

8 Strategic Implications for Denim Manufacturers and Traders

8.1 DENIM PRODUCT DEVELOPMENT TREND

8.1.1 Development history

8.1.1.1 Physical breakthrough¹

Denim is one of the oldest fabrics in the world. Its origin can be traced back to the 16th century when a tough cotton fabric was used in Nîmes to make strong trousers for sailors. A Bavarian-born man named Levi Strauss successfully launched denim into a historic legend during the Gold Rush period in San Francisco, though his first products were brown canvas pants instead of indigo blue jeans in 1873. During the 1890s, Levi Strauss manufactured the first jeans under the designation "501 indigo" [2]. However, it was until the 1950s that denim gained worldwide attention and jeans became a favorite among the youngsters.

Basic denim fabric refers to a cotton twill fabric featuring a 3/1 warp faced weave, traditionally made with indigo-dyed yarn for the warp and natural yarn for the weft with the standard weight of 14.5 oz. per square yard. For many years, around 75% of all jeans have been made out of this fabric [3].

With the entry of more denim manufacturers around the world and the sharper market competition, denim has underwent drastic changes in almost every aspects from material selection to final finishes. The denim apparel family has also been expanded to cover all the essential items from tops to bottoms.

A. Material

The traditional denim fabric is made of 100% pure cotton. Today, though cotton is still the main yarn type, there are other materials used to make denim fabrics, including ramie, silk, and cotton blends such as 50% cotton with 50% polyester. The wool denim is a high value added material using wool and cashmere, which was developed by Brad Mill, the largest Australian denim manufacturer, in May 1997. Tencel/Modal (made of blended or mix-woven denims of cotton and rayon) and stretch denim adopting Lycra are also widely accepted nowadays. Levi's "Engineered Jeans" launched at Interjeans in Germany and at 40° in the UK use fabrics made of Tencel/cotton to integrate cotton's toughness and ruggedness with Tencel's comfort and strength [4]. As Caroline Parent, "Levi's" Design Chief said, "it is the fabric that cinches the deal" [4].

B. Spinning, Dyeing & Weaving

The yarn used to be exclusively ring-spun. With the introduction of OE machines, the open-end spun yarn occupied an important place during the spinning process. Both methods have advantages and disadvantages. For example, ring-spun yarn has a softer hand and a natural uneven surface appearance, though the process is slower and

¹ This section is mainly based on the following references: [1];[55]; [56];

more labor-intensive. OE yarn is cheaper and quicker to produce but the hand is not as good as the ring-spun ones. Thanks to the technological improvement, ring optics gives OE yarn the visual characteristics of ring-spun yarn through an irregular spinning process.

Indigo is still the most important dyestuff. There are two basic dyeing methods: indigo dyed and sulphur dyed. Retro dyeing is a new one combining dyeing and surface effect processing in one process, which is energy efficient and more environmentally friendly.

As regards weaving, the varieties are rich as well, ranging from traditional 3/1 weaves to 2/1 and 1/1 ones, from checks and plaids to diamond weaves and jacquards. In the US, weft-elastic fabrics dominate the scene while in the EU, warp and bi-elastic denims are woven in addition to the weft-elastic ones.

C. Color & Weight

Technological advances in various processes greatly enrich the color and weight availability. With the indigo blue as the main stay, there are various colors and color shades, such as black, ecru, and color denim. Denim and jeans has now tended to develop towards two extremes: either extra heavy & thick (over 14 oz.) or ultra light & thin (under 6.5 oz.). The weight range is from 4 oz. to 17 oz.

D. Finishing

Before the introduction of stone wash in 1978, almost all denim sold in the market was unwashed or unrinsed with the typical dark blue appearance. Consumers used to buy jeans and wash them at home to achieve their desired effects. In 1974, the first pre-washed jeans made their appearance in the market. However, it was until the 1980s that washing techniques were fully developed to achieve either hand improvement or the desired final looks such as intentionally destroyed appearance. Stone wash signaled the breakthrough in washing techniques. In 1986, chemical wash won the popularity among denim manufacturers and consumers. Enzyme wash entered the picture partly due to the increased environment-consciousness among the consumers. Other washing methods include snow wash, ice wash, granite wash, marble wash, charcoal and surf wash, etc.

E. Final product line

The past half-century has witnessed the significant changes in the denim family, evolving from the basic denim fabric and jeans to the full product lines. The denim apparel is no longer limited to jeans and expanded into denim jacket, shirt, vest, shorts and skirt as well. As regards denim fabrics, they cover a lot of varieties in addition to the basic cotton twill fabrics, including stretch denim, ecru denim, color denim, re-used denim, sand blast/shotgun denim, heavy/light denim and soda pop denim, etc. Cotton Incorporated predicts that the popularity of denim will continue into spring 2001, with new versions such as metallic coated denim and metallic printed jeanswear on the market [5].

8.1.1.2 Concept evolution

Levi Strauss developed jeans because of its durability and easy care. Therefore, the earliest consumers were gold miners in the west. Jeans were perceived as workwear rather than fashion items in the US before the 1950s. After the WWII came to the end, denim jeans were formally introduced into the Europe, Japan and other countries. In these regions, jeans were viewed more as an American symbol than as functional working clothes. That's the major difference between the US market and other markets such as the Europe and Japan. It can be said that it was since 1950s that

Table 8.1 Summary of the important events in denim development history

Denim development history	
Year	Important events
1873	Levi Strauss made the first jeans from a heavy brown canvas
1890s	Levi Strauss produced the first jeans under the designation "501 indigo"
1950	First zipper jeans
1960s	Denim achieved worldwide growth and acceptance
1978	Stone wash
1986	Chemical wash
1987	The first denim fabrics dyed "superblue indigo"
1992	Soft jeans made of blended yarn or mix woven fabrics; reverse denim
1993	Multicolor warp yarn dyeing-sizing range
1994	Soda pop denim
1995	Retro dyeing process
1997	"Denim Wool"; Water free fading of denim with laser by Icon Inc., USA

(Source: [45])

denim products entered a golden development age and evolved into today's all-purpose garment appealing to all classes and ages.

Denim and its related products have undergone remarkable changes since the 1950s. Table 8.2 illustrates the important events during the past five decades, which greatly affects the concept of jeans among the consumers and helped promote technological innovations and product development of denim fabrics and apparel.

In view of the denim development history of the past 50 years, it clearly shows that it is closely associated with social and cultural changes during each different period. The movie stars' excellent performance in the films with the West and anti-hero themes in the 1950s injected fresh cultural connotations into the jeans, making them appeal to the youngsters who were pursuing freedom and breaking with rigid social mores. The following decade saw the further development of this social movement and jeans were viewed as the symbol of social equalizer. Back to the mainstream in the 1970s marked the debut of designer jeans. Jeans were no longer confined to the youth. Those over 25 years old began to accept them as a way to remain young and energetic. The successful "Back to basic" campaign launched by Levi Strauss & Co. in the 1980s indicated that man began to pursue a simple way of life. However, the popularity of worn or destroyed look of jeans reflected the ultimate anti-fashion view among some consumers. In the 1990s, worldwide concerns about the environmental pollution finally arouse consumers' attention and green consumption becomes a no strange name. Associated with this environment-consciousness is the appearance of "Eco-denim". Furthermore, as people are looking for a simpler and more casual life, jeans, with its unique cultural connotations accumulated for so many years, are the ideal non-class leisure wear among the consumers. Levi's "Engineered Jeans" well reflect this trend. It is an ergonomic update on the classic five pocket style. Moreover, the production process for "Tencel" has a minimal impact upon the environment and the cellulose used to manufacture the fiber is sourced from managed forests [4].

Though the concept of denim and jeans has evolved progressively, its core concept remains unchanged. Today, denim is well established as street fashion fabric and denim apparel is closely connected with youth, freedom and vitality. The well known "five-nons" embodied in denim, which is non-age, non-sex, non-season, non-border, and non-class, clearly explain its wide acceptance and popularity for so many years.

8.1.2 Future trend

8.1.2.1 Hotter market competition

Since the appearance of the first jeans in San Francisco in 1873, American brands, such as Levi's, Wrangler and Lee, used to be the only players in the denim world until the 1950s. Competition was just concentrated upon the American domestic market during this period.

The European consumers developed an interest in jeans left by American GIs after the end of WWII. With the availability of denim imports from the US, the denim production and consumption in the European markets generated healthy development. European brands emerged to fight for the market share with established American brands and in the 1970s, these labels started their internationalization process in the world market and achieved positive results [46].

Because of relatively easier entry of the textile and apparel sector, many developing countries selected this sector as the engine for their economic growth. Their comparative advantages in the labor cost and land boosted their quick emergence in the world textile and apparel market. The most remarkable example is China, which is now the world No. 1 textile and apparel exporter. With the increased new entrants in the denim sector, the market competition became much sharper and hotter in the 1990s than one hundred years ago.

Table 8.2 Important events related to denim concept development

	Events	Concept development
1950s	<i>Movie Stars</i> John Wayne (the west films reflecting cowboy's life) James Dean (Rebel without a cause) <i>Music: Rock 'n' Roll</i>	Jeans were associated with anti-establishment and a break with convention. They were also the symbol of cowboys who are brave and cool.
1960s	Anti-war demonstration Hippy civil rights movement	Jeans were viewed as social equalizer and wore as uniform of the social revolution.
1970s	The anti-hero "revolution" was integrated with the mainstream of the society Utopian ideals of the world	Jeans were accepted by the adults; Designer jeans were in the picture
1980s	Back to wealth and status Yuppies Levi's "back to basic" campaign	Jeans were developed in two extremes: very fashionable and elegant; and very anti-fashion such as destroyed jeans by sand blast and shotgun
1990s	Trend towards "green" consumption Casual on Friday Pursue family life and simpler life	"Environmental-friendly" products such as Wrangler's "Earth Wash jeans" Jeans were perceived as the ideal non-class leisure fashion Soft denim and jeans and the basics boom

(Source: [46])

Table 8.3 Global denim production situation (Source: [6, p35])

Global Denim Production Capacity				
<i>Unit: million linear meters</i>				
Region	Countries	1992	1997	Over-capacity
Australia	Australia	15	15	2
Western Europe	Italy, Spain, Belgium, Greece, France, Germany, Ireland, Portugal	195	190	52
Eastern Europe	Czech Rep., Poland, CIS, Russia	20	15	4
Middle East	Turkey, Israel, Syria, Dubai, Saudi Arabia	110	160	45
North Africa	Marocco, Egypt	55	45	12
Southern Africa	South Africa, Ivory Coast	45	50	15
North America	USA, Canada	600	630	30
South America	Mexico, Brazil, Argentina, Colombia, Peru, Chile	245	675	190
Southern Asia	India, Pakistan, Sri Lanka, Bangladesh	60	340	100
South East Asia	Indonesia, Philippines, Thailand, Vietnam, Malaysia	50	200	70
Far East	China, HK, Japan, Taiwan, Korea	1025	1700	500
World		2420	4020	1020

Table 8.3 shows that the world denim production capacity increased from 2.4 billion linear meters in 1992 to 4.0 billion in 1997, up by 66.7% within just five years. However, there are signs that the global denim consumption has slowed its growth pace. For example, the annual growth rate in the US market has been down from 9% to 2-3% in recent years. As a result, too rapid production increase undoubtedly resulted in worldwide over-capacity, which was estimated to be 1.0 billion linear meters if global consumption was set to be 3.0 billion in 1996. Asia countries experienced the most severe capacity surplus in recent years due to blind expansion and lack of systematic view for future development. The production capacity in this region was almost doubled from 1.1 billion linear meters in 1992 to 2.2 billion in 1997. Take India and China for example, the former suffered about 25% over-capacity out of its current 200 million meters [7] while the latter experienced about one third glut out of its 1040 million meters output [8]. If the over-capacity problem cannot be solved within the next several years, denim manufacturers will have a very hard time, especially for those engaging in commodity item production which price is the single most important factor.

Denim consumption nowadays can be divided into two broad categories: one is pursuit of new fashion items with high quality and high added value; the other is commodity items appealing to middle and low end markets. Since most developing countries are competing in the latter category, market competition is really cutthroat. The situation will not change much in the future with more and more developing countries entering the picture. The complete quota elimination by the end of 2004 is another positive sign for both current and potential players. Therefore, it can be expected that the market order will be re-organized with new faces and new brands.

8.1.2.2 Focus upon innovation and concept crystallization

When the denim market was dominated by several American brands before the 1970s, little technological breakthrough was achieved. However, when more non-US players joined the game since the late 1970s, innovation in the washing and finishing

techniques as well as fabrication and color varieties came in streams. Innovation and product development have become important company strategies to survive the cruel global competition.

Aggressive competition is the major driven force for the drastic changes during the last twenty years. Stable quality is no longer the single determinant in the market competition. Only those who pay more attention on technological innovation and continuous product development can ultimately win the game. Japanese denim industry is one of the best examples for its continuous innovation efforts during its short history. Kurabo boasted that they were the first in the world to develop uneven denim. Nisshinbo developed liquid ammonia treatment and its "Ekian" products enjoy good reputation both home and abroad. It was also Japanese jeans manufacturers that suggested stone-washed jeans which opened a new era for jeans development. Moreover, the extremely demanding consumers in Japan push the manufacturers to spare no efforts in delivering high quality and high value-added products. As a result, the Japanese denim manufacturers successfully build their upmarket image based on these technological breakthrough and continuous improvement.

There is no denying the fact that Levi's is still the world leading brand. But it has faced more challenges in recent years from competitors all over the world. Its sales dropped by US\$ 1.1 billion over 1997 in 1998 and its standing in the Fairchild 100 list of fashion's most recognizable brands have slipped from the 5th in 1997 to 23rd in 1999 [9]. With more brands and entrants in the market, it is natural to focus attention on factors other than quality and cost control. Therefore, though denim has a history of more than 100 years, its rapid evolution just started from 20 years ago when more players fight for the market share and brand building. Efforts to find new materials, new processing techniques and new fashion styles will be further enhanced by every ambitious company to secure a favorable market position. Product differentiation is of much more importance especially when global sourcing nowadays has already made traditional comparative advantages, such as low labor cost and abundant raw material supply, available to all the global players.

Denim wonder in the fashion circle during the past century is partly due to its successful connotation and continuous association with the social and cultural trend. Therefore, in addition to the heavy R & D investment in technical innovations, it is of the same importance to develop and realize an appropriate concept for jeans and other denim apparel, which is in line with current hot issues and social trend. To some extent, this may be harder than actual technical breakthrough because it requires a better understanding of consumers' psychology, social and cultural context as well as the product itself. The emergence of "environmental-friendly" denim products indicates the "green consumption" trend in the 1990s and company's shift priority in marketing and promotion campaign.

8.1.2.3 Subject to shorter fashion cycle and contemporary life style

Denim fabric was chosen to make jeans because of its fastness and sturdiness. And Jeans, for a long time, were perceived more as workwear than fashion items in America. Therefore, the popularity of jeans before the 1950s was mainly attributed to its practical functions, less subject to fashion cycles.

With jeans and denim apparel more closely associated with fashion trend and life style, the life cycle of denim products promoted every season is much shorter than previous years. In other words, the best seller this year may fail to attract consumers next year. The rich varieties available in the market also give consumers wide

choices. Fabric, finish, color and style all have strong influences upon consumer's selection of a denim item. And these four aspects are subject to other known and unknown factors as well, further complicating the issue. Take the European market for example. The emergence of a new fashion culture from the music and dance triggered new interpretations about fashion items. As a result, the market is becoming highly fragmented with no single brand occupying the dominant position as Levi Strauss' 501 campaign did in the 1980s. Brand competition further segments the market into various niches, each appealing to different target consumers. The popularity of destroyed jeans among some consumers in the 1980s is a good example for this. In a word, denim products in the future will be prone to shorter life cycle and be more closely connected with consumer's life style.

8.2 IMPLICATIONS FOR CHINA'S DENIM SECTOR AND THE WHOLE TEXTILE INDUSTRY

Business environment is becoming more and more dynamic, complex, diverse and hostile [10]. Both the external and internal environments are significantly different from those in the 1950s or 1960s. As the world No. 1 textile and apparel exporter and one of the world most important denim manufacturers, it is crucial to depict the overall environment in which China's textile and apparel enterprises are competing for survival and to identify some possible measures they can take to secure a healthy growth.

8.2.1 General external environment

8.2.1.1 Political and legal dimension

A. China's WTO entry

This issue is of political significance as well as economic implications for China. Its impact upon China's textile and apparel industry has been explained in detail in Section 2. However, its effects upon China are far beyond this scope. China's entry into WTO means that its economy will be truly integrated with the world economy and act within the WTO-based framework. As mentioned earlier, to individual industries, the changes of game rules due to WTO entry are of consequence, including liberalization of foreign trade regime and domestic distribution channels, elimination of NTBs and reduction of tariff rates, and commitment to improving market access conditions of professional services and the telecommunication sector, etc. These are no longer piecemeal changes without a definite time frame for implementation. Rather, they are regulated within the whole package of WTO-related agreements. Significant changes can be expected in the next five years if China successfully enters WTO by the end of 2000.

B. SOE reform

SOE reform is one of the most important aspects in China's economic restructuring from a planned economy to a market one. During the past 2 years, reform of SOEs has achieved some positive results, especially in the textile and apparel sector where some SOEs turns loss into profits this year.

Current SOE reform places much emphasis upon corporatization, that is, transforming traditional state-owned enterprises into corporations. The state will not interfere with enterprise's daily operation and ultimately withdraw the state assets in industries without strategic importance to the nation, such as the textile and apparel

industry. The major aim is to pull SOEs out of the current dilemma on a market-oriented basis. Other measures include mergers, bankruptcy, reorganization of group companies, debt-to-equity swaps, and so on (See Section 2.1.2.5). Whether these steps will achieve the desirable results is an issue requiring detailed research and analysis, which is beyond this study's scope. But one thing is certain: the final result of the reform will influence the future direction of the overall economic restructuring path in China.

C. Changes in legal system

The rapid economic development needs solid support of a well-developed legal framework. However, the legal system in China lags behind the economic development, failing to provide a firm foundation for future sustainable economic growth. Having realized this problem, China is now trying to work out new laws and regulations compatible with current economic situations. Enforcement of the new contract law and the drafting of a competition law have sent a positive signal, indicating that domestic enterprises will face a better regulated legal environment with more clearly defined rights and obligations. However, since China's economic reform is unique in the world without a specific theory or pattern to model after, it will take a very long time for China to work out a legal system solidly supporting its economic development.

8.2.1.2 Social and cultural dimension

A. New social security system

In the past, the employers particularly those SOEs, were responsible for the employees' welfare benefits, including pension and medical fees, which was a very heavy burden for the enterprises' healthy growth. To guarantee a sound economic development and solve this byproduct out of a planned economy, a new social security system has been established in China since the early 1990s, aiming to shift the welfare responsibility for employees from enterprises to this new system. It consists of basic living costs for laid-off workers, pensions for the retired workers and a minimum living standard for urban residents, together with pension, unemployment and medical insurance [11]. After several years' enforcement, there have been some positive achievements. For example, about 120 million people have joined the insurance-based retirement program accounting for 90% of employees in urban areas. By the end of September 1999, 668 cities and 1638 towns had participated in the system and 2.8 million received minimum living allowances [12]. As regards laid-off workers, they receive a monthly allowance ranging from RMB 140 to 380 after enrolling at enterprise-based re-employment service centers [11]. Specific vocational training programs have been developed in these re-employment centers to enhance their skills and help them find new jobs. The Regulations on Subsistence Security for Urban Citizens went into force on October 1, 1999 [13], establishing a platform for the whole aid package. The government also allocated RMB 400 million to help improve living standards of people in the Central and Western China [12].

The social security system is still at its early stage and leaves much room for further improvement. For example, though about RMB 50 billion has been collected in pension schemes nationwide, many cities and provinces have already run up a deficit [11]. According to Premier Zhu, the coverage of social welfare insurance programs should be expanded in accordance with law and social welfare insurance must be made mandatory in urban areas. New funding channels should be sought to supplement social security funds, together with a well-developed labor market [14].

Though it is still a long way to go for China to establish an effective social security system, this move has already caused profound social changes. First, when it is the society at large rather than the enterprises that are responsible for the employees' welfare, the enterprises can concentrate upon more business-oriented activities. Second, state-owned enterprises are no longer the "apple of the eye" when people decides their career path since the past "security" is not there any more. Third, people began to realize that their future welfare is mostly dependent upon their own efforts. This change of attitude is, to some extent, more important.

B. Departure from lifelong employment and non-performance-based promotion

This point has close relationship with the previous one. The "iron rice bowl" has been broken, putting a period to the lifelong employment and egalitarian income distribution system. Employees are paid and promoted according to their actual working performance and ability. Those who are not suitable or who do a bad job may be fired at last. Therefore, to work in a state-owned enterprise is no longer desirable since it has lost most privileges it once enjoyed. More and more people are now working in non-SOE sector. For instance: employees in FIEs accounted for 0.83% of the total employment in 1997, compared with 0.01% in 1985 [15].

Since people know that they are responsible for their own behavior and their efforts will be rewarded, they tend to work harder and be more initiative. The productivity and efficiency in enterprises are boosted and employees see a clearer future than before when one's performance had nothing to do with one's final payment or promotion.

C. Increased exposure to world fashion culture

Before the 1980s when China was relatively isolated from the outside world, people wore almost the same style clothes with dull color. Few people paid attention to fashion items or fashion trend, and even if some did, they didn't have alternatives to change since the offered products were either identical or similar. Department stores were the only place where people purchased textiles and apparel. There were almost no fashion magazines, foreign brands or fashion exhibitions and shows. It could be called "fashion desert" where people had no sense and knowledge of fashion and textiles and apparel were merely functional products.

The past two decades have witnessed great changes in China, particularly since the 1990s. Many domestic as well as foreign brands have made their appearance in various forms of retailing outlets. People are more exposed to world fashion culture and have more dispensable income to spend on fashion goods. Textiles and apparel are not viewed just as necessities, instead, they are associated with one's status, individuality and image. People, especially urban youngsters, are quick to accept different cultures and customs and hence, develop a taste which is closer to world fashion development. Consumers become more demanding and sophisticated than before.

D. More informal and leisure life style

Since the mid-1990s, China began to enforce a new working schedule, featuring five working days. People have more leisure time to relax and enjoy life. What's more, the quick development of the entertainment sector has led to increased emphasis upon life quality. The trend towards casual life in the world also influences China.

Another thing worth noting is that there tend to be longer holidays around some major festivals, such as the New Year and National Day, which often last about one week. More and more people choose to travel around or shop during the holiday, which creates a very good business opportunity.

8.2.1.3 Technological dimension

A. Technological advances in textiles and apparel

In Section 8.1.1.1, the physical development of denim has been discussed. As regards textiles, various technical advances have been achieved, such as the synthetic fiber, spandex, non-woven fabrics and non-water printing. Cost reduction, efficiency improvement and niche positioning are the major driving forces behind these breakthroughs. Increased environmental consciousness among the consumers and industry has encouraged use of "renewable" or "sustainable" resources in textile manufacturing [16].

Technological advance in the apparel sector is much slower because of its labor-intensive nature, especially during the 1960s and 1970s when labor productivity was mainly the result out of incremental improvements rather than out of the major technological leap experienced by the textile sector such as the development of open-end spinning and shuttleless looms [47]. The application of micro-processor in apparel production in the late 1970s, such as compute-aided design (CAD) and computer-controlled-cutting (CCC), makes flexible manufacturing economically viable and possibly find a way out of the dilemma between flexibility and lower unit costs. Other benefits include productivity boost, fabric and labor saving and better quality control. For example, by using CAD in the apparel sector, labor savings may reach as high as 20:1 or even 100:1 [47]. Computer controlled cutting is a related micro-processor innovation. The result is that one lower paid, unskilled operator can do the equivalent work of three or four highly paid, skilled cutters in approximately one tenth of the time [17]. As a result, traditional manual skill requirements have been changed to machine operation due to this deskilling vs. enskilling process [48].

B. Information technology (IT) in the supply chain

The application of IT in the textile and apparel industry has triggered a re-engineering of business process and a re-configuration of business networks within the supply chain [10]. The emergence of e-commerce, non-store retailing, EDI and Internet has exercised great influence upon present ways of thinking. For example, traditional retailing forms are challenged by e-retail where it costs only US\$ 1000 to set up shop [18]. In the US, the proportion of on-line shoppers for apparel products has increased from 10% in 1997 to 25% in 1999 [19]. The overwhelming reasons to build EDI links with suppliers are the expected enhanced accuracy of information flows, reduced lead time and inventory, and strengthened customer service.

To put it simple, IT has resulted in a redefinition of business scope and opportunities, forcing the involved companies to compete and cooperate in a drastically changed environment. In this sense, the textile and apparel sector may undergo some significant changes brought about by the IT revolution rather than by pure technological advances, especially in the organizational structure and competitive strategies. There has emerged "virtual corporation" which uses IT to coordinate its supply and marketing activities without owning any of them [10].

Information technology in China has developed quickly during the past decade. According to the China National Network Information Center, there were 1.2 million Internet users by June 1998, or one in a thousand now has access to the Internet [20, p118] However, compared with those developed countries, the IT development still lags far behind the international level.

8.2.1.4 Demographic dimension

A. Nuclear family with only one child

Chinese families once featured bigness with several generations living under the same roof. Now, there have been some remarkable changes in the family structure. Families made up of one couple and one child became prominent, especially in the urban areas.

The family planning policy after more than 20 years' enforcement in China has formed some Chinese-unique features. The single child has become the focus of the family, receiving sole attention from six adults: two parents and four grand parents. These children can have whatever they want and parents hope to give them the best: good education, extensive hobby development and branded apparel such as Nike shoes, Levi's jeans and Crocodile T-shirt. The market potential for children and youngster are indeed very large. Since the family planning policy will continue into the future, such nuclear family will dominate the scene, posing a new force to the already dynamic business environment.

B. Emergence of a middle-income class and a consumer market

The broken of "iron rice bowl" and the entry of MNCs have greatly enlarged the income gap between the rich and the poor. At the same time, there emerged a middle-income class. As for textile and apparel products, the two extremes are not the desirable consumers since the markets are relatively small. It is the middle-income class that has large market potential for textiles and apparel. With the economic development, this class will grow as well, with young and middle-aged people constituting the major part.

Though China has a population of more than 1.2 billion, the real consumers are far less than the figure. According to James Glasse, consumer market in China now numbers some 150 million people, a massive rise compared with the 1980s when there was virtually no consumer market at all [20, p17-18].

C. Less willing to work in textile enterprises

Today, less and less people are willing to work in a textile or apparel enterprise, particularly those with higher educational background. (See Section 2.1.2.1) They are attracted by industries offering good salary and a foreseeable brighter future, such as hi-tech or service sectors. Working in textile and apparel enterprises is considered as "no future" and "non-competent", which is now a prevalent opinion held by most youngsters and their parents. As a result, the average age in the textile and apparel industry becomes older in recent years and the enterprises find it harder to recruit talented people to join them.

8.2.1.5 Macroeconomic dimension

Though current economic growth in China is not as rapid as that in the early 1990s, it is still much faster than the average world growth level. In 1999, the GDP growth in China reached 7.1% [21].

Investment is mainly concentrated upon infrastructure, most of which has been directed toward the central and west regions. Between 1998 and 1999, about two-thirds of infrastructure investment is channeled to the central and west [49]. In the first seven month this year, the growth rate of infrastructure investment in the central and west regions reached 19.4% and 14.4% respectively, compared with 5% in the east region [22], indicating the government's determination to develop these regions through policy encouragement and orientation.

Foreign trade registered a remarkable growth thanks to the increase of export rebate rate and heavy attack upon smuggling. In the first eight months of this year, the total import and export value reached US\$ 301.7 billion, of which the export value was US\$ 159.3 billion, 34.6% up over the same period last year [23]. Growth of foreign direct investment (FDI) was stalled in 1999, fallen by 20.9% from the 1998 level [24]. However, it recovered quickly this year. In the first seven month of this year, FDI reached US\$ 27.6 billion, increased by 24% over the same period last year [25].

Domestic market demand was sluggish for a very long time. The retail price of commodities in 1998 declined by 2.6 percent over 1997 and further dropped by 3% in 1999 [26]. The government adopted various measures to stimulate demand including consecutive interest rate cuts and the imposition of 20% interest tax upon the bank deposit. Now, there are some signs showing a little recovery from the deflation situation started since April 1998 [27]. In February the consumer price index increased by 0.7% on a year-on-year basis [27] and in August, another 0.3% over last August [50]. The total retailing volume for consumer goods increased by 10% in the first seven months of this year [28]. Nevertheless, it is hard to say now that the consumer market will gain momentum. Chinese people expect that they will spend more on housing, medical care, pension insurance and education of their next generation. Many Chinese consumers may further close their pockets in the future or become more discreet in money spending.

As domestic economy becomes more integrated with the world, especially after China enters WTO, the macro-economic condition will undergo some fundamental changes. For example, according to Mr. Dai Xianglong, the president of Bank of China, the interest rate will be liberalized to be subject to market forces within three years as the first step to lay a foundation for further reform on exchange rate and free convertibility of RMB [29].

8.2.1.6 Global dimension

A. Globalization vs. regionalism

The economy is global, but the world is organized politically into nation-states [30, p23]. As a result, both globalization and regionalism are parallel on the horizon, characterized by the establishment of WTO and various regional preferential agreements.

The world economy is integrated more than ever before. Companies with a global vision adopt various strategies to make their presence in other countries' markets. However, no matter what strategies they pursue, their consideration is constrained by many political factors, and the rising trend of regionalism is one of them. Regional trade arrangement peaked in the 1950s and 1960s and again in the late 1980s and 1990s with different features. There are 107 free trade agreements (including Customs Union) went into effect around the world as June 1999 [31].

Today's regionalism is smaller countries actively approaching larger countries which are usually their most important trading partners, aiming to securing the necessary market access key to their economic development. Mexico's eagerness to join NAFTA and other countries' expressed interest in acceding, such as Chili, all reflect this security-based consideration. At the same time, larger countries want to use such negotiation as a leverage to handle non-trade issues with the smaller country and to increase their bargaining power with other large countries [51]. Whether regionalism can boost the welfare of member countries and whether it can ultimately

promote or frustrate the multilateral trading system are still open questions despite numerous academic discussion such as Viner's "trade creation and diversion" argument and Bhagwati's "stumbling and building blocks" argument [52]. But one thing is certain at present: Regionalism is developing faster than globalization and its scope has been extended to cover countries located in different continents. For example, in March 2000, Mexico and the EU signed NAFTA-like trade agreement, which has passed in Mexico and waited for review in the EU. It aims to eliminate 95% of trade barriers between the two countries by the year of 2007. About 82% of goods exported from Mexico to the EU will be duty-free immediately, with the rest 18% be freed progressively before 2003 [33].

Despite the political factors in those regional trade arrangements, trade creation within member countries and diversion from non-members concerning textile and apparel products is obvious, such as Mexico with the US, and Turkey with the EU. The international apparel/textile production division and QR requirements in the textile and apparel trade foster an ideal environment for regional trade development and these preferential agreements become the final stimulus accountable for the rapidly increased textile and apparel trading volume among member countries.

B. Managed trade regime

This point has been explained in Section 1.3.4.3. Today's trade regime is more complicated than fifty years ago. Tariff is no longer the most commonly used weapon to manipulate trade after several rounds of multi-lateral talks under the GATT. Instead, non-tariff measures, such as quota, technical standards and anti-dumping investigation, are extensively employed to prevent imports and protect domestic industries.

In addition, developed countries want to include some non-trade issues in new multi-lateral round of talk, such as labor standards, environmental protection and competition policy. In the US, there is a proposal under which US companies would voluntarily adopt a "NO SWEAT" label showing that apparel and other products are not manufactured in "sweatshops" and agree to be inspected [34]. Though nothing significant was achieved during the last Seattle Round, these issues may become the major topics in the future.

8.2.2 Competitive internal environment

8.2.2.1 Threat of new entry

Entry barrier in the textile and apparel sector is much lower compared with those hi-tech industries. Moreover, most denim enterprises in China are engaging in production of basic items featuring low value-added and labor-intensive nature. Product differentiation in most enterprises is not obvious, making them more vulnerable to competition. As mentioned earlier, China's WTO entry will encourage foreign investment and more foreign brands will seek to have a direct presence in this huge domestic market. Therefore, threat of new entry, both from home and abroad will be much more intense in the future.

8.2.2.2 Threat of substitutes

As regards denim apparel family, they face challenges from other casual wear, such as khaki pants. (See Section 1.3.4.6) Though efforts have been made to enlarge denim apparel's age appealing, such as "gentlemen's jeans" and "designer jeans", it cannot be

denied that denim apparel has its own limits and restraints. It is the most popular item among those aged below 35 and is worn in very casual occasion. The khaki pants, on the other hand, appeal to a wider consumer group and can be worn in more occasions. The emergence of other casual items, such as "casual suit", is another threat to denim apparel. In this sense, though denim apparel still enjoys dominance in the casual wear category at present, it is facing hotter competition from other substitutes.

8.2.2.3 Power of suppliers

In China, most production enterprises in the textile and apparel supply chain are small in size and have no obvious competitive advantage over each other. The same case in the denim sector. Therefore, bargaining power of suppliers is not strong enough to exert significant influence upon an enterprise's daily operation and decision-making. For example, according to the survey conducted in 1997 and 1998 on 27 denim manufacturers, 84.8% focus upon standard products [53]. This indicates that downstream enterprises can easily change their purchase orders from A supplier to B supplier without encountering too many difficulties or increasing transaction costs. As a result, the relationship with suppliers is very loose and unstable.

8.2.2.4 Power of buyers

In developed countries, textile and apparel production is more demand-pull rather than supply-push. The emphasis is shifted from "cost-plus" methods of pricing towards "value-minus" methods, that is, to satisfy customer's needs at the lowest cost with the maximum added value [35]. The establishment of the buyer's market in China regarding denim products indicates that the bargaining power has switched from suppliers to retailers/wholesalers and from retailers to ultimate consumers. After more than twenty years' reform and open-up, both the distribution channel and consumers have undergone remarkable changes and their bargaining power has increased a lot. Enterprises who are still not market-oriented and who still neglect consumers' needs are more likely to lose the competition. Today's consumers want value for money, including price, quality, service (product-related and corresponding available speed), and product features. They are more sensible and discreet in current "supply-surplus" situation. The reform in the distribution channel and entry of foreign entities, such as Wal-Mart, Carrefour and Metro, all contribute to the strengthening role of wholesalers and retailers. According to Taplin, large retailers exercise oligopsony power upon manufacturers for cost reduction and more responsive to retailer needs [17]. That's one of the major reasons that domestic enterprises are now paying much attention to the market needs instead of "closing-door-manufacturing". However, the loose relationship within the supply chain makes domestic enterprises still slow and inefficient to meet consumers' needs, a big problem for future competition.

8.2.2.5 Rivalry

Section 2.1.2.3 (B) and 2.4.2.3 have explained in detail the rivalry condition in domestic textile and apparel market, both at present and after China's WTO entry. In a word, competition in China is still at its preliminary stage, concentrated more on simple price cut than long-term planning and creative efforts. When foreign competitors turn to global sourcing and outward processing, move upmarket with high

value-added activities, or pursue globalization to survive the competition, many domestic enterprises are still obsessed with quick returns in the short run through simple imitation or large discounts. It's no denying that market competition in China has been boosted to a new level with participation of more enterprises in a more open environment. But it still takes time to form a more order and fair competition, which is crucial to the healthy economic growth.

8.2.3 Some suggestions to domestic textile and apparel (denim) enterprises

Based on the above analysis, it is clear that various internal and external factors are interacting together to form a more dynamic and complicated environment in which enterprises have to make corresponding changes to fit. Moreover, the final success is dependent not only upon individual companies' efforts, but also upon strategic cooperation among companies and the appropriate measures taken by the government.

8.2.3.1 Supply chain reform

To some extent, this reform is of parallel importance to the current SOE reform. The highly fragmented supply chain is one of the most serious bottlenecks for development in the textile and apparel sector. There are various definitions about SCM in the literature. To sum up, supply chain management refers to an integrated management system based on well-defined relationship with suppliers and customers and aimed to facilitate and control the flow of physical goods and associated information throughout the distribution channel in order to create the greatest comparative value for the customer [36]. Since it is an issue far too complicated to discuss in detail here, only some points are raised to shed some light upon the possible reform directions.

A. Quick response (QR)

The key element of fashion is time [54]. The most important aim of supply chain reform for textile and apparel products is to realize quick response, that is, developing the right product and delivering it to the right place at the right time through well-designed coordination of the retailers, suppliers and manufacturers [54, p16-18].

Today, QR is playing a more and more important role in sourcing decisions. The emergence of Mexico and Turkey as the major textile suppliers to America and EU can be partly attributed to their geographic proximity which makes QR easier to realize in addition to the relevant preferential arrangements mentioned above. Labor cost is not as determinative as before, even in some basic items. The increased bargaining power of buyers, especially those large retailers, puts much pressure upon the manufactures to shorten lead time. A survey conducted by the US shows that apparel enterprises adopting QR enjoys 15.4% return on sales, compared with 1.3% without QR and 6.5% if importing from the Far East [37, p43].

Enterprises in China had been rigidly separated horizontally and vertically under the central-planning system. Though the market economy has been established for some time, many enterprises still see competition as vicious and daily operation independent of cooperation with others. As a result, there is little coordination between downstream and upstream enterprises and between manufactures and retailers or wholesalers. Such separatism places the enterprises at a very disadvantageous place when quick response has become a part of strategy in international competition. Table 8.4 shows that lead time in apparel production in

China is longer than other Far East countries and much longer than East European countries and countries such as Algeria and Morocco.

To facilitate production and make the end products more appealing in the market, parties involved in the chain should, first of all, share the information in a true two-way traffic. Application of hard wares such as Bar-coding, Point of Sales scanning and Cross Docking can be solved with enough capital and expertise support. The most difficult part is the actual enforcement requiring trust, frankness and understanding, a kind of philosophy still strange to most textile and apparel enterprises. Moreover, it should be admitted that management level in Chinese enterprises is still low, a problem greatly hindering the enforcement of QR strategy. At present, several things should be done first to pave the way for the QR strategy:

- Changing the old attitude towards competition. Management in the enterprises should realize that strategic cooperation with other chain members and even potential competitors is sometimes necessary and important.
- Sending people to some benchmarked companies to learn their QR practice and gain experience from them. For example, the QR system in Levi Strauss is composed of five parts, including bar-code, retail-related EDI, efficient physical flow, manufacturer-related EDI and flexible manufacturing system [38, p159].²
- Conducting experiments in some product lines on a small scale. For example, one manufacturer with one supplier and one retailer concerning one or two product lines. These enterprises should be capital-strong and open-minded since QR strategy requires relatively heavy investment and good management expertise. After such network is successful, then it can be carefully extended to include more participants.

B. Strategic alliance rather than vertical integration

There is now a trend in China to form large company groups through backward or forward vertical integration. This strategy has advantages such as greater control over the costs and supply and higher fixed overhead costs [39], however, it may fail to be flexible in view of quick response requirements because of big size and multi-layered management functions. Moreover, most Chinese enterprises lack necessary capital and management expertise to run the integrated company. Consequently, it may be better to form strategic alliance among chain members rather than vertical integration. The Italian apparel company Benetton here provides an example of de-integration for Chinese textile and apparel enterprises. Benetton produced end products based on orders received. In addition to the IT-based information system and CAD/CAM

Table 8.4³ Lead times in apparel production in some countries and regions

Average international lead times in apparel production		
Supplier	First order	Repeat order
China	6-7 months	3 months ^a
Bangladesh	6-7 months	not possible
Other Far East	4-5 months	3-5 months ^b
East Europe, Algeria, Morocco, Tunisia, Turkey, Greece	3 ^c -6 weeks	3 ^c -6 weeks
Other EC	2 ^c -4 weeks	2 ^c -4 weeks

a: Repeat orders possible but facility rarely used

b: Minimum 7 weeks if goods are shipped by air

c: If fabric is readily available at the factory

(Source: EIU cited in JSDC Vol.110, May/June 1994)

² This book is translated by Yan Xiong from Japanese to Chinese

³ From "Supply Chain Issues in the Textile and Clothing Industry", Graham et al. p36

systems, its supply base is vertically de-integrated, composed of major suppliers with whom Benetton has majority shareholdings and small subcontractors who agree to work exclusively for Benetton in return for stable demand and a 10% profit margin on their sales. Activities that are high value-added or high technology-/capital-intensive are conducted centrally through the major suppliers, such as fabric knitting and weaving, CAD/CAM design, computerized cutting, and dyeing. On the other hand, some low value-added work is decentralized to the subcontractors, including piece work, pressing and garment finishing when economies of scale cannot be achieved and where the quality of customer service will not be hampered. Based upon such arrangement, the company can take advantage of economies of scale where they exist and reduce the company's costs and financial exposure where economies of scale are low. Analysts estimate that the company's production can be compatible with that of the producers in Asia thanks to high technology employed and this de-integrated supply system [54, p26-32]

Strategic alliances are of more flexibility and less financial and risk exposure than actual merger and acquisition, which may be more suitable for present conditions in Chinese textile and apparel enterprises. In addition, the textile and apparel production process can be more easily divided up among individual companies compared with other industries. Enterprises with strength should learn to effectively cooperate with other suppliers, trying to form stable long-term rather than random short-term relationship with other members in the supply chain. At the same time, efforts should be made to improve current poor commercial credit situation by first solving the serious "triangular debt" among enterprises in order to enhance mutual trust and create a friendly business environment.

C. Emphasis upon on-site training

Reform of the supply chain, in the final analysis, is dependent upon competition over human resources. Both information management and supply chain coordination require talented personnel. Moreover, the success of supply chain needs whole-hearted participation of every individual no matter what position he or she is in the company. On-site training gives employees a good opportunity to continue study in today's information-explosive era, which is important to boost morale in addition to material incentives.

Though education in China is now receiving more and more attention, the gap with the developed countries is hard to be narrowed in the short run. According to the survey conducted in 27 denim fabric manufacturers in China between 1997 and 1998, only about 12% of the management received higher education [53]. Lack of qualified technicians and managers may turn out to be the most serious bottleneck in winning the competition for Chinese textile and apparel enterprises. Though government is responsible for developing an educational system meeting the new economic conditions, enterprises should do their share in providing on-site training for their employees, including skill enhancing and horizon widening. It may increase cost in the short run, but it will finally benefit the enterprise in view of management improvement and productivity boost. Employees will have more incentives to work since they gain a lot at the same time. Even when they leave the enterprise, the knowledge they learned will benefit the new one as well, which is ultimately good to the whole society. It is the largest plus out of on-site training.

D. Macro-regulation from the government

As already mentioned in Section 2.4.4.2 (B), government role in current economic restructuring should be shifted from micro-level to macro-one. As regards supply chain

reform, the government support is indispensable, especially concerning the reform in the cotton distribution system.

A relatively stable cotton price and supply is key to Chinese textile industry, particularly to the denim manufacturers who are very heavy cotton users. The reform was carried out since last September by introducing market mechanism to this highly regulated sector with the cotton price set according to the market condition rather than direct administrative order. The cotton price dropped at first. However, when domestic demand rose with the improved situation in the textile industry and high-quality new cotton was in short supply, the cotton price went up again this year. For example, the price of Grade 229 rose from RMB 9,300 per ton in October 1999 to RMB 11,000 in January 2000 [40]. The price of Grade 327 is now up to RMB 12,800 per ton, 24% up within just two months and domestic price for long-staple cotton is RMB 8000 higher than that in the international market [41]. The National Cotton Auction Market began to sell the nation's cotton reserves since December 3, 1999 [40] in the hope of alleviating the supply shortage and curbing the price increase. Whether the reform will achieve the desired result is hard to ascertain now, but at least the first step has been taken to liberalize the raw material distribution system, which is good news to the whole supply chain construction.

Another urgent task for the Chinese government is to construct a legal system conducive to the sustainable economic development. The deteriorating commercial credit and serious corruption scandals indicate that current laws and regulations are very inadequate to guarantee an open, fair and transparent competitive environment. If these problems cannot be solved, it will greatly frustrate the supply chain reform whose foundation is built upon a clearly defined legal framework.

8.2.3.2 Focus upon core activities concerning individual companies

This issue is somewhat related to Section 8.2.3.1 (B). Constant changes of consumer tastes and fashion styles as well as shorter life cycle make product-related investment decision more risky and difficult. Moreover, most Chinese textile and apparel enterprises are scarce in capital and expertise. Therefore, it will be more reasonable for them to work out a strategy concentrated upon specialization rather than diversification. However, most enterprises often make decisions regardless of its own strength and weakness as well as demand/supply conditions, leading to either unpractical ambition or shortsighted behavior.

To maintain or capture a larger share in the low-/middle-end markets featuring commodity products, cost may be the most decisive factor in the competition, partly offsetting the long geographical distance with the major importing markets. The most obvious advantage Chinese enterprises enjoy now is the labor and land cost and availability of relatively skilled workers compared with other developing countries such as Mexico. Therefore, how to effectively control the production cost, including the material, labor, capital and management cost, is very important for China's textile and apparel industry to be competitive in these market segments. Cost leadership could be the core strategy for most export-oriented enterprises serving the mass markets.

For those who want to build up their own brands and corporation image, cost is not the single consideration. What matters more is their design and marketing strength, which are the two most important value-added activities in the whole value chain. Marketing is particularly important for a fashion enterprise aiming to build brands and expand market share. Mass customization, which is now valued by some

world famous enterprises such as Levi's, is still new in China. It not only needs computer-based technology mentioned earlier, but also requires customer-oriented attitude. To some extent, the latter may be harder to achieve since it is rooted in daily operation and ways of thinking. With Chinese consumers being widely exposed to world fashions either through traditional mass media or through Internet, they want products that are more individual and fashion-oriented. Therefore, enterprises, such as denim manufacturers, should work out marketing strategy based on this new consumer trend to upgrade their service and increase intangible value. A very hot issue these days is e-commerce. However, Chinese textile and apparel enterprises should be careful in taking this approach. Levi Strauss is withdrawing from its direct e-commerce sales, focusing more on its consumers and retail partnership. According to Jeff Beckman, a Levi's spokesman, "running a world class e-commerce site had become unaffordable", while at the same time, upsetting their traditional retail outlets [42]. In view of China's current hard and soft environment, it is still not mature for Chinese enterprises to carry out direct on-line sales as its competitive strategy. It will be more cost efficient for them to concentrate upon traditional marketing approaches since they are more suitable for current economic conditions. This doesn't mean that e-commerce is not viable in China, but blind adoption regardless of reality will just push the enterprises into a more serious dilemma.

In a word, enterprises with vision should focus upon these core activities based on their strength and environment, and at the same time, establish close and long-term relationship with some key suppliers for product manufacturing and with retailers for information gathering and collaboratively product development. Such specialization could more effectively raise the entry barrier and form a competitive edge hard to be imitated or acquired.

8.2.3.3 Think global

It is the time for Chinese enterprises to be global-minded if they really want to survive the international competition. There are two reasons. First, as said before, the global trade is now characterized by regionalism and various complicated non-tariff barriers. One possible way to overcome these obstacles is to get into the regional bloc by directly establishing plants or factories in the target region, such as Mexico or Turkey. Second, compared with some later movers, usually countries in the Latin America or Africa, Chinese textiles and apparel have benefited from their learning curve and enjoyed better value for money. Based on these two reasons, Chinese textile and apparel enterprises with strength can move their production facilities to some developing countries in order to be an insider rather than an outsider under current regionalism move.

Instead of investing individually, it will be much better for several enterprises to act together and coordinatively. This can not only reduce risks and resource inputs for individual company, but also enhance the overall strength and competitiveness. Enterprises should be well informed of the foreign market before they really take steps. Relevant government agencies should play a role here. It can help gather information about the target market, conduct study on its general business environment and practice, and contact foreign association and government.

8.2.3.4 Well prepared for the network economy

The world today is very different from the one twenty years ago. The explosion of

information technology, together with significant organizational changes at the global level has ushered in a "new world information economy", featuring deep ubiquitous networking [43, 44]. Textile and apparel sector is an old and traditional industry benefited a lot from the industrial revolution. Though technology in its production process, especially in the apparel sector, evolved slowly during the past 50 years, the network economy will definitely re-shape traditional organizational structure and the way to view and do business.

"The central economic imperative of the network economy is to amplify relationships." [44, p118] Current competition is not just concentrated upon cost or prompt delivery, rather, it is the result of various interactions. It is now necessary to re-think the relationship between the mainland and HK textile and apparel enterprises. Section 2.5.3.5 has discussed the possible impact upon the old "front-store-back-factory" relationship after China enters WTO, with analysis focus upon the WTO-related environmental changes. Under the network economy, fundamental changes are necessary and inevitable. If the two sides fail to change correspondingly, it may turn out to be fatal to the final result.

Both the mainland and HK textile and apparel enterprises are facing big challenges. For instance, though China enjoys low labor cost, it is always easy to find other suppliers with lower labor cost; HK is a fashion center in the Asia, but it still cannot compete with France or Italy concerning fashion design. Moreover, no matter how efficient the infrastructure is, both sides are at a disadvantage over those periphery countries around the US and EU due to long geographic distances. Therefore, enterprises in both sides should build relationships based on "network consideration" rather than "pure labor division", a new cooperation pattern carefully designed to generate synergy, making 1 plus 1 larger than 2. The following "4R" strategy is just a preliminary discussion, hoping to provide some suggestions for the enterprises both in the mainland and in HK.

First, rationalize the value chain by eliminating non value-added processes. For example: in current cooperation pattern, transportation of the final products first from the mainland to HK and then from HK to the final importer is actually a step adding no value but delaying the responsive time. Infrastructure in some coastal cities such as Shanghai and Shenzhen has improved a lot. Possible low efficiency there can be partly attributed to lack of experienced personnel. Therefore, HK trading companies can directly establish offices in some key cities to handle freight forwarding or help train local employees.

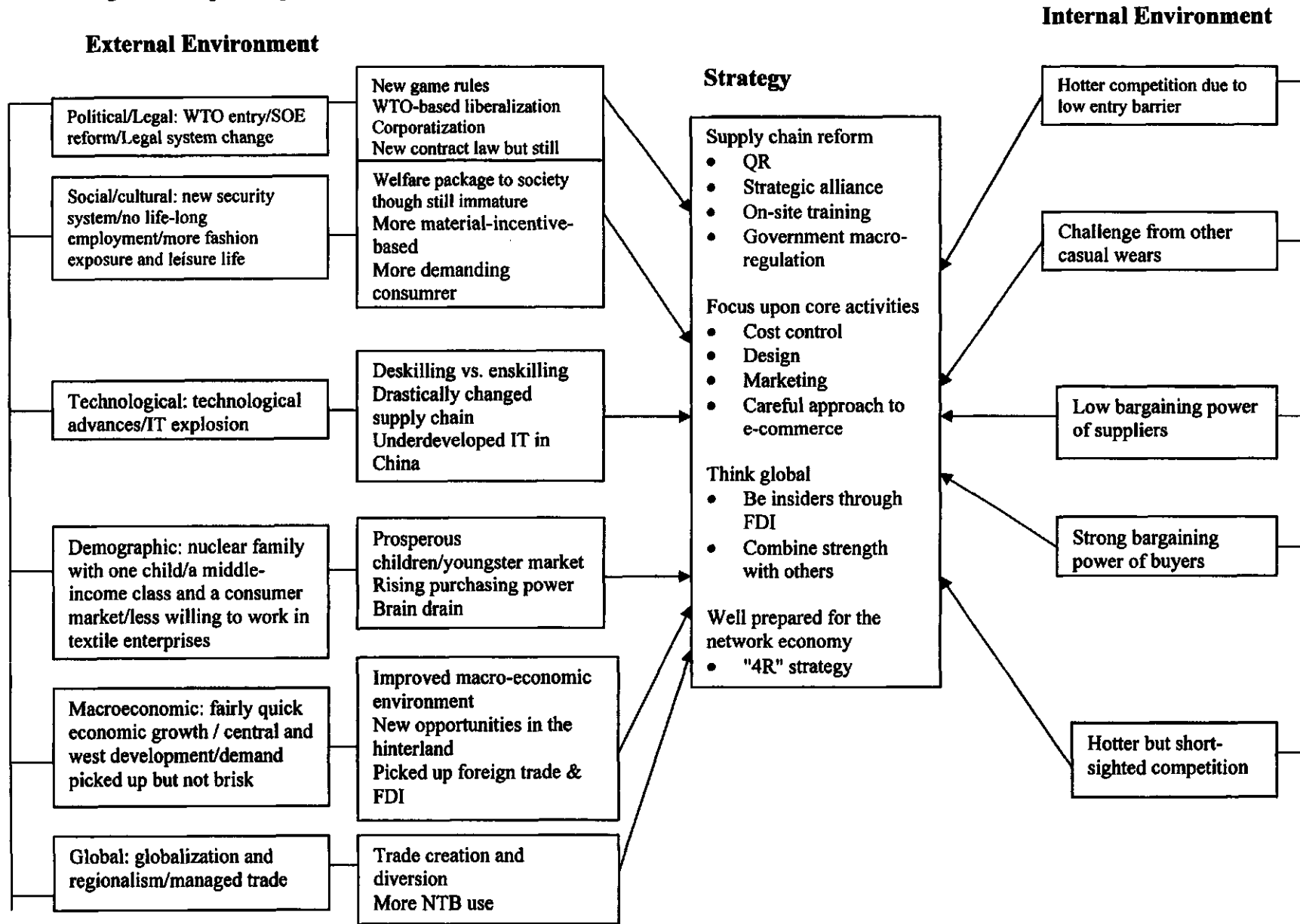
Second, realize instant information exchange by installing EDI among the cooperative enterprises. This measure can not only save time and labor in handling paper work, but also greatly facilitate information flow and promote better communication. Speed is key to fashion business. The more time it saves, the more value it may create.

Third, recover new competitive niches by integrating design with hi-tech contents, such as new-type fabric or sophisticated manufacturing process. Fashion design is hard to be protected by patents since a small change can successfully evade the piracy charge. Moreover, both HK and the mainland designers are still not in a position to compete with those in France and Italy. Though it is possible for them to catch up in the future, it is better to establish their own unique competitive advantages by finding new niches now.

The ability to meet consumers' demand has become a basic requirement. To create and change what the customers want beyond today's capabilities is more crucial for the success [36, 44]. As mentioned in Section 2.5.3.5, if the mainland and HK can

8.1 Strategies corresponding to current dynamic external and internal environment

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collaborate on R & D, based on the former's strength in basic scientific researches and the latter's good market sense and strong capital support, they have the chance to move upmarket and secure a position relatively difficult to be attacked. The success largely depends on the close cooperation between the two sides in identifying the market niche and analyzing its feasibility and future prospect.

Fourth, re-design current network by adding new members into the net. "As the number of nodes in a network increases arithmetically, the value of the network increases exponentially." [44, p23] HK investment is currently focused upon the Pearl River Delta. In view of China's huge domestic market which is actually composed of several different sub-markets, there is a large space for the current network to be expanded to other regions, such as those second-tier cities in the central and west of China. The "product life cycle" theory used by some MNCs to make investment decision can be applied to the mainland market as well. The product lines can be moved progressively from the east to the west and from the coast to the hinterland based on the product life cycle, which can not only prolong the product's life, but also maximize profit. This again requires members in the net to act together in market research and eliminate obstacles in the distributive channel.

8.2.4 Summary

The above analysis draws a picture for current external and internal environment in which domestic textile and apparel enterprises are competing. Figure 8.1 is the summary of the above-discussed issues. No enterprise can win the game without paying full attention to the drastically changed environment. Only those who clearly understand today's market can find a way out of the hyper-competition.

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