

IV. DOES CHINA HAVE A COMPETITIVE ADVANTAGE IN THE LOW-END GARMENT INDUSTRY? A CASE STUDY APPROACH

*By Bala Ramasamy and Matthew Yeung**

Introduction

A new era began in the textile and garment industry on 1 January 2005. A four-decade long system of trade restraints on the exports of textiles and garments ended with the full implementation of ATC. An import quota system practiced by the developed countries (particularly the United States and the European Union), while aimed at protecting domestic producers in those countries, provided a ready market for textile and garment producers in developing countries despite their inefficiencies in production. The removal of the quotas and the re-emergence of China and India as economic powerhouses have posed serious problems for several Asian developing economies (e.g., Cambodia, Indonesia, Mongolia and the Lao People's Democratic Republic). Trade economists feared that these countries would be unable to compete with China despite a temporary safeguard measure imposed by the European Union and the United States that is valid until the end of 2008 (Nordås, 2004).

China's pre-eminent position as the world's largest exporter of textiles and garments is beyond doubt. The ADB reported that in 2005 China controlled more than a quarter of the market share of clothing imports in the United States and a third of the European Union's imports of textile and clothing. What drives China's advantage in this industry? Macro studies tend to point to, among other factors, China's low labour costs. However, economic development in China is also pushing wage rates upwards. To what extent is the low labour cost argument true? What are other drivers that cement China's position as the "tailor to the world"? To what extent are restrictive trade policies affecting individual firms? Can Chinese garment manufacturers continue to dominate the garment industry in the long term? This chapter attempts to answer these questions by using a case study approach. Other studies have considered similar questions at a macro level (Dayaratna-Banda and Whalley 2007; Tong, 2006; Yamagata, 2007; Yang, 1995, 1999; Yang and Zhong, 1998). However, in-depth case studies of garment manufacturers are capable of providing insights that could help producers and policy makers in their decision-making. In this chapter, a comparison is made of two garment manufacturers – one located in Beijing and the other in Jakarta – their cost structures and the challenges they face in their respective countries.

Section A provides a general discussion of the trade policies within the garment industry and its implications for China. Section B provides an overview of the garment industry in China. Section C introduces the methodology used in this study, particularly a description of the manufacturers who form the basis of the study. Section D provides the findings, followed by a discussion of the results in section E.

* The authors acknowledge a grant provided by ESCAP for undertaking this study. Thanks are also due to Yuan Yizhou for his research assistance.

A. Quotas, no quotas, more quotas

Historically, the textile and garment industry has been the most regulated manufacturing sector in international trade. In an effort to protect their domestic industries, the European Union and the United States restricted imports of textiles from Japan in the 1950s and 1960s. These restrictions were then extended to countries such as India, Hong Kong, China, and Pakistan. These restraints, which were complex in nature, were brought together under the MFA in 1974. Developed countries were allowed to impose export restraints on developing countries under the MFA if there was evidence of market disruptions in their home markets. The MFA quota regime and increasing labour costs resulted in the outsourcing of labour-intensive production of garments to low-cost countries following the “flying geese pattern”, i.e., from Japan to the newly industrialized countries to South-East Asia. As China and Viet Nam ventured into reforms of their respective economies, they also have been recipients of these investments. Unexpectedly, the MFA resulted in the emergence of garment industries in countries that did not have a true competitive advantage in the sector (Deutsche Bank, 2005). However, this provided a launching pad for industrialization among LDCs (Nordås, 2004; Brenton and Hoppe, 2007).

On 1 January 1995, the plan to phase out the MFA during the following 10 years led to ATC, under which quotas were to be gradually removed in four stages resulting in a complete no-quota environment on 1 January 2005. The growing economic prowess of China and its accession to WTO in 2001 were perhaps in the minds of negotiators since ATC allowed importers to impose safeguard measures if there was evidence to show there as an imminent threat to their own domestic industry. Although China was excluded from the agreement in the initial phases, the increase in quotas in the earlier stages was grandfathered into the later stages when China acceded to WTO. However, a no-quota environment for China only lasted a few months as the United States initiated safeguard measures on 12 apparel and textile products (later increased to 34 product categories) until the end of 2008.

The European Union was more supportive of liberalization in that it imposed safeguards on 10 product categories that were to last until 2008. The European Union also agreed that it would not extend the safeguards after 2008. Nevertheless, under the China accession protocol, member States can impose product-specific safeguard measures for 12 years after accession, and China’s status as a non-market economy allows other member States to impose anti-dumping and countervailing actions against China until 2016. Brazil, Canada, Mexico, Peru, South Africa and Turkey have thus far taken action against China. Ironically, while the objective of extending the quota environment was to protect domestic suppliers, research tends to suggest that imports from China are being diverted to other low-cost and perhaps less efficient international producers (Brambilla and others, 2007). Despite such evidence, the possibility of China experiencing a quota-free environment in the near future looks bleak. Thus, it is necessary for Chinese garment manufacturers to assume that a quota-imposed environment will continue for the next 10 years and to make the necessary strategic decisions.

B. Textile and garment industry in the Chinese economy

The textile and garment industry has been a strategic component of China’s economy since 1949. Like many other industries, it had experienced both stagnancy and receding competitiveness by the end of the command economy era. Under the Reform and Opening-up Policy, the industry has undertaken major changes since the late

1970s. State-owned enterprises (SOEs) went through privatization, and private companies (including firms with foreign investment) have now become leading players in the industry.

The growth of the textile and garment industry has gone hand-in-hand with China's economic takeoff since the 1980s. Annual output increase in the garment industry during the past 20 years was about 15 per cent, relatively higher than the country's overall GDP growth of about 10 per cent a year. However, it has lost its position as the leading industrial sector in the Chinese economy. In 1985, the top five industries in China by proportion of total industrial output were textiles (12.1 per cent), food, beverages and tobacco (12 per cent), machinery (10.9 per cent), metallurgy (8.6 per cent) and construction materials (6.9 per cent). By 1995, the top five industries by proportion of total industrial output were food, beverages and tobacco (10.9 per cent), metallurgy (9.5), machinery (8.2 per cent), textiles (8.2) and construction materials (7.7 per cent). In 2005, textile output was ranked seventh (4.6 per cent) while the garment industry ranked seventeenth (1.9 per cent) among various industries (table 1).

In 1993, China became the world's leading exporter of textiles and garments. In 2005, industrial output reached US\$ 217.6 billion, with a total export value exceeding US\$ 100 billion. Although in terms of industrial output other more technology-based industries such as communications equipment, computers and other electronic equipment became more important, the growth in the manufacturing of textiles, wearing apparel, footwear and caps increased dramatically (see table 1).

Although China's textile and garment industry enjoyed continuous expansion and its share of GDP growth remained stable, its contribution to China's total exports appears to have decreased. In 1996, the industry accounted for 2.7 per cent of GDP and 6.5 per cent of total industrial output, and employed 12.4 per cent of the labour force. Comparatively, in 2005, the industry accounted for about 2.9 per cent of China's GDP, 7 per cent of China's total industrial output and 13.4 per cent of employment in industries. However, the following figure shows that the proportion of textile and garment exports decreased from 23.1 per cent in 1996 to 15.1 per cent in 2005. It should be noted, however, that the export value has tripled.

In 2005, China's total exports of textiles and garments amounted to US\$ 115 billion. The export of garments was US\$ 73.9 billion, among which Asia (42 per cent), EU 25 (19 per cent) and North America (21 per cent) were major destinations. Japan, the United States, Hong Kong, China, the European Union, the Russian Federation and the Republic of Korea were the major national markets. Jerseys, pullovers, cardigans etc. (HS Code 6110) comprised the largest exported category in 2006. As table 2 shows, China's total exports of knitted and non-knitted garments increased by 489 per cent and 200 per cent, respectively, but that exports of men's trousers and shirts were below industry average.

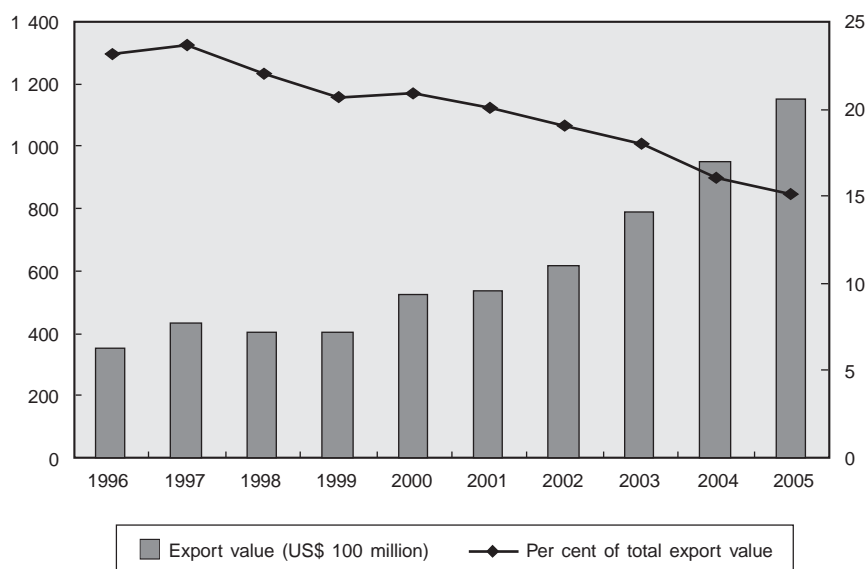
Prior to 2001, the textile and garment industry accounted for 5 per cent of FDI into China, and foreign enterprises contributed about 35 per cent of total exports. The increase of FDI in the industry has been higher than the national average since 2000. From 2000 to 2005, FDI into China grew by 48.2 per cent, while FDI into the textile and garment sector increased by 56.2 per cent. The major investors were from Hong Kong, China, Taiwan Province of China, Japan and the United States, and the investment primarily went to coastal regions. In 2006, FDI in the garment sector was 30.9 per cent of the total amount of investment while in the textile sector it amounted to 16.5 per cent. In December 2004, China lifted restrictions vis-à-vis region, equity structure and total number for foreign enterprises, and trends for expansion into China's inland areas are perceivable.

Table 1. China's leading industries by gross industrial output, 1999 and 2005

2005 ranking	Industry	Gross industrial output 1999 (Y 100 million)	Proportion of total industrial output, 1999 (%)	Gross industrial output 2005 (Y 100 million)	Proportion of total industrial output 2005 (%)	Per cent increase from 1999 to 2005
1	Communication equipment, computers and other electronic equipment	2 513.21	7.1	22 594.03	9.0	799
2	Smelting and pressing of ferrous metals	3 034.52	8.5	17 309.81	6.9	470
3	Production and supply of electric power and heat power	3 423.73	9.6	14 904.26	5.9	335
4	Manufacture of transport equipment	3 164.63	8.9	14 538.43	5.8	359
5	Manufacture of raw chemical materials and chemical products	2 605.09	7.3	14 027.74	5.6	438
7	Manufacture of textiles	1 547.67	4.4	11 655.12	4.6	653
17	Manufacture of textile wearing apparel, footwear and caps	142.39	0.4	4 668.52	1.9	3 179
	China total	35 571.18	100	251 619.50	100	607

Source: China National Bureau of Statistics.

Export value of China's textile and garment industry, 1996-2005



Source: *Annual Report on China's International Trade in Textiles and Clothing, 2005-2006.*

Table 2. China's garment exports, 1996 and 2006: selected items

HS Code	Garment type	Export value, 1996 (US\$)	Export value, 2006 (US\$)	Per cent increase
61	Articles of apparel, accessories, knit or crochet	7 626 391 947	44 900 426 797	489
62	Articles of apparel, accessories, not knit or crochet	14 570 613 800	43 720 321 656	200
6110	Jerseys, pullovers, cardigans etc., knit or crochet	2 529 116 127	12 858 753 806	408
610342	Men's or boys' trousers, overalls, breeches, cotton, knitted	101 250 996	349 186 224	245
610510	Men's or boys' shirts, cotton, knitted	33 510 330	144 144 213	330
620342	Men's or boys' trousers and shorts, cotton, not knit	1 067 967 088	3 214 116 820	201
620530	Men's or boys' shirts, man-made fibres	382 015 593	779 491 671	104

Source: United Nations Comtrade Database.

Despite growth in output and profitability in the textile and garment industry, 20 per cent of the small and medium-sized garment enterprises reported losses. State-owned enterprises now comprise less than 1 per cent of the total industry, while the private sector dominates the industry. In general, SOEs lag behind private and foreign enterprises in terms of profitability, although they appear to be larger in terms of average number of employees. Compared to domestically owned private firms, foreign enterprises are more capital intensive, suggesting higher technological standards. The correlation between asset/size ratio and profitability appears to support the perception that China's labour cost advantage in the textile and garment industry may be ebbing (table 3). For example, the average salary in Shenzhen rose nearly three-fold in the past 10 years, and a yarn worker in Zhejiang may earn 70 per cent more than a similar worker in Henan, an inland province that is rich in labour supply. Therefore, many manufacturers are already relocating to third-tier towns and even other provinces to retain cost advantage. Moving production locations to South-East Asia is also being considered as an option.

Location being a decisive factor, China's textile and garment industry is distinctively regionalized. The five coastal provinces, that is, Zhejiang, Guangdong, Jiangsu, Shanghai and Shandong, comprise the majority of industrial output by producing 81 per cent of chemical fibre, 60 per cent of yarn and 66 per cent of cloth. The five provinces combined account for 77.2 per cent of China's total export value of textiles and garments (tables 4 and 5).

China has emphasized the upgrading of industrial productivity by investing in the technology side. In 2005, the import value of equipment was US\$ 3.45 billion, an 80 per cent increase compared with 2000. The top five exporting provinces took up 83 per cent of the imports of equipment, mostly from Japan, Germany and Italy.

In sum, the textile and garment industry is vital for the national economy, employment, and foreign trade, not only for China but also for other labour-intensive economies including Cambodia, India, Indonesia, Pakistan and Viet Nam. The biggest future challenge for China's textile and garment industry is its competitive advantage. Cheap labour, which was once the source of this advantage, is gradually becoming scarcer, particularly in the coastal areas that continue to dominate China's textile and garment industry. China is losing this advantage to other developing countries in the region that are also rich in labour supply.

China has actively engaged in the global textile and garment market, although it is estimated that China is mainly producing OEM and only accounts for 10 per cent of the total value added of the end product.¹ China's textile and garment industry is heavily dependent on exports, and the end of ATC did not give China an easy passage to overwhelming market share. Rather, renewed trade disputes and barriers emerged. Therefore, China is trying to increase its efficiency in the textile and garment industry in the post-ATC era by upgrading technologies and improving supply chains etc. However, these measures will further undermine the cost advantage in low-end garment manufacture. Using a case study approach, the following sections show the loss of advantage that China is experiencing in these low value-added products. China is pressed to find a new competitive advantage in the global market.

¹ http://www.fdi.gov.cn/pub/FDI/zgjj/hyzk/zzy/fzgy/t20060419_23739.htm, and http://english.peopledaily.com.cn/200508/31/eng20050831_205457.html

Table 3. Ownership composition of China's textile and garment industries

Textiles	No. of Enterprises	Gross industrial output value (Y 100 million)	Average output value (Y 10 000)	Average total assets (Y 10 000)	Average revenue (Y 10 000)	Average profits (Y 10 000)	Average employees
SOE	905	923.87	10 208.51	14 647.40	10 206.85	-24.53	815
Private	12 879	5 035.94	3 910.19	2 604.98	3 807.09	139.08	139
Foreign invested	5 007	3 201.80	6 394.65	5 824.99	6 225.06	232.47	232
Other*	64 312	2 493.51	387.72	494.55	356.60	3.81	4
Total	83 103	11 655.12	1 402.49	1 296.91	1 352.19	38.24	38

Garments	No. of Enterprises	Gross industrial output value (Y 100 million)	Average output value (Y 10 000)	Average total assets (Y 10 000)	Average revenue (Y 10 000)	Average profits (Y 10 000)	Average employees
SOE	282	110.13	10 208.51	14 647.40	10 206.85	-24.53	411
Private	5 053	1 555.77	3 910.19	2 604.98	3 807.09	139.08	209
Foreign invested	5 110	2 290.07	6 394.65	5 824.99	6 225.06	232.47	350
Other*	37 841	712.55	387.72	494.55	356.60	3.81	49
Total	48 286	4 668.52	1 402.49	1 296.91	1 352.19	38.24	100

Source: Adapted from *China National Bureau of Statistics Yearbook, 2006*.

* By definition, the "other" enterprises include all enterprises except SOEs, private and foreign invested enterprises in China. Collective-owned, share-holding cooperatives, joint operation enterprises belong to this classification.

Table 4. Leading Provinces in the textile industry in China

Province	Chemical fibre (10 000 tons)	Province	Yarn (10 000 tons)	Province	Cloth (100 million metres)
Zhejiang	660.33	Shandong	371.77	Zhejiang	96.20
Jiangsu	501.95	Jiangsu	335.60	Jiangsu	90.46
Shandong	95.38	Henan	141.80	Shandong	90.17
Fujian	70.12	Zhejiang	96.41	Guangdong	40.41
Shanghai	49.78	Hubei	89.82	Hebei	30.76
Guangdong	39.91	Hebei	68.59	Henan	23.65
Henan	39.73	Fujian	64.53	Hubei	23.40
Sichuan	26.56	Anhui	38.31	Fujian	21.69
Jilin	24.36	Guangdong	36.64	Chongqing	14.55
Liaoning	23.70	Xinjiang	27.90	Shaanxi	10.67
Hebei	22.67	Hunan	26.06	Sichuan	7.93
Tianjin	20.54	Sichuan	25.48	Anhui	6.66
Jiangxi	18.07	Jiangxi	20.44	Liaoning	5.71
Heilongjiang	17.83	Shaanxi	19.43	Jiangxi	4.12
Hubei	11.74	Liaoning	17.41	Hunan	3.70
Anhui	11.36	Guangxi	11.87	Shanxi	3.63
Hunan	8.29	Shanghai	11.65	Tianjin	2.85
Xinjiang	5.42	Shanxi	10.39	Shanghai	1.55
Hainan	4.61	Tianjin	7.32	Xinjiang	1.34
Yunnan	3.04	Chongqing	6.90	Heilongjiang	1.10

Source: *China Textile Industry Development Report 2005-2006*.

Table 5. Chinese regional contributions to textile and garment exports and imports, 2005

Province	Exports (US\$ 10 000)	Imports (US\$ 10 000)	Exports and imports (US\$ 10 000)	Exports, per cent of China total
Zhejiang	2 443 507	114 855	2 558 361	21.2
Guangdong	2 201 023	763 042	2 964 065	19.1
Jiangsu	1 881 968	204 166	2 086 133	16.3
Shanghai	1 286 866	227 549	1 514 415	11.2
Shandong	1 061 994	150 782	1 212 776	9.2
Five provinces combined	8 875 358	1 460 394	10 335 750	77.2
China total	11 503 337	1 713 619	13 216 956	100

Source: *Annual Report on China's International Trade in Textiles and Clothing, 2005-2006*.

C. Methodology

In an effort to understand clearly the issues discussed above, we now focus on a representative garment factory in China and analyse its cost structure for a few selected products. As a comparison, a representative firm in Indonesia was selected and an attempt was made to obtain similar information. Although only the cost of cut, make and trim was considered, the problems faced by each producer at various levels of production were explored. In order to ensure valid comparability, the collection of cost data was limited to men's shirts and men's trousers. Since these product categories are basic in terms of fashion and standard in terms of design, comparing manufacturers in two different countries is possible. In this way, it is possible to highlight the competitive advantage of China, if any, to its counterpart in Indonesia. The latter country was for the comparison due to the importance of the industry to the Indonesian economy resulting from the changes in quota arrangements.

Information was collected from in-depth, face-to-face interviews at the city where the manufacturers had their offices, i.e., Beijing and Jakarta. In the case of the Beijing manufacturer, the interviewee was the general manager of the company, while the Jakarta interviewee was the owner. In addition, three other garment manufacturers were interviewed – two in China and one in Jakarta – who were not engaged in the production of shirts and trousers, but had an in-depth knowledge of the industry. The interviews, which lasted between 2 hours and 2.5 hours, were conducted in a cordial manner. The interviewees were extremely helpful and more than willing to share their experience with the interviewers. Additional information was solicited through e-mail at later stages.

The interviews focused on a number of issues including the cost of production, availability of raw materials, labour quality and availability, quotas and tariffs, quality standards and requirements, customs procedures, and governance and regional agreements.

Brief profiles of the companies interviewed are provided below. The names of the companies have been kept confidential for competitive reasons.

1. Company A in Jakarta

Established in 1989, Company A is a garment manufacturer in Jakarta, Indonesia. Starting from basic garment products, it has grown into a competitive regional and international market participant. It has developed two business units – Firm S for OEM and Firm T for proprietary branding. Firm S now boasts 800 employees, 10 production lines and an annual capacity of 2 million pieces. Firm T is of similar size, with a capacity of about 700 employees and 10 lines.

The main products of the company include woven and knitted ladies' apparel, blouses, skirts, trousers etc., and production is backed by digital technology. Firm S aims to be a solution provider by incorporating in-house facilities and by practicing rigid AQL quality controls. Production is divided into three departments: cutting, sewing and finishing. Both Firm S and Firm T have a daily output of about 5,000 pieces. Company A has been a supplier of many renowned apparel brands to the European Union and the United States, including Liz Claiborne, Quicksilver and Kellwood. About 60 per cent of its exports go to the United States, 30 per cent to the European Union and 10 per cent to the rest of the world. Firm S may have benefited from its locational advantage in east Jakarta's Export Processing Zone (e.g., efficiency in export procedures and enhanced security).

Company A aims to be a leader in the regional garment market by emphasizing both quality and corporate responsibility. Since 1998, Firm S has been a certified vendor of Target and Wal-Mart. In 2005, it obtained ISO 9002 Quality Certification. Firm S and Firm T also received their Worldwide Responsible Apparel Production (WRAP) certification in 2003 and 2007, respectively.

2. Company C in Beijing

Company C is a SOE located in Beijing, and a leading SOE in the industry. It has a number of subsidiaries producing various types of textiles and garments. It also has a dedicated subsidiary that focuses on its international trading activities. With offices in Japan, the United States and the United Arab Emirates, Company C is among the top 100 garment exporters in China with a total export value of US\$ 75 million in 2005.

The focus here is on two subsidiaries that are engaged in the production of men's shirts and men's trousers. Firm X and Firm Y were established in 1996 in an economic development zone, 40 km from Beijing and 60 km from Tianjin, one of the busiest ports in northern China. Firm X is a Sino-Japanese joint venture that currently has about 1,000 employees, 22 production lines and 4 workshops (1 cutting, 2 tailoring, and 1 dyeing and finishing). The fixed assets exceed yuan renminbi 22 million (US\$ 3 million), and the majority of the machines have been imported from Japanese textile equipment manufacturers Brother and Juki. The products of Firm Y include jackets, trousers, suits and skirts, with a total annual output of about 1.6 million pieces. Firm X enjoys customer design capacities and its products fulfill the nation's first-class quality ranking for garment exports. Firm X's international partners include GAP, Columbia and Liz Claiborne.

Firm Y is a Sino-United States joint venture that currently has about 660 staff members and 5 workshops (1 cutting and 4 tailoring), 17 production lines (9 for shirts, 4 for fashion and 4 for other garment lines). Most of the production equipment was imported from Japan and its products include shirts, blouses, and fashion and other garments. The company's annual output is about 1.6 million pieces, which are mainly exported to Japan, the United States, Germany and Australia. Firm Y received ISO9002 certification in 2000.

3. Additional interviews

Mr. J, who is from Hong Kong, China, has factories in Guangdong province, China. He was involved in the production of men's shirt and trousers seven years ago but decided to move on to higher value-added products. Currently, Mr. J focuses on the design and production of wedding gowns for export.

Mr. U is a German who owns a manufacturing plant in Zhejiang province, China. He also has a showroom in Shanghai with headquarters located in Macau, China. Mr. U has been involved in the garment industry for more than 30 years, building up his current business from scratch. He also engages in consulting for foreign enterprises dealing with textiles and garments in China.

Mr. C is a Malaysian who has lived in Indonesia for the past 30 years. He specializes in the garment trade although he does not own any plants. He acts as an intermediary between clients in the United States and the European Union, and producers in Indonesia. As such, Mr. C is well versed in the issues considered in this project.

D. Findings

1. Cost of production

Surprisingly, there appears to be no difference in direct labour costs between the manufacturer in Beijing and the one in Jakarta. Both reported that the direct labour cost was US\$ 0.90 per shirt and US\$ 1.10 per pair of trousers. There is also no significant difference between the average monthly salaries of production workers and supervisors in the two locations. On average, production workers earn between US\$ 120-US\$ 130 per month, while supervisors earn about US\$ 200 per month. However, there appears to be a difference in productivity in shirt making. In Beijing, the productivity is 14.54 shirts per worker, while in Jakarta it is 11.90. This may be due to higher capital intensity as the Beijing manufacturer reported 45 machines per production line compared to 34 in Jakarta. There does not appear to be a significant difference in productivity in trouser making, i.e., 8.57 pairs of trousers per worker in Beijing compared with 8.70 in Jakarta, although the number of machines per line in Jakarta is greater.

It is also interesting to note that the cost of raw materials in the form of fabric and accessories shows an insignificant difference between the two locations. For a standard specification of 133 x 72/40 x 40 at 48"/50" width (used for shirt production), the cost in both countries was reported to be US\$ 1.32 – US\$ 1.35 per yard. For trouser production, fabric of 120 x 80/32 x 32, width 48"/50" costs between US\$ 1.53 and US\$ 1.55 per yard. Accessory (buttons, zippers etc.) costs range from 50 cents for shirts to 80 cents for trousers in both countries. The Chinese manufacturer sources most of the required fabric from within China but about 10 per cent is sourced from overseas. In particular, more fancy fabric (for other items such as blouses etc.) is imported from the Republic of Korea and Taiwan Province of China. The Indonesian manufacturer sources 90 per cent of his fabric for shirt production from foreign suppliers, i.e., China, the Republic of Korea and Taiwan Province of China (the ratio being 30 per cent, 30 per cent and 40 per cent, respectively). For trousers, 50 per cent of the fabrics are imported from China, while the remainder is from the Republic of Korea and Taiwan Province of China. There do not appear to be any issues in sourcing as the delivery lead-time in both countries ranges from 20-30 days for plain dyed fabric to 35-40 days for yarn-dyed fabric. The interesting point to note here is that despite sourcing the fabric from China, the Indonesian manufacturer is still able to obtain it at a price and a lead-time that is competitive to the Chinese producer.

Utility costs are more expensive in China than in Indonesia. For example, the cost of electricity in Beijing is US\$ 0.104 per kWh compared with US\$ 0.06 in Jakarta. The cost of rental is also far higher in Beijing. The cost of office space in Beijing is US\$ 172.41 per m² per year compared with only US\$ 18 in Jakarta. It was not possible to determine the cost of factory space as it is fully owned by the Beijing operator. The cost of capital is not relevant in these two cases because the Beijing operator has a small loan while in Indonesia garment manufacturers are not eligible for bank loans.²

² As a result of the 1997 economic crisis in Asia, the Indonesian Central Bank blacklisted companies in the textile and garment industry as they had a high degree of non-performing loans. Ten years after the crisis, the industry continues to be penalized by the financial community.

Quotas can be a major cost to Chinese producers. In the case of the Beijing manufacturer, the government allocated quotas for shirts and trousers are quite small. For these government allocated quotas, the manufacturer needs to pay US\$ 0.80 per dozen shirts and US\$ 1.75 per dozen pairs of trousers. If quotas are purchased from the open market, the cost can go up to US\$ 4-US\$ 5 per dozen shirts and US\$ 10-US\$ 15 per dozen pairs of trousers. Hence, while the quotas can provide some protection for a manufacturer, they can also hamper production. The manufacturer insisted that the removal of the quota for the products in question in 2007 by the European Union and in 2008 by the United States could reduce the cost and provide more opportunities for China's garment manufacturers. Quota costs do not apply to the Indonesian manufacturer.

Neither manufacturer is required to pay import duties as these are paid by the buyers.³ In the case of Indonesia, VAT of 10 per cent is imposed on fabrics bought from local sources. However, if the fabric is used for export purposes, a 60 per cent rebate is offered, although this may involve a six-month waiting period. In the case of imported fabrics, a 2.5 per cent duty is imposed. In China, VAT is imposed on all materials purchased locally. However, if the materials are used for export purposes, an 11 per cent refund is granted for garments.⁴ It should be noted that this rebate has gradually been reduced by the Chinese authorities.

2. Issues in production

The lead-time for production is quite similar for both locations. Both manufacturers reported similar periods, i.e., 30 days. However, the rejection rate experienced by the Chinese producer was far higher than the Indonesian manufacturer (i.e., 5 per cent to 10 per cent in China compared with 2 per cent in Indonesia).

Perhaps the most important issue raised by both respondents was labour-related matters. The Chinese producer complained that there was an acute shortage of skilled labour, which increased his production costs. Increasingly, customers are moving their orders towards South-East Asian countries such as Viet Nam and Cambodia. On the other hand, the Indonesian producer lamented that the labour laws provided an advantage to workers. In 2007, for example, the minimum wage rate was increased from Rp 819 100 (about US\$ 89) to Rp 900 516 (about US\$ 99).⁵ Compliance with the minimum wage law is mandatory not only because it is required by law, but also due to pressure by the customer for the producer to comply with WRAP. Under WRAP, wages, working hours, minimum working age, benefits, safety and health etc. are stated in detail. The Indonesian producer has the required WRAP certification, but the result is higher production costs. The tight labour law with regard to remuneration also does not allow the producer to switch to a piece rate system.

The labour issues in China must not be underestimated. It was reported by one of the additional interviewees that there was a tendency for management as well the workers to opt out of a legal contract so that welfare payments (which may be up to 25

³ The agreement with the buyer from the European Union and/or United States is on an FOB basis.

⁴ For textile production, the rebate is lower at 9 per cent.

⁵ As a comparison, in 2007 the minimum wage rate in Beijing is Y 730 (about US\$ 96) compared with Y 640 (about US\$ 84) in 2006.

per cent of total salaries) need not be paid to the Government.⁶ A lower than actual number of workers are reported to the authorities, which results in a smaller amount of welfare contribution being paid by the producer while the workers get to keep a larger portion of their income. In such cases, the incentive to pay on a piece rate and/or lower than minimum wages is likely. In a competitive market like that for shirts/trousers, bad producers can drive out the good ones.

Interestingly, neither of the producers complained about custom procedures or illegally solicited payments, either in their operations or in the transportation of their output. This may be due to their factories being located in free trade or bonded zones. However, the Indonesian producer allocates 0.2 per cent of total sales for this purpose. The Chinese producer, being an SOE, need not deal with these issues. Similarly, sourcing for fabric and accessories was not considered an issue, at least in the production of shirts and trousers. However, this may emerge as a problem for more fancy garments, which require fabric that is more sophisticated.

Finally, both producers are focusing their efforts towards markets in the European Union, the United States and, to a certain extent, Japan. Regional agreements do not appear to have benefited either producer. The Indonesian manufacturer, despite having some business in the ASEAN region, was unaware of any regional efforts that contributed to his industry. The Beijing manufacturer had no comment on regional agreements affecting garments.

E. Discussion and conclusion

Despite current belief that China has abundant cheap labour to offer in the low-end garment industry, the authors' research found no such evidence. There is no clear competitive advantage for China compared to its rivals in South-East Asia. In China, several factors may have contributed to the rising cost of labour. China continues to be the economic powerhouse in Asia, attracting investors from many types of industries. Local companies are also expanding in order to satisfy the insatiable appetite of Chinese consumers. Thus, the demand for labour is continuously increasing, particularly skilled labour or at least labour that is trainable. The low-end garment industry needs to compete with other industries in attracting talent, pushing up wage rates. In addition, the rising cost of living, as highlighted by the increasing inflation rate over the past few months, is forcing workers to demand higher wages. In other words, the cheap labour advantage in China is becoming a myth rather than a reality.

In order to remain competitive, Chinese manufacturers have two choices. First, they can move west towards the inland provinces, where cheap but unskilled labour may be still available. If it is critical that they remain in the coastal provinces for logistical reasons, shifting production operations to third- or fourth-tier cities within these provinces may be an option. However, accessibility to skilled labour in those smaller cities may still be an issue as the migration of workers to larger cities continues. However, such a move would provide some solace, at least in the short term. In fact, relocating to smaller cities is already a trend among some garment producers (CTEI, 2007). Second, Chinese producers may need to consider relocating to neighbouring South-East Asian

⁶ This may not be the case with the interviewed Chinese manufacturer as it is a state-owned enterprise.

countries such as Cambodia, the Lao People's Democratic Republic and Viet Nam in order to take advantage of relatively cheaper labour in those countries. There may be logistics issues in some of those countries, but the cost of losing foreign customers to other more competitive producers will be greater. More importantly, the findings of the present study show the need for Chinese producers to move towards higher-end garments. As emphasized by the consultants during this study, profit margins are higher for high-end garments such as sportswear and fashionable women's wear. However, this changeover would need a greater investment in improving the skills of the current labour force, establishing sources for more sophisticated fabric and securing orders for such items from clients.

Based on the price of fabrics paid by the two interviewed manufacturers, it is clear that China also does not have a true competitive advantage, either in cost or in availability of the raw materials. The Indonesian producer, although importing a large portion of his fabric, is able to secure a price similar to the Chinese producer. A reduction in the cost of imports due to lower transportation costs on the one hand, and tariff liberalization policies on the other, point to an advantage that China will continue to lose in the medium term. In fact, as Chinese producers move to higher-end garment items, more resources will be allocated to fabrics that are more sophisticated rather than those required for lower-end products. In the long term, China may have to turn to imports for low-end fabrics.

China's lack of a competitive advantage brings us to the issue of quotas. If the direct cost of production between the Chinese and the Indonesian producer is more or less the same, the price paid for the quota puts the Chinese producer at a clear disadvantage. The cost of quotas may be forcing Chinese producers to engage in illegal practices, e.g., transshipping through South-East Asian countries, or the exploitation of workers by providing a less than appropriate work environment. Since quotas are an added cost to Chinese producers, it is not surprising that the interviewed Chinese manufacturer reported a maximum profit margin of 8 per cent compared with the 10 per cent earned by his Indonesian counterpart. Considering the appreciation of the yuan renminbi since the middle of 2006 (it has reportedly appreciated about 10 per cent since China adjusted its exchange rate policies in July 2005⁷), it is obvious that Chinese producers at the low end of the garment industry are being squeezed out of their profits. Therefore, the exports of these low-end products by China should decline. As table 6 shows, after a sudden spurt of growth in 2005 due to a no-quota environment, the growth in exports of knitted and woven garments to the United States in 2005/06 was relatively lower. The growth in the export of shirts (knitted or crocheted) in 2005/06 was far higher than the sector average, i.e., 83.3 per cent compared with the average of 23.1 per cent. However, non-knitted shirts (HS6205) literally stagnated (-1.3 per cent) in 2006.

Why is there a difference between exports of knitted and non-knitted shirts to the United States? It is likely that more orders for non-knitted shirts are being directed to South-East Asia compared with orders for knitted shirts. The fabric for non-knitted shirts is less cumbersome, and the most important capital investment needed is sewing machines. On the other hand, for knitted shirts, producers require machines that can weave the yarn before cut, make and trim can take place. In other words, knitted shirt production is relatively more capital- and skill-intensive. It is therefore quite likely that, in the medium term, more non-knitted shirt production will be moved out of China.

⁷ *Financial Times*, 9 October 2007.

Table 6. Exports of shirts by China to the United States

(Unit: US\$)

HS Code	Commodity	2004	2005	2006	Per cent increase, 2004-2005	Per cent increase, 2005-2006
61	Articles of apparel and clothing accessories, knitted or crocheted	2 408 735 508	5 118 797 183	6 302 958 662	112.5	23.1
62	Articles of apparel and clothing accessories, not knitted or crocheted	3 475 712 769	6 603 794 883	7 884 399 395	90.0	19.4
6105	Men's or boys' shirts, knitted or crocheted	21 267 404	50 873 669	93 242 756	139.2	83.3
6205	Men's or boys' shirts, not knitted or crocheted	303 470 457	439 235 784	433 343 964	44.7	-1.3

Source: United Nations Comtrade Database.

Based on the above findings and the export figures for 2005 and 2006, one of two scenarios is likely to occur in 2009. Here, emphasis is on the situation with regard to the United States, as it is the only nation to impose a substantial quota on China.

In scenario one, the status quo is maintained, i.e., no major increases in exports of low-end garments to the United States. The reason is the realization by American buyers that China has lost its competitive advantage to other producers in the region. Orders that were meant for China gradually move towards other countries such as Cambodia, Indonesia, the Lao People's Democratic Republic and Viet Nam. Thus, in scenario one, the removal of quotas would have minimal effect on imports of low-end garments by the United States.

Scenario two assumes that United States buyers are unaware of China's declining competitive advantage in these low-end products. If such is the case, the removal of quotas would result in an increase in orders from the United States buyers, perhaps diverting the orders from other developing countries such as Mexico or Turkey. On the other side of the Pacific Ocean, Chinese producers may not be willing to reject these orders despite a higher cost of production. The Chinese may be forced to move their operations inland or to outsource the labour-intensive production to lower cost locations in South-East Asia. In such a scenario, whether exports increase would depend on the location to which production would be shifted.

Scenario two is probably the more likely outcome. If that is indeed the case, the Government of China will need to address the issue, as it may invite further retaliation from the Government of the United States on the one hand, and a misallocation of Chinese resources on the other. As mentioned above, the future of China's garment industry is in the higher value-added categories. It is therefore advisable for the Government of China to steer the industry in that direction. The possible policy considerations include: (a) removing the tax rebate that is currently granted for low-end products; (b) providing incentives to move production to inland provinces and/or other low-cost locations such as South-East Asia; and (c) offering incentives to produce high value-added garments, including the creation of Chinese brands.

This chapter shows that China's labour cost advantage in low-end garment products, particularly men's shirts and trousers, is being lost to other producers in the region. The advantage of producing its own fabrics is also not strong enough to compete with producers of neighbouring countries. Increasing labour costs, coupled with an added quota cost and an appreciating currency, is forcing China's producers to move production to smaller cities or to outsource them completely to cheaper manufacturers in other countries. The future of China's garment industry lies in higher-end products that involve fabrics, designs and technology that are more sophisticated. The good news is that the industry is developed enough to meet these challenges. The modernization of its factories over the past two decades, and the clustering of firms in the textile and garment industry through government-directed efforts, can sustain China's position as the "tailor to the world".

For garment producers in competing countries, particularly developing and emerging economies in South-East Asia, greater linkages with Chinese garment producers are critical. These linkages, for example by being part of China's supply chain, could open markets in the developed countries and, more importantly, the growing Chinese market.

A clear limitation in this research is the case study method used. A larger number of manufacturers would increase the credibility of the above findings. However, given limited resources, it is hoped that these findings will assist the protagonists in the garment industry.

REFERENCES

- Brambilla, I., A. Khandelwal and P. Schott, 2007. "China's experience under the Multifiber Arrangement (MFA) and the agreement on textiles and clothing (ATC)", National Bureau of Economic Research Working Paper 13346. Cambridge, Massachusetts, United States.
- Brenton, P. and M. Hoppe, 2007. "Clothing and export diversification: Still a route to growth for low-income countries?" World Bank Policy Research Working Paper 4343. Washington, D.C.
- CTEI, 2007. "China's textile and garment industry should be updated and restructured". Translated from China Textile Economic Information Portal, available at <http://news.ctei.gov.cn/show.asp?xx=87936>
- Dayaratna-Banda, O. G. and J. Whalley, 2007. "After the MFA, the CCAs (China Containment Agreements)", The Center for International Governance Innovation, Canada, CIGI Working Paper No. 24.
- Deutsche Bank, 2005. "WTO textile agreement now expired: China maturing into the world's tailor", *Deutsche Bank Research Current Issues*, 14 February 2005.
- Evans, C. L. and J. Harrigan, 2004. "Tight clothing: How the MFA affects Asian apparel exports", National Bureau of Economic Research Working Paper 10250. Cambridge, Massachusetts, United States.
- Nordås, H. K., 2004. "The global textile and clothing industry post the Agreement on textiles and clothing", World Trade Organization Discussion Paper No. 5. Geneva.
- Rodgers, Y. M. and G. Berik, 2006. "Asia's race to capture post-MFA markets: A snapshot of labor standards, compliance, and impacts on competitiveness", *Asian Development Review*, vol. 23, No. 1; p. 55. Manila.
- Tong, Z. 2006. "The development of China and world trade", *Journal of World Trade*, vol. 40, No. 1; p. 129. New York.
- USITC, 2004. "Textile and apparel: Assessment of the competitiveness of certain foreign suppliers to the US market", Investigation, No. 332-448
- Yamagata, T., 2007. "Prospects for development of the garment industry in developing countries: What has happened since the MFA phase-out?" Institute of Developing Economies Discussion Paper No. 101.
- Yang, Y., 1999. "China's textile and clothing exports: Changing international comparative advantage and its policy implications", Australian National University Demetrius Working Paper, 99-103.
- _____, 1995. "China's textile and clothing exports: Challenges in the post-MFA period", *Pacific Economic Papers* 250, pp. 6.7-6.12.
- Yang, Y. and C. Zhong, 1998. "China's textile and clothing exports in a changing world economy", *The Developing Economies*, No. XXXVI-1 March: 3-23.