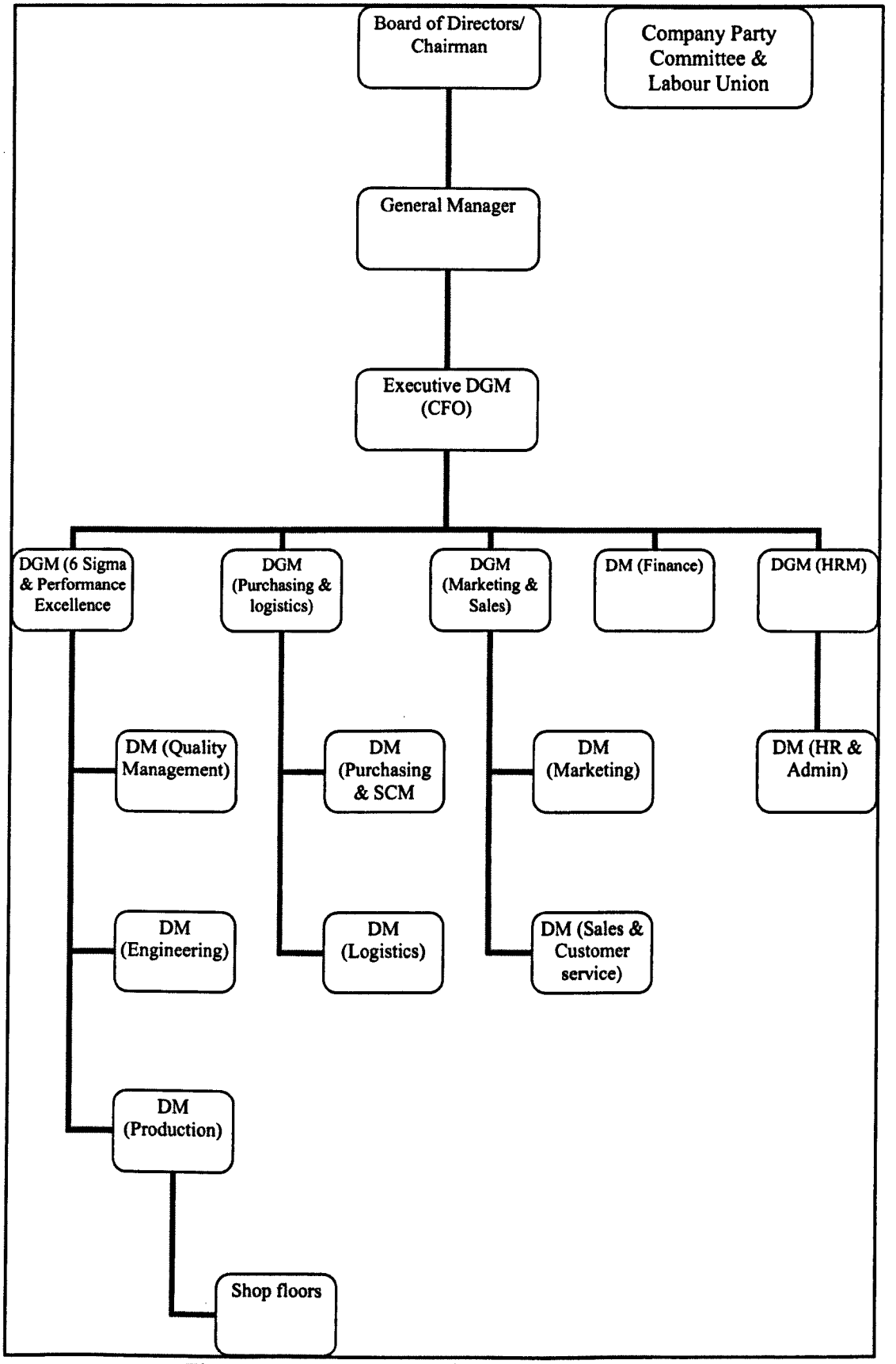

Figure 7.8: Organizational chart of Company B

7.4. SOEs, POEs, FIEs and 'Quality culture'

In this section, the author intends to integrate the case-study findings above, to explore the similarities and differences of organizational culture among SOEs, POEs and FIEs. Additionally, the author will compare the organizational culture in different types of ownership with a concept of an ideal 'quality culture' derived from the CVF literature. Hence, the author will attempt to discuss the case-study results in context of the relevant theories.

7.4.1. Comparisons of SOEs, POEs and FIEs

Table 7.1 below presents the average CVF ratings of the four cultural types in each case-study company. The first two highest ratings of cultural types in each company have been highlighted. For example, the two SOEs had the highest two scores in Hierarchical and Rational cultures – with red highlight. Both POEs scored the highest two in Developmental and Group cultures – with green highlight. However, as mentioned before, the two FIEs in this study possessed very different CVF profiles, despite the fact that both of them place high premium on developmental cultural aspects. For RSHEP, it had the highest two scores in Developmental and Group cultures – with a yellow highlight; whereas SHRL (the SOE (75%) and Japanese (25%) JV) scored the highest two in Hierarchical and Developmental cultures – with yellow highlight.

Four Cultural Types / Companies' Average Ratings		Hierarchical [a]	Developmental [b]	Group [c]	Rational [d]
SOEs	SZ	**39**	11	6	**44**
	SDEC	**36**	20	21	**23**
POEs	DJ	16	**34**	**26**	24
	LL	15	**37**	**26**	22
FIEs	RSHEP	15	**37**	**27**	21
	SHRL	**40**	**28**	12	20

Table 7.1: Average CVF ratings for case-study companies

Based on the CVF ratings, this broad comparison suggests that the two POEs (Company E and F) had very similar organizational culture to the WOFE (Company A); in terms of hierarchal and rational cultural characteristics, while the two SOEs (Company C and D) obtained similar CVF profiles to the SOE-dominated JV (Company B). Clearly, the organizational culture in the POEs and

the WOFE was distinctive from that in the SOEs and the SOE-dominated JV. Some of their cultural aspects had completely contrasting emphases – the POEs and the WOFE placed the strongest emphases on developmental and group values, while putting the least stress on hierarchical culture. The SOEs and the SOE-dominated JV placed the strongest emphases on hierarchical cultures, whereas putting the less stress on group values.

However, looking closely at the interview discussion, the author noted that the POEs studied had a similar decision-making system to the SOEs, despite the fact that they adopted very different organizational structures. As described above, the SOEs had formal and hierarchical structures, i.e. with formal rules and procedures and many layers from top to bottom, which seemed to the author to be redundant. In contrast, the POEs had a flexible and lean structure, with less standardized rules and regulations. However, both ownerships had a centralized decision-making system, i.e. the top level is power-oriented, who is not willing to share the authority with lower levels; most of the decisions have to be referred to and finalized by the top/senior executives, while the lower level employees have a restricted or 'nominal' autonomy.

Furthermore, the author found out that although both the POEs and WOFE placed high values on group culture, they employed different mechanisms to achieve employee cohesion, loyalty and morale. For POEs, the owner of the company acted as a father figure, who is responsible for creating a family-oriented environment and facilitating interactions within the company. Employees had the belief that they were like family members. They were willing to share and socialize with each other. Typical examples were group trips and sports matches. For WOFE (Company A), it paid great attention to delegation/empowerment (e.g. a decentralized decision-making), structured training and education system, and employee career development, so as to increase employee involvement and satisfaction.

Comparing these case-study findings with current literature, Ralston *et al* (2006) also used the CVF instrument to compare SOEs, POEs and FIEs in China, in the context of their organizational cultures. With reference to their quantitative

research findings, the current study can assist in validation of the CVF in the following respects. Firstly, in terms of the organizational culture preferences within each ownership type, the author's findings are consistent with these of Ralston *et al's* (2006), i.e. the SOEs embraced hierarchical cultural values in conjunction with rational cultural elements. In contrast, the POEs obtained an entrepreneurial profile (i.e. a developmental-type orientation) mixed with traditional family values (i.e. a group culture). Secondly, on the level of cross-ownership comparison, the author's results were also consistent with Ralston *et al's* (2006) study, i.e. the POEs scored significantly higher than the SOEs on group and developmental cultures; the SOEs scored significantly higher than the POEs on hierarchical culture; while all three types of ownership enterprises (SOEs, POEs and FIEs) scored moderate or high on rational culture.

On the other hand, the author also identified some contrasting elements. For example, Ralston *et al* (2006) found that the FIEs in China have a balance across the four organizational cultures; the SOEs' culture profile, relative to the POEs, is substantially similar to that of the FIEs. In contrast, the current study, though using small numbers of cases, suggested that the organizational culture of FIEs in China might vary from case to case, depending on its ownership structure (JV or WOFE), the percentage of its shares controlled by local and foreign partners (e.g. a SOE-dominated JV) and national culture of foreign partners. Indeed, the authors found that the two POEs (Company E and F) have very similar organizational culture to the WOFE (Company A). In terms of hierarchal and rational cultural characteristics, the two SOEs (Company C and D) obtain similar CVF profiles to the SOE-dominated JV (Company B). Clearly, in this study, the organizational culture in the POEs and the WOFE were substantially different from these in the SOEs and the SOE-dominated JV.

Further, it is interesting to note that the SOEs and the SOE-dominated JV in this study were least focused on group culture. This was unexpected, given that China is widely accepted as a collectivistic society in the relevant literature (e.g. Hofstede, 2004; Trompenaar, 1994). However, when considering China's economic opening and reforms, and the SOEs reforms and privatizations, this observation may be understood and explained. Ralston *et al* (1999) found that in

the 1990s, the new generation of Chinese managers and professionals were more individualistic and more likely to act independently than their previous generation counterparts. This trend may become stronger over time, as China moves more towards capitalism and market-orientation. Secondly, from a qualitative researcher's perspective, the author argues that although both the POEs and the WOFE placed high value on group culture, they used different mechanisms to achieve employee cohesion, loyalty and morale. Additionally, as previously noted, both POEs in this study adopted a centralized decision-making system, which is contrary to the expectations from CVF theory. This observation was not unexpected, and accorded with findings from other scholars (Glover and Siu, 2000; Hall and Xu, 1990; Lewis, 2003; Schlevogt, 2002). For instance, according to Schlevogt (2002), Chinese POEs typically feature power-orientation and strong centralization, with authority or power held firmly in the hands of the owners or family members.

7.4.2. 'Quality Culture'

In this sub-section, the author will compare the organizational culture of the various ownership types with a concept of an ideal 'quality culture' derived from the CVF literature. The author is aware of numerous other research results in the QM field, focusing on the concepts of an ideal 'quality culture'. Indeed, the author is not convinced that there exists a single, 'ideal' quality or TQM culture, and this must be considered in the specific national context. However, as the results presented in this chapter were based on the CVF theory, the author thinks it is reasonable to pursue for a while the concept of an ideal, which is derived from the CVF literature. This also aims to provide the reader with some new insights into the 'quality culture' of Chinese enterprises.

As discussed in literature review, there has been extensive research using the CVF instrument to assess the organizational cultures of different organization, associated with QM implementation. These researches have been conducted with a broad scope, including the U.S. (e.g. Chang and Wiebe, 1996; Shortell *et al,* 1995), and cross-cultural context (e.g. Al-Khalifa and Aspinwall, 2001; Prajogo and McDermott, 2005). Particularly, Chang and Wiebe (1996) employed a panel of TQM experts from the U.S. Conference Board TQM Center to determine the

relative balance of the four different cultural types embedded in the CVF that would support TQM implementation. Their findings are consistent with other studies (i.e. Al-Khalifa and Aspinwall, 2001; Prajogo and McDermott, 2005; Shortell *et al,* 1995). As Figure 7.9 illustrated, there is no single most effective organizational culture type to support TQM implementation. Instead, an ideal 'quality culture' combines a mixed set of cultural values and characteristics embedded in the CVF, which is biased towards the group and developmental organizational cultures, with a lower emphasis on rational and especially hierarchical cultures.

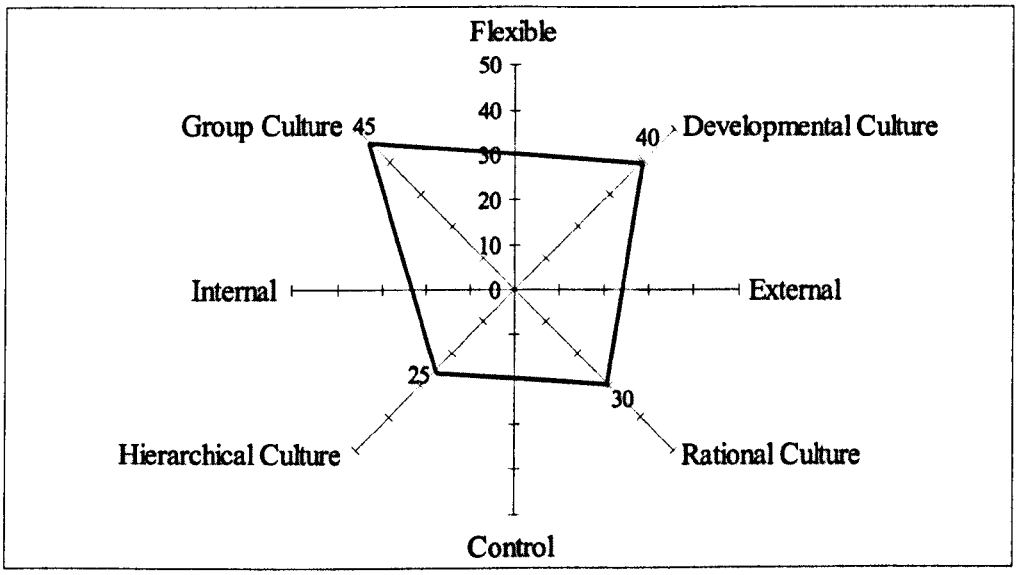

Figure 7.9: An ideal 'quality culture' profile
(Adopted from Chang and Wiebe, 1996: 25)

Comparing the organizational culture in different types of ownership with this concept of an ideal 'quality culture', it can be seen that the POEs and WOFE employed similar culture profiles to this supposed 'ideal' TQM culture profile as established by Chang and Wiebe (1996). This 'ideal' TQM culture profile embraces a strong group culture in conjunction with a development orientation, with slightly higher emphasis on the group values, but much lower emphasis on rational culture. By contrast, the SOEs and the SOE-dominated JV have relatively opposite culture profiles. Additionally, an ideal culture profile is least focused on hierarchical cultural elements. However, the SOEs and the SOE-dominated JV put strong focus on hierarchical and rational values.

7.5. Conclusions

The knowledge outcomes derived in this chapter attempted to provide the readers with new knowledge to the 'soft aspects' of QM, which included:

1) The application of CVF – The author has used the CVF to examine and compare the organizational culture among different types of company ownership. The author discussed these findings in context of the relevant literature. The observations noted in the current study generally support the established theory. The author, however, identified contrasting or negative observations in some cases.
2) An ideal 'quality culture' – the author has compared the organizational culture of case-study companies with a concept of an ideal 'quality culture' derived from the CVF literature. More importantly, the author argued that one must locate an ideal 'quality culture' in a specific national context, which was in line with the cross-cultural arguments previously discussed in literature review chapters (e.g. Noronha, 2002 & 2003; Sousa-Poza *et al*, 2001). It is reasonable to argue that a uniform QM implementation is not likely to be effective on a global scale, or more specifically, there is no 'ideal' culture for QM implementation in a global context, due to the fact that national culture varies from country to country, which constraint the organizational rationality (Hofstede, 2004). As a consequence, people from a particular national background prefer specific characteristics of the organizational culture to foster their QM implementation, based on their assumptions, beliefs and values. The implication is that the effective QM implementation is not always and only fostered by a group-oriented and developmental culture in the cross-cultural context. QM is a complex for global application that requires organizations to implement it in a way that is sensitive to local needs and adaptive to specific cultural condition.

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CHAPTER 8 – INFLUENCING FACTORS ON QM PRACTICES

In this chapter, the author will focus on examining how various factors influenced the dissemination, adoption and implementation of QM practices in case-study companies. A dissemination and adoption model is proposed, as illustrated in Figure 8.1 below, and the chapter is organized in accordance with the diagram. Section 8.1 will explain the three factors for dissemination. Section 8.2 will describe the seven factors for adoption. Finally, section 8.3 will discuss the factors that facilitate successful QM implementation. The author will also explain the relationships among these factors. There are some overlaps between these categories, as suggested in Figure 8.1, and these will also be explained below.

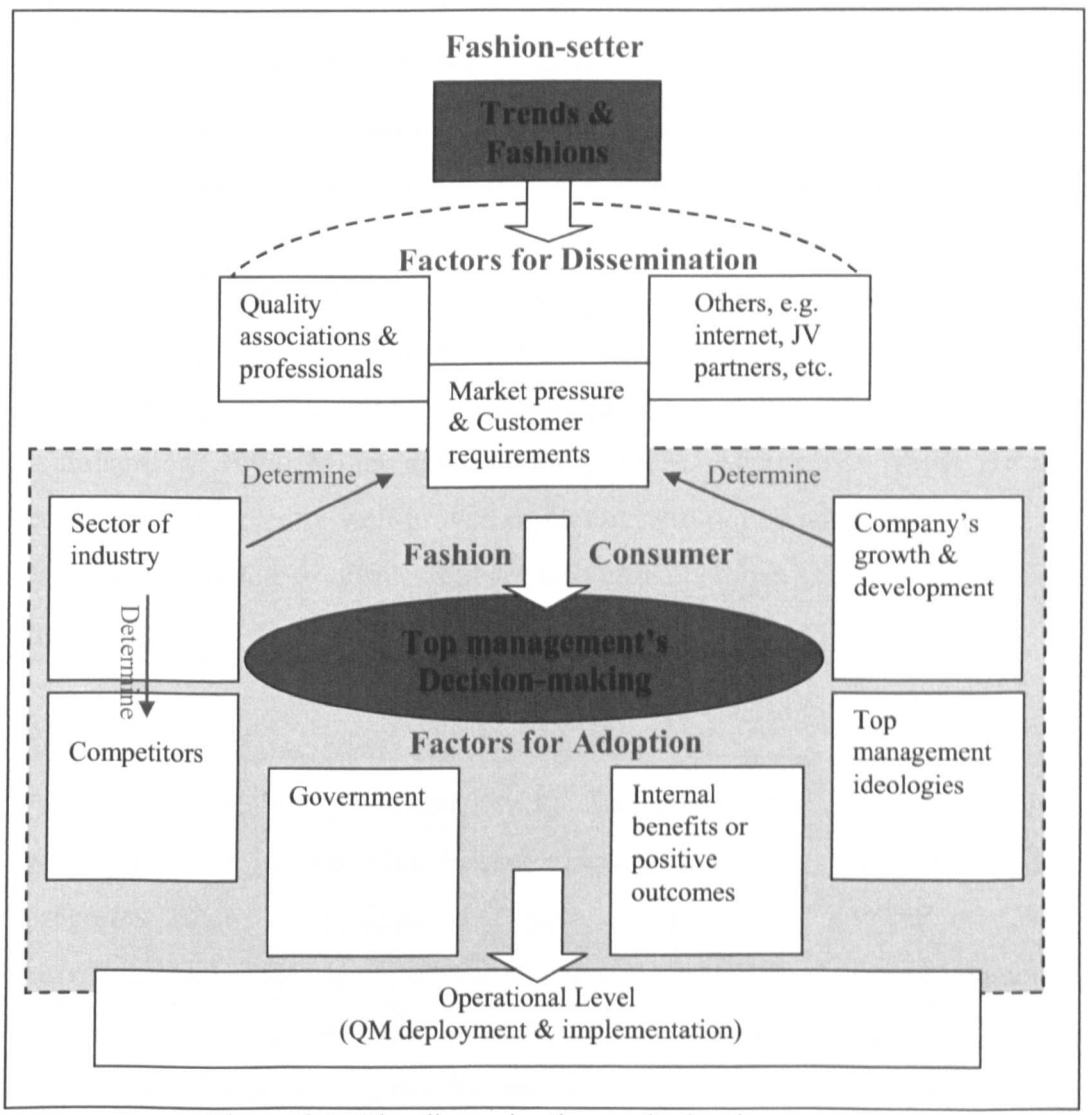


Figure 8.1: The dissemination and adoption process

8.1. Factors for QM Dissemination

This section will explain the three main observed factors, which were found to influence the knowledge and persuasion stages of dissemination. These are: QM trends and fashions, quality associations and consultants, and market pressure and customer requirements. The last of these is also considered an adoption factor.

8.1.1. QM Trends and Fashions

Trends and fashions in this study refers to the available QM approaches that have been developed by fashion-setters (e.g. the quality 'gurus', business schools and academic scholars) (Abrahamson, 1996). It was one of the key dissemination factors observed in this study. According to the majority of interviewees, their companies consciously attempted to develop awareness of emergent trends and fashions. Internal quality experts undertook *ad hoc* research on new trends, and several companies held regular meetings on QM issues, one theme of which was a discussion of QM trends. However, it was very clear from the case-study companies, that top managers did not blindly adopt any QM approach simply because it is the current trend or fashion. Management made decisions based on a balanced view of various adoption factors, including the key commercial drivers. This observation is in line with rational adoption theories as mentioned in the literature review (e.g. Abrahamson, 1996; Miller and Hartwick, 2002). Approaches which are not considered sufficiently well-proven or mature will not be adopted, while those considered obsolete or obsolescent are also unlikely to get serious consideration by managers.

8.1.2. Quality Associations and Consultants

As mentioned in the literature review, the Shanghai Quality Association (SQA) was established in 1982 and has provided QM training, seminars and TV programs since 1985. Since that time, an increasing number of QMS certification bodies have obtained accreditation from China National Accreditation Committee for Quality System Registration Bodies (Ping, 1992; Sun, 2000). When interviewed by the author, a senior quality expert at SQA

indicated that according to current statistics, there were more than 500 registered quality consultancy firms and 148 registered QM training bodies in China, with 58 registered QM consultancy and training firms based in Shanghai. He suggested that these organisations are connected in a network of quality professionals, who play an important role in assisting local government to maintain a good environment for the development of effective QM practices, in the dissemination of QM trends and fashions and in interpreting them for local adoption. These claims were substantiated by the recipients – according to interviewees in the case-study companies, external consultancy and training firms provided useful QM resources and experience, and adopted a coaching role to help companies set up and develop their QMS. For example, consultancy and training firms analysed a company's current performance and situation and provided class-room training to companies' internal quality staff. They guided companies on QM implementation, in particular advising and assisting companies to develop their QM program documentation such as Quality Manuals. These observations add more evidence to current literature regarding the role of quality associations and professionals. According to Tuan and Ng (1998), the quality associations and professionals have played an important role of disseminating foreign QM knowledge and experiences in China, as well as assisting Chinese enterprises to improve quality. The quality associations have also taken responsibility for setting up Quality Awards, e.g. the China Quality Award, Beijing Mayor Award and Shanghai Mayor Award.

8.1.3. Market Pressure and Customer Requirements

Market pressure and customer requirements were found to be important knowledge and awareness routes, regarding QM trends and fashions. Several company interviewees mentioned that their top management attended annual supplier conventions, during which their customers introduced and recommended QM approaches and techniques. For example, the Quality Manager at Company C stated: *"During the annual supplier meetings, our customers will recommend us some popular QM methods, standards, concepts and experiences. For example, Six-Sigma...Our customers have recommended it many times. Some are just recommendations, and some are mandatory*

requirements. I think our customer requirements reflect current QM trends and fashion..."

8.2. Factors for QM Adoption

This section will discuss the seven observed decision factors for adoption (market pressure and customer requirements, competitors, top management ideologies, internal benefits or positive outcomes of QM, sector of industry, company's growth and development and government). Note that 'customer requirements' appears in both lists: the author considers that is an important knowledge and persuasion factor for the dissemination of QM fashions, in addition to being an important factor in adoption decision-making.

The author firstly explains the relationships among these factors with reference to Figure 8.1. For example, perceived attractiveness of QM approaches is influenced by business considerations such as competitors' activities, as well as market pressure and customer requirements. The sector of industry within which the company is operating (e.g. electronic, home appliance and automotive) was found to exert considerable influence on the key commercial considerations such as competitors, market pressure and customer requirements. The fashion-consumer's (invariably, in our case companies the top management of the company) decision-making for QM adoption was based on these factors. A company's growth and development trajectory was found to have two important influences in this situation. Externally, it related to the company's major customers and market, and therefore influenced the adoption of QM practices. Internally, a company's growth and development could tend to drive top management's decisions on QM adoption, in particular the need to be seen to adopt modern QM approaches. Once an adoption decision was taken, the implementation phase was usually led by the top management, and then deployed at operational level.

8.2.1. Market Pressure and Customer Requirements

In addition to being a dissemination route, market pressure and customer requirements were perceived to be one of the most influential factors

supporting QM adoption. Especially in Chinese-owned enterprises, the adoption of QM initiatives was primarily motivated by market pressure, customer requirements and for marketing purposes (i.e. external commercial factors). In an earlier chapter, the author provided various examples from case-study companies to demonstrate the important role of market pressure and customer requirements on QM adoption (See Chapter 6 for detail). According to the interviewees, these factors had strongly influenced the history of QM adoption, the current QM practices and people's perspectives about QM practices in all case-study companies. Interviewees commented that under market pressure, it was important for their companies to achieve internationally-recognized QMS standards, e.g. the ISO9000 series and similar industry-specific standards. Additionally, with the expansion of international trade, they were concerned to overcome new trade barriers, relating to various forms of QMS and product specific standards in different industries and countries. These certifications could be a qualifier: referred to as a 'stepping-stone', a 'pass' or a 'necessity' of doing businesses globally. As suggested by Magarinos and Sercovich (2002) and Panitchpakdi (2002), the fair and open competition in current Chinese market heightens the pressing needs of many Chinese enterprises to qualify various forms of quality certifications. Furthermore, to build and sustain supply chain or cooperative-relationships, companies have to adopt QMS according to their customer requirements. For example, the Quality Manager at Company C pointed out that,

> *"...In order to survive, we have to meet market requirements, and satisfy our customers. In 1998, our Chairman led us to achieve the ISO9002 certificate, because it is impossible for us to become an automotive-related supplier without one...I think it lead us on to the door of automotive-supply industry. In the following years, we certified VDA6.1, QS9000 and TS19649...Even the ISO14000, which doesn't directly relate to quality management, but we have to get it to satisfy our customers. In 2005, our customers added the 'concept of environmental-friendly' as an extra requirement in their suppliers' management regulations..."*

8.2.2. Internal Benefits and Positive Outcomes

Interviewees reported seven main benefits or positive outcomes associated with various QM initiatives, they:

- provide information and 'know-how' – useful frameworks that guides company on what to do and how to do it, that promote effective procedures, documentation and standardised working;
- facilitate acquisition of new business – in particular, internationally-recognised certificates (e.g. ISO 9000 series; TS16949) enable companies to do business in domestic and global markets;
- improve customer relationships – sustaining long-term cooperative supply-relationships, and increasing customer satisfaction;
- enhance company image – by achieving various awards and certifications;
- increase company performance in terms of competitiveness, productivity, efficiency and profitability, by reducing non-conformance, cost and waste;
- support process improvement (of both the product development production processes) – by formalising and systematising processes; providing improvement tools and techniques;
- develop managerial discourse and organisational culture – by improving top management and staff awareness and commitment; creating a 'quality culture' and encouraging staff training.

These observations were supported by much evidence from the case-study companies and accord with the benefits of QM noted by many sources in the literature. For example, Gibson and Tesone (2001); Miller and Hartwick (2002) and Thawesaengskulthai and Tannock (2008b) suggested some expected positive outcomes of QM implementation in various countries. Specifically, Hua *et al*'s (2000) study was based on the survey results of 71 Shanghai manufacturers. Their research findings indicated that Shanghai manufacturers obtained many positive results through QM practices, including higher market share growth, higher profitability and low costs.

Notably, interviewees from all the case-study companies mentioned that their companies benefited from QM implementation, in terms of performance. Three illustrative examples of evidence are provided below.

First, during a visit to Company D, the author noticed that the company had achieved various local (Shanghai), national and global awards, including the

"Shanghai Gold Prize for Quality Management" (2002 and 2005), "China Customer Satisfaction Product" (2003, 2004, 2005), "China Brand-name Product" (2005), "The Best Engine of the Year B.A.A.V Awards 2005 – self-developed 6CT natural-gas engine", and "The Best Engine Producer of the Year B.A.A.V Awards 2006". The award plaques were exhibited on the company's display board, and certainly tended to enhance its image. (See Appendix 3 for companies' photos)

Secondly, the head of GM office at Company E stated: *"We aim at achieving our quality policy (i.e. achieve customer satisfaction rate 99%, product conformance rate 99% and minimize the complaint rate). After implementing QMS, i.e. since the year 2000, we have increased the numbers of production from 0.9million to 300million till 2005...We are one of the 500 Strongest Industrial Corporations in Shanghai in 2004 and achieved Enterprise's excellent economic and export performance in China in 2004; our products are honoured by "CERTIFICATE FOR PRODUCT EXEMPTION FROM QUALITY SURVEILLANCE INSPECTION" in China."*

As another example, the Quality Manager from Company F also told the author that: "*after launching the QMS, the company usually follows the procedure and requirement that are outlined in QMS documentation. QM improves the management model, e.g. standardize our management procedures; strengthen the concept of 'management by responsibility'.*" He continued, "*... So everyone has and knows his or her responsibility, the cooperation and communication across departments are improved, and the managerial capabilities of departmental managers are also increased gradually...*"

8.2.3. Top Management Ideologies

The author considers that there are various extrinsic factors (e.g. market pressure and customer requirements; competitors; company's growth and development) that drive top management to adopt QM practices. However, interviewees from three case-study companies (Company A, B and F) pointed out that the top managers' own intrinsic ideologies could pre-dispose or motivate them to adopt QM practice. For example, the Chairman of Company F

(the owner of company) had placed great emphasis on QM since its foundation, and adopted the slogan *"product quality is the fundamental principle; quality is in my hand, and safety is in my heart"*. The chairman also led the whole company to implement ISO 9000 because she believed it laid groundwork for the company's future development and expansion. Additionally, the GM of Company A stated: *"I believe the company's strongest point is 'quality' whereas the weakest point is 'price'. We are very expensive - probably the most expensive supplier, but we have very good quality. In our position, the main competitive advantage is quality. The QM initiatives are very good tools to help us achieve the strategy."*

8.2.4. Sector of Industry

As mentioned in Chapter 6, different case-study companies adopted various forms of quality systems standards and product specific standards, which were largely determined by the sector of industry within which the company was operating. For instance, all three companies (Company A, C and D) that were operating in the automotive supply chain, had implemented automotive-industry QMS standards: QS9000, TS16949 and VDA 6.1. Interviewees from these three companies considered that these were important and prestigious standards and mandatory requirement for participation in the global automotive industry. The two electronics manufacturers (Company B and E) had instead to qualify for electronic product-specific standards – UL and RoHS, so as to sell their products in the global market. Hence, the sector of industry could drive and shape company's decision on which QM initiatives to adopt. Of course, the sector of industry also largely determines a company's major products, customers, market pressures and competitors, all of which can be regarded as background commercial considerations that motivate companies to adopt QM practices.

8.2.5. Company's Growth and Development

The case-study evidence suggested that a company's growth and development profile can provide both external and internal triggers towards QM adoption. Externally, it relates to a company's expansion in terms of market and customers, which has already been discussed. For example, in Chapter 6, the

author used quotations from the Quality Manager at Company C, to demonstrate that a company might need to adopt different QM initiatives because it has gradually expanded its customer network and/or market. Additionally, an example from Company E illustrated that companies might face new trade barriers relating to various forms of QMS and product specific standards when expanding their businesses (e.g. from a domestic- to an internationally-oriented market).

Internally, a company's growth and development can also drive top management's decision-making on QM adoption. With increasing growth and development, the top management may see the need to adopt modern QM approaches, which provide processes, information and 'know-how', to support companies' internal growth. For example, the Quality Manager at Company F pointed out that,

> *"In order to survive, company must attach an importance to quality management. [Our] company has paid great attention to quality since its birth. However, at that time, we simply take initiatives to control product quality. We really want to produce high quality products. With company's development, we feel we are not good enough, but we don't know how to improve. Our chairman therefore led us together to launch a modern management approach – ISO9001...It is necessary, as ISO9001 is a useful framework, which answers the questions of 'how to do; what we should do, etc'. We improve quality through standardizing and systemizing our process and management."*

The Quality Manager at Company E also described how the company's internal expansion drove QM adoption: "*At the birth-stage, we merely considered how to survive in this market. Our factory was small and leased. With company's development, i.e. till the end of 1999, our boss thought it is necessary to extend factory and to improve productivity so as to respond to the increasing numbers of orders and to meet customer requirements. Also our company could afford to buy the factory...So we introduced ISO 9001. Our boss thought it is necessary, and our company has the capacity to do so...*"

For Company B, QM development was embedded in the company's growth and development (Figure 8.2). At the initial start-up stage, the company introduced technology from a Japanese JV partner, and focused on production

only, using basic QC techniques. With the support of its Japanese partner, the company developed a Chinese-style '3N (i.e. Three Not – Do Not receive unqualified products; Do Not produce unqualified products; Do Not pass on unqualified products), 4M (i.e. Man, Material, Machinery and Method), 5S' combination method. At the growth stage, the company set up a research & development centre and started to develop its own products, guided by the Japanese partner. During that stage, Company B introduced QA by adoption of ISO 9000 in 1996, and later in 1998 developed its own unique quality approach (a 'Customer-centred Quality Pyramid'). When the company reached its established and expansion stage, top management led employees in the pursuit of performance excellence (based on the self-assessment criteria of the China Quality Awards). The aim was to achieve continuous improvement with a company-wide scope, unlike the activities at previous stages that focused mainly on production. In both 2001 and 2002, the company was awarded the 'China Quality Awards', which laid the groundwork for Company B to become an outstanding company. Subsequently, top management has developed a vision: "to become the world number one supplier in air-conditioner industry", using this strategy also to advance its brand image. Since 2004, the company has focused on a blend of BPR with Six-Sigma to achieve this goal.

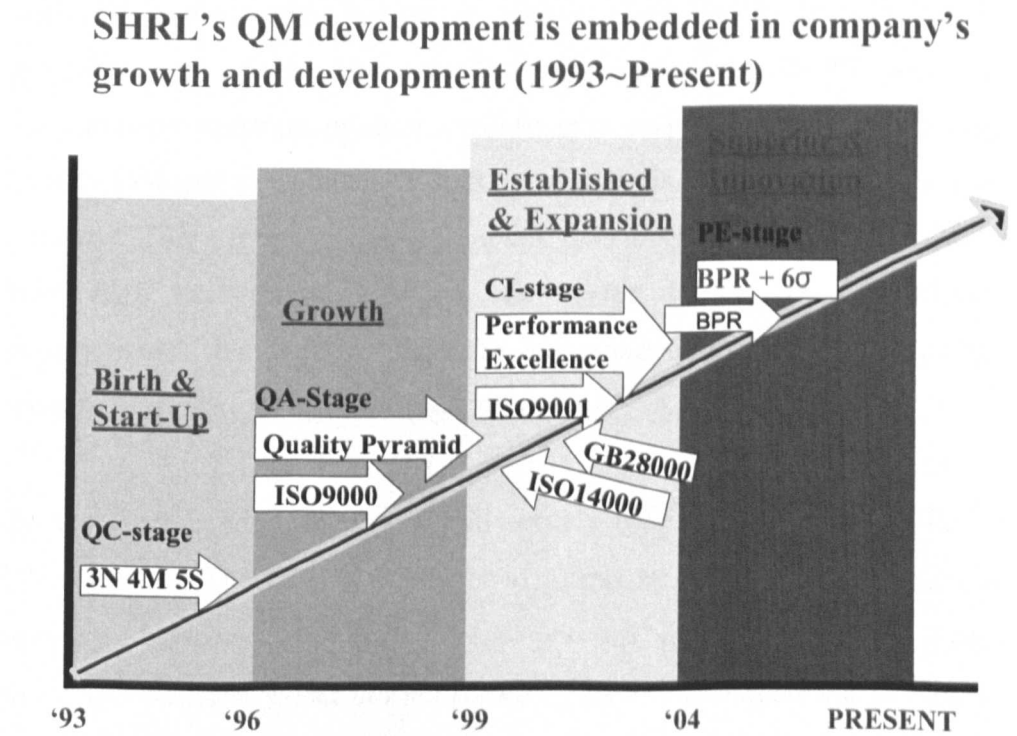


Figure 8.2: Company B's QM development alongside its growth

8.2.6. Competitors

Competition is one of the commercial considerations which drove QM adoption in the case-study companies. Interview results suggested that competition is considered to have moderate degree of impact on QM adoption, based both on 'peer-pressure' and benchmarking. In this context, 'peer-pressure' means the fear of losing customers when competitors were awarded more or higher-level QMS certificates. For instance, the Quality Manager at Company E highlighted that it is necessary to consider what their competitors were doing in this fierce market, "*...Compare and compete with our competitors in all aspects, including QMS standards, so as to retain the market shares and sale volume. If our competitors are qualified more QMS standards, we might be washed out in this game*".

Additionally, 'peer-pressure' indicates that in the essentially open market situation in which these companies operate, they compete with each other based on high quality, low price products. Companies therefore adopted QM initiatives with the expectation that they would help to achieve competitive advantages and higher business performance. According to a senior manager at Company E, price was still the industry's major competitiveness issue, but this was not sufficient in the current market. A company had also to compete on quality, technology and service. Company E therefore adopted ISO9001, which helped the company increase product conformance and productivity. Similarly, the Quality Manager at Company F said, "*...Competitors has certain impact on QM adoption. There is not a single company operating in this industry. Customers have high expectations. As an old saying goes, 'No competition, No improvement'. We hope to increase our product quality, reduce costs, and provide first-class services through the means of quality management.*"

On the other hand, competitors also serve a role as benchmarking that drives QM adoption. The Quality Manager at Company A said, "*As an old Chinese saying goes 'Know your enemy, know yourself, a hundred battles, a hundred won'. Competitors reflect market trends of quality management. Compare with*

the top one in the industry, learn experience and lessons from them, and endeavour to become the number one in the industry..."

The DGM at Company B explained that company's approach: *"We choose top companies among our competitors as benchmarks. We build co-operative and inter-communicative relationships with them (i.e. the benchmarking companies). We learn and exchange managerial concepts and ideas. We use their QM experience for reference...Additionally to become the benchmark in the industry is our [company's] strategic values. We aim at this direction as our vision is to be the world number one supplier of air-conditioner compressor. We always encourage ourselves – There is an Intel in the computer industry, we hope there is also a SHRL in the air-conditioner industry..."*

Interestingly, the author noted that the Quality Manager from Company D mentioned 'losing-face' as well as 'peer pressure' and benchmarking, when commenting on the impact of competitors. He said, "*Many companies in our industry have QM systems and standards. Some of our suppliers are also qualified ISO...It is impossible for us not to do so, we will lose face*".

Moreover, the author found some negative observations relating to the impact of competitors. According to the QM at Company C, competitors have very little impact on QM adoption in the company, mainly because of its sales model. As mentioned before, Company C built all its products to order and was the exclusive supplier to its customers, in terms of four products – high battery cable, plastic inner parts, hot pressing products and rubber seal series products.

8.2.7. Government

Based on the case-study results, Government was also perceived to have a moderate impact on QM adoption, in two main ways: firstly in the creation of an environment that encourages companies to pursue high quality standards and better QM practices and secondly in the provision of a regulatory framework. Liu's (2005) research also revealed similar impacts of Government on QM adoption and development in China.

For example, the Quality Manager at Company F said, *"the government has certain impacts on QM adoption, e.g. it encourages all companies to implement QM initiatives...so it's the general direction in China [for companies to implement one or more QM initiatives]..."* The Quality Manager at Company C explained that the Government encouraged all the Chinese SOEs to launch a "Quality Month" activity in September every year. The purposes of "Quality Month" is to focus on solving the root causes of major quality problems occurring during the year, and make improve business performance (e.g. quality, process improvement and productivity). It is also a good opportunity for company to recognise its staff for their contributions to quality improvement.

In terms of government regulatory powers, most of the interviewees commented that their companies have to achieve certain industry quality standards, and/or export quality standards that are required by laws and regulations (e.g. the Law of Product Quality; China Compulsory Certification). For instance, the Quality Manager at Company A pointed out: "*Because we are a chemical manufacturer, government has special requirements on our operations, especially on 'safety' and 'environment' aspects. We highlight these issues in our quality policy, and take them into account during the product design and development process. We use QM tools and techniques to control and monitor the operations...*"

8.2.8. Degree of Impacts

Each company interviewee was asked to identify the degree of impact for each adoption factor, using a Likert-type scale (1=the least influential, 5=the most influential). The averaged results are indicated in Figure 8.3 (See Appendix 5 for a summary of adoption factors scores from all interviewees). Market pressure and customer requirements were perceived to be the most influential factors on QM adoption. Especially in Chinese owned-enterprises, the adoption of QM initiatives was motivated primarily by customer requirements and market pressure, including specifically marketing purpose. The author considers that the cause might be related to the Chinese national context.

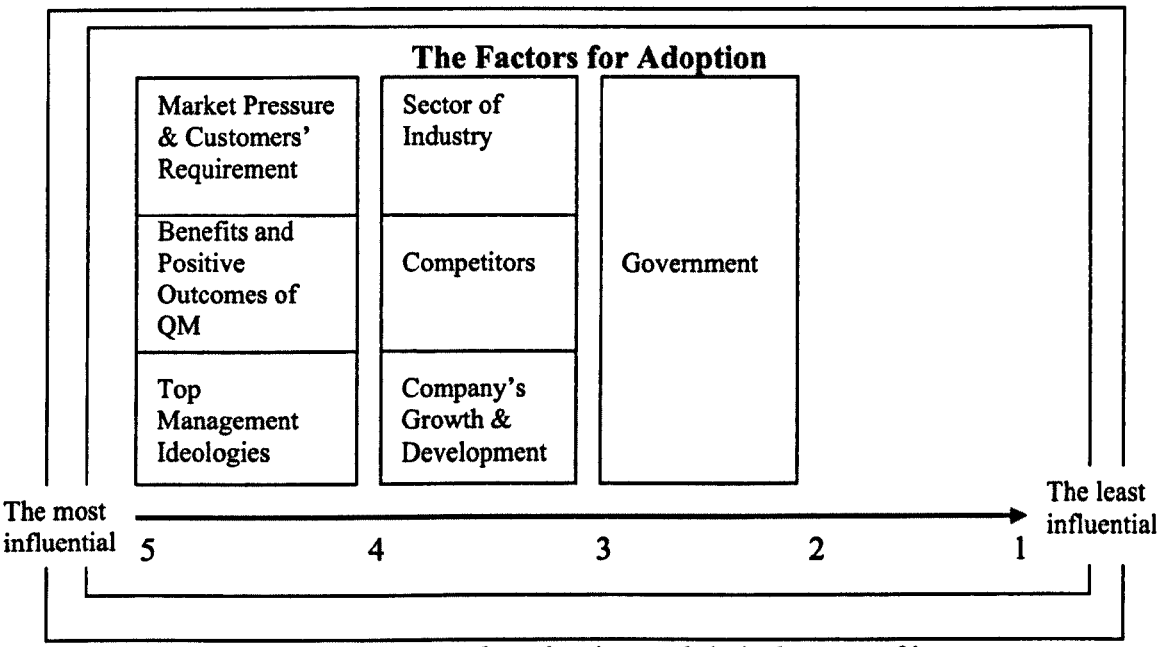


Figure 8.3: The factors for adoption and their degrees of impact

8.3. Factors for Successful QM Implementation

This section will discuss the factors that facilitate QM implementation, including company's mission and vision, organizational culture, top management commitment and human capital/resource.

8.3.1. Company's Mission and Vision

Based on the case-study results, a company's mission and vision was closely linked with company's quality policy (See figure 8.4 below). On the one hand, quality and QM were embedded in a company's mission and vision. On the other hand, quality policy reflected a company's top-level vision and mission, and demonstrated its quality philosophy and quality objectives. Quality policy was promulgated by top managers (CEO, GM or DGM) within the case-study companies. The author argues that while company mission and vision indirectly influenced QM implementation; the QM implementation also contributed to achieving company's mission and vision, potentially offering a virtuous circle. Three examples will be demonstrated here, one each from each type of company ownership.

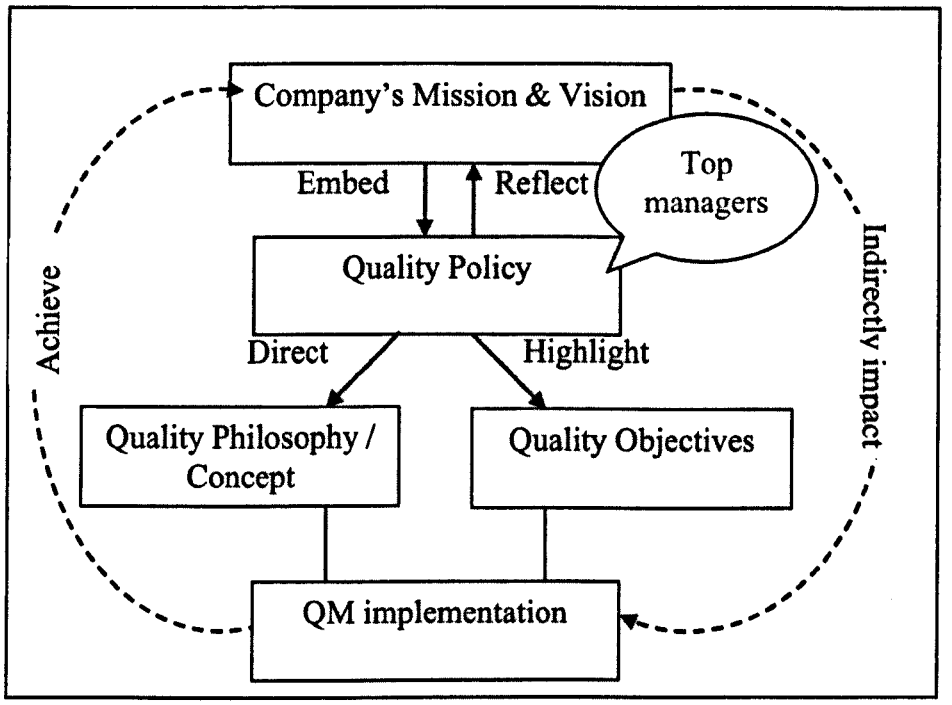


Figure 8.4: Influences on QM implementation

Company A's mission was to be a world leading Engineering Plastics supplier based on three competitive advantages – globalization, innovation, and operational excellence and quality. According to its Quality Manager, the company's quality policy was announced by the group CEO, which was very important for every employee to understand and to follow in daily work. The quality policy reflected the company's mission of being a leading engineering plastic supplier worldwide. The quality policy also highlighted the quality philosophy/concept in the company. *"...Our quality concept is customer-focused. We put great efforts to understand and satisfy customers' needs and expectations, and build up mutually-trusted and long-term relationships with them. Our quality concept is to make continuous improvement in processes and methods. Our quality concept emphasizes QHSE (i.e. Quality, Hygiene, Safety and Environment)..."* as the Quality Manager stated in an interview. During the company visit, the author found the company's quality policy contained the aforementioned information, which was displayed in the General Manger's office, Quality Manager's office, reception area and corridor. (See appendix 3 for companies' photos)

For Company D, its quality policy was announced by the General Manager. It was to implement a brand image strategy, cultivate/create quality culture, maximize quality management benefits and effectiveness, and meet customers' satisfaction. During the interview, the Quality Manager explained how the company's missions impacted on QM implementation,

> *"Our company's mission is to create new power for society improvements, and supply the best products to our customers, based on the four main values – keeping improvements and innovation, integrity, customer-first and people-oriented. The quality policy indicates that we want to be the leader of China's Diesel Engine industry, and our brand-name aims to pass down the soul and spirit of Rudolf Diesel – the Father of Diesel engine, and the spirit of innovation (new power). Under the umbrella of this quality policy, we set down yearly quality objectives, which might relate to operational costs, quality, market performance, management effectiveness, customer satisfaction rate, etc. All these help us to achieve company's mission, maximize customer satisfaction and internal organizational benefits."*

As mentioned previously, the Company F was a market leader in the Shanghai electric bicycle industry. It aimed to grasp domestic market to maintain its market position, and to develop its international market and network. The company Chairman coined the slogan of *"Product quality is the fundamental principle; quality is in my hand, and safety is in my heart"*. Accordingly, the quality policy highlighted company's quality concepts – to pursue performance excellence, innovation and customer satisfaction. The company implemented QM initiatives to achieve its mission and quality objectives.

8.3.2. Organizational Culture

As discussed in the literature review, organizational culture has a great influence on QM implementation. This section will provide empirical evidence to illustrate how QM and organizational culture relate to each other. During the fieldwork, the author asked all the interviewees in case-study companies to describe the influencing factors on QM implementation, and to score 1-5 on the following statements (1=strongly disagree; 5=strongly agree) in particular:

1. QM initiatives are a vehicle/tool of cultural change in our organization.
2. QM initiatives maintain and reinforce our management discourse and organizational culture.

Interestingly, the respondents from Company A, E and F scored 2 or 3 on the first statement, and scored 4 or 5 on the second statement. According to the GM at Company A,

> *"... It is not because implementing QM initiatives and doing this paper work that help us to develop new culture or change culture. I think we have the culture, and our management discourse are already customer-and quality-focused. We want to satisfy our customers and be a good supplier for our customers. The initiatives (e.g. Six Sigma, TQM, ISO9000) are useful tools to help company achieve the mission, and to reinforce our culture (i.e.: what we want to do and achieve into everyday work, and make our view more clear and visible), but they cannot change our culture or management philosophies."*

Similar comments were made by the Quality Managers at Company E and F. For example, the Quality Manager at Company F stated that,

> *"Our company is a very personalized place, and we put great emphasis on people – develop their quality and ability. Our quality policy and QM practices are under the umbrella of company's management discourse and culture. We implement QM practices in a way that reflect and reinforce our culture and management discourse, such as team-working and employee involvement. QM implementation reinforces these cultures in everyday life...Every employee takes their own responsibilities, and proactively cooperates with each other during the product development process..."*

The author links these observations with the organizational culture results that have been discussed in Chapter 7. The three case-study companies had similar organizational culture profiles, and were closer to an ideal 'quality culture profile' established by Chang and Wiebe (1996). In accord with established theoretical propositions (e.g. Gallear and Ghobadian, 2004; Zammuto *et al*, 2000), the author therefore argues that when a company has organizational culture that supports QM implementation, the QM concepts are more likely to fit with its existing organizational culture, and are more readily refined and shaped by it. The QM practices play a role to reflect and reinforce the existing organizational culture and management discourse in everyday work.

A different picture was observed at Company C, B and D. The respondents at these companies scored 4 or 5 on both statements. On the one hand, QM can trigger cultural changes in these companies, or at least the interviewees thought that some cultural changes were necessary to support QM implementation. According to the interviewees, the most necessary aspects included: extensive

staff training; cross-functional co-operation; employee involvement and motivation; top management commitment; and an appropriate attitude towards continuous improvement. On the other hand, the interviewees also thought that QM could *reinforce* some aspects of organizational culture, e.g. hierarchical or power-oriented aspects.

Further, as pointed out by the interviewees in these companies, they faced some barriers of cultural changes, such as resistance to change, lack of knowledge of how to manage change and existing culture and members (e.g. lack of empowerment, responsibility and transparency, i.e. the unwillingness to reveal the negative facts). For example, the Quality Manager at Company C mentioned that senior managers tried to change management behaviour and organizational culture, and the changes were progressively taking place. He said, *"Company tends to employ many younger-generation university graduates in recent years, who have higher education level, and different values and behaviours from older generation, there is a gap in between. However, there is still a great amount of older generation employees in the company...the changes take time and effort."*

Based on these observations, the author argues that the power of QM practices to trigger cultural changes might be limited to a superficial level. QM practices could possibly change people's actions. However, deep down in their heart, people's beliefs and values may not be so easily changed. It is therefore not difficult to understand why Company C, B and D obtained opposite CVF profiles to the ideal 'quality culture profile' proposed by Chang and Wiebe (1996). These observations further support the author's propositions as previously stated, and are compatible with the cross-cultural theories (Flynn and Saladin, 2006; Hofstede, 1994; House *et al*, 2002; Sturdy, 2004; Trompenaars, 1994) – there is no single, ideal 'quality culture', and a full absorption or direct replication of QM practices imported from foreign soil does not always lead to success. QM practices might be adapted for local consumption, so as to be in line with the organizational and cultural models of organizations.

8.3.3. Top Management Commitment

All the interviewees in this study agreed that a top-down approach to QM implementation was more effective than a bottom-up approach. Based on the case-study results, top management commitment played a significant role when implementing QM initiatives, in terms of:

- Setting Quality Policy and Objectives,
- Providing resources,
- Delegating authority,
- Serving as a 'role-model',
- Increasing the level of effectiveness and efficiency.

Besides the examples presented in section 8.2.1, which demonstrated that top management commit to setting quality policy and objectives, these observations were supported by other evidence from the case-study companies. For instance, the Quality Manager at Company C told the author that, *"Although our customers are the main adoption factors on QM, the top management commitment is certainly important. It helps us to reduce the length of implementation, and increase the level of effectiveness and efficiency. When we started to launch the ISO9000 in 1998, top managers paid great attention to it, and emphasized that we must achieved the certificate as soon as possible. It is therefore we managed to pass the certificate at the first and within one year..."*

Further, the GM at Company A believed that one of the most important things for successful QM implementation is top management commitment. He said,

> *"...I am a role model for my employees. I spend at least 2 hours every morning in the factory, going with people to check the cleaning, the samples, the storage, etc...I also participate in some of the quality activities, e.g. Management Review, Quality theme meetings. Besides, for example, when the customers had been keeping complain about one certain defect of our products, I worked with the quality team together to support them and solve problems. I show my attention to QM...If I am fully committed to QM implementation, it is more likely that my employee will do the same."*

According to the Quality Manager at Company D, a successful QM implementation must be supported and emphasized by top managers. Top managers should be willing to invest resources, e.g. invest in new machinery, equipments, technology, staff training and system improvement, to support QM implementation. Top managers should also place quality as one of the top

priorities. As the Quality Manager pointed out, *"the top managers delegated the authority to me, so that I can ask for re-production if products do not meet the quality standards or customers' requirements, even if the Production Manager think they are ok or the sales team can sell them out..."*

8.3.4. Human Capital

The case-study results indicated that human capital has a certain impact on QM implementation. According to the interviewees, a successful QM implementation relies on outstanding human capital. It is important to increase the quality, capability and knowledge of the workforce both by staff training, and bringing in specialists and outside talent. Additionally, it is necessary to educate people about key quality concepts, e.g. customer-focused, taking responsibility and following the standards requirement (no short-cuts). These observations were also evident in Hua *et al*'s (2000) study, which suggested that a higher employee education level would lead to better QM implementation results.

Significantly, the author discovered that SOEs in China can face problem of recruiting and retaining high quality staff. This could be one of the reasons that the QM implementation stage in some SOEs lags behind POEs and foreign companies. For example, the Quality Manager at Company C said,

> *"Nowadays, it is very difficult to maintain high quality staff. Employees see themselves separated from company. They only come here to gain experience, and they 'jump' to other companies once they become experienced. People are really interested in money, and they always look for higher salary in foreign companies...Our staff is mainly the old generation, who might not have the appropriate ability...they have old-fashion thinking, no innovation."*

The Quality Manager at Company D explained that it was necessary to increase the quality of labour force, however the company still lacked good QM specialists.

In sum, the above-noted factors provided good insights into the factors that facilitate successful QM implementation, from a perspective of qualitative study. These observations also accord with the literature relating to the CSFs

for QM (Black and Porter, 1996; Dayton, 2001; Saraph *et al,* 1989; Sun, 2000). However, in terms of the cultural impacts, one needs to view them from different angles. It is important to understand that the results of cultural change may limit to certain extent in an organization, as this will not always lead to effective QM implementation. Instead, 'adaptive practices' that are suited to the local context and consumption are needed.

8.4. Conclusions

The knowledge outcomes established in this chapter included:

1) QM dissemination and adoption – the author has aimed to provide a rich picture of the dissemination and adoption of QM in China, and hoped to extend the understanding of these issues in the context of diffusion and management fashion theories.

2) Factors facilitate QM implementation – the author explained various factors observed in the current study that facilitated successful QM implementation. More importantly, the author hoped to have provided readers with a new insight into the relationships between culture and QM implementation.

CHAPTER 9 – CONCLUSIONS

This research has examined the issue of managing quality in the Chinese context, based on the multiple case-studies of Shanghai manufacturing industry. Currently, there is a lack of systematic and intensive investigation in the field of OM, concerning how and why culture matters to QM; in particular, how the Chinese business cultures and Chinese context impact QM. Further, the literature on international QM development typically fails to provide strong linkages to the relevant broader management theories, such as dissemination or management trends and fashions. For example, what is rational in QM adoption in specific national context and why the preference for QM initiatives varies globally? The author believes that it is important to understand these phenomena, especially in the context of Newly-Industrialised Countries (NICs). This research aimed to fill these gaps and contribute to knowledge development, by exploring both the 'hard' and 'soft' aspects of QM, examining the relationships between QM and culture, and developing a dissemination and adoption model that extends understanding of the diffusion and management fashions theories in this context.

Section 9.1 will present key research conclusions and implications. Section 9.2 will briefly discuss validation feedback from the case study respondents and academic experts independent of the case study. Section 9.3 will propose the contributions to knowledge. Finally, section 9.4 will outline the limitations of this research, and suggest areas of future research.

9.1. Conclusions and Implications

Conclusions and implications have already been discussed separately in each of the data analysis chapters (Chapters 6, 7 and 8). In this section, the author will highlight the key conclusions and implications.

Considering first the current status of QM – one of the research questions that was discussed in Chapter 6. To summarise, companies in Shanghai tend to favour QMS initiatives (typically certification-oriented approaches, e.g. ISO9000) more than general QM methods (non certification-oriented approaches, e.g. Six Sigma and TQM). Automotive-related companies adopted TS16949 as their main QM

framework, and companies in other industries adopted ISO9001 as their main QM framework. Particularly, Chinese-owned enterprises were more likely to favour certification-oriented approaches than FIEs – they had correspondingly less interest in the implementation of more advanced QM methods.

Additionally, the author used the CVF in conjunction with semi-structured interviews to examine the culture of organizations in the context of QM implementation, as described in Chapter 7. The findings suggested that the two SOEs had the highest two scores in hierarchical and rational cultures, while both POEs revealed strong developmental and group cultures. However, the two FIEs in this study possessed very different CVF profiles one from another, despite the fact that both placed a high premium on developmental cultural aspects. These organizational culture differences suggest that the culture of FIEs may vary, depending on its ownership structure (JV or WOFE), the JV partner's culture and the percentage of its share controlled by local and foreign partners.

The relationship between culture and QM has two aspects, as described in Chapter 8. Firstly, QM initiatives are an important vehicle of cultural change in organizations. Secondly, such initiatives can also act to sustain the management discourse and reinforce the organizational culture. This relates to the existing culture in an organization and should be considered in relation to the specific national context. It is reasonable to argue that there is no single, ideal 'quality culture', and a full absorption or direct replication of QM practices imported from foreign soil does not always lead to success. QM practices might be adapted for local consumption, so as to in line with the organizational and cultural models of organizations.

In the context of the above general findings, Figure 9.1 below provides a high-level relationship diagram of key findings concerning QM dissemination and diffusion. This model is compatible with both Rogers' (1995) diffusion theory and Abrahamson's (1996) theory of management trends and fashions. The research indicates the presence of drivers of change connected to market factors and customers, together with consultants and quality professionals who aim to positively influence managers' decision on QM adoption. The model involves: 1)

QM trends and fashions (i.e. the supply side); 2) Dissemination routes and context – QM initiatives are disseminated through channels or routes, and different adopters are potentially interacting with each other (i.e. awareness and persuasion stages); 3) Top management decision-making – a choice to adopt or reject, based on the adoption factors; 4) Implementation, driven also by top management, involving potential adaption or indeed 'nominal' adoption.

The following section will review the key findings associated with elements shown in Figure 9.1.

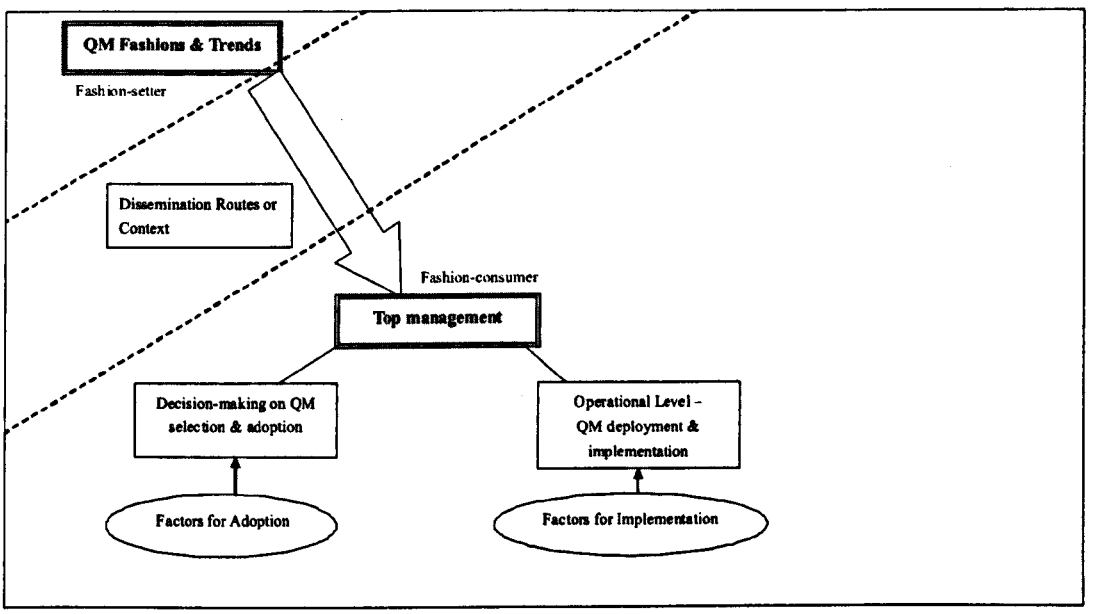


Figure 9.1: A model of QM dissemination and diffusion

- **QM Fashions and Trends** – The author considered QM in the context of both Diffusion theory (Rogers, 1995) and Management Fashions theory (Abrahamson, 1996), and has taken the view that QM initiatives can be considered as management trends and fashions; disseminated from fashion-setter to fashion-consumer. It was clear that QM initiatives that are considered as being the current trend or fashion are indeed likely to get serious consideration by top managers; whereas obsolete or non-current fashions would not get serious consideration from managers. Case-study companies kept updating themselves concerning QM trends and fashions via various routes (see below point).

- **Dissemination Routes and Context** – Dissemination of QM trends took place via different routes, such as the internet, consultants and JV partners. The author focused mainly on two observed routes in this study, i.e. quality associations and consultants, and market pressure and customer requirement. Quality associations and consultants provided useful QM resources and experience, and played a 'coaching' role to help company set up QM systems. Customers introduced and recommended trends and fashions relating to QM systems, methods, concepts and techniques during supplier conventions or meetings. Some QM approaches were mandatory for implementation, whereas some were for reference.

- **Top Management** – Top managers were key figures in both adoption decisions and implementation issues. Top managers were generally rational decision-makers, because they did not blindly adopt QM fashions and their decision-making was based on specific adoption factors. It is important to highlight that top managers' decision might be influenced by various extrinsic factors (see point below). However, top managers' own ideologies could also pre-dispose or motivate them to adopt QM practices. In terms of implementation, they played a major role in initiating, setting quality policy and objectives, supporting (e.g. delegation of authority) and serving as a 'role-model'.

- **Factors for Adoption** – As presented in Figure 8.1 (Please refer to Chapter 8 for detail), the seven observed factors for adoption in this study were: market pressure and customer requirement, top management ideologies, benefits and positive outcomes of QM, sector of industry, company's growth and development, competitors and government. Figure 8.1 in Chapter 8 also illustrated the relationship among these factors. It is important to highlight that among these adoption factors, market pressure and customer requirement were perceived to be the most influential factors on QM adoption. Especially in Chinese owned-enterprises, the adoption of QM initiatives was motivated primarily by customer requirement and market pressure, including specifically marketing purposes.

- **Operational level (QM Deployment and Implementation)** – All case companies launched ISO9000 as a starting point of their QM journey, regardless of their manufacturer type and the market or industry within which they were

operating. Different companies have then adopted a wide range of quality systems standards and product specific standards, which were largely determined by the industry within which the company was operating, the types of products that the company was producing and company's growth and development. In terms of the effectiveness of QM implementation:

- 'Adaptive' QM practices were observed in this study, in terms of 1). 'Rationalized operations' (a Chinese-style QCC); 2). Interviewees mentioned the benefits of adaptive QM practices and QM implementation is sensitive to the country context; 3). The development of the China Quality Awards might also indicate the future QM trend in China – a 'Chinese QM model'.

- 'Nominal adoption' of QM practices was not observed in the case-study companies. However, this phenomenon does exist in China, in the views of quality experts and consultants.

- **Factors for Implementation** – The author identified five external and internal factors in this study, related to QM implementation. These include Chinese national culture, company's mission and vision, organizational culture, top management commitment and human capital.

9.2. Theory Validation

As mentioned in the methodology chapter, theory validation was carried out during January and February 2009, through respondent validation and face validation. The author discussed the key findings with three respondents from case-study companies (the GM & QM from Company A, and the DGM from Company C). The author also organised a panel discussion with three professors working at the China Europe International Business School (CEIBS).

Respondents' Feedback

The validation data from respondents generally confirmed the research results that the author had developed. It also helped the author to better explain the phenomena and theoretical elements.

The GM and QM at Company A mainly commented on three elements, i.e. QM trends and fashions, dissemination routes and QM implementation. According to the GM at Company A, it is generally true that QM initiatives considered as being current trends and fashion are likely to get serious consideration from him. However, it also depends on the type of QM initiatives, i.e. whether it is a certification-oriented (e.g. ISO9001 and TS16949) or non-certification approach (e.g. TQM). The GM pointed out that TS16949 does not only represent the current trends in the automotive industry, but also is an obligation or a 'must'. Additionally, the GM mentioned that the QM trends could vary from country to country, and from industry to industry. This observation supports the current literature (e.g. Charlesworth, 2000; McNeil and Greatbanks, 2002; Thawesaengskulthai and Tannock, 2008a).

Further, the GM thought that the role played by quality consultants depends on the development and maturity of a company. He agreed that Quality associations and consultants could act a dissemination route. However, in-house quality experts also played a key role of disseminating and implementing QM initiatives in the company. In his viewpoint, some Chinese companies that lacked QM experience, knowledge and high quality staff, could rely more heavily on external quality consultants.

Moreover, the QM at Company A made some comments on 'adaptive practices'. In his viewpoint, 'adaptive QM practices' for local operations are equally likely in both FIEs and Chinese companies, as long as the company employs local staff. The underlying reasons relate to the Chinese context. He explained that the company previously operated a voluntary 'suggestion system', however, hardly any employee gave suggestions. The company then changed to a 'rewards and punishment' suggestion system, which significantly increased the numbers of suggestions. This observation provides further evidence that support the author's

proposition, i.e. 'adaptive practices' that are sensitive to the local context and consumption are needed.

On the other hand, the DGM at Company C commented mainly on 'nominal adoption'. In his view, 'nominal adoption' might happen unintentionally in some companies, because they lacked management experience, knowledge, and quality expertise. Companies do not provide relevant training, and few people understand the most appropriate way of implementing QM. In sum, such companies might not be at an appropriate stage to implement advanced QM methods, such as ISO9000. Additionally, the GDM highlighted that the degree of regulatory power can largely influence the phenomenon of 'nominal adoption'. With an increasing attention on China from worldwide, the Chinese government has placed much more emphasis on quality, imposing more rigorous rules and regulations and also severe punishments, with the aim of improving China's image.

'Experts' Feedback:

The author discussed the research background with three professors at CEIBS, providing the key research questions, methodology and data analysis during the validation stage. The three academics were very interested in the author's current study and findings. They believed that it was a valid and credible research, based on their knowledge and experience. They also highlighted that there is a need for future research to investigate similar areas using different methodology and samples. Generally, the observations and comments from these three academics helped the author to apply the case-study findings in a broader context.

The CEIBS academics mainly commented on the phenomena of 'adaptive practices' and 'nominal adoption', also on senior managers' rational behaviour as regards QM adoption. For example, two scholars pointed out that 'adaptive practices' and 'nominal adoption' do exist in the majority of the countries worldwide. One of them emphasized that even in the USA, one could observed 'adaptive practices' and 'nominal adoption' in some companies. However, he believed that these phenomena should be more evident in China.

On the other hand, they mentioned that while investigating the rational behaviours of top managers, the author should also consider irrational behaviours, which do exist in most companies from their perspectives. For example, one of the professors noted that, based on his consulting experience, managers in some companies adopted certain QM approaches through informal chat with friends or someone with a good reputation in the industry, they did not however do any analysis or evaluation.

The author explained the assumption and focus of this study – as previously discussed in the literature review (Chapter 2), researchers have studied adoption from the viewpoint of management fashions, considering irrational (e.g. Boje *et al*, 1997; Jackson, 2001; Sturdy, 2004) and rational adoption theories (e.g. Abrahamson, 1996; Miller and Hartwick, 2002). In this research, following Abrahamson (1996), the focus was on studying QM adoption from a rational perspective, and rationality was certainly present in the managers' intent. However, the case-study companies typically did not undertake genuinely systematic and extensive evaluation of their QM implementation, though managers claimed some benefits and positive outcomes of QM implementation (Please refer to Chapter 8). This may undermine the claim of full rationality in decision-making. Nevertheless, the author believes that the research findings provide good support for considering fashion-consumers' behaviour as fundamentally rational, in respect of QM implementation and adoption decisions.

9.3. Contributions to Knowledge

The author believed that this research has provided worthwhile contributions to knowledge in five respects: 1) knowledge of 'soft' aspects of QM in the context of Chinese business cultures; 2) knowledge of the relationships between culture and QM implementation; 3) theories of diffusion and adoption of QM initiatives; 4) the application of CVF to complement qualitative studies; and 5) the implications of the differences among three types of enterprises (i.e. SOEs, POEs and FIEs), in terms of their current QM status and organizational culture issues. The results of this research should be of interest to business and management academics, both foreign and Chinese management practitioners and QM professionals.

'Soft' aspects of QM in the context of Chinese business cultures:

This research has generated some new knowledge on the 'soft' aspect of QM in relation to Chinese business cultures, from a qualitative researcher's perspective. Academic recognition of China's importance to global economic development is well chronicled for over a decade (Ralston *et al*, 2006). More recently, there has been a considerable literature focused on examining the organizational culture of Chinese enterprises. Most of these studies are however conducted using a quantitative research approach (e.g. Child, 1990; Kwan and Walker, 2004; Lewis, 2003; Ralston *et al*, 2006; Schlevogt, 2002). These studies provide statistical evidence and generalisability on Chinese business cultures, which however, lacked some richness and detail. Thus, the author claimed that new knowledge has been added to existing theories regarding the 'soft' aspects of QM in the context of Chinese business cultures, by providing a richer and more substantive picture of these issues, in enterprises with various types of ownership.

The relationships between culture and QM implementation:

This research has attempted to provide new insights into the relationships between culture and QM implementation, from both organizational culture and national/cross-cultural perspectives. Previous researches on organizational culture suggested that QM approaches are useful tools to maintain or reinforce its culture, or to change organizational culture in the direction to a desired 'quality culture' (Gallear and Ghobadian, 2004; Zammuto *et al*, 2000). However, when considering a specific national context, this may not be completely true. Indeed, there exists no single, 'ideal' quality or TQM culture, as this will not always lead to effective QM implementation. Instead, QM presents a complex set of implementation decisions, and requires organizations to implement it in ways that are sensitive to company needs and adaptive to specific cultural conditions. Thus 'adaptive practices' that are suited to the local context and consumption have appeared worldwide.

Theories of dissemination and adoption of QM initiatives:

This research has attempted to contribute to the development of a richer picture of the dissemination and adoption of QM in China, and to extend understanding of QM dissemination in the context of diffusion and management fashion theories. The background theories of both Rogers (1995) and Abrahamson (1996) have

both been found useful, and in the context of this work have been found to be complementary.

The application of CVF in qualitative study:

Supporting her claim for a modest methodological contribution, the author has shown that the CVF is a valuable instrument for cross-ownership (e.g. SOEs, POEs and FIEs) comparison of organizational culture in China. Using the CVF approach enabled the author to illustrate the results of cross-case comparison descriptively and graphically. Based on the author's experience, the CVF is useful when used in conjunction with qualitative research, to capture a rich picture and to increase research validity through within case triangulation. This allows for greater accuracy and understanding of the phenomenon. Moreover, the author believed that using the CVF, a researcher can explore mixed cultural aspects of organizations influenced for example by different managers or investors.

The implications of the differences among three types of enterprises:

By examining three different types of ownership, the author has identified the similarities and differences in terms of their current QM status and organizational culture issues. The implications were that FIEs were at more advanced stage than Chinese enterprises in terms of QM implementation. The adaptation or indeed nominal QM practices may exist in Chinese enterprises, which could influence the effectiveness of QM adoption and implementation. The underlying reasons might relate to the Chinese context. The organizational culture differed among SOEs, POEs and FIEs, but the culture in POEs and one WOFE was quite similar, and was more compatible with an 'ideal quality culture' proposed by Chang and Wiebe (1996).

9.4. Limitations & Future Research

9.4.1. Research Limitations

The author believed that this study represents valid and valuable findings, which has contributed to knowledge advancement and management practices in various aspects, as aforementioned. However, there were some limitations, particularly due to the practical constraints of this research.

Firstly, due to the time and resource constraints, only fourteen interviews with case-study companies and three interviews with quality experts and consultants were conducted for theory building. These were substantial in-depth sessions, yet the comprehensiveness and robustness of the research findings might have been improved, if more cases or interviews within the current case-study companies had been possible.

Secondly, the theory validation, although taken very seriously in this research, was primarily based on respondent validation and face validation, with limited independent input. The validity and credibility of this research might have been improved, if more test cases and further independent validation opportunities had been available.

Thirdly, the dissemination and adoption model was based on the assumption that managers (i.e. fashion-consumers) generally made rational decisions on QM adoption. However, result and analysis represented the managers' perceptions and judgements, and in reality irrational behaviours may also exist.

Fourthly, the CVF has generally been used in quantitative studies with a large sample size. However, this research applied the CVF with smaller 'diagnostic' data sets that were not analysed using statistical methods. Although these were combined with interview data allowing for a rich picture, the author had no method of quantifying statistical confidence in numerical results.

Last but not the least, this research findings were mainly based on the selected six enterprises in Shanghai manufacturing industries. Shanghai is generally believed to be one of the most developed and advanced cities in China. Therefore, the

research conclusions in terms of the QM status and culture issues might only be valid in some advanced cities (e.g. Beijing, Shenzhen, and Guangzhou). Additionally, the readers should aware the geographical boundary of this research, which determines the national context (e.g. business environment). Therefore, the adoption factors and their degree of impacts identified in this study might vary from other countries, although the author believed that they could be generalised and valid in most countries.

9.4.2. Future Research

The limitations outlined above suggested the following areas for further work:

Firstly, future researches could conduct similar studies with companies extended to other types of manufacturers (e.g. food and textiles) and to different geographical regions in China.

Secondly, future studies could also use quantitative methods for further development and testing of the theoretical model of QM dissemination and adoption proposed in this research. More fundamentally, there is a need for future research that contributes to understanding of fashion-consumers' behaviour on the demand side, in an international context. Therefore, researchers can investigate how adoption factors and their degree of impacts vary from country to country.

Lastly, there have been long-standing debates in terms of the relationship between QM and culture. Future researches can therefore use mixed methods, including both quantitative and qualitative research, to investigate this issue and do cross-cultural comparison on this basis.

REFERENCES

1. Abrahamson, E. (1991), "Managerial Fads and Fashions: The Diffusion and Rejection of innovations", *The Academy of Management Review*, Vol.16 (3), pp.586-612

2. Abrahamson, E. (1996), "Management Fashion", *The Academy of Management Review*, Vol.21 (1), pp.254-285

3. Ahire, S. L., Golhar, D. Y. and Waller, M. A. (1996), "Development and Validation of TQM implementation constructs", *Decision Sciences*, Vol. 27, (1), pp. 23-56

4. Alasuutari, P. (1995), *Researching Culture: Qualitative Method and Cultural Studies*, London: Sage Publications Ltd

5. Alasuutari, P. (1997), "The Discursive Construction of Personality". In The Narrative Study of Lives, A. Lieblich and R. Josselson (eds.): Vol. 5. Newbury Park, California: Sage, pp.1-20

6. Al-Khalifa, K. N. and Aspinwall, E. M. (2000), "The development of total quality management in Qatar", *The TQM Magazine*, Vol. 12 (3), pp. 194 – 204

7. Allen, R.F. and Dyer, F.J. (1980), "A tool for tapping the organizational unconscious", *Personnel Journal*, pp.192–199

8. Alvesson, M. and Karreman, D. (2000), "Varieties of Discourse: On the Study of Organizations through Discourse Analysis", *Human Relations*, Vol. 53 (9), pp. 1125-1149

9. Antony, J., Leung, K., Knowles, G. and Gosh, G. (2002), "Critical success factors of TQM implementation in Hong Kong industries", *International Journal of Quality & Reliability Management*, Vol. 19 (5), pp.551-566

10. Ashkanasy, N. M., Broadfoot, L. E. and Falkus, S. (2000), "Questionnaire measures of organisational culture", in Handbook of Organizational Culture and Climate, N. M., Ashkanasy, C. P. M., Wilderom and M. F., Peterson (Eds.), Thousand Oaks: Sage Publication

11. Badri, M. A., Davis, D. and Davis, E. (1995), "A study of measuring the critical factors of quality management", *International Journal of Quality and Reliability Management*, Vol. 12, (2), pp. 36-53

12. Bai, C. and Xu, L. C. (2005), "Incentives for CEOs with multitasks: Evidence from Chinese state-owned enterprises", *Journal of Comparative Economics*, Vol. 33 (April), pp. 517-539

13. Baker, E. L. (1980), "Managing organizational culture", *The McKINSEY Quarterly*, Autumn, pp. 51-61

14. Barley, S. R. and Kunda, G. (1992), "Design and Devotion: Surges of Rational and Normative Ideologies of Control in Managerial Discourse", *Administrative Science Quarterly*, Vol. 37 (3), pp. 363-400

15. Batstone, E. and Gourlay, S. (1986), *Unions, Unemployment and Innovation*, Oxford: Blackwell

16. Benton, T. and Craib, I. (2001), *Philosophy of Social Science: The Philosophical Foundations of Social Thought*, New York: Palgrave Macmillan

17. Beyer, J. M. (1981), "Ideologies, values, and decision making in organizations", In handbook of organizational design, P.C. Nystrom & W. H. Starbuck (eds.), New York: Oxford University Press, pp. 166-202

18. Bhagat, R. S., Kedia, B. L., Harveston, P. D. and Triandis, H. C. (2002), "Cultural variations in the cross-border transfer of organizational knowledge: an integrative framework", *Academy of Management Review*, Vol. 27 (2), pp. 1-18

19. Black, S. A. and Porter, L. J. (1996), "Identification of Critical factors of TQM", *Decision sciences*, Vol. 27 (1), pp. 1-21

20. Boje, D. and Winsor, R. D. (1993), "The Resurrection of Taylorism: Total Quality Management's Hidden Agenda", *Journal of Organizational Change Management*, Vol. 6 (4), pp.57-70

21. Boje, D. M., Grace, A. R., Robert D. and Debra J. S. (1997), "Restoring reengineering", *Communication Research*, Vol. 24 (6), pp.631-668

22. Bradley, K. and Hill, S. (1987), "Quality circles and managerial interests", *Industrial Relations*, Vol.26 (1), pp.68-82

23. Bright, K. and Cooper, C. L. (1993), "Organizational Culture and the Management of Quality: Towards a new framework", *Journal of Management Psychology*, Vol. 8 (6), pp.21-27

24. Brown, D. H. and MacBean, A. I. (2005), *Challenges For China's Development An Enterprise Perspective*, London & New York: Routledge

25. Bryman, A. (2001), *Social Research Methods*, Oxford: Oxford University Press

26. Cagliano, R. and Spina, G. (2000), "How improvement programmes of manufacturing are selected: the role of strategic priorities and past experience", *International Journal of Operations and Production Management*, Vol. 20 (7), pp.772-791

27. Cameron, K. S. and Ettington, D. R. (1988), "The conceptual foundations of organizational culture", in Higher Education: Handbook of Theory and Research J.C., Smart (Eds.), NY: Agathon Press, pp.356-396

28. Cameron, K. S. and Quinn, R. E. (1999), *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework,* Addison Wesley Press, Reading, MA, Addison-Wesley Series on Organizational Development

29. Chang, F. S. and Wiebe, H. A. (1996), "The ideal culture profile for total quality management: a competing values perspective", *Engineering Management Journal*, Vol. 8 (2), pp.19-26

30. Charlesworth, K. (2000), *A question of quality? A survey of performance improvement initiatives*, London: British Quality Foundation, Institute of management

31. Child, J. and Lu, Y. (1990), "Industrial Decision Making under China's Reform, 1985-1988", *Organization Studies*, Vol. 11 (3), pp.321-51

32. Chin, K. S., Pun, K. F. and Hua, H. M. (2001), "Consolidation of China's transformation efforts: a review", *International Journal of Quality & Reliability Management*, Vol. 18 (8), pp. 836-853

33. Chiu, R. K. (1999), "Employee involvement in a Total Quality Management programme: problems in Chinese firms in Hong Kong", *Managerial Auditing Journal*, Vol. 14 (1), pp. 8-11

34. Chung, J. H. (2003), "China's Reforms at Twenty-five Challenges for the New Leadership", *China: an International Journal*, Vol. 1 (1, March), pp. 119-132

35. Clark, T. and Greatbatch, D. (2004), "Management Fashion as Image-Spectacle: The production of Best-selling management books", *Management Communication Quarterly*, Vol.17 (3), pp.396-424

36. Claver, E., Tari, J. J. and Molina, J. F. (2003), "Critical factors and results of quality management: an empirical study", *Total Quality Management*, Vol. 1 (1), pp. 91–118

37. Cooke, R. A. and Rousseau, D. M. (1988), "Behavioural Norms and Expectations: A quantitative approach to the assessment of organizational culture", *Group and Organization Studies*, Vol. 13 (3), pp. 245-273

38. Cooke, R. A. and Lafferty, J. G. (1989), *Organizational culture inventory*, Plymouth, MI: Human Synergistic

39. Cooke, R. A. and Szumal, J. L. (2000), "Using the Organizational Culture Inventory to Understand the Operating Cultures of Organizations", In Handbook of Organizational Culture & Climate, N. M. Ashkanasy, C. P. M. Wilderom & M. F. Peterson (eds.), London: Sage Publications Inc, pp. 147-162

40. Czarniawska, B. and Panozzo, F. (2008), "Preface: Trends and Fashions in Management Studies", *International Studies of Management and Organization*, Vol. 38 (1), pp. 3–12

41. Czinkota, M. R., Ronkainen, I. A. and Moffett, M. H. (2005), *International business*, Mason, Ohio: South-Western

42. Dale, B. G., Cooper, C. L. and Wilkinson, A. (1997), *Managing Quality & Human Resources: A Guide to Continuous Improvement*, Oxford & U.S.A.: Blackwell Publishers Inc

43. Dale, B. G. (2003), Managing Quality, UK: Blackwell Publishing

44. Dahlgaard, S. M. (1999), "The evolution patterns of quality management: some reflections on the quality movement", *Total quality management*, Vol.10 (4&5), pp.473-480

45. Dahlgaard, J. J. and Dahlgaard, S. M. (2001), "Lean production, Six Sigma quality, TQM and company culture- a critical review", *The TQM Magazine*, Vol.18 (3), pp.263-281

46. Dayton, N. A. (2001), "Total quality management critical success factors, a comparison: The UK versus the USA", *Total Quality Management*, Vol. 12 (3), pp. 293-298

47. Deming, W.E. (1986), *Out of Crisis*, MIT Centre for Advanced Engineering, Cambridge: MA

48. Denzin, N.K. and Lincoln, Y.S. (2005), *The Sage Handbook of Qualitative Research*, Thousand Oak & California: Sage Publications

49. Deshpandé, R., Farley, J. and Bowman, D. (2004), "Tigers, Dragons, and Others: Profiling High Performance in Asian Firms", *Journal of International Marketing*, Vol. 12 (3), pp. 5-29

50. Easterby-Smith, M. (1991), *Management Research: An Introduction*, London: Sage Publications

51. Enz, C. (1986), *Power and shared values in the corporate culture*, U.S.: UMI Research Press

52. Evans, J. R. and Lindsay, W. M. (2002), *The Management and Control of Quality*, USA: Thomson Learning

53. Fairclough, N. (2005), *Analyzing Discourse, Textual analysis for social research,* London, New York: Routledge

54. Fleisher, B. M. and Yang, D. T. (2003), "Labor laws and regulations in China", *China Economic Review*, Vol. 14 (4), pp. 426-433

55. Flick, U. (2002), *An introduction to qualitative research*, London: SAGE

56. Flynn, B. and Saladin, B. (2006), "Relevance of Baldrige Constructs in an International Context: A Study of National Culture." *Journal of Operations Management*, Vol. 24 (5), pp.583-603

57. Gallear, D. and Ghobadian, A. (2004), "An empirical investigation of the channels that facilitate a total quality culture", *Total Quality Management*, Vol. 15 (8), pp. 1043-1067

58. Garvin, D.A. (1988), *Managing Quality: The strategic and Competitive Edge*, London: Collier Macmillan

59. Gibson, J. W. and Tesone, D. V. (2001), "Management fads: Emergence, evolution, and implications for managers", *Academy Management Executive*, Vol. 15, pp. 122-133

60. Gibson, J. W., Tesone, D. V. and Blackwell, C.W. (2003), "Management fads: Here yesterday, gone today?" *Advanced Management Journal*, Vol. 68 (4), pp.12-17

61. Ghobadian, A. and Gallear, D. (2001), "TQM implementation: an empirical examination and proposed generic model", *International Journal of Management Science*, Vol. 29 (4), pp. 343-359

62. Glaser, S. (1987), "Measuring and Interpreting Organizational Culture" *Management Communication Quarterly*, Vol. 1 (2), pp. 173-198

63. Glick, W. H. (1985), "Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research", *Academy of Management Review*, Vol. 10, pp. 601-616

64. Glover, L. and Siu, N. (2000), "The human resource barriers to managing quality in China", *The International Journal of Human Resource Management*, Vol. 11 (5), pp. 867-882

65. Grant, D., Keenoy, T. and Oswick, C. (1998), "Organizational discourse: of diversity, dichotomy and multi-disciplinarity", in Discourse and Organization, D., Grant, T., Keenoy and Oswick, C. (Eds.), London: Sage Publication, pp.1-13

66. Groves, T., Hong, Y. M., McMillan, J. and Naughton, B. (1995), "China's Evolving Managerial Labor Market", *The Journal of Political Economy*, Vol. 103 (4), pp. 873-892

67. Guba, E. G. and Lincoln, Y. S. (1994), "Competing paradigms in qualitative research". In Handbook of qualitative research, N. K. Denzin & Y. S. Lincoln (Eds.), London: Sage Publication, pp. 105-117

68. Hackham, J. R. and Wageman, R. (1995), "Total quality management: empirical, conceptual and practical issues", *Administrative Science Quarterly*, Vol. 40, pp. 309 – 342

69. Hall, R. H. and Xu, W. M. (1990) "Run Silent, Run Deep-Cultural Influences on Organizations in the Far East", *Organization Studies*, Vol. 11(4), pp.569 – 576

70. Heizer, J. and Render, B. (2005), *Operations Management*, International: Pearson Education International

71. Hill, S. (1991), "Why quality circles failed but total quality might succeed". *British Journal of Industrial Relations*, Vol. 29 (December), pp. 541-568.

72. Hodgetts, R. M., Luthans, F. and Doh, J. P. (2006), *International management: culture, strategy, and behavior*, New York & London: McGraw-Hill Irwin

73. Hofstede, G., Neuijen, B., Ohayv, D. D. and Sanders, G. (1990), "Measuring Organizational Cultures: A Qualitative and Quantitative Study across Twenty Cases", *Administrative Science Quarterly*, Vol. 35 (2), pp. 286-316

74. Hofstede, G. (1994), *Uncommon Sense about Organizations: Cases, Studies and Field Observations* ,Thousand Oaks CA: Sage Publications

75. Hofstede, G. (2004), *Cultures and organizations: Software of the mind*, New York; London: McGraw-Hill

76. House, R., Javidan, M., Hanges, P. and Dorfman, P. (2002), "Understanding culture and implicit leadership theories across the globe: an introduction to project GLOBE", *Journal of World Business*, Vol. 37, pp. 3-10

77. Hua, H. M., Chin, K. S., Sun, H.Y. and Xu, Y. (2000), "An empirical study on Quality Management practices in Shanghai manufacturing industries", *Total Quality Management*, Vol. 11 (8), pp.1111-1122

78. Iedema, R. and Wodak, R. (1999), "Introduction: Organizational Discourses and Practices", *Discourse & Society*, Vol. 10 (1), pp.5-19

79. *ISO survey of certification 2007* [online]. Available at <URL: http://www.iso.org/iso/iso9000-14000/pdf/survey2007.pdf> [Accessed 28th March 2009]

80. Jackson, B. (2001), *Management Gurus and Management Fashions: A Dramatic Inquiry*, London: Routledge

81. Javidan, M. and House, R. (2001), "Cultural Acumen for the Global Manager: Lessons from Project GLOBE", *Organizational Dynamics*, Vol. 29 (4), pp. 289-305

82. Javidan, M. and Carl, D. E. (2005), "Leadership across Cultures: A Study of Canadian and Taiwanese Executives", *Management International Review*, Vol. 45 (1), pp. 23-45

83. Jenner, R. A., Hebert, L., Appell, A. and Baack, J. (1998), "Using Quality Management for Cultural Transformation of Chinese State Enterprises: A case Study", *Journal of Quality Management*, Vol. 3 (2), pp. 193-210

84. Jha, S. J., Michela, J. L. and Noori, H. (1996), "The dynamics of continuous improvement: Aligning organizational attributes and activities for quality and productivity", *International Journal of Quality Science*, Vol. 1, pp. 19-47

85. Johnson, P. and Duberley, J. (2000), *Understanding Management Research: An Introduction to Epistemology*, London: Sage

86. Juran, J. M. (1978), "Japanese and Western quality: a contrast in methods and results", *Management Review*, Vol. 67 (11), pp.27-45

87. Juran, J. M. (1986), "The quality trilogy", *Quality Progress*, Vol. 9 (8), pp.19-24

88. Kano, N., Nobuhiku, S., Fumio, T. and Shinichi, T. (1993), "Attractive quality and must-be quality", *The Journal of the Japanese Society for Quality Control*, Vol. 14 (2), pp.39-48

89. Kieser, A. (1997), "Myth and rhetoric in management fashion", *Organization*, Vol. 4 (1), pp.49-74

90. Kilmann, R. H. and Saxton, M. J. (1983), *The Kilmann-Saxton culture-gap survey*, Pittsburgh: Organizational Design Consultants

91. Krasachol, L. and Tannock, J.D.T. (1999), "A study of TQM implementation in Thailand", *International Journal of Quality & Reliability Management*, Vol. 16 (5), pp. 418-432

92. Kuhn, T. S. (1996), *The Structure of Scientific Revolutions*, Chicago and London: The University of Chicago Press

93. Kwan, P. and Walker, A. (2004), "Validating the Competing Values Model as a Representation of Organizational Culture through Inter-Institutional Comparisons", *International Journal of Organizational Analysis*, Vol.12 (1), pp. 21-37

94. Lee, C. Y. and Zhou, X. M. (2000), "Quality management and manufacturing strategies in China", *International Journal of Quality & Reliability Management*, Vol. 17 (8), pp. 876-899

95. Lee, C. C., Lee, T. S. and Chang, C. (2001), "Quality and productivity practices and company performance in China", *International Journal of Quality & Reliability Management*, Vol. 18 (6), pp. 604-625

96. Lewis, P. (2003), "New China-old ways? A case study of the prospects for implementing human resource management practices in a Chinese state-owned enterprise", *Employee Relations*, Vol. 25 (1), pp. 42-60

97. Li, J. H., Anderson, A. R. and Harrison, R. T. (2003), "Total Quality Management principles and practices in China", *International Journal of Quality & Reliability Management*, Vol. 20 (9), pp. 1026-1050

98. Liu, Y. (2005), "Product Quality of China", Plenary presentation at 10th ICIT International Conference on ISO 9000 & TQM, Shanghai, China, March 2005

99. Lockett, M. (1988), "Culture and the Problems of Chinese Management", *Organization Studies*, Vol. 9 (4), pp.475-496

100. Lockett, M. (1990), "The Problems of Chinese Management", in Child, J., Lockett, M. (Eds.), Advances in Chinese Industrial Studies, JAI Press, Greenwich, CT, Vol. 1, pp.153-166.

101. Magarinos, C. A. and Sercovich, F. C. (2002), *China in the WTO: the birth of a new catching-up strategy*, Basingstoke, Hampshire, New York: Palgrave Macmillan

102. Maykut, P. S. and Morehouse, R. (1994), *Beginning qualitative research: A philosophic and practical guide*, London and Washington: Falmer Press

103. McGregor, D. (1985), *The Human Side of Enterprise*, 25th Anniversary Printing: McGraw-Hill

104. McNeil, R. and Greatbanks, R. (2002), The EQF Project- The True Effectiveness of Quality Related Initiatives in the UK, [online]. Available at < http://www.iqa.org/downloads/eqf_full_report.pdf> [Accessed 5th December 2006]

105. Meng, X. and Kidd, M. P. (1997), "Labour Market Reform and the Changing Structure of Wage Determination in China's State Sector during the 1980s", *Journal of Comparative Economics*, Vol. 25 (August), pp. 403-421

106. Merritt, A. (2000), "Culture in the Cockpit: Do Hofstede's Dimensions Replicated?", *Journal of Cross-cultural Psychology*, Vol. 31 (3), pp. 283-301

107. Michela, J. L. and Burke, W. W. (2000), "Organizational Culture and Climate in Transformations for Quality and Innovation", In Handbook of Organizational Culture & Climate, N. M. Ashkanasy, C. P. M. Wilderom & M. F. Peterson (eds.), London: Sage Publications Inc, pp. 225-244

108. Miller, D. and Hartwick, J. (2002), "Spotting Management Fads", *Harvard Business Review*, Vol. 80 (10), pp.26-27

109. Mintzberg, H. (1979), *The Structuring of Organizations*, Englewood Cliffs, NJ: Prentice Hall

110. Miyagawa, M. and Yoshida, K. (2005), "An empirical study of TQM practices in Japanese-owned manufacturers in China", *International Journal of Quality & Reliability Management*, Vol. 22 (6), pp. 536-553

111. Morishima, M. (1982), *Why Has Japan Succeeded? Western Technology and the Japanese Ethos*, Cambridge: Cambridge University Press

112. Noronha, C. (2002), "Culture-specific TQM in China: Case studies for theoretical consideration", *Asian Business and Management*, Vol.1 (1), pp. 125-145

113. Noronha, C. (2003), "National Culture and TQM: Empirical Assessment of a Theoretical Model Based on Chinese Companies", *TQM Magazine*, Vol.15 (5), pp. 351-356

114. O'Connor, N. G., Deng, J. and Luo, D. (2005), "Political constraints, organization design and performance measurement in China's state-owned enterprises", *Accounting, Organizations and Society*: Article in Press

115. Oliver, N. and Wilkinson, B. (1988), *The Japanization of British Industry*, Oxford: Blackwell

116. Orr, G. (2003), Review: Diffusion of Innovations by Everett Rogers (1995), [online]. Available at < http://www.stanford.edu/class/symbsys205/Diffusion%20of%20Innovations.htm> [Accessed 21st March 2009]

117. Oswick, C., Keenoy, T., Beverungen, A., Ellis, N., Sabelis, I., Ybema, S. (2007), "Discourse, practice, policy and organizing: some opening comments", *International Journal of Sociology and Social Policy*, Vol. 27 (11/12), pp. 429-432

118. Ott, J.S. (1989), *The Organizational Culture Perspective*, Brooks-Cole, Pacific Grove, CA

119. Ouchi, W.G. (1981), *Theory Z*, Addison-Wesley, Reading: MA

120. Pagell, M., Katz, J. P. and Sheu, C. (2005), "The importance of national culture in operations management research", *International Journal of Operations and Production Management*, Vol. 25 (4), pp. 371-394

121. Panitchpakdi, S. (2002), *China and WTO: Changing China, Changing World Trade*, International: John Wiley & Sons

122. Pascale, R. (1985), "The paradox of corporate culture: reconciling ourselves to socialization", *California Management Review*, Vol. 27, pp. 26–41

123. Patton, M. Q. (2002), *Qualitative research & evaluation methods*, Thousand Oaks, California; London: SAGE

124. Pettigrew, A. M. (1979), "On Studying Organizational Cultures", *Administrative Science Quarterly*, Vol. 24 (December), pp. 570-581

125. Pfeffer, J. (1993), "Barriers to the advance of organizational science: Paradigm development as a dependent variable", *Academy of Management Review*, Vol. 18, pp.599 - 620

126. Ping, X. (1992), *Township Enterprise Quality Management*, Beijing: Agricultural Publishing House, (in Chinese)

127. Potter, J. and Wetherell, M. (1987), *Discourse and social psychology: Beyond attitudes and behaviour*, London: Sage

128. Prajogo, D. I. and McDermott, C. M. (2005), "The relationship between total quality management practices and organizational culture", *International Journal of Operations & Production Management*, Vol. 25 (11), pp.1101-1022

129. Punch, K. F. (2005) *Introduction to Social Research: Quantitative and Qualitative Approaches*, London: SAGE Publications

130. Quinn, R. E. and Rohrbaugh, J. (1983), "A spatial model of effectiveness criteria: Toward a competing values approach to organizational analysis", *Management science*, Vol. 29 (3), pp. 363-377

131. Quinn, R. E. and Kimberly, J. R. (1984), *Managing Organizational Transitions*, Dow Jones-Irwin, Homewood, IL

132. Quinn, R. E. and McGrath, M. R. (1985), "The transformation of organizational cultures: A competing values perspective". In Reframing Organizational culture, P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg and J. Martin (Eds.), Beverly Hills, CA: Sage Publications, pp. 315 - 334

133. Quinn, R.E. and Spreitzer, G.M. (1991), "The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on quality of life". In Research in organizational change and development, R.W. Woodman and W.A. Pasmore (Eds.), Greenwich: JAI Press, pp. 115–142

134. Ralston, D.A., Holt, D.A., Terpstra, R.H., and Yu, K.C. (1997), "The impact of national culture and economic ideology on managerial work values: A study of the United States, Russia, Japan and China", *Journal of International Business Studies*, Vol. 28, pp. 177-208

135. Ralston D.A., Terpstra-Tong, J., Terpstra, R.H., Wang, X. and Egri, C.P. (2006), "Today's State-Owned Enterprises of China: Are They Dying Dinosaurs or Dynamic Dynamos?", *Strategic Management Journal*, Vol. 27, pp. 825-843

136. Ralston, D.A., Holt, D.A., Terpstra, R.H., and Yu, K.C. (2008), "The impact of national culture and economic ideology on managerial work values: A study of the United States, Russia, Japan and China", *Journal of International Business Studies*, Vol. 39, pp. 8-26

137. Rentsch, J. (1990), "Climate and culture: interaction and qualitative differences in organizational meanings", *Journal of Applied Psychology*, Vol. 75, pp. 668 - 81.

138. Riege, A. (2003), "Validity and Reliability Tests in Case Study Research: A Literature Review with Hands-On Applications for each Research Phase, Qualitative Market Research", *An International Journal*, Vol. 6(2), pp.75-86

139. Rogers, E. M. (1995), *Diffusion of innovations*, New York: Free Press

140. Rousseau, D. M. (1990a), "Quantitative assessment of organizational culture: the case for multiple measures", In Organizational climate and culture, B. Schneider (Ed.), San Francisco: Jossey-Bass, pp. 153-192

141. Rousseau, D. M. (1990b), "Normative Beliefs in Fund-Raising Organizations: Linking Culture to Organizational Performance and Individual Responses", *Group & Organization Studies*, Vol. 15 (4), pp. 448-460

142. Rungtusanatham, M., Forzab, C., Kokac, B.R., Salvadord F. and Niee, W. (2005), "TQM across multiple countries: Convergence Hypothesis versus National Specificity arguments", *Journal of Operations Management* Vol. 23 (1), January, pp. 43-63

143. Saraph, J.V., Benson, P.G. and Schroeder, R.G. (1989), "An instrument for measuring the critical factors of quality management", *Decision Sciences*, Vol. 20 (4), pp. 810-829

144. Schein, E. (1992), *Organizational culture and Leadership*, San Francisco: Jossey-Bass

145. Schein, E. (2004), *Organizational culture and Leadership*, San Francisco: Jossey-Bass

146. Schlevogt, K. A. (2002), *The Art of Chinese Management: Theory, Evidence and Application*, Oxford: Oxford University Press

147. Shah, S.K. and Corley, K.G. (2006), "Building better theory by bridging the quantitative-qualitative divide", *Journal of Management Studies*, Vol. 43 (8), pp.1821-1835

148. Sheridan, J. E. (1992), "Organizational culture and Employee Retention", *Academy of Management Journa*l, Vol. 35 (5), pp.1036-1056

149. Shortell, S. M., O'Brien, J. L., Carman, J. M., Foster, R. W., Hughes, E. F. X., Boerstler, H. and O'Connor, E. J. (1995), "Assessing the Impact of Continuous Quality Improvement/Total Quality Management: Concept versus Implementation", *Health Services Research,* Vol. 30 (2), pp. 377-401

150. Siehl, C. and Martin, J. (1988), "Measuring organizational culture: Mixing qualitative and quantitative methods", In Inside organizations: Understanding the human dimensions, M. O., Jones, M. D., Moore and R. C., Snyder (eds.), California: Sage Publications, pp 79-103

151. Silverzweig, S. and Allen, R. F. (1976), "Changing the Corporate Culture", *Sloan Management Review*, Vol. 17 (3), pp. 33-48

152. Silverman, D. (2005), *Doing qualitative research: a practical handbook* (2nd ed.), London: Sage

153. Smircich, L. (1983), "Concepts of culture and organizational analysis" *Administrative Science Quarterly*, Vol. 28, pp.339 – 358

154. Sousa-Poza, A., Nystrom, H. and Wiebe, H. (2001), "A cross-cultural study of the differing effects of corporate culture on TQM in three countries", *International Journal of Quality & Reliability Management*, Vol. 18 (7), pp. 744 - 761

155. Stake, R. (1995), *The Art of Case Research,* Thousand oaks: Sage Publications

156. Studwell, J. (2002), *The China dream: the quest for the last great untapped market on earth*, Grove Press

157. Sturdy, A. (2004), "The adoption of management ideas and practices, Theoretical perspectives and possibilities", *Management Learning*, Vol. 35 (2), pp.155-179

158. Sun, H.Y. (1999), "A comparison of QM practices in Shanghai and Norwegian manufacturing companies", *International Journal of Quality & Reliability Management*, Vol. 17 (6), pp.635-660

160. Taylor, F. W. (1911), *The principles of scientific management*, Boston, Mass: IndyPublish.com

161. Thawesaengskulthai, N. (2007), *Selecting Quality Management and Improvement Initiatives: Case studies of industries in Thailand*, Thesis submitted to the University of Nottingham for the degree of Doctor of Philosophy, Nottingham: University of Nottingham

162. Thawesaengskulthai, N. and Tannock, J.D.T. (2008a), "Trends in QM and Continuous Improvement Initiatives", *International Studies of Management and Organisation*, Vol.38 (2), pp.5-24

163. Thawesaengskulthai, N. and Tannock J.D.T. (2008b), "Pay-off Selection Criteria for Quality and Improvement Initiatives", *International Journal of Quality and Reliability Management*, Vol. 25 (4), pp 366-382

164. Thomas, P. (2003), "The Recontextualization of Management: A Discourse-based Approach to Analysing the Development of Management Thinking", *Journal of Management Studies*, Vol. 40 (4), pp. 775 - 801

165. *The Status of Chinese market 2008* [online: Chinese]. Available at <URL: http://www.saic.gov.cn/zwxxq/zwdt/zyfb/t20090320_45368.htm> [Accessed 30th March 2009].

166. Tjosvold, D., Yu, Z. Y. and Liu, H. (2003), "Traditional values for applying abilities and leader effectiveness in China", *Leadership & Organization Development Journal*, Vol. 24 (7/8), pp. 460-469

167. Trice, H. M. and Beyer, J. M. (1993), *The cultures of work organizations*, Englewoood Cliffs, NJ: Prentice Hall

168. Trompenaars, F. (1994), *Riding the Waves of Culture: Understanding Diversity in Global Business*, New York: McGraw-Hill

169. Tuan, C. and Ng, L. F.Y. (1998), "Total Quality Management in China", In Handbook of Total Quality Management, C. N. Madu (Ed.), London: Chapman & Hall

170. Tuckman, A. (1994), "The yellow brick road: Total Quality Management and the restructuring of organizational culture", *Organization Studies*, Vol. 15 (5, Winter), pp. 727-751

171. Ulrich, W. L. (1984), "HRM and Culture: History, Ritual, and Myth", *Human Resource Management*, Vol. 23 (2), pp. 117-128

172. Weiler, G. (2004), "What Do CEOs think about Quality?" *Quality Progress*, Vol.37 (5), pp.52-56

173. Wheatley, M. (1998), "Asian lessons in the art of manufacturing", *Management Today*, No. Apr, pp.72-75

174. Woods, J. A. (1997), "The six values of a quality culture", *National Productivity Review*, Vol. 16 (2), pp. 49-55

175. Xenikou, A. and Furnham, A. (1996), "A Correlational and Factor Analytic study of Four Questionnaire Measures of Organizational culture", *Human Relations*, Vol. 49 (3), pp. 349-371

176. Xu, Q. (1999), "TQM as an Arbitrary Sign for Play: Discourse and Transformation", *Organization Studies*, Vol. 20 (4), pp. 659-681

177. Xu, D., Pan, Y. G. and Yim, B. (2005), "Performance of domestic and foreign-invested enterprises in China", *Journal of World Business*: Article in Press, (November)

178. Yin, R. K. (2003), *Case study research: design and methods* (3rd ed.), INC, California: Sage Publications

179. Yu, C. S., Cochran, D. S. and Spencer, B. (1998), "Quality management practices in China", *Quality Management Journal*, Vol. 5 (2), pp.91-105

180. Zammuto, R. F. and Krakower, J. Y. (1991), "Quantitative and Qualitative Studies of Organizational Culture", *Research in Organizational Change and Development*, Vol. 5, pp. 83-114

181. Zammuto, R. F., Gifford, B. and Goodman, E. A. (2000), "Managerial Ideologies, Organization Culture, and the Outcomes of Innovation", In Handbook of Organizational Culture & Climate, N. M. Ashkanasy, C. P. M. Wilderom and M. F. Peterson (eds.), Sage Publications Inc, pp. 261-278

182. Zhang, L. H. and Goffin, K. (1999), "Managing the transition– supplier management in international joint ventures in China", *International Journal of Physical Distribution & Logistics Management*, Vol. 31 (2), pp. 74-95

183. Zhang, Z. (2000), "Quality management approach in China", *The TQM magazine*, Vol. 12 (2), pp. 92 – 104

184. Zhao, X., Flynn, B. and Roth, A. (2006), "Decision Sciences Research in China: A Critical Review and Research Agenda – Foundations and Overview", *Decision Sciences*, Vol. 37 (4), pp. 451-496

Appendix 1: A comprehensive Interview List and Summary

Cases	Date	Interviewee	Position	Start time	Length	Location	Equipment
*SZ	120506	Mr. Yuan	Production Manager	12pm	1.32hr	Meeting room (3)	Audio Recorder
*DJ	180506	Mr. Dong	GM Assistant	11.15am	59.14 mins	Meeting room (1)	Audio Recorder
		Mr. Zhang	QM				

Pilot Interview List

Case	Interview summary
SZ	• On 12th May 2006, I visited SZ together with a Quality expert at Shanghai Quality Association, and managed to do a pilot interview with the production and quality manager who has been working in the company for more than 10 years. • In this interview, I started with some background questions and then approached to my main aims. Although, the interviewee was a quality and production manager, yet he does take on responsibilities at strategic level, and in addition, he has been working in the company for more than 10 years. During the interview, the interviewee was very kind and willing to tell me almost everything I asked, and helped to write anything I was unclear about – key phrase, key terms, etc. Therefore, I almost found out what I really want to know, including company's background information. • However, I was not able to achieve the issue of *triangulation* within the company, which primarily due to the limited contacts. I wasted too much time on notes-taking. The interview questions can be refined further in the following interviews. I will keep the core questions exactly the same, but the way of phrasing questions and orders need to be changed according. I need to practice on how to ask probe/subsidiary/follow up questions (more focused and purposeful), and use more feedback and reinforcement to flow up interviews.
DJ	• On 18th May 2006, I visited case 2 (DJ) together with a Quality expert at Shanghai Quality Association. I managed to do interviews with both the GM assistant and Quality Manager in the company. • In this interview, I started with some background questions with general manager assistant and then focused on set of interview questions about operations and organizational management (strategic level). I asked quality manger set of questions related to QM implementation in the company. • Since I was able to interview both the general manager assistant and quality manager in the company, I have found out more accurate and comprehensive information. The GM assistant is more familiar with overall organizational management (strategic level) while the quality manager is more familiar with QM issues in company. This is also to take the issue of '*triangulation*' into account. Overall speaking, the second-time pilot interviews were much better than the first one based on the lessons learnt.

Pilot Interview Summary

LL (POE)		*DJ (POE)		SDEC (SOE)			*SZ (SOE)		SHRL (JV)			RSHEP (WFOE)		Cases
120307	140207	100207	170107	010307	160107		070207	120107	150307	070307		100107		Date
Mr. Liu	Mr. Fang	Mr. Zhang	Mr. Qian	Mr. Wu	Mrs. Sun	Mr. Mu	Mr. Shen	Mr. Zhou	Mr. Shen	Mr. Lv	Mr. Zhen	Mr. Yuan	Mr. BAKOS	Interviewee
QM	Chairman	QM	Head of GM office	Deputy GM	Chief Engineer	QM	GM	QM	QM	Secretary of Party committee	Deputy GM	QM	GM	Position
9.15am	9:45am	10.30am	1.40pm	2.00pm	9.30am		9.00am	2.30pm	2.00pm	3.30pm	2pm	1pm	2.30pm	Start time
46.22mins	1.30hr	52.13mins	53.39mins	20mins (Tel interview)	66.5mins		1.43hrs	1.09hr	49mins	1.42hr	1.16hr	1.16hr	1.38hr	Length
Office	Green light Hotel VIP Room	Meeting room (2)	Meeting room (2)		Quality Assurance Dept		Meeting room (2)	Meeting room (1)	Meeting room 09	Party Committee Office	DGM Office	QM Office	GM Office	Location
Audio-recorder	Audio-recorder	Audio-recorder	Audio-recorder		Audio-recorder		Audio-recorder	Audio-recorder	Audio-recorder	Audio-recorder	Audio-recorder	Audio-recorder	Audio-recorder	Equipment

SH PUTAC Consulting	OMNEX Consulting	
120107	100107	
Mr. Frank Yin	Judy	Mr. Xu
Quality Consultant	Quality Consultant	Quality consultant
7.30pm	9.00pm	8.30pm
45:59mins	23.54mins	29.56mins
Coffee Bar	Coffee Bar	Coffee Bar
Audio-recorder	Audio-recorder	Audio-recorder

Main Fieldwork Interview List

Case	Interview summary
RSHEP (WFOE)	• On 10th Jan 2006, I visited (RSHEP) and managed to do two interviews with their GM and Quality Manager/Quality Management Representative. The GM, Mr. Attila BAKOS joined the Shanghai office about 1 year ago after the plant moved from PuDong to MinHang Industry Centre (Rhodia Shanghai Technology Centre). Previously, he had been working for Rhodia Group (European offices) for many years and had 4- year work experiences with General Electrics. The Quality Manager/QM Representative, Mr. Terry Yuan who has been working in the company for only 7-8 months, but prior to that, he was a quality manager in a car manufacturer. • Through the interview with Mr. Yuan, I was able to find out a big picture of their current QM practices, QM developments and possible future trends, but moreover, I was able to generate a rich picture about the major influences on the adoptions and implementations of QM practices within their company – why company adopt certain QM initiatives and the way they are being implemented. In addition, Mr. Yuan told me how he is being supported and cooperated by the top via their management ideologies, resources, empowerment and real commitments, all of which are really important for successful QM implementation in the company. Last but not the least, Mr. Yuan spent sometime to explain their Quality Policy for me, and it was amazing to know that the company's quality policy is exactly the same to company's mission statement, which was announced by the CEO of Rhodia Group. This implies that quality is top competitive advantage. • Through the interview with Mr. BAKOS that was conducted in English, I was able to find out more detailed company background information (through a company's presentation), basic management philosophies and organizational culture (my questionnaires and some follow-up questions). He also told me the major influences on the formations and changes in organizational culture and basic management philosophies. Mr. BAKOS was very kind to give me the copies of company's presentation, Organization Chart of Rhodia Shanghai EP and Rhodia Leadership Framework as second-hand sources, but he required to keep them confidential. • I was able to achieve the issue of "triangulation" within the company. Some recommendations/feedbacks from Quality Manager are: the interview questions are bit too wide so that he did not get my focus – what I really want to find out; but he required me to send him a copy of my report. Mr. BAKOS (GM) mentioned that the theoretical questionnaire is quite easy and logical to do, but he thought the major influences I listed were quite limited and not very relevant. Therefore, I might change to ask

	interviewees an open question and then ask them to comment on the influences I listed.
SZ (SOE)	• On 12th Jan 2007, I visited (SZ) together with a Quality expert in Quality Association. I only managed to do an interview with their quality manager Mr. Zhou mainly because of time limit. The Quality Manager has been working for the company for more than 8 years (the second Quality manager for the company, who joined the company less than 1 year after it set up in Shanghai). • As this is the second time I visited company, I was able to find out more detailed information about their current QM practices, QM developments and possible future trends on the top of previous data. But the new and very important data I get this time was the major influences on the adoptions and implementations of QM practices within their company. Through the interview, I can feel this company is a very traditional SOE, reflects the organizational culture and management philosophies – bureaucratic, old-fashioned, centrally-directed, and QM practices focus on the paper works (primary aim is to get the certificates). • I have booked another time to interview their GM. • On 7th Feb 2007, I did an interview with their GM, Mr. Shen, who has been working in the company for about 3 years. We spent quite a lot of time on discussing company's values and mission statement, and the reasons behind them, which on the other hand, help me understand company's management ideologies and organizational culture. However, I think the GM might feel my theoretical questionnaire was hard to do, but he successfully finished them with my explanations. Further, I feel there are still many traditional Chinese culture, ideologies, concepts maintain in this SOE though many changes have been taken place. The deep reforms in Chinese SOE take long time. On the other hand, I found out that the political and economic systems in China more largely influence on the formations and changes in organizational culture and basic management philosophies than other types of organizations.
SDEC (SOE)	• On 16th Jan 2007, I visited (SDEC) under a very bad weather. There were two interviewees participated in this morning's interview – Mr. Mu – The Quality Assurance Manager, and Mrs. Sun – Chief & Senior Engineer, both of whom have been working in the company for a long period, especially Mr. Mu, who has been working there for more than 20 years. • However, the interview environment is quite noisy that makes me difficult to concentrate, moreover, as they have to prepare a report for an important meeting this afternoon, I have to leave before I really finish asking my interview questions. What I will do next is to compare the data I have got against my interview questions, and email them the rest interview questions as request – if I have more questions, I have to conduct telephone interviews or revisit the company according to the situation. • The Deputy General Manager can not see me but he asked me to send him

	my interview questions (SET I) and he will try to answer them and email me back. ● By the end of Feb, I received completed questionnaire from the DGM, and followed by a 20-min telephone interview on the 1st, March, 2007, which mainly focused on discussing the major influences on the formations and changes in organizational culture and basic management philosophies.
* DJ (POE)	● On 17th Jan 2007, I visited (DJ) and did an interview with their Deputy GM, Mr. Qian, who has been working in the company for 5 years. ● This is the second time I visited company (pilot case) and my focus today is to find out basic management philosophies and organizational culture in the company, and the major influences on the formations and changes in organizational culture and basic management philosophies (based on my new semi-structured interview questions). ● I have booked another time to interview their Quality Manager. ● On 10th Feb 2007, I did an interview with their Quality Manager, Mr. Zhang for about 50 mins. I explored the company's QM practices further and in addition found out why company adopt certain QM initiatives and the way they are being implemented. The company realize the importance of quality in today's market, and is market-oriented and customer-focused (strategic changes), but implementing QM practices does not have very big influences on company's culture – it takes time to edify, train and change employees' concepts, ideas and minds.
LL (POE)	● On 14th Feb 2007, I did an interview with LL's Chairman, Mr. Fang for about 1 hour and half in Greenlight Hotel VIP Room. I found that he did not like my theoretical questionnaire and it was difficult for him to score, so I asked him to score in a different method. Mr. Fang gave me a company brochure and a copy of article from newspaper about his carve-out story. ● I was not able to visit the company and factories. ● I have booked another time to interview their Quality Manager. ● On 12th March 2007, I did an interview with LL's Quality Manager, Mr. Liu. During the interview, I found he was very interested in my questions and he was willing to accept my further interview if I required.

SHRL (JV)	• On 7th March 2007, I visited (SHRL) and managed to do two interviews with their DGM Mr. Zhen and their secretary of Party committee Mr. Lv. • I think this is the most successful case study because of following reasons: 1): SHRL is a very good and leading company in China; 2): The two leaders are very kind, friendly and knowledgeable; they are very interested in my research and very support academic research in China (they hope more and more researches can be done in China that could benefit both the Chinese and foreign enterprises). Very surprisingly, the Party committee secretary, Mr. Lv contacted me two days after our interview to ask me some feedbacks, I promised to write a report for him; 3): During the two interviews, I could see that the two leaders have great passions on both their jobs and company, they feel very proud working in this company – show their loyalty and their confidence about company's future developments; 4): I interviewed the DGM based on my interview questions, but I also chatted with Party committee secretary about organizational culture, management ideologies and company's future developments – achieved the issue of 'triangulation' on SET I question. • This is the JV which the Chinese SOE (SHHL) holds 75% share and the Japanese partners hold 25% share. According to MR. Zhen, he thinks this type of JV formation is the most successful/effective way (optimum) but it takes quite long time to change and to adapt to. Nowadays, after more than 12 years, the company developed modern, mature, scientific and self-innovative (localized) management ideologies, not only have advanced foreign management philosophies, but also and more importantly, take Chinese culture, customs and characteristics into account – the most successful management must based on both the advanced foreign management philosophies and the situations of China and company itself. • On 15th March 2007, I interviewed their Quality manager/ Vice-manager of SBG, Mr. Shen for about 49mins. MR. Shen is very experienced and highly educated, and has been working in the company for about 10 years (6 years as QM/ Vice-manager of SBG). Mr. Shen is very kind and fully supports my research – we have had a very pleasant talk based on my semi-structured interview questions, but further, Mr. Shen gave me some documentations related to company's QM practices and developments and showed me their production scene. Finally, Mr. Shen mentioned that he wishes that persons like me (can speak both Chinese and English, and is familiar with Chinese and Western culture) can do more comparison researches about Foreign enterprises and Chinese enterprises, and it is better to translate them into Chinese. Because nowadays, there are lots of good articles in English but it is very hard for Chinese entrepreneurs to read who are keen on knowing those good cases in Western.

Appendix 2: Three sets of interview questions

SET I: For Chairman, CEOs, Senior managers (English version)

Date _____Time _____Location _____
Length _____

Organization background

- ✓ The nature of organization
- ✓ Brief introduction of organization's developments
- ✓ Type of manufacturer
- ✓ Current products
- ✓ Major customers and export areas
- ✓ The number of employees
- ✓ The organizational structure, departmental functions and responsibilities (ask for organizational structure chart)
- ✓ The constitution of the senior management team (nationalities, positions, background, etc)
- ✓ Companies' mission statements

Q1: How long have you been working in the company?

I am interested in finding out the basic management philosophies and organizational culture in the company. I would like to invite you to do some interesting questionnaires as follows:

Q2: Could you please describe the interpersonal relations in your company?

Q3: Now please score 1-5 on the following statements and give examples:

a. The level of trust

1 2 3 4 5

Very low ⟶ Very high

b. The level of morale

1 2 3 4 5

Very low ⟶ Very high

c. The level of leader credibility

1 2 3 4 5

Very low ⟶ Very high

d. Amounts of conflicts, disagreements, friction and anxiety?

1 2 3 4 5

Very large ⟶ Very small

e. Resistance to change

1 2 3 4 5

Very strong ⟶ Very weak

Q4: Strategic orientation in the company. So in your viewpoint

1 2 3 4 5

Reactive ⟶ Proactive

Not to try new activities or policies until others have found them successful

Like to be the first to try new activities or policies

Q5: The following questionnaire is based on a theoretical framework, what you need to do is distribute 100 points among 4 items of each question depending on how similar the description is to your organization. You have to use all 100 points for each question, and for each item, respondents can give any points between 0 -100 (0-not same at all, 20-30 somewhat similar but less than half; 50 half right; 70-80 very similar; 100 all same)

1. 'Big picture' of organization

a. Our organization is a very **formalized** and **structured** place. It has a **centrally-directed** culture, and **bureaucratic** procedures generally govern what people do

b. Our organization is a very **dynamic, aggressive, innovative** and **entrepreneurial** place. People are willing to take risks

c. Our organization is a very **personal** place, and is like an **extended family.** People see to share a lot of themselves, form very **good relations,** and to be very **socializing.**

d. Our organization is very **production/task oriented.** A major concern is with **getting the job done.** People aren't very personally involved.

2. Leadership role (as a leader, you think your role is being):

a. A **monitor** & a **coordinator,** i.e.: you are a **technically expert,** and are always **well-prepared, reliable** and **dependable.** You should **collect information, design effective methods & systems,** and **maintain structure.**

b. An **innovator,** an **entrepreneur** or a **risk taker,** i.e.: you should be **creative** to **envision changes,** and to **acquire resources**

c. A **mentor,** a **sage,** a **facilitator** or a **father or mother** figure, i.e.: you should be very **caring** and **empathic. Show your consideration** and **facilitate interactions.**

d. A **producer** & a **director,** i.e.: you should be **task-oriented, work-focused, decisive** and **directive. Initiate actions**

3. Means & managerial ideologies focus (the main things hold your organization together, and push it forward are):

a. Formal rules, regulations and **policies.** Maintaining **a smooth-running (stable)** institution and focusing on **internal processes** are really important

b. The **flexibility, adaptability** to changes and new environment. **Taking risks, being first** & commitment to **innovation** are important.

C. Loyalty, cohesion & morale (a concern for team-working and people), where people are highly **respected, committed** and **empowered.**

d. Planning, goal setting, & task accomplishment. Our Organization has clear & measurable goals, and plans to meet these goals, and will strive to achieve them.

4. **Ends** (The valued outcomes of your organization are):

a. Control and **stability.** Having efficient and smooth operations.

b. Growth and **acquiring new resources. Readiness** to meet new challenges is important

c. Human resources development.

d. Being **productive** and **efficient. Achieving goals** is important

5. Structure & Communication

a. Our organization has a **hierarchical structure,** where high levels of management control all authorities and responsibilities, and with lower levels obeying rules. Normally, there are **vertical communication** (top-bottom); **routine tasks; formal rules, policies** and **procedures**

b. Our organization has a **flexible** and **decentralized** structure. There are **interdependent work flow** and **non-routine tasks.** We use less rules, policies, procedures, and formal planning.

c. Our organization has a **decentralized structure,** where all levels of employees are fully **committed** and **motivated.** There are lots of training for employees, and we use less rules, policies, procedures, and formal planning.

d. Our organization uses **centralized decision-making,** but complex training demands

Please give me examples, such as how important decisions have been made? Organizational chart? What kinds of facilities/ activities do company provide to enable socialization and to bring employees together? What kinds of training

available for your employees? What does company do to support employees' personal development?

Q7: So, regard to the current management in the company, in which aspects, or (and) any department, you wish to improve and develop?

Excellent, you have told me really important information regarding organizational culture and managerial practices. Now, I would like to explore some information regarding QM dissemination, adoption and implementation.

Q8: Please tell me how do QM practices disseminate, i.e. how are you aware of or hear QM knowledge and experiences? (E.g. QM trends & Fashions, Quality associations, Internet, JV partners, etc)

Q9: Please tell me why, as managers, you would adopt certain QM initiatives (i.e. adoption factors)?

For example, Market pressure, customers, top management ideologies, competitors, etc. For each factor, please score 1-5 (1=the least influential, 5=the most influential), and give examples.

Q10: Please tell me the factors that impact on QM implementation, which can be internal (within organization) or external factors. For example, foreign partners, Chinese context, e.g. business environment, cultural issues, top management commitment, etc.

Q11: Finally, I would like to know the relationship between QM implementation and organizational culture, from your perspective.

Please score 1-5 on the following statements, where 1=strongly disagree; 5=strongly agree:

- QM initiatives are a vehicle/tool of cultural change in our organization

1 2 3 4 5

Strongly disagree ⟶ strongly agree

- QM initiatives maintain and reinforce our management discourse and organizational culture

1 2 3 4 5

Strongly disagree ⟶ strongly agree

SET I: For Chairman, CEOs, Senior managers (Chinese version)

公司背景资料（用于分析公司具体资料之前）：

- ✓ 贵公司企业体制和性质
- ✓ 如果是中外合资企业，中方和外方（包括香港，台湾）股权分别占有率（%），以及原中方和外方公司背景
- ✓ 贵公司何时在上海创建
- ✓ 贵公司目前员工人数
- ✓ 属何制造业，目前主要产品，主要客户和出口国
- ✓ 贵公司组织结构（各部门职责）- 画组织框架图
- ✓ 高级管理层组织结构（人数，国籍等）
- ✓ 贵公司目标，口号

Q1: 请问您在贵公司担任总经理/高级主管一职有多久了

Q2: 那么接着我想对贵公司的基本管理理念和企业文化做一些了解 - 我想请您做一些有趣的问卷

Q3: 请您先简单地形容一下贵公司人与人之间的关系？

a. 贵公司人与人之间的信任度

1 – 很低 2 – 低 3 – 一般 4 – 高 5- 很高

b. 贵公司的民心士气：

1 – 很低 2 – 低 3 – 一般 4 – 高 5- 很高

c. 贵公司领导可信性度

1 – 很低 2 – 低 3 – 一般 4 – 高 5- 很高

d. 贵公司人与人之间的斗争，冲突

1 – 很多 2 – 多 3 – 一般 4 – 少 5 – 很少

e. 贵公司对于改变，变革的抵制程度

1 – 很强 2 – 强 3 – 一般 4 – 弱 5 –很弱

Q4: 您认为贵公司的战略的倾向性

1 2 3 4 5

非常被动的 ⟶ 非常主动的

Q5: 接下来的 5 个问题是根据理论上的一个框架来制作的，目的是想了解贵公司拥有怎样的企业文化。 对于每一个问题， 您必须把 100 分分配到相应的 4 个答案，每一个答案您可以给它 0-100 分之间，根据它描述贵公司的相似程度来定，如果您认为它描述贵公司一点也不相似-0，一些相似 -20~30，一半相似 50，很相似的 70~80，完全一样的话-100

1．我们公司是：

a. 非常正式化和结构分明的地方。我们有以中心为管理的文化，官僚制度的方式，程序通常支配员工的行为。

b. 非常有动力，好斗的，有闯劲的，敢于创新，变革的地方。员工们都敢于和积极地冒险。

c. 非常个人的地方，而且像一个大家庭。员工们很注意/很乐意分享他们自己，与他人建立友好的关系，而且很喜欢与他人交往的。

d. 以任务为导向的地方，主要关注的就是把工作做好/任务完成。人不是很有关联的。

2．作为一位领导，我认为我主要的任务/角色是：

a. 监视员/监测员和协调员- 我是一个技术上/工艺上的专家/老手，总是很可靠，很能信赖的。 我会去搜集信息资料，计划/设计很有效的方法和系统，并维持组织结构。

b. 革新者，企业家，敢于冒险的人 – 我很有创造性，会预想革新和改变，去探索和获得新的资源/财力/方法

c. 德高望重的人，像导师和父亲一样 – 我对员工很有同情心，很有感情，总是显示我的关爱和体谅

d. 生产者和指挥者- 以完成任务为先，以工作为主的。

3．我们公司管理理念的重点/管理手段是：

a. 采用正式的规章制度和方针，主张维持稳定运转的/稳定的制度，比较注重内部的程序控制

b. 不断适应新的环境和变化/变革，勇于冒险和创新是很重要的

c. 基于民心，衷心和员工凝聚力 – 注重员工/团体精神，员工们被高度的尊重，充分承担任务和授权的

d. 注重目标制定和有计划地完成任务 – 我们公司有着很明确且可测量的目标，并且会制定如何达成这些目标，和努力的去完成他们。

4．我们公司追求的结果是：

a. 控制和公司的稳定性，拥有有效的和平稳的运作

b. 不断扩大和寻求新的资源，充分/时刻准备着去接受新的挑战

c. 人力资源的发展

d. 有效率，能生产

5．我们公司的有：

a. 等级很分明的组织结构，高层领导控制/掌握了所有/大多数的权利和责任，下层员工只需服从。 我们的信息传递基本由高层到底层， 而且有常规的任务

b. 非常灵活和比较分散的组织结构，没有常规的任务，不太喜欢用正式的规章制度和方针

c. 比较分散的组织结构，各级员工都充分承担任务，而且他们会经常接受培训

d. 中央集权来做决定

（问一些例子说明公司是如何做出重要决定的，有哪些员工培训计划，公司如何支持员工个人与职业发展的，为员工提供哪些设施...

Q6: 那么与贵公司先前的基本管理理念与企业文化相比较，您觉得有哪些主要的改变？（对比之前的5个问题， 以前大致是怎样的），引起这些改变的主要原因是什么呢？

Q7: 那么对于贵公司目前的管理运作，您希望在哪些方面/哪些部门再作进一步的改进和发展呢？那贵公司未来的管理理念大致会往哪方面发展呢？

非常感谢您之前提供的宝贵信息，我觉得非常有趣能了解贵公司的管理理念和企业文化.接着我想了解贵公司的质量管理方面的信息。

Q8: 您和公司是如何的质量管理方面的信息的，比如从咨询公司，质量管理机构等？

Q9: 对于公司采用的质量管理手段或工具，您是如何做决定的（有哪些因素影响你的决定。请您注明一下哪些他们的影响力（1-5，5=最有影响力的，1=没有影响力），并举例说明。

Q10：有哪些因素影响质量管理的运行的，比如高层参与，人力资源等

Q11: 最后我想了解一下贵公司采用了那些质量管理方法，您认为他们为公司的基本管理理念/方法带来了怎样的影响？请您为以下 2 条内容打分 (1-5 分之间选择) –

1. 质量管理给企业文化带来了变革

1 2 3 4 5

表明您很不同意这个观点 表明您很同意这个观点

2. 质量管理维持并加强了公司现有的管理理念/方法

1 2 3 4 5

表明您很不同意这个观点 表明您很同意这个观点

SET II For Quality or Operations Managers (Chinese & English version)

Date _____Time _____Location _____

Length _____

Q1: How long have you been working as a quality manager in this company?

请问您在贵公司担任质量经理一职有多久了？

Q2: Could you please tell me some histories regarding to the quality management in the company?

请您透露一下贵公司质量管理发展史吧

Q3: What about the current QM system and practices that are being implemented? Please describe them.
那请问贵公司目前运用了怎样质量管理方式与体系呢（如：六西格马，全面质量管理等）

Q4. Please describe the specific quality activities, and tools and techniques. 开展了哪些相关的质量体系活动？运用了哪些质量管理工具和手段？

Q5. What are the main products? What is the Product development process? How does each function co-operate each other? 贵公司目前主要产品是什么，产品实现过程包括哪些？每一个部门在这些过程中是如何参与和合作的？

Q6: How effective is QM adoption, e.g. 'nominal adoption', 'adaptive practices'? 谈谈您对名义的质量管理，和本地化的质量管理的看法？

Q7: What do you think of the current Quality Management practices in the company, in what ways, you wish to develop or improve?
那么对于目前贵公司的质量管理方式与体系，您希望如何再进一步改善呢？

Q8: Where does the resource and experience of Quality Management come from?

那这些质量管理方面的技术，经验，信息等是如何引进的？

Q9: I am particularly interested in the factors that influence your company's decision on QM adoption? For each factor, please score 1-5 (1=the least influential, 5=the most influential), and give examples.

那么是什么原因是贵公司决定引进质量管理体系及方式？

Q10: What have you achieved (sales, profit, reputation, product quality, etc) and what do you try to achieve from implementing these system and improvements?

那请问您期望目前的质量管理体系及方式能为公司带来怎样的效益？那实际运作的效果如何呢？

Q11: Please tell me the factors that impact on QM implementation, which can be internal (within organization) or external factors. For example, foreign partners, Chinese context, e.g. business environment, cultural issues, Top management commitment, etc. 有哪些因素影响质量管理的运行的，比如高层参与，人力资源等？

Q12: Finally, I would like to know the relationship between QM implementation and organizational culture, from your perspective.
Please score 1-5 on the following statements, where 1=strongly disagree; 5=strongly agree:

- QM initiatives are a vehicle/tool of cultural change in our organization

1 2 3 4 5

Strongly disagree ——————————→ strongly agree

- QM initiatives maintain and reinforce our management discourse and

organizational culture

1 2 3 4 5

Strongly disagree ——————————→ strongly agree

最后我想了解一下贵公司采用了那些质量管理方法，您认为他们为公司的基本管理理念/方法带来了怎样的影响？请您为以下 2 条内容打分 (1-5 分之间选择) –

1. 质量管理给企业文化带来了变革

1 2 3 4 5

表明您很不同意这个观点 表明您很同意这个观点

2. 质量管理维持并加强了公司现有的管理理念/方法

1 2 3 4 5

表明您很不同意这个观点 表明您很同意这个观点

SET III For Quality consultants or experts (Chinese & English version)

Date _____ Time _____ Location _____

Length _____

Q1: 请问您做这一行有多久了？How long have you been working as a quality professional in auditing/ consultant/ training firms/ SQA?

Q2: 请您简单的介绍一下咨询公司这一行业目前在上海是怎样的？-如: 提供哪些服务，竞争等 Please describe what the consulting business life likes in Shanghai? (Offerings, Competition, etc) 相比以前有哪些变化？ How is it changing?

Q3: 那作为质量咨询师，您平时的工作包括哪些？-如何帮助公司实施质量管理的，引进相关的质量管理方面的技术，经验，信息 As a quality auditor/consultant, what kinds of work you are involving? - How do you help companies implement QM practices? 相比以前有哪些变化？How is it changing?

Q4: 总的来说，您认为质量管理在上海实施现状如何？In general, what do you think the current situation of QM practices in Shanghai industry, in terms of

a. 主要流行哪些体系和方法 What are the current popular adoptions of QM initiatives (trends & fashions) in today's Shanghai industry?

b. 您认为在上海，公司采用质量管理程度如何？e.g.:只是为了通过质量体系考核，本土化，简单化)In your viewpoint, to what extent do companies adopt those practices in Shanghai industry, any 'nominal adoption', 'adaptive practices'?

Q5: 那么对比4种不同性质的企业：国有企业，合资企业，外资企业，中国民营企业，您认为他们在采用和实施质量管理方面有哪些相同和不同之处? Well, comparing and contrasting, what do you think the differences and similarities are among SOEs, COEs, JVs and WOFEs in terms of QM practices?

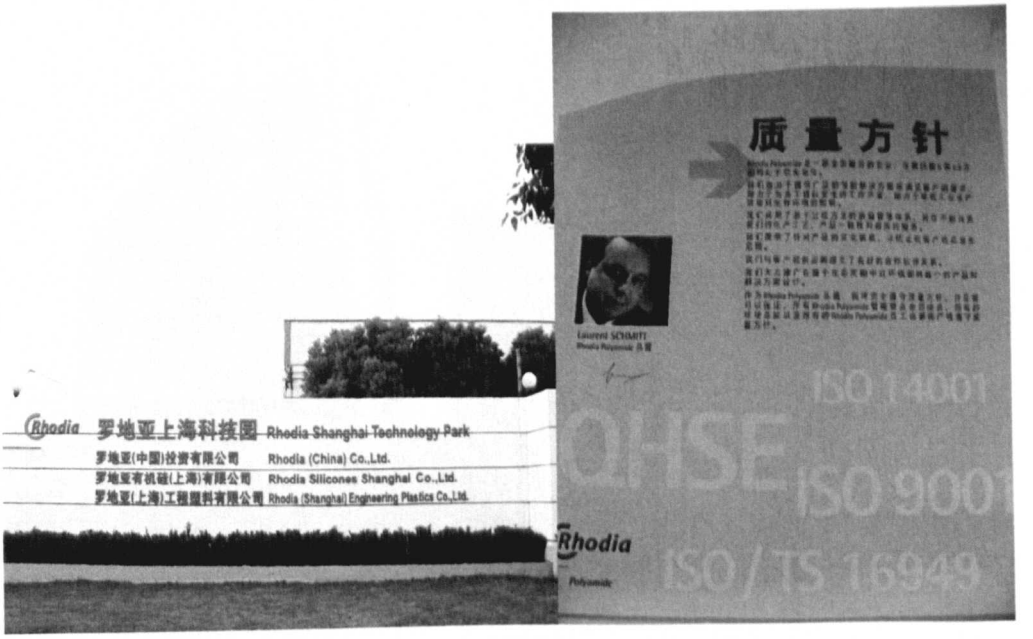
Q6: 您认为为何有些通过ISO9000考核的公司依然存在严重的质量问题 In your viewpoint, why some of the ISO9000 registered companies still have serious quality problems?

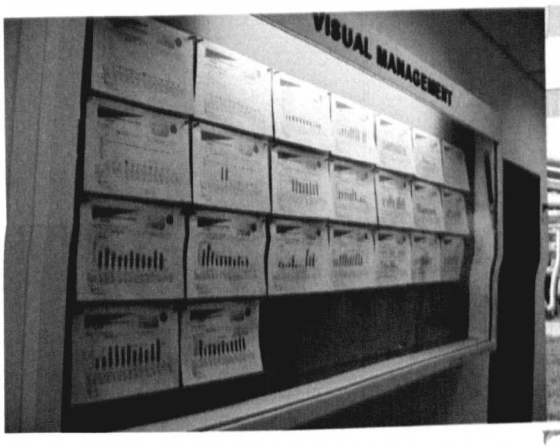
Q7: 对比以前，您认为有哪些发展和进步 Comparing to the previous QM practices, what are the developments/changes in Shanghai industry?

Q8: 未来的发展趋势会怎样？In your viewpoint, what might be the future trends of QM practices in Shanghai industry?

Appendix 3: Companies photos

Company A RSHEP:





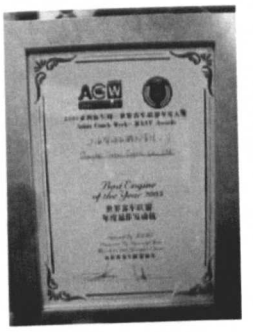
Company B SHRL

Company C SZ

Company D SDEC

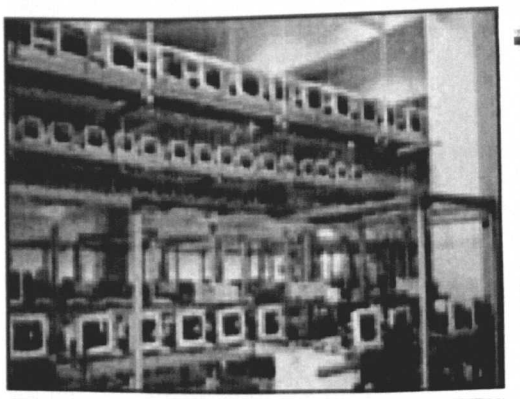

上柴动力

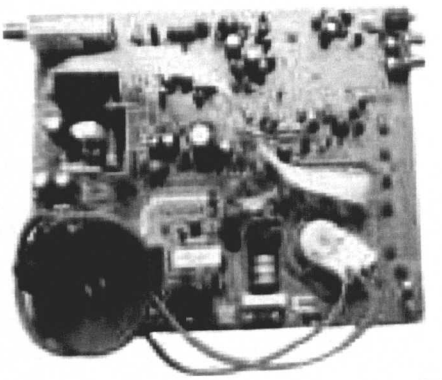

Best Engine Producer
of the Year
BAAV Awards 2006



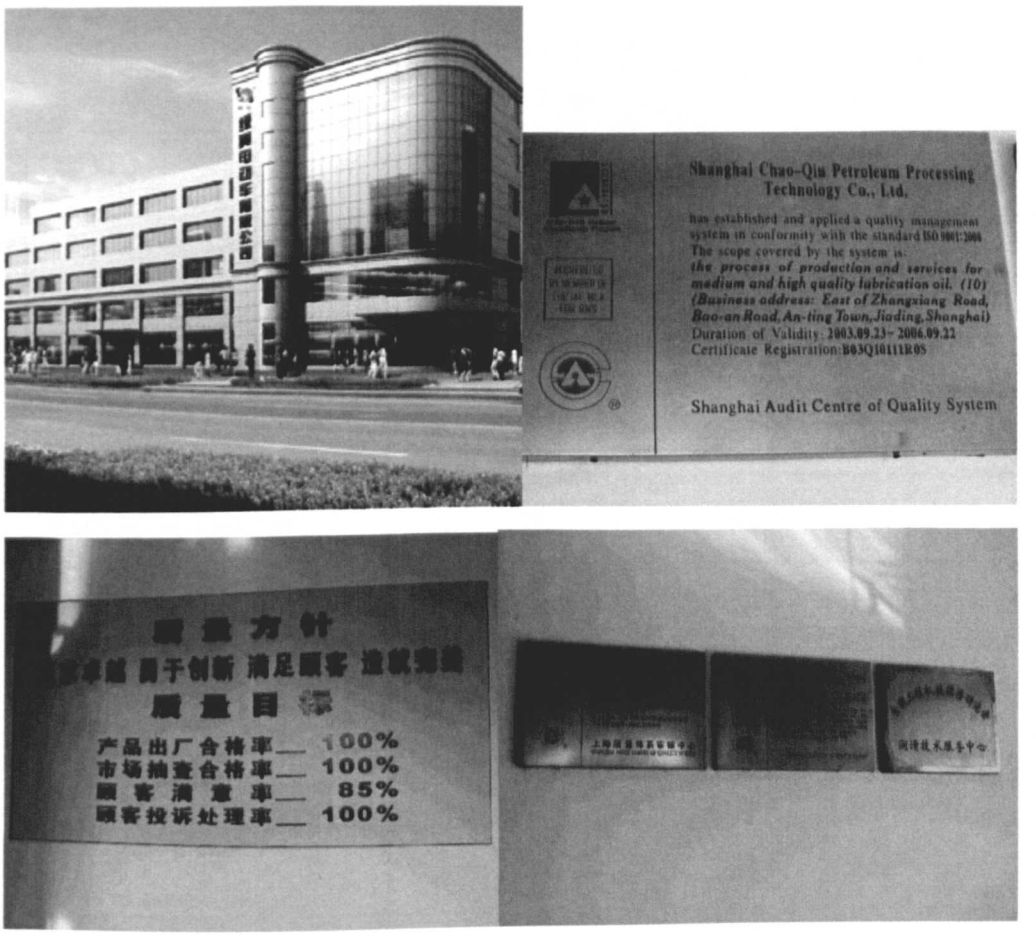

上海市质量金奖

Company E DJ





Company F LL



Appendix 4: A summary of CVF scores of each case-study company

Company A – RSHEP				
Four Cultural Type / **Ratings on five dimensions**	Hierarchical [a]	Developmental [b]	Group [c]	Rational [d]
1. Organizational character	20	40	10	30
2. Leadership character	15	40	30	15
3. Managerial means	25	25	25	25
4. Organizational emphases/ends	5	35	25	35
5. Organizational structure	10	45	45	0
Average ratings for each cultural type	15	37	27	21

Company B – SHRL				
Four Cultural Type / **Ratings on five dimensions**	Hierarchical [a]	Developmental [b]	Group [c]	Rational [d]
1. Organizational character	30	40	10	20
2. Leadership character	40	30	0	30
3. Managerial means	30	30	10	30
4. Organizational emphases/ends	40	40	20	0
5. Organizational structure	60	0	20	20
Average ratings for each cultural type	40	28	12	20

Company C – SZ				
Four Cultural Type / **Ratings on five dimensions**	Hierarchical [a]	Developmental [b]	Group [c]	Rational [d]
1. Organizational character	60	10	10	20
2. Leadership character	15	35	10	40
3. Managerial means	50	0	0	50
4. Organizational emphases/ends	30	10	0	60
5. Organizational structure	40	0	10	50
Average ratings for each cultural type	39	11	6	44

Company D – SDEC				
Four Cultural Type / **Ratings on five dimensions**	Hierarchical [a]	Developmental [b]	Group [c]	Rational [d]
1. Organizational character	35	25	25	15
2. Leadership character	29	21	21	29
3. Managerial means	25	25	25	25
4. Organizational emphases/ends	27	27	19	27

5. Organizational structure	64	0	18	18
Average ratings for each cultural type	**36**	**20**	**21**	**23**

Company E – DJ				
Four Cultural Type / **Ratings on five dimensions**	Hierarchical [a]	Developmental [b]	Group [c]	Rational [d]
1. Organizational character	10	30	30	30
2. Leadership character	20	40	30	10
3. Managerial means	30	20	20	30
4. Organizational emphases/ends	20	30	20	30
5. Organizational structure	0	50	25	25
Average ratings for each cultural type	**16**	**34**	**26**	**24**

Company F – LL				
Four Cultural Type / **Ratings on five dimensions**	Hierarchical [a]	Developmental [b]	Group [c]	Rational [d]
1. Organizational character	12	31	38	19

FACTORS	Market pressure & Customers' requirement	Positive outcomes of QM	Top management ideologies	Sector of industry	Company's growth & development	Competitors	Government

2. Leadership character	10	40	40	10
3. Managerial means	27.3	31.8	13.6	27.3
4. Organizational emphases/ends	25	40	10	25
5. Organizational structure	0	41.2	29.4	29.4
Average ratings for each cultural type	**15**	**37**	**26**	**22**

Appendix 5: A summary of adoption factors scores of case-study company

Average Scores	LL		DJ		SDEC		SZ		SHRL		RSHEP	
4.67	5 (QM)	4 (Chairman)	5 (QM)	5 (Head of GM office)	5 (CE)	5 (QM)	5 (QM)	5 (GM)	4 (QM)	4 (DGM)	5 (QM)	4 (GM)
4.42	5 (QM)	4 (Chairman)	4 (QM)	5 (Head of GM office)	4 (CE)	5 (QM)	4 (QM)	3 (GM)	4 (QM)	5 (DGM)	5 (QM)	5 (GM)
4.17	5 (QM)	5 (Chairman)	4 (QM)	4 (Head of GM office)	3 (CE)	3 (QM)	3 (QM)	4 (GM)	4 (QM)	5 (DGM)	5 (QM)	5 (GM)
3.58	2 (QM)	3 (Chairman)	4 (QM)	3 (Head of GM office)	4 (CE)	4 (QM)	5 (QM)	4 (GM)	4 (QM)	3 (DGM)	4 (QM)	3 (GM)
3.5	4 (QM)	3 (Chairman)	4 (QM)	3 (Head of GM office)	3 (CE)	3 (QM)	4 (QM)	3 (GM)	4 (QM)	5 (DGM)	3 (QM)	3 (GM)
3.08	3 (QM)	3 (Chairman)	4 (QM)	3 (Head of GM office)	3 (CE)	3 (QM)	1 (QM)	2 (GM)	4 (QM)	4 (DGM)	4 (QM)	3 (GM)
2.58	2 (QM)	2 (Chairman)	4 (QM)	2 (Head of GM office)	3 (CE)	3 (QM)	3 (QM)	2 (GM)	3 (QM)	2 (DGM)	3 (QM)	2 (GM)