
The Chinese Apparel Cluster in Guangdong

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Harvard Business School

Microeconomics of Competitiveness

May 5th, 2006

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China: A Brief Economic and Political History

Today China is showcased as the model example of the developing world. Since the widespread economic reforms in 1978, China's Real GDP has grown from US\$763 billion in 1980 to US\$7.8 trillion in 2005. This represents a compounded annual growth rate of 9.38 percent for the period 1980 through 2005. With this exhibited growth rate, China doubles its GDP approximately every 7 years. Furthermore, growth rates of this magnitude place China as one of the key drivers of growth in the world economy.

China has become known as the "Country of 3 Cs." Historically, this referred to the strong followings of Confucianism and Communism. More recently, the third C has come to represent Capitalism. After the end of the Cultural Revolution and the death of Mao in 1976, Deng Xiaoping took office in 1978. He quickly laid out a plan for economic reform based on the "four modernizations" in agriculture, industry, science and technology and national defense (Vogel, 1989). Market-based reforms implemented by Deng Xiaoping during the 1990s included fiscal decentralization, the opening of special economic zones, a move towards market-based pricing, and the privatization of state-owned enterprises (SOEs). These political changes can be seen clearly in the decreased state ownership of firms from 75 percent SOEs in 1980 to 25 percent in 2002 (McKinsey, 2003).

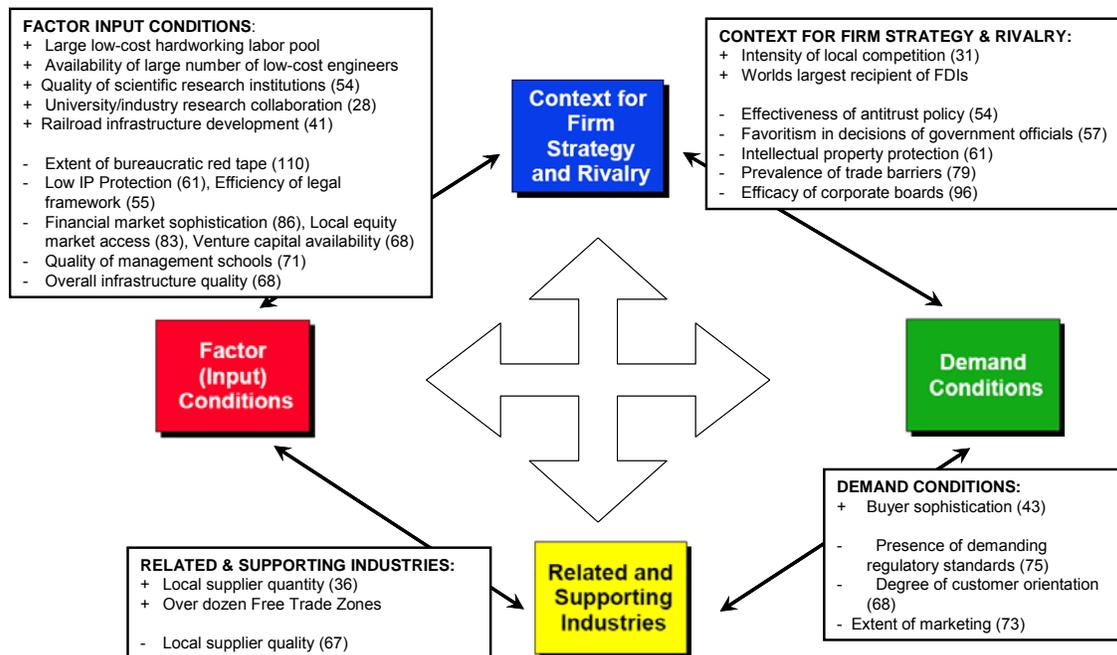
China National Diamond Analysis

China: Today's Economic Miracle

According to the Economist Intelligence Unit (EIU), China's Real GDP measured US\$7.8 trillion in 2005 and is expected to grow to more than US\$8.5 trillion in 2006. This represents a 9.9 percent growth over 2004 and an estimated 8.8 percent growth from 2005 to 2006 (EIU CountryData). With a growth rate of this magnitude, China will maintain its position as one of the fastest growing countries in the world.

A look at China's national diamond reveals competitive advantage in factor conditions, weaknesses in the context for firm strategy and rivalry, strength in the related and supporting industries and limited demand conditions.

Figure 1: Chinese National Diamond



Factor (Input) Conditions: China is initially identified as a source of cheap labor, with even an adequate number of low-cost engineers thanks to a relatively well-established network of universities and scientific institutions.

However, despite a high level of FDI China is ranked relatively low in the Business Competitiveness Index. Whereas China's counterparts in term of FDI inflows, the US and UK, are ranked 1st and 6th respectively, China is ranked 57th—below India, Ghana, Jamaica and Botswana to name a few (Porter, MOC Website). The underperformance is in large part driven by China's poor governance structure (Porter, MOC Website). The extent of bureaucratic red tape (ranked 100/116) and efficacy of corporate boards (ranked 96/116) have significant negative effects on China's factor conditions and the context for firm strategy and rivalry (Institute for Strategy and Competitiveness, HBS).

Context for Firm Strategy and Rivalry: In 2005, China was ranked by the United Nations Conference on Trade and Development (UNCTAD) as the third largest recipient of FDI after the US and UK. These increases in FDI have been driven, in large part, by the growth of manufacturing productivity in China. Since the mid 1990s, 60 percent of China's total inflows of FDI have been put into manufacturing which, not coincidentally, increased its productivity growth at an unprecedented rate of 14.7 percent between 1997 and 2000 (UNCTAD, 2005). In the past, much of this FDI was driven by a large supply of low cost and relatively educated labor. However, there is recent evidence that labor shortages are causing wages to rise in China. For example, as of March 2006, Guangdong province reported 2.5 million jobs unfilled (Business Week Online, 2006).

While local competition is present, clientalism and trade barriers present a burden to the efficient operation of individual firms where ultimate wealth is created within an economy.

On December 11, 2001, China became the 143rd member of the World Trade Organization (WTO). At the end of 2001, China's exports totaled US\$266.1 billion with a current account balance of US\$17.4 billion. By the end of 2005, China's exports reached US\$764.2 billion with a current account balance of US\$116.1 billion – representing a trebling of exports and an increase of the current account balance by a factor of 7 since WTO accession (EIU CountryData). The level of China's current account balance, and its alleged undervalued currency, is cited by some as the cause of the rising current account deficit of the US. Despite the revaluation of the renminbi in July 2006, China's currency has only appreciated by 1 percent against the US dollar (EIU, 2006).

In November 2004, China joined into an agreement with the Association of Southeast Asian Nations (ASEAN) to create the world's largest free trade zone (CNN, 2004). China has since been able to offer tariffs that are more lenient than the WTO standards to its ASEAN and Taiwanese trading partners (EIU, 2006). The ASEAN-China FTA has been projected to increase exports from ASEAN countries to China by 48 percent and increase China's exports to ASEAN by 55.1 percent – corresponding to a rise in ASEAN and Chinese GDP by 0.9 percent and 0.3 percent, respectively. The three sectors that are expected to benefit the most from this deal are textiles and apparel, electrical appliances and machinery, and other manufactures (Enright et al, 2005). The province of Guangdong, and its neighbors which make up the Pearl River Delta, are strategically positioned to be the bridge between mainland China and South-East Asia as part of this agreement.

The main destinations for Chinese exports in 2004 were the US (21 percent), Hong Kong (17 percent), Japan (12.4 percent) and South Korea (4.7 percent).

Related and Supporting Industries: The availability of local suppliers does not present a constraint to the Chinese economy, although a qualitative weakness in the products they offer may be hampering developments in the value chain. Currently China's principal product exports by export value of are information technology (IT), communications equipment, entertainment and reproduction equipment, sporting goods, apparel, and textiles (International Cluster Competitiveness Project). Of these, the clusters that show the highest rate of growth in terms of national export share are IT, sporting and leather products, the later being relevant as a supporting cluster to the apparel industry. According to Standard Industrial Trade Classification (SITC) codes, apparel exports in 2004 measured US\$74 billion – representing approximately a 20 percent increase over 2004 (EIU, 2006).

Demand Conditions: While China is endowed with a large local market with a high degree of sophistication (ranked 43rd), there is still work to be done in terms of setting standards and the marketing of products. More importantly, concerns of insufficient local consumption relative to investment must not be undermined, especially given the country's high level of inequality particularly by regions. Inequality (as measured the GINI coefficient) has increase from 0.3 in the 1980s to approximately 0.45 today (Mai et al, 2005)

Understanding the Investment Paradox: The Role of Hong Kong

Hong Kong as an Important Source of FDI

Hong Kong, whilst a small country, occupies an important global position in terms of FDI outflow. In 2002, the country was ranked amongst the top ten worldwide contributors to FDI outflow with a total of US\$17.69 billion. Within the Asian continent, Hong Kong is only surpassed by Japan, which ranked fifth in 2002 with US\$31.48 billion. Hence, Hong Kong occupies an important financier role within in Asia (Enright et al, 2005).

China's high levels of FDI despite the low rankings in business competitiveness could be explained by the significant role Hong Kong plays as a source of FDI for China. Thus, between 1979 and 1995, Hong Kong ranked first in terms of FDI to China with approximately US\$234 billion or 59 percent of total inflow. Between 1996 and 2002, this ratio fell both in absolute and relative terms to US\$140 billion worth of FDI equivalent to 32.4 percent of total inflow (Enright et al, 2005). According to research by Deutsche Bank slightly over 50 percent of China's FDI in 2003 originated in Hong Kong (Deutsche Bank, 2005).

Moreover, a significant amount of Chinese "mainland" investment is thought to be routed through Hong Kong in order to take advantage of preferential policy towards foreign investors – a process known as "roundtripping." According to the World Bank, "roundtripping" accounts for 20 to 30 percent of Chinese FDI (World Bank, 2002).

As of July 2003, approximately 200 Chinese enterprises have been listed in Hong Kong. These enterprises have succeeded in attracting about 83 percent of the funds invested on the Hong Kong Stock Exchange within the first seven months of their listing (Enright et al, 2005).

Extensive Trade Relations

Hong Kong is a highly trade-dependent economy whereby trade accounted for 252 percent of GDP in 2002. As one multinational executive reflects: “Hong Kong is where you go to build markets.” A recent Enright, Scott and Associates Ltd survey has concluded that the Hong Kong was the single most important city in the region with three times as many business regional headquarters as Tokyo (Enright et al, 2005).

This background explains why some describe Hong Kong as being China’s window to the world. As a hub for overseas firms, the city expands China’s access to world markets, and for that reason, Hong Kong occupies an important position as one of China’s main trading partners. In fact, most of Hong Kong’s trade takes the form of Chinese re-exports. Between 2000 and 2002, these Chinese re-exports accounted for seven to ten and half times the proportion of Hong Kong’s own domestic exports (Enright et al, 2005). Similarly, about 21 percent of China’s exports are destined to Hong Kong only surpassed by the US with a share of 25.8 percent in 2004 (Deutsche Bank, 2005).

Another important source of trade between China and Hong Kong takes the form of intermediate inputs exported to China from Hong Kong.

A Role for the Chinese Diaspora?

Ties extending beyond mere economics further strengthen the relationship between Hong Kong and China, and especially the Guangdong province, as most of those residing in Hong Kong can trace their original roots back to the Guangdong Province. Thus, it appears that the role of the Chinese Diaspora in Hong Kong has already materialized in positive spillovers to China and specifically the coastal regions (Enright et al, 2005).

Hong Kong and China: A Win-Win Situation

In assessing the performance of China, one must recognize the crucial role Hong Kong has played and still assumes in the growth of the Chinese economy beyond trade and finance. For example, it is estimated that in 2002 more than 600 flights took place between both Hong Kong and forty Chinese cities on a weekly basis. This is in addition to the more than 33,000 vehicles that cross Hong Kong mainland boundary each day. This logistical support has been crucial to the strengthening of the economic role Hong Kong has had in China's coastal regions. Hong Kong is also described as providing China with "management know-how, technology, equipment, design and research, marketing skills, procurement services, and quality assurance" (Enright et al, 2005).

One important factor that stands out in these economic ties is the apparent specialization that has taken place. While in the late seventies, Hong Kong's wages and land costs had reached a high point, the adoption of market socialism in 1978 and subsequent opening of China's economy in 1979 allowed firms from Hong Kong to relocate their manufacturing in China, and specifically in the coastal regions where production costs were lower. The services associated with manufacturing, however, were and are still undertaken from Hong Kong where the knowledge-based labor force has expanded from 21 percent in 1981 to over 50 percent in 2001 (Enright et al, 2005). This perspective has been shared by respondents of a 2002 survey conducted by University of Hong Kong and the Trade Development Council where businessmen established in Hong Kong found that in most sectors the Hong Kong-Guangdong partnership was more successful than either actor alone.

Cluster Analysis

Guangdong: A Dynamic Chinese Province

China's self-imposed isolation after World War II and during the Cultural Revolution (1966-76) resulted in a trade to GDP ratio of only 10 percent and no stock of foreign direct investment (Kennedy, 2002). Before the reforms of 1978, Guangdong presented itself as a considerably disadvantaged Chinese province ranking 16th out of 30 Chinese provinces in terms of GDP per capita (Renard, 2002). Its bureaucracy was hampering as a result of its size and lack of training. Whereas the structure of a planned economy was thought to reduce the incentive to work, Guangdong's labor force was considered to be particularly undisciplined. Moreover, its abundance in natural resources operated as a deterrent for the province to develop a competitive industry. The province suffered from structural weaknesses in terms of technology and management systems. Administratively, Guangdong was heavily dependent on decision-making in Beijing, had multiple administrative layers and poor coordination which created an unstable business environment.

It is within this context that Guangdong began undertaking significant economic and political reforms in the late seventies which translated in a phenomenal economic take-off in the eighties (Vogel, 1989). The Chinese province seemed to be on a rocky but definite path driven by an ambitious vision clearly articulated in 1992 by Deng Xiaoping in a tour of the region: Guangdong was to accelerate its reform process in order to catch up with neighboring Asian economies (Enright et al, 2005). Already, by 1995, Guangdong's per capita GDP ranked 5th out of China's 30 provinces (Renard, 2002). The subsequent table of comparative Chinese provincial diamonds lends support to the economic endowment of Guangdong relative to the rest of China.

Table 1

	Factor Inputs				Demand	Rivalry	Domestic Industry
	Raw Material	Infrastructure	Domestic Capital	FDI			
Guangdong		√	√	√	√	√	√
Jiangsu	√	√	√	√	√	√	√
Zhejiang	√	√	√	x	√	√	√
Shanghai		√ x	√ x	√	√		√
Shandong	√	√		√	√		x
Liaoning	√	√			√	√	√ x
Tianjin		√	√ x				
Guangxi	√	√			x		
Hainan	√	√	√	√			
Hubei	√	√	x				
Shaanxi	√				x		
Guizhou	√				x		
Shanxi	√	x	x				
Jiangxi	√	x					

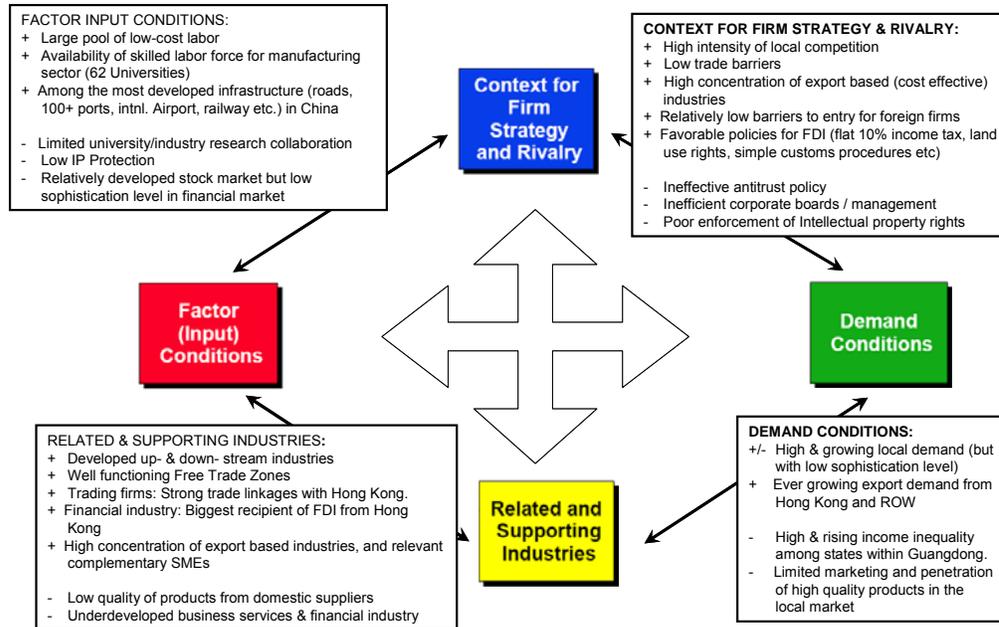
Source: Hendrischke et al, (1999).

Over 70 percent of China's present textile & apparel production is concentrated in three coastal provinces (Guangdong, Zhejiang, Jiangsu) and two river deltas (Pearl River and Yangtze River). Although Guangdong ranks third in national textile & apparel production (26.6 percent with a 12 percent growth rate), it tops other Chinese provinces in terms of national exports (20.5 percent). In 2005, exports reached total of US\$16.6 billion with textile representing US\$4.8 billion (12 percent growth rate) and apparel representing \$11.8 billion (17 percent growth rate).

Over two-thirds of Guangdong's firms produce for exports accounting for US\$ 10 billion in 2001 which further strengthens competition between local firms (Enright et al, 2005).

Guangdong Cluster Diamond

Figure 2: Guangdong Regional Diamond



Factor (Input) Conditions: Guangdong presents clear cut evidence of strong input conditions as often found in the clusters of developing countries. The province, as previously mentioned, is endowed with water and natural resources. Its geographical location on the coast bridges between Southern China and the rest of the world. The province has indeed the longest coastline in the country. Its proximity to Hong Kong which is said to be visible from the coast is particularly advantageous since it gives it access to a deep sea port for trade and enables synergies with the financial and managerial hub of Hong Kong (Vogel, 1989).

Guangdong is one of the best endowed provinces in terms of infrastructure with three ports in the cities of Guangzhou, Shenzhen and Zhuhai. While Guangzhou's Baiyun Airport links the province's capital to mainland China and acts as a transportation hub for Southern China, it is seconded by Shenzhen's Bao'an International Airport which handled about half of Guangzhou's approximately 600,000 tones of cargo in 2002. Shenzhen, for

example, has gradually attracted buyers because of its seaports (20 percent of Guangdong's trade occurs through its container ports) and its growing reputation for a garment consolidated centre where important international merchandisers have intensified their buying activities (Enright et al, 2005).

It is worth noting, however, that the 80 percent of Guangdong's trade that is unaccounted for is shipped through Hong Kong. Businessmen prefer to avoid shipping their goods through Shenzhen's ports despite the province's ability to offer a lower price than Hong Kong's container port as a result of lower land-haulage costs, port handling charges, and 21 to 49 percent lower terminal handling charges. The overall net savings which could represent from 20 to 33 percent of total cost in Shenzhen does not provide sufficient compensation for the cumbersome informational requirements, high level of regulatory uncertainty, unexpected cargo confinement as well as prolonged sampling measures which characterizes the Chinese bureaucracy. Survey evidence seems to suggest, however, that the willingness to accept all these risks may be correlated with costs in the supply chain: higher value products allow for a transportation premium versus goods competing on lower production costs (Enright et al, 2005).

Guangdong suffers, however, from a weak level of education, barely reaching the average for the whole of China. While Guangdong's 83 million inhabitants represent 6.2 percent of China's total population, the number of higher learning institutions in 2003 reached a bare 77 institutions representing a mere 5 percent of the national share. With 105,533 graduates from these institutions each year, i.e. 5.6 percent of total number of Chinese graduates, Guangdong faces a constant shortage in skilled labor particularly professionals which forces it to resort to migrant workers from other Chinese provinces. Thus, 88 percent of Guangdong's cadres, 90 percent of its enterprise labor, and 80 percent

of its professionals originate from outside the province (Huijiong et al, 2005). Nonetheless, this weakness does not appear to impair the apparel cluster given its reliance on unskilled labor.

Opening of the Chinese economy in 1978 and the creation of three special economic zones in Guangdong in early 1980s caused a large increase in outsourcing of Hong Kong's textile and apparel companies. At first, production was subcontracted to state-owned Chinese factories, but eventually an elaborate outward-processing arrangement was set up that relied on an assortment of manufacturing, financial and commercial joint ventures. The outsourcing to the Chinese mainland led to the dismantling and relocation of Hong Kong's manufacturing sector during the late 1980s and early 1990s. In 1995, Hong Kong entrepreneurs operated more than 20,000 factories employing an estimated 4.5-5 million workers in Guangdong. Taking into account the fact that total employment in Hong Kong industry had shrunk to 386,000 in 1995, or just over 15 per cent of the workforce, Hong Kong manufacturers in effect increased their domestic labor force well over 10-fold through their outward processing arrangement with China (Gereffi et al, 2003).

Context for Firm Strategy and Rivalry: Context for firm strategy and rivalry in Guangdong is relatively good overall. The province enjoys a high degree of political and economic autonomy by virtue of having three of the four Special Economic Zones (Shenzhen, Shantou and Zuhai). Furthermore, economic policies are favorable to firms since they are only subject to a 15 percent corporate tax rate with a 5 years tax holidays; corporate profit and capital investment repatriation is free; duty free concessions exist on imports of raw materials and intermediate goods; and no export taxes are imposed. Firms are also allowed to keep a large share of their output and foreign exchange (Vogel, 1989). The province has its own Stock Exchange in Shenzhen, a Guangdong Development Bank, allows

foreign banks to operate, and allows the local government to issue bonds. Prices remain free, thus, diminishing market distortions (Enright et al, 2005).

Administrative reforms in Guangdong began in 1977 when an entrance exam was first introduced in the province. The purpose of this exam was to institute a system of selection of government officials based on meritocracy. Appointment and promotion were made more stringent using higher minimal educational standards. A training program was also introduced for government officials. Finally, an early retirement package was introduced for older and less qualified bureaucrats. Nonetheless, while these administrative reforms provide an encouraging context for firms operating in Guangdong, the province still suffers from clientalism, untrained bureaucrats and a still limited talented pool of government officials (Vogel, 1989). Improvements are still needed in areas of intellectual property protection and anti-trust regulations.

A significantly positive contributor to the environment of competitiveness within the province is the decline in state owned enterprise from 81.2 percent in 1998 to about 34 percent in 2002 in favor of 58.8 percent share of foreign-funded units in the same year (Vogel, 1989). This change in the ownership structure of firms reinforces competition and enhances productivity within the region. Also, it is estimated that about 30 million Chinese originating from Guangdong live abroad and thus act as a catalyst for investments in the province as well as the introduction of new production methods.

Related and Supporting Industries: Guangdong's garment industry benefits from good related and supporting industries thanks to the role of Hong Kong which provides inputs and complex manufacturing steps. It is estimated that in 2002, 52 percent of Hong Kong trade related and manufacturing firms maintained operations in China with 96 percent of

those locating in the Guangdong province. The share of foreign funds in manufacturing industry in Guangdong has seen a consistent rise from 41.19 percent in 1981 to 71.38 percent in 2002 (Enright et al, 2005).

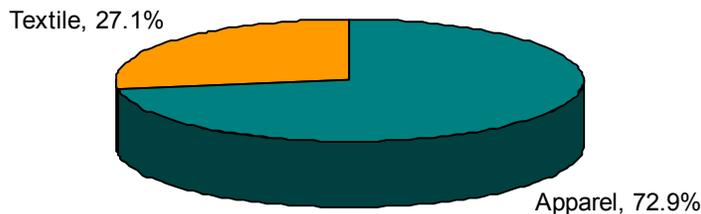
Also, it is estimated that 60 percent of the material used in the garment industry is imported from Hong Kong. The initial design and subsequent marketing activities are, for the most part, undertaken in Hong Kong to cater to international demand. Moreover, in order to circumvent international trade restrictions, some piece and finishing work is sometimes performed on Chinese garments for the purpose of attributing its source to Hong Kong as to avoid strict rules of origin.

Demand Conditions: Demand conditions are particularly pronounced in the province given both its relative prosperity spurring local demand as well as exports to Hong Kong. Indeed, Guangdong's exports to Hong Kong have more than doubled between 1995 and 2002. Also most of these exports have been subsequently re-exported by Hong Kong. Thus, in 2001, 86.9 percent of the products imported from China by Hong Kong's businessmen were entirely or partially manufactured in Guangdong. Also, 90 percent of Hong Kong's imports from China were re-exported to a third destination (Enright et al, 2005). Guangdong also benefits from the existence of a significant domestic market within the province (Vogel, 1989). By virtue of having a high per capita GDP relative to the rest of China, Guangdong's inhabitants constitute a purchasing power that should not be overlooked. In fact, a survey by Guangdong Provincial Statistical Bureau describes eight cities out of the province's 22 having residents who enjoy "relatively comfortable living standards" (Enright et al, 2005).

Overview of Global Apparel & Textile Market

In 2003, global apparel and textile market reached 58.5 million tons in volume and generated revenues of US\$935 billion with a CAGR of 2.2 percent since 1999 (Cassill, 2005 and CMAR, 2006). More than two-thirds of global revenues came from apparel while textile accounted for the rest. In 2000, the top five global apparel exporters were China (US\$39.2 billion), followed by Hong Kong (US\$24.7 billion), the US (US\$9.3 billion), Mexico (US\$9.3 billion) and Turkey (US\$7.0 billion) (Gereffi et al, 2003).

Figure 3: Sources of Global Revenue



Source: Cassill, Nancy L. (2005).

Historical Global Migration of Apparel

Since the 1950s, the world textile and apparel industry has gone through several production migrations. Understandably, companies were following cheaper sources of labor as sophistication and openness of the developing economies increased. The first was from North America and Western Europe to Japan in the 1950s and early 1960s, when western textile and clothing production was displaced by a sharp rise in imports from Japan. The second migration happened from Japan to Hong Kong, Taiwan and the Republic of Korea, which dominated global textile and clothing exports in the 1970s and early 1980s. In the late 1980s and the 1990s there was a third migration, from the Asian “Big Three” (Hong Kong SAR, Taiwan and the Republic of Korea) to other developing economies. In the 1980s, production moved to mainland China, but also to several Southeast Asian countries like

Indonesia, Thailand, Malaysia, Philippines and Sri Lanka. In the 1990s, new suppliers included South Asian and Latin American apparel exporters driven by special economic zones and proximity to the USA (Gereffi et al, 2003). There is no reason to believe that the third migration is conclusive.

The Implications of the Expiration of the Multi-Fiber Arrangement

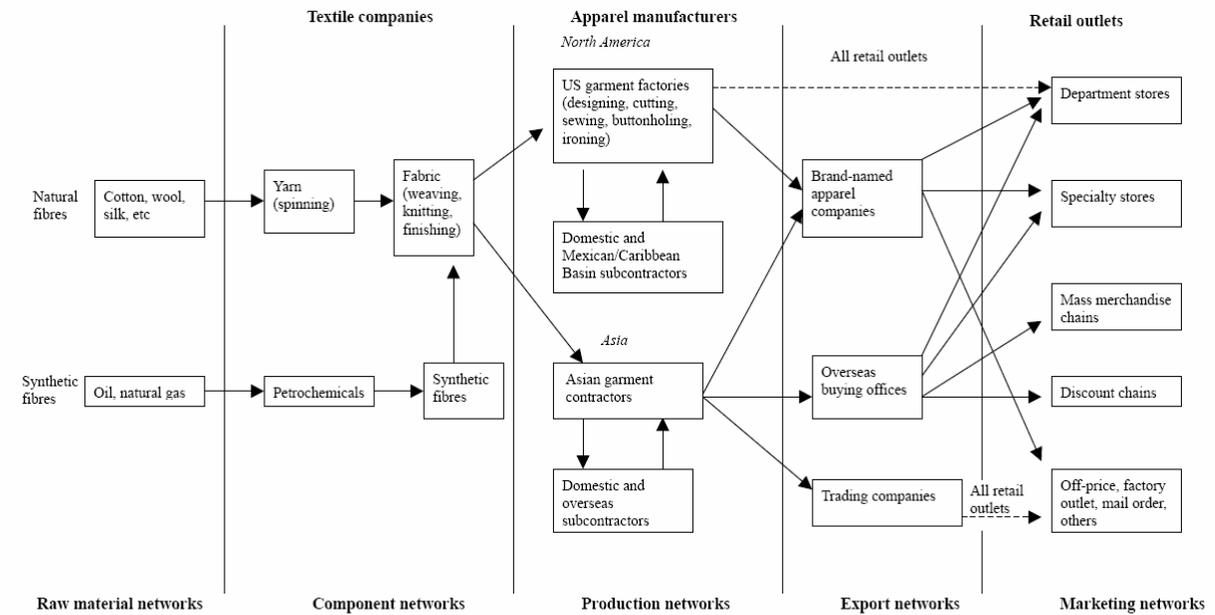
In 2000, China accounted for 21.6 percent of the world's textile and garment exports. By the end of 2002, in terms of the export value, the textile and garment industry of China reached US\$62 billion. When the decades-old Multi-Fiber Arrangement was phased out as of January 2005, more than 2,000 textile and clothing categories were no longer restricted by export ceilings. First quarter data for 2005 suggest that the United States imports of Chinese apparel and textile rose by more than 60 percent compared to a year earlier. It is projected that by 2008, when member nations of the WTO further eliminate the "safeguard quotas," (special quotas limiting the annual growth of selected categories by 7.5 percent so as to minimize perceived domestic market disruption), China will be likely to account for half, if not more, of the global textile and apparel production (Wai-ling Chan, 2005).

Apparel Value Chain: A Buyer-Driven Story

The apparel value chain is a good example of a buyer-driven value chain in which retailers and marketers like Wal-Mart, Sears, Nike, Gap or Liz Claiborne are "manufacturers without factories" with the physical production of goods separated from design and marketing. They fundamentally have control over the whole value chain without capital investments and the hassle of physically owning and operating the factories. In contrast to producer-driven value chains where profits come from scale, volume and technological advances, buyer-driven chains' profits come from superior

design, sales, and marketing which allow the retailers, designers and marketers to act as strategic brokers in linking overseas factories with product niches in their consumer markets. As the “five forces” model would suggest, profitability within the value chain is the greatest where high entry barriers exist (Gereffi et al, 2003).

Figure 4: Apparel Value Chain



Source: Gerris et al. (2003)

The Role of Government

The key governmental step towards building a competitive province was the establishment of three Special Economic Zones in Guangdong with. Favorable economic regulations and low taxes (10 percent versus a national average of 30 percent) facilitated development of the Guangdong region into an industrialized province with superior infrastructure of roads and over 100 ports in the Pearl River Delta.

Institutions for Collaboration: Governmental Councils and Trade Associations

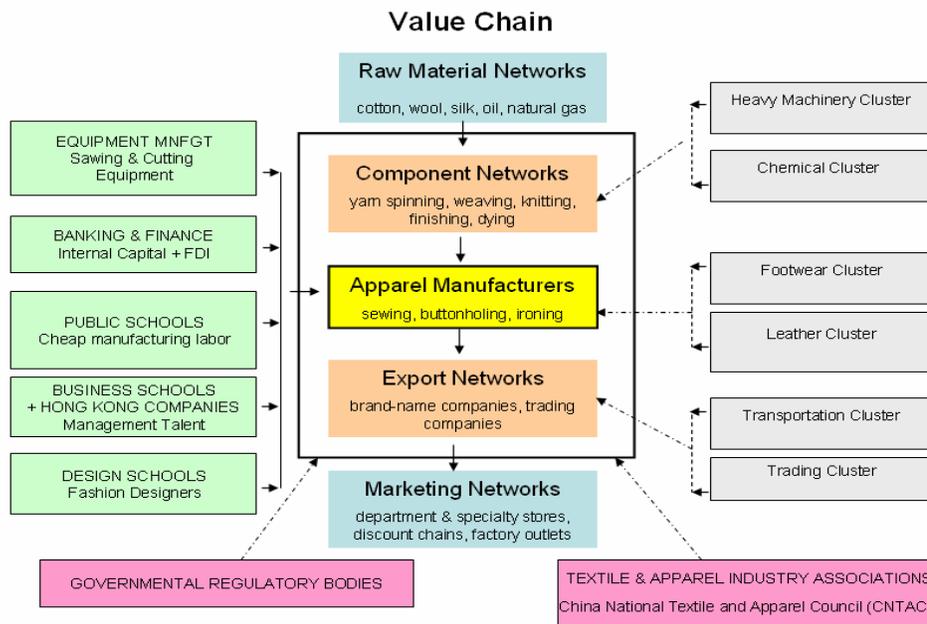
China National Textile Industry Council (CNTIC) was established in 2000 as the arm of the central government responsible for the nation’s textile industry. It publishes a 500-

page year book and development report on the textile and garment industry in mainland China (Wai-ling Chang, 2005).

China National Textile and Apparel Council (CNTAC), is the national Federation of all textile-related industries, and is a non-profit organization formed on a volunteer basis. The aim of CNTAC is to provide services in the modernization of China's textile industry. The scope of services includes setting guidelines & rules to supervise the performance of the industry, improving the self-discipline working system, and protecting the interests of the industry. CNTAC aspires to study and research the development and growing trend of the domestic and international textile industries, and participate or provide consulting services in the domain of strategy development, industrial policy, technological progress and upgrading, market promotion and exploration, reform and opening up of the industry, and bridge the enterprises with the government, make recommendations and reports to the government, and provide information and consulting services for the enterprises (CNTAC).

One of the recent accomplishments of CNTAC is the establishment of a testing center in Xiqiao. With an investment of 10 million Chinese renminbi, it is the most advanced fabric testing facility in China. Its role is to provide fabric quality testing, technology training, quality accreditation and technology consulting services to the textile industry in southern China (TWA, 2005).

Figure 5: Textile & Apparel Cluster Map - Guangdong



Strategic Challenges and Recommendations

A recent cause for concern is the level of excess capacity and the threat of overheating of the Chinese economy. As the main component of GDP, high levels of investment in the three years has caused the Chinese government to now attempt to slow investment growth after signs of overcapacity in manufacturing become evident (EIU, 2006). Because of rising trade tensions, particularly with the US, China is losing its ability to export this surplus (EIU, 2006).

More importantly, high levels of investment relative to consumption means that China's high growth is not sufficiently being translated into rising living standards through consumption.

Despite its high rate of growth, China has experienced difficulty in improving prosperity. The Chinese government, however, has identified steps to improve this. China's 11th 5-year plan which is in effect from 2006 through 2010 sites a focus on the quality, not quantity of economic growth. Efforts to achieve this include improving the technological

standards in value added production and a concentration on more equitable growth (EIU, 2006).

Cluster Challenges and Recommendations

➤ **Lack of IP Protection**

- **Issue:** China's chronic problem is intellectual property violation. During our interview, Alessandro Vannuccini, Co-founder and CEO Asia of 4PEOPLE suggested that this is China's hottest issue. 4PEOPLE is an apparel company, selling approximately 1.5 million pieces annually, which specializes in providing Italian designs to its Chinese suppliers and subsequently exports the products to European markets. It is not uncommon that Chinese suppliers steal product designs supplied by 4PEOPLE and produce their own garments which are then sold directly to European markets at a discounted price compared to that negotiated with 4PEOPLE (Vannuccini, 2006).

While IP violation can be partially overcome by foreign investors and contractors via careful selection of trusted suppliers, its effect is detrimental to incentives for local Chinese companies to innovate product features and manufacturing practices.

- **Recommendation:** Government needs to take a proactive approach in fighting IP violations and business piracy. Although it seems that the Chinese government was historically lenient towards implementing IP policies as Chinese companies were the ones who often benefited from these violations (Salmon, 2005), it is time to change this mindset. Until Chinese companies

see a benefit in innovating the product and processes, they will not invest in R&D and innovation.

➤ **Lack of Lead Firms in Branding, Design and Manufacturing Innovation**

- **Issue:** National development requires establishing linkages with the leading firms in an industry. These firms are not necessarily the traditional vertically integrated manufacturers, nor are they necessarily involved in making finished products. Lead firms, such as fashion designers or private label retailers, can be located upstream or downstream from manufacturing, or they can be involved in the supply of critical components (e.g. microprocessor companies like Intel or software firms like Microsoft in the computer industry). What distinguishes lead firms from non-lead firms is that they control access to major resources (such as product design, new technologies, brand names or consumer demand) that generate the most profitable returns (Gereffi et al, 2003).

To a large extent due to its communist legacy, China has a reasonable supply of engineers but lacks enough qualified creative talent with which it could compete with western companies in design and marketing. Guangdong's deputy governor's statements confirm that one of the key issues hampering further development of the province's apparel and textile companies is the fact that most lack their own brands (TWA, 2005).

- **Recommendation:** The government should assume leadership in establishing higher educational institutions in the Guangdong province. The

government should aspire to launch a joint degree with top design universities of USA, UK, France or Italy.

In addition, the government should strive to attract the significant Chinese student body studying abroad. In 2003, some 120,000 Chinese students were studying abroad—the highest number of any of the 28 countries whose supply of graduates McKinsey Global Institute has investigated (Farrell et al, 2005). More importantly, this strategy has a potential to achieve immediate results if synergies between Hong Kong’s intellectual property rights protection framework and Guangdong’s availability of low-cost R&D staff can be formed to facilitate cooperation between industry and universities in the region.

➤ **Increasing Labor Cost**

- **Issue:** Although Guangdong has low wages and an abundant workforce, both wages and land costs have risen rapidly. As costs in Guangdong go up, manufacturers who wish to retain a Chinese-based production system will have to move their facilities further into China, where they will once again encounter bad roads, inadequate water and power systems, and lack of commercial infrastructure. As production moves inland, it will be increasingly difficult to attract enough managers from Hong Kong.

In addition, new low-cost apparel-exporting Asian countries are emerging—India, Indonesia, Myanmar, Sri Lanka, Vietnam and others— while Mexico and the Caribbean Basin countries loom as cheap production sites closer to

the United States' market with only 6 day boat delivery versus 4-6 weeks from China (Gereffi et al, 2003).

- **Recommendation:** Rather than trying to replicate the Pearl River Delta pattern on a large scale further inland, it might be wiser to try to upgrade operations at the Guangdong plants. If Guangdong wants to avoid being locked into low-end manufacturing, it should take initiative to take fuller advantage of the global trend towards service-enhanced or technically-innovative manufacturing. It is important to note that to provide solid ground for innovation to happen, government will need to address IP piracy and talent issues which are discussed above.

A good example of such successful product innovation is a patent held by Hong Kong company TAL for construction of non-iron shirt supplied exclusively to Brooks Brothers. The shirt has 3 specific features: 1) “XLA” special heat-activated fabric which is woven into the cotton to decrease wrinkling during wear, 2) anti-puckering tapes sewn into the shirt, and 3) a permanent crease on the sleeve resulting from baking shirts in high-temperature ovens after the sewing job is complete (Sand, 2006).

➤ **Lack of communication between government and small and mid-sized businesses in Guangdong**

- **Issue:** Partially due to its communist legacy, the government of Guangdong has not yet developed an effective communication tool with small and

medium sized companies which could improve the quality of legislations affecting the business environment.

- **Recommendation:** Establish a special public agency for aggregating common concerns and mediating with government authorities. Its mandate should be to collect, aggregate, and express common concerns of particularly small and medium sized enterprises in order to provide an efficient and convenient way to reflect their views and help improve the business environment in Guangdong.

➤ **Poor Working Conditions**

- **Issue:** Double bookkeeping to faultily disguise genuine factory information is not uncommon in Guangdong. A Chinese manager of a large-scale garment factory supplying for multinational corporations in the Pearl River Delta economic zone has confessed to falsifying workers' time cards and salary statements so as to meet the clients' code of conducts and pass external social audits. Rules and regulations are not strictly enforced by local labor departments, which have significant vested interests in economic development and foreign investment. An average work day lasts between 12 and 14 hours, seven days a week. To cope with the increasingly just-in-time production schedule, the migrant workers are often required to work nonstop to next morning (Wai-ling Chan, 2005).

On May 31, 2005, the China National Textile & Apparel Council unveiled its so-called "China Social Compliance 9000 for Textile & Apparel Industry"

(CSC9000T). The audit seeks to emulate international standards, and provides a list including issues such as working hours, wages and safety. One of its key purposes is to reduce trade friction based on the perceived negative image of Chinese industry. Chinese textile trade is suffering from the image held by the developed world of Chinese factories inadequately paying and treating workers to produce cheap goods and dump in their markets (Han Shih, 2006).

- **Recommendation:** Although we acknowledge that this problem is a serious one, we believe it should be addressed with caution. We believe that some minimal standards should be maintained and enforced and the government is already taking steps in that direction. As the conditions in the factories improve, the Chinese government needs to publicize these efforts. However, the Chinese government needs to balance their actions. The passing of overly stringent working rules and their subsequent enforcement might result, in extreme cases, in the closure of factories in search of cheaper labor elsewhere and giving little alternative to the affected Chinese workers. We believe that this problem will be best addressed indirectly via stimulating innovation, technical, and operational advances in the industry which will result in greater productivity and better working conditions for the textile and apparel workers. Additionally, attracting more multinational companies to Guangdong with higher working standards will further improve labor conditions and increase options for Chinese workers.

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