MANAGING DEMAND AND SUPPLY IN CHINESE FASHION APPAREL FIRMS: AN EXPLORATORY STUDY UNDER THE FOURTH INDUSTRIAL STRUCTURAL CHANGE

A Thesis Submitted in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

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DECLARATION

I certify that, except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of this thesis is the result of work that has been carried out since the official commencement date of the approved research programme; any editorial work, paid or unpaid for, by a third party is acknowledged; and ethics, procedures and guidelines have been followed.

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ABSTRACT

The Chinese market represents one of the largest growing retail markets in the world. The new rise of e-commerce and digital technology has transformed the local commerce and retail landscape creating significant competitions and opportunities. Driving $4.84 trillion worth of sales alone in 2016, Chinese retail market is fuelled by rising demand from the large inland and regional areas, and growing purchases for high quality services and products. The fashion apparel (FA) sector, often characterised by short product lifecycles, high market volatility, low demand predictability, and a high number of impulse purchases, is one of the main retail industries in China experiencing radical transformations. Traditional FA companies have encountered a series of disruptive changes, including rising labour costs, out-dated manufacturing lines, and a chronic oversupply problem, which has led to supply chain breakdowns. Despite the challenges and uncertainties faced by the industry, research on how Chinese FA companies adapt to these changes is limited.

The present study explores how the Chinese FA companies manage and restructure their supply chain under the emerging market dynamics. As supply chain management (SCM) is still at the nascent stage of development in China, this study establishes an exploratory research, proposing a strategic SCM framework, comprised of core demand and supply process elements, and management components based on Western practice. Drawing upon the theoretical perspective of Alignment Theory, the study introduces four strategic fit types of the supply chain configurations: Make-to-forecast/Administration (A), Make-to-order/Production (P), Pack-to-order/integration (I), and Buy-to-order/Development (D). Working under the proposed SCM framework, the study applies the framework into the Chinese market context to probe how domestic FA companies have restructured their internal supply chain during the period of transformation, and whether the alignment of internal supply chain elements and components of the external market situation exists in current businesses.

The findings of this study reveal that companies capable of leveraging a new strategic fit of SCM alignment among their process elements and management components encourage a better business performance during the transformation. Key actions driving the business into a successful strategic fit configuration are identified in the findings. The findings also unveil some of the common characters residing in the Chinese economic ecosystem, and prescribe a series of practical implications in terms of formulating strategic supply chain solutions and enhancing competencies for the Chinese businesses.

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LIST OF ACRONYMS

B2C	Business to Consumer
FA	Fashion Apparel
FDI	Foreign Direct Investment
FFE	Foreign Funded Enterprise
GDP	Gross Domestic Product
O2O	Online to Offline
OEM	Original Equipment Manufacturer
PE	Private Enterprise
SCM	Supply Chain Management
SME	Small and Medium Enterprise
SOE	State-Owned Enterprise
SPA	Specialty Private Apparel
TA	Textiles and Apparel
TVE	Township and Village Enterprise
WTO	World Trade Organization

CHAPTER 1: INTRODUCTION

This study explores how the Chinese fashion apparel companies manage their supply chains to meet the rapidly changing demand under the fourth industrial structural change. In this chapter, the research background will be provided, followed by a presentation of the research motivations and purpose, and research questions. Thereafter, the research scope and significance of the study will be presented, and the structure of the thesis will be outlined.

1.1 Research Background

The definition of supply chain management (SCM) has various interpretations. These draw from various aspects of business management, and strive for an integrated approach. The term SCM has been coined to describe both changes within supply chains as well as the evolution of processes, strategies, and management tools. SCM first appeared in the 1980s as a concept encompassing all activities associated with the flow and transformation of goods, from raw materials through to the end user (Oliver and Webber, 1982). The intense global competition in the 1980s forced many organizations to offer low cost, high quality and realizable products with greater supply chain (SC) efficiency (McFarlane, 1984; Chandra and Kumar, 2000; Huang *et al*., 2002). Manufacturers utilized Just-In-Time (JIT) and other management initiatives to improve manufacturing efficiency and cycle time (Srinivasan, *et al*., 1994; Thomas and Griffin, 1996; Tan, 2001). Lean production, adopted in the Toyota Production System (TPS) (Ono, 1988), was one of the significant advancements in the early 1990s, promoting the use of barcodes, EDI (electronic data interchange), and shipment records, for cost cutting (cost of inventory and overheads, etc.) and accuracy improvement. This transformed the traditional ways of manufacturing into managing all activities involved from suppliers to customers, for smooth product flow and lead-time reduction (Henderson and Venkatraman, 1993; Broadbent and Weill, 1993). The objective of SCM was mostly centred on minimizing inventory and enhancing SC efficiency (McFarlane, 1984; Porter and Millar, 1985; Davenport, 1993; Hewitt, 1994).

Starting from the late 1990s and throughout the 2000s, with the focus on globalization, outsourced manufacturing and distribution drove companies to focus on “core competencies” (Childerhouse *et al*., 2002; Frohlich and Westbrook, 2002). Instead of vertical integration, companies outsourced less-competitive functions to other service providers, such as Original Equipment Manufacturers (OEMs) (Williams, *et al*., 2002). This changed management requirements, by extending the supply chain beyond the company walls and distributing management across specialized supply chain partnerships (Williams *et al*., 2002; Al-Mudimigh *et al*., 2004). Specialization creates manufacturing and distribution networks composed of several individual supply chains specific to suppliers, producers and customers that work together to design, manufacture, distribute, market, sell, and

service a product based on each set of conditions (Huang *et al*., 2002; Bruce *et al*., 2004). Market forces demanded rapid changes from suppliers, logistics providers, locations, or customers in their role as components of supply chain networks (Langabeer and Rose, 2002; Lee, 2004; Bruce *et al*., 2004). This variability has significant effects on supply chain infrastructure, from the foundation layers of establishing and managing electronic communication between trading partners, to more complex requirements such as the configuration of processes and work flows that are essential to the management of the network itself (Hines *et al*., 2002; Robertson *et al*., 2002; Stratton and Warburton, 2004; Walters and Rainbird, 2004).

Under this context, SCM was defined as the integration of key business processes from the end users through original suppliers that provide products, service, and information, which adds value for customers and other stakeholders (Lambert *et al*., 1998; Tan *et al*., 1998). Highlighting the importance of the customer, Agile SC strategy was proposed using market knowledge and virtual corporation to exploit profitable opportunities in a volatile market place as a trade-off solution opposed to Lean strategy (Fisher, 1997; Naylor *et al*., 1999; Mason-Jones *et al*., 2000; Christopher, 2000). Companies strive to assemble networks of specific partners, and tailor combined supply processes for different demand categories, to realize supply chain agility (Flint, 2004; Rainbird, 2004; Walters and Rainbird, 2004). The supply processes may differ between various types of organizations, but mostly include procurement, manufacturing, logistics capacity consideration (inventory and delivery), supply chain information technology and supply chain relationships (Davenport, 1993; Hewitt, 1994; Lambert *et al*., 1998; Christopher, 1998; Hines, 2004). The objective of SCM was mostly focused on fulfilling customer demand and enhancing SC effectiveness (Walters, 2006; Jüttner *et al*., 2006).

With growing globalization and technology innovation in the late 2000s, there has been an increasing concern about market mediation. SCM has been defined based on a new perspective, with the belief that management of all supply chain activities should be driven or created outwardly by the market rather than by the suppliers (Svensson, 2002; Al-Mudimigh *et al*., 2004; Rainbird, 2004; Jüttner *et al*., 2007 and Hilletofth *et al*., 2009). The previous “one-size fits all” SC strategy, i.e. Lean and Agile, which designed supply chains inwardly to fulfil only few demand categories, became insufficient to cope with the new demand variations (Christopher and Towill, 2001; Huang *et al*., 2002). This led to further study in the late 2000s (see, for example, the special issue dedicated to the demand chain in the *Journal of Operations Management*, 2002) centred on designing supply chains based on demand-differentiations. Some authors attempted to distinguish this concept from SCM by labelling it as demand chain management (DCM) (Walters and Rainbird, 2004; Jüttner *et al*., 2006; Canever *et al*., 2008; Hilletofth *et al*., 2009 and Hilletofth, 2012). They focused on identifying specific

demand processes and activities involved in each organization and across the chain members for integration. The demand processes may differ between various types of organizations, but mostly include product mix and development, market emphasis, customer segmentation, channel of distribution, promotion and price regime (Esper *et al*., 2010; Hilletofth, 2009; Jüttner *et al*., 2007; Gattorna, 2010). The objective was centred on analysing and creating customer demand rather than fulfilling it, as cost-efficiently as possible. Although the new interpretation was created, many still believe that DCM is part of the overarching concept of SCM, with special regard to customers (Lummus and Vokurka, 1999; Horvath, 2001; Barratt, 2004; Stadtler, 2015; Gattorna, 2010).

While new jargon and initiatives are being constantly developed, the underpinning concept of SCM definitions has evolved into an overarching process coordination enhancing both supply and demand process elements, in which demand processes are all processes at the customer or market interface aimed at responding to customer demand through value creation, and supply processes comprise the tasks necessary for fulfilling the demand (Canever *et al*., 2008; Esper *et al*, 2010; Hilletofth *et al*., 2009). Considering various market differentiations, dynamic SC strategies can be formulated for delivering different SC priorities by means of structuring process elements (Jüttner *et al*., 2006, Hiletofth *et al*., 2009; Sukati *et al*., 2012). Extending the previously-proposed Lean and Agile SC strategy, literature has mostly classified another two, namely Hybrid and Highly-flexible, derived from pure Lean and Agile strategy considering multiple demand segmentations (Browne and Zhang, 1999; Naylor *et al*., 1999; Mason-Jones *et al*., 2000; Childerhouse and Towill, 2000; Christopher, 2000; Christopher and Towill, 2001; Holmström *et al*., 2001). These in all, represent four main types of SC strategy in line with external demand variations (Treville *et al*., 2004; Vonderembse *et al*., 2006; Gunasekaran *et al*., 2008; Gattorna, 2010). In this regard, the objective of SCM focuses on quickly managing demand variations to achieve strategic fit of alignment and enhance business competitiveness (Defee and Fugate, 2010; Flynn *et al*., 2010; Wu *et al*., 2014).

In summary, according to the strategic fit of Alignment Theory, superior business performance is associated with high degrees of internal alignment among SCM process elements and management components for a specific SC strategy, and external alignment with the market conditions (Chorn, 1991; Gattorna, 1998; Gattorna, 2010; Ye and Lau, 2018). Under this notion, higher business performance is delivered through competency networks composed of SC expertise in understanding which demand and supply process elements deliver results, as well as through intimate understanding of how strategically manage these elements within an organization (Ketchen Jr and Hult, 2007; Chopra and Meindl, 2007; Ketchen *et al*., 2008; Olavson *et al*., 2010; Langenberg *et al*., 2012) (see Figure 1-1).

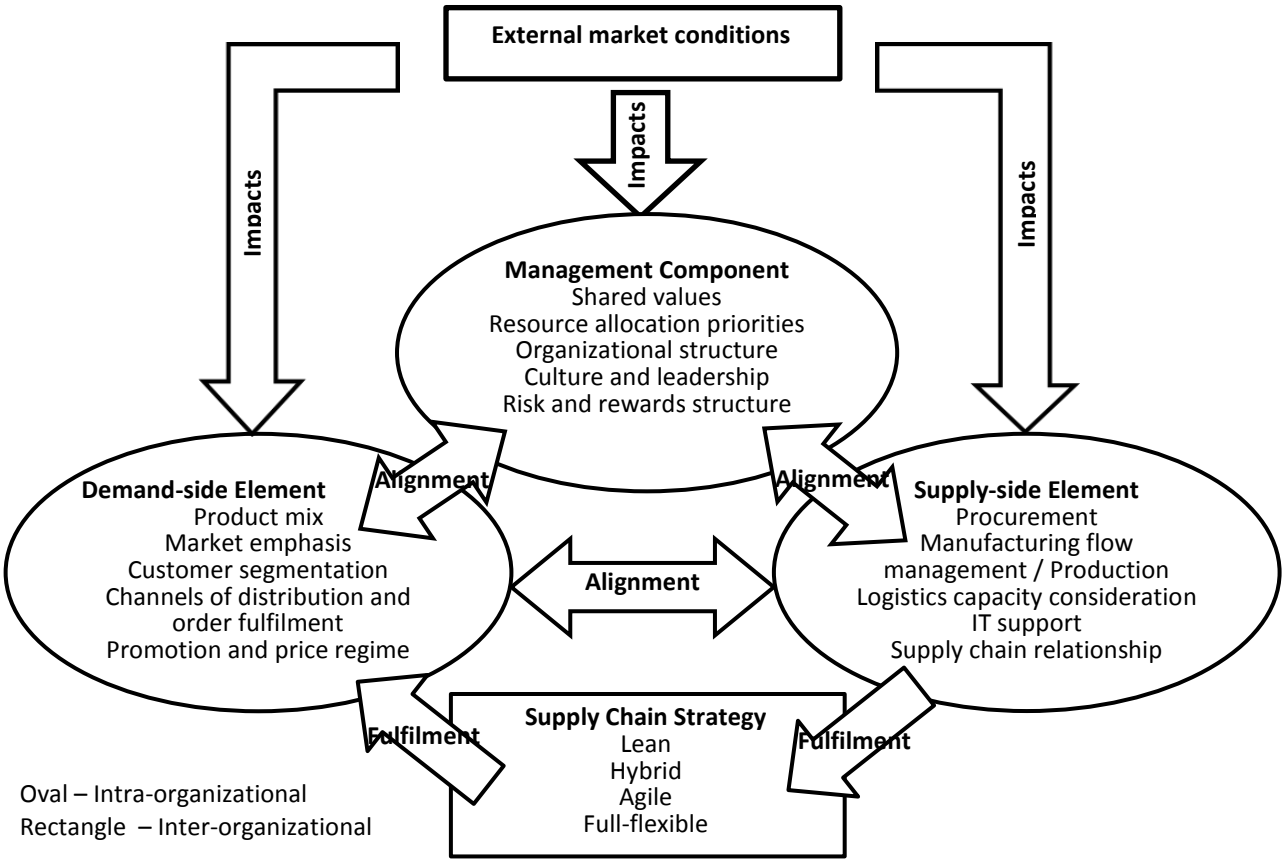


Figure 1-1: SCM Research Framework

The literature review as part of this research identified that there are several suggestions proposed for structuring a strategic SCM framework. Some have focused on identifying specific demand and supply activities for an integrated effort: for example, Walters and Rainbird (2004) and Walter (2006) propose a demand chain framework by differentiating the supply process and demand process of elements, based on specific internal activities. Similar studies such as the one by Jüttner *et al*. (2007) also identify the integration of a series of specific demand and supply processes according to the day-to-day activities, to cope with the environment dynamism. Others have considered a more theoretical configuration, suggesting that supply chain elements should be leveraged through strategically managing certain components, for an overarching alignment (Cooper *et al*., 1997; Hilletofth and Ericsson, 2007; Jüttner *et al*., 2006). The present study incorporates these previous configurations. Various possible management components that receive managerial attention when managing SC are taken into consideration (Ellram and Cooper, 1990; Henderson and Venkatraman, 1993; Cooper *et al*., 1997). The components identified span a range of management decision-making considerations within a firm, which mostly include shared values, resource allocation priorities, organizational structure, culture and leadership, and risk management, as shown in Figure 1-1 (Houlihan, 1985; Hammer *et al*., 1993; Lambert and Cooper, 2000; Gattorna, 2010; Flynn *et al*., 2010).

1.2 Motivations

The fashion market is characterised as an industry of short life cycles, high volatility, low predictability, and frequent impulse purchases (Lyons *et al*., 2012). With the movement of globalization, managing an apparel supply chain to source from labour-intensive countries, and coordinating a long pipeline with short lead time in order to catch up with rapidly changing trends, have become increasingly critical for industrial players (Cao *et al*., 2008; De Brito *et al*., 2008). Although many SC solutions have been proposed to better integrate demand-side marketing with supply-side production, most prescribe a one-size-fits-all solution with either a lean or an agile approach to cope with the dynamism (Bruce *et al*., 2004; Lam and Postle, 2006; Masson *et al*., 2007; Barnes and Greenwood, 2006). Regarding marketing orientation as ancillary to internal supply fulfilment and operation, the role of market demand for an integrated supply chain process is still largely neglected in existing studies (Lee, 2002; Christopher *et al*., 2006; Bhardwaj and Fairhurt, 2010). In recent research, some scholars suggest using a taxonomy approach for selecting global supply chain strategies. For instance, Brun and Castelli (2008) developed the 'segmentation tree' process incorporating three demand elements - product, channel and brand characteristics - into supply strategies. Similarly, Yi *et al*. (2011) identified four types of supply strategies, namely, laggard, conservative, agile, and aggressive, assigned to product categories for higher flexibility. While new jargon and initiatives are constantly being developed, theoretical underpinnings accounting for how these strategies integrate with each element in supply chain processes are still insufficient.

China's apparel market represents one of the largest growing retail markets in the world (Fung Business Intelligence Centre, 2014; Euromonitor International, 2014). Attributed to booming e-commerce and digital technology, there is a proliferation of domestic consumption not only from the large metropolises but also the large number of inland cities (Fung Business Intelligence Centre, 2014). The rising demand for apparel is also fuelled by the stable increase in household income. Improved living standards of people in the country have shifted the focus from basic apparel to more diverse fashion products (Lu and Dickson, 2015). According to a forecast made by Euromonitor International (2014), annual apparel sales in China will reach $333,312 million in 2019, an increase of 25% from $267,246 million in 2014. However, confronted with growing dynamism, traditional fashion apparel (FA) companies have encountered a series of disruptive challenges, such as rising labour costs, out-dated production lines, and large over-stocks, which lead to supply chain breakdowns (Yuan and Xu, 2010; Chao and Lu, 2015). Despite the dramatic changes and dynamic market uncertainties, research on how Chinese FA companies adapt to disruptive changes is limited.

The literature indicates that the apparel market in China has experienced four industrial structure changes since 1978 (Brandt and Rawski, 2008; Scissors, 2009; Yuan and Xu, 2010; Zhao, 2013). Starting as a planned economy, China began to introduce market principles in 1978 via economic reform. This was carried out over four stages of industrial structural change (Chuang 2008; Brandt and Rawski, 2008; Scissors, 2009) (see Figure 1-2).

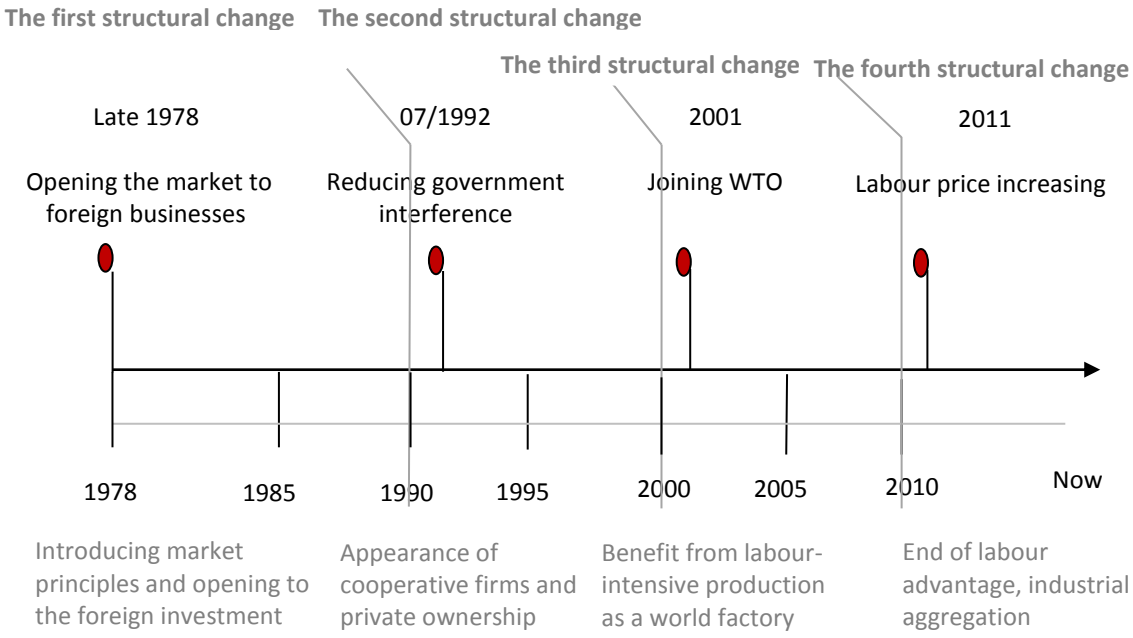


Figure 1-2: Development of the Chinese Apparel Industry

The first structural change, from the late 1970s to late 1980s, involved the decollectivization of production and opening up of the industry to foreign investment (Chen and Shih, 2004; Guo, 2002). According to the Guidance of Foreign Investment Catalogue in 1979, apart from a few textile segments, such as wool and silk, there were no other limitations for accepting foreign capital investment in mainland China at the time (Zhu *et al.*, 2010). The objective was to transform the administrative unit to a business unit in such a way as to enhance efficiency in the use of resources (Brandt and Rawski, 2008; Zhao, 2013). However, most units still remained state-owned (Brandt and Rawski, 2008; Scissors, 2009). The second structural change, in the 1990s, involved the privatization and contracting out of much state-owned enterprises with the aim of lifting of price controls and regulations with less government interference (Brandt and Rawski, 2008; Scissors, 2009; Zhao, 2013). As a result, the private sector grew remarkably accounting for as much as 70 per cent of China's gross domestic product (GDP) by 2005 (The European Commission, 2005; Engardio, 2005). During the 2000s, with the third structural change, unprecedented growth occurred with the economy

increasing by 9.5% a year since China joined the World Trade Organization (WTO) (Scissors, 2009). From 2000 to 2006, textile material exports kept at an increase rate of 20.2% year-on-year, with apparel products maintained at 17.6% every year (Qian, 2008). With an objective of releasing trade barriers and reducing tariffs for a rapid growth in the economy, China became one of the world's largest textiles and apparel producers (Qian, 2008). However, with the end of cheap labour in the late 2000s, established on the extensive growth mode, the industry is facing a new potential, an intensive growth model, under the fourth industrial structural change (Das and N'Diaye, 2013; Chinese Textile Industrial Union, 2012; Yuan and Xu, 2010).

The literature reveals that most studies on the Chinese apparel industry focus on reporting the status quo of dynamic market transitions in a broad sense (see for example Kwan *et al*., 2003; Chen and Shih, 2004; Hong, 2006; Yuan and Xu, 2010; Hua and Guo, 2012). Many of them point out the challenges posed by the latest structural changes in FA companies (Qiu, 2008; Zhu *et al*., 2010; Chan, 2011; Fung Business Intelligence Centre, 2013). However, few authors prescribe solutions and investigate supply chain dynamism in China's FA retail industry (Yi *et al*., 2011; Ye and Lau, 2014; Ye *et al*., 2013). The lack of study in this regard suggests that industry practitioners might not have experience yet in developing the innovative management methods required to strive in an increasingly volatile environment, and that the concept of SCM in the Chinese FA industry is still in its infancy and needs to be further researched.

1.3 Purpose and Research Questions

In the research background and motivation sections, it is shown that, as comprehensive as SCM studies are, research on managing a supply chain in China's FA industry and its industrial structural change is still in its infancy. There are limited studies found on managing the increasing market dynamism. As such, the purpose of this research is to explore how the Chinese FA companies have responded to impacts of the latest industrial structural change in terms of managing their supply chains, and to investigate whether failure or success of companies are related to performance in managing supply and demand. Based on the above discussion, the following primary research question is raised:

How do firms in the local FA industry manage their supply chain to align demand with supply, within the context of uncertainties brought about by the current structural change in China?

To fully address the primary research question, the following subsidiary research questions are proposed, underpinned by the research framework and the strategic fit of the alignment theory:

a. *What operational changes have the Chinese FA firms made to their demand and supply process elements during the period of structural change?*

b. *What strategic changes have the Chinese FA firms made to their supply chain management components during the period of structural change?*

c. *Are the adjustments at two levels, namely operation and strategic management, aligned internally and externally with the structural change?*

The literature shows that significant impact has been exerted on the companies' product supply and production during the industrial structural change, mainly including problems of chronic oversupply and production cost up-soar (AT Kearney, 2013; Hua and Guo, 2012; Zhu, 2012). A large number of small OEMs, especially those located near the large east coast cities, were not able to continuously survive, due to the rising labour costs (The European Commission, 2005). Industry has increasingly relocated from the coast to the interior, where the large reserve of rural labour resides. According to Hua and Guo (2012), investment by the apparel industry in inland areas increased from 16% to 46% between 2005 and 2011, in looking for a cheaper labour force, whereas investment in large east coast cities decreased from 75.3% to 42.1% over the same time period. Although the government also released the 12th Five Year Plan (2011 to 2015) in 2011, attempting to relocate production resources and strengthen the infrastructure upgrade, companies still found it difficult to relocate their suppliers to inland areas, due to the disadvantage of having a complete industrial supply chain and supportive logistics facilities in the inland regions (Chen, 2009; Zhu, 2012). In east coast megacities, higher rental and labour costs were squeezing retailers' margins and making it more difficult for low-performing product brands to survive (Fung Business Intelligence Centre, 2014). As the macro-economy slowed, many retailers suffered a sales decline in 2012, making overstocking a prevalent issue across multiple categories (Fung Business Intelligence Centre, 2014). Many factories encountered the oversupply problem, with excessive obsolete products, which led to a break in the financial chain and deceleration in further skill development and machinery upgrade.

In addition to the impact on the supply and production industry, the retail market has also experienced a series of transformations. A study undertaken by the Chinese Apparel Association shows that, from 2000 to 2005, the average life cycle of the top 500 domestic brands in China was just 1.5 years (AT Kearney, 2013). This is a result of fierce market competition combined with consumers' rapidly-changing tastes (AT Kearney, 2013). For example, people born in China in the 1980s enjoy more disposable income than those only ten years older, and have had wider choices in their childhood and teen years as China's economy opened up. Meanwhile, the highly individualistic post-1990 generation is even more vigorous in pursuing stylish dress, leading to diverse market

demand (AT Kearney, 2013; Euromonitor international, 2014). Besides this, online retailing and e-commerce has developed at an unprecedented speed and transformed the traditional brick-and-mortar model into various retail networks (Li and Fung Research Centre, 2012). According to statistics, the transition value of the online retailing market was RMB766.6 million in 2011, of which online apparel sales accounted for 26.7% (Li and Fung Research Centre, 2011). From 2007 to 2011, online apparel sales grew dramatically from RMB15 billion to RMB204.9 billion, which accounted for 14.3% of China's total apparel sales (Li and Fung Research Centre, 2012). However, as much as there has been an emphasis on the broad impact posed by supply and market changes, limited studies have focused on how FA firms deal with these changes in terms of managing their internal supply chain process. Hence, the first subsidiary research question is proposed as follows:

a. *What operational changes have the Chinese FA firms made to their demand and supply process elements during the period of structural change?*

Apart from the disruptive changes in terms of the market demand and supply, the literature also shows that significant changes were observed in corporate management. The increasing market dynamism and speed of change within China's internet ecosystem pose a potential for a great impact on the emerging market entrepreneurialism (Chi, 2015; Feng *et al*., 2014). Many of the personalities and business stories behind these entrepreneurs are from China's leading internet and technology players (PwC's Experience Center, 2016). The Chinese government also explicitly encourages this start-up mentality, with Prime Minister Li Keqiang calling for "mass entrepreneurship" and supporting this pledge with USD 6.5bn in grants, tax breaks and subsidized technology parks (Alsop, 2015). E-commerce and giant digital platform players, such as Alibaba, Taobao or Tencent (founder of Wechat mobile platform), have played a leading role in transforming the traditional business model (PwC's Experience Center, 2016). New technology features or services from one company are replicated and often enhanced in others within a few weeks rather than months. Many firms are willing to adopt a test-and-learn mentality during the execution (PwC's Experience Center, 2016).

While new retailers have strived to build multiple channels and jump on the bandwagon of imitating each other's business model for innovation, traditional companies which either transformed from a private wholesaler or an all-in-one state-owned supplier have found themselves stuck in an out-dated business structure and system, and have had lacked any solutions for this problem (Chi 2015). Although many companies have tried various approaches to transform their business model and strategy, only few have succeeded during the structural change period (Jiangsu Textile, 2014; Li and Fung Research Centre, 2012). Hence, the second subsidiary research question is proposed as follows:

b. *What strategic changes have the Chinese FA firms made to their supply chain management components during the period of structural change?*

Following the above discussion, Table 1-1 summarises the major external impacts on the local FA companies. As stated in the research background, the internal SC process operation of an organisation and its external competitive situation should not be viewed as separate, interdependent entities but as different influences within the same environment (Chorn, 1991; Gattorna, 1998). The literature indicates that superior business performance is associated with high degrees of internal alignment between SCM elements and components, and external alignment with the changing market conditions underpinned by the strategic fit of the alignment theory (Santala and Parvinen, 2007; Gattorna, 2010). In other words, this principle suggests a need for dynamic understanding of multiple aspects of business management, including situation, strategy, process operation, and management style, rather than a one-size-fits-all solution. In order to explore whether this principle is applicable within China's changing research context, the third subsidiary research question is proposed as follows:

c. *Are the adjustments at two levels, namely operation and strategic management, aligned internally and externally with the structural change?*

Table 1-1: External Impacts on China's FA Industry

Perspective	External Impacts on FA industry	References
Supply and production	■ Increased production costs ■ Oversupply and overstock issues	Chen and Shih, 2004; Hong, 2006; Chen and Cheng, 2008; Chen, 2009; Hua and Guo, 2012; Li, 2013; Mo, 2010; National Development and Reform Commission, 2007; Qiu, 2008; Yuan and Xu, 2010; Zhang and Zhang, 2015; Zhu, 2012; Zhu *et al*., 2010
Market demand	■ A more segmented retail market with diverse buying behaviours ■ Thriving e-commerce led to retail channel diversity	Chan, 2011; Chen and Cheng, 2008; Chuang, 2008; Hong, 2006; Huo, 2016; Fung Business Intelligence Centre, 2014; Liu and Chen, 2005;Liu, 2007; National Development and Reform Commission, 2007; Qiu, 2008; The European Commission, 2005; Yuan and Xu, 2010; Zhong Jiang Wang Web Company, 2007; Zhou, 2010; Wang and Guo, 2014
Corporate management	■ Emergence of different business models ■ New entrepreneurship culture	Yi and Jaffe, 2007; Towers and Song, 2010; Yu and Ramanathan, 2012; Wu, 2012; The Economist, 2013; The Economist, 2013; Fung Business Intelligence Centre, 2014; Feng *et al*., 2014; Jiangsu Textile, 2014; Chi, 2015; Retail and Ecommerce, 2016

In summary, placing the generic SCM framework (see Figure 1-1) in the context of the present research, a complete structure of the research framework for this research can be presented in Figure 1-3, portraying the changing external competitive situation in China's FA industry, and the potential achievement of alignment from internal SCM within a particular firm.

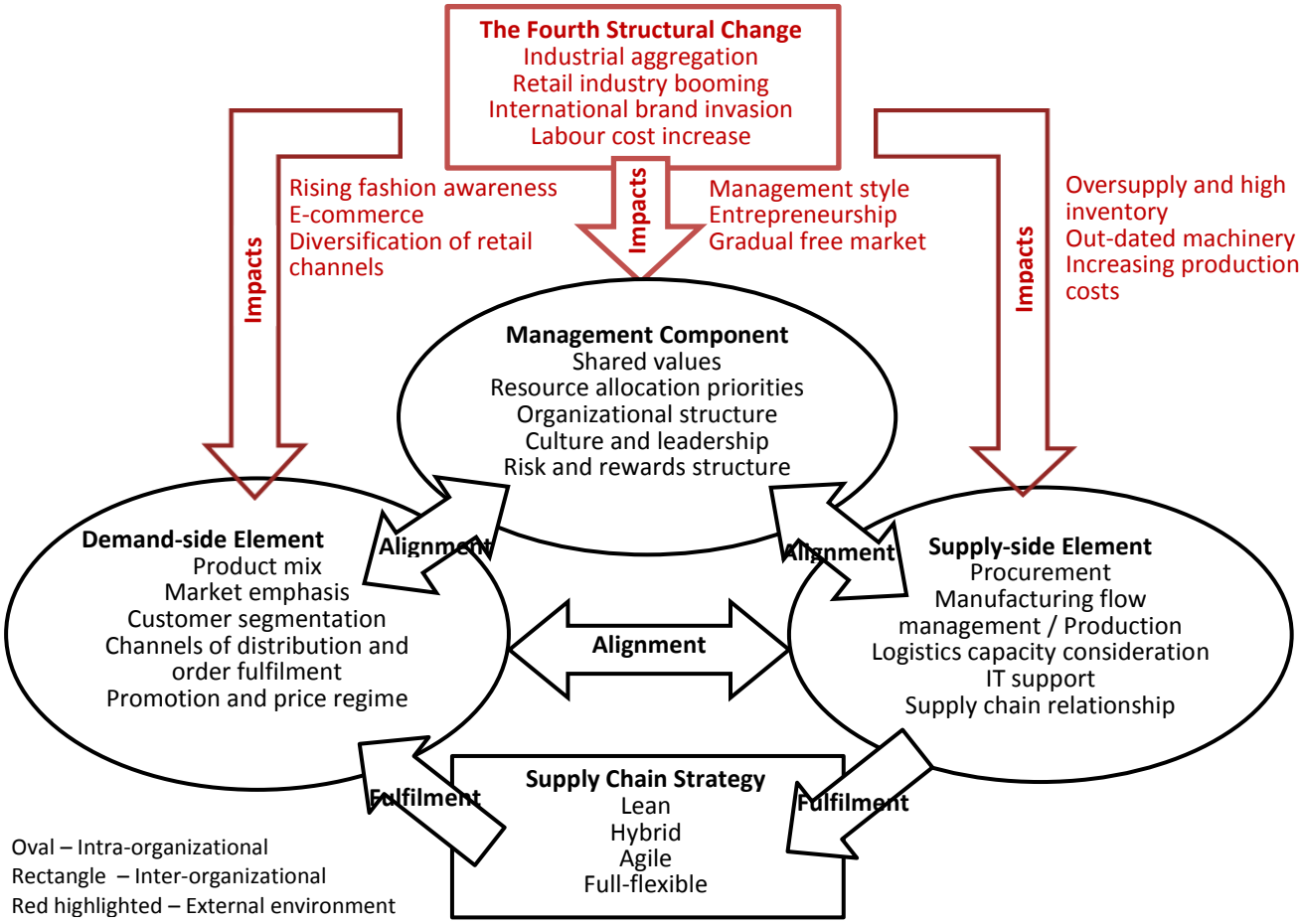


Figure 1-3: SCM Research Framework for the Chinese Fashion Apparel Industry

1.4 Research Scope

The scope of this study is SCM in the Chinese FA industry under the impacts of the latest industrial structural change, as indicated in the research questions and framework. Although the literature review of this study reports on four industrial structural changes in China, the research scope will mainly focus on addressing SCM in the context of the fourth industrial structural change.

Besides this, the objective of SCM centres on coordination of supply and demand processes and management components within a particular firm in order to leverage different types of supply chain strategy for a strategic fit of alignment with the external competitive situation, in a way that enhances business competitiveness. Thereby, the research scope will be investigated from the perspective of an individual apparel company via the underlined supply chain process elements and management components, and across from the standpoint of first-tier suppliers to front-tier customers. In addition, although demand-side elements are considered equally as the supply-side elements in the research framework, only those significantly relevant from a SC design perspective will be included in this research.

1.5 Significance of the Study

This study develops an overarching SCM research framework contributing to theory building within SCM research. It also proposes a measurement underpinned by the alignment theory in the research methodology, which supports the application of theory into practice. The findings of the study contribute to theory by complementing the theoretical implications of existing research under a different research context.

Furthermore, as an exploratory study, this study contributes to knowledge by reviewing the historical development of China's FA industry under the four industrial structural changes, which a limited number of previous studies have looked into. It attempts to offer a comprehensive view on China's industrial transformation that provides readers with a foundation to understand the current market situation. The proposed research framework and the alignment measurement yield a strategic roadmap for entrepreneurs, and develop an understanding of SCM for the industry. The findings of the study offer practical implications for the industry in terms of formulating strategic decisions and improving business competitiveness. Finally, this study attempts to provide local industry with certain insights to understand the dynamic uncertainties of the market, and shares insights on the international trade.

1.6 Structure of the Thesis

This thesis contains seven chapters. Following the introduction in Chapter 1, Chapter 2 provides a thorough literature review on the research background, discussing the definitions of terms, key scope, elements and components incorporated into the research framework. This chapter provides a sound understanding of knowledge and theory closely related to the research questions. Chapter 3 lays out the research context of this study. It discusses the development of China's FA industry and reviews SCM studies of this industry.

After setting the background, Chapter 4 looks specifically into the research methodology. This chapter unfolds across five sections covering research approach, research method, data collection, data analysis, and data validity. The philosophic research paradigm of this study is discussed followed by applied research method, strategies, and the design of the conducted studies. The rationale for choosing the qualitative multiple case study method of empirical analysis and the process of selecting relevant samples based on theoretical stratified sampling from the sample frame will be discussed. For data collection process, strategies applied for data collection, i.e. semi-structured interview, onsite observation and desktop study, and processes for preparing the data collection will be further elaborated. In the data analysis section, within-case analysis and cross-case

comparison will be carried out as the methods that will be used to generate the findings of this study. The last section on data validity will further demonstrate the reliability and validity of this study.

Chapter 5 presents the finding of the within-case analysis. This chapter addresses the first two subsidiary research questions. Each case study's findings are summarized as a synthesised table discussing key changes made within each firm in terms of supply chain process elements and management components. In Chapter 6, cross-case comparison findings are generated based on the within-case study. This chapter mainly addresses the last subsidiary research question exploring the alignment relationship of these internal changes made by each firm with the external market shift. Meanwhile, it also highlights the similarities and differences of each firm taken for its response to the structural change. Finally, Chapter 7 summarizes the findings by reflecting back on the literature review. The rationale for the internal shifts that have happened in each firm is further examined within the larger context of the industrial transformation (Chapter 3), which renders a deeper understanding of the research context. Finally, theoretical and practical contributions are discussed, followed by a presentation of research limitations and possible directions for future research.

CHAPTER 2: LITERATURE REVIEW

This chapter introduces the theoretical background of this study. Firstly, the definitions of SCM and incorporated scopes of the existing SCM frameworks are reviewed. Following on the discussion, key SCM process elements, components, and strategic configurations are specified underpinning the proposed SCM research framework (see Figure 1-1). Thereafter, the theoretical underpinning of the research framework is discussed. Figure 2-1 presents a mind-map of the literature review chapter.

2.1 Origin of the SCM and Definitions

The term "supply chain management" (SCM) first appeared in the literature in 1982, deriving from traditional logistical thinking (Oliver and Webber, 1982). Since then it has received substantial attention from scholars and practitioners (Cooper *et al*., 1997; Childerhouse *et al*., 2002; Esper *et al*., 2010). Initially, it was introduced to facilitate the physical transfer of products and the management of inventory on the supply chain (Ellram and Cooper, 1990). With development of the market, the definition of SCM has had various interpretations and evolved into different perspectives.

According to the Table 2-1 definitions of SCM, while some studies regarded SCM as an extension of logistics, emphasising flow of materials taken across inter-organizational boundaries (Oliver and Webber, 1982; Monczka *et al*., 1998; Tan *et al*., 1998), others considered that value on the supply chain could be captured not only from the physical product but from other activities, in particular, marketing and after-sales services (Christopher, 1998; Lambert *et al*., 1998; Hines, 2004). Previous study attempted to classify the body of SCM literature into various perspectives: for instance, Tan *et al*. (1998) and Tan (2001) categorized SCM into two perspectives, a purchasing/supply perspective and a transportation/logistics perspective. The former evolved from the traditional purchasing and materials function whereas the latter emphasized the importance of physical distribution and integrated logistics of the wholesaling and retailing industry. Similarly, Croom *et al*. (2000) also divided SCM into different subjects, including but not limited to purchasing and supply, logistics and transportation, marketing, and organisational behaviours.

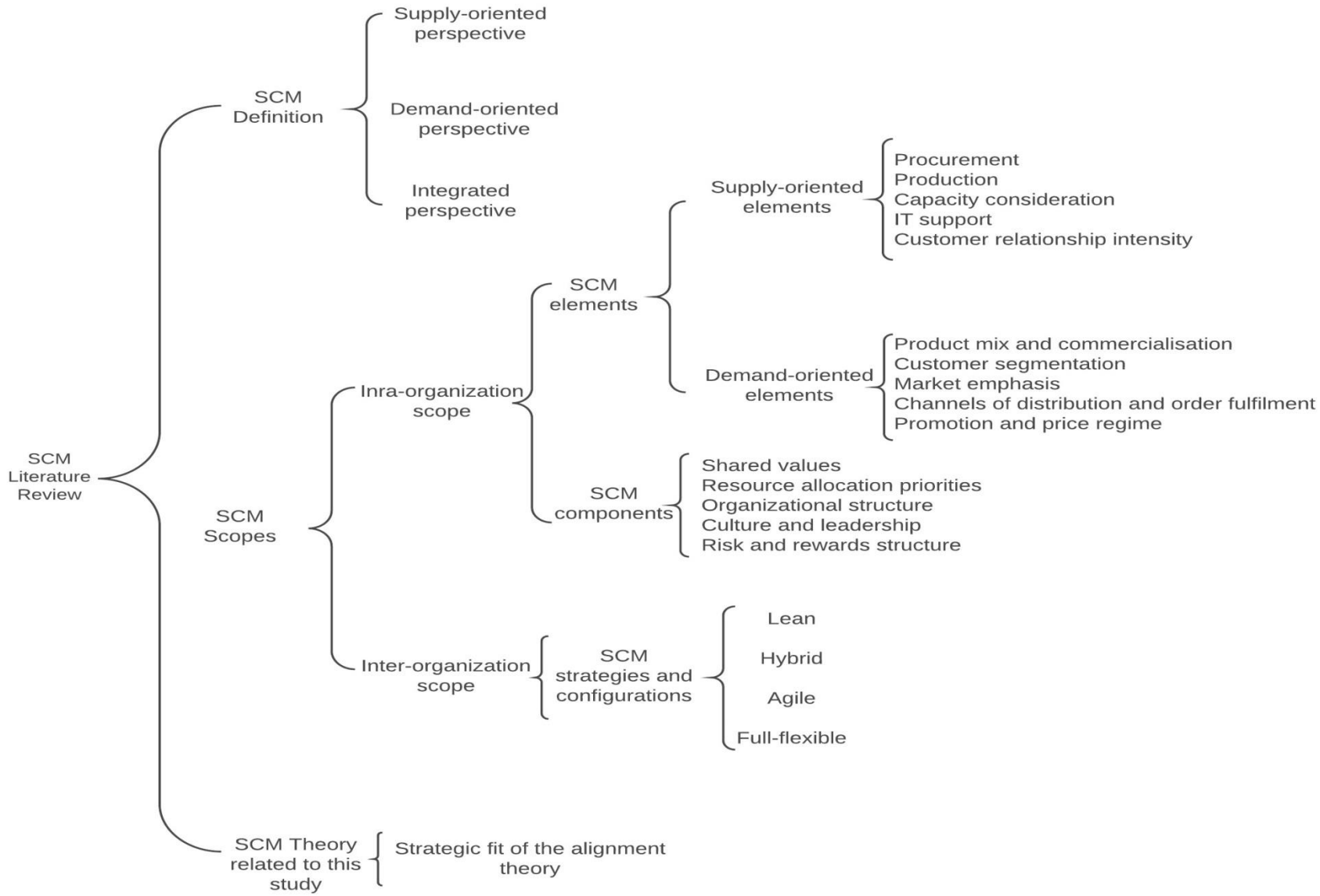


Figure 2-1: Literature Review Mind-map

Table 2-1: Definitions of SCM

Reference	Definition
Supply-oriented perspective	
Oliver and Webber (1982, p. 43)	"The process of planning, implementing, and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible."
Ellram and Cooper (1990, p. 2)	"SCM focuses on the control and management of inventory throughout the entire supply chain, from the supplier to the ultimate customer."
Monczka *et al*. (1998, p. 190)	"SCM requires traditionally separate materials functions to report to an executive responsible for coordinating the entire materials process, and also requires joint relationships with suppliers across multiple tiers. SCM is a concept, whose primary objective is to integrate and manage the sourcing, flow, and control of materials using a total systems perspective across multiple functions and multiple tiers of suppliers."
Cooke (1997, p. 3)	"…successful coordination and integration of all those activities associated with moving goods from the raw materials stage through to the end user, for sustainable competitive advantage. This includes activities like system management, sourcing and procurement, inventory management, transportation, warehousing, and customer service."
Tan *et al*. (1998, p. 3)	"SCM encompasses materials/supply management from the supply of basic raw materials to final product (and possible recycling and re-use). Supply chain management focuses on how firms utilise their suppliers' processes, technology and capability to enhance competitive advantage. It is a management philosophy that extends traditional intra-enterprise activities by bringing trading partners together with the common goal of optimisation and efficiency. "
Demand-oriented perspective or Supply and demand oriented perspective	
Lambert *et al*. (1998, p. 1)	"··· is the integration of key business processes from end user through original suppliers that provides products, service, and information that add value for customers and other stakeholders."
Christopher (1998, p. 12)	"SCM should be termed demand chain management to reflect the fact that the chain should be driven by the market, not by suppliers. Equally the word 'chain' should be replaced by 'network' since there will normally be multiple suppliers and, indeed, suppliers to suppliers as well as multiple customers and customer's customers to be included in the total system."
Mentzer *et al*. (2001, p. 11)	"The systematic, strategic coordination of traditional business functions and tactics across all business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole."
Langabeer and Rose (2002, p.12)	"SCM is a complex web of business processes and activities that help firms understand management and ultimately create consumer demand."
Hines (2004, p. 76)	"Supply chain strategies require a total systems view of the links in the chain that work together efficiently to create customer satisfaction at the end point of delivery to the consumer. As a consequence, costs must be lowered throughout the chain by driving out unnecessary expenses, movements, and handling. The main focus is turned to efficiency and added value, or the end-user's perception of value. Efficiency must be increased, and bottlenecks removed. The measurement of performance focuses on total system efficiency and the equitable monetary reward distribution to those within the supply chain. The supply chain system must be responsive to customer requirements."
Walters and Rainbird (2004, p. 468)	"An effective approach to demand-chain management first requires the organisation to understand its current and potential markets and second to identify the essential (or core) processes and capabilities that are required for success."
Jüttner *et al*. (2007, p. 381)	"The concept that aims to integrate demand and supply oriented processes. Demand processes are all processes at the customer or market interface aimed at responding to customer demand through value creation […] supply processes comprise the tasks necessary for fulfilling demand."
Hilletofth *et al*. (2009, p. 1181)	"The alignment of demand creation and demand fulfilment processes across functional, organizational and inter-organizational boundaries."
The Council of Supply Chain Management Professionals (CSCMP)	"SCM is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage. Supply chain activities cover everything from product development, sourcing and production to logistics, as well as the information systems needed to coordinate these activities."
APICS Dictionary	"…design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally."

As demonstrated in Table 2-1, SCM concept has been interpreted from various perspectives. For instance, compared with the traditional supply-oriented view of minimizing inventory and enhancing SC efficiency mentioned by Monczka *et al*. (1998) and Cooke (1997), a demand-driven SCM suggests realizing cross-functional supply chain process integration among internal organization and external stakeholders, to create superior customer value and business competitive edge (Lambert *et al*., 1998; Christopher, 1998; and Hines, 2004).

Attributed to increasingly dynamic market and technology advancement, market mediation or demand-differentiation became the key emphasis in the SCM concept (Svensson, 2002). Some studies attempted to distinguish this concept from the traditional SCM as value chain or demand-driven supply chain management (Walters and Rainbird, 2004; Jüttner *et al*., 2007; Canever *et al*., 2008; Hilletofth *et al*., 2009 and Hilletofth, 2012). These studies suggested that a traditional one-size-fit-all solution, either Lean or Agile strategy, considered only ideal product categories and was not sufficient for coping with the new dynamism (Langabeer and Rose, 2002; Heikkilä, 2002; Verhallen *et al*., 2004). Therefore, combining different supply, manufacturing and distribution strategies as various solution packages, each one appropriate to a specific product or consumer segment, was advised to adapt to this dynamism (Payne and Peters, 2004; Al-Mudimigh *et al.*, 2004; Hilletofth, 2009; Esper *et al*, 2010). This variation also transformed the supply chain infrastructure, from the foundation layers of establishing and managing communication between trading partners, to more complex requirements such as the configuration of processes and work flows that are essential to the management of the network itself (Walters and Rainbird, 2004; Liker and Choi, 2004; Lee, 2004).

As indicated, the term SCM has been coined to describe both changes in supply chains as well as the evolution of processes and strategies. As the new jargon and initiatives were constantly being developed, SCM studies have evolved into a more integrative understanding enhancing both supply and demand parties. In the following chapters, the study will further examine the dynamic incorporated scopes embedded in the existing SCM framework and identify the key elements under each scope of the research framework.

2.2 Scopes of the SCM Framework

The scope of the supply chain can be defined in terms of the number of firms involved in the supply chain, and the activities and functions involved (Cooper *et al*., 1997; Ellram and Cooper, 1990).

Table 2-2: Important SCM Frameworks Leading to the Paradigm Shift

SCM framework	Reference	Theoretical underpinning	Addressed scope	Addressed element
The value chain framework	Porter and Millar (1985)	NA (Not Available)	Intra-organizational	■ Primary activities (evolved physical creation of the product): Inbound logistics, Operations, Outbound logistics, Marketing and sales, Service ■ Support activities (inputs and infrastructure): Firm infrastructure, Human resource management, Technology development, Procurement
Matching supply chains with products (I)	Fisher (1997)	NA	Inter-organizational	■ Types of supply chain (Efficient supply chain, Responsive supply chain) ■ Types of products (Functional products, Innovative products)
SCM framework	Cooper *et al*. (1997)	NA	Intra-organizational	■ Business processes (Customer relationship, Customer service, Demand management, Order fulfilment, Manufacturing flow, Procurement, Product development, Return channel) ■ Management components (Organization structure, IT structure, Product structure, Leadership structure, Culture, Risk structure)
SCM Strategies	Naylor *et al*.(1999)	NA	Both	■ Material flow (Raw material supplier, Manufacturer/Assembler, Retailer, End-user) ■ Types of supply chain strategy by positing decoupling point (Buy to order, Make to order, Assemble to order, Make to stock, Ship to stock)
Integrative model for enabling agile supply chain	Christopher and Towill (2001)	NA	Both	■ Principles: Agile supply chain, Postponed fulfilment, Rapid replenishment ■ Programmes: Quick Response, Lean production, Agile supply ■ Actions: Setup time reduction, Economy of scale production, Waste control, Process management, Vender managed inventory, cross-functional teams
Matching supply chains with products (II)	Huang *et al*. (2002)	NA	Inter-organizational	■ Types of supply chain (Agile, Hybrid and Lean supply chain) ■ Product characteristics (Innovative, Hybrid and Standard products)
Value chain model	Walters and Rainbird (2004)	NA	Intra-organizational	■ SCM processes: Order processing, Evaluate value delivery, Order assembly and inventory management, Manufacturing, Service management ■ DCM processes: Customer relationship management, Product category, Product service, Value proposition, Value profiling ■ Managing value chain: Design and development, Procurement, Production, Marketing, Service
Strategic alignment supply chain model	Christopher and Gattorna (2005)	NA	Both	■ Supply chain types: Fully flexible, Agile, Lean and Continues replenishment ■ Customer segment types: Innovative solutions, Demand/Quick response, Efficiency/Consistency, Collaborative ■ Culture and leadership style ■ Competitive situation
Demand chain management framework	Jüttner *et al*. (2006)	NA	Both	■ Supplier and manufacturing strategy (Supplier strategy: QR and CR; Manufacturing strategy: Agile, Leagile, Lean) ■ Distribution strategy (Primary distribution strategy--City and Rural; Secondary distribution strategy--Grocery, General retail, Off license, Convenience) ■ Demand types (Low volume, high value products; High volume, low value products; In-between types)
Demand chain management framework	Hilletofth (2009)	NA	Both	■ Market management: Strategic marketing planning, Market research, Product development, Product commercialization, Branding, Marketing and sales, Life-cycle management ■ Supply chain management: Strategic supply chain planning, Supply chain design (market research, Consumer segmentation, design of solutions), Supply chain operation ■ Competitive advantage and business strategy
Aligning products with supply chain processes and strategy	Stavrulaki and Davis (2010)	NA	Both	This framework combined the feature of Naylor *et al*. (1999)'s framework and Cooper *et al*. (1997)'s SCM process framework; ■ Logistics process ■ Competitive management focus ■ Product characteristics and supply chain types
Supply chain portfolio design	Olavson *et al*. (2010)	NA	Both	■ Objectives: set the strategic goals for the supply chain ■ Strategy: design supply chians ■ Tactics: re-optimize around the new strategy ■ Triggers for changes in above three (products, competition and macroeconomic factors)
Supply chain integration model	Cao *et al*. (2015)	■ Contingency theory ■ Configuration theory	Intra-organizational	■ Organizational culture: development culture, group culture, rational culture, hierarchical culture ■ Supply chain integration: Internal integration, customer integration, supplier integration
Process interface framework for marketing and purchasing integration	Toon *et al*. (2016)	■ Structure dynamics ■ Human dynamics ■ Situational dynamics	Intra-organizational	■ Managerial approach to purchasing-marketing coordination (Transactional, Integrative, Co-management) ■ Co-management ■ Forms of dynamics

Underpinned by definitions of SCM, while some authors have addressed the entire supply chain, others have focused on parts of it, across or within firms. Specific functions and process elements tend to focus on their connection with other firms. This chapter identifies the various scopes for SCM by reviewing previous important SCM frameworks that drive the paradigm shift, in Table 2-2.

Comparing some of the key elements and components in the previous studies with the proposed research framework, strengths and weaknesses of previous SCM frameworks are underlined, thereby, enhances the rigorousness of the proposed research framework. As shown in Table 2-2, most frameworks are structured into two scopes; namely inter-organizational and intra-organizational. Important elements and components incorporated in the frameworks are identified below:

- Inter-organization (across the supply chain—types of SCM strategies based on product and customer characteristics):
  i) Functional (Lean)/ship-to-stock
  ii) Innovative (Agile)/make-to-order
  iii) Hybrid (leagile)/pack-to-order
  iv) Fully-flexible/buy-to-order
- Intra-organization (within a particular company):
  i) Support elements or activities including *supply-side operation* (inbound outbound logistics, inventory, procurement, production/manufacturing flow management, procurement) and *demand-side operation* (marketing emphasis and sales, product development, service, customer relationship, order fulfilment);
  i) Management component including business competitive and shared values, firm infrastructure, human resource management, leadership structure, culture, risk structure, product structure, and IT structure.

Compared with the preceding structure, the development of SCM frameworks advanced into a wider research scope, as mentioned in Chapter 1 on the role of market mediation, and richer classifications of the supply chain configuration. For example, Fisher (1997) proposed a strategic supply chain matrix that considered the nature of the demand by classifying it into two categories, functional versus innovative. Huang *et al*. (2002) took a step further by suggesting a third type of supply chain, named hybrid, under the previously mentioned matrix. Similarly, Naylor *et al*. (1999) opined that the traditional view of two types of supply chain, the paradigm of either Lean or Agile, was too simplistic. They presented a new method of classification, combining two paradigms with total supply chain structure based on market knowledge and positioning of decoupling point. It

specifically differentiated supply chains into Buy-to-order (Fully-flexible), Make-to-order (Agile), Assembler-to-order (Hybrid), Make-to-stock (Lean), and Ship-to-stock (Lean). Some configurations not only encompassed demand and supply elements but also strategic management components such as culture, leadership, and business structure, aiming for an overarching structure (Christopher and Gattorna, 2005; Stavrulaki and Davis, 2010; Cao *et al*., 2015).

Another improvement comes from stronger linkage among levels of elements. For example, Jüttner *et al*. (2006) proposed a framework matrix anchoring the link between the consumer segmentation and manufacturing element of supply chain strategy. This framework attempts to align three different manufacturing strategies, lean, agile and leagile, based on three types of consumer segments identified as: low volume, high value products; high volume, low value products; and in-between types. Furthermore, this was then considered to drive the procurement element of the supply chain strategy. Two primary modes of operation were identified from the procurement base. The first mode is the use of continual replenishment (CR) to deal with 'base' demand for standard components in large predictable volumes, spanning the pure lean and lean element of the leagile manufacturing strategy. The second is a responsive mode to deal with 'surge' or 'wave' demand for more customised components in much smaller, more unpredictable volumes, in response to the pure agile and agile element of the leagile manufacturing strategy. Elements under each level were defined by scope and levels in between were structured based on shared attributes. Similar examples, such as Hilletofth (2009) and Walters and Rainbird (2004), also demonstrate an intricate alignment among different levels of SC elements, leading to development of the theoretical understanding of the SCM study. In summary, the evolution of the SCM framework shows a gradual enhancement in the integration of strategy, structure and process elements (Walters and Rainbird, 2004; Jüttner *et al*., 2006; Hilletofth, 2009).

Although this evolution manifests significant progress, limitations also exist. Most frameworks address the dynamism from one dimension. Only a few of them attempt to incorporate both dimensions for an overarching configuration (Christopher and Gattorna, 2005; Stavrulaki and Davis, 2010). There is a lack of explanation for how these elements can be fully integrated within and among the various companies in the supply chain. This might result from deficiency in theoretical underpinnings. The research framework proposed in the present study attempts to mediate the above limitations based on its underpinning theory, which will be outlined in Sections 2.5 and 2.6. In the next section, incorporated elements and management components of the framework will first be reviewed.

2.3 Process Elements of the SCM Framework

In the following paragraphs, key SCM elements for process integration highlighted in the research framework will be further explained. The use of SCM elements to develop capabilities and achieve the overall strategic fit are widely explored in some literature (Chopra and Meindl, 2007; Lambert and Cooper, 2000; Jüttner *et al*., 2007). These authors suggest that cross-functional elements for process integration serve as key drivers to achieve higher supply chain performance. This study identifies below ten process elements commonly incorporated by the previous studies (refer to Table 2-2), from both supply and demand aspects. While similarities exist, differences are exacerbated by having to deal with multiple independent entities.

- Product mix and commercialisation

Product mix, also known as product assortment, refers to the total number of product lines that a company offers to its customers. For example, a small company may sell multiple lines of products. Sometimes, these product lines are fairly similar, such as dishwashing liquid and bar soap, which are used for cleaning and use similar technologies. At other times, the product lines are vastly different, such as diapers and razors (Lambert and Cooper, 2000). In order to maintain portfolio consistency, each product line might have its own timeframe to launch its new product based on product life-cycle, which nowadays, is closely liaised with the sourcing, manufacturing flow, and product distribution, for shorter supply chain lead-time (Walters and Rainbird, 2004; Hilletofth *et al*., 2010).

- Marketing emphasis

Marketing emphasis is a sum of activities to do with and for the customer in order to pre-condition him or her for a sale. Based on customer preference and segmentation, marketing planning, such as branding and sales campaigns, around the product-line concept could be deployed to better align with the target customers and to promote products (Flint, 2004; Walters and Rainbird, 2004). Leveraged by a customer value-oriented supply chain management, companies are able to deploy order fulfilment networks based on marketing emphases and customer segmentations.

- Customer segmentation

Customer segmentation is the practice of dividing a customer base into groups of individuals that are similar in specific ways relevant to marketing emphasis, such as age, gender, interests, and spending habits. Customer segmentation relies on identifying key differentiators that divide customers into groups that can be targeted. Information such as customers' demographic and psychographic behavioural tendencies is taken into account when determining customer segmentation practices (Jüttner *et al*. 2010; Gattorna, 2010). Based on these, companies can tailor diverse packages of

supply chain solutions to fulfil various segment preferences, and to understand dynamic demand changes (Lambert and Cooper, 2000; Walters and rainbird, 2004).

- Channels of distribution and order fulfilment

Channels are the pathways through which customers gain access to products and services. These channels are the commercial arrangements made with other parties to carry out some of the functions required to present products/services to the target market (Gattorna, 2010). The customer order fulfilment process is concerned with the delivery of orders through the retail channels. It involves specialist distribution and transport enterprises, and logistics service providers. It determines how products are retrieved and transported from the warehouse to retailers (Beamon, 1998; Browne and Zhang, 1999). Products could be transported to retailers directly, or may first be moved to distribution facilities, which in turn transport products to the retailers. This process closely interacts with other activities including the management of inventory retrieval, transportation, and final product delivery, for an integrated supply chain (Lambert and Cooper, 2000; Beamon, 1998).

- Pricing regime and promotion activity

Pricing is concerned with setting the selling price for the firm's product or service. Price can be used to differentiate the product from others competing in the marketplace. Since logistics creates time and place utility, its activities contribute to product price (Williams *et al*., 1997). As firms improve logistics systems from both technical and managerial perspectives, numerous benefits related to price and availability of goods can be realized (Al-Mudimigh *et al*., 2004; Walters and Rainbird, 20004). Pricing also should be considered to align with the total customer-base expectations. Not all customers want the lowest price, nor are they all prepared to pay a premium. Therefore, it is important to align the price with right service emphasis and product mix, for a strategic package (Al-Mudimigh *et al*., 2004; Gattorna, 2010). Promotional activity, such as advertising, should be integrated with a business's overall pricing strategy and product mix. For instance, it is unlikely that any promotional activities are required by customers who are already brand loyal: for them it becomes a distraction. However, for customers who are price sensitive and demanding diversity, it is essential to attract their attention.

- Procurement

The procurement process focuses on managing relationships with strategic suppliers, rather than the traditional bid-and-buy system. Selecting the best array of suppliers to source from, and indeed to outsource to, is a vital consideration; and this consideration may well determine whether a firm can leverage portfolio of value propositions to customers (Cooper *et al*., 1997; Vollmann and Cordon, 1998). Levels of collaboration could be built based on several categories of selection, such as product

technology and process technology, for long-term or short-term strategic alliance aligned with desired outcome (Vollmann and Cordon, 1998; Lambert and Cooper, 2000; Heikkilä, 2002). The purchasing function develops rapid communication mechanisms such as electronic data interchange (EDI) and Internet linkages, to quickly transfer requirements. These rapid communication tools provide a means to reduce time and cost spent on the transaction portion of the purchase. Purchasers can focus their efforts on managing suppliers, as opposed to placing and expediting orders (Thomas and Griffin, 1996; Gattorna, 1991; Christopher, 2000). The objective of supplier or procurement management is to support the manufacturing flow management and product development.

- Manufacturing flow management/Production

Production planning describes the design and management of the entire manufacturing process, which includes activities related to planning, scheduling and supporting manufacturing operations, such as work-in-process storage, handling, transportation, and time phasing of components, inventory at manufacturing sites, and maximum flexibility in the coordination of geographical and final assemblies' postponement of physical distribution operation (Spear and Bowen, 1999; Lambert and Cooper, 2000). Supply chain configuration needs to ensure the delivery of the required range of value propositions, which means: using straight production lines for products that are being produced in volume in order to drive down unit costs; using postponement techniques (position of decoupling point on the supply chain) and utilizing slack capacity in times of off-peak demand; or using methods such as group technology, where small specialized batches are produced for either brand-loyal customers or customers that exhibit urgent demand for a product, for which they are prepared to pay. Manufacturing planners work with customer planners to develop strategies for each customer segment. Changes in the manufacturing flow process lead to shorter cycle times, meaning improved efficiency and responsiveness to customers (Lambert and Cooper, 2000; Walters and Rainbird, 2004). The related strategies will be further discussed in detail in the next section on supply chain strategies.

- Logistics capacity consideration

Capacity can be in many forms, such as machine capacity, labour availability, inventories (existing in all forms), storage locations, and transportation options. To counter any fluctuations in demand and potential problems on the supply side, both of which can cause disruptions, buffers can be designed into the overall supply chain where appropriate (Chandra and Kumar, 2000; Ketchen *et al*., 2008; Gattorna, 2010). Excess capacity, inventory, and management information systems, all provide buffers that allow a best value supply chain to provide better service and be more responsive to its customers.

- Information technology support

Information technology or systems have played a crucial role in all planning and execution phases of supply chain management (Talluri, 2000; McFarlan, 1984). Some have categorized them according to whether information technology is widely used in the value chain or selectively used for only information processing, and whether it is applied for value creation or applied for the connection of value-adding activities on the SC (Narasimham and Kim, 2001; Talluri, 2000). While most contemporary enterprises will have an integrated system such as Enterprise Resource Planning (ERP), the exact combination of software applications that sits on top of this transactional system is largely determined by the types of customers being served and their corresponding needs (Frohlich and Westbrook, 2002; Gunasekaran and Ngai, 2004). The key for investing in information technology is to mix the appropriate strategy package for each of the main customer types, rather than offer all available technology at every customer indiscriminately (McFarlan, 1984; Frohlich and Westbrook, 2002). Whether the system deployed in a company can on the whole leverage a competitive edge, rather than drain spending with less return on investment, is the key consideration for SC system implementation.

- Supply chain relationship

Supply chain relationship management is a combination of business process and technology, which seeks to understand a company's customers from the perspective of who they are, what they do, and what they're like (Ryals and Knox, 2001). Some customers need to be recognised and provided with personalized service attention, while others might not care as much (Ryals and Knox, 2001; Lambert and Cooper, 2000; Gattorna, 2010). Since providing close personal attention is costly, it is important to differentiate the service given based on customer relationships: for instance, loyal customers will be provided with closer personal attention compared with other consumer segments. The success in delivering the appropriate customer service hinges on the ability to develop an internal process team that can monitor, analyse, and establish differentiated customer service standards and deploy aligned demand fulfilment (Christopher *et al*., 1985; Christopher and Jüttner, 2000; Ryals and Knox, 2001).

All these supply chain elements are playing a key role in forming dynamic supply chain strategies to fulfil various consumer demands. The ones included in the above discussion are not confined to physical logistics considerations alone, but rather are a combination of all the variables that a business might want to bring to bear in order to deliver on the promise embedded in a particular value proposition.

2.4 Management Components of the SCM Framework

An essential underlying premise of an SCM framework is that there are certain strategic management components that are common across all business processes and members of the supply chain. The level of integration and management of a business process link is a function of the number and level of components added to the link (Ellram and Cooper, 1990; Henderson and Venkatraman, 1993; Cooper *et al*., 1997). Consequently, adding management components improves the level of integration of the business process link. The literature on SCM and business process suggests various possible components that should receive managerial attention when managing SC (Lambert and Cooper, 2000; Houlihan, 1985; Hammer *et al*., 1993; Gattorna, 2010). The components identified span the range of management decision-making within a firm. These components are extended to apply to the management of a supply chain. While similarities exist between these components, differences are exacerbated by having to deal with multiple, independent entities. The following five components are those mostly identified in the literature.

- Shared values

A value proposition is a promise of value to be delivered, communicated, and acknowledged (Houlihan, 1985 and Hammer *et al*., 1993). It is also a belief on the part of the customer about how value (benefit) will be delivered, experienced and acquired. Delivering on that promise has two dimensions (Gattorna, 2010). Firstly, it is important to review the operational issues and identify any gaps in how the supply chain can meet the needs of customer-buyer behaviours. Secondly, companies should get the right organisational planning and structure in place, with the right people and abilities, so that the organization is equipped with the necessary capabilities to deliver on the promise represented by value propositions.

- Resource allocation priorities

Resource allocation is the assignment of available resources to various uses. 'Resource allocation priorities' are the three most important words in the vernacular for companies battling to survive in different trading conditions (Cooper *et al*., 1997; Ketchen Jr. and Giunipero, 2004). Using shared forecasts will help when dealing with customers willing to share and collaborate; and using sophisticated network optimization models might be necessary where this collaboration does not exist and companies are trying to decide between different courses of actions. In the latter case, they must decide whether to serve particular customers or not, with the aim being to maximize customer account profitability (Gattorna, 2010).

- Organizational structure

Organizational structure refers to the individual firm and the supply chain (Ketchen Jr. and Giunipero, 2004; Salam, 2011). The use of cross-functional teams would suggest more of a process approach (Lambert and Cooper, 2000). When these teams work across organizational boundaries, such as in-plant supplier personnel, the supply chain should be more integrated. It is difficult to integrate a top-down organization structure with a bottom-up structure. The level of management involved everyday can differ across supply chain members.

- Culture and leadership

Culture and attitude are very important considerations. Compatibility of corporate culture across channel members cannot be underestimated (Lambert and Cooper, 2000; Bello *et al*., 2004). Meshing cultures and individuals' attitudes is time consuming, but is necessary at some level in order for the channel to perform as a chain. Aspects of culture include how employees are valued and how they are incorporated into the management of the firm (Bello *et al*., 2004; Gattorna, 2010). The power and leadership structure across the supply chain will affect its form. One strong channel leader will drive the direction of the chain. In most chains studied in the present research, there are one or two strong leaders among the firms. The exercise of power, or lack thereof, can affect the level of commitment of other channel members (Zhao *et al*., 2011). Forced participation will encourage exit behaviour, given the opportunity.

- Risk and rewards structure

The anticipation of sharing of risks and rewards across the chain affects long-term commitment of channel members (Ellram and Cooper, 1990; Hammer *et al*., 1993). In a stable market, in combination with loyal, docile customers who buy the same products and services all the time, the risks may be low. For new customers coming onto the books and demanding new combinations of products and ways of being serviced, the risks are correspondingly higher. It is important to assess the risks and, where possible, make an early decision.

The above components define the organizational behaviour and influence how supply chain strategic elements can be delivered. If the managerial and behavioural components are not aligned to drive and reinforce an organisational behaviour supportive to the supply chain objectives and operations, then the supply chain will be likely to be less competitive and profitable (Lambert and Cooper, 2000). If one or more of the managerial components are changed, other components likewise may have to be readjusted for a company to realize an aligned configuration. The groundwork for successful SCM is established by understanding each of these SCM components and their interdependence. It is believed that true intra- and inter-company business process management, or redesign, is only likely to be successful if it is recognized as a multi-component change process, simultaneously and

explicitly addressing all SCM components (Hewitt, 1994; Cooper *et al*., 1997; Lambert and Cooper, 2000).

2.5 Strategic Configurations of the SCM Framework

As for the comprehensive scopes and dimensions of SCM research, supply chain strategies are applied dynamically as well, comprising the elements of demand, procurement, manufacturing, distribution, and logistics (Jüttner *et al*., 2006; Vonderembse *et al*., 2006). This section will discuss four main supply chains incorporating key supply chain strategies, anchored in most of the SCM frameworks. The application of supply chain strategies are inextricably intertwined, considering the various parties involved or levels of integration. For example, Lean or Just-in-time originated as a practice of managing manufacturing flow for the Toyota Production System (Fisher, 1997; Spear and Bowen, 1999); however, the adoption of leanness or agility was explored under overall strategic supply chain management (i.e., push-pull strategy), in particular considering market knowledge, via information enrichment and positioning of decoupling point or Order Penetration Point (OPP), to create an integrated supply chain process (Naylor *et al*., 1999; Mason-Jones *et al*., 2000; Christopher and Towill, 2001; Stratton and Warburton, 2003). In summary, there are four generic supply chains that encapsulate major business configurations and SCM strategies. These are Lean, Hybrid, Agile, and Fully-flexible. According to the literature review, Table 2-3 defines these four types of supply chain, and presents the various strategic combinations by means of which the identified elements are structured. Each type of supply chain is constructed in order to fulfil demand requirements of each consumer segment.

Table 2-3: Supply Chain Strategies and Configurations

Category	Lean (Ship-to-stock/Make-to-forecast)	Hybrid (Pack-to-order)	Agile (Make-to-order)	Fully-flexible (Buy-to-order)	References
Definition	Supply chain focus on elimination of waste or non-value added steps in the supply chain. It is supported by the reduction of setup times to allow for the economic production; thereby achieving cost reduction, flexibility and internal responsiveness.	Interfaces with market to understand customer requirements, maintaining future adaptability. Tries to achieve mass customization by postponing product differentiation until assembly process and adding innovative components to the existing products.	Supply chain focus on respond to rapidly changing, continually fragmenting global markets by being dynamic and context-specific, aggressively changing, and growth oriented. The firms are driven by customer designed products and services.	A network of firms that is capable of creating wealth to its stakeholders in a competitive environment by reacting quickly and cost effectively to changing market requirements.	Fisher, 1997; Spear and Bowen, 1999; Browne and Zhang, 1999; Naylor *et al.*, 1999; Christopher, 2000; Huang, *et al.*, 2002.
Demand-side elements	**Administration (A)**	**Integration (I)**	**Production (P)**	**Development (D)**	
Product mix and commercialisation	Commodity products, stable product line and minimal variants. This type of customer just wants the same product-service experience repeated on a consistent basis and they will shop around to get it. The lowest possible cost to drive the lowest-price offer to customers is essential.	Big emphasis on product quality; joint product development. Innovative to improve relationships. Consumers might not in the habit of exploring new products and might just want the same product-service experience repeated overly.	Larger range, choice is important and differentiated products on growing markets. Customers in a 'demanding' mindset tend to like choice and convenience. Choice means a great variety in product range, but emphasis on meeting the quality is strong nonetheless.	Customised products for innovation, growth through product development and market development. Extensive Research and design (R&D); aims to be the first to market.	Mason-Jones *et al.*, 2000; Christopher and Towill, 2001; Walters, 2006; Gattorna, 2010.
Market emphasis	Lowest price, but reliable.	Building brand retention with existing customers.	Quick response to changing customer requirements.	Creative problem-solving.	Mason-Jones *et al.*, 2000; Childerhouse *et al.* (2002).
Consumer segmentation	Little knowledge or involvement in delivery. Desired for efficiency or consistency before product-service quality.	Little knowledge, very involved in delivery. Customers in this segment tend to buy proven quality products, perhaps augmented feature or services.	This type of customer is seeking differentiated products and service, will pay a premium if necessary. The challenge for supplier is continuous improvement.	Very knowledgeable and involved delivery.	Mason-Jones *et al.*, 2000; Jüttner *et al.*, Walters, 2006; 2006; Gattorna, 2010.
Channels of distribution and order fulfilment	Wide distribution through multiple channels for customers to get easy access.	Channels are the commercial pathways, along with products and services that are sold. Either direct or via trusted outlets.	Provides easy access to consumer requirements.	Limited (narrow and specialised).	Bruce *et al.*, 2004; Jüttner *et al.*, 2006; Gattorna, 2010.
Pricing regime and promotion activity	To succeed in this segment, supplier should ideally look for the lowest cost producer in order to drive prices lower than competitors.	Price according to strength of brand, moderate price sensitivity and low promotional activity is simply not required.	Competitive, moderate price sensitivity, high promotional activity and fashion-style approaches.	Price appropriate for a creative solution, no price sensitivity and target early adopters.	Childerhouse *et al.* (2002); Gattorna, 2010.
Supply-side elements	**Administration (A)**	**Integration (I)**	**Production (P)**	**Development (D)**	
Procurement	If lower cost of production is available through outsourcing, then it is best to outsource, but usually the standard part of the range and only if high reliability can be maintained. Focus on ways to reduce the cost of inputs and processes.	Select suppliers on the basis of relationships and capabilities. Attributes involve low cost and high quality, along with capability for speed and flexibility as and when required.	Market knowledge and distributions. Select supplier primarily for speed, flexibility and quality.	Product, technology and innovation; looks for suppliers with capacity and creative solutions.	Mason-Jones *et al.*, 2000; Holmstrom *et al.*, 2001; Huang *et al.*, 2002; Jüttner *et al.*, 2006.
Manufacturing flow management/Production	Emphasis is on seeking lowest cost-to-serve for the high volumes involved. The products are usually in the mature stage of their life-cycle, so margins are under pressure and little differentiation is possible.	Low volume, high value added. Collaborates to reduce costs. Maximum utilisation achievable is consistent with serving clients	Mostly likely to use a combination of in-house and outsourcing production to get required capacity in short lead-time; shorter runs; flexible scheduling; make-to-order.	Prototypes; customisation.	Mason-Jones *et al.*, 2000; Christopher and Towill, 2001; Huang *et al.*, 2002; Walters, 2006.
Logistics capacity consideration	High reliability, predictable service and ready availability. The demand forecasts are usually fairly reliable so high capacity utilization is sought when serving this segment, which in turn reduces unit costs.	Consistent with delivering a reliable product/service, trying to reach and maintain high levels of capacity utilization, especially as the forecasts are likely to be highly accurate as it is updated regularly in close consultation with customers. .	Short lead times and uses postponement. Deploy excess buffer capacity.	Speed is vital. Draw on in house and external parties for resources in this regard.	Fisher, 1997; Mason-Jones *et al.*, 2000; Huang *et al.*, 2002; Gattorna, 2010; Jüttner *et al.*, 2006.

Information technology support	Emphasis on transactional system or replace legacy systems with modular ERP system.	Emphasis on customer management; such as, CRM, VMI, or CPFR.	The emphasis in this type of supply chain is on achieving a quick response to sometimes unreasonable demands. Using decision making modelling or analytical system to run scenarios; or integrated system for shorter lead-time, such as VMI, or Big data analysis	Determine what is required to solve the problem.	Mason-Jones *et al*., 2000; Robertson *et al*., 2002; Gunasekaran *et al*., 2008; Gattorna, 2010;
Supply chain relationship	Seek economies of scale, low cost production and distribution, forecast demand, mature products, predictable-lead time and low collaboration.	Share information, seek strategic partnerships and long-term stability, and build mutual trust and mutual dependence collaboration.	Fast decision-making, fast delivery; rapid response in unpredictable conditions; low collaboration.	Meet unplanned/ unplannable demand; innovative solutions, delivered fast; intense relationships, but short term while the problem exists.	Jüttner *et al*., 2006; Vonderembse *et al*., 2006; Gattorna, 2010.
Management Component	**Hierarchical (A)**	**Group (I)**	**Rational (P)**	**Entrepreneurial (D)**	
Shared values	Emphasis on 'deep approach. Efficient, with the ability to provide customers with value for money and security.	Emphasis on 'quality'. Ability to develop long-term, dependent customer relationships.	Emphasis on 'deep and focused'; a high-energy approach. Reliability, accuracy and responsive to customer needs.	Emphasis on 'broad' approach. Spontaneity, the ability to anticipate and exceed customer expectations, and flexibility.	Chorn, 1991; Walters, 2006; Gunasekaran *et al*., 2008; Gattorna, 2010.
Resource allocation	Focus on cost reduction.	Focus on supporting the relationship to retain customers and service.	Build spare capacity to cater for volatile demand.	Hedge and deploy resources, sometimes ineffectively.	Chorn, 1991; Vonderembse *et al*., 2006; Gunasekaran *et al*., 2008.
Organizational structure	Use a static organizational structure. Organise clusters around core functions or processes.	Relationship cluster, with coexistence of vertical functions and horizontal clusters.	Clusters designed for speed and focused on specific sub-segments.	Small multi-disciplinary cluster, usually on standby, but can be full-time.	Chorn, 1991; Browne and Zhang, 1999; Jüttner *et al*., 2006; Vonderembse *et al*., 2006; Gunasekaran *et al*., 2008.
Culture and leadership	Traditional: leads by procedure and sets a precedent, implements only proven business practices, cost controller, efficiency focus, uses information to control, seeks stability and is risk averse. Dominant coalition: CEO, production, finance and accounting	Coach: conscientious; leads by teaching; concerned for others; loyal, committed, team working and politically astute; seeks agreement by consensus. Dominant coalition: Chief Executive Officer (CEO), HR and R&D.	Company baron: leads by objectives; embraces change; goes for growth; focuses on what's important; analytical, fact-based negotiations. Dominant coalition: CEO, marketing, process engineering, sales and operations.	Visionary: leads by inspiration; is authentic, informal and decisive; cares about ideas; and values innovation. Dominant coalition: CEO, product R&D and market research	Chorn, 1991; Browne and Zhang, 1999; Gunasekaran *et al*., 2008; Gattorna, 2010.
Risk and rewards structure	The demand patterns are relatively predictable, risk is low. However, these customers will quickly move away if alternative sources are found that have lower prices and reliable delivery.	As the overriding emotion in this segment is loyalty to supplier and brand, there is low risk only if company remain empathetic to its customers.	This type of supply chain is dealing with a market segment where demand and supply patterns are relatively unpredictable and the risk is high. Contingency plans should be prepared to mitigate some of risk of disruption in supply to key customers.	High risk for both parties, sometimes new and untested solutions have to be tried.	Chorn, 1991; Browne and Zhang, 1999; Gattorna, 2010;

**Further explanations will be given on the indicator of A-I-P-D in the section 2.6.*

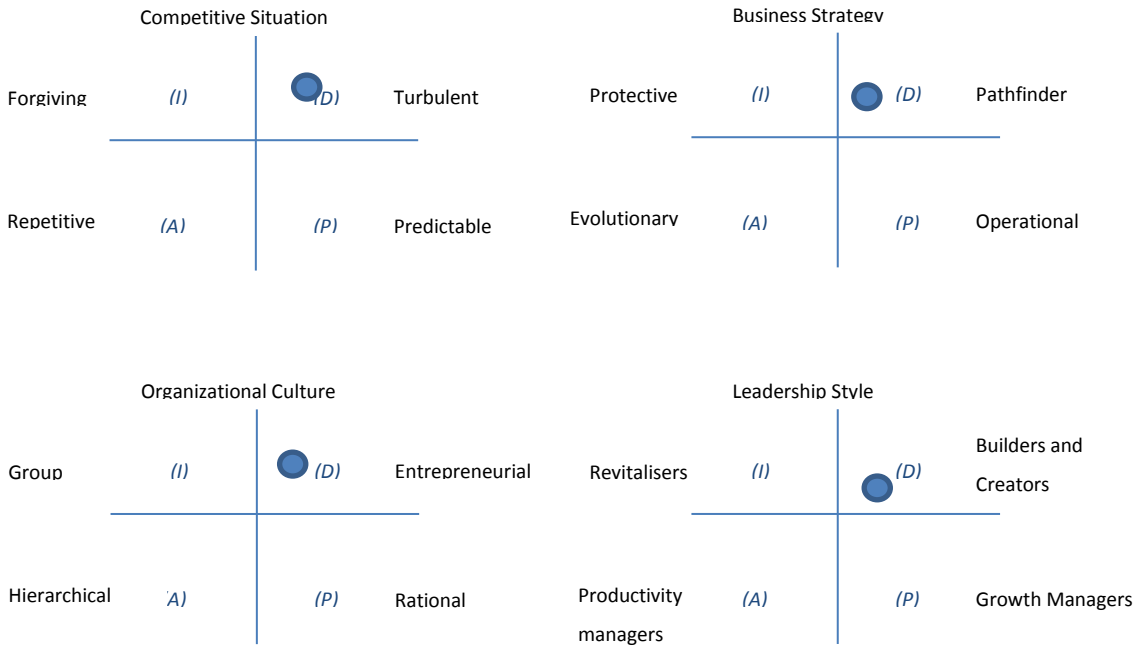
2.6 Achieving Strategic Fit of the Alignment in SCM

In this section, a further discussion is presented of the theoretical underpinnings of the research framework, and demonstrating the meaning of the logic sets based on the theory and how certain alignments between the SC elements and components within an organization, and external competitive situation, could be further accounted for by matching the logic sets, shown in Table 2-3.

Alignment Theory is derived from Carl Jung's (Jung, 1981) theory of psychological types, which states that all conscious mental activity occurs in two perceptual processes – *sensing* and *intuition* – and two judgment processes – *thinking* and *feeling*. Adizes (1976) resolved and simplified Jung's (1981) original framework and identified four key behavioural types or 'logic sets' that exhibit a dominant tendency in the management stream. He developed the 'P-A-E-I' coding system, which stands for 'Producer-Administrator-Entrepreneur-Integrator', to categorise different management styles. Later on, Chorn (1991) and Gattorna (1998) reunified the approach from an organisational behavioural perspective, and re-labelled the 'E' as 'D' (Developer). While alignment theory mainly operates in the management area, Gattorna (2009) proposes a dynamic alignment framework that expands the elements of market, strategy, culture and leadership style into more specific capabilities with P-A-D-I codes. These specific capabilities are expanded from the previous management scope into specific streams of logistics and supply chain management.

Alignment theory proposes four categories of 'element' – competitive situation (marketplace), strategy, culture, and leadership – and four 'logic' sets – production (P), administration (A), development (D), and integration (I) (refer to Figure 2-2). Each element has four types, each described by its own set of attributes (refers to Tables I–V in Chorn's (1991) paper). For example, the four types of competitive situation are forgiving, turbulent, repetitive, and predictable, which basically represents the different states of the market. Each type corresponds to a logic set in the P-A-D-I system. The attributes used to characterise a type of market include conditions, products/markets, customers, relationship type, and structure. In a turbulent market, for instance, conditions will be highly uncertain with intense competition. Consequently, the risk is also high. Products are mainly customised for novel market niches with a focus on people-based, tangible action. Customers are very knowledgeable and can switch to other vendors easily. To retain customers, delivery is usually involved as a value-added service. In terms of relationship type, discrete transactions with intense relationships are usually emphasised. For a turbulent competitive situation, the corresponding logic set is development (or developer), which emphasises discontinuation, novelty, and changes through innovation and creation.

As strategic fit is basically the alignment of an organisation with the environment, a company needs to formulate an appropriate strategy, nurture a supporting organisational culture, and adopt a matching leadership style to cope with a particular type of competitive situation. For example, to respond to a turbulent (D) competitive situation, a company should adopt a pathfinder (D) strategy, nurture an entrepreneurial organisation culture (D), and adopt a builders and creators leadership style (D) to promote innovation and change.



- Four 'logics': (P) Production; (A) Administration; (D) Development; (I) Integration
- Circle - -Centre of gravity in each element shows where the dominant logic should align when strategic fit is achieved

Figure 2-2: Elements of Strategic Fit (Chorn 1991)

The descriptors of the attributes in Tables B–E (Chorn, 1991 pp. 21-24) have provided the basis on which to determine: the competitive situation in which an organisation is situated; the strategy the company has formulated to compete in the market; the organisation culture the company has nurtured to drive the company; and the leadership style it has adopted to develop the employees. Strategic alignment theory provides the basis on which to account for the observed alignment between a company's external and internal management for a higher company performance. In accordance with the alignment theory, it is implied that there is:

- A need to initiate changes in SC configurations and SC strategies to align with the changes in the external dynamic and volatile market, so as to survive and thrive in long-term development (refer to Table 2-3 SC configurations and SC strategies);

- A need to ensure alignment between a company's internal SC strategic operation and its management orientation, so as to operate and lead the firm in the right direction (refer to Table 2-3 strategic elements and management components columns);
- A need to align supply fulfilment with demand planning, so as to provide the required supply chain capabilities to meet customer needs (refer to Table 2-3 strategic elements column).

Therefore, by pairing the logic sets indicated by P-A-D-I with the elements in Table 2-3, a company would observe whether it has realized a strategic fit of alignment between its internal SC process operation, strategic management, and the external competitive situation (Gattorna, 2010; Chorn, 1991, Ye and Lau, 2018). The elements and components in the proposed research framework in Chapter 1, would serve as a comprehensive picture of SC operation within an organization. Operational variations might exist in real practice; but the one identified in the table represents the most advisable situation for higher performance. For example, in terms of the IT-support element, a company might find itself still capable of leveraging an agile supply chain by adopting VMI system equipped with multiple IT tools in the short term; which is identified as a hybrid supply chain character in Table 2-3. However, if in the long-term the company aims for sustainable development through an agile supply chain, launching a certain modelling or analytical system should be taken into further consideration, as indicated, as a more advisable character in the description.

2.7 Summary

This chapter has provided a comprehensive literature review on the evolving SCM research and practice. The development of SCM and its definitions were discussed in line with the identification of SCM strategic frameworks, scope, elements, management components, and strategies. Structural relationships between SCM research and practice were reinforced by the introduction of the strategic fit of alignment theory, and specified by the identified SCM scope, elements, components, and strategies. An array of descriptive indicators was specified based on the theory, which array serves as a foundation for the practical application of the research framework to the study of the Chinese FA industry.

CHAPTER 3: CHINESE FA INDUSTRY UNDER THE STRUCTURAL CHANGES

The apparel market in China has experienced four industrial structure changes since 1978 (Brandt and Rawski, 2008; Scissors, 2009; Yuan and Xu, 2010; Zhao, 2013). Starting as a planned economy, China began to introduce market principles in 1978 via economic reform. This was carried out in four stages of industrial structural change (Chuang 2008; Brandt and Rawski, 2008; Scissors, 2009). Figure 3-1 presents a timeline of the industrial history.

3.1 The First Structural Change

The first structural change was from 1978 to 1990, when China started the Open Door Policy (Chen and Shih, 2004; Guo, 2002; Zhao, 2013). During the period of the planned system, the state controlled and managed economic activities; and supply was organised as a large single factory, whereas buying activities were assigned through rations to individual families by using National Grain Coupons (Zhao, 2013). In 1980, *Special Economic Zones (SEZs)*[1] were set up as a way to open up to foreign investment and motivate the domestic economy (Hu, 1995). According to the Guidance of Foreign Investment Catalogue in 1979, apart from a few textile segments, such as wool and silk, there were no other limitations on accepting foreign capital investment in mainland China at the time (Zhu *et al*., 2010). The foreign capital initially arrived through the business type of equity joint-venture ownership with a local Chinese partner (Vanhonacker, 1996). While there were only two joint ventures in the Chinese textile and apparel industry in 1982, their number increased dramatically to 150 in 1986, 46 of which were apparel firms (Guo, 2002). A few international brands emerged, such as Pierre Cardin and Goldllion, many of them with a modern, Western style, which managed to successfully enter the market and gain great popularity among the local people (Chuang, 2008).

On reviewing domestic consumption in the apparel sector in the first structural change period, the per capita consumption of apparel grew from RMB15 to RMB45 from 1978 to 1990 (Guo, 2002). With the increasing demands on style and quality, there was a call for enterprises to study changes in consumer demands rather than to merely produce according to the orders from the commerce department (OuYang, 1994).

[1] Special Economic Zone (SEZ): The government of China gives SEZs special (more free market-oriented) economic policies and flexible governmental measures. This allows SEZs to utilise an economic management system that is more attractive for foreign and domestic private firms to do business with than the rest of mainland China. SEZs were started in the 3rd Plenary Session of the 11th CPC Central Committee in 1978, when the Chinese government decided to reform the national economic setup.

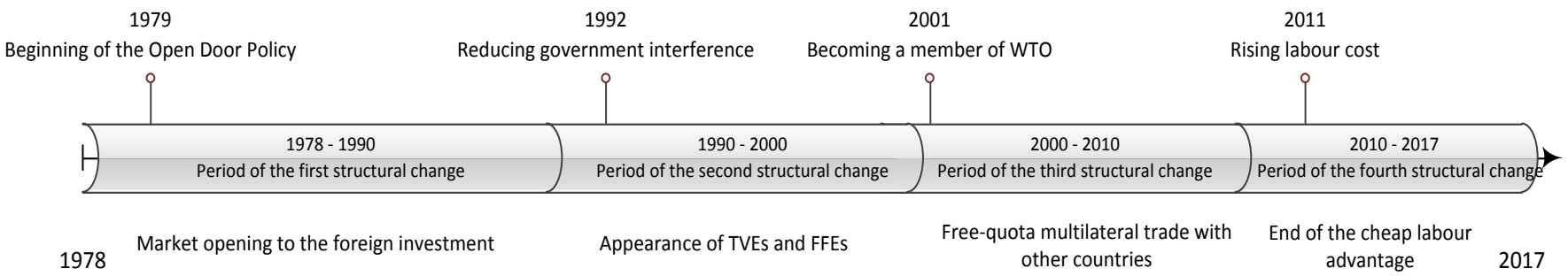


Figure 3-1: Timeline of the Chinese Textile and Apparel Industry Development

Several movements were released from the central government that symbolised their way of responding to 'shifting tracks' ('*zhuangui*'), a term coined by Wu Wenying (1983), who was the new Minister of the Textile Industry. These movements are summarised below:

- Transforming a firm from an administrative unit to a business unit, and allowing the management of the firm to make independent decisions rather than operate as a de facto administrative unit to extend the power of the state.
- Reforming the management system and adopting a general manager responsibility system.
- Breaking down the lifetime employment system or the 'iron rice bowl' ('*tiefanwan*') of cadres and workers, and partly adopting a contract-based employment system.
- The elimination of the ration-coupon buying system from downstream, as more freedom was delivered to the consumers to buy at their own discretion.
- Establishing other types of ownership, primarily township and village enterprises (TVEs) and foreign funded enterprises (FFEs), to introduce competition into the economic system.

The government intended that these actions would unfreeze more authorities for the purpose of injecting incentives into the local market and enhancing the economy. With the initial ease towards the free market, textile suppliers and manufactures were able to produce the quantity they liked, as with private ownership. The movement broke the rigid boundaries between industry and commerce, in which, historically, industrial units were not able to conduct commercial activities, as they derived their mandates from two separate authorities, namely the Ministry of Industry and the Ministry of Commerce (Feng *et al*., 2014). The other change came from introducing incentives into systems of the company by giving the staff rewards based on their job performance rather than on the length of the time they were employed, which encouraged the staff to work towards better performance, and later brought in profit for the company. As a result of the above actions, TVEs and private companies started to emerge. These changes to operations under those types of ownership brought much more independence than for the state-owned enterprises (SOEs). Local private apparel companies such as Reb Beans and Heng Yunag Xiang became market giants in the early-opening market (Chuang, 2008).

During the period of 1980 to 1990, retail sales increased from RMB179 billion to RMB725 billion, which realised a 300% growth rate (CMIC, 2000). Until 1990, the export of Chinese textile and apparel products accounted for 25% of the world's textile and apparel products; and 79.1% of all ready-to-wear garments on the domestic retail market were manufactured by the TVEs (Yuan and Xu, 2010). With the phenomenal growth and success of TVEs and FFEs, the Chinese garment industry became predominantly led by the market, i.e. the non-state-owned sector (Zhao, 2013).

3.2 The Second Structural Change

With the pace of marketization in the early 1990s, large shifts in business transformation started, through multiple methods of merging with other firms. Most of the TVEs were contracted out, or changed their ownership structure via privatisation (usually through a management buy-out). The garment industry in the wholesale and retail markets began to grow significantly towards the end of the second structural change. The concepts of branding and market niche emerged in the free market environment. There were a few niches that were roughly categorised by gender, such as the men's t-shirt, suit or ladies' outfit markets; some were categorised by style, such as casual, jeans or athletics; others were categorised by materials, such as leather or silk; and, finally, some were categorised by product market and functional purpose, such as lingerie or children's wear products (Guo, 2002). Many private companies, such as Metersbonwe and LinNin, entered into the pool, adopting different retailing models such as horizontal-integrated or virtual sub-contracted models, and leveraged a large amount of market share in the new land (Guo, 2002). Meanwhile, there was a substantial increase in apparel product consumption in the local market, in line with the rapid expansion of the retailing industry.

On the other hand, foreign-direct investment (FDI) or wholly-foreign-owned enterprises (WFOEs) became a growing trend in the 1990s, which were referred to as a new, and possibly more effective, way of doing business in China (Vanhonacker, 1996). Compared with FFEs in a joint-venture, FDI provides more control and power for the international players and takes less time to establish (Vanhonacker, 1996). According to the statistics, by 1990, there was a total of 2,192 FFEs in China's textiles sector, with a cumulative investment of about US$2 billion (Zhao, 2013). In the year 1991 alone, 972 new FFEs invested in China's textiles industry, representing an annual increase of 44 %. By 1999, a cumulative total of 5,156 international textiles firms had been established in China, accounting for 28.7% of the national output of textile products in the same year; this was a close second to the state-owned sector, which accounted for 29.7% (Zhao, 2013).

This full-dimensional industrial evolution allowed the non-state sector in the textiles industry to grow and dominate the market, while the SOEs were losing market competitiveness (Chan, 2011). In 1996, the SOEs had a net loss of RMB8.3 billion, and the following year had a loss of RMB4.5 billion (Yuan and Xu, 2010). In 1999, while the FFEs made a total profit of RMB55.53 billion in the Chinese textiles market, the state-owned sector made a loss of RMB3.73 billion in the same year (Zhao, 2013). The massive scale loss for SOEs in those five consecutive years was largely due to low efficiency and over-production. In 1997, the central government finally decided to reform the SOEs through issuing a series of policies (The European Commission, 2005; Zhou, 2010), which included:

- A three-year campaign of demolishing spindles in SOEs for the cotton textiles sector, named

'Project Breaking Point'.

- Providing funding for the textile industry in terms of replacing obsolete equipment and upgrading machinery.
- Encouraging the consolidation of the top 600 textile mills in China.
- Expanding the exportation of products around the world.
- Adopting favourable policies for the export of textiles products, including tax deductions and tax rebates.

The textile and apparel industry was regarded as a project sitting at the top of the list of priorities for national reform. A large number of obsolete facilities were demolished. Subsidies were provided by the central government for machinery upgrades and for laying-off the redundant staff (Yuan and Xu, 2010). The SOEs have received significant subsidies from the government in order to prevent their competitive elimination and to enhance efficiency. Most dead SOEs had cleared their heavy debts and received a new start. According to the statistics (Kwan *et al*., 2003), compared with 1980, the total GDP of the country received a significant rise till 2000, and reached RMB 8, 940 billion.

3.3 The Third Structural Change

In 2001, China joined the World Trade Organization (WTO), allowing the textile and apparel industry to participate more in the global arena, and driving the industry into a new structural change. With the elimination of quotas, the apparel industry in China has attracted a great deal of foreign investment, while the advantageous labour costs for global sourcing turned China into the world's factory (Hong, 2006; National Development and Reform Commission, 2007). Greater price competition was generated which enabled buyers to squeeze suppliers that were willing to sell at narrow margins (and even bear losses) in order to gain market share and survive (Taylor, 2004; The European Commission, 2005). Therefore, cheaper labour was offered in China with a one-stop service, as the Chinese producers had great flexibility to meet the buyers' requirements for product quantity and specifications (Mo, 2010; Wang and Guo, 2014). Meanwhile, the government offered attractive land uses to boost the local economy and employment rate, which provided a supportive infrastructure and logistics system for industrial growth (Qian, 2008). From 2000 to 2006, textile material exports maintained a rate of increase of 20.2% year-on-year, whereas the apparel products maintained a rate of increase of 17.6% every year (Qian, 2008). There was increasing catch-up in the apparel sector in the period of the third structural change. In 2006, China ranked number one in terms of the value of global exports, receiving a total of US$144.7 billion for its textiles exports around the world, within which apparel exports accounted for US$95.39 billion and textile exports accounted for US$48.68 billion (Qian, 2008).

Large numbers of OEMs were established on the scale of SMEs, which were located in the Pearl River Delta and gradually extended into the Yangtze River Delta region (Chen and Shih, 2004; Zhao, 2004). Industrial clusters initially took shape: there were a total of 9,463 manufacturers located in the river delta areas of China, including Guangdong, Zhejiang, Jiangsu, Shanghai, Fujian and Shandong, which produced garments, shoes and hats, based on the data for 2003 (Chen and Shih, 2004; Mo, 2010). These manufacturers produced 81.77 % of all garments, shoes and hats (Chen and Shih, 2004). Meanwhile, these clusters were the early beneficiaries of the industrialisation and technology advances from global sourcing. More and more FDI invaded the local market not only in cloth processing and production but also in the wholesale industry (Chen and Shih, 2004). Companies receiving FDI were allowed free-trading in the four big cites of Beijing, Shanghai, Tianjin and Chongqing, which were directly administered by the central government (Dickson and Zhang, 2004).

From a marketing perspective, increasingly specific consumer segments appeared, with more dynamic buying behaviours. In their study of the Chinese consumer market segments for apparel products, Dickson *et al*. (2004) proposed six major market segments in the tier-one cities of Beijing, Guangzhou and Shanghai, which are described by the demographic, geographic, psychographic and lifestyle characteristics. Similar studies also investigated the cultural factors influencing domestic buying patterns (Kwan et al., 2003; Zhang et al., 2002). It can be observed that consumers in the retail market have become more aware of buying behaviours with the gradual opening of the market. The data below confirm that there was significant growth in the local market for the textile and garment retail industry after 2005.

Table 3-1: The Conditions of Chain Retail Enterprises in the Textile and Garment sector

	Number of Stores (units)		Operating Area (10, 000 sq.m)		Persons Engaged (10,000 persons)		Total Sales Value (RMB100 million)		Retail Value (RMB100 million)	
Market retailer in the Textiles and Garment Sector	**2005**	**2006**	**2005**	**2006**	**2005**	**2006**	**2005**	**2006**	**2005**	**2006**
	3107	3420	56.5	61.7	4.8	5.0	73.6	83.7	49.6	53.3
	2006	**2007**	**2006**	**2007**	**2006**	**2007**	**2006**	**2007**	**2006**	**2007**
	9660	10972	70.6	96.5	4.8	8.3	232.6	286.4	211.2	260.9
	2007	**2008**	**2007**	**2008**	**2007**	**2008**	**2007**	**2008**	**2007**	**2008**
	12544	13821	85.7	102.4	6.3	7.8	205.7	267.3	136.6	176.3

**Sourced from China Statistical Yearbook (National Bureau of Statistics of China, 2014)*

However, with the increasing participation in global trade and the elimination of quantitative restrictions under the WTO Agreement on Textiles and Clothing (ATC) in 2004, many countries imposed temporary safeguarding measures on Chinese exports, such as the United States (US) and the European Union (EU) in 2005 (Audet, 2007). This put additional import barriers in domestic fibres and clothing production from these foreign countries, and led to a deceleration in China's global export economy.

During this period of structural change, China had been much focused on expanding production capacity via low value-added and labour-intensive manufacturing, i.e., OEM production. Domestic apparel industry was disadvantaged in certain areas demanding high technology development and innovation, such as, textile knitting, weaving, and product design (Tylecote *et al*., 2010). In those areas, China had been relied heavily on importing advanced, knitted fabrics such as woollen fabrics, manmade fibres, and machinery for the production of high-quality products for consumption (The European Commission, 2005; Zhao, 2004).

3.4 The Fourth Structural Change

From the mid-2000s till 2010 with the trend of decline in export economy and currency appreciation, production cost has risen significantly, especially in the coastal areas of China (National Development and Reform Commission, 2007; Qiu, 2008). This has posed a series of impacts on the domestic apparel retail companies described from three perspectives: supply and production; market demand; and corporate management.

3.4.1 External Impacts on the Supply and Production

Although the last few decades under a post-quota environment has rendered open opportunities for small and medium entrepreneurs selling directly to buyers, it has also led to a highly fragmented industry where more than a hundred of different companies are competing in the marketplace, causing price wars and chronic oversupply amongst domestic manufacturers (The European Commission, 2005; Chinese Textile Industrial Union, 2012).

After 2010, a large number of small OEMs, especially those located near the east coastal big cites, were not able to continuously survive due to the rising labour costs (The European Commission, 2005). Industry, as a result, has increasingly relocated from the coast to the interior, where the large reserve of rural labour resides. According to Hua and Guo (2012), investment by the apparel industry, looking for a cheaper labour force, in inland areas increased from 16% to 46% between 2005 and 2011; whereas the investment in east coastal large cities decreased from 75.3% to 42.1% over the same period. Although the government also released the 12th Five Year Plan (2011 to 2015) in 2011,

attempting to relocate production resources and strengthen the infrastructure upgrade, companies have still found it hard to relocate their suppliers to inland areas due to the difficulties of trying to establish a complete industrial supply chain and supportive logistics facilities in the inland regions (Chen, 2009; Zhu, 2012).

In east costal megacities, higher rental and labour costs have been squeezing retailers' margins and making it more difficult for low-performing product brands to survive (Fung Business Intelligence Centre, 2014). As the macro-economy slowed, many retailers suffered a sales decline in 2012, making overstocking a prevalent issue across multiple categories (Fung Business Intelligence Centre, 2014). Many factories encountered an oversupply problem, with excessive obsolete products, which led to a break in the financial chain and the omission for further skill and machinery upgrades.

3.4.2 External Impacts on the Market Demand

With the export markets shrinking significantly, many firms have shifted their business goal to fulfilling domestic demand (National Development and Reform Commission, 2007). With the rising GDP and product price, international companies have taken an opportunity to set up retail brands in the growing retail market, especially those located in the large coastal cities. In the late 2000s, many international fast fashion retailers launched their retail stores (Li and Fung Research Centre, 2011). Fashion apparel became a promising market in the 2000s, where previously apparel was regarded as a basic necessity rather than a fashionable product. The success of international fashion businesses in the local market has raised great concerns for local practitioners. Many domestic companies tend to believe that a quick profit could be made easily by imitating those successful stories (Lu, 2011).

In recent years, China has experienced significant development in the local retail market, with an average annual growth rate of 19% since 2005 (Zhong Jing Wang Web Company, 2007). According to the data for local expenditure on clothing, the per capita consumption expenditure on clothing of urban households rose from RMB801 in 2005 to RMB1,284 in 2009. At the same time, the proportion of clothing expenditure within urban disposable income dropped slightly, from 7.63% in 2005 to 7.48% in 2009 (International Trade Centre, 2011). As part of the market development process, the disposable income of Chinese residents is increasing, and a population group of affluent people is emerging, which has led to an increasingly segmented market demand (Huo, 2016). For example, people born in China in the 1980s enjoy more disposable income than those only ten years older, and have had wider choices in their childhood and teen years as China's economy has opened up. Meanwhile, the highly individualistic post-1990 generation is even more vigorous in pursuing stylish dress, leading to a diverse market demand (AT Kearney, 2013; Euromonitor international, 2014).

Besides this, online retailing and e-commerce has developed at an unprecedented speed, and has transformed the traditional brick-and-mortar model into multiple retail networks combining direct and franchising, and online and offline business, in an attempt to cut operational costs and expand sales (Zhou, 2010; Li and Fung Research Centre, 2012). According to statistics, the transition value of the online retailing market was RMB766.6 million in 2011, of which online apparel sales accounted for 26.7% (Li and Fung Research Centre, 2011). From 2007 to 2011, online apparel sales grew dramatically from RMB15 billion to RMB204.9 billion, which accounted for 14.3% of China's total apparel sales (Li and Fung Research Centre, 2012).

The advantage of having an online channel helps the business expand market growth from the first-tier regions into second- and third-tier inland regions (Li and Fung Research Centre, 2011; Li and Fung Research Centre, 2012). The first tier includes the metropolises, which are mostly located along the coastline, including the Yangtze River Delta, the Pearl River Delta, and the Bohai Gulf Metropolitan Rim. Those are the regions that evolved early in the industrialisation period, including Beijing, Shanghai, Guangzhou, Tianjin, Hangzhou, Shenzhen, Ningbo, Qingdao and Dalian. They play a key role as the bridging market for international fashion retailers. The second-tier cities are the provincial capitals and well-developed cities in inland China, such as Nanchang, Zhengzhou, Changsha, Changzhou, Wuxi and Xi'an. Their populations range from 4 to 8 million. The third-tier cities are mostly located in the west, including northwest and southwest China, and have limited geographic resources. There are large numbers of consumers with growing spending power that are left out in the second- and third-tier cities (Li and Fung Research Centre, 2011).

3.4.3 External Impacts on the Corporate Management

The increasing market dynamism and speed of change within China's internet ecosystem also have had a great impact on the emerging market entrepreneurialism (Chi, 2015; Feng *et al.*, 2014). Many of the personalities and business stories behind of these entrepreneurs are from China's leading internet and technology players (PwC's Experience Center, 2016). The Chinese government also explicitly encourages this start-up mentality, with Prime Minister Li Keqiang calling for "mass entrepreneurship" and supporting this pledge with USD 6.5bn in grants, tax breaks and subsidized technology parks (Alsop, 2015). E-commerce and giant digital platform players, such as Alibaba, Taobao and Tencent (founder of the WeChat mobile platform), have played a leading role in transforming the traditional business model (PwC's Experience Center, 2016). Table 3-2 lists the main existing business models on the current Chinese FA market. New technology features or services from one company are replicated and often enhanced within a few weeks, not months.

Many firms are willing to adopt a test-and-learn mentality during execution (PwC's Experience Center, 2016).

Table 3-2: Types of Distribution Model and Business Ownership in the Existing Market

FA retail enterprises by retail channels and ownerships		Description
Retail Channels	Direct stores/SPA	Specialty store retailers for private label apparel, encompassing the main stages of the process from design, through production to the direct final sale.
	Click-and-mortar (B2C/O2O)	Business to consumers. Businesses adopting online e-commerce retailing.
	Multi-channel (direct/franchised/online)	Companies adopting multiple network strategies to gain market share. For example, adopting direct channels in core cities while franchising in other areas.
	Store-in-store (all-in-one supply chain/ department store)	Companies that encompass all stages of the business process from product design, through production (not only their own brands but OEM), to distribution and retailing.
	Franchised	Brand designers that allow franchisees to use the brand trademark and distribute the supplier's product. Normally, they outsource production processes to OEM.
	Discounted/outlet/department stores	The physical stores in which manufacturers sell the stock directly to the downstream consumers.
Corporate Ownership	SOE-State-owned Enterprise	The legal entity under which the government undertakes commercial activities on behalf of an owner.
	TVE-Township and Village Enterprise	Market-oriented public enterprises under the purview of local governments, based on townships and villages in China.
	FFE-Foreign-funded Enterprise	A joint-venture in which an international business cooperates with a local business in shared ownership in China.
	FDI-Foreign Direct Investment	A controlling ownership of a business enterprise in one country by an entity based in another country.
	PE-Private Enterprise	A business owned either by a non-governmental organisation, or by a relatively small number of shareholders or company members.

**Sourced from China Statistical Yearbook (National Bureau of Statistics of China, 2014)*

As a summary, Table 3-3 below presents a comprehensive literature review on the research context and classifies the themes into each industrial structural change. As shown in the Table 3-3, most articles focus on reporting the status quo of China's FA industry undergoing the fourth industrial structural change, based on industrial practice. The transitional impacts of the fourth industrial structural change can be mainly summarized in terms of three aspects: supply and production; retail market; and industrial management. Specifically, the significant impacts on the supply and production industry mainly include chronic oversupply and production costs up-soar (AT Kearney, 2013; Hua and Guo, 2012; Zhu, 2012); whereas the influences on the retail market come from diverse market demand, and thriving e-commerce, retail brands and channels (Li and Fung Research Centre, 2012; Euromonitor international, 2014).

Table 3-3: Literature Review on the Development of Chinese FA Industry

Period	Themes	References	References		
		Industry report	Academic study	Research field	Method
The First Structural Change	Initial opening of the planned economy	(Chan, 2011; Chuang, 2008; Guo, 2002; Yuan and Xu, 2010; Zhu et al., 2010)	×	×	×
The Second Structural Change	Emerging of TVEs and joint-ventures/ incompetence of SOEs	(Gong and Gen, 1998; Guo, 2002; OuYang, 1994; Yuan and Xu, 2010)	×	×	×
The Third Structural Change	Quota release	(Chen and Shih, 2004; Hong, 2006; National Development and Reform Commission, 2007; The European Commission, 2005; Wang and Guo, 2014; Zhao, 2004)	(Audet, 2007; Kwan *et al*., 2003; Taylor, 2004; Zhu and Zhou, 2010)	Business management	Empirical Study, Survey
	Labour-intensive advantages	(Hei, 2003; Qian, 2008; The European Commission, 2005; Zhao, 2004)	(Audet, 2007; Zhu et al., 2010)	Business management	Survey; Literature Review
	Emerging of the consumer preferences	(Kwan et al., 2003)	(Dickson *et al*., 2004; Zhang, *et al*., 2002)	Marketing	Survey
	Firm privatization FDI invasion	(Chen and Shih, 2004; Zhao, 2004)	(Dickson and Zhang, 2004; Zhu et al., 2010)	Marketing; Business relationship management	Survey
	SOE reform	(The European Commission, 2005; Zhao, 2004)	×	×	×
	Development of third party logistics	×	(Lam and Postle, 2006; Towers and Song, 2010; Kam *et al*., 2011)	Supplier and logistics Management	Case Study, Empirical Study
	Guanxi and business culture	×	(Dickson and Zhang, 2004; Kwan *et al*., 2003; Towers and Song, 2010)	Business relationship Management	Survey, Case Study
	Quality and safety control	(Li and Fung Research Centre, 2012; The European Commission, 2005)	×	×	×
The Fourth Structural Change	Production costs increasing and lack of skills in production and design	(AT Kearney, 2013; Chen and Cheng, 2008; Chen, 2009; Hua and Guo, 2012; National Development and Reform Commission, 2007; Qiu, 2008; Yuan and Xu, 2010; Zhang and Zhang, 2015; JiangSu Textile, 2014; Wang and Guo, 2014; Wu, 2012; Zhong Jing Wang Web Company, 2007; Zhou, 2009; Zhou, 2010)	×	×	×

	Chronic oversupply and high inventory	(Guo, 2002; Li, 2013; Guo, 2008; Lou, 2011; Ma, 2005; Zhao, 2009; Zhu, 2012)	×	×	×
	Third party logistics delivery and SCM	(Zhou, 2009; Zhou, 2010)	(Yi *et al*., 2011; Ye and Lau, 2014; Ye *et al*., 2013	Logistics and SCM	Case Study
	Segmented retail market with diverse buying behaviours	(Hong, 2006; National Development and Reform Commission, 2007; Chen and Cheng, 2008; International Trade Centre, 2011; Li and Fung Research Centre, 2011; Li and Fung Research Centre, 2012; Euromonitor international, 2014)	×	×	×
	Thriving e-commerce and diverse distribution channels	(International Trade Centre, 2011; Li and Fung Research Centre, 2012; Liu and Chen, 2005; Zhou, 2010)	(Chuang, 2008; Chan, 2011)	Marketing	Empirical Study
	Emerging of international fashion retailers and brands	(Li and Fung Research Centre, 2012; National Development and Reform Commission, 2007; Huo, 2016; Liu and Chen, 2005; National Development and Reform Commission, 2007; Qiu, 2008; The European Commission, 2005; Zhong Jing Wang Web Company, 2007)	×	×	×
	Awareness of market regulations	(Chen and Cheng, 2008; Chen, 2009; International Trade Centre, 2011; Lou, 2011; Zhu, 2012)	(Chen et al., 2014; Chi, 2011; Lu and Wang, 2012; Chi, 2015)	Business management (Corporate social responsibility)	Literature review, survey
	Wholesale market aggregation and emergence of various business models and entrepreneurs	(PwC's Experience Center, 2016; Chen and Cheng, 2008; Chen, 2009; Hu, 2004; Liu and Chen, 2005; National Development and Reform Commission, 2007; Zhao, 2004; Zhu, 2012)	(Hua and Guo, 2012; Wang, 2009)	Business relationship Management; Marketing	Empirical Study

Apart from these two aspects, literature also shows that significant changes were observed in industrial management including the emerging market entrepreneurialism and regulations (International Trade Centre, 2011; PwC's Experience Center, 2016).

While many of the industrial articles briefly describe the challenges posed by the latest structural changes in a broad sense, few studies have prescribed solutions or investigated SC dynamism in China's FA industry (Yi *et al*., 2011; Ye and Lau, 2014; Ye *et al*., 2013). The lack of research in this regard suggests that the industry might not have enough experience in developing integrated solutions to cope with the new changes, and that the concept of SCM is fairly new for the Chinese market and its study.

3.5 Summary

China's apparel market represents one of the largest growing retail markets in the world. The apparel industry has experienced a rapid economic growth over the past few decades. Confronted with the growing dynamism of the fourth structural change, traditional FA companies have encountered a series of disruptive challenges. This chapter has drawn upon a large amount of background literature to provide a solid foundation for the present research context. It reviewed four stages of industrial structural changes comprehensively; and examined in particularly at the external impacts of the fourth industrial structural change on the FA industry. Three main aspects of these external impacts were identified; wherein the external competitive situation of the proposed research framework is situated.

CHAPTER 4: RESEARCH METHODOLOGY

This chapter introduces the research methodology of this study. Research approach underlining the philosophy design of this study, methods adopted for answering research questions, and the specific steps for carrying out the research method are discussed. After that, the research validity is addressed.

4.1 Research Approach

This study attempts to explore how Chinese FA companies manage their supply chain to align demand with supply under dynamic uncertainties. In order to probe the research questions, this study proposes a SCM research framework with identified SCM elements and components. The research framework served as a guideline to investigate and compare the SCM theory with the empirical observations in the new research context of China.

In order to answer the research questions and generate new knowledge about social phenomena, researchers need to adopt a logic of enquiry and conduct the study on the basis of underlying ideas and principles, which represent the research approach (Blaikie, 2007). It can be argued that there are four major natural science research approaches: Inductive, Deductive, Retroductive and Abductive. These four constitute four different ways of generating new knowledge by addressing the problem of where to begin and how to proceed (Blaikie, 2007; Creswell, 2013). Table 4-1 shows the aims, assumptions and logic of each of these four types of research approach.

Table 4-1: The Four Research Approaches Commonly Adopted in National Science Research

	Inductive	Deductive	Retroductive	Abductive
Aim	To establish descriptions of characteristics and patterns	To test theories, to eliminate false ones and corroborate the surviving theory	To discover underlying frameworks or mechanisms to explain observed regularities	To describe and understand social life in terms of social actors' motives and understanding
Ontology	Cautious, depth or subtle realist	Cautious or subtle realist	Depth or subtle realist	Idealist or subtle realist
Epistemology	Conventionalism	Conventionalism Falsifications	Modified neo-realism	Constructionism
Start	Collect data on characteristic or patterns Produce descriptions	Identify a regularity to be explained Construct a theory and deduce hypotheses	Document and model a regularity Describe the context and possible mechanisms	Discover everyday lay concepts, meanings and motives Produce a technical account from lay accounts
Finish	Relate these to the research questions	Test the hypotheses by matching them with data	Establish which mechanism(s) provide(s) the best explanation in that context	Develop a theory and elaborate it iteratively

Source: Blaikie (2007)

Inductive research is regarded as the generalization of conclusions derived through observing a specific case in reality; while deductive research is described as the generalization of conclusions derived through testing a theoretical hypothesis on a specific case in reality (Bryman and Bell, 2015). They are based on two contrasting styles of reasoning, both of which are linear in nature: that is, they move logically from one idea to another. However, alleged deficiencies in the inductive and deductive approaches have led to the development of two other alternative forms of reasoning, which are reductive and abductive approaches (Blaikie, 2007; Creswell, 2013). The latter are based on cyclic or spiral processes rather than linear logic (Sayer, 2010).

This study can be characterized as a retroductive research. Retroductive research strategy is regarded as an approach of locating or exploring the real underlying structures that are responsible for producing an observed regularity. It holds a depth realist ontology which believes reality is often seen to consist of three levels: the empirical, the actual and the real (Bhaskar, 2013; Pietarinen and Bellucci, 2014). The aim of a retroductive study is to explain observable phenomena with reference to underlying structures or frameworks. Thereby, in order to unveil the real reality and explain observable phenomena, the researcher must discover appropriate frameworks (Pawson, 1989, 2000; Pawson and Tilley, 1997). By testing the model of the framework in existing entities, further analysis and consequence that can be stated in a manner open to empirical study (Blaikie, 2007). The task of the researcher is to postulate both the underlying framework that gives rise to empirical outcomes and the balance of contextual conditions that enable or modify the framework.

In the logistics and SCM field, there is a dominance of deductive research, according to Kovacs and Spens (2005). As the deductive approach is most suitable for testing existing theories rather than creating a new one, this can imply that theory development is not a usual character for logistics and SCM study; this also corresponds with the literature review of this study which pinpointed the deficiencies in the theory of SCM research. This study attempts to tackle the research gap. Although SCM study has been well-established in some developed countries, it has been overlooked to a great extent in developing countries, such as China. This study explores whether the strategic fit of the alignment theory in SCM could be a solution for this new research context, in a way that enriches the theory. It discovers the underlying patterns in a new environment through an established SCM research framework. The research framework serves as a guideline to investigate and compare the theory with empirical observation. Explanation takes the form of positing the underlying procedure (P-A-D-I logic indicators) that will generate the outcome of the theory (the alignment or not), which consists of how structural resources (determined by SCM elements and components) constituted the research framework.

4.2 Research Strategy

This study adopted qualitative research method to probe and explain the observable phenomena with reference to the underlying research framework. According to Yin (2008), qualitative studies are particularly suited to exploring complex phenomena in natural settings. Tewksbury (2009) states that the knowledge gained through qualitative investigations is more informative, richer and offers enhanced understanding compared to that obtained via quantitative research. Golicic *et al*. (2005) also illustrate that a qualitative approach provides researchers with access to deeper levels of understanding of new and complex phenomena.

As the research question is largely exploratory, based on "How" under a new research context, a multiple case study strategy was considered to be the most appropriate research strategy for this study (Eisenhardt, 1989). According to Daymon and Holloway (2002), interpretive case study method is particularly suited to explore people's intentions, motivations and subjective experiences, with a focus on developing rich content and in-depth investigations.

Many similar studies have adopted qualitative in-depth case study in the SCM field, especially in the fashion apparel SC field. In the mid-2000s, SCM studies focused on gaining understanding and insight of SC strategies by adopting single case studies in the fashion industry (Bruce and Daly, 2006; Bruce *et al*., 2004; Christopher *et al*., 2004; Jacobs, 2006). Having the character of a fast-changing market and with globalization, many authors focusing on studying the geographic demand diversities of the fashion industry have also preferred to use qualitative case studies: for instance, Cao *et al*. (2008) focused on the fashion SC in Hong Kong; Barnes and Lea-Greenwood (2006) and Doyle *et al*. (2006) studied FA SC based on UK retailers; and Brun and Castelli (2008) and Masson *et al*. (2007) looked at the example of the Italian FA industry. In recent years, in-depth multiple case study, providing a high level of detail in qualitative data, has been widely chosen to gain a deeper understanding of dynamic market phenomena (Caniato *et al*., 2013; Castelli and Brun, 2010; Yi *et al*., 2011). The multiple, rather than single, case study approach is adopted because the results of a multiple case study are typically more generalizable and better grounded than are those of a single case study (Davis *et al*., 2007). Multiple cases permit a replication of logic, in which the cases are treated as a series of experiments that confirm or disconfirm emerging conceptual insights (Eisenhardt, 1989; Yin, 2008). They "enable comparisons that clarify whether an emergent finding is simply idiosyncratic to a single case or consistently replicated by several cases" (Eisenhardt and Graebner, 2007, p. 27). This process of studying more complex circumstances strengthens the research quality.

4.3 Case Study Design

In this study, a multiple case study, involving five cases, have been conducted. Each case company, as one holistic unit of analysis, represents a specific business model in the current market, built on different ownership type, market niche, and firm scale. All together embody the majority of business types existing in the current dynamic Chinese FA market, serving the research purpose of studying a new, dynamic research context. The following section will explain, in particular, the sample selection, the data collection, and data analysis process, for these five case companies.

4.3.1 Case Selection

Based on the data published by the National Bureau of Statistics of China, there were 157 garment brand retailers in the Chinese market in the year 2013, as illustrated in Table 4-2. A theoretically stratified sampling was adopted to stratify the samples into identical subcategories in order to increase statistical efficiency and provide data from which to represent and analyse subgroups (Cooper and Schindler, 2003). By selecting representative cases in each stratum, theoretically stratified sampling permits the use of replication logic in each case to extend the emergent theory or phenomenon (Neuman, 2005).

Table 4-2: Research Sampling Frame

Special Retail of Textiles and Garments	2009	2010	2011	2012	2013
Number of Head Stores (unit)	114	130	139	148	157
Number of Stores (unit)	11192	12184	18185	10507	11858
Persons Engaged at Year End (10,000 persons)	8.9311	6.2931	8.0749	6.7407	7.1258
Operating Area of Retail Enterprises at Year End (10,000 sq. m)	92.5836	127.8089	152.3273	147.6895	223.6516
Total Sales of Commodities (RMB100 million)	222.8314	255.5319	339.52435	369.48267	376.6699
Total Purchase Value (RMB100 million)	173.7559	187.3757	255.15946	303.19389	670.6279
Centralised Purchases and Delivery (RMB100 million)	130.0339	143.601	159.37322	205.32302	586.9217

Source: National Bureau of Statistics of China (2014)

In this study, the sampling frame was stratified into six strata in terms of distribution model and business ownership types in the existing market (refer to Table 3-2). Around 12 cases (two in each stratum) were initially shortlisted, according to market strength and industrial benchmarking. The criteria for case selection were according to: the measurement factors of annual sales revenue, net income and overall growth rate (to capture the companies evolving with robust resource strength and development potential); market capitalisation and consumer awareness ranking (to capture the companies with strong marketing value); and ownership diversity and market niche diversity (to capture the market diversity of current China). These 12 enterprises identified were approached, via contact lists, between March and May 2014, to seek their cooperation to participate in the study. After the initial contact, six companies agreed to be interviewed. However, given the limited

information provided by one company, five companies representing five major business models in the current market were selected for interview. Table 4-3 displays the profile of the selected cases. To protect the identity of the cases, they are labelled as Company A to E in this study.

In order to answer the subsidiary questions pertaining to areas of supply process, demand process and strategic management, the interview participants selected from each company mainly involved the managerial personnel responsible for each company's product sourcing and supply (product supply manager), retail marketing and customer service (regional store manager), and strategic organisation management (senior director), in an attempt to apprehend a full picture of SC operation in each company.

Table 4-3: Profile of Selected FA Firms

Case Company	Business Model		Ownership	Number of Staff	Number of Retail Stores	Year of Foundation	Market Niche	Lead-time in Days	Location	Description
A	**Traditional Player**	All-in-one OEM and retailer	SOE	500	2	1979	Middle-high end	90 (DTS)	Nanjing, Jiangsu Province	The company started off as a supplier, processor and producer of silk textile products. It gradually expanded its business to garment production and retailing by introducing its first own brand in 2010 targeting the local silk garment market. It owns ten proprietary companies (i.e. OEM) providing one-stop service for international customers and two retail stores.
B		Franchised retailer	PE	500	3390	1997	Low-middle end	45 (PTS/annual design)	Wenzhou, Zhejiang Province	The company started off as an apparel wholesaler and turned into a franchisor in 2000 when it established its brand of garment. By 2015, it had 3,390 stores - 528 of which were self-owned and 2,862 franchised covering 100% of first-tier cities, 66% of second-tier cities and 33% of third-tier cities. The company outsources its production and logistics while keeping only the business of branding and product design. Its brand targets the young people casual wear market.
C	**New Player**	SPA	PE	400	95 (60 covering tier 1 cities)	1996	High-end	80 (DTS/seasonal design)	Guangzhou, Guangdong Province	The company started off as an apparel designing firm and gradually developed into a SPA business in 2001. By 2015, it had 95 stores, 60 of which were in first-tier cities. It provides a range of high-quality hand-made designer products emphasizing the use of sustainable natural materials.
D		Online e-commerce	PE	300 (once had 5000 in 2012)	No physical store	2007	Low	50 (DTS)	Beijing	The company started off as an online apparel business in 2007. As a new B2C player in the FA market, it focused on casual wear for the younger generation. Leveraging the rapid development of social media in China, the business boomed in 2011 with a RMB10 billion sales per annum. However, due to over-expansion, the company faced significant challenges in maintaining the scale of business in 2013.
E		Multi-channel retailer	FFE	500	1800	2001	Middle	30 (PTS/Annual design)	Beijing	The company started off as a retailer with physical stores but expanded to multi-channel retailing in 2013 when it launched its online shops. By 2015, it had 1,800 shops – 40% self-owned and 60% franchised - in 300 cites. The brand targets modern female working class with age of 25 or above.

DTS—Design to Sales; PTS—Production to Sales

4.3.2 Data Collection

This study has drawn on multiple sources of evidence, mainly comprising semi-structured interviews, on-site unobtrusive observations, and reviews of business news, reports and database. These data sources form the predominant means by which to mutually triangulate the data and complement each other (Creswell, 2013). The possibility of combining multiple data sources is one of the major advantages of case study research since it allows the researcher to study the research question from several perspectives (Yin, 2013). It also corresponds well with the research purpose and questions of this study. Table 4-4 provides a summary of the data collection methods used in this research.

Table 4-4: Interview Records

	Company A	**Duration**	**Company B**	**Duration**	**Company C**	**Duration**	**Company D**	**Duration**	**Company E**	**Duration**
Interviews	Product supply Manager	45 mins	Product Manager	30 mins	Product Manager	30 mins	Product Manager	60 mins	Product Manager	90 mins
	Regional store Manager	60 mins	Regional store Manager	60 mins	Regional store Manager	60 mins	Regional store Manager	30 mins	Regional Sales Manager	60 mins
	Senior Director	60 mins	Senor Director	90 mins	Senior Director	90 mins	Senior Director	90 mins	Senior Director	30 mins
		Frequency (Times)		**Frequency (Times)**		**Frequency (Times)**		**Frequency (Times)**		**Frequency (Times)**
On-site observation	Factory	1	Head office	1	Head office and factory	1	Head office	2	Head office	1
	Retail store in Nanjing	2	Retail store in Shanghai	2	Retail store in Shanghai	2	Online store	Multiple	Retail store in Shanghai	2
	Online store	Multiple	Retail store in Wenzhou	2	Retail store in Guangzhou	2			Online store	Multiple
Secondary data research	Company webpage		Business report		Industry news		Business report		Industry news	
	Industrial News		Case study report		Business report		Case study report		Business report	
			Industry news		Industry news		Industry news			

Several-Three times or above

Semi-structured face-to-face interviews were applied as the main data collection method in the five case studies. According to Yin (2008), interviews provide one of the most important data sources as means for the researchers to probe the respondents' thoughts and feelings about the issues they are most familiar with. An interview protocol was provided containing questions to be addressed. It was used through the development of a semi-structured interview framework that included overall research questions or issues to be addressed. Specifically, the protocol covers a series of open-ended questions related to supply and demand operational processes and strategic management in managing each company's supply chain. A copy of the interview protocol is provided in Appendix A.

According to Yin (2008), open-ended questions are common in case study interviews, whereby the researcher asks the respondent for factual information as well as opinions. Open questions also give interviewees greater freedom to answer questions in a way that suits their interpretations and perspectives, and allow the interviewer to follow up on topics more fully (Turner, 2010). The interviewees were briefed on the topic and purpose of the research prior to the interview. Most of the interviews were carried out outside of working hours to ensure a tension-free environment. Note-taking was the main method for documentation, and most interviews were audio-recorded on the consent of interviewees.

Preparation was carried out before and after conducting the interviews for each case company, including reviewing documentation (i.e. business reports, news, whitepapers, and archival records) and understanding each company's business background, in an attempt to achieve higher validity in analysis, and to provide further insights. Some of the key questions would be highlighted apart from the general questions during the interviews, considering the nature of various business circumstances.

On-site observations were conducted to obtain contextual information and an insight into the company. By conducting the interviews at the participants' working places, including factories, retail stores and head-offices, opportunities for direct observation were created and utilized for all five companies. In the case studies, the collected data were summarized into a case study report for the data analysis.

4.3.3 Data Analysis

This study mainly used two types of data analysis method, within-case analysis and cross-case comparison. According to Miles and Huberman (1994), the analysis of case narratives is based on inductive reasoning, with two types of analysis, within-case and cross-case. The goal of within-case analysis is to identify generalizable patterns for each case independently, in relation to the research questions. Several analytic techniques are adopted for the within-case analysis including explanation-building, time series analysis, and pattern-matching. In order to present a comprehensive background for each case, development of a timeline during the four industrial structural changes was displayed at the beginning of each case report, highlighting the key milestones and important affairs of the company. This also served as a reflection within the broad research context in terms of each company's internal development, influenced by the external market changes.

Secondly, the observed transitional changes in the supply and demand process, and management during the current structural change, were specifically examined and explained. In order to yield a

deep understanding of the local context, a content analysis was carried out based on the themes (i.e. internal SCM elements, components, and external market circumstances) derived from the research literature and framework. Thirdly, a summary table was provided, listing all the analytical data under each corresponding theme, and classifying them into two stages of transformation (i.e. before the fourth structural change, and after the fourth structural change). A logic code (P-A-D-I) was paired by matching the classified data with the descriptive indicators proposed in the literature review (see Table 2-3) for each theme. A copy of an example of how the empirical data under each theme was matched with the logic code is provided in Appendix B. Finally, after structuring all empirical data with a corresponding logic code, the alignment relationship among the themes could be determined. In this study, the following criteria are used for standardization on the ratio of the alignment:

I. High level of alignment: 80% or more of the activities delivered within a company are matched with the external situation based on the P-A-D-I codes (12 or above 12 out of 15 codes are matched as the same as the code representing the external situation).
II. Medium level of alignment: 60% to less than 80% of the activities delivered within a company are matched with the external situation based on the P-A-D-I codes (9 or above 9 out of 15 codes are matched as the same as the code representing the external situation).
III. Low level of alignment: less than 60% of the activities delivered within a company are matched with the external situation based on the P-A-D-I codes (less than 9 out of 15 codes are matched as the same as the code representing the external situation).

A comprehensive diagram indicating the alignment results on the research framework under two stages, of before and after the fourth structural change, is provided at the end of each case's within-case analysis. This part of the data analysis is designed to answer three subsidiary research questions.

Based on the results obtained from the within-case analysis, cross-case comparison is presented to determine whether any replication of logic exists between the five cases, for higher generalisability of the research findings. Eisenhardt (1989, p. 541) describes cross-case technique as "searching tactics to force investigators to go beyond initial impressions, especially through the use of structured and diverse lenses on the data." Patterns of similarities and differences across the five case companies for the transitional changes of SCM and alignment of these changes were largely manifested (Miles and Huberman, 1994; Eisenhardt and Gaebner, 2007). Specifically, this process was able to generalize the findings under each SCM element and component for the industry, detecting the advantage and disadvantage areas of SCM operation for the industry and wether alignment was a common trait for the transitional FA industry in China. An analytical summary table

is provided containing features of all SCM elements, components, and scopes, based on the two stages of transition in the five case companies.

4.4 Research Quality

The quality of a qualitative research is based on its validity and reliability; and a number of criteria have been used to evaluate the validity and reliability, as shown in Table 4-5. Four criteria are commonly employed in case study research: construct validity, internal validity, external validity and reliability (Eisenhardt, 1989; Yin, 2008).

Table 4-5: Techniques and their Implementation for Establishing Validity and Reliability in the Case Study Research

Validity	Definition	Techniques from case study literature	Implementation in this study
Construct	Tests whether the research measures what it is supposed to measure	■ Uses multiple sources of evidence ■ Establishes a chain of evidence ■ Key informants review the draft of the case study report	■ Multiple in-depth interviews in each case follow up on the desktop research on each business's reports and on-site, unobtrusive observations
Internal	Focuses on the extent to which conclusions can be drawn for causal effects and establishes a causal relationship	■ Pattern matching ■ Explanation building ■ Rival explanations ■ Logic models ■ Time-series analysis	■ Investigates the patterns regarding the SCM alignment between dimensions ■ Looks for logical consistency in the interview transcripts ■ Builds time-series analysis on each case for historical analysis
External	Looks at whether the research results can be generalized	■ Rationale for case selection ■ Uses replication logic in multiple case studies	■ Selects five cases covering a comprehensive network with contrasting characteristics and high presentiveness of characteristics
Reliability	Demonstrates repeatability with the aim to minimise errors and bias	■ Uses case study protocol ■ Develops the case study database	■ Refines and implements a case study protocol with each unit of analysis

Source: Ying (2008)

4.4.1 Research Validity

Construct validity in a case study refers to the extent to which a procedure leads to an accurate observation of reality (Denzin, 1994). Multiple sources of evidence, the establishment of a chain of evidence and a key informant review of the case study report are typical techniques adopted to ensure construct validity (Yin, 2008 and 2013). In this study, data triangulation was achieved by using several data sources to answer the research questions (e.g. interviews, company reports, Internet-based documents, archival records, and observations). Besides this, construct validity was also achieved via respondent validation and peer review (Eisenhardt and Graebner, 2007). An ethics application was submitted before carrying out the data collection process among the key informants including school colleges, ethic committees and interview participants; and was granted an approval on 13th February, 2014 by RMIT Business College Human Ethics Advisory Network (BCHEAN). A copy of the interview invitation letter stating the purpose of the study and interview, and its translated

Chinese version, are provided in Appendices C and D; and a copy of ethics approval letter is attached in Appendix E.

Key informants were asked to review the case study report to confirm that the participants understood correctly and to continuously comment on the findings as they emerged. The data collection and analysis of this study proceeded in an interactive manner in which interview questions were progressively refined to pursue the emerging themes within each case. While similarities and differences among the cases were noted, they were left for further analysis until all individual case study reports were completed, to maintain the analytic independence of the replication logic.

Internal validity refers to the causal relationships between variables and results (Yin, 2008). Many decisions regarding interval validity are made in the design phase, and some apply to the data analysis stage (Yin, 2013; Denzin, 1994; Eisenhardt, 1989). This study has adopted several ways to compare empirical data with the established literature and framework, to enhance the validity. For instance, background of individual company development was compared with the historical timeline of the four industrial structural changes. The essential logic underlying the time-series design is the match between trends of data points compared to a theoretically significant trend specified before the onset of the investigation for internal validity (Yin, 2008). Meanwhile, the results of within-case analysis and cross-case comparison were also compared with the literature, to validate the structure of the framework developed and explore the admissibility of rival explanations.

External validity or 'generalizability' flows from the contention that empirical findings must be applicable to settings other than those in which they are studied (Long and Johnson, 2000). The generalizability claim is grounded in replication logic, and is central to building a theory from cases (Eisenhardt and Graebner, 2007). Eisenhardt (1989) argues that case studies can be a starting point for theory development, and that a cross-case analysis involving four to ten cases can provide a sound basis for analytical generalisation. This study contains five case studies selected as strong representatives of the Chinese FA industry, based upon a stringent process of theoretically stratified sampling. Besides this, the results of multiple case study also strengthen the research validity based on logic replication among the five cases.

4.4.2 Research Reliability

Reliability refers to the absence of random errors or a degree of consistency in conducting the study, enabling subsequent researchers to arrive at the same results if they conduct the study again following the same steps or repeat the same procedure used (Denzin, 1994; Yin, 2013). Reliability is typically considered less important in qualitative research, since the aim is to understand certain factors and the courses of events. Besides this, most case studies are unique with in-depth

understanding and the conditions potentially changing over time, and thus, they are seldom identical (Holme and Solvang, 1997).

There are many tactics for increasing the reliability of case study research. Reliability can be enhanced by transparency through maintaining good documentation, case study protocol, and data triangulation (Yin, 2013; Silverman, 2006). This study uses multiple data sources as described in the previous section, not only to increase the validity but also the reliability of the case studies. The case study protocol was designed based on the research questions and framework, and presented to the respondents prior to the interview. Appropriate respondents were selected targeting different areas of SCM. The data collection was well documented in all cases, and all interviews were also digitally recorded.

4.5 Summary

This study adopted a retroductive research approach in an attempt to explore whether the proposed research framework, could be an appropriate means of studying the new research context of the Chinese FA industry. To explore the observable phenomena in this new research context, empirical study was carried out by applying a qualitative case study approach. Five case companies were selected based on stringent requirements, followed by stages of data collection and an analysis process. Preparations arranged before commencing the data collection, comprised of designing interview protocol, liaison with the key respondents for answering the questions, and submitting an ethics application. This study referred to multiple data sources comprised of interview, onsite observation, and secondary data review; and it drew on a series of data analysis methods: within-case analysis and cross-case comparison. The findings of this study were thus able to realize a high level of research validity and reliability.

CHAPTER 5: WITHIN-CASE ANALYSIS

This chapter presents the within-case analysis of the five investigated companies. Each case has been developed with the same consistent structure for the within-case analysis. Following the background description, transitional changes of each company in response to the impacts of the fourth industrial structural change are discussed in terms of the aspects of SCM elements and components. The analysis is presented in an interpretive manner in order to capture the empirical in-depth phenomena of the local context. Thereafter, a summary of all significant SCM changes made by the company during the period of the fourth industrial structural change is presented in a table with a corresponding logic code paired under each aspect of SCM elements and components. Finally, the strategic fit of the alignment between inter- and intra- organization during this period is identified, and indicated on the research framework for each case company.

5.1 Company A (SOE)

5.1.1 Company Background

Company A is a traditional SOE, and was founded in 1979 at the beginning of the first structural change in China, as a result of the Open Door Policy implemented in 1978. Originally, Company A was set up as a government department under the Chinese Silk and Textile Administration, focusing on silk yarn production, textile production and garment export. It is located within Jiangsu province, in the south-eastern part of China. Upon becoming an SOE, Company A gradually integrated with 15 upstream and downstream supply chain partners, which were also government departments previously, to develop into an all-in-one organisation with its own brands, comprising material suppliers, garment manufacturers (OEMs), distributors for export, and retailers for the local market. The company is involved in many businesses, including silkworm growing, silk textile production and machinery, garment design and production, garment export, and local retailing, the latter which commenced in 1994. As a traditional SOE, Company A has maintained a strong relationship with the central government. At the time of the second structural change in 1990, the government realised that exploring and fulfilling the local market demand could be a solution for the industrial reform of the entire country. As such, Company A, like other SOEs, had to follow the policy of the central government and started to develop its local markets.

However, being a government-subsidised business, Company A lacked the incentive to devote its full effort to developing its marketing and retailing business at the beginning. The retail business was confined to providing a purchasing channel for government officials to buy the products for their own consumption or as gifts to peers. Company A's main focus was basically on OEM garment

production for export. By the mid-2000s, the majority of the business is still heavily reliant on the low value-added manufacturing of generic products. There was no attempt to upgrade machinery or technologies to catch up with the rapid industrialisation in the evolving manufacturing sector. When the third structural change occurred in the late-2000s, the company suffered huge shrinkage in profit due to obsolete facilities and technologies. By 2010, Company A had decided to start two retail stores in two shopping malls in the city centre of Nanjing, the capital of Jiangsu province, and at the same time launched its online retail platform. Figure 5-1 shows a development timeline of the Company A under the four industrial structural changes.

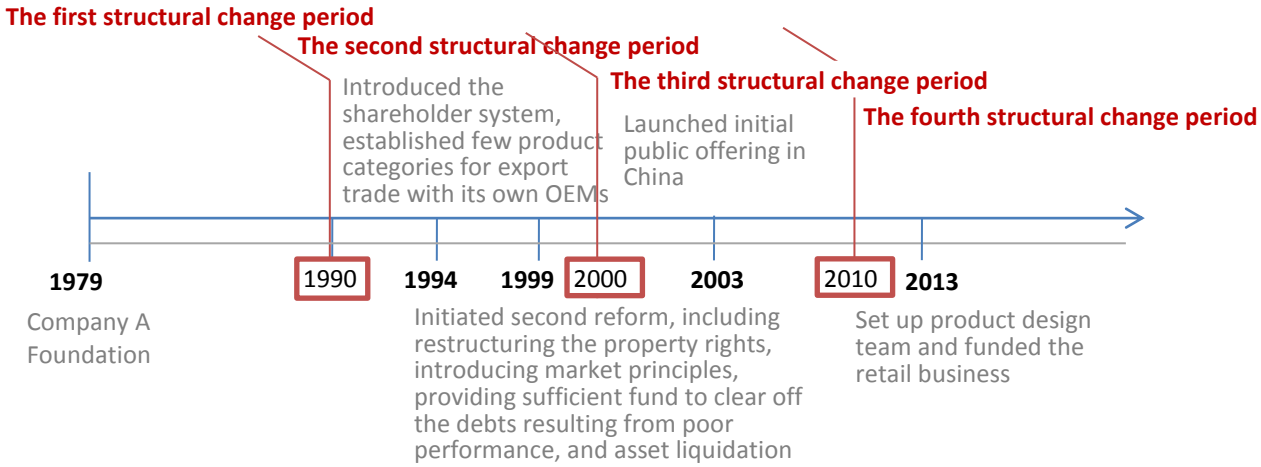


Figure 5-1: A Development Timeline of Company A

5.1.2 Transitional SCM Changes to the External Impacts

The following section explores the transitional changes made by Company A during the period of the fourth industrial structural change. It specifically discusses the operational changes made by the company in the demand and supply side of elements, and strategic changes made in the management components, in an attempt to address the first two subsidiary research questions.

Demand-side Elements

Company A has had little focus on developing marketing strategy as there has not been enough incentive for the required effort. Like many other SOEs in China, Company A was able maintain its business based on the continuous government subsidies and resource offering. Since the introduction of the retail business was designed to follow the market trends, little awareness was sought in terms of positioning supporting services such as product and brand development, advertising planning, and studying consumers to explore the market. In 2010, the company tried to improve its situation by setting up a product design team. However, the design process was scarcely involved any innovative design skills or technology. Instead, the process was mainly built on pattern

fabrications, as explained by the product manager of the design team regarding the product development:

> "*As a traditional OEM, we do not have much experience in business marketing and product development. We used to manufacture the products required by clients and work on a relatively mass-production standard. For product design or material design, we are still at a very early stage. For example, we just use the patterns or styles from our export products designed by overseas clients, and hope it will sell in the local market. As it is really hard to predict which style would be popular in the coming season, if we are able to sell 60% of our inventory, it would be actually quite lucrative. It all depends on how well we can cash out our inventory; otherwise the company may face closure. That is the task for most of the SOE firms as they all face huge inventory.*"

As was observed as part of the interviews with the manager of the design team, Company A lives on a strategy that sales are driven by pushing its supply inventory to customers rather than fulfilling the demand by pulling the downstream customer information. The company has limited awareness on developing products based on consumer need and promoting products with value-added service. It lacks motivation in product design and quality improvement. The product manager mentioned the attitude towards building product branding:

> *"Everyone has a different taste; therefore, it is very hard to catch a trend on such a versatile market. We haven't put much consideration into doing research about targeting niches and brand identity, as we are just at the very beginning stage in terms of brand development. In our system, it is hard to get high levels of standards for data analysis. And, based on the experience described by most of local apparel companies, they also don't have this. As the trend is hard to catch, it all depends on luck."*

As the company has not put in much effort in terms of understanding its consumers, it has been hard to specify product portfolios. According to the on-site retail store visit for Company A, the product range extended from young fashion to office wear, and nightgowns to accessories. However, with a wide range of style and category variation, there was a vague and inconsistent structure in the package presentation, which led to the unclear message about the brand identity. Although Company A regarded itself as one producing high-end silk fashion garments, it appeared difficult for it to recognize itself as a high-end brand on the market, and whether the product quality itself had realized a certain high standard in product design and production. With the increasingly competitive market influenced by the fourth structural change, Company A appeared to have no concern about its out-dated product package and shrinking demand.

In terms of building retail channels, Company A was forced to explore the local demand after the fourth structural change. As profit was shrinking on the traditional OEM market, and increasing subsidy spending control by the government, Company A was encouraged to launch online e-commerce and set up retail stores in Nanjing apart from the previous internal, government-based gift purchasing network.

However, since Company A had long relied on its gift purchasing network and on receiving subsidies from the government by building favourable relationships, the skills and capabilities needed to make a competitive living on the external market was difficult to obtain. Company A had limited experience in managing retail channels as well as product package and branding. Barely able to realize the expected result, launching extra channels instead made the remaining problems, i.e. confusing brand identify and out-dated product categories, even more acute. Onsite observation showed that there were various price differences between online and offline networks for the same kind of product. A discussion with the product manager recalled the issue:

> *"Since the spending control of public funding from the government started in year 2010, it has posed a great threat to our internal network sales. We are forced to launch more channels by the trend. With the launching of the online store, the retail stores exist more like showrooms due to the price difference between online and offline. Consumers know to compare prices online before going to buy offline. Now, only people from our internal network are willing to buy from retail stores, as they can have a discounted price. If we only look at the sales from our retail business, we are actually not in profit."*

As shown, the distribution network expanded as a result of following trends and government requirements, without the supporting services for a more effectively growth and enhancement. It is difficult to expanding market when the product cannot be identified first. The next section further discusses the upstream SCM changes for Company A, and explains issues of material supply and the product manufacturing process.

Supply-side Elements

Company A, as a traditional SOE, has had a strong connection with its multiple suppliers, as a way to retain resource capital. These suppliers used to be government-owned businesses as well. In the early 1990s, the silk market was controlled by SOEs, and these suppliers were more willing to work with SOEs as part of their internal relationship. The advantage of a state-owned business was reliability of financial support and resource controls. However, dependence on this type of system also turned the business into solely a way of gaining resources, and neglecting the issues of skill creation and societal output. This has empowered Company A to keep the status quo in terms of

existing with government subsidies and favourable conditions. In terms of sourcing, one of the plant managers pictured the transitional changes made after the fourth structural change:

''We own most of our facilities and suppliers (25 first-tier suppliers), so we have no pressure on sourcing. And we have a great relationship with our old suppliers. In terms of supplier selection, unless the old suppliers have some issues, such as being short of new material, we will not consider switching to any new one. In terms of payment, we always pay bills in advance. It is still fine for us to work without information systems between suppliers, factories and us. Nowadays, these suppliers are not only working for us but they also do business with other private business. As the labour cost increases, many suppliers have to look for ways to survive. As SOEs have not had as many orders as previously, they have to find new customers. With the increasing labour cost, some suppliers are living at the edge."

Although the company worked with suppliers on a long-term basis, the infrastructure of these suppliers was not fully developed under the new economic context. Throughout the 2000s, with profits shrinking, OEM factories started to work not only for Company A but also for other newly-developing private companies, to gain profit. Due to a labour shortage, most factories were pushed into a trend of increasing salaries, starting with the southern coastal areas then moving to the inland areas. These companies gradually transferred their factories to inland areas and to other low-cost, developing countries such as Cambodia and India. In the long run, upgrading facilities and skills would be the inevitable way to survive under the new market, as the plant manager mentioned:

"The factory workers have become increasingly aware of their human rights. They are looking for better work environments, especially the workers from regions of the Yangtze River Delta. With the increasing living expenses in the big cities, they have found it hard to survive on low salaries. Therefore, the labour price has been pushed up in those areas. At the moment, we are trying to gradually move the factories to inland China for cheap labour. However, people are aware of the salary differences between the different regions. They intend to move into areas with a higher salary and income. Sooner or later, the inland areas with scarce labour will have to increase the labour price as well. At the moment, we have also set up branches in developing countries such as Cambodia to cut the production costs."

As such, suppliers that choose to stay have needed to find a new solution to upgrade the skills of their human resources, which relies on building better training, education and technology. The plant manager of the company claimed that the factories in China were required to be certified with a quality management system (QMS). Although QMSs such as ISO 9001 and Six Sigma were introduced

to China in the 1990s, the systems failed to work effectively and fundamentally. As further explained by the plant manager:

> *"All the large-scale factories in China are required to introduce quality standards in order to improve production efficiency. However, as the factories have long been operating with a low working standard, we are not familiar with process design. The threshold of getting QMS has deteriorated dramatically, and certification agencies granting the certificate as a formality, to make a profit, have emerged. People change the rules. Problems such as high staff mobility and poor training are often seen in the factories. With the increasing labour costs, we are losing our clients."*

In terms of production processes in the factory, the processes lack supervision and standards. Based on the discussion with the plant manager, Company A's production tasks are delivered into small groups. Each group contains around 20 staff performing one process. For example, the group who is responsible for sewing the collar only needs to work through this process in the work flow. The workflow is roughly broken down into several processes, from cutting, through sewing, to final composing. This approach was borrowed from the lean method. However, although the approach was introduced at a conceptual level, the operational standards boiled down to each group's own way of working, and the results can vary from one group to another where there is a lack of standards for implementation.

Lean implementation not only requires the skills for doing the right things in the right place at the right time, and in the right quantity, to achieve optimal work flow, but also requires an understanding of the embedded mindset of continuous improvement for skills and flexibility. The work is highly specified with respect to content, sequence, timing and outcome. However, in Company A's supplier factory, the majority of the production work is done manually, to an ambiguous standard and with weak links in between. There is no certain information system to standardize these processes, monitor the workflow, and enforce the standards, and as such there might little willingness to improve. All this variation could translate into lower productivity, and unclear obligations and responsibilities among the workers, which would prevent the company from upgrading its production lines for lower costs. More importantly, this ambiguity hinders learning and improvement, because it hides the link between how the work is done and the results. If most of the work is done manually in production, the quality of the product depends significantly on the skills of the workers. However, factories in China lack the standards to supervise processing, and lack a supportive environment for the labour workers, which later would result in inconsistent working performance. According to the plant manager:

"Many staff complain about their low pay rate and unfair workload at the end of month. If they have any negative feelings, it can pass to the product quality. Another issue leading to poor quality is not enough training and experience. Due to high mobility, we always have to look for new people, and training those people takes time and money as well."

Many of the incoming workers have not had proper training before they started working in Company A. The managerial level lacks standards and a long-term vision, since managers believe that 'almost done' and 'looks alright' are the normal standards in a factory. Based on what the plant manager described, they have not been willing to share their ideas for improvement and solving problems, since no pathway has existed between the floor workers and the plant manager. Thereby, company-wide problems remain hidden and are neither shared nor resolved.

In terms of order planning, Company A also had a limited tracking record for each production line, and the orders were scheduled based on a command from the plant manager. This lack of management can result in higher costs and wasted labour. When asked about the production process and supply chain planning, the plant manager replied:

"Sometimes orders can come in together from different clients; it is really hard for us to sort out and track the progress of each order. Since the factory works as separate systems, we just make sure the required products finish on time. However, technical problems can occur in between the operations or even after completion. That can cause production delay and higher costs. However, it is hard to foresee or avoid them."

As demonstrated, it is hard for Company A to realize integration in the supply and demand process. The way of working in the current production line not only hides the problem, but also the work between each link has become isolated and no one communicates the problems experienced. In addition, a long lead-time was another problem mentioned, which was due to inefficient workflow and production planning, as remarked on by the plant manager:

"There is no tracking system to monitor, foresee and prevent the mistakes along the production lines. Therefore, when quality issues occur, a huge amount of work-in-progress products need to be fixed, which can cause sequential disorder. Besides, it is hard to identify the relevant people who were responsible for the problems. That causes conflicts between staff members."

In terms of product delivery and logistics, Company A uses third-party logistics (3PL) companies for their product delivery. This was established on a basic transactional system, and has been able to maintain the logistics efficiency.

Since the whole SCM process has been developed on a push basis, integrative attempts for information sharing and partner collaboration are not a priority for the current SC relationship management. As demonstrated, traditional firms such as Company A, used to live on building internal relationship with SC partners as a key successful factor, become not that necessary for companies on the current market. Meanwhile, SCM skills and capabilities have become increasingly important for the SC partners and downstream consumers. In the following section, the discussion will further expand into the strategic management component of SCM in Company A.

Strategic Management Components

While many people in Company A appeared to understand the transforming market and were aware of the new SC operational standard the new competitors were striving to achieve, not many were willing to make a change in mindset, and were satisfied with the resources they had obtained. Company A has adopted a rather hierarchical organisational structure, where rigid and tight procedures, policies and constraints are emphasized. The company has existed with this system for decades, with the government subsidies, and it is difficult to initiate internal changes.

Company A transformed from a government-related sector under the Chinese Silk and Textile Administration, which mainly focused on silkworm cultivation and silk weaving in the 1980s, and later on grew into several departments covering the processes of knitting, dying, printing, silk garment production for the export market, and for domestic consumption. After the late 1990s, the departments were renamed as 16 subsidiary firms. However, as mentioned above, Company A is still under the ownership of the state government, which follows a strict routine with a hierarchical system.

The organisation structure is comprised of several functional silos, including accounting, finance, party committee, auditing, and general administration. Sitting on the top of the structure are the general management officer, the board of directors, and shareholders, where strong connections exist with the provincial government, rather than operating independently. The traditional SOEs, even today, have close connections with the industrial regulators and are treated with favourable arrangements. Their close connections to the industrial regulators came from the kinship (*renqing*) of the previous central planning era. Through these close relations, top managers of firms and policymakers of the government share the same ideology on development, whether they have experience in commerce or not. The management system builds on the ‘iron rice bowl’ (*tiefanwan*) distribution, with a life-time employment system and guaranteed pensions. Furthermore, an SOE could not cease a money-losing operation, divest any non-core assets, or declare bankruptcy by itself: the decisions for these lie ultimately in the hands of its owner, the state.

With years of working under this rigid system, Company A's capability for building a competitive business has gradually deteriorated, as the majority of the trades have been arranged through a reciprocal exchange of personal values, mutual protection, and social status enhancement via internal networks. However, confronted with an increasingly dynamic market influenced by the fourth structural change, private firms established on the premise of economic orientation have evolved significantly in areas of business management, technology development and market understanding. Situated in this changing market, Company A, with a less-motivated system and rigid protocols, has gradually lost the competitive edge to build required skill and capability for improvement. In terms of the company's organizational structure, the general manager in the head office mentioned:

> *"Many SOEs find it hard to survive under the new environment, and the government keeps buying them off. There are many old brands in department stores that are disappearing, while many new brands sprout up. As a traditional SOE, we try to sustain under the new environment and we still have a long way to go."*

The internal business driver of Company A is closely related to the governmental mechanism rather than for evolving its commercial activities. The strategic management of Company A followed a system characterised by social ownership of the means of production and co-operative management, which later on evolved into a government-based subsidiary system. Company A thus is in contrast with the companies under a private ownership.

5.1.3 Summary of All Internal SCM Changes to the External Impacts

Following the above discussion, Table 5-1 summarises the data into a full array of actions made by Company A during the fourth industrial structural change, in the aspects of SCM elements and components, classifying the period into two stages (i.e. before and after) of the transition. By pairing the analytical information with the descriptive indictors, a corresponding logic code is identified for each discussed element and component.

Table 5-1: A Summary of the Transitional SCM Changes of Company A

Scopes	Aspects	Observation of practices before the fourth structural change	Identified coding	Actions taken in response to the fourth structural change	Identified coding
External Environment	Market conditions	'Commodity' products were produced for internal sales and export. The products were situated in market conditions with low uncertainty, low competitive intensity and low risk.	**A**	Shrinking profit with increasing cost. Product market has turned into conditions with higher competitive intensity.	**P**
		Internal environment of the company			
Demand-side Element	Product mix	Stable production lines with generic product mix.	**A**	■ Trying to imitate design for profile differentiation, but lacking profile consistency.	**N**
	Market emphasis	Economies of scale for lower prices and reliable sources to work with for manufacturing.	**A**	■ Regarding itself as a high-end brand; however, the brand cannot match the product mix and customer expectations.	**N**
	Customer segmentation	Targeting labour-intensive export market. Clients have limited access to local silk OEMs as an industrial barrier.	**A**	■ Losing previous clients as costs increased. ■ Opening retail stores to target high-value-added local consumers; however, the product mix cannot fulfil the customer needs.	**N**
	Channels of distribution	Wide access to the export market, since the silk industry is monopolised by the state firms	**A**	■ Opening online channel. ■ Attempting to reduce the dependence on selling through the internal network.	**P**
	Promotion and price regime	Low promotional activity.	**A**	■ Discounting the price for the online sales campaign.	**N**
Supply-side Element	Procurement	The company was able to maintain a low cost from sourcing through partnerships with suppliers that are part of the network and have a large capacity. Suppliers are more willing to do business within the SOE network as payment is guaranteed by the government.	**A**	■ Increasing material costs. ■ Sourcing in neighbour countries for cheaper costs.	**A**
	Manufacturing flow management/production	The factories are producing in high-volume, labour-intensive mode. Focus is on reducing the costs of inputs. Certain management issues and poor labour conditions emerged.	**A**	■ Migrating the factories to inland areas and opening a business branch in Cambodia. ■ Investing in new machinery.	**A**
	Logistics capacity consideration	Push service with predictable service and ready availability.	**A**	■ Selling inventory through the online network.	**N**
	IT support	Using transactional systems such as email for daily basis contact; had some finance systems for basic auditing.	**A**	■ Lacking development in internal IT; still using legacy systems.	**A**
	Supply chain relationship	Seeking economies of scale within the *guanxi* networks. As the product has predictable lead-time with generic standards, relationships were built with simple reciprocal favours.	**A**	■ Internal connections have waned as the government has cut subsidies. ■ Internal suppliers have to work with other private firms to survive.	**N**
Management Component	Shared values	Emphasis on a 'deep' approach. Efficient, with the ability to provide customers with value for money and security.	**A**	■ With the gradually-end of market protection, the company lost its competitive edge.	**N**
	Resource allocation	With the advantage of strong capital, the company invests mostly in building infrastructure and heavy industry. Focuses on building capacity.	**N**	■ Investing in building relationships with the other business parties.	**N**
	Organizational structure	Centralised-structure and administrative system.	**A**	■ Still maintaining its centralised structure with a hierarchical administration.	**A**
	Culture and leadership	Seeks stability, leads by procedure and precedent.	**A**	■ Working in a top-down system with procedures and central control.	**A**
	Risk structure	The company is protected by the internal network.	**N**	■ With the pace of market privatisation, SOEs are confronted with higher market competition.	**N**

Note: P-Production; A-Administration; D-Development; I-Integration; N-Not available

Apart from the above points, a series of annual targets were also mentioned in the 2014 annual staff meeting, in an attempt to tackle the structural change and form short-term goals for Company A's development. They are listed below; however, whether these had been put into action was not observed by the time of the interview:

- Improving the product design through sharing a design platform among the company and other subsidiary companies, to form a resource pool and establish product design consistency;
- Introducing a proper information system platform to control the process and reduce the operations costs;
- Actively introducing e-commerce network;
- Placing cost control on the supply chain processes, and focusing on core business such as product design, supplier management, production process, and machinery upgrades.

5.1.4 Alignment between the Intra- and Inter-Organization

In accordance with the above discussion, transitional SCM changes in Company A will be further analysed to observe any alignment during the period of transition (before and after the fourth structural change). By indicating the corresponding logic code generated under each of the elements and components of the proposed research framework, whether Company A achieved the strategic fit of alignment between its intra- and inter-organization can be identified (Figure 5-2).

As demonstrated on Figure 5-2, during the fourth structural change, Company A has transformed from having a partially-aligned SCM framework into a misaligned SCM framework. In terms of supply operation, Company A has largely relied on a labour-intensive production. Most of the supply activities have been conducted in an attempt to achieve high-volume and low-cost production. With the increasing costs and the retail market booming, the labour capacity has gradually lost its advantage. Due to lacking experience in skilled production and supply chain capability, Company A has been stuck in the dilemma of industrial upgrading and has had to relocate labour into the less-developed countries, such as Cambodia, to extract a profit margin. Although the government has provided funding for importing high-tech machinery and quality textiles from other countries, skill cultivation and technology innovation cannot be realised by taking a shortcut, but requires an appropriate environment to nurture team members for engagement.

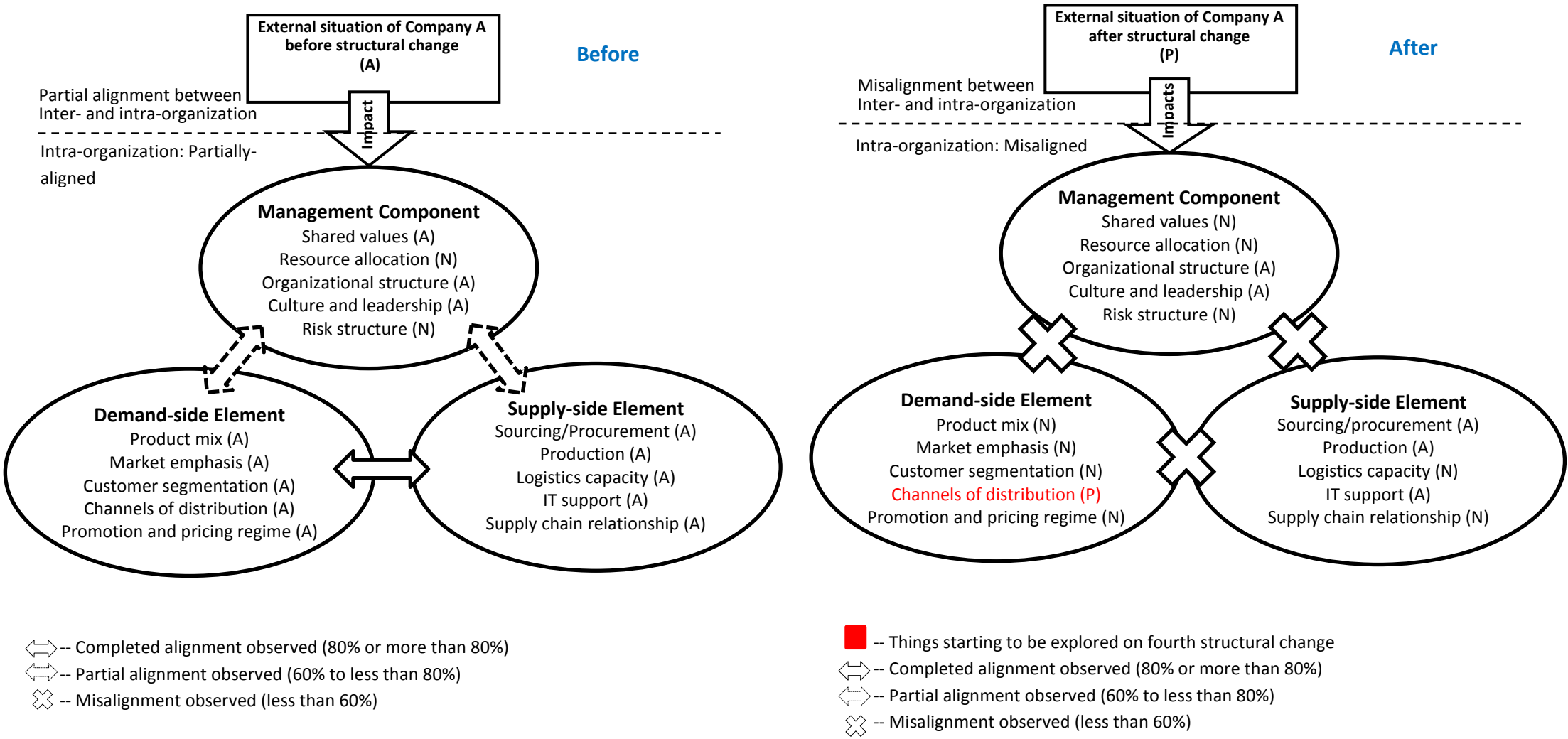


Figure 5-2: Company A's Strategic Fit of the Alignment between the Intra-and Inter-organization during the Fourth Structural Change

In terms of demand side operation, it is shown that Company A has found it difficult to create a clear identify for its product mix and brand niche. It has regarded itself as a high-end product brand; however, the internal capabilities of making high-end quality designs and marketing the brand to potential consumers have been much behind expectations. Therefore, although the government funds the company to open an online store or other multiple channels, Company A has not been able to find the right consumers without the right products.

According to the interviews and within-case analysis, Company A's misalignment between its market demand and supply fulfilment operation is largely attributed to the rigid management components. Built on rigid protocols and hierarchic leadership in the department, especially with the long-term influence of the traditional corporate culture in which transactions typically come through established reciprocal exchange of personalized favours rather than by developing business relationships based on successful transactions, the company lacks a shared motivation for building innovative capability and embracing ideas from non-interpersonal relationships, and to reform for improvement that will provide mutual or social benefits. Thereby, adopting an administration system (A) under the period of the fourth structural change, Company A might experience more resistance in its internal SCM to adapt to the external changes.

5.2 Company B (Franchised)

5.2.1 Company Background

Company B is an apparel retailer that was founded in 1995 during the period of the second structural change in China. The company started selling cloth as a wholesaler, and gradually grew under its own brand. In the late 1990s, Company B had limited resources to open its own factories, and decided to operate as a distributor and outsource production to OEMs at a cheaper price. In the early 2000s, it developed into a franchising network, which had its own design team and brand. By that time, when most companies in the industry worked in a similar way to an SOE, with strong assets and strong human capital, Company B stood out by developing its downstream channel with limited capital. Taking advantage of outsourcing, Company B expanded significantly in the local market, and used franchises to submerge its network into the inland regions of China. Company B became one of few private-owned companies in the mid-1990s of the China. It targets consumers between the ages of 18 and 25, and mainly focuses on making wearable casual clothing.

Although the product mix covered a wide non-specific range in the mid-2000s, from sportswear to casual street wear, Company B still achieved a great success and popularity among the young people, who just had opened to various clothing styles. Company B became one of the few early-starters that joined the free market and took great advantage of the local market share. In the short period

from 1995 to 1999, the company's annual sales rocketed from less than RMB5 million to RMB250 million. Taking the benefit of OEM outsourcing at low prices, and trading with franchises to enhance the market penetration, the company made RMB2 billion in sales in 2005. The brand achieved great popularity among the young generation that was born after the 1980s. By the late 2000s, Company B already owned around 3,000 physical stores across China, among which 2,862 are franchises and 528 are directly operated.

With decades of development, Company B has received significant growth by maintaining this large-scale capacity expansion in a growing market. However, the company showed early signs of developing bottlenecks in 2005. One of the previous advantages, of owning large downstream franchises, became a challenging issue as the market began to shrink. With markets growing towards maturity, increasing numbers of competitors entered into the market with a strong competitive edge and a specific targeted niche. The traditional method of building a large network and pushing quantity into the downstream lost its competitiveness. Excessive stock was exposed in regional franchises, since the product could not be sold. However, instead of confronting its product and inventory problem, Company B decided to shift the pressure into the downstream by setting higher sales targets for the franchises and forcing the downstream to increase orders, which further accelerated the main problem. Meanwhile, the company decided to extend its product line, as was the traditional method, which gave less time for it to prepare for launching its new products. Without resolving the old problems existing in the previous product line, Company B spent large amounts of money on rolling out the not-ready new products, which caused a further RMB3.16 billion inventory issue. By 2013, the sales had dropped by RMB200 million compared with 2012 figures, which represented a decrease in sales of 15% to 45% of market share. Figure 5-3 shows the developmental timeline of Company B under the industrial structural changes.

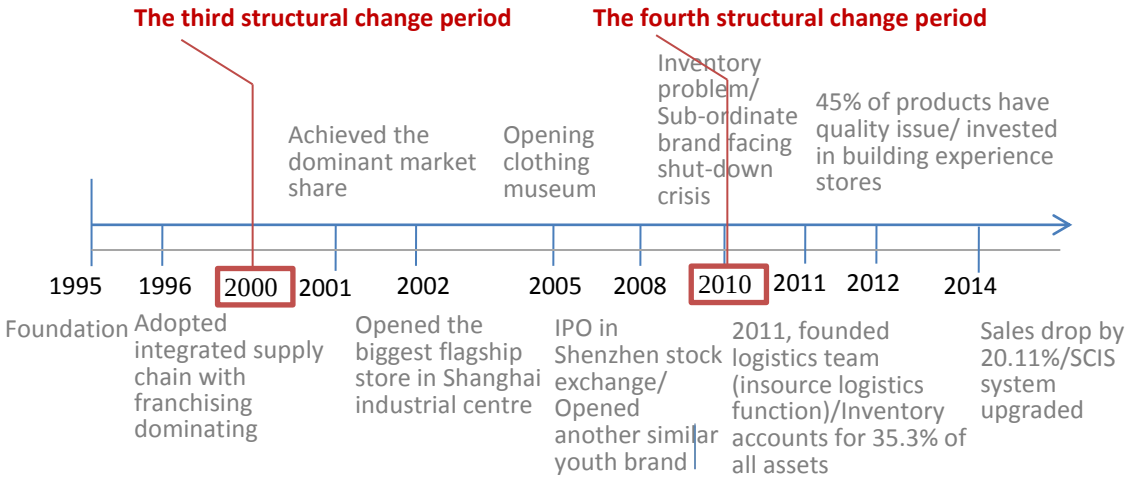


Figure 5-3: A Development Timeline of Company B

5.2.2 Transitional SCM Changes to the External Impacts

The following section explores the transitional SCM changes made by Company B during the period of the fourth industrial structural change. It specifically discusses the operational changes made by the company in the demand and supply side of elements, and strategic changes made in the management components, in an attempt to address the first two subsidiary research questions.

Demand-side Elements

Company B started off its brand by targeting a generic customer base between the ages of 18 and 25 in late 1990s. As the market evolves, the original customer segment gradually grows up in age while the new generation are looking for higher self-recognition compared with ten years ago. These latter consumers are more vigorous in pursuing stylish dress. According to the interview with its product manager, Company B found it difficult to adjust to the new market demand:

> *"We used to be very popular for the '80s generation with our fresh and simple style. As the new era comes, this generation are highly individualistic and they are also bombarded with many choices compared with late '80s kids. The way of operating the company has never changed much for a long time, since it started in the early 2000s. At the moment, the team is trying to learn from those international competitors and seek some variety in product design."*

However, with the low awareness of the product quality and design, as well as the lagging response to the external changes, Company B has received a large number of negative reviews of its products. Customer comments such as 'out-of-fashion' and 'not worth the price' are mostly mentioned for product returns, based on online feedback. One consumer further explained why he would not choose Company B's product:

> *"If I want to buy something generic, I prefer to go to brand X (an international company) as you can find less-expensive stuff with good quality. If I look for fashion stuff, I will definitely choose brand Y (an international company), as they are always on the trend and have large varieties with an acceptable price. If you ask me about opinion towards Company B, I cannot recognize this brand."*

Under the fourth structural change, Company B has gradually lost brand identity to its competitors. With more fierce market competition, it has been slow-moving to adjust its core product line in response to consumers' new demands. Confronted with a series of uncomfortable market shifts, Company B attempted to resolve this issue by launching a new brand in 2008, targeting the 20–35-year-old age group and working-class consumers. With significant amounts of money spent on building new mega-stores and advertising for its new brand, this did not resolve the problem

underlying the core product line, but added the greater complexity of operating two immature brands. The product manager discussed the issues of product mix and customer segmentation:

> *"The problem lies in the gradual disengagement between their consumers and brand. As the older generation are growing up, the company should realise that the new generation of this age is looking for different products. Opening a new brand does not solve the old problems. Besides, redefining a new market niche requires significant research and money for building these entire new infrastructures. As the market is become increasingly versatile, it is a risk to enter without preparation. I guess the CEO is bold as Company B achieved great success in late 1990s and everyone knew it at that time, but time has changed."*

With the second brand launching, the problems from both product lines became acute. In 2010, Company B had to stop the negative growth of the second brand, and closed down many stores located in the big cities. The director of the Company B discussed the problems related to internal management:

> *"The original crew of the Company B started as the wholesaler. We were good at building relationships with vendors and marketing our products to them. However, we are not familiar with building product features and providing skills in factories or understanding demand trends. In 2008, we did try to introduce new members, young people with new ideas. Somehow, it created great conflict inside the company. The majority of people still prefer the traditional way of doing business. A lot of people left the firm who held different perceptions in terms of running the company. This was a conflicting period and it takes time to accept new things."*

Realising the market was shrinking and operational costs of maintaining the physical network were increasing, Company B decided to cease any further authorisation for store franchises in 2012, and converted the current franchised stores to direct ownership, or closed them if these stores were in trouble regarding making sales. The company gradually shifted its focus to directing channelling. Until 2014, Company B had 100% direct store ownership in most first-tier cities of China. Meanwhile, Company B invested a large amount of money (RMB6 billion) in building its own online channel. It also worked with other third-party e-commerce giants, i.e. Taobao.com[2] and Tmail.com[3], to sell its

[2] Taobao.com is a Chinese website for online shopping, similar to eBay and Amazon, which is operated in China by the Alibaba Group. Founded in 2003, it offers a variety of products for retail sale. In January 2015, it was the second most-visited website in China, according to Alexa.com.

[3] Tmall.com was introduced in April 2008 as an online e-commerce platform to complement the Taobao consumer-to-consumer portal, and became a separate business in June 2011. As of October 2013, it was the eighth most-visited website in China, offering global brands to an increasingly affluent Chinese consumer base.

products via the e-commerce platform. Several large all-in-one experience stores[4] were opened in the mega-cities such as Shanghai and Beijing. Apart from these, in 2015, Company B also jumped on the bandwagon and spent significantly on building a mobile application for mobile users, and worked with We-Chat to integrate with social media (China Food Newspaper, 2016). From the interviews, it appears that Company B has been enthusiastic in developing multiple channels of distribution, and extremely generous in spending. The product manager reflected on this matter:

> *"CEO of our firm is much a sales- and marketing-focused person. He loves new marketing ideas which sometimes might not really necessary for the current business. Many marketing decisions were made without scrutinizing internal business performance. We also lack certain systematic management based on specific data analysis and review, which would help us to detect any operational problems and risks. Although we spent significantly on building and marketing infrastructures and platforms, the return is not as expected. Most experience stores opening in the last two years have had a very low sales return, and a few had to be closed due to the large debts. Product review is not good as well."*

As Company B has gradually lost the first-tier cities as a market place due to fierce competition, it has tried to push its sales into the second and third tiers of the inland regions. However, with the booming e-commerce development in the Chinese retail market, most businesses set up multiple touch points and online channel into the inland areas with a resulting rapid increase in competition. Company B is just one of thousands of similar companies. According to the interview, sales of Company B from 2011 to 2013 had a gradual decrease of 33.4% year-on-year. An example was given based on the sales data from a large experience store, located in Chongqing, the inland area of China:

> *"In 2014, the sales revenue generated by the physical network in Chongqing area was around 400 million RMB, in which traditional physical stores accounted for 40% to 50% of sales, whereas experience stores made around 50% to 60%. However, net profit was around negative 200 million RMB."*

As usual, customer reviews were not positive in terms of the services provided in the large experience stores. Most of the reviewers reflected that they lacked an integrated shopping experience in an apparel store:

> *"Why do I need order through a mobile application if I already in the store?"*

[4] An experience store attempts to provide multiple value-added services and build a sense of community based on its brand value.

"I don't really need to go to Company B's experience store to buy a cup of coffee or use the Internet there. It is neither a coffee store nor an Internet bar."

"It is a fancy store, but I did not buy anything and I kind of lost the focus."

As demonstrated, Company B invested significantly in marketing and demand elements. However, it is still a question whether these test-and-go transformations could leverage product and sales performance. The next section will further discuss the upstream SCM changes in Company B, and explain issues of material supply and the product manufacturing process.

Supply-side Elements

Company B works with over 300 OEMs in terms of material sourcing and production; and the majority of the product categories are generic products, which are produced in high volume. It takes roughly around 14–21 days for sourcing and another 45 days for OEM production. Company B is also able to negotiate the price with different OEMs due to its large buying capacity, and to maintain relationships with various suppliers. With decades of working under a ship-to-stock supply chain, Company B has ordered all clothing styles one year before, and put each into production at the beginning of each financial year based on a regional quote, delivered the batches within a seasonal timeframe. Most of the OEMs are located in Guangdong, China. With a rough production lead-time of three months, products are then be delivered into regional distribution centres located in the cities of Shanghai and Wenzhou, responsible for product delivery into Eastern China, and in the city of Shenyang for Northern China. All of these outbound logistics are arranged by the suppliers themselves with 3PL companies. The regional sales manager of Company B commented on product supply:

"We heard the story from many international fast fashion brands on how to realise a flexible supply chain; however, we adopted the traditional method of make-to-order for many years. It is hard to change. Generally, products are regarded as future goods. We attempt to order more at the annual ordering because it is part of the KPI target for us. So, literately we have not realized fast fashion as have those international firms. Nowadays, many stores depend heavily on selling 'baokuan'[5]. Fashion is hard to predict, so we would like to order more in case it needs more as safety stock. The overstock issue has become a bit acute in these years as most products are not selling and become obsoletes."

[5] *Baokuan* (Interview, 2014): styles that sell a large quantity in a short period of time. This term is used widely in the Chinese fashion market to refer to a phenomenon that one typical clothing style sells extremely well, beyond expectation.

Conflicts also have arose between franchised stores and direct stores, due to different management standards, which have led to more severe inventory problems. Direct stores, under direct control from the head office, receive favourable conditions on sales targets: for example, they have a lower requirement on sales targets, and are allowed to regularly do sales campaigns. However, franchise stores, without much support in either staff training or skill development, are required to reach continuously rising sales targets every year, with a fixed three-year contract. As commented by the regional sales manager:

> *"The company set the franchising contracts to three-year terms and required 25% annual growth. This incurred significant disagreement between the franchises and the company. It became even harder to work with the company. Other compulsory rules were attached, such as setting an annual quota in terms ordering quantity and increasing growth rate, while the direct stores didn't have these requirements."*

As the franchisees could order from the suppliers directly without any supervision from the head office, significant overstock surfaced. In order to reach target sales, the franchise stores would simply order as much as they could regardless of whether they could turn them into real transactions. The regional sales manager discussed the overstock problem:

> *"From 2009 to 2011, the inventory rocketed from RMB900 million to RMB3.16 billion, accounting for 35.3% of total assets. The overstock dragged the company down, and we tried many ways to sell inventory, online, or in stores and outlets. After 2011, we had to close a few franchise stores, and started to withdraw the franchise ownership for direct control."*

Apart from the acute overstock issue, internally, Company B invested 30% of resources on building an integrated information system. It spent 2.5 billion RMB on self-developing a demand purchasing and ordering system, and upgrading the outdated financial system, in an attempt to achieve an integrated platform. Besides this, the company also spent another 0.5 billion RMB on data mining. At the time of interviews, the system coverage could reach over 4,000 servers across 1,000 cities. The regional sales manager recalled:

> *"The previous system took around 15 days for one order to process; now it only needs two to three days. While it takes 40 days to close the financial settlement, now we can achieve on-time tracking of the order statuses and make more responsive reactions. This definitely improves transparency and efficiency."*

In terms of downstream product delivery, Company B used 3PL logistics, working with distribution centres to deliver the product into the direct storefronts for efficiency. During the fourth structural change period, Company B had a significant drop in sales. The interviewees were reluctant to expose

the internal sales data. However, recorded in online information, Company B had a consecutive sales decrease from 9.94 billion RMB in 2011 to 9.51 billion RMB in 2012, 7.89 billion in 2013, and 6.62 billion in 2014; while the profit followed a corresponding decline, from 0.27 billion in 2011, to 0.87 billion in 2012, 0.51 billion in 2013, and 0.17 billion in 2014. On the other hand, with high spending on building IT and retail infrastructure, this could drive the company into significant debt. In the following section, the discussion will further expand into the strategic management component of SCM in Company B.

Strategic Management Components

Although influenced by international competitors, and making many disruptive changes, in particular on the demand side - i.e. launching another retail brand, investing significantly in building multiple channels and internal IT infrastructure, and withdrawing from the previous franchising network - Company B still relied significantly on a traditional make-to-forecast model during the period of the fourth structural change. In other words, problems related to the core system, such as out-of-date product mix and design, unclear marketing and branding message, and large inventory, might not have significantly changed during this period. In terms of these management failures, the head director commented:

> *"Opening another brand in 2008 became a lesson for us. We thought we could make another miracle by using the same way as with starting our first brand. However, things have changed in the new environment. The market is more competitive, while the consumers are more price-sensitive to the diverse choices and aware of fashion sense. By that time, what we thought was, why could we not become the international Brand Y, as it became so popular in the local market? Therefore, we tried to imitate Brand Y by opening another brand and spending a large amount of money on building large experience stores and infrastructure, in the most expensive land, e.g., Shanghai, Beijing and Guangzhou. The result seems not good. We could do more on defining the two brands and differentiating product features of these two."*

Company B jumped on the bandwagon and adopted a test-and-go mentality, with bold movements expected to fix these problems over a short period. Suffering from extensive profit loss and large debt, there were many conflicts among the company's middle management level and senior directors. This also led to significant changes in personnel. In 2009, 19 managers left the company, resulting from divided opinions about the company's future development.

According to the head of the general office, the CEO preferred a centrally-controlled business structure, and most of the decisions were made by him with a few close friends who started the company with him, based on personal incentives. The middle-level managers were only responsible

for delivering the tasks required by the higher level, without any room for suggestions or changing practices. The decision making in those large projects involving heavy investment was mainly delivered by the CEO without much fact-based negotiation with other senior directors. Centralising all power for decision-making under a single perspective could be risky for a firm in terms of achieving long-term sustainable development. One sales manager who left the company in 2010 described the situation as follows:

> *"Decision making was granted to only a few people who basically controlled everything. There is no room for others. It is unfortunate for a company of this size to have a restrained vision. However, the new market is full of competition and consumer-driven; it's important to have an open mind, embrace changes and focus on what is important."*

Since strategic alignment also requires an understanding of specific operational functions in the supply chain, it is essential to involve senior managers in the process. Aligning with incentives is quite unlike other operational challenges that are amenable. Managers who understand the motivations of the firm in the supply chain can tackle incentive-related issues. Although Company B invested significant resources on building infrastructure, marketing product and brand, and upgrading internal information system, it failed to align these operational changes with a clear corporate incentive for firm's competitive edge leveraging in the new market.

5.2.3 Summary of All Internal SCM Changes to the External Impacts

Following the above discussion, Table 5-2 summarises the data into a full array of actions made by Company B during the fourth industrial structural change, in terms of the aspects of SCM elements and components, classifying the period into two stages (i.e. before and after) of the transition. By pairing the analytical information with the descriptive indictors, a corresponding logic code is identified for each discussed element and component.

Apart from the above points, a series of annual targets were also mentioned in the 2014 annual staff meeting in an attempt to tackle the structural change, and these projects had been put in action at the time of interview, which include:

- Invested a large amount of money on building multiple channels, and withdrew the franchise ownership on the downstream physical stores, to retain the direct control on its physical retail network;
- Invested a large amount of money to self-develop e-commerce platform and internal Enterprise Resource Planning system;
- Invested largely on building own logistics team rather than outsourcing this part of the service to the third party logistics.

Table 5-2: A Summary of the Transitional SCM Changes of Company B

Scopes	Aspects	Observation of practices before the fourth structural change	Identified coding	Actions taken in response to the fourth structural change	Identified coding
External Environment	Market conditions	Low competitive intensity. Huge market with not many players.	**A**	High competitive intensity and high risk. Market differentiation emerged in the growing market.	**P**
		Internal environment of the company			
Demand-side Element	Product mix	Focusing on ways to reduce the cost of inputs and aims for economies of scale. The product base is mainly from generic products.	**A**	■ Studying other product mixes and supply chain strategies; however, it is hard to re-identify itself through upgrading its product mix. ■ Unable to fulfil its new customers' needs with its current product range.	**N**
	Market emphasis	The brand targeted the generic youth-wear market with affordably priced products during the 1990s and 2000s. Worked with popular TV stars to market its brand through various TV and magazine advertisements.	**A**	■ The product failed to reach the new youth generation. ■ Losing brand identity during market transition. ■ Investing significant money to create another youth fashion brand, expecting high growth; however, the return on sales is not promising and also causes brand confusion with its main brand.	**N**
	Customer segmentation	The products target young adults from age 18 to25. Stable product line with expanding network.	**A**	■ Gradually dislocating its products from its customers.	**N**
	Channels of distribution	The company expanded its business by franchising retailers. After the fourth economic transition, the company's traditional channel was confronted with many issues, such as inventory problems (on 35% of assets), network ineffectiveness, and the market share shrinking.	**A**	■ Withdrawing franchise stores. ■ Investing in building online store.	**P**
	Promotion and price regime	Acceptable price. Low promotional activity.	**A**	■ The product could not sell well and keep a competitive price, as costs have increased.	**N**
Supply-side Element	Procurement/Supplier management	Outsourcing production to OEM. Product produced as future goods and put into economy-of-scale production.	**A**	■ Material costs increasing	**A**
	Production/Facility/ Quality Control	High volume, low cost; push-based commodity production.	**A**	■ Quality problem becomes acute since OEMs are living under the profit margin.	**A**
	Logistics capacity consideration (Inventory and transportation)	**Inventory** From 2009 to 2011, the inventory increased from RMB900 million to RMB3.16 billion for one third of total assets, due to the capacity expansion and push-based supply chain. **Transportation** Owned a few regional warehouses and had own logistics team to deliver products to retail stores. Product delivery for franchise stores was outsourced to different 3PLs arranged by suppliers and franchises themselves.	**A**	■ Marking down the price and doing sales campaigns through online and outlets ■ Investing money on reinforcing logistics team	**P**
	IT support	Company B invested 20% of assets in building an IS network. The system was upgraded three times; it took time to achieve data synchronisation on all sides.	**A**	■ Although investing money in developing some ERP modules, realisation of information integration among the supply chain partners still needs time.	**A**
	Supply chain relationship	Issues with the franchises becoming increasingly severe. This hindered the level of collaboration among the parties. The sense of collaboration, trust and risk sharing was low. Upstream maintained a relationship based on low cost.	**A**	■ Working with logistics team for fast delivery. ■ Responsiveness has improved by developing information systems.	**P**
Management Component	Shared values	Emphasis on 'expansion'; high-energy approach. Reliability and accuracy.	**A**	■ Losing the service emphasis in the business transformation	**N**
	Resource allocation	Built connections with OEMs and expanded downstream network by franchising; Spent large amounts on marketing and advertising to establish reputation.	**N**	■ Investing heavily in marketing and channel distribution, such as opening online platform, O2O experience stores and mobile platforms, but is not effective. ■ Investing in building internal IS ■ Investing in improving logistics services	**N**
	Organizational structure	Organised clusters around core processes. Mostly focused on sales-driven structure.	**A**	■ Still focusing on sales growth; all the functions play a supportive role for the sales and marketing teams.	**A**
	Culture and leadership	The team led by CEO for sales-focus and capacity expansion. Control was achieved by focusing on results.	**A**	■ The culture keeps changing under the transition, but mainly focusing on fast growth.	**N**
	Risk structure	Company evolved only limited risk as it outsourced the production and delivery. In the downstream, it adopted a franchise network. Therefore, it was a low capital business when it started.	A	■ Not aware of market shifts. ■ Huge inventory has occurred. ■ The new investment has a low return on investment.	**N**

Note: P-Production; A-Administration; D-Development; I-Integration; N-Not available

5.2.4 Alignment between the Intra and Inter-Organization

In accordance with the above discussion, transitional SCM changes in Company B will be further analysed to observe any alignment during the period of transition (before and after the fourth structural change). By indicating the corresponding logic code generated under each of the elements and components of the proposed research framework, whether Company B achieved the strategic fit of alignment between its intra- and inter-organization can be identified (Figure 5-4).

As demonstrated in Figure 5-4, during the fourth structural change, Company B has transformed from having a fully-aligned SCM framework into a misaligned framework. Before the new structural change, the external environment with low risk and competitive intensity was identified as the repetitive (A) code. Company B was able to deliver an incremental system (A) in terms of its internal supply chain operations. The company outsourced production in order to achieve the lowest cost, and worked with other 3PLs for downstream product delivery and distribution. It adopted a ship-to-stock supply chain strategy to fulfil demand that mainly came from predictable requirements. In terms of marketing, the company had a clear market niche previously by offering generic product lines to its consumers. Adopting a franchise network, Company B successfully channelled large product capacity to downstream customers located in the first- and second-tier cities of China. As the market was still growing under a low saturation, Company B quickly made itself into a dominant player, with only few competitors as early entrants. In terms of strategic management, Company B worked under a highly sales-focused management system, with a centred or hierarchical leadership team, mainly from the original sales team who started the company with the CEO. Company B was able to leverage a collectively lean supply chain configuration, represented by logic code A, before the industrial structural change.

During the fourth structural change, the external market became increasingly competitive. Company B initiated a series of test-and-go projects for internal adjustment. Significant changes made in the demand-side SCM elements, including expending large amounts of money on opening new brands, retail channels and infrastructure, marketing, and advertising. Meanwhile, internally, it invested significantly in self-developing IS and logistics services. During the disruptive changes, problems such as over-stocking, management conflicts, and financial difficulties, became acute, which led to significant human resource erosion in the company's strategic management. Areas highlighted in red in Figure 5-4 show the elements which experienced the most significant changes. Most of these changes made at the operational level did not come from an aligned-management incentive, but rather from imprudent decision making by a small number of people, which mostly has led the company into a misaligned SCM framework under the dynamic changing environment.

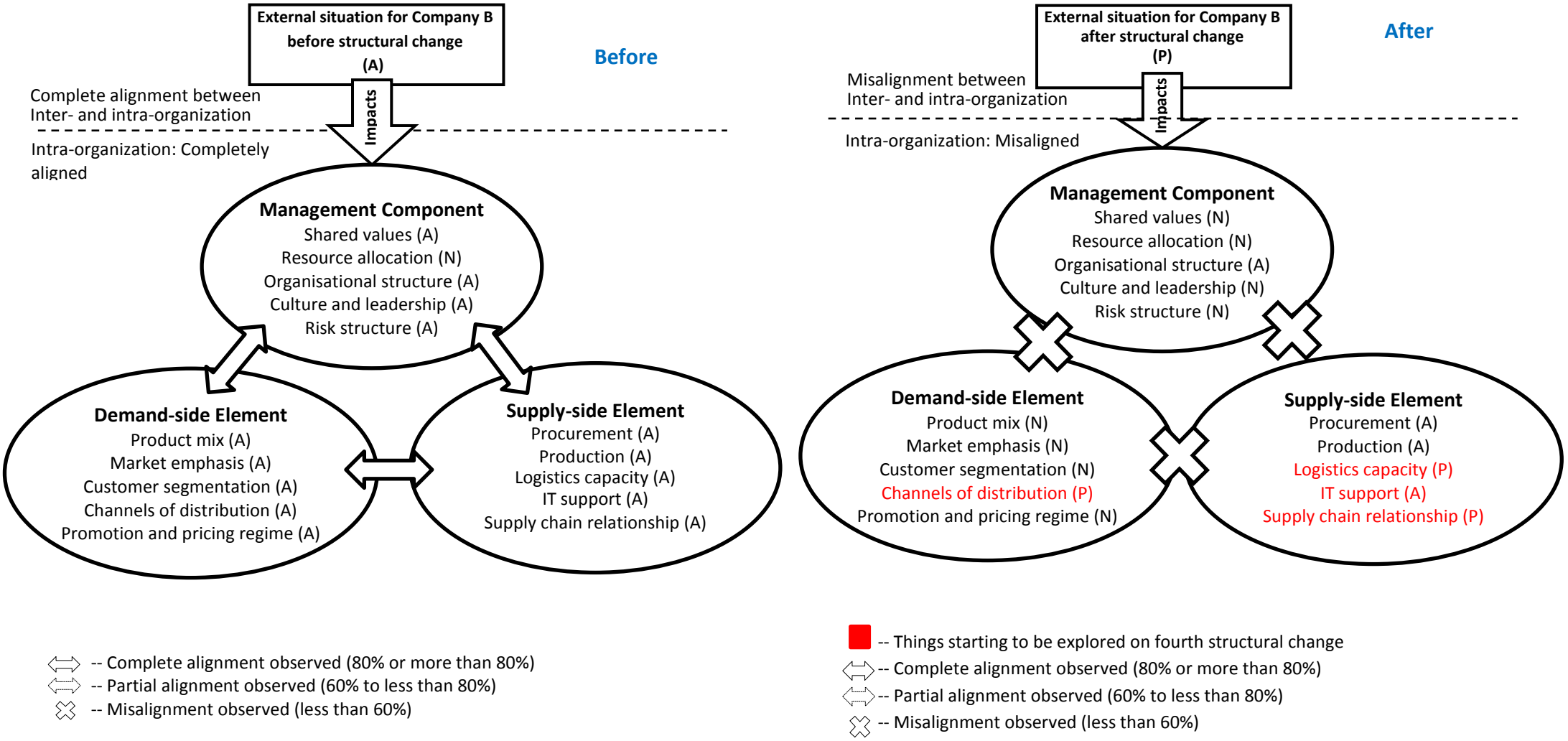


Figure 5-4: Company B's Strategic Fit of the Alignment between the Intra-and Inter-organization during the Fourth Structural Change

5.3 Company C (SPA)

5.3.1 Company Background

Company C was founded by two fashion designers in 1996. The company has aimed to build an ethical designer brand with a local identity. It became one of the few early practitioners providing designer apparel products in the local market. The product advocates a natural and organic design with mostly handmade crafts. Company C, with a goal to target the high-end market, experienced a series of restructures in the early 2000s. In 2004, the company downsized the scale of physical stores, from 95 to 60, and upgraded product collection and price range. In 2005, Company C launched its first *shengtai*[6] store in Shanghai, integrating the functions of fashion design gallery, product shopping, and recreation, for a one-stop experience. Since the opening of the *shengtai* stores, Company C has received significant positive feedback from its downstream customers.

Following the initial success of its all-in-one experience store, in 2008, Company C launched another *shengtai* store in Beijing, keeping the sustainable design concept with a theme of Returning-to-Nature. Using recycled materials in its products, Company C was able to create a nature vibe with a mix of contemporary modern art, in its new store. In addition to this, the new s*hengtai* store was the first to open a library section connected to the gallery section, introducing world-famous fashion design brands and history. The all-in-one experience stores aim to build an integrated sales platform that links the young and talented designer teams with their consumers and fans.

In 2011, Company C opened one of the biggest experience stores, connecting extended services with its core services. The store, located in the heart of Guangzhou, combined design studio, collection showrooms, a book library, home accessories, and some other supporting services such as a café and Wi-Fi areas. Company C has invested mostly in building physical experience stores rather than online stores. In 2014, Company C had an assessed value of RMB1 billion, with a strong liquidity and a steady growth rate of 20% per year. Figure 5-5 shows the developmental timeline of Company C under the industrial structural changes.

[6] Shengtai store: a type of store that incorporates different supporting services into a traditional shopping experience. It adds more value for customers not just through selling and buying behaviours but by creating a platform for the consumer to experience a new way of shopping, by interacting with social media, providing themes for testing diverse features, offering services tailored to individual needs, and nurturing a brand culture.

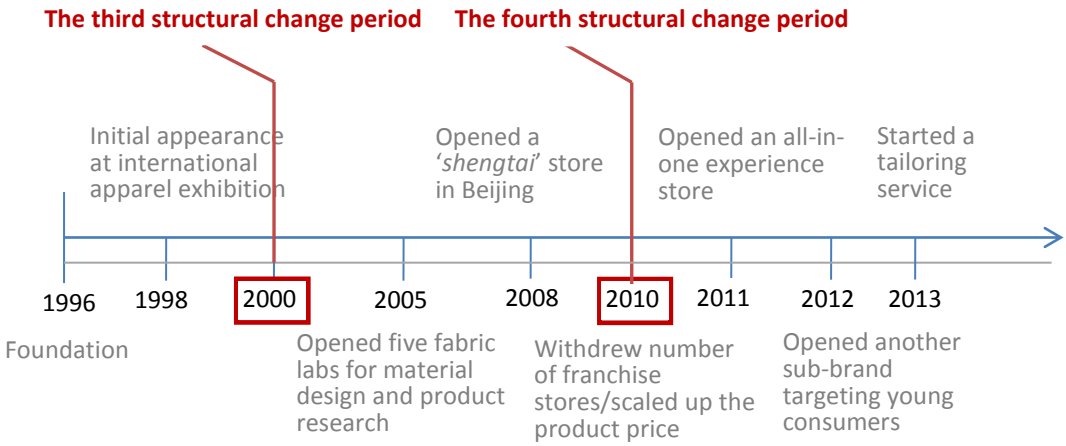


Figure 5-5: A Development Timeline of Company C

5.3.2 Transitional SCM Changes to the External Impacts

The following section explores the transitional SCM changes made by Company C during the period of the fourth industrial structural change. It specifically discusses the operational changes made by the company in the demand and supply side of the elements, and strategic changes made in the management components, in an attempt to address the first two subsidiary research questions.

Demand-side Elements

Determined to establish an ethical designer brand with a Chinese fashion identity, Company C invested significantly in product development from raw material textiles to apparel products. With years of preparation, it aimed to build a competitive identity in the fashion design industry under the structural changes.

In the early 2000s, the high-end clothing market was mostly dominated by international designer products. With limited skills and experience, it was significantly difficult for the local designer to enter this niche market. As the majority of high-end consumers looked for Western products, there was conspicuously low recognition of local fashion designers. With the difficult of identifying its market potential and competitive edge, Company C initiated a research project on product development in 2005, opening five design studios, comprising weaving, knitting, accessorising, fabric dyeing, and quality control. Centred on these five main areas, the company initiated a series of restructuring processes for fabric and product design. With an intention to introduce different techniques for textile development, Company C tried to integrate machinery techniques and some hand-made craftwork. An example was given from the product manager of the Company C:

> *"We were exploring a new type of weaving technique, which integrated cotton velvet into fabrics by using needling techniques. This created an ink-painted effect as in ancient Chinese calligraphy.*

We were pretty much exploring and learning by ourselves, as no one did this before. There are many traditional handicraft skills, techniques and values that have been replaced by industrialised modern fashion. We attempt to bring it back through building rapport in the project. That was the reason for opening design studios. We believe that the competitiveness should come from having an understanding of ourselves instead of borrowing directly from international fashion."

Apart from strengthening product development, Company C also tried to develop and support a sustainable lifestyle in line with its product range. The company preferred to use natural textiles containing materials with less man-made chemicals. The apparel design was aimed for ergonomic streamlining with better body fit and comfortable design, at the same time combined with design elements. The senior director of Company C pointed out the future direction of the market:

"As the market is growing towards maturity, it is time for us to provide our consumers with better products, services and values. We are trying to improve on our product release timeline with the design lead-time. Most of our designers are quite young and lack experience in merchandising. A product is not just a piece of art work; we also need to make it for commercial value and to be accepted by our customers. We need to improve efficiency and the consistency in launching our design collection in the right timeframe."

The attempt at making a consistent and durable collection profile was the most pressing task, as previously the company had been lacking in this area. The senior director also mentioned the issues about branding:

"We have always held a strong motive to make our own designs since the beginning of the company, although the external environment was not favourable for us dating back to the 2000s. Back then, not many people knew what the value of art work or high quality product design was. Those were difficult times, when we had to work for our living, build relationships with suppliers, and create products just for sales to keep our business running. However, the team never gave up our original purpose. Nowadays, as the market becomes more diverse and is opening, our customer groups are increasing. More and more young people are willing to pay high prices for the value of design."

Within years of building its brand identity and relationship with customers, 70% of purchases were made by the company's loyal customers and VIP members. An example was given by the product manager:

"Most of our consumers will come back regularly. They have a high requirement on fashion and know what they are looking for. Our shengtai store opens a platform for them to enjoy a new ways of clothing and shopping. Many of them come here just simply to hang out with friends, and

purchase comes as second. Our products make them feel more confident, comfortable and different individuals."

With a series of incentives put into building product range and customer groups, Company C also initiated a few operational actions on its distribution network. Launching the design studios, Company C upgraded its product price range from RMB500–800 previously to RMB1000–1500 in 2005. Starting from 2004, it downsized the number of retail stores from 100 to 67, while building four large, all-in-one shengtai stores in Shanghai, Beijing, Shenzhen and Guangzhou. Meanwhile, the company withdrew some of the franchising store ownership in order to regain management control. Keeping the proportion at 80% direct ownership in the first-tier cities and 20% franchises in the tier-two cities, Company C also introduced a number of performance indicators for store management. These evaluations covered a wide range of criteria targeting monthly and annual sales, including the average cost effectiveness per square metre of the clothing stores, and the store's location, decoration layout and visual display. The franchises worked on an annual-term contract, with as much support given from the head office and flexibility as they needed to reach the required standards. As recalled by the senior director at the head office, the internal restructuring started by lessening the capacity expansion:

"We have a clear vision on developing product niche. With the middle market shrinking, the high-end market is growing. The company has to be prepared for this transition. By closing the franchise stores that were not up to the standard, we are able to focus more on product development and maintain our business with more centralized system for high flexibility and efficiency."

In line with centralising the capacity, *shengtai* stores, which integrate multiple industries and offer a high-end, one-stop shopping experience, were launched. Following the initial success of the *shengtai* stores, in 2011 Company C decided to open a library section in the *shengtai* store, thus becoming the first leading company to successfully integrate multiple services into a one-stop shopping experience. Combining design workshop, gallery, and book-reading and recreational services, into the traditional shopping experience, also creates significant brand and marketing values, as recounted by the sales manager of one of the *shengtai* stores:

"The library and gallery creates a learning centre for us. Consumers are given opportunities to interact with our brand through different ways. We also use this platform to promote other talented designer brands exclusively. Apart from this, the shengtai *stores have sometimes been used as a venue for fashion conferences. It has become a great inspiration for our designer team interacting with our customers."*

However, the risk of building a large experience store with diverse industrial themes cannot be underestimated. As book stores are being swept away by the e-book industry and online shopping, for example, Amazon.com, opening a physical library in a clothing store is simply not an easy task. It took Company C a significant effort in order to build a contemporary library with a modern architectural design. Company C also worked with experts in the publishing industry to work through the process of book selection and interior decoration. The themes selected are closely related to apparel design and the history of world famous fashion designer brands. The book selection followed a stringent standard, focusing on topics of handicraft skills, naturalism art, and sustainable lifestyles. The senior director in the head office revealed:

> *"We initially located 130 brands from the 1,000 global brands and boiled it down to 80 brands. After a second around of screening, we locked onto 50 brands, among which, 20 of them are being shown for the first time in the local industry. The combination of the store, library and café offers consumers a new shopping experience. It also keeps our consumers in the store, lets them enjoy their time, and stimulates more purchases. All these settings are well-structured with flow. It is not randomly spread out but is based on spatial design and consumers' 'purchasing behaviour'."*

Training programmes are provided to the frontline staff for their different job duties. Apart from the basic skills involved in each role, training also nurtures the staff within the company's culture and brand story. It can be perceived that Company C has consistent strategic planning for its market management. By opening the experience stores, Company C expected to upgrade its business to a new level. According to the interviews, the s*hengtai* store in Guangzhou achieved great success and recorded RMB60 million in sales by itself in that year.

Supply-side Elements

Company C intends to maintain a long-term relationship with a few fabric suppliers that are able to provide strong design techniques and capabilities. It attempts to build an innovative relationship with its suppliers and looks for collaboration. As many of its products require a combination of different production skills, Company C insources 40% of its production which requires skilful handcrafting, and outsources the remaining 60% which is mainly generic manufacturing. The production capacity is on a relatively low scale, with 200–1,000 pieces per style for domestic consumption. With the combination of in-house and outsourced production, the company is able to achieve a balanced trade-off between cost and value, as discussed by the senior director of the company:

"We make our designs and part of production in house. In order to reach a high quality standard and make innovative improvements, material suppliers work closely with us on a long-term basis. Though it is hard for us to achieve economies of scale, the suppliers are able to get rewarding experience in terms of improving skills and technologies. It not only facilitates them to transform their businesses, but makes our deal negotiable. At the moment, we are working on aligning our design and production cycle with the market seasons. As the business grows, it takes effort to deploy the network and make sure the processes are streamlined. We try to initiate IS for process integration."

In order to integrate the processes and enhance communication between the departments, Company C adopted an IS system to enhance its power for controlling its supply chain. This has been done by introducing ERP modules between the departments to integrate the segmented information and naturally feed in real-time information across the department boundaries. With higher information standardisation in an ERP system, more synchronisation among the department levels can be reached compared with the previous self-developed system. One example was given, in terms of managing the inventory, by the senior director of the company:

"Inventory is a big part of expenses and can be incurred and hidden under levels of processes: for example, inventory from final products and from the work-in-process products as processing fabrics or accessories. The system provides us with on-time information to make sales forecasts and prevent large stocks. At the moment, the annual inventory rate can be controlled to be less than 25% and the raw material inventory rate is 15%. Although, compared with other companies, we have low inventory due to low capacity. But we are still looking for better resource utilisation at all levels of operation. IS has definitely become an important tool to control transparency."

Another significant benefit from IT is the implementation of CRM in Company C. By targeting the high-end niche market with an upgraded product mix during the fourth structural change, Company C gradually found that 75% of its sales were coming from their VIP customers. Previously, although the company had focused significantly on exploring new consumers, they could not maintain their customers in the long-term. Since only small groups of the people who have strong purchasing power play a significant role in achieving sales, Company C was aware of the importance of maintaining their loyal consumers and providing after-sales services. Developing a CRM system allowed the company to set up customer profiles, track their sales records, categorise record information, and send exclusive product information to their VIP consumers. Meanwhile, the sales data received from the downstream trading partners was sent upstream to help with making better decisions in the purchasing and production processes. IT has facilitated the company being able to

build an integrated platform on the supply chain, which the senior director of the company described:

> *"We are trying to build an integrated supply chain with higher powers of control and transparency. Information technology helps us to simplify processes and focus on consumer management and cost control."*

Company C made a significant effort to enhance its internal capabilities by building strong relationships with its suppliers and OEMs, achieving maximum utilisation through an IS platform and serving clients with consistent customer services.

Strategic Management Components

Company C has undergone different types of struggles during the structural change. The goal of making its own designs has never changed, which has evolved into potential key competitiveness for the company under the stages of restructuring itself. The senior director of the company explained:

> *"In early 2000s, we hesitated whether we should give up building niche market and follow the trend to promote sales and expand market share. It was hard for high-end players back in the 2000s, as consumers were not ready enough to recognize a design brand. Probably, we were not ready enough to be a high-end player, which led us to internal structural change and design capability improvement. Thanks to the support from our great team and VIP customers, they have helped us to grow. In 2005, we were aware of fierce market competition as many international brands swept the local market. During the time, we encountered the problem of accumulating inventory."*

As has been clearly demonstrated, running a company such as Company C will inevitably lead to making a lot of mistakes. The ability to have responsive actions and recovery from the previous mistakes facilitates the company's transformation. After 2005, Company C restructured its team, focusing on strengthening its internal capabilities. With the design studios having been launched in 2005, Company C scaled down its marketing and sales team. It transferred staff from the sales team, and formed three new teams centred on product branding, VIP customer management, and staff training. The company had already attempted to direct its resources into upgrading the product mix and enhancing market research and internal capabilities prior to 2010, which equipped the firm with the ability to upgrade to be a high-end designer brand during the fourth structural change.

In line with these changes, the company adjusted the organisational structure, combining its horizontal clusters with vertical function silos. For example, Company C formed a purchasing team, which comprises approximately ten staff selected from the production, sales and marketing teams,

exclusively. The team works closely with the retail stores, the upstream designers and the production team. It is responsible for data analysis based on all types of information obtained cross-functionally, and for confirming decisions made on production quantity, design style and quality check. It brought about a hybrid system that can work without communication barriers:

> *''Our purchasing team works as a horizontal cluster to provide better decisions for other functional silos, and to make adjustments for processes. These people include some of our original crew who have experienced the whole journey of our firm's growth. They have been selected from different teams and have a rich market experience. Based on the data analysis obtained from the upstream to downstream, the purchasing team has set up a statistical analysis for decision making."*

The organisational structure now facilitates an environment for people to strengthen its internal capabilities and make its brand more competitive under the new structural changes. The value of Company C is delivered from nurturing a strong sense of brand loyalty, committed teamwork, and a collaborative environment. In terms of future capital investment, the senior director of the Company C stated:

> *"We are looking for partners rather than investors. We need someone who is willing to collaborate for innovation and drive the creative force with us. As you see, we are not only looking for sales and market expansion. We want to do something that can have a real influence on our society."*

The vision of the company is in line with the value of its staff and the way it operates. The organisation structure provides a flexible platform with an emphasis on internal capability innovation, supply chain integration and relationship management with its downstream customers.

5.3.3 Summary of All Internal SCM Changes to the External Impacts

Following the above discussion, Table 5-3 summarises the data into a full array of actions made by Company C during the fourth industrial structural change in terms of the aspects of SCM elements and components, classifying the period into two stages (i.e. before and after) of the transition. By pairing the analytical information with the descriptive indictors, a corresponding logic code is identified for each discussed element and component.

Table 5-3: A Summary of the Transitional SCM Changes of Company C

Scopes	Aspects	Observation of practices before the fourth structural change	Identified coding	Actions taken in response to the fourth structural change	Identified coding
External Environment	Market conditions	High uncertainty and high competitive intensity. Customised products for the high-end market.	**D**	Aiming towards a market share with low competitive intensity, but high uncertainty. The products' characteristics are augmented by products in a protected environment.	**I**
		Internal environment of the company			
Demand-side Element	Product mix	Established five fabric research labs in the areas of spinning yarn, weaving fabric, dyeing, knitting and quality control.	**D**	■ Focusing on improving fabric design and techniques. ■ Improving the efficiency of product development; strengthening the design cycles with the market lifecycle.	**I**
	Market emphasis	The brand targeted the high-end niche market. The brand advocated a lifestyle of sustainability, nature and health. It tried to promote local fashion designers.	**D**	■ Aligning the brand image with product development. ■ Opening all-in-one experience stores to market its brand culture and upgrade the brand equity.	**I**
	Customer segmentation	Brand targeted the middle to high-end market.	**P**	■ Upgrading to target high-end VIP customers. ■ Strengthening VIP services, such as organising various reward activities and discounted prices. ■ Developing a community to have a strong bond with its loyal customers.	**I**
	Channels of distribution	The company provided easy access through the direct and franchise networks.	**P**	■ Down-sizing retail stores from 100 shops to 60 shops, most under direct ownership. ■ Working with franchise stores collaboratively with clear KPI standards. ■ Opening a few all-in-one experience stores.	**I**
	Promotion and price regime	Appropriate price for a creative solution. The price is targeted to middle-level consumers.	**D**	■ With more innovative collections and quality released, price scales are upgraded from RMB500-800 to RMB1,000–1,500. ■ Hosting special promotional activities, only given for VIPs. ■ Having one or two sales campaigns per year.	**I**
Supply-side Element	Procurement/Supplier Management	Worked with a few suppliers providing technology-based solutions.	**D**	■ Looking for skilful suppliers with an innovative and open mind on material development. ■ Focusing on improving quality. ■ Aiming for work collaboratively.	**D**
	Production	Combination of in-house and outsourced production. In terms of quality control, it aimed for a high KPI scorecard.	**P**	■ Integrating different techniques into the production process. ■ Low volume, high value-added operation. ■ Attempting to realise a more efficient production schedule consistent with product design cycles.	**I**
	Logistics capacity consideration	Used 3PL to achieve flexible delivery.	**P**	■ Process integration. ■ Considering reducing inventory. ■ Sharing information on the supply chain for demand forecasts.	**I**
	IT support	■ Replaced legacy systems with ERP ■ Worked with a 3PL for service integration; for example, it used a 3PL which provides a PDA service for product tracking and warehouse management; the 3PL also provided technical support for IT system integration	**D**	■ Focusing on CRM and VMI. ■ Integrating different functions for sharing information.	**I**
	Supply chain relationship	■ Worked with the 3PL service providers for flexible solutions ■ Attempted to apply an integrated IS platform to gather the segmented data under functional silos into an all-in-one network ■ The collaboration among the partners tended to be innovative and flexible	**D**	■ Strengthening IS for an integrated solution for the supply chain. ■ Attempting to build more collaborative partnerships with its suppliers and OEMs for mutual benefit.	**I**
Management Component	Shared values	The company had a strong focus on developing a competitive designing brand.	**D**	■ Focusing on product R&D and quality improvement. ■ Strengthening internal capabilities. ■ Focusing on providing high value consumer services.	**I**
	Resource allocation	The company looked for the potential to grow which might deploy and hedge the resources to re-define the niches and explore new directions.	**D**	■ Focusing on developing internal supply chain capabilities. ■ Resource allocation to R&D and improving consumer services, such as building experience stores and opening research labs for material design.	**I**
	Organizational structure	The company had a strong marketing and sales team before 2006. It had restructured in order to allocate more resources to the service team.	**P**	■ Moving personnel from the marketing and sales department. ■ Opening teams for supportive services. ■ Opening a purchasing team comprising different people who have come from all different vertical functional silos. Starting a cluster-coexisting structure of vertical function and a horizontal cluster	**I**
	Culture and leadership	The company was led by inspiration. The team attempted to value from innovation and creative solutions for development.	**D**	■ Nurturing a creative team value for all staff with supportive training programmes. ■ Creating an innovative environment for young designers. ■ Carrying out extensive market research studies to develop business objectives.	**I**
	Risk structure	The company had low market recognition before 2005, which added more risk for the firm to grow in capacity.	**D**	■ With years of development, the company is able to grow steadily and have a stable VIP consumer share of the local market.	**I**

Note: P-Production; A-Administration; D-Development; I-Integration; N-Not available

The list below contains some of the significant actions taken by the Company C in consideration of the fourth structural change:

- Company C refined its product mix and upgraded to the high-end market by adjusting the product price range from RMB500–800 to RMB1000–1500 in 2005;
- Company C downsized the number of retail stores from 100 to 60 stores, with 80% direct ownership and 20% franchises in the tier-two cities in 2005;
- In order to maintain the collective development pace of all stores, KPI monitoring and standards training were introduced into the store management system;
- Until 2014, the company has opened four all-in-one experience stores in first-tier cities of Shanghai, Beijing, Shenzhen and Guangzhou, for high value-adding customer services.

5.3.4 Alignment between the Intra and Inter-Organization

In accordance with the above discussion, transitional SCM changes in Company C will be further analysed to observe any alignment during the period of transition (before and after the fourth structural change). By indicating the corresponding logic code generated under each of the elements and components of the proposed research framework, whether Company C achieved the strategic fit of alignment between its intra- and inter-organization can be identified (Figure 5-6).

As demonstrated in Figure 5-6, during the fourth structural change, Company C has gradually shifted from having a partially-aligned SCM framework to a fully-aligned framework. In terms of the demand-side element, Company C has implemented an end-to-end restructuring in terms of its product development, marketing, branding, channels of distribution, and promotion and price regime. Company C was able to upgrade from a supply chain leveraged by capacity expansion into an augmented supply chain under a more mature market environment. Company C initiated a series of marketing and product restructurings: opened product design studios and experience stores; upgraded product ranges with a design timeline; and strengthened customer services with VIP customer relationship management.

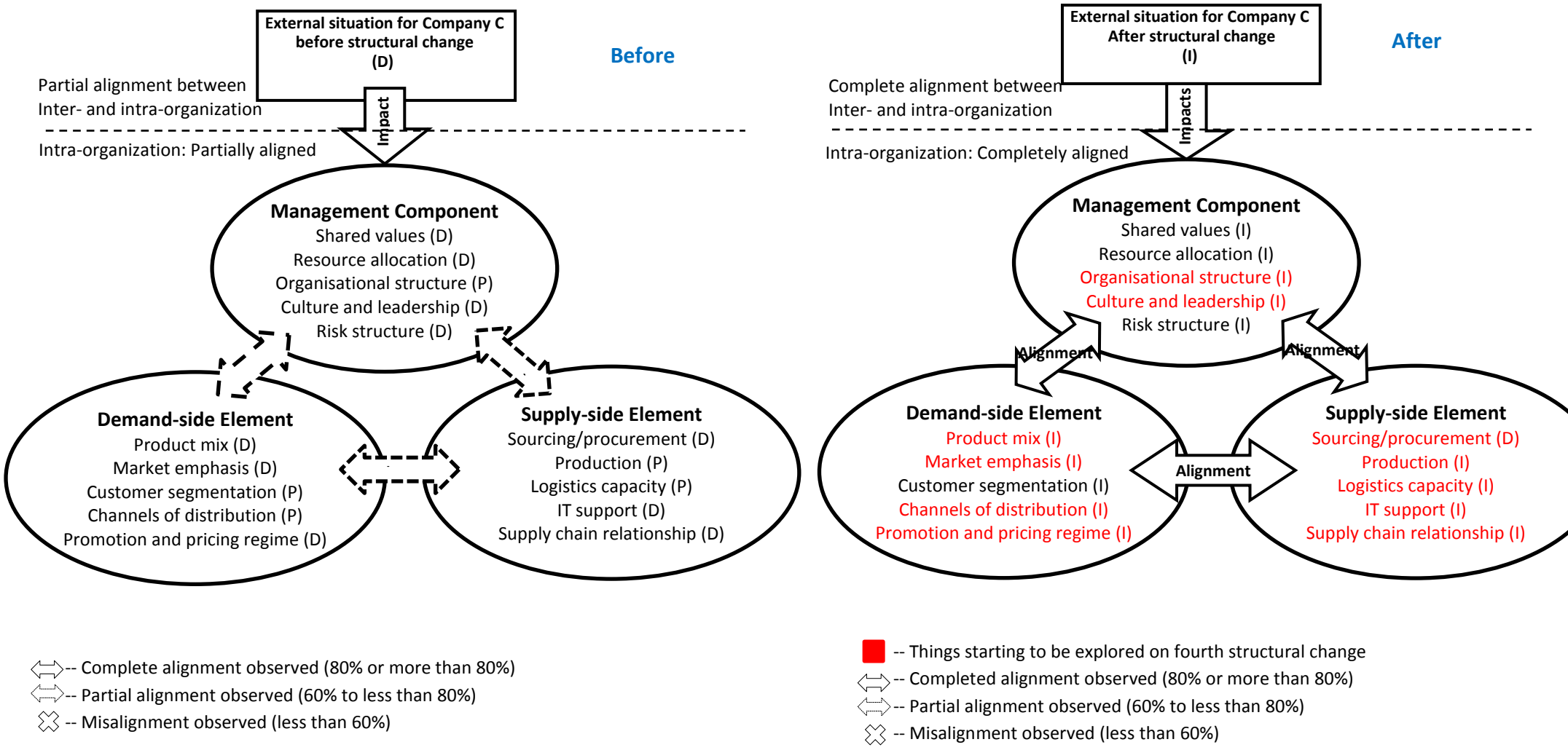


Figure 5-6: Company C's Strategic Fit of the Alignment between the Intra-and Inter-organization during the Fourth Structural Change

From the supply side, Company C was continuously working towards build a more efficient supply chain with higher resource utilisation. Adopting a combination of in-house and outsourcing manufacturing, generic product elements were outsourced to OEMs for mass production, and elements requiring high skill techniques were worked by its own designers and manufacturers. In order to reduce the hidden cost and cut wastage of previously high expenses for textile and product exploration, the company strengthened its collaboration with suppliers for a more consistent product design, and aligned lead-time within the seasonal timeframe. It also worked with other third-party logistics firms for an integrated information system and product delivery. These changes were able to transform the company with higher consistency, in a way that increased supply chain efficiency.

From the organisation management perspective, Company C had an early awareness of the dynamic changing market. The managerial level has had a clear vision and aligned incentives in identifying the right product niche and customer groups, and building required supply chain capabilities for fulfilling demand. Therefore, most of the operational restructures carried out on the ground floor aligned incentives with the company's strategic leadership and management. For instance, in order to render more support for product development and customer services, and to create a more transparent supply chain, Company C restructured its organisational structure by adding horizontal service teams into vertical function silos, for a coexisting system. The new structure aimed to nurture open, flat-communicating and collaborative working cultures across all levels of business teams. With these tremendous efforts and motivation, Company C was able to leverage the capability upgrade and a fully-aligned SCM framework during the fourth structural change.

5.4 Company D (B2C)

5.4.1 Company Background

Company D is an online apparel company founded in Beijing in 2007, when e-commerce became widely proliferated in China. The owner, having already borrowed the model of Amazon.com in an earlier venture[7] selling books, decided to open a new online store to sell t-shirts. Many of the top leadership team of the previous business agreed to join the new business, although they did not have much market experience in the TA industry. Company D started off by selling men's t-shirts to establish its own brand. Taking advantage of China's unusual combination of high Internet penetration and low concentration in the retail industry, Company D was able to reach a large customer base and grew rapidly from 2008 to 2010. According to the statistics from 2008 to 2010 (Li,

[7] This B2C store was acquired by Amazon for $75 million in 2004, becoming Amazon's brand in China.

2015), sales grew from RMB120 million to RMB1.2 billion in that period, representing a 200% annual sales increase. In 2010, with a dramatic capital increase from external venture capitalists, Company D expanded its product line from just selling t-shirts to 30 other kinds of products, including footwear, white goods, digital products, and furniture. Company D attempted to transform itself into a worldwide, multi-platform organisation. In 2011, Company D received six rounds of public funding, worth an estimated RMB2 billion, from local venture capitalists. With its booming popularity on the local market, the expectation for future prosperity was significant.

Continuing with the aggressive expansion of its product lines, Company D spent a large amount of money, which was funded by local venture capital investment, in hiring staff and office expansions, in order to make a larger impact. In 2009, the company relocated its head office from a suburban area of Beijing to the inner centre of the city, which consumed higher land rental rate and resources. In late 2011, the number of staff reached approximately 13,000 people. Many of the hired staff had unclear positions or obligations; they were signed up by the human recourse department to fill the performance requirement from the head-office for targeting sales expansion beforehand. Expecting to reach RMB10 billion for its 2011 sales revenue, Company D set out many targets centred on future sales expansion and market promotion. However, the company showed a slow growth in 2011, reaching only RMB1.9 billion. Even worse, the inventory became a significant problem, which caused RMB600 million lost in profit, with a negative 20% growth in 2011 compared to that in 2010. With the dramatically shrinking profits, Company D had to postpone the plan for its initial public offering in the fourth quarter of 2011. In the following two years, Company D had to keep battling the costs of large amounts of the exploded inventory stock as the price of the explosive expansion. Company D gradually lost its previous competitive market niche and future direction. In 2013, Company D had to close down its in–house logistics team and move its office back to the suburbs, due to the financial challenges. Issues, such as low product quality, large inventories, and hefty debts owed to the suppliers, led to the final breaking of the financial chain. According to a business news report (Zhang, 2016), the company experienced significant staff redundancies after moving the office back to the suburbs. Only 300 staff stayed with the company. In 2014, Company D received RMB650 million (US$100 million) from local VCs and shareholders in a seventh round of fundraising, which allowed the company to avoid closure. Figure 5-7 shows the developmental timeline of Company D.

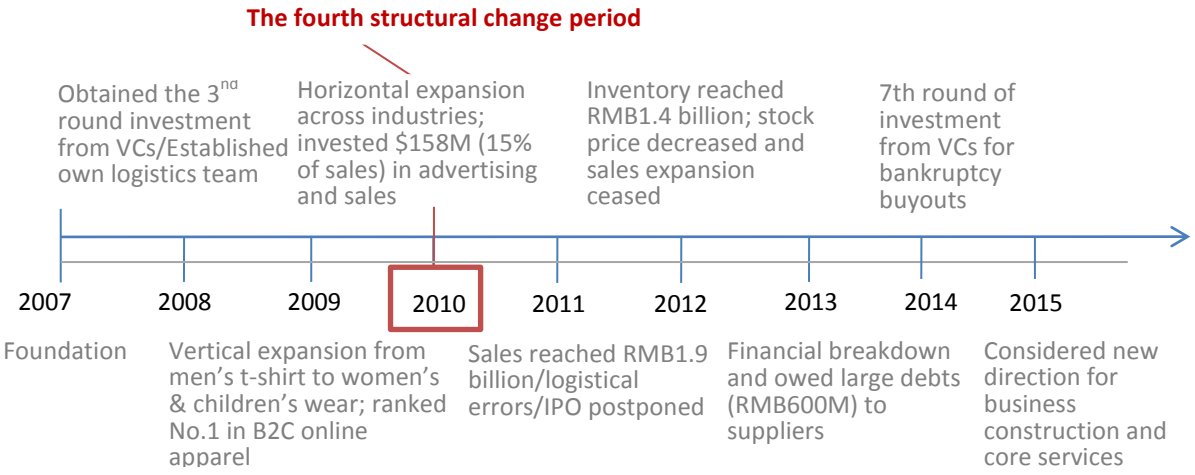


Figure 5-7: A Development Timeline of Company D

5.4.2 Transitional SCM Changes to the External Impacts

The following section explores the transitional SCM changes made by Company D during the period of the fourth industrial structural change. It specifically discusses the operational changes made by the company in the demand and supply side of the elements, and strategic changes made in the management components, in addressing the first two subsidiary research questions.

Demand-side Elements

Without much experience in running an apparel business, Company D outsourced production to OEMs and directly sold products online. Compared with the traditional supply chain, which requires physical investment for the assets, Company D offered a lower price for its products. The company started off with a clear brand niche by only focusing on a men's t-shirt and shirt collection. This niche, along with the low level of market concentration, brought more favourable conditions for the company to grow in China compared with other competitive market niches such as ladies' wear. Furthermore, adopting an online selling network also provided an opportunity for those SMEs, such as Company D, that started off their business with a simple idea. With a simple style and reasonable price, the company received significant popularity among the working class. Moreover, by using innovative digital campaigns, combining celebrity, viral seeding and story-telling, the company achieved widespread awareness of its brand: for example, a branding message similar to the type of "find understanding, acceptance and strength in a sense of self", achieved significant praise and responses from those post-1980s youths who looked for freedom and individualism. The company also hired highly active celebrities from social media who shared the same image as Company D, which greatly complemented the brand's values to express youthful, energetic, approachable and highly individualised styles. According to a business news report by Hunter (2012), Company D spent

RMB1 billion and approximately 15% of its total sales on media marketing. With the business growing somewhere in the vicinity of 200% in two years, Company D accelerated the development pace by making the Great Leap Forward[8] after the fourth structural change. The general manager of the company recalled the transition in the areas of product development and branding:

> *"In China, a traditional retailer usually takes around 7 to 10 years to grow into a large-sized business, which has more than 250 employees and more than RMB500 million turnover. The gradual growth corresponds with the continuous adjustments in the different stages of business development. However, e-commerce shortens the timeline to one or two years with a 200% to 300% annual growth rate. This gives a business no time to readjust properly. In order to make the supply match the demand expectation in such a short period of time and make higher sales, product development and quality become unimportant. During the aggressive growth period from 2007 to 2010, Company D invited different product lines and categories to sell on its own website without proper profile selection, structure design, quality checks or shelf-life management. By that time, Company D thought the platform could sell anything under its logo, which damaged its brand image significantly. Some old suppliers were trying to help the company build product profiles. However, the company had no time to listen."*

The company previously had a design team for product development. However, under the expansion period from 2010 onwards, product development was neglected and variety was introduced. The development teams were rushed to achieve sales levels as high as possible. As long as the staff could find suppliers to provide products and fulfil the sales targets, there were no requirements for product quality, realised timeline, or packaging mix. Company D treated itself as a comprehensive platform rather than a brand retailer. That had not only significantly damaged the brand identity but also lost the consumers' trust, which was recognised by the general manager:

> *"Company D used to be good at marketing. It made a great case in terms of creating brand story and nurturing a brand culture in 2009 when we got a clear niche. Marketing would add extra value if products were well-presented. Nowadays, with the gradual importance of building product and brand niches for its core value and raising market barrier, the company gradually got lost in the competition through its crazy expansion."*

[8] The Great Leap Forward (MacFarquhar, 1983) was an economic and social campaign by the Communist Party of China (CPC) from 1958 to 1961. The campaign was led by Mao Zedong and aimed to rapidly transform the country from an agrarian economy into a socialist society through rapid industrialisation and collectivisation. However, it is widely considered to have caused the Great Chinese Famine. The plan brought to an abrupt stop the earlier, more cautious attempts to sustain the speed of China's recovery and the further development of the Five-Year Plans. The more radical members of the leadership tried to outdo each other with more and more unrealistic calls for 'greater, faster, better and cheaper' production.

The expansion reached almost all areas of formal and leisure wear, including accessories and jewellery, and even household products. The company attempted to become a multi-platform website, aiming to achieve high sales targets in a very short period of time; as a result of which, eventually, quality and service were sacrificed. Internal supply chain systems became disordered because the expansion scale was too aggressive for Company D to focus its attention on. There were increasingly negative reviews and products returned by the consumers due to the deteriorating quality.

Supply-side Elements

During the period of product category expansion, Company D worked under a push-based system that directly assigned the production budget quotas to the sourcing team. The budget quotas were given by the CEO, based on annual sales expectations, without conducting any analytical research into its real market demand. The CEO looked for at least 300% annual sales growth during the time of aggressive expansion. Therefore, everyone in the company was driven with the goal of reaching that sales target. Furthermore, in order to make the target achievable, the quotas were assigned to each department as an individual KPI in 2011. So as to make this happen in a short period of time, in one year, deals were quickly made between the suppliers and Company D without considering other service conditions. The product batches were kept on re-order to reach the sales figures. The deals were signed as long as there were profit margins for both parties. The general manager described the situation in 2010 and 2011:

> *"I remember that one day my boss talked to me about the next year's annual sales target. When he mentioned a RMB6 to 10 billion sales target for 2011, I was not sure because it was a large leap for us. And then he asked me to work out a budget plan in terms of hiring more people and finding more suppliers. In the following months, the company was chaotic with hiring, moving to a larger office building and asking everyone to make orders, as we would have an anticipated RMB6 billion sales transactions. We did not know for sure what we were doing, but we were in pretty high spirits."*

There was no portfolio screening process for selecting suppliers, as long as the supplier was able to provide a good price. This led to a further price war between the buyers and sellers, and even high-powered bullying within the company, because it ignored certain standards in order to find suppliers, as long as the price margins were negotiable. One supplier who worked for the company from 2009 to 2011 mentioned:

> *"I worked for Company D from 2009 to 2011 and was responsible for sourcing. By that time, I designed profiles for different products and created a series of criteria pertaining to supplier*

selection for skills, standards and price considerations. As there were limited resources for any qualified suppliers in the company, I worked with some experienced suppliers that were capable of offering ideas and technologies for structuring the product mix and scheduling the production. Then, someone who worked in the same department as me copied my design and presented it to the managerial level, and offered it two times cheaper than mine. Obviously this was not going to be the same quality. However, that case finally got the budget approval. I could not do anything about it. And most people at the higher managerial level in this company didn't care too much about the standards and regulations. There were no legal regulations as well, which can lead to market disorder."

Regardless of knowing whether the product was of good quality or the design was in line with the market demand, large amounts of orders were put into production, which could not be sold in the market and turned into inventory products. It can be seen that this oversupply problem was not only caused by having a push-based system that neglected the demand-side operation but also from the management slip-up in that the supportive system was not promoted in some companies. The general manager recalled:

"In China, if a company has good guanxi *with the suppliers, the suppliers are able to produce for it on credit and the company could pay later, when it is capable of doing so, during a certain time period. Therefore, it drives the department to expand the budget in order to reach the sales target, regardless of whether it could get the products to sell out or not. I remember that products from a purchasing order worth RMB100 million were found left in the warehouse for around two years without anyone knowing. The order was signed for by a manger that normally would not have the decision rights for such a large quantity. In that aggressive expansion period, a case like this could happen. Therefore, it turned out to be large amount of inventory, worth RMB1.4 billion, at the end of 2011, which led to significant debts owed to those suppliers. The company lost RMB600 million in profit in 2011."*

Confronted with the large deficit during the fourth structural change, Company D had to cease expansion and start controlling its spending in 2012. By focusing on only the apparel product lines, the company kept t-shirts and canvas shoes as their core product-lines. At the same time, the company rolled out large-scale online sales activities to reduce inventory and increase cash flow. Then, reducing inventory became the main task requested by the CEO for its next mission in 2013. According to the general manager of Company D:

"2012 was a hard year for us. The company hit the bottom. The initial task for our company was to digest the inventory. We had many promotions such as RMB9 sales for t-shirt products or

RMB99 sales for all coat and jacket products. And these activities were organised every month. For public holidays, we had more deals for our consumers."

Whilst Company D worked on the inventory reduction, at the same time, the company decided to move the office back to the suburbs. With the large shifting of personnel, many staff decided to leave the company. There were significant human resources lost at the managerial level due to the conflicting views of how to manage and lead the company. Meanwhile, the company started to have heavy redundancies, especially in the logistics and warehousing team, where they were accustomed to hiring more staff. Company D also cut 24 distribution centres across the country and left only six in the main cities for budget control. However, with the hike in customer orders due to the sales campaign, more products required the logistics team to deliver them. The slashing of staff numbers in the logistics department and the distribution network restructure simply led to more management disruption when a large amount of orders was required to be delivered in few days. In addition, the sudden price slashing and sales campaigns were also harmful to the regular sales patterns and brand. The decision to reform caused further management disorder, since one decision led to another unanticipated effect. According to a senior staff member in the logistics team:

"Due to the continuous price mark-down in the whole of year 2013, sales had a dramatic increase. Orders once hiked to one million times in just one day. We were looking for staff to do the deliveries. In order to bring sales in and generate more profit, the company sometimes helped other brands to sell discounted products on its own online store. However, as there was a lack staff in the logistics team, we had to ask other staff from other departments to help with packing and delivery, which incurred more errors in the rushed times."

It is evident that Company D was on a roller-coaster journey. New problems occurred when the old ones were not completely resolved. Company D went through a series of extreme movements, either for dramatic capacity expansion at the beginning of the fourth structural change or large-scale budget cutting in the later recovery plan. The company has gone through significant management instability during the structural change.

In terms of Company D's supply chain relationships, there was low collaboration between parties on the supply chain. The relationship was established to achieve low costs by seeking economies of scale. As the supplies were found based on achieving a beneficial purpose for the both parties, a low level of collaborative engagement was generated. This also happened with the company's internal relationships among the departments due to several personnel shifts and redundancies being made, which kept varying the company's values and corporate culture. Meanwhile, internal *guanxi* was built on maintaining a beneficial purpose for boosting high sales growth, and internal skills and

capability development were not promoted. By 2014, Company D was able to reduce 80% of its inventory by discount sales, which prevented Company D from going bankrupt. However, the future for its brand of products remains unsure.

Strategic Management Components

At the beginning of the business, Company D was able to provide customers with value for money, and reliable customer service was provided by its in-house logistics team for product deliveries and returns. The prices were good compared with other competitors in the market. The product mix had a simple niche targeting t-shirts and other shirts of a reliable quality. With its outstanding marketing strategy, Company D was able to attain significant popularity before 2010. Strong marketing skills and a flexible logistics service became competitive advantages for Company D. However, under the fourth structural change, Company D initiated aggressive expansion and gradually lost their advantage. According to the general manager:

> *"Company D focused itself on sales and marketing. It invested around 15%–35% of total sales on marketing compared to the 3.5% on marketing expenses that other apparel retailers do. This made the firm receive significant social attention through multiple ways of advertisings. However, under the new structural change, sales and marketing capabilities were additional for a competitive business. Other capabilities, such as product design or internal system structure, become increasingly important for a competitive market."*

During the fourth structural change, Company D kept its growth through its digital presence and media exposure. For example, it generated viral social media in 2010 by launching a series of campaigns, using nationwide TV and outdoor advertising in big cities, creating featured advertisements and secretly seeding them online. The advertisements became an Internet meme, with customers creating and socially sharing characters to generate additional promotion and media coverage. In 2011, the company launched a sub-site combining elements of photo blogging, fan advocacy, and social media, to create a new retail platform for social e-commerce. By adopting these methods, Company D was able to engage on a massive scale with its audience, boosting word of mouth via the Internet and increasing its online click-rate. However, although the company enjoyed strong media and brand exposure, it converted only 9% of its e-shoppers into regular buyers. The business evolved into creating scenes and media attention, and enjoyed fundraising in the public listings. However, the real business waned during that period. At the peak expansion period in 2011, Company D once had 13,000 staff, with a chaotic structure. The general manager revealed:

> *"By that time, we had approximately 10,000 staff and still kept hiring. The hiring was based on the CEO's command, as one team leader was only effectively accountable for seven team*

members, at most. Therefore, once there were 40 presidents in leadership. Most staff had nothing to do and it was a disaster for managing people."

Company D lavished its spending on building its fame, while real business waned. By 2012, it had to move its headquarters from the city centre back to the suburbs, and sacked large numbers of surplus labour hired previously during the expansion. According to the general manager:

"After moving back to the suburbs, we thought we might be able to cut the staff number to around 1,000 people. Finally, we had only 300 people left, as many of them asked to leave. The t-shirt production team used to have about 200 people with chaos; now it has only seven people responsible for t-shirt design, material selection and order tracking, with one team manager."

After 2013, Company D also tried a series of new business models in an attempt to achieve a quick recovery. For example, Company D started a controversial campaign by inviting third-party companies to sell their brands via Company D's platform. This idea originated from [VIP.com.cn][9]. The general manager commented:

"The CEO would come up with different ideas about restructuring the business, which changed all the time. Last year the company tried to learn from international fast fashion brands' supply chain. Then, we had a new VC on board from [Xiaomi Inc.], a technology company. We were asked to learn from its business model this year. And we are planning to do another campaign to sell other brands on our platform."

It appears that Company D is still in a stage of exploration, although the company has tried various ways to recover from the structural change. In terms of organisational structure, Company D has divided the previous product team into six process silos, and opened a production department focusing on material sourcing, product design, and the production process. Company D attempted to make some changes after the recovery stage. However, whether these new approaches and adjustments will have a positive effect in the long run to leverage a specific niche for the company's future is still in question.

5.4.3 Summary of All Internal SCM Changes to the External Impacts

Following the above discussion, Table 5-4 summarises the data into a full array of actions made by Company D during the fourth industrial structural change in terms of the aspects of SCM elements and components, classifying the period into two stages (i.e. before and after) of the transition.

[9] [VIP.com.cn]: a Chinese online platform selling retail brands' products at a discounted price. The company, founded in 2008, took the advantage of the large amounts of stock found in most Chinese retailers that had resulted from oversupply in the mid-2000s.

Table 5-4: A Summary of the Transitional SCM Changes of Company D

Scopes	Aspects	Observation of practices before the fourth structural change	Identified coding	Actions taken in response to the fourth structural change	Identified coding
External Environment	Market Conditions	The previous product appeared to have a low level of market concentration and was located in a low-competitive-intensity segment.	**A**	This segment becomes increasing competitive under the fourth structural change. Other competitors share the market, which means there are many different products under the same niche.	**P**
		Internal environment for the company			
Demand-side Element	Product mix	Major focus on having one product line based on general skills.	**A**	■ Expanding product lines dramatically into other industries. ■ Degenerating quality and design.	**N**
	Market emphasis	The brand targeted young casual styles for those from 18 to 30 years old by selling shirt products online.	**A**	■ Making online advertisements and blogs for extensive social media exposure and brand awareness. ■ Creating memes to boost online click rate	**N**
	Customer segmentation	Large majority were working class with a basic product match. Reliable quality with lower prices.	**A**	■ Losing target niche. ■ Negative consumer reviews.	**N**
	Channels of distribution	Had its own logistics team for the last mile of delivery directed from online ordering; the company was able to achieve lower cost and a quick response result.	**A**	■ Creating mobile/tablet platforms. ■ Integrating mobile network with online commerce for higher social exposure	**P**
	Promotion and price regime	Extensive development of online advertising and promotion.	**P**	■ Using the online platform for sales campaigns, not only for its own brand but for other brands, to get rid of inventory.	**N**
Supply-side Element	Sourcing/Supplier management	Outsourced standard products for economies of scale.	**A**	■ Losing quality control on suppliers. ■ Reordering products that will not sell. ■ Evolving in *guanxi* and leveraging for a negative purpose.	**N**
	Production/Facility/Quality Control	Outsourced production based on high volume, low cost.	**A**	■ Keeps reproducing the same order ■ Losing control of standards of production due to the pursuit of the lowest cost.	**N**
	Logistics capacity consideration (Inventory and transportation)	Had a logistics firm for online delivery and provided a series of highly reliable services.	**A**	■ Stock piling inventory. ■ Closing a few DCs for cost saving. ■ Delivery errors increasing.	**N**
	IT support	Self-developed a transactional system.	**A**	■ Maintaining the previous transactional system.	**A**
	Supply chain relationships	Sought economies of scale for low-cost products and distribution.	**A**	■ Looking for low cost production ■ Using g*uanxi* to build connections.	**N**
Management Component	Shared values	Excelled at online marketing; able to provide reliable services and products with high quality customer services.	**A**	■ Losing focus in the aggressive expansion.	**N**
	Resource allocation	Invested largely in marketing and branding, and set up its logistics network.	**N**	■ Investing heavily in the marketing and advertising areas. ■ Spending on building popularity and media exposure.	**N**
	Organizational structure	Organised clusters around the core processes, which are marketing and sales.	**A**	■ Keeps changing. ■ Restructuring several times, the current structure being based on functional teams.	**N**
	Culture and leadership	Traditional, gained leads by procedure and the cost controller used information to control.	**N**	■ Culture keeps changing. ■ Trying different business models.	**N**
	Risk structure	The market niche was under low risk due to there not being many competitors when Company D entered the market.	**A**	■ The company is stuck in its financial problems. However, the previous VC, which had a *guanxi* connection with Company D, might be able to save it again.	**N**

Note: P-Production; A-Administration; D-Development; I-Integration; N-Not available

By pairing the analytical information with the descriptive indictors, a corresponding logic code is identified for each discussed element and component.

The list below also contains some of the significant actions taken by the Company D in response to the impact of the fourth structural change:

- Expanded product lines into other unrelated industries;
- Re-ordered extensively and continuously on obsolete products;
- Invested extensively in marketing, advertising and sales rather than in product and services;
- Several rounds of personnel change at the management level which led to unstable corporate values and organizational structure, and outstanding cost of mismanagement.

5.4.4 Alignment between the Intra and Inter-Organization

In accordance with the above discussion, transitional SCM changes in Company D will be further analysed to observe any alignment during the period of transition (before and after the fourth structural change). By indicating the corresponding logic code generated under each of the elements and components of the proposed research framework, whether Company D achieved the strategic fit of alignment between its intra- and inter-organization can be identified (Figure 5-8).

As demonstrated in Figure 5-8, during the fourth structural change, Company D has transformed from having a partially-aligned SCM framework into a misaligned framework. Before the structural change, Company D had a specific product niche market fulfilled by a lean supply chain with mass production. It had its own logistics team for product delivery, and was able to achieve high efficiency and customer feedback with its fast online delivery. The highly focused product mix and clear brand identity, fulfilled by a highly-efficient supply chain, made the business achieve great success. Furthermore, the adoption of e-commerce not only reduced significant set-up costs for Company D, of building physical infrastructure, but also expanded market reach via the online platform.

With the market turning highly-competitive, Company D gradually lost the capacity advantage. Meanwhile, urging all kinds of changes and business expansion, Company D made many hasty changes with misaligned incentives, including aggressively expanding product categories into other industries with diluted product quality, and spending significantly on marketing, advertising and sales rather than on products and services; which led the company to substantial profit erosion with high overhead costs, inventory, capital investments, and high cost of operational risk and mismanagement. With dramatic changes and unstable leadership, Company D gradually lost SCM alignment with external environment.

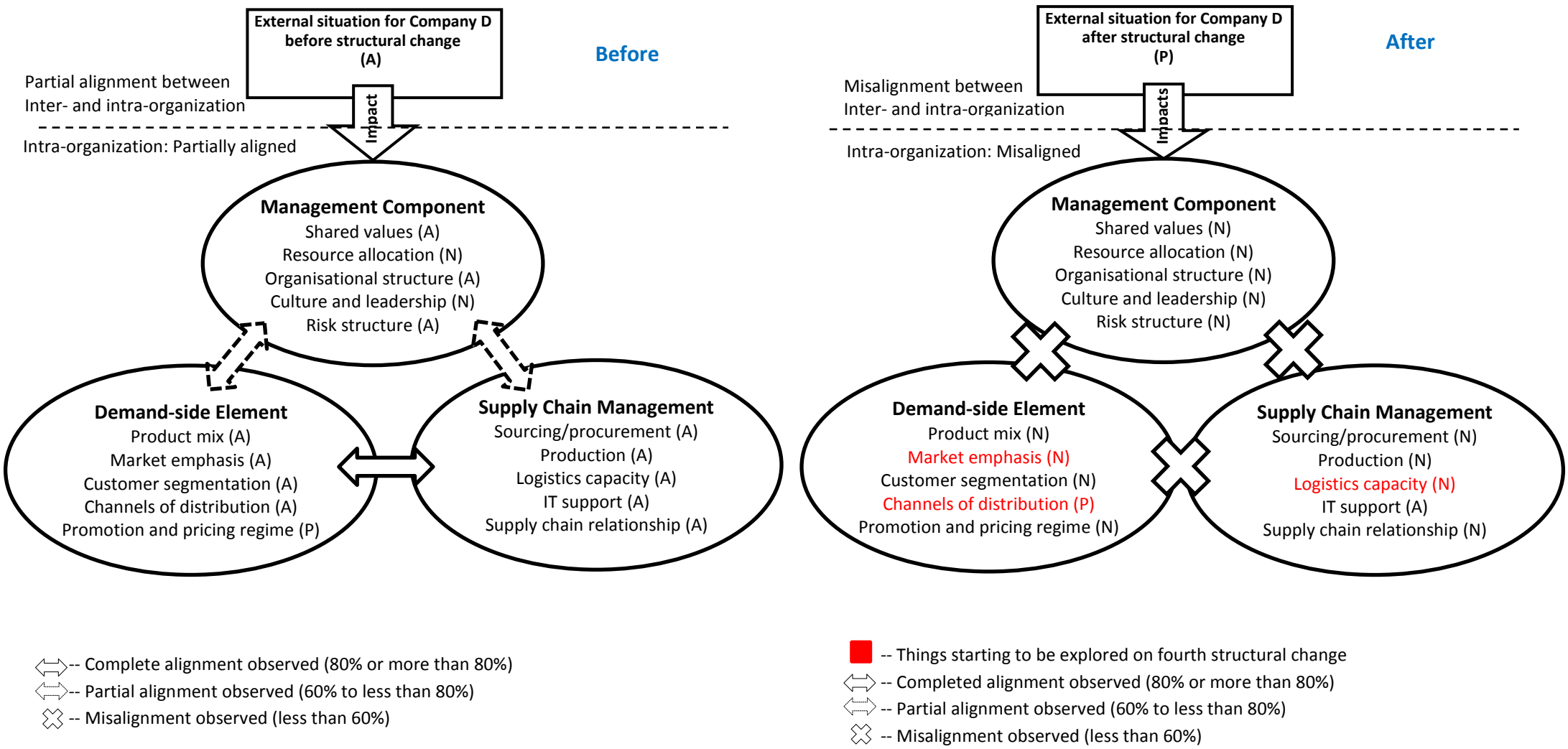


Figure 5-8: Company D's Strategic Fit of the Alignment between the Intra-and Inter-organization during the Fourth Structural Change

5.5 Company E (Multi-channel)

5.5.1 Company Background

Company E was founded in 2001 in Guangzhou, China. The brand was originally under a large international apparel organization founded in 1975, and was firstly brought to China in 1997. Two staff who worked with the original crew overseas bought out the brand and started Company E independently in the new Chinese market. With great experience in operating an apparel business, Company E designed its own collections and provided fast affordable fashion for women through multiple-channel retail networks across China. Within ten years, Company E gradually expanded their network from tier-one cities to the tier-three inland areas of China, coming to own 1,800 retail stores covering approximately 300 cities across China.

As one of the most famous female apparel brands in the current local market, Company E has a clear niche of targeting the middle market with an affordable price. The products have drawn great popularity among the working class with an urban fashion style. Starting from the 2000s, as the market grew, with saturation in most of the tier-one cities, the company started to submerge its business into the inland regions using a franchise network. After 2010, Company E decided to extend its market by adopting an e-commerce network. Collaborating with other third-party business-to-customer (B2C) platforms, such as Taobao.com and Tmall.com, Company E began to sell its products online in 2011. This allowed the brand to emerge into a wider range of consumer bases without spending much on building physical stores. Taking advantage of e-commerce, the company's sales revenue rocketed to over RMB9 billion, and it became one of the top sellers in the local fashion market in 2011.

Feeling the pressure of large stocks, in 2012, Company E downsized the scale of its franchising from 50% to 28%, in order to better control its supply chain through direct ownership. Meanwhile, the online store also opened a platform to market the inventory products through sales campaigns, and to output the over-production into inland areas where there was resource scarcity. Apart from selling online, Company E launched a mobile platform by working with another third-party media company, Tencent Limited[10] in 2014. The new application for mobile and tablet shoppers not only provided a convenient shopping experience for new generation users but also enhanced customer

[10] Tencent limited is a Chinese investment holding company whose subsidiaries provide media, entertainment, Internet and mobile phone value-added services, and operate online advertising services in China. Tencent's many services include social networks, web portals, e-commerce, and multiplayer online games. Its offerings include the (in China) well-known instant messenger, Tencent QQ, and one of the largest web portals in China, QQ.com. Mobile chat service WeChat has helped to bolster Tencent's continued expansion into smartphone services.

services through social media interaction. In 2014, the company launched its official online portal, which serves mainly for marketing its brand profile and enhancing media exposure. Figure 5-9 shows the developmental timeline of Company E.

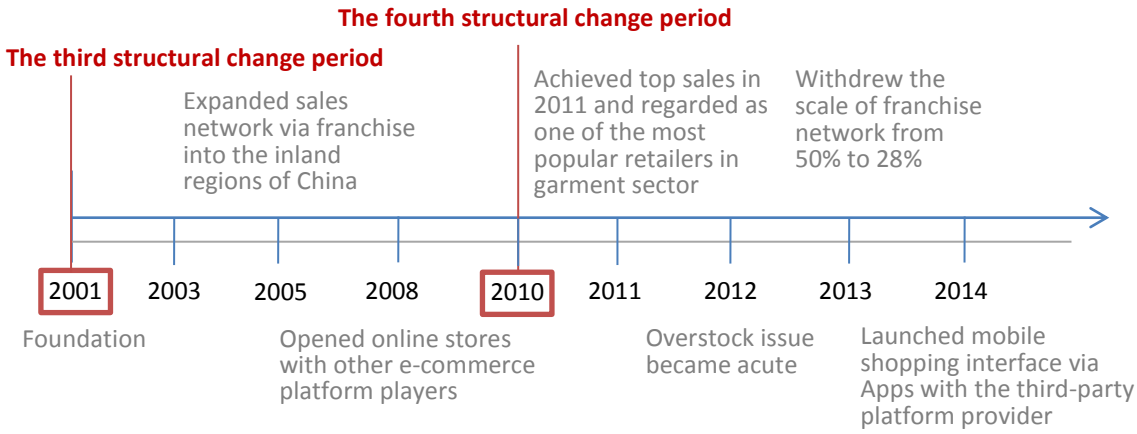


Figure 5-9: A Development Timeline of Company E

5.5.2 Transitional SCM Changes to the External Impacts

Throughout the 2000s, the local apparel market had a relatively low market concentration due to the early emergence of the private market. As more and more women chose to work in society, the role of the female became more and more independent; and they are now considered equally capable of working in the business environment. Women's office-wear for various working occasions and functions had largely emerged by the mid-2000s, long after the men's suits and shirts clothing category. In the last ten years to date, urban fashion for women has started to grow with a great diversity in styles, which has transformed this niche into a highly competitive market during the fourth structural change.

The following section explores the transitional SCM changes made by Company E during the period of the fourth industrial structural change. It specifically discusses the operational changes made by the company in the demand and supply side of the elements, and strategic changes made in the management components, in an attempt to address the first two subsidiary research questions.

Demand-side Elements

In terms of product development, Company E has tried to introduce more design elements to expand the themes and occasions in one product line, for example: the company integrated casual elements into urban style for after-work or casual-Friday occasions; beach wear was introduced into the summer themes to expand the summer product collection; and accessory products, such as beach towels and hats, were introduced in line with the seasonal collection. The product range of

the company has been specified with more clear features targeting various occasions and seasonal themes, which helped to promote brand feature. According to one of the product managers in the storefront in Shanghai:

> "*We are leveraging our customers by extending our design themes and adding more on trend elements into the collections. Now, we have tried to integrate different elements to create diversity for one theme, and also use accessories to add value to make an overall outfit looking. People nowadays are after more diversity. By managing the visual display, we can introduce our customers to different ways of styling and encourage purchasing."*

Company E, as a large retailer, appears to have initiated restructuring by gradually differentiating their products and influencing consumer groups with strong marketing and customer services. By having various product mixes coordinated with the seasonal designing themes, the company can reach more market penetration. In this way, the sales skills of staff and store setup play important roles for marketing the brand and encouraging sales. Some of the pieces look simple; however, they can be dressed up by pairing them with other products or accessories. By having a clear theme for each season, Company E has demonstrated the great advantage of matching product mix and gaining a high level of product variety.

Apart from that, store location also plays an important role, in setting up the store's visual displays according to different customer groups. With the implementation of the ordering system, Company E was able to redefine its customer segmentation with more specific categories. The product manager revealed:

> *"Different stores attempt to show different sales patterns due to regional diversity. Therefore, knowing your own consumer group is important for locating your store and displaying the store based on their preferences. This also helps the store make better decisions in product ordering. For example, if a store is located near a university campus, most of coming customers are students who prefer casual wear with an affordable price. Also, if a store is located near a business centre, those customers might look for an urban classy style without considering too much on price. There will be different ways of presenting products in these two stores. As sales information will be recorded in ordering system and classified under a designated category, when making an order in system, items will be automatically displayed under the category for regional manager to make selections based on the store region."*

Although the ordering system was used for tracking the product differentiation, the system was self-developed, and has its limitations for information standardisation. Therefore, it was difficult to apply to other parties on the supply chain for process integration. The information recorded in the system

in terms of style categories depended largely on personal opinions. The categories selected were based on personal judgement of each store manager. According to the regional product manager:

> *"We once had a regional manager who preferred the white colour. She ordered 80% of products that were white. Then, that season turned out to a great amount of the overstock. It was hard to do the visual display as well. Now, the system provides us with references from the previous data and purchasing patterns. We used to order as much as we could in every order cycle. This push-based system resulted in large inventory. Now, we have a tight control on the ordering budget, and order the products based on the historical data."*

Company E attempted to seek more differentiation in its product range and targeted a specific niche with its customers. Meanwhile, with the increasing costs of maintaining a physical store, Company E decided to withdraw some of the franchises that had a low sales return, and launched its e-commerce in 2009. Considering the risk and cost of opening its own online store, Company E worked with one of the biggest e-commerce companies in China, providing B2C sales services via the Internet. The company launched its product lines on their websites, Taobao.com and Tmall.com. Until 2011, Company E had 72% of its stores in a direct network, which gave them strong control of their sales and operations. In addition, online marketing generated a substantial amount of sales and brand exposure for Company E. In 2013, Company E worked with Tencent to launch its sales on the Wei-chat application, a mobile text messaging communication service for mobile and tablet users in China, and enhanced its media exposure through social media platforms. The platform opened another window for the company to draw attention from the mobile generations. By collaborating with other third-party service providers to build multiple channels, the company has been able to reach more market penetrations with low operational costs and financial risk. Although the benefit was significant, there have been many technical issues of maintaining a multi-channel supply chain that have caused complexity in the operation, as described by the product manager:

> *"As we opened more channels, delivery became a problem. Initially, we found that problems like out-of-stock items or a requirement for a second delivery between stores are common. Some customers would like to order via mobile, as a discount is offered through the mobile platform, and picked up in store. Some like to try it first in the physical store and later order online. Customers also show different purchasing patterns, either on the Internet or mobile. Nowadays, they have more choices to make when purchasing. This simply requires more work for us to strategically manage these channels."*

In keeping with this discussion, Company E was one of the market explorers in operating a multiple-channel management practice. The operational manager recalled the channel expansion that Company E experienced:

> *"There is a significant trend of shopping via mobile and tablet, nowadays, similar to five years ago when the Internet took the place of the traditional way of shopping. We started to realise that, based on our customer behaviours, the different ways of positioning these channels and marketing the products are important. For mobile users, we tried to present it as simple as possible for the customer to identify products easily through the search catalogue. Regular rewards like discount coupons or free delivery are delivered to mobile customers. The desktop platform is good for realising new products through a look-book, displaying our product catalogue and doing seasonal sales by posting information online. Besides this, the different purchasing patterns also help us to generate sales; for example: pushing a sales campaign after 7pm as there is a surge in the online click-rate at this time of the day; or a new season product catalogue being updated on the mobile platform or social media first, as these customers attempt to shop for fashion styles. They are the potential group to become our loyal customers."*

With the increasing market competition, Company E adjusted its product mix to fit the new demand; meanwhile, it successfully developed multiple channels to deliver its excess capacities into inland areas. Although operational adjustments took place in multiple areas of demand management, Company E grew steadily through the channel expansion. The next section discusses the responses for supply chain management.

Supply-side Elements

Company E worked with over 60 OEMs located in the cities of Guangzhou and Dongguan. This region is renowned for its industrial production, and has gathered many small- and medium-sized manufacturers. The products were selected from the annual sample conference organized by the parent firm. The selected products were pushed into production in batches every three months, based on the different regions. Once the OEMs had finished the manufacturing, the products were delivered by 3PL companies into the regional distribution centres. The items and production quantity was strictly controlled by the regional budget delivered from the head office. The regional manager has responsibility for: selecting the items based on the market condition and customers' tastes; controlling purchasing budget and inventory; and achieving the annual sales target. Previously, the procurement cycle was twelve months, as the market had a stable demand. With the gradually changing environment, excessive inventory occurred, as the system had a long lead-time

and had no demand forecasting. The store warehouses were overloaded with obsolete products, as remembered by the product manager:

> *"We found a large amount of excessive stock in the storefront, especially in the franchise stores, in 2012. The traditional push-based operation lacks transparency and reflection. This led to the bullwhip effect. However, during these years we have been working on this. We are trying to get rid of inventory through marketing online or outlet sales, and control the upstream ordering by cutting budgets."*

Although company's supply pipeline still works under a push-based structure, some adjustments have been made to enhance efficiency. From the internal supply chain aspect, the sales data are now recorded electronically and sent through to the head office weekly. Recording data can facilitate the decision making in the ordering process, and enable more specific production plans in terms of production quantities and styles. Meanwhile, regular stock-takes are carried out in each store warehouse, to better control supply chain visibility and make adjustments to production plans if necessary. With respect to the aspect of market management, building multiple channels has also helped the firm channel out some inventory and expand its market share. According to the store manager:

> *"After the fourth structural change, we were required to reduce our order quantity by one-third. Now, we try to prevent overstocks. However, as most OEMs we are working with are bound by high-volume contracts for economies of scale, quality issues may occur and sometimes the products were recalled to the suppliers, which could take time as well. We also face the reality of labour costs increasing. Therefore, we might need to find new OEMs in other developing countries."*

However, in terms of upstream production and cost control, the product manager continued:

> *"Most of the apparel firms in China cannot promote certain flexibility compared with international fast fashion like Zara. Since the push system was adopted for decades, changing the system required a certain mindset and capabilities. Besides, integration between parties also takes time and effort under the ways of doing business. The top level of our company focuses significantly on sales rather than designing high value-added items. Our products are more generic with fewer requirements for speed and design, which can be leveraged as an advantage through better marketing and networking. Compared with Zara, we have different niches and different teams."*

It appears that the reform of Company E was mainly initiated via network expansion, to leverage a new market share and control efficiency in the supply chain. In the areas of downstream distribution, Company E has four distribution centres, located in the eastern area of Shanghai, the northern

region of Tianjin, the central area of Chongqing, and the southern region of Guangzhou. Sales orders generated from the expanding network of online and mobile customers were sent to the storefront warehouses by order locations, and were delivered for the last mile to the individual customers by collaborating 3PL companies. According to the store manager:

> *"We are facing management disorder when it comes down to the downstream product distribution, because all the products are delivered through the storefront warehouses, including the online customers and mobile customers. When it comes to sales campaigns in high season, it can be quite chaotic to organise the delivery and manage the warehouses. Conflicts arise, as there are different KPIs monitoring the physical network and e-commerce."*

As indicated by the discussion, Company E adopted a store fulfilment model for its multiple-channel product delivery. Although the centralised pipeline delivery limited the product flow and, in a way, controlled the product inventory, this left the managing burden to the downstream players, especially in the high ordering seasons. However, in order to achieve economic efficiency, Company E could fully utilise the labour resources by adopting store fulfilment under the current infrastructure limitations. Although the company works with multiple 3PL companies, they are able to provide a highly efficient service with good customer services, which is under the budget consideration for Company E:

> *"The managerial level fears excessive inventory; therefore, all the products have to go through one pipeline from the storefronts. Though we could achieve better economic aggregation and inventory control through IS integration or infrastructure planning, this part of the service is still under exploration. We are facing many technical IT limitations after we implemented omni-channels. It is also causing many fragmented managerial problems and conflicts between internal parties. However, it is still a cost-effective way for us to adopt store fulfilment and work with multiple efficient 3PLs, at the moment."*

Due to the network expansion, the multiple tasks, of designing mobile applications, web management, business intelligence (BI) database development, and internal system expansion, were confronted by the company. There were many fragmented information systems providing overlapping services with different processes and interfaces, which made the transactions complicated and incurred higher management costs. The information system was applied to each individual department, and it was difficult to realise the above-mentioned systems' integration in the ordering process. For example, the data that came from the distribution centres, read from barcodes, had a different format to the data generated at the downstream point of sales (POS) that were input to an Excel spreadsheet. In addition, the order tracking information for the online and

mobile sales from the third-party service providers all have different login interfaces, sometimes self-deployed, which cannot merge with each other along the supply chain process. A united system enabled standardised processes and user-friendly interfaces, and technical support teams, are urgently needed for Company E. However, with industrial resource and infrastructure limitations, Company E has relied on rigid methods for its supply chain control, which has sustained the previous supply chain structure and the benefits between the parties.

In summary, Company E was able to balance its competitive challenges by restructuring its product mix and marketing these products by building omni-channels to leverage large amounts of new users. To organise its distribution network, Company E leveraged a trade-off between its supply chain's flexibility and efficiency by working with multiple 3PL companies in a centralised distribution network. According to an industrial report (Jiang, 2015), it is only a matter of time for industrial upgrades to occur in China, as the government has also released various incentives for local firms' technology improvements. Many firms, such as Company E, have been working on improving their information systems, although they have only focused on a few general functions of business management such as procurement and warehousing. Achieving platform integration on the whole supply chain still requires a certain amount of time. The next section discusses the response witnessed, from the company's organizational management perspective.

Strategic Management Components

When confronted by market saturation, Company E was able to further explore the market by reaching customers with various product mixes and multiple access channels. The company emphasised building a high-energy model using store fulfilment and maximising resource utilisation, based on a centralised product flow, to provide accurate and responsive customer services. In order to drive a high growth in its sales, Company E worked with other third-party companies for order handling and dispatch, since those companies had developed a system for sorting out online orders and dispatching. In this way, Company E enhanced the retail store order rate from an average of 50 orders to above 180,000 orders per day. Although the large amount of orders caused chaos in managing the storefronts, Company E had a high sales return on investment, as it did not spend much on system design or supply chain restructuring. The product manager stated:

> *"Our CEO was a sales person and focused on driving a highly efficient supply chain. Though the current system has many flaws, like fragmented IS and managing disorders, and it might not be the most effective process, it is the most efficient one."*

In terms of management issues, further explanations were drawn from the store manager:

"In order to control the inventory, we are required to make quality and stock check every month now. As all products are sent from the storefronts, it causes a large workload. We are required to do sales reports on daily, weekly and monthly sales data; however, no one reads report every day. If the products are detected with a problem, we don't really know who caused the damage. We have to listen to the regional sales manager's orders and fulfil the sales target."

During the fourth structural change, Company E pushed the products into the production pipeline with a shorter lead-time, compared with its previous working style. The supply chain still built on a make-to-stock structure; however, the spare capacity was leveraged by gaining new consumers in multiple channels, and a responsive delivery service was provided by working with multiple 3PL partners. Company E sustained the previous model by finding new capacity and building omni-channels as a key competitive edge. Whether or not the disadvantage of having an integrated process and information system will become an obstacle for future development, the company has prevented itself from being eliminated on the grounds of this market transition.

5.5.3 Summary of All Internal SCM Changes to the External Impacts

Following the above discussion, Table 5-5 summarises the data into a full array of actions made by Company E during the fourth industrial structural change in terms of the aspects of SCM elements and components, classifying the period into two stages (i.e. before and after) of the transition. By pairing the analytical information with the descriptive indictors, a corresponding logic code is identified for each discussed element and component.

The list below also contains some of the significant actions taken by the Company E in response to the impact of the fourth structural change:

- Refined product lines with more specific product differentiation in design style and categories;
- Launched order-planning system in an attempt to streamline the procurement process, and integrated it with demand management;
- Launched online store and mobile network by working with third-party e-commerce platform providers;
- Cut down the scale of franchise network, and transformed store ownership to mostly direct control;
- Launched a series of sales campaigns via online and mobile platforms in an attempt to tackle the overstock problem;

Table 5-5: A Summary of the Transitional SCM Changes of Company E

Scopes	Aspects	Observation of practices before the fourth structural change	Identified coding	Actions taken in response to the fourth structural change	Identified coding
External Environment	Market conditions	The previous product appeared to have a low level of market concentration and be located at a low competitive intensity segment.	**A**	This segment becomes increasing competitive under the fourth structural change. Other competitors share the market which makes differentiated products under the same niche.	**P**
		Internal environment for the company			
Demand-side Element	Product mix	Focused on making generic products and reducing cost of inputs.	**A**	■ Expanding product styles based on various occasions. ■ Seeking product differentiation by matching them with accessory products for specific themes and occasions. ■ Improving customer services.	**P**
	Market emphasis	The brand targeted mainstream market and aimed for provide reliable and lower price for consumers.	**A**	■ Marketing online. ■ Using mobile platforms to enhance social media exposure.	**P**
	Customer segmentation	The company owned stable product lines and had stable consumer segments.	**A**	■ Funnelling down the network to inland consumers. ■ Reaching a large amount of new users through online and mobile channels.	**P**
	Channels of distribution	Adopted franchising and directing ownerships for a wide distribution.	**A**	■ Withdrawing franchise ownership, and fully adopting direct ownership. ■ Launching online store. ■ Opening mobile application and social platform to reach new users. ■ Adopting store fulfilment for multiple channel distribution in order to control product flow.	**P**
	Promotion and price regime	Limited promotion activities with stable frequency.	**A**	■ Launching a series of sales campaigns through online and mobile network. ■ Releasing a high number of promotional activities throughout the year for a quick turnover.	**P**
Supply-side Element	Sourcing/Procurement	Worked with over 60 suppliers. Focused on economy of scale in capacity rather than quality-related standard.	**A**	■ Attempting to find cheaper materials from overseas.	**A**
	Production/Facility/Quality Control	Had a rather long lead-time cycle based on seasonal production. Produced in a high volume and at low cost.	**A**	■ Requiring shorter production lead-time, monthly. ■ Quality issues becoming acute.	**P**
	Logistics capacity consideration (Inventory and transportation)	Push-based system that worked under a predictable service and ship-to-stock model.	**A**	■ Executing more regular stock checks every week at the storefront. ■ Applying barcoding and a warehousing system for higher supply chain efficiency in the regional distribution centres. ■ Using store fulfilment for its multiple channel delivery to control inventory and product flow. ■ Working with another 3PL for last-mile online order delivery in order to enhance the customer service.	**P**
	IT support	Mainly working on manual or basic transitional system	**A**	■ Using IT to improve efficiency, such as barcoding technology to track products in transition and POS in store transactions. ■ Designing a few ERP modules, such as WMS in DCs and the order planning system. ■ Working with third-party service providers for system development, such mobile application design, online web design and BI development. ■ Trying to integrate ERP systems with 3PL's systems, since the company had fragmented multiple information systems and overlapping functions.	**P**
	Supply chain relationships	Seeking economies of scale. Push based forecasting system. Low collaboration	**A**	■ Still relying on push-based operational model and maintaining corporate benefits with the previous players in a low collaboration relationship. ■ Working with multiple third-party service providers for a responsive solution. ■ Internal management problems becoming acute.	**P**
Management Component	Shared values	The company focused on being sales-driven. It was able to provide high value for money by selling generic products with good customer services. Related sales and market campaigns were carried out to promote products.	**A**	■ Providing responsive services by building multiple distribution channels and restructuring different product mixes to create product variety and fulfil new demand.	**P**
	Resource allocation	Focus on cost reduction	**A**	■ Building multiple channels to leverage new demand. ■ Investing in sales and marketing.	**P**
	Organisational structure	Organizing clusters around sales team	**A**	■ Unclear responsibility exists between structure layers. ■ Structure mainly grounded to support sales team.	**N**
	Culture and leadership	Focused on high sales growth.	**P**	■ Investing in sales and marketing. ■ New plans are carried out to control product flow, such as cutting order budgets and regular stock checking.	**P**
	Risk structure	Low market risk as the market was not saturated	**A**	■ Working towards a responsive supply chain with multiple 3PLs for risk sharing. ■ Borrowing 3PL IS instead of investing solely in system design.	**P**

Note: P-Production; A-Administration; D-Development; I-Integration; N-Not available

- Changed to store fulfilment delivery for multiple channel delivery, and aimed to achieve higher efficiency and traceability in the outbound logistics delivery and the last mile parcel distribution;
- Improved product traceability and inventory management by introducing information technologies with third-party logistics service providers, i.e. barcode technology and warehousing management system.

5.5.4 Alignment between the Intra and Inter-Organization

In accordance with the above discussion, transitional SCM changes in Company E will be further analysed to observe any alignment during the period of transition (before and after the fourth structural change). By indicating the corresponding logic code generated under each of the elements and components of the proposed research framework, whether Company E achieved the strategic fit of alignment between its intra- and inter-organization can be identified (Figure 5-10).

As demonstrated in Figure 5-10, during the fourth structural change, Company E was able to develop and maintain a fully-aligned SCM framework. The market niche of office-wear products previously had a low competitive intensity, from the 1990s to the 2000s. With more diverse market demand and increasing competitor entry, the market has become more competitive, with rising product standards. Company E adopted an integrated distribution channel by using both direct and franchise networks before the fourth structural change. It was able to reach a wide range of consumers with high value-for-money products. The products were produced on a massive scale, with generic styles. The production lead-time could be stretched to an annual timeline, with seasonal delivery to the storefront. Taking advantage of the low labour cost in China, Company E accomplished a significant capacity expansion, with high sales growth. In order to enhance efficiency, the company adopted a ship-to-store approach based on the seasonal cycle.

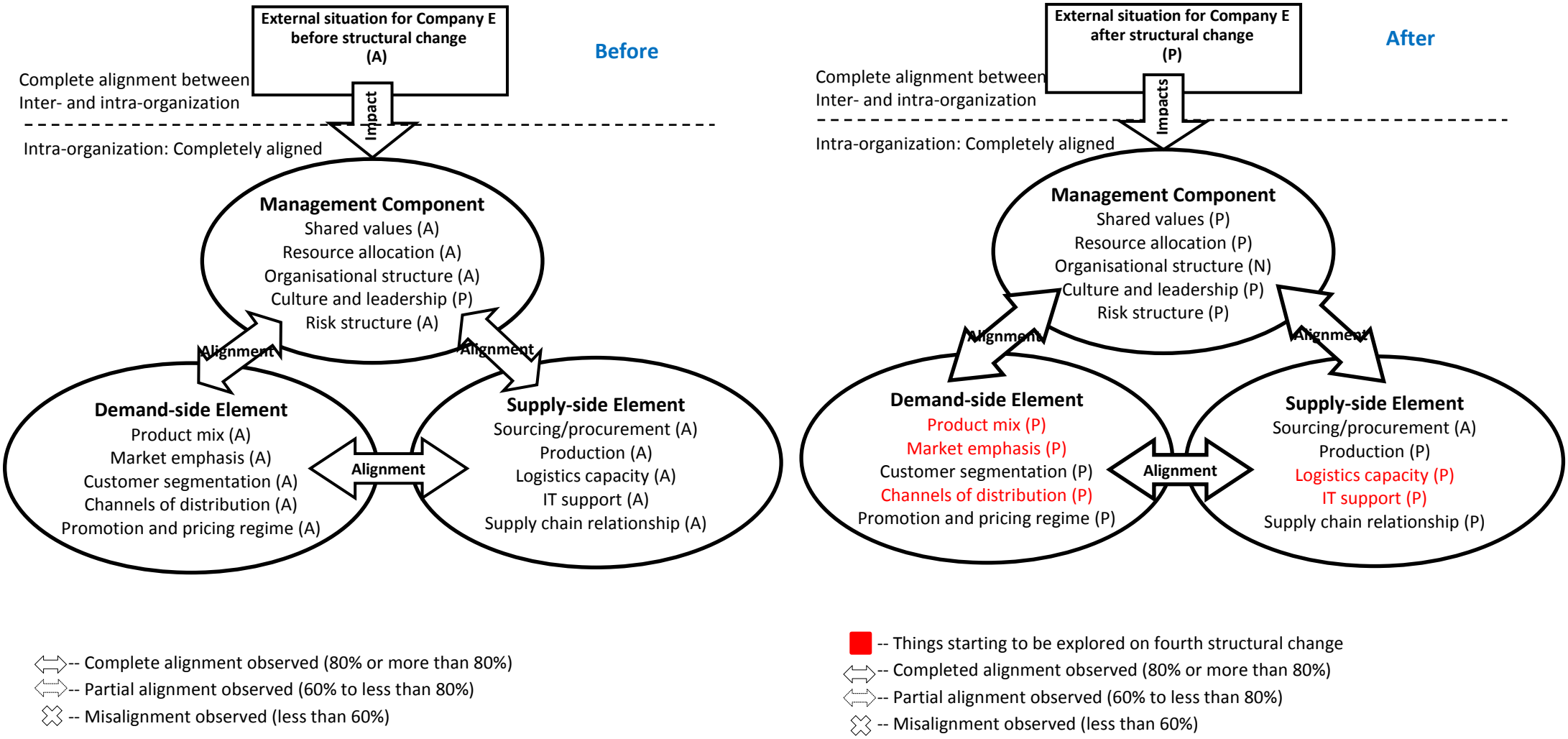


Figure 5-10: Company E's Strategic Fit of the Alignment between the Intra-and Inter-organization during the Fourth Structural Change

During the structural change, Company E was aware of a gradually saturating market. Building multiple channels with a low cost of investment became the method of exploring the new market. Working with third-party service providers for channel expansion not only provided a solution with low set-up costs but also developed a large number of new customers. In order to fulfil the diverse customer segments, Company E delivered its products by store fulfilment, in order to control the product flow for high efficiency and to prevent overstocks. This method was cost saving, as the company was not required to build a new fulfilment system for operating the multiple channels. It worked with an e-commerce partner that had an IS platform for the sorting out of orders. The system was able to dispatch the orders based on identifying Company E's regional stores in different locations. By sending the electronic purchase orders to Company E's distribution centre, the products were sent to the designated retail stores. With this series of methods, Company E was able to find itself a new market position. However, the difference between Company E, and other firms that also tried to apply channel expansion for structural reform but failed, has remained its product competitiveness. The product mix was competitive enough for the company to adopt this method, and assured their consumers' buying attention. Although Company E was able to find a new trade-off in its supply chain, the remaining problems, such as overlapping office systems and the hidden cost of management disorder, may be a risk for future development.

5.6 Summary

This chapter has provided a comprehensive within-case analysis for the five companies. Following the introduction on the firm's background, transitional changes of each firm on the external impacts were identified, and discussed from the aspects of SCM elements, and strategic components. A full array of actions encoded with the corresponding logic symbols (P-A-D-I) were then provided in a summary table, which helped to determine the strategic fit of alignment of each organization during the fourth industrial structural change.

CHAPTER 6: CROSS-CASE COMPARISON FINDINGS

In this chapter, a cross-case comparison is presented to observe any replication of transitional patterns with similarities and differences across the five case companies. Based on the within-case analysis, transitional changes in the five companies in response to external market changes are cross-compared from the three main aspects, i.e. the demand-side elements, supply-side elements, and strategic management components, addressed in the three sections below, respectively.

6.1 Cross-case Comparison between the Demand-side Elements

The results of the cross-case comparison in terms of the demand-side elements are presented in Table 6-1. As demonstrated, all firms intended to expand sales capacity by developing multiple retail networks, and this was delivered in various ways. With the popularity of e-commerce and online shopping in China, some apparel firms attempted to leverage sales capacity by working with third-party e-commerce platform players, i.e. Companies A and E; others endeavoured to develop own online store, i.e. Companies B and D. Among the five interviewed companies, four launched online networks. Companies B, D and E took a step further by launching mobile applications and social media platforms. Besides this, the majority of them, i.e. Companies B, C and E, encountered the problem of high operational costs occurred from a non-direct holding network, i.e. franchise stores located in the tier-two and -three cities of China. In response to that, these companies launched a gradual transfer of the franchise network to direct holding. However, considering the performance of building various distribution channels, only two companies have made a successful internal transformation in response to the external market dynamism. For instance, targeting the high-end, less-competitive market segment, Company C was able to deliver a series of high-end design products in a mix with limited market reach, by building all-in-one experience stores in few tier-one cities, as opposed to building online stores like the other companies. Similarly, targeting a highly competitive market segment, Company E worked with several third-party platform providers in an attempt to develop wide market coverage, and adopted store fulfilment to control the downstream product flow.

In terms of market emphasis and promotion, the marketing and sales methods have become increasingly diverse. In addition to the traditional method, e.g. commercial TV advertising, a series of new promotional methods appeared, for instance, using social media and online platforms for augmented brand image and sales promotion, and implanting viral seeds for higher web exposure. As shown in Table 6-1, many companies, mainly the private ones, adopted a test-and-go mentality with sales promotion, and utilized various marketing methods under multiple channels.

Table 6-1: The Results of the Cross-case Comparison for the Demand-side Elements

Demand-side Elements	Company A (SOE)	Code	Company B (Franchised)	Code	Company C (SPA)	Code	Company D (B2C)	Code	Company E (Multi-channel)	Code
External market conditions after the fourth structural change	Shrinking profit with increasing cost. The product market has changed into conditions with higher competitive intensity.	**P**	High competitive intensity and high risk. Market differentiation emerged in the growing market.	**P**	Aiming towards a market share with low competitive intensity but high uncertainty. The product segments are augmented in a protected environment.	**I**	This segment became increasingly competitive under the fourth structural change. Other competitors share the market, which means there are many different products under the same niche.	**P**	This segment became increasingly competitive under the fourth structural change. Other competitors share the market, which means there are many different products under the same niche.	**P**
Internal company environment										
Product mix	■ Trying to imitate designs for profile differentiation, but lacking profile consistency.	**N**	■ Studying other product mixes and supply chain strategies; however, it found it difficult to re-identify itself through upgrading its product mix. ■ Unable to fulfil its new customers with its current product range.	**N**	■ Focusing on improving fabric designs and techniques. ■ Improving the efficiency of product development; strengthening the design cycles with the market lifecycle.	**I**	■ Expanding product lines dramatically into other industries. ■ Degenerating quality and design.	**N**	■ Expanding product styles based on various occasions. ■ Seeking product differentiation by matching them with accessory products for specific themes and occasions. ■ Improving on customer service.	**P**
Market emphasis	■ Regarding itself as a high-end brand; however, brand cannot match with product mix and customer expectations.	**N**	■ The products failed to reach the new youth generation. ■ Gradually losing its brand identity. ■ Investing significantly to create another youth fashion brand expecting high growth; however, the return on sales is not promising and also causes brand confusion with its main brand.	**N**	■ Aligning brand image with the product development. ■ Opening all-in-one experience stores to market its brand culture and upgrade the brand equity.	**I**	■ Making online advertisements and blogs for extensive social media exposure and brand awareness. ■ Creating memes to boost the online click rate.	**N**	■ Marketing online. ■ Using mobile platform to enhance social media exposure.	**P**
Customer segmentation	■ Losing previous clients as cost increased. ■ Opening retail stores to target high value-added local consumers; however, product mix cannot fulfil the customers' needs.	**N**	■ Gradually losing the connection between its products and customers.	**N**	■ Upgrading to target high-end VIP customers. ■ Strengthening VIP services, such as organising various reward activities and discounted prices. ■ Developing a community to have a strong bond with its loyal customers.	**I**	■ Losing target niche. ■ Negative consumer reviews.	**N**	■ Funnelling down the network to inland consumers. ■ Reaching a large amount of new users through online and mobile channels.	**P**
Channels of distribution	■ Opening online channel. ■ Attempting to reduce the dependence on selling through the internal network.	**P**	■ Withdrawing franchise stores. ■ Investing in building online store.	**P**	■ Downsizing retail stores from 100 shops to 60 shops; most are direct ownership. ■ Working with franchise stores collaboratively, with clear KPI standards. ■ Opening a few all-in-one experience stores.	**I**	■ Opening mobile/tablet platform. ■ Integrating the mobile network with online commerce for higher social exposure.	**P**	■ Withdrawing franchise ownership, and fully adopting direct ownership. ■ Launching online store. ■ Opening mobile shopping and social platform to reach new users. ■ Adopting store fulfilment for multiple channel distribution in order to control product flow.	**P**
Promotion and price regime	■ Discounting the prices for the online sales campaigns.	**N**	■ The product cannot sell well and maintain a competitive price, as costs have increased.	**N**	■ With more innovative collections and quality released, price scales are upgraded from RMB500–800 to RMB1,000–1,500 ■ Special discount, only for VIPs. ■ Having annual sales campaigns one or two times.	**I**	■ Using the online platform for sales campaigns not only for its own brand but for other brands to get rid of inventory.	**N**	■ Launching a series of sales campaigns through online and mobile networks. ■ Releasing a high number of promotional activities throughout the year for a quick turnover.	**P**

Although significant resources were delivered in this area, as in Companies B and D, some results were not expected. Many mentioned in the interviews that these results were attributed to inadequate product development and demand management. Only Companies C and E have successfully identified their market emphases with aligned marketing methods and product mix.

In summary, companies eager for extensive sales capacity expansion, and only focusing on building sales contact points and promoting infrastructures, could more easily find themselves losing their brand features and product niche during the structural change period. In addition, private companies have been more willing to react to the external changes in demand-side elements, as opposed to the stated-owned enterprise with a less-motivated corporate incentive.

6.2 Cross-case Comparison between the Supply-side Elements

The results of the cross-case comparison for the demand-side elements are presented in Table 6-2. As demonstrated, with the production cost increase, some companies such as Companies A and E attempted to relocate their suppliers in neighbouring countries for cheaper production cost. However, a series of other issues occurred, i.e. higher delivery cost and high cost of training, as a supply chain trade-off. Realizing that it would not be an easy task, many firms, i.e. Companies B, C and E, shifted focus to improving logistics efficiency to reduce the total supply chain cost. For instance, Company E worked with multiple third-party service providers in terms of cargo distribution from the suppliers to the distribution centre and storefront warehouses, and last-mile parcel delivery from the store warehouses to the end customer. Store fulfilment method was adopted in Company E in an attempt to centralize the product flow and control the inventory. Meanwhile, the third-party logistics company also provided related information system for warehouse management.

Overstock problem was widely mentioned in all interviewed firms; which also corroborates the literature review of this study. Product price was marked down for cheaper sales. Companies B, C and E were aware of the importance of inventory control, and released a series of monitor initiatives, for example: working with third-party logistics providers for a shared IT platform; introducing order procurement system; and regular stock checks. This has rendered higher supply chain traceability and efficiency, and enhanced collaboration among the supply chain partners.

Table 6-2: The Results of the Cross-case Comparison for the Supply-side Elements

Supply-side Elements	Company A (SOE)	Code	Company B (Franchised)	Code	Company C(SPA)	Code	Company D (B2C)	Code	Company E (Multi-channel)	Code
External market conditions after the fourth structural change	Shrinking profit with increasing costs. The product market has changed to conditions with higher competitive intensity.	**P**	High competitive intensity and high risk. Market differentiation emerged in the growing market.	**P**	Aiming towards a market share with low competitive intensity, but high uncertainty. The product segments are augmented in a protected environment.	**I**	This segment became increasingly competitive under the fourth structural change. Other competitors share the market, which means that there are many different products under the same niche.	**P**	This segment became increasingly competitive under the fourth structural change. Other competitors share the market, which means that there are many different products under the same niche.	**P**
Internal company environment										
Procurement/Supplier management	■ Material costs increasing. ■ Sourcing in neighbour countries for cheaper costs.	**A**	■ Material costs increasing.	**A**	■ Looking for skilful suppliers with an innovative and open mind on material development. ■ Focusing on improving quality. ■ Aiming to work collaboratively.	**D**	■ Losing quality control of suppliers. ■ Reordering products that will not sell. ■ Evolvement in g*uanxi* leveraging for a negative purpose.	**N**	■ Attempting to find cheaper materials from the overseas.	**A**
Production/Manufacturing flow management	■ Migrating the factories to inland areas and opening a business branch in Cambodia. ■ Investing in new machinery.	**A**	■ Quality problem becomes acute since the OEMs are living under the profit margin.	**A**	■ Integrating different techniques into the production process. ■ Low volume, high value-added operation. ■ Attempting to realise a more efficient production schedule consistent with product design cycles.	**I**	■ Keeps reproducing the same order. ■ Losing control of standards in production due to the pursuit of the lowest cost.	**N**	■ Requiring shorter monthly production lead-times. ■ Quality issues become acute ■ Using store fulfilment for its multiple channel delivery to control inventory and product flow.	**P**
Logistics capacity	■ Selling inventory through the online network.	**N**	■ Marking down the price and doing sales campaigns online and in outlets. ■ Investing money in reinforcing the logistics team.	**P**	■ Process integration. ■ Considering reducing inventory. ■ Sharing information on the supply chain for demand forecasts.	**I**	■ Stock piling inventory ■ Closing a few DCs for cost saving. ■ Delivery errors increasing.	**N**	■ Executing more regular stock checks every week in the retail stores. ■ Applying barcoding and a warehousing system for higher supply chain efficiency in the regional distribution centres. ■ Working with another 3PL for last-mile online order delivery in order to enhance customer service.	**P**
IT support	■ Lacking development in internal IT; it still uses the legacy system.	**A**	■ Although investing money in developing some ERP modules, the realisation of information integration between the fragmented processes still takes time.	**A**	■ Focusing on CRM and VMI. ■ Integrating different functions for sharing information.	**I**	■ Maintaining the previous transactional system.	**A**	■ Using IT to improve efficiency, such as barcoding technology to track products in transition and POS in store transactions. ■ Designing a few ERP modules, such as WMS in DCs and order planning system ■ Working with third-party service provider for system development, such as mobile app or online web design ■ Trying to integrate ERP systems with 3Pls systems, since the company had fragmented multiple information systems and overlapping functions.	**P**
Supply chain relationships	■ Internal connection wanes as the government cuts subsidies. ■ Internal suppliers have to work with other private firms to survive.	**N**	■ Working with logistics team for fast delivery. ■ Responsiveness has improved by developing information systems.	**P**	■ Strengthening IS for an integrated solution on the supply chain. ■ Attempting to build more collaborative partnerships with its suppliers and OEMs for mutual benefit.	**I**	■ Looking for low cost production. ■ Using *guanxi* to build connections	**N**	■ Working with multiple third-party service providers for a responsive store fulfilment solution. ■ Internal management problems become acute.	**P**

In terms of internal IT implementation, some firms such as Company B invested significantly in self-developing internal ERP modules in a few areas, while others such as Companies C and E worked with the service providers to leverage product traceability. It is shown that there is great interest in technology development in many interviewed companies, i.e. the internal ERP modular and Big Data technologies. However, integration between these fragmented functional modules is still difficult to capitalize. Parties on the supply chain intend to use their own self-developed system, which could lead to a segmented supply chain network. Technology development also tends to focus on a few narrow areas in logistics operation, in which it is still difficult to achieve a scale of integration among the parties in the supply chains.

In terms of material sourcing and production planning, many companies show significant skill disadvantages. With a shrinking labour force, and an increasingly diverse retail market, products are required to be manufactured in a shorter lead-time, and with higher quality and productivity. However, the disadvantages, in the areas of process management and lacking skills and technique innovation, have made this transformation difficult to materialise in a short period. Among the five interviewed companies, only one, Company C, has made its way to a skill upgrade in the production process, in a way that achieves higher product and service value and targets a high-end niche market.

In summary, supply chain restructuring in the five companies was mostly initiated by improving logistics capacity, such as building an information system for warehousing and distribution management, and by gradually expanding into building high value-added capabilities for an integrated process management, and material and product development, when the external environment allowed the company to nurture a type of innovative culture and openness for the company to grow with the required technology and human resources.

6.3 Cross-case Comparison between the Strategic Management Components

The results of the cross-case comparison for the strategic management components are presented in Table 6-3. As demonstrated, most companies still kept on capacity expansion. They were eager to invest in building new infrastructures and advertising for augmented marketing image, rather than developing new skills and capabilities needed in the new dynamic changing market. Only few firms, i.e. Companies C and E, have prepared themselves for and delivered appropriate resources into developing key capabilities and corporate engagement with their staff during the structural change, hence, these firms were able to leverage a higher corporate competitiveness during the fourth structural change.

Table 6-3: The Results of the Cross-case Comparison for the Strategic Management Components

Strategic Management Components	Company A (SOE)	Code	Company B (Franchised)	Code	Company C (SPA)	Code	Company D (B2C)	Code	Company E (Multi-channel)	Code
External market condition after the fourth structural change	Shrinking profit with increasing cost. The product market has turned into conditions with higher competitive intensity.	**P**	High competitive intensity and high risk. Market differentiation emerged in the growing market.	**P**	Company E aimed towards a market share with low competitive intensity but high uncertainty. The product characteristics are augmented by products in a protected environment.	**I**	This segment becomes increasing competitive under the fourth structural change. Other competitors share the market, which make differentiated products under the same niche.	**P**	This segment becomes increasing competitive under the fourth structural change. Other competitors share the market that makes differentiated products under the same niche.	**P**
Internal company environment										
Shared values	■ With the gradual end of market protection, the company lost its competitive edge.	**N**	■ Lost the service emphasis in the business transformation.	**N**	■ Focusing on product R&D and quality improvement. ■ Strengthening internal capabilities. ■ Focusing on providing high value consumer service.	**I**	■ Losing a focus in the aggressive expansion.	**N**	■ Providing responsive services by building multiple distribution channels and restructuring a different product mix to create product variety and fulfil new demand.	**P**
Resource allocation	■ Investing in building relationship with the other business parties.	**N**	■ Investing heavily in marketing and channel distribution such as opening online platform, experience O2O stores, and mobile platforms; but not effective. ■ Investing in building internal IS. ■ Investing in improving logistics service.	**N**	■ Focusing on developing internal supply chain capabilities. ■ Resource allocation in R&D and improving consumer service, such as building experience stores and opening research labs for material design.	**I**	■ Investing heavily in marketing and advertising areas. ■ Spending on building popularity, and media exposure.	**N**	■ Building multiple channels to leverage a new demand. ■ Investing in sales and marketing.	**P**
Organizational structure	■ Still maintaining its centralized structure with a hierarchic administration.	**A**	■ Still focusing on sales growth, other functional teams playing a supportive role for sales and marketing team.	**A**	■ Moving personnel from the marketing and sales department. ■ Opening teams for supportive service. ■ Opening a purchasing team comprised of different people coming from all different vertical functional silos. The company starts a cluster-coexisting structure of vertical function and horizontal cluster.	**I**	■ Keeps changing. ■ Restructuring several times, the current one is based on functional team.	**N**	■ Unclear responsibility existing between structure layers. ■ Structure mainly grounded in support sales team.	**N**
Culture and leadership	■ Working in a top-down system with procedures and central control.	**A**	■ The culture keeps changing under the transition but mainly focusing on a fast growth.	**N**	■ Nurturing a creative team value for all staff with supportive training programmes. ■ Creating an innovative environment for young designers. ■ Carrying out extensive market research studies to develop business objectives	**I**	■ Culture keeps changing. ■ Trying different business models.	**N**	■ Investing in sales and marketing. ■ New plans are carried out to control the product flow, such as cutting order budget and regular stock checking.	**P**
Risk structure	■ With the pace of market privatization, SOEs are confronting higher market competition.	**N**	■ Not aware of market shifting. ■ Huge inventory occurred. ■ The new investment has a low ROI.	**N**	■ With years of development, the company is able to grow steadily and have a stable VIP consumer share of the local market.	**I**	■ The company is stuck in the financial problems. However, previous VC who had guanxi connection with the company might be able to save it again.	**N**	■ Working towards a responsive supply chain with multiple 3PLs for risk sharing. ■ Borrowing 3PL IS instead of developing itself.	**P**

Many companies, i.e. Companies A, B, D and E, started off the companies when the market saturation was considerably low. With limited market competition and low demand volatility, these firms have long been working under a mode of capacity expansion. Developing unique product features or niche market is not a common trait for them. Most private companies were driven by a sales-oriented business culture and incentives, and adopted a top-down corporate structure. Only Companies C and E have considered nurturing a corporate value leveraging towards a higher customer service. With the advancement of digital technology and increasing market competition, many companies are aware of the emergence of various business models and entrepreneurships, such as e-commerce and online-to-offline (O2O) channel. Some companies such as Companies B and D adopted a test-and-go mentality, boldly delivering numerous expanding projects on the way to cope with the new dynamisms. They attempted to replicate other's successful business model as a panacea for own problems, which has led to disruptive corporate leaderships. Among these interviewed companies, only Company C has initiated a consistent supply chain restructuring with an aligned corporate incentive.

Many companies show significant deficiencies in resource management. They were eager to trading on the stock market for raising more capital. However, many companies bore a high level of investment failure which led to resource misallocation, wasteful infrastructures and excess capacity. Firm like Company D, received several rounds of funding, provided by few internal trading partners and investors in a close *guanxi*. The company was undergone significant leadership disruptions, and kept replacing its board members.

In summary, as shown in Table 6-3, whether a company can leverage an aligned SCM framework appears to be closely related to the mindset of the management team. An organisation with a rigid top-down system, such as Company A, B and D can find it more difficult in the transition phase, since innovative thinking is not a common character of middle-level managers, let alone the ground-floor staff who are required to be obedient and efficient in implementing orders or decisions made by a higher authority. As such a mindset can prevent a firm from transforming itself into a flexible and adaptive enterprise during economic changes, fostering responsiveness, or finding a navigational direction during an economic structural upheaval.

6.4 Summary

This chapter has discussed the results of the cross-case comparison findings among the five companies. The findings were summarised from the three aspects: demand-side elements, supply-side elements and strategic management components. Similarities and differences across the companies were identified in an attempt to explore the common development patterns of the industry during the industrial structure change.

CHAPTER 7: DISCUSSION AND CONCLUSIONS

This chapter firstly discusses the research findings answering the three subsidiary research questions. The empirical findings are then compared with the background literature of this study; and the research implications and contributions are drawn upon the findings. Finally, limitations of this study and future research are discussed.

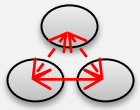
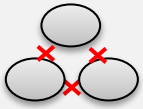
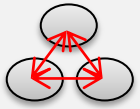
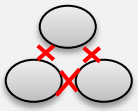
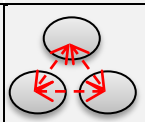
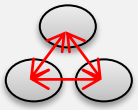
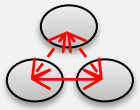
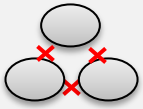
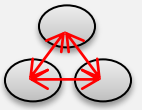
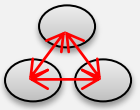
7.1 Summary of the Research Findings: Answering the Research Questions

In the following discussion, the alignment outcomes based on cross-comparing the results of five case companies are summarized in Table 7-1. The findings are presented to answer each research question.

a. *What operational changes have the Chinese FA firms made to their demand and supply process elements during the period of structural change?*

As demonstrated from the demand perspective, all firms have delivered a great amount of actions. These companies have either successfully leveraged their business operations to re-align with the new demand, or failed to identify a new competitiveness during the business expansion. The area that received the most significant restructuring is observed in the channel distribution management (see Table 7-1, highlighted in red). There has been a booming trend of company opening online stores and attempting to create multiple consumer contact points or channels, e.g. mobile application and social media account, incorporating with the traditional brick-and-mortar business model. The findings show that all firms have delivered certain initiatives in this aspect, for instance, Companies B and E opened multiple new channels comprised of online and social media platform, and collaborated with several e-commerce and cloud computing companies, such as Taobao.com and Tmall.com, to launch the channel; meanwhile, they ceased further authorizations on their franchise stores in order to cut down the operational cost and prevent channel cannibalizations. Similarly, Company C also terminated franchise agreements with the franchisors that bore significant operational difficulties, and opened a few all-in-one physical experience stores to enhance customer service and the market penetration.

Table 7-1: A Summary of the Cross-case Comparison Findings and the Alignment Outcomes

Response (screened by coding standard)			Company A		Company B		Company C		Company D		Company E	
External Market Environment		Competitive situation	Before	After	Before	After	Before	After	Before	After	Before	After
		(Market demand)	A	P	A	P	D	I	A	P	A	P
Intra-organization	Demand-side Elements	Product mix	A	N	A	N	D	I	A	N	A	P
		Market emphasis	A	N	A	N	D	I	A	N	A	P
		Consumer segmentation	A	N	A	N	P	I	A	N	A	P
		Channels of distribution	A	P	A	P	P	I	A	P	A	P
		Promotion and price	A	N	A	N	D	I	P	N	A	P
		Weighing percentage	100% A	80%N	100%A	80%N	60%D	100%I	80%A	80%N	100%A	100%P
	Supply-side Elements	Sourcing/procurement	A	A	A	A	D	D	A	N	A	A
		Manufacturing flow management/Production	A	A	A	A	P	I	A	N	A	P
		Logistics capacity	A	N	A	P	P	I	A	N	A	P
		IT implementation	A	A	A	A	D	I	A	A	A	P
		Supply chain relationships	A	N	A	P	D	I	A	N	A	P
		Weighting percentage	100% A	60%A	100%A	60%A	60%D	80%I	100%A	80%N	100%A	80%P
	Management Components	Shared values	A	N	A	N	D	I	A	N	A	P
		Resource allocation	N	N	N	N	D	I	N	N	A	P
		Organisational structure	A	A	A	A	P	I	A	N	A	N
		Culture and leadership	A	A	A	N	D	I	N	N	P	P
		Risk structure	N	N	A	N	D	I	A	N	A	P
		Weighting percentage	60% A	60%N	80%A	80%N	80%D	100%I	60%A	100%N	80%A	80%P
	Intra-organization Alignment											
	Inter-organization Alignment with External Environment		Partially aligned	Misaligned	Completely aligned	Misaligned	Partially aligned	Completely aligned	Partially aligned	Misaligned	Completely aligned	Partially aligned

Despite the fact of all companies taking initiatives in channel expansions, the incentives lying behind each differ. Most companies (Companies A, B and D) aimed to motivate product sales and advertising by expanding channels, and even more, clear the excess inventories, regarded as a chronic problem existing in most industrial sectors of China. These companies boldly invested large amount of resources to build and promote their new channels, but did not pay much attention to understanding new customer demand, and allocating a centralized product management and service with the newly added channels. Thus, the SCM changes can only be observed in the channel distribution element, regardless of the other demand elements. By comparison, Companies C and E have initiated a coherent transformation extending through all five demand-side elements in line with the corporate incentive and changing demand.

Transitional changes in supply-side elements appear not to be as conspicuous as the demand-side elements, as outlined in Table 7-1. Most were observed in the area of business logistics capacity (see Table 7-1, highlighted in red). The findings show that all firms used 3pl companies to deliver their products; and most (Companies B, C and E) were able to realize a strong logistics capacity by working with multiple 3pls providing value-added services in the restructuring period: for instance, Company D worked with 3pls for the last-mile product deliveries, and achieved a centralized store-fulfilment for its multi-channel retailing.

However, the findings also reveal that merely leaning on the logistics capacity is not sufficient to leverage an end-to-end SC restructuring. The majority of the firms (Companies A, B and D) still operated under a push-based supply chain process, which products were pre-ordered and pushed through the channels with a large amount of quantities. These firms set production at a level; and orders were built on a six-month lead-time with limited understanding of the consumer demand or potential new market trends. As an industry featuring volatile demand and increasingly higher purchasing requirements during the structure change, firms lacking an integrative supply chain and demand management would continuously suffer from excess and out-of-date inventories. Therefore, although Company B was able to realize certain logistics efficiency at the downstream, failure to correspond its supply and production with demand blunted the gains, and led the firm to having large inventory debt and sales decline.

Besides that, skill development in the sourcing and production process is a not common characteristic for the current apparel industry, according to the interviews. This could result from the companies lacking certain resource allocation in the supportive areas, such as staff training, skill improvement, and production facility upgrade. The company that was able to obtain a skill upgrade, such as Company C, has shown it is much easier to leverage a new niche market and strengthen

market competitiveness for the industrial structural change. In this regard, a higher value-added supply chain, centred on delivering customized services and products, was realized for the business, replacing the traditional method of capacity expansion. Finally, the findings show that integration between the market demand and supply fulfilment was not commonly observed in FA firms. The companies, such as Companies C and E, that were able to leverage an integrated SCM from both side elements, demonstrated a better example of understanding new market demand and readjusting internal SC capability to match, during the structural change period.

b. What strategic changes have the Chinese FA firms made to their supply chain management components during the period of structural change?

According to the interviews, most interviewees conceded that SCM strategic components have played a significant role in guiding the supply chain operation in terms of the process elements. The findings suggest that success in initiating supply chain restructuring coherently from both demand and supply side appears to be closely related to having an aligned corporate value and leadership management. For instance, both companies' (C and E) senior management teams have allocated required financial and human resources across their supply chain to match the strategic incentives that fit their emerging competitive market situation; and hence, the adjustments were observed consistently in both demand management and supply fulfilment.

Besides that, the findings show that most companies (A, B and D) were inadequate in the areas of resource management and risk prevention. These firms expended significantly on capacity expansion, building and promoting the newly-built infrastructures and virtual platforms, and advertising excess stock products on these platforms. Despite the outstanding expenditure, the outcome was not expected, as these firms still faced continuous sales decline. The incapability of identifying a competitive market share under the new situation led the businesses to have poor return on investment and sales performance. Comparatively, Companies C and E delivered more resources for developing and upgrading product features, and attempted to leverage niche products or redefine demand segments to gain market competitiveness. For example, instead of investing significantly in building its own retail channels, Company E adjusted its product offering, adding more varieties into product mixes, collaborated with multiple e-commerce and cloud computing companies to set up online-and-offline retail stores, and used store fulfilment method to centralize downstream product delivery, and thus cut down the operational cost. In this regard, Company E was able to prevent itself from any disruptive financial risks in the industrial structural change period.

Finally, common characteristics were observed in the corporate structure and leadership aspect. There was certain corporate rigidness and a lack of engagement from most senior management of

the interviewed companies (Companies A, B, and D). The case studies of Companies B and D show that higher management level was more interested in driving a highly sales-driven business plan and were unwilling to infusing system dynamism. Decision-making was more centred on the project contributing directly to improve sales and marketing, measured as a key business performance target. Interviewees from Companies A, B and D also mentioned that the companies have had a highly-controlled corporate leadership and been relucent to open to the changes. Significant conflicts were observed in the companies' (B and D) middle and senior management during the structural change period, which have led to considerable management disruptions and leadership failure. The findings also imply certain traits differentiating strategic management of SOEs and private enterprises. All private companies (Company B, C, D and E) have shown more motives in participating in market activities regardless of the positive or negative effects attributed by the actions, whereas SOE (Company A) tended to be more reluctant to react to the external changes, and to stick to the traditional system.

c. *Are the adjustments at two levels, namely operation and strategic management, aligned internally and externally with the structural change?*

As demonstrated in Table 7-1, dynamic alignment among the SCM elements and strategic components depicted in the research framework was not commonly seen in the five interviewed companies. Only two (C and E) out of five companies were able to engage required resources in product development, demand management and supply fulfilment to leverage an internal strategic fit of the alignment with the external changing market situation. In specifics, Company C aimed to leverage a high-end niche market with high returns in unit profit, and it enabled sufficient resources in areas of enhancing product development, opening five design studios, and upgrading product assortment and prices with the brand features. Pairing with these ground-floor operational changes, the high management team was also able to provide sufficient 'soft' value among the staff teams and engage the resources to enable required skill training. Similarly, Company E also had a clear demand focus targeting extensive market penetration to the large inland surplus consumers during the structural change period. The company adjusted its product range, adding more varieties to cope with the demand dynamisms, collaborated with various e-commerce companies to set up multiple sales touch points in a considerable low cost, and worked with 3pls for downstream product tracking and deliveries to reduce operational cost. With a centralized product management and store fulfilment method, this company was able to achieve a highly efficient business performance with a steady sales growth. Both companies realized a new strategic fit of the business alignment, and received positive business performances during the structural change. Thereby, the findings imply

that companies capable of leveraging a new SCM alignment between their process elements and strategic components can perform better during the structural change period.

The alignment outcome of each company also implies that the demonstration of an alignment relationship in an individual company conformed to the performance in its current situation, rather than being a verdict on the firm's future development. For instance, Company C, which was underperforming at one stage before the fourth of the structural changes, was in the process of continuously re-identifying its market situation and business competitiveness in order to develop required internal capabilities for achieving its main incentive, and it was able to realize this strategic incentive at the later stage of the development during the structural change period. Therefore, although a firm can achieve a highly-aligned strategic fit at a specific point of development, the management cannot guarantee a permanent fit, since the dynamic nature of competitive situations makes the stages of alignment a moving target.

Furthermore, the findings show that a consistent improvement in one or two elements or components of each perspective, i.e. demand-side operation, supply-side operation and strategic management, can mediate the business from any disruptive changes, motivate a moderate realignment, and render more time for firms to continuously adjust through the adaptation. For example, Company E started off the readjustment by considering a few elements simultaneously under each perspective: product mix and channel distribution of the demand process elements, logistics capacity of the supply process elements, and resource allocation of the management components; and gradually incorporated the changes into other process elements and management components. This has given a business more time in terms of nurturing staff engagement and improving business skills for the new tasks, and also for senior management foreseeing any financial difficulties or project failures caused by disruptive process restructuring. Another comparative example is demonstrated by Company D, which intended to initiate a series of significant changes all at once in the demand-side process elements that led the business into a turbulent corporate structure and leadership.

In summary, the findings of the alignment outcome corroborate with alignment theory, and suggest that companies capable of leveraging a new strategic fit alignment among the SC process elements and management components can perform better during the transformation. The indication of an alignment relationship in the individual company states the performance of its current situation rather than being a settlement on the firm's future development. Thereby, in order to survive under market dynamism, companies should continuously monitor their internal operation and assess the

firm performance in order to prepare them with the market dynamisms and improve internal capabilities as they grow.

7.2 Research Contribution and Implications

Based on the research findings, further discussion matching the reviewed literature with the research findings will be provided; and the research contributions and implications of the study will be manifested in the following discussion.

A series of market impacts were outlined in the reviewed literature, such as rising production costs, increasingly diverse demand market, and advancement of e-commerce. Table 7-2 presents a summary of common actions taken by the firms in response to the impact of the fourth structural change, and identifies the key actions led the company to a successful strategic fit of the alignment.

As revealed, common actions initiated by the majority of the interviewed companies still performed on the continuation of traditional supply and production business model, either retaining the production capacity expansion based on previous demand requirements, or using sales promotions to ease the overstock problem. Many companies attempted to gain business advantages by developing e-commerce and multiple channel retailing, and invested resources in continuous expansion. With the growing market competitions creating more diverse and volatile demand, few were aware of the importance of understanding new demand and buying behaviours, and building niche products and services under this new market condition. The findings of this study has contributed to the understanding that it is vital for businesses to consider not only using e-commerce to increase sales points and channel accessibility but also to continuously upgrade the product mix to correspond with the emerging consumer requirements, and to provide efficient avenues to fulfil the orders. The findings also specify some of the key methods adopted by the companies in terms of managing multiple channels. These include, but are not limited to: downsizing the physical franchised retail network to cut operational cost; centralizing online-and-offline product assortment, price management and information flow to keep consistency; and building strong customer relationship and brand awareness using social media platforms.

Table 7-2: Actions Taken by the Firms in Response to the Impact of the Fourth Structural Change

	External impact on the industry (reviewed literature)	Common actions taken by the five companies (findings)	Key actions taken for strategic fit of SCM alignment (findings)
Demand-side operation	■ More segmented market with diverse buying behaviours (Chen and Cheng, 2008; Zhou, 2010; Chan, 2011; Wang and Guo, 2014; Fung Business Intelligence Centre, 2014) ■ Fiercer competion on the retail market (Kwan *et al.*, 2003; Liu, 2007; Hong, 2006; Zhao, 2013; Tong and LI, 2013) ■ Thriving e-commerce (National Development and Reform Commission, 2007; Retail and Ecommerce, 2016; The Economist, 2013; Hua and Guo, 2012)	■ Set up online store in addition to the physical stores (Companies A, B, and E) ■ Launched multiple sales touch points through electronic devices (Companies B, D and E) ■ Lauched a series of sales promotions and advertising through multiple retail channels (Company B, D and E)	■ Upgraded product mixes and brand features, and continously worked on product development (Companies C and E) ■ Downsized physical franchised retail network to cut operational cost (Companies C and E) ■ Worked on understanding customer demand and emerging trend (Companies C and E)
Supply-side operation	■ Increasing manufacturing cost (Chen and Shih, 2004; Hong, 2006; Yuan and Xu, 2010; Wang and Guo, 2014) ■ Oversupply and overstock issues (Mo, 2010; Wang and Guo, 2014; Hua and Guo, 2012)	■ Continously relied on production capcity expansion (Companies A, B, and D) ■ Used sales promotions, and utilized mulitple retail channels to sell large inventories (Companies A, B, D and E)	■ Collaborated with multiple 3pls to achieve higher logistics capacity (Companies C and E) ■ Invested on enhancing information system (Companies C and E) ■ Centralized product delivery and last mile distribution by using store-fulfillment method (Company E)
Strategic management	■ Emergence of different business models (Yi and Jaffe, 2007; Yu and Ramanathan, 2012; Hua and Guo, 2012; Zhou, 2010; Chi, 2015) ■ New entrepreneurship (Kshetri, 2009; Fung Business Intelligence Centre, 2014; Retail and Ecommerce, 2016; The Economist, 2013)	■ Adopted a test-and-go practice and invested significant resources on expanding business model (Compnaies B and D)	■ Allocated required recouces to leverage coporate competitveness on the new emerging market (Companeis C and E) ■ Provided sufficient skill training and nurtured staff enagament among all levels of the management team (Company C) ■ Infused corporate dynamism (Company C)

On the other hand, with the increasingly rising labour costs, the findings highlight the important role of 3pls and the growing logistics and IT capacities for cutting the overall supply chain operational cost. Many companies intended to strengthen logistics capacity by working with multiple value-added 3pl service providers and building supportive information systems to enhance product traceability. Some of the key methods adopted by the industry in terms of resolving increasing cost include but are not limited to: adopting a centralized store fulfilment method to control the downstream product flow; assigning different tasks to various 3pls working for product delivery, tracking, assortment, and last-mile parcel dispatches; and regular stock taking to monitor inventory and restructuring the ordering process to reduce lead time.

The findings of this study also point out the deficiency of resource management and staff engagement existing in most of the companies. Although various business models, i.e. click and mortar and omni-channel retailing, emerged, most companies were not good at allocating required resources to leverage their own business model aligning with the corporate strategic incentive. The case studies show that many firms encountered disruptive changes in the corporate leadership and operations; and conflicts arose across different levels of management teams during the business model expansion period. Besides this, the firm with a traditional mindset, such as SOE, was much influenced by the remnants of state control, which required middle level managers to be obedient and efficient in implementing orders or decisions made by a senior authority. As such, corporate dynamism was not a common character of middle-level managers, and they were also not encouraged to respond to the external dynamisms.

Underpinned by the above discussion, this study summarizes a list of the following research implications for the Chinese FA industry:

- With the emerging demand trends and market opportunities, Chinese businesses should not continuously proceed with production capacity expansion, and should turn the emphasis on demand management to prevent further overproduction and oversupply problems.
- Leveraging logistics capacity is not the only way to enhance the supply chain efficiency; supply chain process mapping should be taken into consideration for more streamlined and integrative SCM. This could be leveraged through various ways, for instance, cutting supply middlemen for shorter supply chains, selecting right suppliers based on product lines and strategic partnerships, and centralizing downstream fulfilment via pooling product assortments in a few regional store warehouses and distribution centres.
- In order to facilitate demand and supply chain integration, Chinese businesses should allocate resources for strategic initiatives aligning with the corporate vision, adjust the

business structure to nurture a shared value, and engage staff and management teams with more skills training and infrastructure support.

Concurrently, government authorities can also provide appropriate avenues to mobilize the resources for industrial transformations, and alleviate the negative effect caused by overcapacity. An example of this can be related to the strategic government plan of One Belt, One Road[11] released in 2013. The project has proposed to redirect the country's domestic overcapacity and capital for regional infrastructure development to improve trade and business relations with Association of Southeast Asian Nations (ASEAN), and Central Asian and European countries. This presents an example of government's influence on the domestic economy, which gradually can manifest through the build-transfer-operate scheme in large state-owned enterprises and a few leading private companies in the industry.

7.3 Limitations and Further Research

The findings of this study have a number of limitations. Firstly, the research findings were drawn upon qualitative case studies. Although multiple case companies were selected using theoretically stratified sampling, only one case under each stratum was chosen for investigation. Selected case companies shared a various set of attributes, e.g. time of foundation, business scale, and supply chain structure. Hence, the generalizability of the findings could be further enhanced by using a larger research sample in future study.

Furthermore, the overall reliability of the case study findings can also be further improved by using more statistical evidences from the interviewed companies in terms of business performance. This can be enhanced by comparing more rigorous statistics measurements, such as sales and profit figures or return-on-investment rates, to strengthen the accuracy of the research findings.

Finally, this study was established as an exploratory research for understanding SCM development of the Chinese market, taking the FA industry as a study focus. Since SCM development is still at the nascent stage in the Chinese market, the study adopted a wide lens, viewing the existing practice with a broad-ranging SCM framework. Therefore, information were captured and investigated from the perspective of viewing the general actions and plans made by the interviewed companies to respond to the external market changes, in preference to specific day-to-day business functions and working processes.

[11] One Belt, One Road focuses on connectivity and cooperation among countries, primarily between China and the rest of Eurasia. It consists of two main components, the land-based 'Silk Road Economic Belt' and ocean-based 'Maritime Silk Road'. The strategy underlines China's push to take a bigger role in global affairs.

7.4 Conclusions

This study explored the SCM of Chinese FA businesses under the fourth industrial structural change, specifically proposing a SCM framework combining supply-side elements, demand-side elements, and strategic management components, to probe the internal SCM restructures made by individual FA companies in response to dynamic market changes. The findings of the study suggest that companies capable of leveraging a higher SCM alignment would perform better in recovering from structural change downturn and in initiating further growth.

The study developed an overarching SCM research framework that contributes to theory building in SCM research. It also proposed a P-A-D-I coding measurement underpinned by the alignment theory, in the research methodology, which supports the application of alignment theory into SCM practice. The findings of the study contribute to theory by complementing the existing theoretical implications under a different research context, and extending the implications by advising on stages of alignment progress, i.e. fully-aligned, partially aligned, and not aligned, in an attempt to provide strategic assistance for monitoring and reflecting on internal business management.

Furthermore, this research contributes to understanding of the Chinese FA market. The study provided a comprehensive review on the development of the China FA industry under the four industrial structural changes, which a limited number of studies have previously looked into. This offers the reader a foundation to understand the current market dynamism. In addition to this, the proposed alignment measurement associated with the research framework yields a strategic roadmap for entrepreneurs to develop a corporate strategy under the new competitive market situation. The findings of the study prescribe a series of practical implications for Chinese businesses in terms of formulating strategic solutions and enhancing business competitiveness. Finally, this study attempts to provide Chinese businesses with certain insights to understand the dynamic uncertainties of the market, and sheds some lights on the emerging Chinese market for the international players.

REFERENCES

Abernathy, FH, Dunlop, JT, Hammond, JH & Weil, D. 2000, 'Retailing and supply chains in the information age', *Technology in Society*, vol. 22, no. 1, pp. 5-31.

Adizes, I. 1976, 'Mismanagement Styles', *California Management Review*, vol. 19, no. 2.

Al-Mudimigh, AS, Zairi, M and Ahmed, AMM. 2004, 'Extending the concept of supply chain: The effective management of value chains', *International Journal of Production Economics*, vol. 87, no. 3, pp. 309-20.

Alsop, Zoe. 2015. 'With stocks' stellar growth over, startups gain favour', *CNBC* http://www.cnbc.com/2015/11/08/chinas-new-wave-of-angel-investors.html.

AT Kearney, 2013. 'Winning China's Apparel Market', *A.T. Kearney,* https://www.atkearney.com.au/consumer-products-retail/ideas-insights/article/-/assetpublisher/LCcgOeS4t85g/content/winning-chinas-apparel-market/10192.

Audet, D. 2007, 'Smooth as Silk? A First Look at the Post MFA Textiles and Clothing Landscape', *Journal of International Economic Law*, vol. 10, no. 2, pp. 267-84.

Barnes, L and Lea-Greenwood, G. 2006, 'Fast fashioning the supply chain: shaping the research agenda', *Journal of Fashion Marketing and Management: An International Journal*, vol. 10, no. 3, pp. 259-71.

Barratt, M. 2004. 'Understanding the meaning of collaboration in the supply chain', *Supply Chain Management: An International Journal*, *9*(1), pp. 30-42.

Beamon, BM. 1998, 'Supply chain design and analysis: Models and methods', *International Journal of Production Economics*, vol. 55, no. 3, pp. 281-94.

Bello, DC, Lohtia, R and Sangtani, V. 2004, 'An institutional analysis of supply chain innovations in global marketing channels', *Industrial Marketing Management*, vol. 33, no. 1, pp. 57-64.

Bhardwaj, V. and Fairhurst, A. 2010. Fast fashion: response to changes in the fashion industry. *The International Review of Retail, Distribution and Consumer Research*, *20*(1), pp.165-173.

Bhaskar, R. 2013, *A realist theory of science*, Routledge.

Blaikie, N. 2007, *Approaches to social enquiry: Advancing knowledge*, Polity.

Brandt, L. and Rawski, T.G. eds. 2008. *China's great economic transformation*. Cambridge University Press.

Broadbent, M and Weill, P. 1993, 'Improving business and information strategy alignment: Learning from the banking industry', *IBM Systems Journal*, vol. 32, no. 1, pp. 162-79.

Browne, J and Zhang, J. 1999, 'Extended and virtual enterprises–similarities and differences', *International Journal of Agile Management Systems*, vol. 1, no. 1, pp. 30-6.

Bruce, M, Daly, L and Towers, N. 2004, 'Lean or agile: a solution for supply chain management in the textiles and clothing industry?', *International Journal of Operations & Production Management*, vol. 24, no. 2, pp. 151-70.

Bruce, M and Daly, L. 2006, 'Buyer behaviour for fast fashion', *Journal of Fashion Marketing and Management*, vol. 10, no. 3, pp. 329-44.

Brun, A and Castelli, C. 2008, 'Supply chain strategy in the fashion industry: developing a portfolio model depending on product, retail channel and brand', *International Journal of Production Economics*, vol. 116, no. 2, pp. 169-81.

Bryman, A. and Bell, E. 2015. *Business research methods*. Oxford University Press, New York.

Brynjolfsson, E, Hu, YJ & Rahman, MS. 2013, 'Competing in the age of omnichannel retailing', *MIT Sloan Management Review*, vol. 54, no. 4, pp. 23-9.

Canever, MD, Van Trijp, HC and Beers, G. 2008, 'The emergent demand chain management: key features and illustration from the beef business', *Supply Chain Management: An International Journal*, vol. 13, no. 2, pp. 104-15.

Caniato, F, Caridi, M & Moretto, A. 2013, 'Dynamic capabilities for fashion-luxury supply chain innovation', *International Journal of Retail & Distribution Management*, vol. 41, no. 11/12, pp. 940-60.

Cao, N, Zhang, Z, To, KM and Ng, KP 2008, 'How are supply chains coordinated?: An empirical observation in textile-apparel businesses', *Journal of Fashion Marketing and Management*, vol. 12, no. 3, pp. 384-97.
Cao, Z, Huo, B, Li, Y & Zhao, X 2015, 'The impact of organizational culture on supply chain integration: a contingency and configuration approach', *Supply Chain Management: An International Journal*, vol. 20, no. 1, pp. 24-41.
Castelli, CM & Brun, A 2010, 'Alignment of retail channels in the fashion supply chain: an empirical study of Italian fashion retailers', *International Journal of Retail & Distribution Management*, vol. 38, no. 1, pp. 24-44.
Chan, PY 2011, 'Fashion retailing in China: An examination of its development and issues', *Advances in International Marketing*, vol. 21, pp. 75-110.
Chandra, C and Kumar, S 2000, 'An application of a system analysis methodology to manage logistics in a textile supply chain', *Supply Chain Management: An International Journal*, vol. 5, no. 5, pp. 234-45.
Chandra, C and Kumar, S 2000, 'Supply chain management in theory and practice: a passing fad or a fundamental change?', *Industrial Management & Data Systems*, vol. 100, no. 3, pp. 100-14.
Chao, W. and Lu, L. (2015), "Textile industry at the crossroads of change", *China Daily,* available at: http://usa.chinadaily.com.cn/epaper/2015-01/05/content_19240996.htm (accessed at 13 March 2017).
Charmaz, K and Belgrave, L 2002, 'Qualitative interviewing and grounded theory analysis', *The SAGE handbook of interview research: The complexity of the craft*, vol. 2, p. 2002.
Chen, C and Shih, H 2004, 'The impact of WTO accession on the Chinese garment industry', *Journal of Fashion Marketing and Management: An International Journal*, vol. 8, no. 2, pp. 221-9.
Chen, H, Daugherty, PJ and Landry, TD 2009, 'Supply chain process integration: A theoretical framework', *Journal of Business Logistics*, vol. 30, no. 2, pp. 27-46.
Chen, L and Cheng, Y 2008, '浅析我国纺织服装产业竞争力的相关因素', *国际商务论坛*, pp. 37-9.
Chen, T, Larsson, A and Mark-Herbert, C 2014, 'Implementing a collective code of conduct – CSC9000T in Chinese textile industry', *Journal of Cleaner Production*.
Chen, Y 2009, '我国纺织服装业升级问题研究', *Industry Review*.
Chi, T., 2011, 'Building a sustainable supply chain: an analysis of corporate social responsibility (CSR) practices in the Chinese textile and apparel industry', *Journal of The Textile Institute*, vol. 102, no. 10, pp. 837-48.
Chi,T., 2015, 'Business Contingency, Strategy Formation, and Firm Performance: An Empirical Study of Chinese Apparel SMEs', *Administrative Sciences*, vol. 5, no. 2, pp. 27-45.
Childerhouse, P, Aitken, J and Towill, DR 2002, 'Analysis and design of focused demand chains', *Journal of Operations Management*, vol. 20, no. 6, pp. 675-89.
Childerhouse, P and Towill, D 2000, 'Engineering supply chains to match customer requirements', *Logistics Information Management*, vol. 13, no. 6, pp. 337-46.
Chinese Textile Industrial Union 2012, 'The end of production cost advantage for China', *Chinese Textile Industrial Union*.
Chopra, S. and Meindl, P., 2007. Supply chain management. Strategy, planning & operation. *Das summa summarum des management*, pp. 265-275.
Chorn, NH 1991. 'The "alignment" theory: Creating strategic fit', *Management Decision*, vol. 29, no. 1.
Christopher, M., 1998. *Logistics and Supply Chain Management: strategies for reducing cost and improving service*. London. *Financial times*.
Christopher, M 2000, 'The Agile Supply Chain: Competing in Volatile Markets', *Industrial Marketing Management*, vol. 29, no. 1, pp. 37-44.
Christopher, M and Gattorna, J 2005, 'Supply chain cost management and value-based pricing', *Industrial Marketing Management*, vol. 34, no. 2, pp. 115-21.

Christopher, M, Lancioni, R and Gattorna, J 1985, 'Managing international customer service', *International Marketing Review*, vol. 2, no. 1, pp. 65-70.
Christopher, M, Lowson, R and Peck, H 2004, 'Creating agile supply chains in the fashion industry', *International Journal of Retail & Distribution Management*, vol. 32, no. 8, pp. 367-76.
Christopher, M and Jüttner, U 2000, 'Developing strategic partnerships in the supply chain: a practitioner perspective', *European Journal of Purchasing & Supply Management*, vol. 6, no. 2, pp. 117-27.
Christopher, M, Peck, H and Towill, D 2006, 'A taxonomy for selecting global supply chain strategies', *The International Journal of Logistics Management*, vol. 17, no. 2, pp. 277-87.
Christopher, M and Towill, D 2001, 'An integrated model for the design of agile supply chains', *International Journal of Physical Distribution & Logistics Management*, vol. 31, no. 4, pp. 235-46.
Chuang, L 2008, 'A Strategic Study for Quickening Brand Building of Chinese Textiles and Garment Industry', paper presented to Business and Information Management, 2008. ISBIM'08..
CMIC 2000, *China's retail sales in 1980-1990*.
Cooper, DR and Schindler, PS 2003. *Business Research Methods*. McGraw-Hill: New York
Cooper, MC, Lambert, DM & Pagh, JD 1997, 'Supply chain management: More than a new name for logistics', *International Journal of Logistics Management, The*, vol. 8, no. 1, pp. 1-14.
Creswell, JW 2013, *Research design: Qualitative, quantitative, and mixed methods approaches*, Sage Publications.
Croom, S, Romano, P & Giannakis, M 2000, 'Supply chain management: an analytical framework for critical literature review', *European Journal of Purchasing & Supply Management*, vol. 6, no. 1, pp. 67-83.
Das, M. and N'Diaye, P., 2013, 'The end of the cheap labour', *International Monetary Fund, Finance and Development*, Vol. 50, No. 2.
Davenport, T.H., 1993. *Process innovation: Reengineering work through information technology*. Harvard Business Press.
Davis, JP, Eisenhardt, KM & Bingham, CB 2007, 'Developing theory through simulation methods', *Academy of Management Review*, vol. 32, no. 2, pp. 480-99.
Daymon, C & Holloway, I 2002, *Qualitative research methods in public relations and marketing communications*, Psychology Press.
De Brito, M.P., Carbone, V. and Blanquart, C.M. (2008), 'Towards a sustainable fashion retail supply chain in Europe: Organisation and performance', *International Journal of Production Economics*, Vol. 114, No. 2, pp. 534-553.
De Treville, S, Shapiro, RD & Hameri, A-P 2004, 'From supply chain to demand chain: the role of lead time reduction in improving demand chain performance', *Journal of Operations Management*, vol. 21, no. 6, pp. 613-27.
Defee, CC and Fugate, BS 2010, 'Changing perspective of capabilities in the dynamic supply chain era', *The International Journal of Logistics Management*, vol. 21, no. 2, pp. 180-206.
Denzin, NK 1994, The art and politics of interpretation.
Dickson, MA, Lennon, SJ, Montalto, CP, Shen, D & Zhang, L 2004, 'Chinese consumer market segments for foreign apparel products', *Journal of Consumer Marketing*, vol. 21, no. 5, pp. 301-17.
Dickson, MA & Zhang, L 2004, 'Supplier-retailer relationships in China's distribution channel for foreign brand apparel', *Journal of Fashion Marketing and Management: An International Journal*, vol. 8, no. 2, pp. 201-20.
Doyle, SA, Moore, CM and Morgan, L 2006, 'Supplier management in fast moving fashion retailing', *Journal of Fashion Marketing and Management: An International Journal*, vol. 10, no. 3, pp. 272-81.
Eisenhardt, K.M., 1989. Building theories from case study research. *Academy of management review*, *14*(4), pp.532-550.

Eisenhardt, KM & Graebner, ME 2007, 'Theory building from cases: Opportunities and challenges', *Academy of Management Journal*, vol. 50, no. 1, pp. 25-32.
Ellram, Lisa M. and Martha C. Cooper 1990, "Supply chain management, partnership, and the shipper-third party relationship", *The International Journal of Logistics Management*, Vol.1, No.2, pp. 1-10.
Engardio, Peter, 2005, "'China Is a Private-Sector Economy'". Bloomberg BusinessWeek. https://www.bloomberg.com/news/articles/2005-08-21/online-extra-china-is-a-private-sector-economy.
Esper, TL, Ellinger, AE, Stank, TP, Flint, DJ and Moon, M 2010, 'Demand and supply integration: a conceptual framework of value creation through knowledge management', *Journal of the Academy of Marketing Science*, vol. 38, no. 1, pp. 5-18.
Euromonitor International (2014), "China to overtake US as Largest Apparel Market by 2017", available at: http://blog.euromonitor.com/2014/04/china-to-overtake-us-as-largest-apparel-market-by-2017.html (access 14 May 2017).
Feng, K, Shen, Q & Zhao, S 2014, 'Institutional influence, cognition and competence of top managers and innovative firms', *Chinese Management Studies*, vol. 8, no. 1, pp. 41-65.
Fisher, ML 1997, 'What is the right supply chain for your product?', *Harvard Business Review*, vol. 75, pp. 105-17.
Flint, DJ 2004, 'Strategic marketing in global supply chains: Four challenges', *Industrial Marketing Management*, vol. 33, no. 1, pp. 45-50.
Flynn, BB, Huo, B and Zhao, X 2010, 'The impact of supply chain integration on performance: A contingency and configuration approach', *Journal of Operations Management*, vol. 28, no. 1, pp. 58-71.
Frohlich, MT and Westbrook, R 2002, 'Demand chain management in manufacturing and services: web-based integration, drivers and performance', *Journal of Operations Management*, vol. 20, no. 6, pp. 729-45.
Fung Business Intelligence Centre (2013), "China's apparel market, 2013", available at: http://www.funggroup.com/eng/knowledge/research/industry_series23.pdf (accessed 10 May 2016).
Fung Business Intelligence Centre (2014), "China's apparel market, 2014", available at: http://www.funggroup.com/eng/knowledge/research/industry_series25.pdf (accessed 10 May 2016).
Gattorna, J., 1991, 'Building relationships in distribution channels', *International Journal of Physical Distribution & Logistics Management*, vol. 21, no. 8, pp. 36-9.
Gattorna, J., 1998, *Strategic supply chain alignment: Best practice in supply chain management*, Gower Publishing.
Gattorna, J., 2009. *Dynamic supply chain alignment*. Farnham, UK: Gower Publishing Ltd.
Gattorna, J., 2010, *Dynamic supply chains*, Prentice Hall.
Golicic, SL, Davis, DF and McCarthy, TM 2005, 'A balanced approach to research in supply chain management', *Research methodologies in supply chain management*, Springer, pp. 15-29.
Gong, M and Gen, Q 1998, '中国的成衣市场与营销策略', *www. cnki.net*, vol. 72.
Gunasekaran, A, Lai, K-h and Edwin Cheng, TC 2008, 'Responsive supply chain: A competitive strategy in a networked economy', *Omega*, vol. 36, no. 4, pp. 549-64.
Gunasekaran, A and Ngai, EWT 2004, 'Information systems in supply chain integration and management', *European Journal of Operational Research*, vol. 159, no. 2, pp. 269-95.
Guo, C 2008, '我国纺织服装出口首现负增长', *资讯*, p. 16.
Guo, J 2002, '现代成衣的历史发展及其产业状况研究', 天津工业大学.
Hammer, M., Champy, J. and Le Seac'h, M., 1993. *Le reengineering* (Vol. 93). Paris: Dunod.
Hei, H 2003, '中国纺织行业现状分析', *中国纺织工业协会统计中心课题组*, vol. 176, no. 32.
Heikkilä, J 2002, 'From supply to demand chain management: efficiency and customer satisfaction', *Journal of Operations Management*, vol. 20, no. 6, pp. 747-67.

Henderson, JC and Venkatraman, N 1993, 'Strategic alignment: Leveraging information technology for transforming organizations', *IBM Systems Journal*, vol. 32, no. 1, pp. 4-16.
Hewitt, F., 1994. “Supply chain redesign”, *The International Journal of Logistics Management*, Vol.*5*, no.2, pp. 1-10.
Hilletofth, P., 2009. How to develop a differentiated supply chain strategy. *Industrial Management & Data Systems*, 109(1), pp. 16-33.
Hilletofth, P., 2011, 'Demand-supply chain management: industrial survival recipe for new decade', *Industrial Management & Data Systems*, vol. 111, no. 2, pp. 184-211.
Hilletofth, P., 2012, 'Differentiation focused supply chain design', *Industrial Management & Data Systems*, vol. 112, no. 9, pp. 1274-91.
Hilletofth, P. and Ericsson, D., 2007. Demand chain management: next generation of logistics management. *Conradi Research Review*, *4*(2), pp. 1-18.
Hilletofth, P, Ericsson, D and Christopher, M 2009, 'Demand chain management: a Swedish industrial case study', *Industrial Management & Data Systems*, vol. 109, no. 9, pp. 1179-96.
Hilletofth, P, Ericsson, D and Lumsden, K 2010, 'Coordinating new product development and supply chain management', *International Journal of Value Chain Management*, vol. 4, no. 1, pp. 170-92.
Hines, T., 2004. *Supply Chain Strategies: Customer-driven and Customer-focused*. Routledge.
Hines, P, Silvi, R and Bartolini, M 2002, 'Demand chain management: an integrative approach in automotive retailing', *Journal of Operations Management*, vol. 20, no. 6, pp. 707-28.
Holme, I.M., Solvang, B.K. and Nilsson, B., 1997. *Forskningsmetodik: om kvalitativa och kvantitativa metoder*. Studentlitteratur.
Holmström, J., Louhiluoto, P., Vasara, A. and Hoover JR, W.E., 2001, January. The other end of the supply chain. In *Supply Chain Forum: an International Journal* (Vol. 2, No. 1, pp. 22-25). Taylor & Francis.
Hong, BG 2006, '生存与发展之路', *行业透析*, vol. 特区经济, pp. 329-30.
Horvath, L., 2001. Collaboration: the key to value creation in supply chain management. *Supply Chain Management: An International Journal*, *6*(5), pp. 205-207.
Houlihan, J.B., 1985. International supply chain management. *International Journal of Physical Distribution & Materials Management*, *15*(1), pp. 22-38.
Hu, S 1995,*The Open Door Policy, 1919-1937.*, Greenwood Press.
Hu, S 2004, '我国纺织服装企业应加快建立快速反应系统', *China Textile Leader*, no. 3, pp. 92-4.
Hua, S and Guo, HJ 2012, *我国纺织产业转移的特点和影响因素分析*.
Huang, S, Uppal, M and Shi, J 2002, 'A product driven approach to manufacturing supply chain selection', *Supply Chain Management: An International Journal*, vol. 7, no. 4, pp. 189-99.
Hunter, M 2012, *Vancl China's billion dollar internet apparel giant*, matthunter.com.
Huo, Y 2016, '浅析中国独立服装设计师品牌经营现状', *新经济*.
International Trade Centre 2011, *The Chinese market for clothing*, Palais des Nations, 1211 Geneva 10, Switzerland.
Jacobs, D 2006, 'The promise of demand chain management in fashion', *Journal of Fashion Marketing and Management*, vol. 10, no. 1, pp. 84-96.
Jiang, CG, 2015, 'Supply-side reform in China', *Wall Street China*.
JiangSu Textile 2014, '中国服装业或将迎来“买手新时代”', *JIANGSU TEXTILE*.
Jung, CG 1981, *The archetypes and the collective unconscious*, Princeton University Press.
Jüttner, U, Christopher, M and Baker, S 2007, 'Demand chain management-integrating marketing and supply chain management', *Industrial Marketing Management*, vol. 36, no. 3, pp. 377-92.
Jüttner, U, Christopher, M & Godsell, J 2010, 'A strategic framework for integrating marketing and supply chain strategies', *International Journal of Logistics Management, The*, vol. 21, no. 1, pp. 104-26.

Jüttner, U, Godsell, J and Christopher, MG 2006, 'Demand chain alignment competence — delivering value through product life cycle management', *Industrial Marketing Management*, vol. 35, no. 8, pp. 989-1001.
Kam, BH, Chen, L and Wilding, R 2011, 'Managing production outsourcing risks in China's apparel industry: a case study of two apparel retailers', *Supply Chain Management: An International Journal*, vol. 16, no. 6, pp. 428-45.
Ketchen, JDJ, Rebarick, W, Hult, GTM and Meyer, D 2008, 'Best value supply chains: A key competitive weapon for the 21st century', *Business Horizons*, vol. 51, no. 3, pp. 235-43.
Ketchen Jr, DJ & Giunipero, LC 2004, 'The intersection of strategic management and supply chain management', *Industrial Marketing Management*, vol. 33, no. 1, pp. 51-6.
Ketchen Jr, DJ and Hult, GTM 2007, 'Bridging organization theory and supply chain management: The case of best value supply chains', *Journal of Operations Management*, vol. 25, no. 2, pp. 573-80.
Kovács, G. and Spens, K.M., 2005. Abductive reasoning in logistics research. *International Journal of Physical Distribution & Logistics Management*, *35*(2), pp.132-144.
Kshetri, N. 2009, "The development of market orientation: a consideration of institutional influence in China", *Asia Pacific Journal of Marketing and Logistics*, Vol. 21 No. 1, pp. 19-40.
Kwan, C, Yeung, K and Au, K 2003, 'A statistical investigation of the changing apparel retailing environment in China', *Journal of Fashion Marketing and Management*, vol. 7, no. 1, pp. 87-100.
Lam, JK and Postle, R 2006, 'Textile and apparel supply chain management in Hong Kong', *International Journal of Clothing Science and Technology*, vol. 18, no. 4, pp. 265-77.
Lambert, DM and Cooper, MC 2000, 'Issues in Supply Chain Management', *Industrial Marketing Management*, vol. 29, no. 1, pp. 65-83.
Lambert, D.M., Cooper, M.C. and Pagh, J.D., 1998. Supply chain management: implementation issues and research opportunities. *The International Journal of Logistics Management*, *9*(2), pp.1-20.
Langabeer, J.R. and Rose, J., 2002. *Creating demand driven supply chains: How to profit from demand chain management*. Spiro Press.
Langenberg, KU, Seifert, RW and Tancrez, J-S 2012, 'Aligning supply chain portfolios with product portfolios', *International Journal of Production Economics*, vol. 135, no. 1, pp. 500-13.
Lee, H.L. 2002. "Aligning supply chain strategies with product uncertainties", *California Management Review*, Vol. 44 No. 3, pp. 105-119.
Lee, H 2004, 'The triple-A supply chain', *Harvard Business Review*, vol. 82, no. 10, pp. 102-13.
Li and Fung Research Centre, 2011, 'China's apparel market 2011', < http://www.lifunggroup.com/>.
Li and Fung Research Centre, 2012, 'China's apparel market', <http://www.funggroup.com/>.
Li, S 2013, '我国纺织服装上市公司资本结构分析与优化', *China Textile Leader*, no. 7.
Liker, JK & Choi, TY 2004, 'Building deep supplier relationships', *Harvard Business Review*, vol. 82, no. 12, pp. 104-13.
Liu, Q & Chen, J. 2005, '全球化背景下我国纺织服装产业集群发展战略研究', *JOURNAL OF TIANJIN POLYTECHNIC UNIVERSITY*, Vol. 24 No. 4, pp. 94-7.
Liu, K. 2007, "Unfolding the post-transition era: the landscape and mindscape of China's retail industry after 2004", *Asia Pacific Journal of Marketing and Logistics*, Vol. 19 No. 4, pp. 398-412.
Long, T and Johnson, M 2000, 'Rigour, reliability and validity in qualitative research', *Clinical Effectiveness in Nursing*, vol. 4, no. 1, pp. 30-7.
Lou, Y 2011, '浅析我国纺织服装产业结构调整升级与社会责任实现', *山东纺织经济*, vol. 171, no. 5, pp. 13-47.
Lu, A 2011, 'The marketing influence of international fast fashion brand Zara for Chinese local apparel market ', *Chinse Academic Jounral Electronic Publishing House*, vol. F272, no. A.

Lu, S. and Dickson, A.M. 2015, “Where is China’s textile and apparel industry going?”, *China Policy Institute,* available at: https://cpianalysis.org/2015/07/24/where-is-chinas-textile-and-apparel-industry-going/ (accessed 10 May 2016).

Lummus, R.R. and Vokurka, R.J., 1999. Defining supply chain management: a historical perspective and practical guidelines. *Industrial Management & Data Systems*, *99*(1), pp. 11-17.

Lyons, A.C., Mondragon, A.E.C., Pilller, F. and Poler, R., 2012. Customer-driven supply chains: from glass Pipelines to open innovation networks. Springer Science & Business Media.

Ma, T 2005, '欧盟阻击“中国制造” 中国纺织行业寻求对策', *WTO 经济导刊*, vol. 6, pp. 38-40.

MacFarquhar, R 1983, *The Origins of the Cultural Revolution: The Great Leap Forward 1958-1960. 2*, Columbia University Press.

Mason-Jones, R, Naylor, B & Towill, DR 2000, 'Engineering the leagile supply chain', *International Journal of Agile Management Systems*, vol. 2, no. 1, pp. 54-61.

Masson, R, Iosif, L, MacKerron, G and Fernie, J 2007, 'Managing complexity in agile global fashion industry supply chains', *International Journal of Logistics Management,* vol. 18, no. 2, pp. 238-54.

McFarlane, FW 1984, 'Information technology changes the way you compete', *Harvard Business Review*.

Mentzer, JT, DeWitt, W, Keebler, JS, Min, S, Nix, NW, Smith, CD and Zacharia, ZG 2001, 'Defining supply chain management', *Journal of Business Logistics*, vol. 22, no. 2, pp. 1-25.

Miles, MB and Huberman, AM 1994, *Qualitative data analysis: An expanded sourcebook*, Sage.

Mo, HP 2010, '浙江省中小纺织企业出口现状与对策分析', *产业经济*, pp. 183-5.

Monczka, R.M., Petersen, K.J., Handfield, R.B. and Ragatz, G.L., 1998. Success factors in strategic supplier alliances: the buying company perspective. *Decision Sciences*, *29*(3), pp. 553-577.

Narasimhan, R and Kim, SW 2001, 'Information system utilization strategy for supply chain integration', *Journal of Business Logistics*, vol. 22, no. 2, pp. 51-75.

Narayanan, V & Raman, A 2004, 'Aligning incentives in supply chains', *Harvard Business Review*, vol. 82, no. 11, pp. 94-102, 49.

National Bureau of Statistics of China, 2014, *China Statistical Yearbook*, 2014 edn, National Bureau of Statistics of China, <http://www.stats.gov.cn/english/Statisticaldata/AnnualData/>.

National Development and Reform Commission 2007, '中国服装行业发展特点及发展趋势', *中国行业经济发展预测*, no. Cover article, pp. 43-6.

Naylor, JB, Naim, MM & Berry, D. 1999, 'Leagility: Integrating the lean and agile manufacturing paradigms in the total supply chain', *International Journal of Production Economics*, vol. 62, no. 12, pp. 107-18.

Neuman, WL. 2005, *Social research methods: Quantitative and qualitative approaches*, Allyn and Bacon.

Olavson, T, Lee, H and DeNyse, G. 2010, 'A portfolio approach to supply chain design', *Supply Chain Management Review*, vol. 14, no. 4.

Oliver, RK and Webber, MD. 1982, 'Supply-chain management: logistics catches up with strategy', *Outlook*, vol. 5, no. 1, pp. 42-7.

OuYang, Y 1994, '中国国情资料', *国家信息中心资料室*.

Pawson, R 1989, 'A measure for measures', *London and New York: Routledge*.

Pawson, R 2000, 'Middle-range realism', *European Journal of Sociology*, vol. 41, no. 02, pp. 283-325.

Pawson, R and Tilley, N 1997, *Realistic evaluation*, Sage.

Payne, T. and Peters, M.J., 2004. What is the right supply chain for your products?. *The International Journal of Logistics Management*, *15*(2), pp. 77-92.

Pietarinen, A-V & Bellucci, F. 2014, 'New Light on Peirce's Conceptions of Retroduction, Deduction, and Scientific Reasoning', *International Studies in the Philosophy of Science*, vol. 28, no. 4, pp. 353-73.

Porter, ME & Millar, VE. 1985, 'How information gives you competitive advantage', *Harvard Business Review*.

PwC's Experience Centre, 2016. "The rise of China's silicon dragon", www.pwchk.com; http://www.pwc.com/id/en/Consulting/Asset/Consulting%20Publication/rise-of-china-silicon-dragon-apr-2016.pdf.

Qian, RN 2008, '我国纺织出口贸易又上新台阶—解读 WTO 2006 年全球纺织贸易统计报告', *纺织科学研究*, vol. 2008 年第 2 期, pp. 1-8.

Qiu, H 2008, '全球价值链视角下我国纺织服装业升级的路径选择', *产业经济*, vol. 北方经济, no. 2008 年第 1 期, pp. 44-6.

Rainbird, M 2004, 'Demand and supply chains: the value catalyst', *International Journal of Physical Distribution & Logistics Management*, vol. 34, no. 3/4, pp. 230-50.

Reinach, S 2005, 'China and Italy: fast fashion versus Pret a Porter. Towards a new culture of fashion', *Fashion Theory: The Journal of Dress, Body & Culture*, vol. 9, no. 1, pp. 43-56.

Retail and Ecommerce. 2016, "China Eclipses the US to Become the World's Largest Retail Market", eMarketer, available at: https://www.emarketer.com/Article/China-Eclipses-US-Become-Worlds-Largest-Retail-Market/1014364 (accessed 2nd September 2016).

Robertson, PW, Gibson, PR and Flanagan, JT 2002, 'Strategic supply chain development by integration of key global logistical process linkages', *International Journal of Production Research*, vol. 40, no. 16, pp. 4021-40.

Ryals, L and Knox, S 2001, 'Cross-functional issues in the implementation of relationship marketing through customer relationship management', *European Management Journal*, vol. 19, no. 5, pp. 534-42.

Salam, MA 2011, 'Supply chain commitment and business process integration: The implications of Confucian dynamism', *European Journal of Marketing*, vol. 45, no. 3, pp. 358-82.

Saldana, J 2009, 'An introduction to codes and coding', *The coding manual for qualitative researchers*, pp. 1-31.

Santala, M. and Parvinen, P., 2007. From strategic fit to customer fit. *Management Decision*, *45*(3), pp.582-601.

Sayer, A 2010, *Method in social science: revised 2nd edition*, Routledge.

Scissors, D., 2009. Deng undone: The costs of halting market reform in China. *Foreign Affairs*, pp. 24-39.

Silverman, D 2006, *Interpreting qualitative data: Methods for analyzing talk, text and interaction*, Sage.

Spear, S and Bowen, HK 1999, 'Decoding the DNA of the Toyota production system', *Harvard Business Review*, vol. 77, pp. 96-108.

Srinivasan, K, Kekre, S and Mukhopadhyay, T 1994, 'Impact of electronic data interchange technology on JIT shipments', *Management Science*, vol. 40, no. 10, pp. 1291-304.

Stadtler, H., 2015. Supply chain management: An overview. In *Supply chain management and advanced planning* (pp. 3-28). Berlin, Heidelberg: Springer.

Stavrulaki, E & Davis, M 2010, 'Aligning products with supply chain processes and strategy', *The International Journal of Logistics Management*, vol. 21, no. 1, pp. 127-51.

Stratton, R and Warburton, R 2003, 'The strategic integration of agile and lean supply', *International Journal of Production Economics*, vol. 85, no. 2, pp. 183-98.

Sukati, I., Hamid, A.B., Baharun, R. and Yusoff, R.M., 2012. The study of supply chain management strategy and practices on supply chain performance. *Procedia-Social and Behavioral Sciences*, *40*, pp. 225-233.

Svensson, G., 2002, 'Supply chain management: the re-integration of marketing issues in logistics theory and practice', *European Business Review*, *14*(6), pp.426-436.

Talluri, S 2000, 'An IT/IS acquisition and justification model for supply-chain management', *International Journal of Physical Distribution & Logistics Management*, vol. 30, no. 3/4, pp. 221-37.

Tan, KC 2001, 'A framework of supply chain management literature', *European Journal of Purchasing & Supply Management*, vol. 7, no. 1, pp. 39-48.

Tan, Keah Choon, Vijay R. Kannan, and Robert B. Handfield., 1998, "Supply chain management: supplier performance and firm performance." *Journal of Supply Chain Management. Vol.* 34, no.3, pp. 2.

Taylor, G 2004, 'China textile trade', *Journal of Fashion Marketing and Management*, vol. 8, no. 2, pp. 136-40.

Tewksbury, R 2009, 'Qualitative versus quantitative methods: Understanding why qualitative methods are superior for criminology and criminal justice', *Journal of Theoretical and Philosophical Criminology*, vol. 1, no. 1, pp. 38-58.

The Economist. 2013, "The Alibaba phenomenon China's e-commerce giant could generate enormous wealth—provided the country's rulers leave it alone", available at: http://www.economist.com/news/leaders/21573981-chinas-e-commerce-giant-could-generate-enormous-wealthprovided-countrys-rulers-leave-it (accessed 10 May 2016).

The European Commision 2005, 'Study on China's Textiles & Clothing Industry and its Market Expansion Strategy', <http://trade.ec.europa.eu/doclib/docs/2005/december/tradoc_126633.pdf>.

Thomas, DJ and Griffin, PM 1996, 'Coordinated supply chain management', *European Journal of Operational Research*, vol. 94, no. 1, pp. 1-15.

Tong, X. and Li, C. 2013, "Impact of brand personality and consumer ethnocentrism in China's sportswear market", *Asia Pacific Journal of Marketing and Logistics*, Vol. 25 No. 3, pp. 491-509.

Toon, MA, Morgan, RE, Lindgreen, A, Vanhamme, J and Hingley, MK. 2016, 'Processes and integration in the interaction of purchasing and marketing: Considering synergy and symbiosis', *Industrial Marketing Management*, vol. 52, pp. 74-81.

Towers, N & Song, Y 2010, 'Assessing the future challenges in strategic sourcing commodity from China: a case-study analysis', *Asia Pacific Business Review*, vol. 16, no. 4, p. 527.

Turner, FJ 2010, *The frontier in American history*, Courier Corporation.

Tylecote, A, Cai, J & Liu, J 2010, 'Why do mainland Chinese firms succeed in some sectors and fail in others? A critical view of the Chinese system of innovation', *International Journal of Learning and Intellectual Capital*, vol. 7, no. 2, pp. 123-44.

Vanhonacker, W.R., 1996. Entering China: an unconventional approach.

Verhallen, T.M.M., Wiegerinck, V.J.J., Gaakeer, C. and Poiesz, T.B.C., 2004. *Demand driven chains and networks*. Tilburg University, School of Economics and Management.

Vollmann, TE & Cordon, C 1998, 'Building successful customer--Supplier alliances', *Long Range Planning*, vol. 31, no. 5, pp. 684-94.

Vonderembse, MA, Uppal, M, Huang, SH and Dismukes, JP 2006, 'Designing supply chains: Towards theory development', *International Journal of Production Economics*, vol. 100, no. 2, pp. 223-38.

Walters, D 2006, 'Effectiveness and efficiency: the role of demand chain management', *International Journal of Logistics Management*, vol. 17, no. 1, pp. 75-94.

Walters, D and Rainbird, M 2004, 'The demand chain as an integral component of the value chain', *Journal of Consumer Marketing*, vol. 21, no. 7, pp. 465-75.

Wang, F and Guo, M 2014, '我国纺织服装业在全球价值链中的地位', *经贸论坛*, vol. 12, pp. 14-24.

Wang, L 2009, 'The empirical study on the ladderlike development trend of textile industry', paper presented to Computing, Communication, Control, and Management, 2009. CCCM 2009.

Williams, L.R., Nibbs, A., Irby, D. and Finley, T., 1997. Logistics integration: The effect of information technology, team composition, and corporate competitve positioning. *Journal of Business Logistics*, *18*(2), p. 31.

Williams, T, Maull, R and Ellis, B 2002, 'Demand chain management theory: constraints and development from global aerospace supply webs', *Journal of Operations Management*, vol. 20, no. 6, pp. 691-706.

Wu, F 2012, '中国纺织行业洗牌开始了', *中国对外贸易*.

Wu, T, Jim Wu, Y-C, Chen, YJ aand Goh, M 2014, 'Aligning supply chain strategy with corporate environmental strategy: A contingency approach', *International Journal of Production Economics*, vol. 147, Part B, pp. 220-9.

Ye, Y., Lau, K. 2018, "Designing a demand chain management framework under dynamic uncertainty: An exploratory study of the Chinese fashion apparel industry", *Asia Pacific Journal of Marketing and Logistics,* Vol. 30 No. 1, pp. 198-234.

Ye, Y., Lau, K. 2014, "Managing demand and supply networks of the Chinese fashion apparel industry under the complexity of the new economy transitions", *Hamburg International Conference of Logistics (HICL 2014)*, pp. 49-84.

Ye, Y., Lau, K., and Teo, L. 2013, "Demand-supply chain management for the Chinese fast fashion apparel industry", in Martin Grimmer (ed.), *Proceedings of 27th Australian and New Zealand Academy of Management Conference (ANZAM 2013)*, pp. 1-26.

Yi, C.Y., Ngai, E.W.T. and Moon, K.L. 2011, "Supply chain flexibility in an uncertain environment: exploratory findings from five case studies", *Supply Chain Management: An International Journal*, Vol. 16 No. 4, pp. 271-283.

Yi, L. and Jaffe, E.D. 2007, "Economic development and channel evolution in The People's Republic of China", *Asia Pacific journal of marketing and logistics*, Vol. *19* No. 1, pp.22-39.

Yin, RK 2008, *Case study research: Design and methods*, Sage Publications.

Yin, RK 2013, *Case study research: Design and methods*, Sage Publications.

Yu, W. and Ramanathan, R. 2012, "Managing strategic business relationships in retail operations: evidence from China", *Asia Pacific Journal of Marketing and Logistics*, Vol. 24 No. 3, pp. 372-393.

Yuan, X & Xu, N. 2010, '我国纺织服装业发展历程与现状分析', *经济研究导刊*, vol. 14, no. 88, pp. 25-6.

Zhang, X & Zhang, Z. 2015, '我国纺织行业发展现状浅析', *统计与管理*, vol. 热点透视.

Zhang, Y 2016, 'Expecting future for Vancl', *TNC*, 2016-06-12.

Zhang, Z, Li, Y, Gong, C & Wu, H. 2002, 'Casual wear product attributes: a Chinese consumers' perspective', *Journal of Fashion Marketing and Management*, vol. 6, no. 1, pp. 53-62.

Zhao, J 2013, *The Chinese fashion industry: an ethnographic approach*, A&C Black.

Zhao, W 2004, '浅析我国纺织工业存在的问题及应对措施', *经济观察*, vol. 3, pp. 48-50.

Zhao, X, Huo, B, Selen, W and Yeung, JHY. 2011, 'The impact of internal integration and relationship commitment on external integration', *Journal of Operations Management*, vol. 29, no. 12, pp. 17-32.

Zhao, Y. 2009, '我国纺织服装产品出口退税率变化历程', pp. 28-30.

Zhenxiang, W & Lijie, Z. 2011, 'Case Study of Online Retailing Fast Fashion Industry', *International Journal of e-Education, e-Business, e-Management and e-Learning*, vol. 1, no. 3.

Zhong Jing Wang Web Company. 2007, '中国纺织行业最新发展报告', *财经界*.

Zhou, J. 2009, '我国纺织产业集群物流问题及发展对策探讨', *Logistics Sci-Tech*, vol. 2, pp. 109-11.

Zhou, Y. 2010, '中国服装业的发展新趋势', *中国纺织工业协会统计中心课题组*, pp. 133-4.

Zhu, G. 2012, '我国纺织服装绿色供应链管理及对策', *纺织学报*, vol. 33, no. 10, pp. 153-8.

Zhu, Y, Chen, T & Zhou, J. 2010, '我国纺织服装行业 FDI 溢出效应研究: 因素/机制与对策思考', *清华大学学报(哲学社会科学版)*, vol. 25, no. 4, pp. 113-25.

Bibliography:

Aburto, L & Weber, R 2007, 'Improved supply chain management based on hybrid demand forecasts', *Applied Soft Computing*, vol. 7, no. 1, pp. 136-44.

Agarwal, A, Shankar, R & Tiwari, MK 2007, 'Modeling agility of supply chain', *Industrial marketing management*, vol. 36, no. 4, pp. 443-57.

Aitken, J, Childerhouse, P & Towill, D 2003, 'The impact of product life cycle on supply chain strategy', *International Journal of Production Economics*, vol. 85, no. 2, pp. 127-40.

Alvarado, UY & Kotzab, H 2001, 'Supply Chain Management: The Integration of Logistics in Marketing', *Industrial marketing management*, vol. 30, no. 2, pp. 183-98.
Appelqvist, P, Lehtonen, J-M & Kokkonen, J 2004, 'Modelling in product and supply chain design: literature survey and case study', *Journal of Manufacturing Technology Management*, vol. 15, no. 7, pp. 675-86.
Arshinder, Kanda, A & Deshmukh, SG 2008, 'Supply chain coordination: Perspectives, empirical studies and research directions', *International Journal of Production Economics*, vol. 115, no. 2, pp. 316-35.
Ateş, MA, Wynstra, F & van Raaij, EM 2015, 'An exploratory analysis of the relationship between purchase category strategies and supply base structure', *Journal of Purchasing and Supply Management*, vol. 21, no. 3, pp. 204-19.
Bailey, K & Francis, M 2008, 'Managing information flows for improved value chain performance', *International Journal of Production Economics*, vol. 111, no. 1, pp. 2-12.
Ballou, RH 2007, 'The evolution and future of logistics and supply chain management', *European business review*, vol. 19, no. 4, pp. 332-48.
Benton, WC & Maloni, M 2005, 'The influence of power driven buyer/seller relationships on supply chain satisfaction', *Journal of Operations Management*, vol. 23, no. 1, pp. 1-22.
Boyer, KK & Hult, GTM 2005, 'Extending the supply chain: Integrating operations and marketing in the online grocery industry', *Journal of Operations Management*, vol. 23, no. 6, pp. 642-61.
Bozarth, CC, Warsing, DP, Flynn, BB & Flynn, EJ 2009, 'The impact of supply chain complexity on manufacturing plant performance', *Journal of Operations Management*, vol. 27, no. 1, pp. 78-93.
Bruque-Cámara, S, Moyano-Fuentes, J & Maqueira-Marín, JM 2016, 'Supply chain integration through community cloud: Effects on operational performance', *Journal of Purchasing and Supply Management*.
Cao, M & Zhang, Q 2011, 'Supply chain collaboration: Impact on collaborative advantage and firm performance', *Journal of Operations Management*, vol. 29, no. 3, pp. 163-80.
Caridi, M, Pero, M & Sianesi, A 2012, 'Linking product modularity and innovativeness to supply chain management in the Italian furniture industry', *International Journal of Production Economics*, vol. 136, no. 1, pp. 207-17.
Chen, IJ & Paulraj, A 2004, 'Towards a theory of supply chain management: the constructs and measurements', *Journal of Operations Management*, vol. 22, no. 2, pp. 119-50.
Choi, K, Narasimhan, R & Kim, SW 2012, 'Postponement strategy for international transfer of products in a global supply chain: A system dynamics examination', *Journal of Operations Management*, vol. 30, no. 3, pp. 167-79.
Choi, TY & Eboch, K 1998, 'The TQM Paradox: Relations among TQM practices, plant performance, and customer satisfaction', *Journal of Operations Management*, vol. 17, no. 1, pp. 59-75.
Chow, WS, Madu, CN, Kuei, C-H, Lu, MH, Lin, C & Tseng, H 2008, 'Supply chain management in the US and Taiwan: An empirical study', *Omega*, vol. 36, no. 5, pp. 665-79.
Christopher, M and Peck, H 1997, 'Managing logistics in fashion markets', *The International Journal of Logistics Management*, vol. 8, no. 2, pp. 63-74.
Closs, DJ, Goldsby, TJ & Clinton, SR 1997, 'Information technology influences on world class logistics capability', *International Journal of Physical Distribution & Logistics Management*, vol. 27, no. 1, pp. 4-17.
Cousins, PD & Menguc, B 2006, 'The implications of socialization and integration in supply chain management', *Journal of Operations Management*, vol. 24, no. 5, pp. 604-20.
Danese, P, Romano, P & Formentini, M 2013, 'The impact of supply chain integration on responsiveness: The moderating effect of using an international supplier network', *Transportation Research Part E: Logistics and Transportation Review*, vol. 49, no. 1, pp. 125-40.

Das, A, Narasimhan, R & Talluri, S 2006, 'Supplier integration?Finding an optimal configuration', *Journal of Operations Management*, vol. 24, no. 5, pp. 563-82.
de Leeuw, S & Fransoo, J 2009, 'Drivers of close supply chain collaboration: one size fits all?', *International journal of operations & production management*, vol. 29, no. 7, pp. 720-39.
Devaraj, S, Krajewski, L & Wei, JC 2007, 'Impact of eBusiness technologies on operational performance: The role of production information integration in the supply chain', *Journal of Operations Management*, vol. 25, no. 6, pp. 1199-216.
Diane, HP, Peggy, DL, Michael, DI & Aleda, VR 2008, 'Marketing and supply chain management: a collaborative research agendanull', *Journal of Business & Industrial Marketing*, vol. 23, no. 8, pp. 520-8.
Droge, C, Vickery, SK & Jacobs, MA 2012, 'Does supply chain integration mediate the relationships between product/process strategy and service performance? An empirical study', *International Journal of Production Economics*, vol. 137, no. 2, pp. 250-62.
Eggert, A, Ulaga, W & Schultz, F 2005, 'Value creation in the relationship life cycle: A quasi-longitudinal analysis', *Industrial marketing management*, vol. 35, no. 1, pp. 20-7.
Ellinger, AE 2000, 'Improving Marketing/Logistics Cross-Functional Collaboration in the Supply Chain', *Industrial marketing management*, vol. 29, no. 1, pp. 85-96.
Eltantawy, RA, Giunipero, L & Fox, GL 2009, 'A strategic skill based model of supplier integration and its effect on supply management performance', *Industrial marketing management*, vol. 38, no. 8, pp. 925-36.
Ericsson, D 2011, 'Demand chain management -- The evolution', *Orion*, vol. 27, no. 1, pp. 45-81.
Fandel, G & Stammen, M 2004, 'A general model for extended strategic supply chain management with emphasis on product life cycles including development and recycling', *International Journal of Production Economics*, vol. 89, no. 3, pp. 293-308.
Fearne, A & Fowler, N 2006, 'Efficiency versus effectiveness in construction supply chains: the dangers of "lean" thinking in isolation', *Supply Chain Management: An International Journal*, vol. 11, no. 4, pp. 283-7.
Germain, R, Claycomb, C & Droge, C 2008, 'Supply chain variability, organizational structure, and performance: The moderating effect of demand unpredictability', *Journal of Operations Management*, vol. 26, no. 5, pp. 557-70.
Ghobakhloo, M, Sabouri, MS, Hong, TS & Amirizadeh, K 2011, 'Electronic commerce-enabled supply chain process integration and business value', *Journal of Systems and Information Technology*, vol. 13, no. 4, pp. 344-68.
Gibson, BJ, Mentzer, JT & Cook, RL 2005, 'Supply chain management: the pursuit of a consensus definition', *Journal of Business logistics*, vol. 26, no. 2, pp. 17-25.
Golfetto, F & Gibbert, M 2006, 'Marketing competencies and the sources of customer value in business markets', *Industrial marketing management*, vol. 35, no. 8, pp. 904-12.
Gonzalez-Zapatero, C, Gonzalez-Benito, J & Lannelongue, G 2016, 'Antecedents of functional integration during new product development: The purchasing–marketing link', *Industrial marketing management*, vol. 52, pp. 47-59.
Green Jr, KW, Whitten, D & Inman, RA 2012, 'Aligning marketing strategies throughout the supply chain to enhance performance', *Industrial marketing management*, vol. 41, no. 6, pp. 1008-18.
Gronroos, C 2011, 'A service perspective on business relationships: The value creation, interaction and marketing interface', *Industrial marketing management*, vol. 40, no. 2, pp. 240-7.
Gunasekaran, A and Ngai, EWT 2005, 'Build-to-order supply chain management: a literature review and framework for development', *Journal of Operations Management*, vol. 23, no. 5, pp. 423-51.
Gunasekaran, A, Patel, C & McGaughey, RE 2004, 'A framework for supply chain performance measurement', *International Journal of Production Economics*, vol. 87, no. 3, pp. 333-47.

Gupta, A & Maranas, CD 2003, 'Managing demand uncertainty in supply chain planning', *Computers & Chemical Engineering*, vol. 27, no. 8?9, pp. 1219-27.
Harrison, A, Christopher, M & van Hoek, RI 2001, 'Measuring agile capabilities in the supply chain', *International journal of operations & production management*, vol. 21, no. 1/2, pp. 126-48.
He, Y & Lai, KK 2012, 'Supply chain integration and service oriented transformation: Evidence from Chinese equipment manufacturers', *International Journal of Production Economics*, vol. 135, no. 2, pp. 791-9.
Hill, CA & Scudder, GD 2002, 'The use of electronic data interchange for supply chain coordination in the food industry', *Journal of Operations Management*, vol. 20, no. 4, pp. 375-87.
Hitt, MA, Xu, K & Carnes, CM 2016, 'Resource based theory in operations management research', *Journal of Operations Management*, vol. 41, pp. 77-94.
Holmström, J, Ala-Risku, T, Auramo, J, Collin, J, Eloranta, E & Salminen, A 2008, 'Demand-supply chain representation: a tool for segmenting service delivery and asset management', *Industrial Service Operations, Manufacturing Fundamentals: Necessity and Sufficiency*.
Holweg, M, Disney, S, HolmstrÖm, J & Smaros, J 2005, 'Supply Chain Collaboration:: Making Sense of the Strategy Continuum', *European Management Journal*, vol. 23, no. 2, pp. 170-81.
Holweg, M & Pil, FK 2008, 'Theoretical perspectives on the coordination of supply chains', *Journal of Operations Management*, vol. 26, no. 3, pp. 389-406.
Inman, RA, Sale, RS, Green Jr, KW & Whitten, D 2011, 'Agile manufacturing: Relation to JIT, operational performance and firm performance', *Journal of Operations Management*, vol. 29, no. 4, pp. 343-55.
Jayaram, J & Tan, K-C 2010, 'Supply chain integration with third-party logistics providers', *International Journal of Production Economics*, vol. 125, no. 2, pp. 262-71.
Keh, HT, Chu, S & Xu, J 2006, 'Efficiency, effectiveness and productivity of marketing in services', *European Journal of Operational Research*, vol. 170, no. 1, pp. 265-76.
Kim, SW 2009, 'An investigation on the direct and indirect effect of supply chain integration on firm performance', *International Journal of Production Economics*, vol. 119, no. 2, pp. 328-46.
Klibi, W, Martel, A & Guitouni, A 2010, 'The design of robust value-creating supply chain networks: A critical review', *European Journal of Operational Research*, vol. 203, no. 2, pp. 283-93.
Kozlenkova, IV, Hult, GTM, Lund, DJ, Mena, JA & Kekec, P 2015, 'The Role of Marketing Channels in Supply Chain Management', *Journal of Retailing*, vol. 91, no. 4, pp. 586-609.
Kumar, S & Malegeant, P 2006, 'Strategic alliance in a closed-loop supply chain, a case of manufacturer and eco-non-profit organization', *Technovation*, vol. 26, no. 10, pp. 1127-35.
Lainez, JM, Reklaitis, GV & Puigjaner, L 2010, 'Linking marketing and supply chain models for improved business strategic decision support', *Computers & Chemical Engineering*, vol. 34, no. 12, pp. 2107-17.
Lau, H & Lee, W 2000, 'On a responsive supply chain information system', *International Journal of Physical Distribution & Logistics Management*, vol. 30, no. 7/8, pp. 598-610.
Lau, KH 2012, 'Demand management in downstream wholesale and retail distribution: a case study', *Supply Chain Management: An International Journal*, vol. 17, no. 6, pp. 638-54.
Li, S, Ragu-Nathan, B, Ragu-Nathan, TS & Subba Rao, S 2006, 'The impact of supply chain management practices on competitive advantage and organizational performance', *Omega*, vol. 34, no. 2, pp. 107-24.
Li, S, Rao, SS, Ragu-Nathan, TS & Ragu-Nathan, B 2005, 'Development and validation of a measurement instrument for studying supply chain management practices', *Journal of Operations Management*, vol. 23, no. 6, pp. 618-41.
Lindgreen, A & Wynstra, F 2005, 'Value in business markets: What do we know? Where are we going?', *Industrial marketing management*, vol. 34, no. 7, pp. 732-48.
Matthyssens, P, Vandenbempt, K & Berghman, L 2005, 'Value innovation in business markets: Breaking the industry recipe', *Industrial marketing management*, vol. 35, no. 6, pp. 751-61.

Mellat-Parast, M & Spillan, JE 2014, 'Logistics and supply chain process integration as a source of competitive advantage: An empirical analysis', *The International Journal of Logistics Management*, vol. 25, no. 2, pp. 289-314.
Merschmann, U & Thonemann, UW 2011, 'Supply chain flexibility, uncertainty and firm performance: An empirical analysis of German manufacturing firms', *International Journal of Production Economics*, vol. 130, no. 1, pp. 43-53.
Metters, R 1997, 'Quantifying the bullwhip effect in supply chains', *Journal of Operations Management*, vol. 15, no. 2, pp. 89-100.
Min, H & Zhou, G 2002, 'Supply chain modeling: past, present and future', *Computers & Industrial Engineering*, vol. 43, no. 12, pp. 231-49.
Min, S. and Mentzer, J.T., 2000,'The role of marketing in supply chain management', *International Journal of Physical Distribution & Logistics Management*, *30*(9), pp.765-787.
Morash, E.A., Dröge, C. and Vickery, S., 1996, 'Boundary spanning interfaces between logistics, production, marketing and new product development', *International Journal of Physical Distribution & Logistics Management*, *26*(8), pp.43-62.
Nath, T & Standing, C 2010, 'Drivers of information technology use in the supply chain', *Journal of Systems and Information Technology*, vol. 12, no. 1, pp. 70-84.
Nepal, B, Monplaisir, L & Famuyiwa, O 2012, 'Matching product architecture with supply chain design', *European Journal of Operational Research*, vol. 216, no. 2, pp. 312-25.
Ngai, EWT, Chau, DCK & Chan, TLA 2011, 'Information technology, operational, and management competencies for supply chain agility: Findings from case studies', *The Journal of Strategic Information Systems*, vol. 20, no. 3, pp. 232-49.
Olhager, J & Prajogo, DI 2012, 'The impact of manufacturing and supply chain improvement initiatives: A survey comparing make-to-order and make-to-stock firms', *Omega*, vol. 40, no. 2, pp. 159-65.
Ostlin, J, Sundin, E & Bjorkman, M 2009, 'Product life-cycle implications for remanufacturing strategies', *Journal of Cleaner Production*, vol. 17, no. 11, pp. 999-1009.
Pagell, M & Krause, DR 1999, 'A multiple-method study of environmental uncertainty and manufacturing flexibility', *Journal of Operations Management*, vol. 17, no. 3, pp. 307-25.
Pereira, JV 2009, 'The new supply chain's frontier: Information management', *International Journal of Information Management*, vol. 29, no. 5, pp. 372-9.
Perks, H, Cooper, R & Jones, C 2005, 'Characterizing the Role of Design in New Product Development: An Empirically Derived Taxonomy*', *Journal of Product Innovation Management*, vol. 22, no. 2, pp. 111-27.
Petersen, KJ, Handfield, RB & Ragatz, GL 2005, 'Supplier integration into new product development: coordinating product, process and supply chain design', *Journal of Operations Management*, vol. 23, no. 3?4, pp. 371-88.
Prajogo, D & Olhager, J 2012, 'Supply chain integration and performance: The effects of long-term relationships, information technology and sharing, and logistics integration', *International Journal of Production Economics*, vol. 135, no. 1, pp. 514-22.
Priem, RL & Swink, M 2012, 'A Demand-side Perspective on Supply Chain Management', *Journal of Supply Chain Management*, vol. 48, no. 2, pp. 7-13.
Rajaguru, R & Matanda, MJ 2013, 'Effects of inter-organizational compatibility on supply chain capabilities: Exploring the mediating role of inter-organizational information systems (IOIS) integration', *Industrial marketing management*, vol. 42, no. 4, pp. 620-32.
Rexhausen, D, Pibernik, R & Kaiser, G 2012, 'Customer-facing supply chain practices?The impact of demand and distribution management on supply chain success', *Journal of Operations Management*, vol. 30, no. 4, pp. 269-81.
Richards, KA & Jones, E 2008, 'Customer relationship management: Finding value drivers', *Industrial marketing management*, vol. 37, no. 2, pp. 120-30.

Richey Jr, RG, Chen, H, Upreti, R, Fawcett, SE & Adams, FG 2009, 'The moderating role of barriers on the relationship between drivers to supply chain integration and firm performance', *International Journal of Physical Distribution & Logistics Management*, vol. 39, no. 10, pp. 826-40.

Roh, J, Hong, P & Min, H 2014, 'Implementation of a responsive supply chain strategy in global complexity: The case of manufacturing firms', *International Journal of Production Economics*, vol. 147, Part B, pp. 198-210.

Rosenzweig, ED 2009, 'A contingent view of e-collaboration and performance in manufacturing', *Journal of Operations Management*, vol. 27, no. 6, pp. 462-78.

Saad, M, Jones, M & James, P 2002, 'A review of the progress towards the adoption of supply chain management (SCM) relationships in construction', *European Journal of Purchasing & Supply Management*, vol. 8, no. 3, pp. 173-83.

Sahin, F & Robinson Jr, EP 2005, 'Information sharing and coordination in make-to-order supply chains', *Journal of Operations Management*, vol. 23, no. 6, pp. 579-98.

Seuring, S 2009, 'The product-relationship-matrix as framework for strategic supply chain design based on operations theory', *International Journal of Production Economics*, vol. 120, no. 1, pp. 221-32.

Skipworth, H, Godsell, J, Wong, CY, Saghiri, S & Julien, D 2015, 'Supply chain alignment for improved business performance: an empirical study', *Supply Chain Management: An International Journal*, vol. 20, no. 5, pp. 511-33.

Skjoett-Larsen, T 2000, 'Third party logistics–from an interorganizational point of view', *International Journal of Physical Distribution & Logistics Management*, vol. 30, no. 2, pp. 112-27.

Srivastava, RK, Shervani, TA & Fahey, L 1999, 'Marketing, business processes, and shareholder value: an organizationally embedded view of marketing activities and the discipline of marketing', *The Journal of Marketing*, pp. 168-79.

Stadtler, H 2005, 'Supply chain management and advanced planning??basics, overview and challenges', *European Journal of Operational Research*, vol. 163, no. 3, pp. 575-88.

Stock, GN, Greis, NP & Kasarda, JD 2000, 'Enterprise logistics and supply chain structure: the role of fit', *Journal of Operations Management*, vol. 18, no. 5, pp. 531-47.

Swafford, PM, Ghosh, S & Murthy, N 2008, 'Achieving supply chain agility through IT integration and flexibility', *International Journal of Production Economics*, vol. 116, no. 2, pp. 288-97.

Tang, CS 2006, 'Robust strategies for mitigating supply chain disruptions', *International Journal of Logistics Research and Applications*, vol. 9, no. 1, pp. 33-45.

Taylor, DH & Fearne, A 2009, 'Demand management in fresh food value chains: a framework for analysis and improvement', *Supply Chain Management: An International Journal*, vol. 14, no. 5, pp. 379-92.

Themistocleous, M, Irani, Z & Love, PED 2004, 'Evaluating the integration of supply chain information systems: A case study', *European Journal of Operational Research*, vol. 159, no. 2, pp. 393-405.

Thonemann, UW 2002, 'Improving supply-chain performance by sharing advance demand information', *European Journal of Operational Research*, vol. 142, no. 1, pp. 81-107.

Tsinopoulos, C & Mena, C 2015, 'Supply chain integration configurations: process structure and product newness', *International journal of operations & production management*, vol. 35, no. 10, pp. 1437-59.

van der Vaart, T & van Donk, DP 2008, 'A critical review of survey-based research in supply chain integration', *International Journal of Production Economics*, vol. 111, no. 1, pp. 42-55.

Van Landeghem, H & Vanmaele, H 2002, 'Robust planning: a new paradigm for demand chain planning', *Journal of Operations Management*, vol. 20, no. 6, pp. 769-83.

Vickery, SK, Jayaram, J, Droge, C & Calantone, R 2003, 'The effects of an integrative supply chain strategy on customer service and financial performance: an analysis of direct versus indirect relationships', *Journal of Operations Management*, vol. 21, no. 5, pp. 523-39.

---- 2008, 'Demand chain management+ response management= increased customer satisfaction', *International Journal of Physical Distribution & Logistics Management*, vol. 38, no. 9, pp. 699-725.
Walton, LW 1997, 'Logistics integration: the effect of information technology, team composition, and corporate competitive positioning', *Journal of Business logistics*.
Wang, G, Huang, SH & Dismukes, JP 2004, 'Product-driven supply chain selection using integrated multi-criteria decision-making methodology', *International Journal of Production Economics*, vol. 91, no. 1, pp. 1-15.
Wang, M, Liu, J, Wang, H, Cheung, WK & Xie, X 2008, 'On-demand e-supply chain integration: A multi-agent constraint-based approach', *Expert Systems with Applications*, vol. 34, no. 4, pp. 2683-92.
Wang, WYC, Chan, HK & Pauleen, DJ 2010, 'Aligning business process reengineering in implementing global supply chain systems by the SCOR model', *International Journal of Production Research*, vol. 48, no. 19, pp. 5647-69.
wierczek, A 2014, 'The impact of supply chain integration on the ?snowball effect? in the transmission of disruptions: An empirical evaluation of the model', *International Journal of Production Economics*, vol. 157, pp. 89-104.
Williams, BD, Roh, J, Tokar, T & Swink, M 2013, 'Leveraging supply chain visibility for responsiveness: The moderating role of internal integration', *Journal of Operations Management*, vol. 31, no. 7?8, pp. 543-54.
Wong, CY, Boon-itt, S & Wong, CWY 2011, 'The contingency effects of environmental uncertainty on the relationship between supply chain integration and operational performance', *Journal of Operations Management*, vol. 29, no. 6, pp. 604-15.
Y, YC, Ngai, E & Moon, K 2011, 'Supply chain flexibility in an uncertain environment: exploratory findings from five case studies', *Supply Chain Management: An International Journal*, vol. 16, no. 4, pp. 271-83.
Yao, Y, Evers, PT & Dresner, ME 2007, 'Supply chain integration in vendor-managed inventory', *Decision Support Systems*, vol. 43, no. 2, pp. 663-74.
You, F & Grossmann, IE 2008, 'Design of responsive supply chains under demand uncertainty', *Computers & Chemical Engineering*, vol. 32, no. 12, pp. 3090-111.
Zhang, C, Xue, L & Dhaliwal, J 2016, 'Alignments between the depth and breadth of inter-organizational systems deployment and their impact on firm performance', *Information & Management*, vol. 53, no. 1, pp. 79-90.
Zhao, X, Huo, B, Flynn, BB & Yeung, JHY 2008, 'The impact of power and relationship commitment on the integration between manufacturers and customers in a supply chain', *Journal of Operations Management*, vol. 26, no. 3, pp. 368-88.
Zhou, H, Shou, Y, Zhai, X, Li, L, Wood, C & Wu, X 2014, 'Supply chain practice and information quality: A supply chain strategy study', *International Journal of Production Economics*, vol. 147, Part C, pp. 624-33.

APPENDIX A: RESEARCH PROTOCOL

Draft Protocol for the Interviews with the Chinese Fashion Apparel Companies

Name of Company: Date of Interview:

Position of Interviewee: Name of the Interviewee:

Time Interview Commenced: Time Interview Completed:

The economic transition in China from a labour-intensive to a value-added model has exerted significant influence on the local fashion apparel industry. The market and the supply networks are confronted with new challenges and opportunities. This study attempts to investigate how the local fashion apparel companies respond to the new market structure and what the rationale behind these responses is. The findings are expected to give valuable insights for the future development of the industry.

A. From a marketing perspective (to identify market segmentations/supply chain design integrating with new product development processes):

从市场管理角度（明细市场分层 / 与产品设计流程相匹配的供应链规划）：

1. What are the major impacts of the economic transition on the local market as observed *by your company*? (Brand invasion from global area/retail channels diversification/booming consumer awareness of brand identity/Chinese fashion culture revival.)

您觉得国内经济转型对贵公司的消费者市场造成了哪些影响？ （例如：品牌竞争加剧，多销售渠道扩张，消费者对品牌价值认知增长，中国本土设计复兴等）

1.1 What challenges were faced by the company, such as issues of more diverse demand or competitive edge lost?

公司在这方面面临哪些挑战？ 比如对时尚更敏感的消费者细分 / 竞争优势丧失？

2. What are the responses of your company to these impacts in terms of market management? (Please elaborate on the aspects of s*trategic marketing planning, market segmentation, product development, and branding and sales,* respectively.)

公司从市场管理角度是如何应对这些新趋势带来的影响？ 采取了哪些措施（可分别从市场总战略规划，客户分层，产品设计，品牌定位及营销管理等方面阐述）

2.1 Do you have a diverse selling network? How many retail shops have you opened and what are the location selection criteria?

贵公司有哪些销售网络, 其门店数量及开设选址标准？

2.2 Does the company specify different product ranges and a structurally aligned strategic supply network combination based on different consumer segments?

公司有无考虑对市场客户细分？ 若有，其细分标准是什么？ 是否有根据不同消费群体细分来定位产品类别及打造相匹配的战略供应链网络？

2.3 From the product design perspective, does the company have a diverse product specification and price-sensitive design for different classifications? How many product categories does the company have? Do you localise or internationalise different product designs to cater for different services or do you have multi-brand development?

从产品设计方面：贵公司有多少种商品分类？ 是否考虑到设计不同的产品线和不同的价格定位来满足不同客户群？ 有无根据本土化或国际化的需求，相应调整产品设计以提供不同的增值服务？ 是否考虑过多品牌扩展？

2.4 Do you intend to research consumer behaviour before releasing new brands and explore the perceived brand value?

在新品牌推出前有无考虑过对消费者行为做相关研究并估量此新品牌可能带来的品牌价值及效应？

2.5 From a CRM perspective, do you have any supporting IT/IS for customer information monitoring (such as POS data or barcoding for better tracking of customers after service)?

从客户关系管理角度：有无引入信息系统记录管理客户信息以便实现更好的售后服务？比如 POS 机或条形码？或 ERP 系统？

3. What is the rationale behind the responses of the company to the changes in market demand?
以上这些应对新市场需求变化的举措其提出根本上可以解决哪些问题？

4. How has the company specified different product ranges and developed different supply networks/solutions for the different market segments? Are the company's changes made under the new market situation related to or aligned with the responses from other perspectives, such as organisation structure and supply network configuration?

From which link do the changes start to pump through the whole company's innovation (such as IT/IS infrastructure updates)?

这些在新趋势下提出的市场管理优化是否考虑到与企业其他方面的优化相匹配？ 比如若市场管理方面提出多品牌发展，是否会在供应链管理方面做精益化匹配，在公司结构上做相应的文化调整等等。

B. From the internal supply network perspective, specify the capabilities needed to serve the market/match the supply chain strategy with distribution strategies and sourcing strategies:

从内部供应链职能角度:

1. What are the major impacts of the economic transition on the internal supply network, as observed by your company (such as high inventory, bullwhip effect, inferior distribution network or logistics cost accumulation)?

国内经济转型对公司内部供应网络产生了哪些什么影响（比如：高库存风险，牛鞭效应，生产成本增加，配送网络落后，物流成本叠加）

2. What specific supply chain capabilities does your company possess in order to meet the diverse customer demands as a response to the economic transition? (Please elaborate on the aspects of *supply network configuration*, and specific *process operations*, *IS/IT management and logistics practices*, respectively.)

为了满足纷繁多变的新市场需求贵公司做了哪些具体供应网络改造以提高各项供应链职能？（可以从供应网络配置，具体操作流程，配套信息系统和物流实施等方面阐述）

2.1 Please describe your supply chain operations process (SPA or horizontal supply chain) and any changes made to network configurations on confronting the economic transition (decentralised or centralised)?

请介绍下你们的供应链操作流程，公司的供应网络是分权还是集权网状？有没有做一些调整和优化来面对新市场趋势？

2.2 How many suppliers do you have, what are the selection criteria for them and does the company collaborate with other parties in the process of product design and raw material sourcing (supplier collaboration)?

请问大致有多少供应商及其选择标准，供应商间有无合作关系？请描述公司在原料采购与成衣生产的过程中与其他方的合作关系（有第三方）。

2.3 Please describe the other logistics facilities you own for your logistics practices (warehouses or DC), and the selection criteria and structure design of these facilities:

请描述公司有无自设物流辅助设施（仓库或配送中心），其选址标准，网络构架及作用？

2.4 Please describe the current transportation structure and distribution network (including the differentiation supply/distribution network for the diverse demand based on products):

请具体描述下物流运输及配送网络的构架？

2.5 Has the company introduced any SC IS/IT software during this time to improve supply chain effectiveness?

供应链网络有无信息系统支持以便达到更高效的供应链响应？

3. What is the rationale behind these network changes in supply re-structuring and design, if any? (Please describe any improvements since its implementation, and the weighting measurements or matrix for these improvements).

做如上这些供应商重组的目的与绩效？

4. How do these capabilities work in a synergistic manner to provide diverse supply chain strategy combinations to satisfy the customers in different market segments (is there a trade-off between customer satisfaction, and cost-efficiency/ revenues and costs)? Do these changes in supply chain capabilities align with the company's organisation structure?

这些相对供应链分职能的改变是否达到了综合效果以满足下游不同的市场细分（效益与成本上的平衡）？ 这些供需网络的对接完善有无考虑到与上层企业管理的因素匹配？

C. From a macro corporate management perspective, how does the company align internal demand and supply capability with the external organization environment?

从宏观企业管理角度：

1. What are the major impacts of the new economy on corporate management, as observed by your company (such as management style and philosophy, western management influences, privatisation, entrepreneurship and open-minded culture infusion)?

新的市场趋势对内部企业管理产生了哪些影响？ （如：管理理念，西方管理模式的影响，创业家精神，企业文化开放融汇）

2. How do the impacts affect the c*ompetitive strategy*, o*rganisational structure*, *culture and leadership* s*tyle* of your companies?

这些影响是如何对竞争优势战略，企业结构，文化及领导方式产生影响的？

3. What is the rationale behind these organisational changes?

是否在企业管理上做了调整及调整原因？

4. How are these responses related to/aligned with the responses for the other two perspectives?

这些调整举措是否与供需网络管理相匹配？

APPENDIX B: EXAMPLE OF DATA ANALYSIS

DCM scopes	Elements	Key evidence gather from interviews	key actions summarized by evidence	Code
Market Management	Product Mix	*"We are leveraging our customers by extending our design themes and adding more on trendy elements into our basic collections to create diversity for one theme and also use accessories to enhance look and create diversity."*— Sales manager in Shanghai	■ Introduce more product styles in line with various occasions. ■ Create product differentiation by matching basic products with accessories or creative visual display	**P**
	Marketing and Branding	*"We used to skill basic office wear; however people nowadays are looking for diversity. By managing the visual display, we can introduce our consumers to different styles by match simple clothing diversely and encourage purchasing."*-- Product manager in Shanghai	■ Focus on visual display to create diversity ■ Marketing online. ■ Quick response to changing requirements	**P**
	Market Segmentation	*"Knowing your own consumer group is important for locating your store and display the store based on their tastes. This also helps the store make better decisions in product ordering. For example, if a store is located near a university campus, most of coming customers are students who prefer casual wear with an affordable price. Also, if a store is located near a business centre, those customers might look for an urban classy style without considering too much on price."*— Sales manager in Shanghai *"We now have online store and last year, we have started to work with Tencent and launched our mobile platform."*—Product manager in Shanghai	■ Funnel down the network to diverse consumer groups ■ Reach out to a large amount of new users through online and mobile channels.	**P**
	Channels of Distribution	*"We have withdrawn some of the franchise stores that had a low sales return and worked with Taobao to launch our online store in 2009. We are downsizing our psychical stores as now most of companies are going online. Now we have most psychical stores direct-owned."*-- Sales manager in Shanghai	■ Withdraw franchise ownership, and fully adopt direct ownership. ■ Launch online store. ■ Open mobile application and social platform to reach new users.	**P**
	Promotion and Price Regime	*"Since we have restructured our sales channel, and cut down numbers of franchising stores where overstock occurred and dragged our sales, now we are trying to get rid of stock by sell through online outlet or through discounted seasonal promotions."*— Sales manager in Shanghai	■ Launch sales campaigns through online and mobile network. ■ Release a high number of promotional activities throughout seasonal sales	**P**
Supply Chain Management	Sourcing and procurement	*"We've got over 60 OEM suppliers in city of Guangzhou and Dongguan. We look for best price deal since some of them with us for a long time."*— Product manager in Shanghai	■ Outsource production to OEMs for lowest price	**A**
	Production/facility/ quality control	*"Previously we worked on long lead-time production cycle. We used to pre-select the style for the whole financial year before puting into production plan. The production lead time sometimes can stretch to 6 months. Whereas now, we require a shorter lifecycle and head office got us a seasonal timeline to put into system and regular stock takes are carried out in each store warehouse to prevent overstock."*— Product manager in Shanghai	■ Require shorter production lead-time monthly. ■ Get regular feedback to the head office	**P**
	Inventory and Transportation	*"When it comes to downstream transportation and product delivery, since we have multiple channels, including online, mobile and psychical. To avoid complicity, we adopt store fulfilment model. Orders are assigned and consigned to regional stores based on geographic location. For second tier parcel delivery, we hired multiple small 3PLs to reach out for us from regional store warehouses."*— Regional manager from head-office	■ Use store fulfilment for its multiple channel delivery to control inventory and product flow. ■ Work with small 3PLs for last-mile online order delivery in order to enhance the customer service.	**P**

P-A-D-I Coding Descriptor:

Product mix element

I: Focus on mature, branded and augmented products

A: Commodity products, stable product line, minimal variants

P: Larger range, choice important, differentiated products in growing markets

D: Customized products for innovation; growth through product

P-A-D-I Coding Descriptor:

Sourcing and procurement element

I: Select suppliers based on relationships and capabilities

A: Outsource standard products to achieve lowest cost production

P: Select suppliers with market knowledge and capabilities

D: Product; technology; innovation; look for suppliers with capacity and creative solutions

	IS Infrastructure	*"As mentioned, now we have an ordering system and seasonal production cycle in plan whereas in the downstream retail, we have POS machine to record everyday sales and take stock regularly. However, in terms of inventory management or product delivery, we don't have integrated system. Orders from online and mobile platform are organized by third-party service providers, which might need time to merge with our internal system."*--Regional manager from head-office	■ Use IT to improve efficiency, such as barcoding technology to track products in transition and POS in store transactions. ■ Set up order procurement system. ■ Work with third-party service providers for system development	**P**
	Supply Chain Relationship	*"Though we could achieve better economic aggregation and inventory control through IS integration or infrastructure planning, this part of the service is still under exploration. We are facing many technical IT limitations after we implemented multiple channels. It is also causing many fragmented managerial problems and conflicts between internal parties. However, we are able to work out by using store fulfilment and working with multiple highly-efficient 3PLs to reduce the risk at the moment."*—Regional manager from head-office	■ Work with multiple third-party service providers for fast delivery and IS integration to enhance flexibility in the supply chain ■ Achieve rapid response in unpredictable conditions	**P**
Organization Management	Competitive Edge	*"Our CEO was a sales person and focused on driving a highly-sales returned company. Though the current system has many flaws, like fragmented IS and transitional disorders, and it might not be the most effective process, but it is the most efficient one to fulfil the volatile demand as responsive as we can."* —Regional manager from head-office	■ Focus on high sales ■ Provide relative responsive service by building multiple sales channels ■ Focus on store fulfilment distribution to control product flow ■ Work flexibly with small 3PLs for responsive parcel delivery service	**P**
	Resource Allocation	*"The supply chain still is built on a make-to-stock structure, however, the spare capacity is leveraged by gaining new consumers in multiple channels, and a responsive delivery service also is provided by working with multiple 3PL partners. We are able to sustain on the previous model by finding new capacity and building multiple-channel to reach out more customer groups."*—Regional manager from head-office	■ Building multiple channels to leverage new demand ■ Investing in sales and marketing.	**P**
	Business Structure	*"We are required to do sales report on daily, weekly and monthly sales data, however, no one reads reports every days. If the products are detected with a problem, we don't really know who caused the damage. We have to listen to regional sales manager's order and fulfil the sales target."*— Product manager in Shanghai **Additional documents can be provided in terms of business structure of this company.*	■ Unclear responsibility exists between structure layers. ■ Structure mainly grounded to support sales team.	**A**
	Culture/Leadership	*"We are pretty sales-driven. When problems occurred relate to product, such as quality issues or ordering issues, unless it is pretty urgent with sales delay, nobody really care that much. Sometimes, we report issues to up management end up with no reply. But anything to do with sales team, head office will prioritize."*--Product manager in Shanghai **For response from managerial perspective, refer inherently to elements of Competitive Edge and Resource Allocation*	■ Investing in sales and marketing. ■ New plans are carried out to control product flow, such as cutting order budgets and regular stock checking.	**P**
	Risk Management	Refer to above elements	■ Working towards a responsive supply chain with multiple 3PLs for risk sharing. ■ Borrowing 3PL IS instead of investing solely in system design.	**P**

P-A-D-I Coding Descriptor:

Competitive edge element

I: Focus on 'quality'; ability to develop long-term, dependent customer relationships

A: Focus on 'deep' approach; efficient, ability to provide customers with value for money; security

P: 'Deep and focused', high-energy approach; reliability, accuracy, responsive to customer needs

D: 'Broad' approach; spontaneity, ability to anticipate and exceed

**Example data was extracted from Company E interview data.*

APPENDIX C: INVITATION LETTER (ENGLISH VERSION)

RMIT UNIVERSITY

PARTICIPANT INFORMATION FOR RESEARCH INTERVIEW

Supply chain management of the Chinese fashion apparel industry under the industrial structural change—an exploratory study

INVESTIGATORS

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Dear Supply Chain Manager,

You are cordially invited to participate in a research project being conducted by RMIT University. Please read this sheet carefully and be confident that you understand its contents before deciding whether to participate. If you have any questions about the project, please ask one of the investigators listed above.

This research is being conducted in conjunction with the study of Ying Ye – one of the investigators – for a Doctor of Philosophy degree. The project has been approved by the RMIT Human Research Ethics Committee. You have been randomly selected for participation in the research through a stratified sampling from the database of the National Bureau of Business Statistics of China.

DESCRIPTION

The purpose of this research is to investigate the impacts of the new Chinese economy transition since 2010 on the supply and demand network of the Chinese Fashion and Textile (FT) Industry. The research explores how firms in the industry would respond and adapt to the economic changes undergoing in the country. The rationale behind the responses from the perspectives of market management, corporate administration, and internal supply chain operation will also be investigated. The Chinese FT industry has undergone four significant reshuffles in the last few decades. The industry has not only played an important role in global trade but also endeavoured to develop its own business characteristics when compared with other industrial countries. This study focuses on the impacts of the economic transition on the industry in terms of market segmentation and management, internal organization adjustment and restructuring, and external supply chain design and operation. It is expected that the findings of the research will provide insight for the local FT industry to improve performance and shed light on the future development of the global FT industry.

About four to six supply chain managers and several senior management personnel will be invited to participate in this research. The outcome of this research will be used for the preparation of a dissertation, international conference papers and international academic journal articles.

PARTICIPATION

Your participation will involve an interview with the investigator which will take approximately one and a half hour of your time. Discussion will be centred on the restructuring of the firm, if any, in response to the economic changes in three aspects: market segmentation and management, internal organizational restructuring and adjustment, and external supply chain design and operation. Your views on the direction for future development of the company and the local FT industry will also be solicited. Please kindly note that participation in the research is entirely voluntary. Your decision to participate or not participate will in no way impact upon your current or future relationship with RMIT. If you are upset about the information provided, you have the right to withdraw at any time from the interview and whatever information you provided will be destroyed. You also have the right to contact the supervisor or the RMIT Business Human Research Ethics Committee if you have any questions about the study.

EXPECTED BENEFITS

This research will benefit the entire FT industry in China by providing valuable insight in supply chain network optimization and direction for future development. The findings could provide references for your company to formulate improvement strategies. The result of this research will be provided to participants at the end of the project upon request. We would very much appreciate your participation in this research. The research team will offer each participant a small gift at the end of the interview as a token to recognize your valuable contribution in the study.

SECURITY OF THE DATA

This project will use a semi-structured interview to collect information. If you agree to participate in the study, the information you kindly provided in the interview will be recorded and stored on a secure server at RMIT. Only information pertinent to the practices of the firm or the industry will be collected, No personal details will be asked and therefore no private information will be gathered or stored. Once data collection and analysis are completed, the data collected will be transferred to the RMIT server where it will be stored securely for five (5) years. After that, the data on the RMIT host server will be deleted and expunged.

RISKS

There are no risks beyond normal day-to-day living associated with your participation in this project. The data collected will not be individually identifiable, and the data will be exclusively stored by the researchers at the RMIT.

PRIVACY AND CONFIDENTIALITY

All comments and responses are anonymous and will be treated confidentially. The names of individual persons are not required in any of the responses.

CONSENT TO PARTICIPATE

Your signing of a consent form to agree the participation will be accepted an indication of your consent to participate in this project.

QUESTIONS/FUTURE INFORMATION ABOUT THE PROJECT

If have any questions or require any further information about the research, please contact one of the investigators above.

Yours sincerely,

Ying Ye and Charles Lau

If you have any complaints about your participation in this project, please see the complaints procedure on the Complaints with respect to participation in research at RMIT page.

APPENDIX D: INVITATION LETTER (TRANSLATED CHINESE VERSION)

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调查邀请函

贵公司，您好:

在此诚意邀请您参与一项由澳洲墨尔本皇家理工大学商学院承办的学术考察项目，该学术项目由该院在读博士研究小组开展，主要研究自 2010 年中国新经济转型下对本土时尚成衣行业供求网络的影响研究。该项目已获得皇家墨尔本理工大学商学院伦理研究委员会(BCHEAN) 批准，严格遵守委员会订立的保密条款。此项目乃研究小组博士课程期间的研讨课题。

项目的开展仅需要您一到一个半小时采访时间，主要探讨在 2010 年中国新经济转型环境下，对本土成衣品牌市场管理及供求网络产生的影响。该研究项目无论对企业自我制定发展战略还是整个行业的未来发展方向都提供了极大的商业参考价值。我们对您的参与表示感谢，作为回馈，研究小组会与贵公司分享研究结果并为每位参与者准备一份小礼品，感谢您对此项目的贡献及支持。

项目内容及研究问题：

中国时尚成衣行业自 1978 年来经历了四次巨大行业洗牌，该行业中国制造不但是国际贸易市场上重要部分，随着经济转型越来越致力于发展特色本土品牌（劳动性密集型整合到科技创新型经济模式整合）。调查主要研究在新经济转型下企业供应链运作的结构调整。

版权保密性

如果您同意参与该学术研究活动，您提供的数据信息会被安全地储存在墨尔本皇家理工大学的私人服务器上。只有行业相关学术信息会被收集，不会涉及公司名称及任何商业隐私问题。除了相关研究数据会作为博士课题论文的参考文献， 所有您提供的信息都会得到妥善保密。

如有问题，请联系如下联系人：

Ying Ye 邮箱: ying.ye@rmit.edu.au

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Leon Kok Yang Teo 电话: +613 9925 5781 邮箱：leon.teo@rmit.edu.au

谢谢您的真诚参与！

此致

敬礼

APPENDIX E: LETTER OF ETHICS APPROVAL

RMIT UNIVERSITY

Business College Human Ethics Advisory Network (BCHEAN)

Building 108, Level 11
239 Bourke Street
Melbourne VIC 3000

GPO Box 2476V
Melbourne VIC 3001
Australia

Tel. +61 3 9925 5555
Fax +61 3 9925 5624

Notice of Approval

Date:	13 February 2014
Project number:	15621
Project title:	Managing Demand and Supply Networks of the Chinese Fashion Textile Industry Under the Complexity of the New Economy Transition
Risk classification:	Low Risk
Principal Investigator:	Dr Charles Lau
Student Investigator:	Ms Nicole Ying Ye
Project Approved:	**From: 13 February 2014 To: 16 July 2017**

Terms of approval:

1. *Responsibilities of the principal investigator*
   It is the responsibility of the principal investigator to ensure that all other investigators and staff on a project are aware of the terms of approval and to ensure that the project is conducted as approved by BCHEAN. Approval is only valid while the investigator holds a position at RMIT University.
2. *Amendments*
   Approval must be sought from BCHEAN to amend any aspect of a project including approved documents. To apply for an amendment submit a request for amendment form to the BCHEAN secretary. This form is available on the Human Research Ethics Committee (HREC) website. Amendments must not be implemented without first gaining approval from BCHEAN.
3. *Adverse events*
   You should notify BCHEAN immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
4. *Participant Information and Consent Form (PICF)*
   The PICF must be distributed to all research participants, where relevant, and the consent form is to be retained and stored by the investigator. The PICF must contain the RMIT University logo and a complaints clause including the above project number.
5. *Annual reports*
   Continued approval of this project is dependent on the submission of an annual report.
6. *Final report*
   A final report must be provided at the conclusion of the project. BCHEAN must be notified if the project is discontinued before the expected date of completion.
7. *Monitoring*
   Projects may be subject to an audit or any other form of monitoring by BCHEAN at any time.
8. *Retention and storage of data*
   The investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

Regards,

Professor Roslyn Russell
Chairperson
RMIT BCHEAN

APPENDIX F: LIST OF PUBLICATIONS

Journal Articles:

Ye, Ying. and Lau, Kwok Hung. (2018), "Designing a demand chain management framework under dynamic uncertainty: An exploratory study of the Chinese fashion apparel industry", *Asia Pacific Journal of Marketing and Logistics,* Vol. 30 No. 1, pp. 198-234.

Ye, Ying., Lau, Kwok Hung. and Teo, Leon. (2018), "Drivers and Barriers of Omni-channel retailing- A case study of the Chinese fashion and apparel industry", *International Journal of Retail & Distribution Management*, paper accepted.

Conference Articles:

Lau, Kwok Hung., Ye, Ying. and Peszynski, Konrad. (2016), "From supply to demand to demand supply chain management: a literature review", *Proceedings of 21st International Symposium on Logistics (ISL 2016)*, pp.92–100.

Ye, Ying. and Lau, Kwok Hung. (2014), "Managing the demand and supply networks of the Chinese fashion apparel industry under the complexity of the new economy transitions", *Hamburg International Conference of Logistics (HICL 2014)*, pp. 49–84.

Ye, Ying. and Lau, Kwok Hung. (2014), "Evolution of demand and supply network alignment and its implementation—a literature review", *Proceedings of 19th International Symposium on Logistics (ISL 2014)*, pp.429–436.

Ye, Ying., Teo, Leon. and Lau, Kwok Hung. (2013), "Understanding organizational use of IT/IS for demand and supply chain management in a MNC pharmaceutical company", in Hepu Deng and Craig Standing (ed.) *Proceedings of 24th Australasian Conference on Information Systems (ACIS)*, Melbourne, Australia, 4-6 December, 2013, pp. 1-11.

Ye, Ying., Lau, Kwok Hung. and Teo, Leon. (2013), "Demand-supply chain management for the Chinese fast fashion apparel industry", in Martin Grimmer (ed.) *Proceedings of 27th Australian and New Zealand Academy of Management Conference (ANZAM 2013)*, Hobart, Australia, 4-6 December 2013, pp. 1–26.

Book Chapter:

Ye, Ying. and Lau, Kwok Hung. (2014), "Managing demand and supply networks of the Chinese fashion apparel industry under the complexity of the new economy transition", in Blecker, T., Kersten, W. and Ringle, C.M. (Eds.), *Innovative Methods in Logistics and Supply Chain Management*, epubli GmbH, Berlin, pp. 49-84.