The Impact of Liberalisation:

Communicating with APEC Communities

Textiles Industry in Thailand

November 1998

Acknowledgments

In Vancouver in November 1997, APEC Leaders and Ministers requested that work be undertaken to promote community understanding of the impact of liberalisation. A broad project was conceived by a Steering Group established under the APEC Committee on Trade and Investment (CTI).

This series of papers, "The Impact of Liberalisation: Communicating with APEC Communities", was prepared as part of the broader initiative. The papers include a review of research on the effects of liberalisation, a series of case studies and a summary report.

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Contents

Summary

If the establishment of an internationally competitive clothing and textile industry in Thailand was based upon the low cost labour, its future depends much more upon smart thinking.

The advantage of low cost of labour is being challenged both by rising labour costs in Thailand, and the shift towards more capital intensive production, offering greater efficiencies, in the industry worldwide.

Smart thinking is needed both to achieve efficient production throughout the supply chain, and also to deliver quality produce that meets the increasingly exacting standards of international customers. It is also required to succeed in a testing international regulatory environment.

The textile and clothing sector overtook rice as Thailand's biggest single export industry in the mid-eighties. It employs about a million workers and contributes more than a quarter of the total value-added in the country's manufacturing industry.

The industry has long had to contend with various distortions in the textile trade. Subsidised exports from Pakistan caused a contraction of the industry in the fifties and led to tariff protection. In the seventies, that protection reached levels of 100 percent.

The government sought to regulate the industry in the seventies, prohibiting capacity expansion and the establishment of new textile firms. The objective was to stop over-production and excess capacity. This regulation was applied with intermittent vehemence until the late eighties, however it was never implemented effectively. The number of spindles, looms and knitting machines grew by about 10 percent a year throughout the period of regulation.

The growth of exports and local shortages of yarn led to the capacity limitations being dropped in 1987. Rapid growth in the industry followed, with the number of weaving firms doubling over the course of the next seven years. There was a significant increase in the import of capital equipment for the industry.

The structure of the industry has traditionally been dominated by the large number of garment firms. There are more than 2,000 of these, ranging from small firms with less than 10 sewing machines to those with more than 1,000. They employ more than 900,000 people and account for nearly three quarters of Thailand's clothing and textile industry exports.

There are about 250 weaving firms, most of which are small and employ relatively old technology. There are a few large modern firms with current technology for air-jet looms. They account for 13.7 percent of exports.

There are 141 spinning companies, with yarns providing 8.3 percent of exports, while, at the most capital intensive end of the industry, there are 16 firms manufacturing artificial fibres. They provide 2.3 percent of Thailand's clothing and textile industry exports.

Over the course of the nineties, the industry has been learning to survive with lower levels of tariff protection. Tariffs on fibres and yarns have fallen to 10 percent, while tariffs on fabrics are 20 percent and those on clothing are 30 percent. Until the early nineties, tariffs on fibres and yarns were set at 30 percent, while those on fabrics and clothing were at 60 percent.

The greatest industry growth has been in the more lightly protected and more capital intensive sectors, with yarn production doubling over the past ten years. Clothing exports declined sharply in 1996 (from $US 6.7 billion to $US 4.5 billion), reflecting a loss of competitiveness in the more labour intensive part of the industry.

A continuing constraint upon the industry is the Multi-Fibre Arrangement (MFA) which allocates quotas on exporter members. In the early years of the agreement, it helped Thailand by curtailing sales of the three biggest textile exporters, Hong Kong, the Republic of Korea and Chinese Taipei. However, Thailand was filling its quotas by the late eighties

and the agreement has limited the industry ever since.

The MFA is being phased out as textiles are brought under the auspices of the General Agreement on Tariffs and Trade (GATT). The process of its incorporation, prolonged over the past 10 years, is complex and presents some risks for exporting nations. Importing countries are able to impose unilateral restrictions on exporters whose trade rises move past the MFA quota levels.

The MFA requires the Thai government to allocate export quotas among companies. Although the allocation is supposed to be open, in practice it favours larger integrated companies and acts as a barrier to new entrants. The larger firms put a lot of effort into ensuring that they meet the criteria for maintaining their quota and this diverts management attention from other opportunities.

Small, medium and new exporters concentrate upon servicing non-MFA countries, such as those of the ASEAN region. Until the recent financial difficulties, this was a good growth market. ASEAN nations, also represent some competition to Thailand in the textile industry. Indonesia, in particular, has been building its textile industry with lower cost labour than is available in Thailand.

The devaluation of the Thai currency, the baht, has restored some competitiveness to its exporters. However, the pressure remains to seek differentiation. The Thai Garment Export Company, for example, has developed systems to meet the exacting standards of buyers such as retailer, Marks and Spencer, which demands that there be no loose metal in the workplaces where its children's clothes are manufactured, or the US department store chain, JC Penney, which requires supplier to be linked to its electronic data interchange network.

The Thai Garment Export Company is a large firm, with exports worth $US 144 million last year. Smaller companies are also becoming more sophisticated in their operation. The Amornthep Knitting Factory, a knitwear company with sales of about $US 1.5 million predominantly derived from exports, is working to implement the ISO9002 quality standard next year. It sees improved productivity as the key to maintaining competitiveness.

Technology is an issue for the industry. The weaving industry is moving to an era of shuttleless production, but more than 80 percent of Thai textile companies still use shuttles. In the spinning sector, the average age of machinery is more than 10 years old. It is reported that across the entire Thai garment industry, there are only two computerised cutting machines.

The Thai government has obtained some funds to support the renovation of the industry form the Asian Development Bank and the World Bank. The Thai Textile Institute has been established. It will administer distribution of the funds and will also be responsible for organising trade missions and supporting quality control.

Background

The Thai textile and clothing industry employs about a million workers. It has the highest employment share in manufacturing.[1] It contributes about 26 percent to the total manufacturing value added. It is also the largest foreign exchange earner of any export commodity.

The industry has been the country's major foreign exchange earner since 1985, displacing the traditionally dominant export item, rice. In 1996, the export of textile and clothing reached $US 4.5 billion. Yet in recent years, the industry has undergone significant reform. Tariffs have been cut and firms in the industry are now much more exposed to international competition. At the same time, the industry faces a major challenge in its export market as a consequence of the reform of the Multi-Fibre Arrangement (MFA).

This paper documents the extent of reform, outlines the response of the industry in Thailand and identifies a series of remaining challenges. The more recent reforms took place in a period of rapid growth of the Thai economy which would have facilitated the processes of adjustment. However, even in this context, there have been substantial increases in export volumes and shifts in the areas of specialisation of the industry. The forces associated with reform and the opportunity to benefit from it have not been swamped by the growth of domestic demand.

Thailand has a long history of textile production. However, the modern garment and textile industry was established relatively late compared with other East and Southeast Asian economies. Thailand's first textile machines included 3,232 spindles and 72 looms, all imported from Germany by the Ministry of Defence in 1936 for military purposes. It was not until 1946 that modern privately owned textile mills began to operate, with a total capacity of 3,600 spindles. The first privately owned modern mill was established by a local entrepreneur in response to textile shortages during the Second World War.

After 1946, the industry expanded rapidly, particularly in mechanised spinning, with the number of spindles increasing to 43,000 in 1952. Production collapsed, however, in the late 1950s due to competition from low cost imported cotton textiles from Pakistan. As a result, several Thai spinning mills went bankrupt and had to be closed. The Thai government reacted by giving protection to the industry for the first time, imposing the Import Restriction Act on cotton yarn imports in 1955. The Act was amended to include cotton fabrics in 1957.

After the introduction of import tariffs, and in 1960 the adoption of the Investment Promotion Act, textile mills that had been closed during the 1950s, including the textile mills owned by the military, were taken over and expanded by local entrepreneurs, and by Chinese entrepreneurs from Shanghai and Hong Kong. A few years later, joint ventures with Japanese firms became important in synthetic fibres.

Recent reforms took place in a period of rapid growth of the Thai economy which would have facilitated the process.

1 In this paper, the textile sector includes both yarn and fabric making. Clothing refers to garment making. Each sector refers to all fibre types (man-made, wool and cotton).

Policy Review

Government policy towards the industry has encompassed a mix of protection, promotion and restriction. In 1970, the government gave the industry protection as high as 100 percent aiming at sheltering the industry from subsidised imported products from Pakistan.

In 1971, the government tried not only to protect but also to regulate the textiles and clothing industry by prohibiting capacity expansion and the establishment of new textile firms. The objective was to avoid excess capacity of production. In 1975, controls were eased due to a rapid expansion of textile exports. Once again in 1978, regulations limiting textiles capacity, with the exception of those granted export promotion privileges prior to March 10, 1978, were reintroduced

While the regulation of textiles sector investment continued until 1987, the rules were never implemented effectively. The number of spindles, looms and knitting machines continued to increase by approximately 10 percent per year during the period of regulation. Textile machines were imported and installed without being registered with the Ministry of Industry.

The regulation also came under pressure because yarn exports increased markedly in 1983. Yarn prices in Thailand rose from below the world market price to above it. The increase in prices and shortages of yarns mainly hit small weaving firms lacking integrated spinning capacity. Then in late 1986, the Ministry of Industry partly abolished the limitation on capacity. Finally, in May 1987, the government abolished outright the limitation on expanding capacity.

Table 1: Import Tariffs for Textiles and Clothing

	Year					percent
	1974	1978	1982	1992	1995	1997
Synthetic Fibre	20(30)[a]	20(30)	20(15)	30[b]	20	10
Yarns (Polyester-Cotton)	20	20	22	30	20	10
Cotton Yarns	25	25	27	30	20	10
Fabrics	60	80	66	60	40	20
Clothing	60	100	66	60	45	30

(...): Import surcharge as a percentage of CIF import price

a: 1975 b: Import surcharge was abandoned

Source:Textile Intelligence Unit, Textile Industry Division

Once the regulation was abolished, a large number of new firms were established. The number of weaving firms doubled between 1987 and 1994. The number of looms increased from 80,000 to 135,000 during the same period, while the number of spindles increased from 1.9 million to 3.8 million. Modern textile machines for both spinning and weaving were imported and installed. About 48,665 units of shuttle looms machines and 16,966 units of shuttleless machines were imported between 1988 and 1995. This investment increased the number of looms by 30 percent.

Import tariffs remained high, however, even up to the early 1990s. Since then, rates on upstream activities have fallen to a third of their previous value (see table 1).

The rate on fabrics has fallen from 80 percent in 1978 to 20 percent in 1997. The rate on clothing has fallen from 100 percent in 1978 to 30 percent in 1997. During this period, the tariff on fibre and yarn imports remained relatively low. By 1997, it had fallen to 10 percent. Major changes in the schedule occurred in 1995 and again in 1997. In 1997, the rates on fibres and yarns, and fabrics were halved to 10 percent and 20 percent respectively, while that on clothing fell by a third to 30 percent.

Impact of Liberalisation

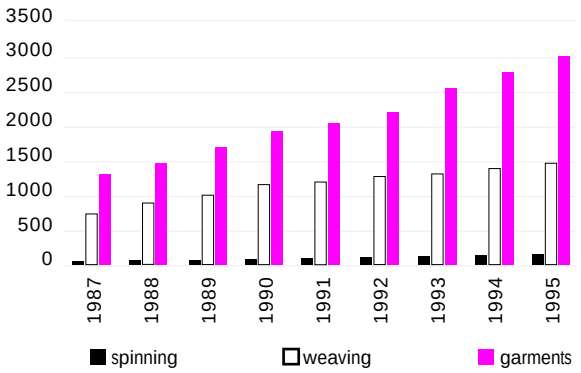
Most Thai textile firms are located in or around Bangkok. There are many firms in garments and weaving, the labour intensive end of the industry, and fewer firms in spinning and synthetic fibres, which are more capital intensive. The number of firms in each sector has increased in every year since 1987 (see chart 1).

There are at least 2,000 garment firms in Thailand, ranging from those with less than 10 sewing machines to those with more than 1,000. Even this number is almost certainly an underestimate as small firms with less than 30 sewing machines do not have to be registered. Around half of the capacity in the garment industry is owned by large companies. The garment industry is characterised by low levels of capital input per worker and simple technology. The minimum efficient scale of production is generally low, and the costs of entering the industry are low.

Both government policy and technology of production dictate the structure of the industry. The labour intensive nature of the industry is responsible for the industry's structure. Simple technology and low efficiency leave large firms with no advantage over small firms.

Small garment firms are heavily engaged in sub-contracting. Small firms undertake the more highly skilled components of orders, while the sub-contractors, mostly household firms, undertake the less skilled work. In producing shirts, for example, the small firms buy fabric and do the patterning and cutting. The sub-contractors usually do simple sewing on the bodies of shirts. Finishing, which includes more difficult tasks such as attaching collars and sleeves, labelling and other fine work, is done by small firms. Larger firms, in contrast, are able to process all the stages in the same factory.

Chart 1: Number of Firms in the Textile Industry 1987– 95



Weaving has fewer firms than the garment component of the industry as it requires more capital and a higher level of technology. In Thailand, some 250 small firms with old semi-automatic and automatic looms produce for the highly protected domestic market and for the 'border' markets of Burma, Laos, Cambodia, Malaysia and Vietnam. Large weaving firms with modern machines, ranging from modern automatic to air-jet looms, produce both for export and for the domestic market.

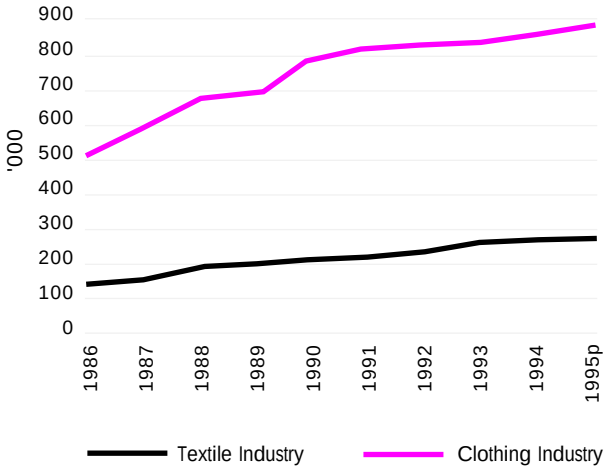
At the more capital intensive end of the industry in Thailand, spinning had 141 firms with 3 million spindles altogether in 1994 or about 27,000 spindles per firm. In the most capital intensive end of the industry, synthetic fibre production, there are only 16 firms. Most are joint ventures with foreign companies.

The industry is being reoriented toward the upstream sectors. These are sectors where tariff rates are relatively low but also where, at least until the crisis of 1997-98, rising wages were driving a shift in Thailand's international competitiveness.

Textile and garment production has grown steadily with the expansion of both domestic and export demands. Garment production increased from around 490,000 pieces in 1975 to more than two million pieces in 1994, representing about a 4 fold increase. Output was stable from 1994 to 1996.

Fabric production increased by a factor of 7 over the same period, but slowed down after 1994. Between 1975 and 1987, yarn production also grew rapidly, rising from 13,500 tonnes to 387,000 tonnes. It

Chart 2: Textile and clothing industry employment



peaked in 1995 at 779,000 tonnes before dropping in 1996.

Since 1990, domestic production of synthetic fibre has also more than doubled. It increased from around 274,000 tonnes in 1990 to 561,000 tonnes by 1996.

Employment has also increased. Just under 900,000 people were employed in the clothing industry in 1995. This represented a 70 percent increase from 1986. Over the same period, employment in the textile industry increased by just under 80 percent to 270,000 (see chart 2).

Liberalisation in the textile and clothing sector has impacted at the household level. Effects of liberalisation on this sector include:

- Markets for textile goods and garments are likely to be more competitive, helping to maintain downward pressure on costs and prices;
- Increased penetration of the market by imports leads to greater product availability and variety;
- Integration of domestic and international markets facilitates the transfer of technology into previously protected markets, further contributing to lower costs of production and increased product quality and variety.

To accomodate rising wages and a shift in Thailand's international competitiveness, the industry is being reoriented toward upstream sectors.

Implications for Trade Opportunities

Export values for clothing and textiles have increased consistently over the past few decades. Thailand was a net importer of clothing and textiles until 1972. Since then, it has become a net exporter.

By 1994, clothing accounted for 73 percent of total exports for clothing and textiles. Clothing is Thailand's largest export item, followed by fabrics (13.7%), yarn (8.3%) and fibre (2.8%). Despite some fluctuations, the export value of clothing and textiles has grown by about 20 percent each year since 1980. In dollar terms, the value has risen from $US 0.5 billion in 1982, to $US 6 billion in 1994, and then nearly $US 6.7 billion in 1995. The sector slumped in 1996 to $US 4.5 billion (see charts 3 and 4).

While Thailand exports textiles and clothing, it also imports raw material, including cotton and intermediate inputs such as synthetic fibre, yarn and fabric. Import values have grown steadily since the 1960s and have increased markedly since the mid 1980s as a result of the rapid expansion of exports (see chart 5).

The high growth of exports of garments since the mid 1980s, moreover, left Thai textile suppliers behind. For example, some of the yarn and fabrics required for exports could not be produced domestically. Relatively low quality was only part of the problem. Fashion changes in garments demanded a variety of inputs that no one country could produce.

Fabric import volume increased rapidly up to 1993. After 1993, however, the growth rate of fabric imports started to decline. In 1996, import volumes decreased. While imports of textile fibres and yarns nearly doubled during the period 1985 to 1989, they too started to decline with the expansion of production capacity.

Fabric exports grew strongly until the turnaround in 1996. Overall, the export orientation of the clothing industry in the 1990s has fluctuated between 40 and 50 percent (the ratio of exports to production in volume terms), while that for the upstream sectors has fluctuated between 25 and 35 percent (see chart 6).

Even within categories, Thailand is both an exporter and an importer. The exception has been the clothing sector, although there are signs that this trend is changing.

The patterns of trade are summarised in the data on net export ratios. The net export ratio is the difference between exports and imports but expressed as a proportion of total trade in this sector (that is, the ratio of the difference between exports and imports to their sum). The net export ratio is bound to lie

Chart 3: Textile exports and imports

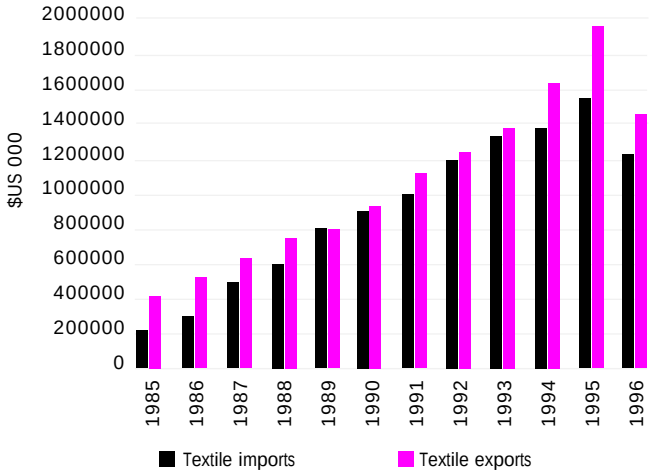


Chart 4: Clothing exports and imports

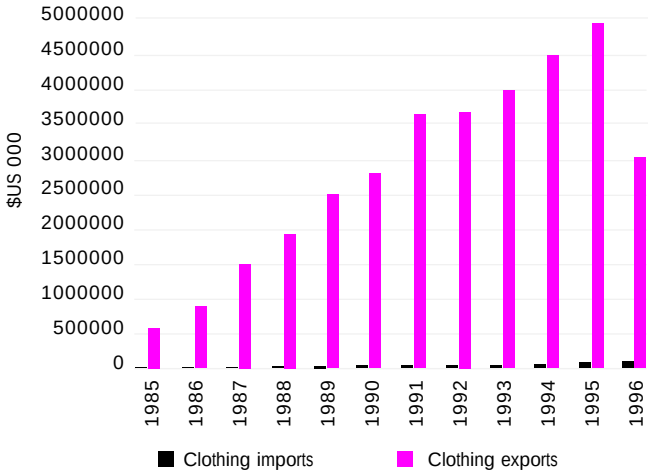


Chart 5: Imports of yarns and fabrics

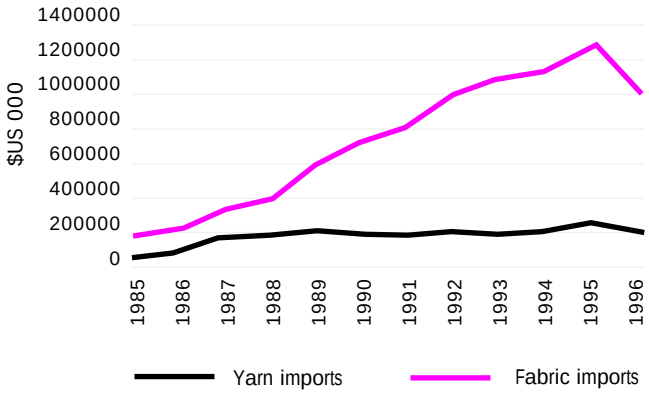
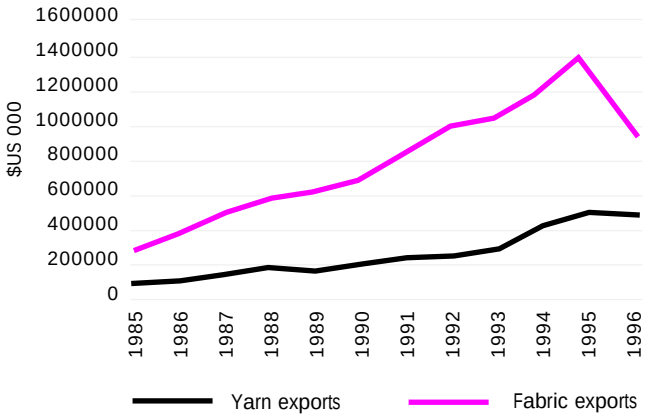


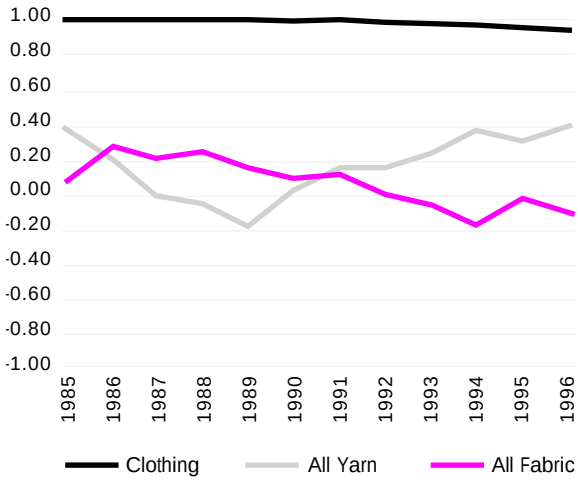
Chart 6: Export of yarns and fabrics



between values of -1 (no exports at all) and 1 (no imports). A value of zero indicates that exports are equal to imports. Thus, a value of the net export ratio close to one can also be interpreted as an indicator of the presence of two way trade in this sector.

The data for Thailand in Chart 7 show a high but recently declining competitiveness in clothing exports. They also show a decline in the net export ratio for fabric, while since the late 1980s, the ratio has been rising for yarn, the more capital intensive end of the industry. This shift, and the slump in clothing exports in 1996, reflects the loss of competitiveness of the more labour intensive part of the industry. The remaining tariffs in the clothing sector will also be slowing down the rate of adjustment in that part of the industry.

Chart 7: Net export ratios for clothing, yarn and fabric in Thailand



Exports destined for MFA markets accounted for around half of total export value of textiles in 1994. The EU and the United States are the major markets for Thai clothing and textiles, each accounting almost equally for a share of around 24 percent of the export value. The remaining MFA importers make up only 4 percent of total exports to MFA markets. Singapore and Japan are the main importing economies in the markets outside the MFA, accounting for around 23 percent of total export values.

Thailand's trade has been effected by the MFA and AFTA.

Textile and garment exports and the MFA

THAILAND HAS BEEN a member of the MFA since its inception in 1975. In early years, the MFA did not have negative effects on Thai exports. Indeed, it provided export markets for Thailand by curtailing the exports of the three major exporting economies; Hong Kong, the Republic of Korea, and Chinese Taipei. Like other MFA members, bilateral agreements have been negotiated between Thailand and individual importing economies.

In early years, the MFA did not have negative effects on Thai exports. It provided export markets for Thailand by curtailing the exports of the three major exporting economies; Hong Kong, the Republic of Korea, and Chinese Taipei.

The utilisation of the Thai export quotas has been high. Utilisation rates of quotas to the two principal markets, the EU and the United States, were 90-100 percent in some categories in the first half of the 1990s. In others, flexible provisions led to utilisation rates in excess of 100 percent.

Thailand started to fill its MFA quotas in the 1980s. After this point, instead of gaining from the MFA provisions, it began to lose from them. This was especially the case with the United States, which placed embargoes on Thai clothing exports from 8 October 1985, because 1985 shipments exceeded the agreed export quotas of 22.4 million square yards equivalent. The amount by which exports exceeded quota limits has consequently been deducted from the agreed quota in a bilateral agreement.

The quota allocation system is important since voluntary export restraints (VERs) distribute the rents among exporters. The process of managing the VERs can either dissipate rents or allow their efficient capture. Thailand has a discriminatory system for export quota allocation that favours large exporting firms. The Department of Foreign Trade is responsible for quota allocations. Two systems are used: one for yarns and fabrics and another for clothing. In each case the available quota is divided into two parts: the principal or basic quota, and a residual quota. The principal quota (usually 70 to 80 percent of the export quota available) is distributed free of charge annually to exporting firms on the basis of past export performance.

The residual quota, that is, the quota left over after the principal quota, or about 20 percent of total export quota available, is allocated on a monthly basis. Twenty percent of the residual quota is reserved for trading companies which are mainly exporting for large firms. These quotas can be sought by any exporting firm, including new ones as well as those already holding principal quotas. If a new exporting company can obtain part of the residual quota in one year, it will be entitled to an export quota allocation from the principal quota the next year.

Although the criteria for obtaining the residual quota appear to represent an open system for newcomers, in practical terms it is difficult

for new firms to obtain quotas. The first and the second criteria are very difficult for small firms to meet. Large exporting firms are at an advantage because they usually have integrated spinning and weaving plants or even synthetic fibre, spinning and weaving production systems. Their domestic input content is accordingly high. New exporting firms find it difficult to compete in terms of the third criterion because it is difficult for them to produce high value added products or high quality products.

The allocated quotas cannot, legally, be bought, sold or transferred to other firms. In addition, exporters are penalised if they fail to export less than 90 percent of their own quota.

The quota allocation system allocates most of the rents arising from the MFA to large exporting firms. The export quota allocation system has, thus far, been efficient in the sense that available quotas have been highly utilised. Existing exporters, moreover, can monopolise the rents because of their historical performance. New exporting firms with less marketing experience have difficulty in obtaining a quota.

The process of managing the export quota system has diminished the incentives for exports in this sector. The well established firms have less incentive to expand their exports outside MFA markets while they enjoy rents from the quota restricted markets. Consequently, small, medium and new firms concentrate on non-quota markets.

World trade in textiles and garments has become more liberalised after the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) was finalised. Textiles and clothing have been scheduled to be integrated into the GATT once again with a transition period of 10 years. In other words, the Multi-Fibre Arrangement that have governed approximately half of the world trade in textiles and clothing for two decades, will finally be eliminated.

Although textiles and clothing products will be included into GATT, the liberalisation process for textiles and clothing will be long and complicated. It will take 10 years (1994 to 2004) to complete the process. Little change is expected in the world trade of textiles and clothing before liberalisation is complete.

Moreover, if the safeguard measure is widely used, the world trade situation of textiles and clothing could possibly worsen compared to the situation under the old MFA: exporting countries have no power to negotiate with the importing countries because the agreement allows the importing countries to impose quota restrictions unilaterally, as long as some import growth is provided and the quota base in no less than in 1990.

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ASEAN Free Trade Area and Thailand's Exports of Textiles and Clothing

ALTHOUGH THE EXPORT value of textiles and clothing to ASEAN markets is small when compared with other markets, it has shown a high rate of growth. From 1991 to 1995, the export value of textiles and clothing increased almost two fold from $US 234 million in 1991 to $US 419 million. The export share of textiles and clothing to ASEAN markets, as proportionate to other markets, has increased from 4.7 percent to 6.5 percent during the same period.

Among ASEAN member economies, Singapore has been the major export market of Thailand. Malaysia is the second largest market, followed by the Philippines. Trade with Indonesia has increased to a lesser extent than other ASEAN markets. Clothing is the major export product of Thailand to ASEAN economies. It accounts for about 80 percent of the total export value of textiles and clothing.

Thailand's integration into the regional production systems has been inhibited by its high level of tariff protection. In addition, some ASEAN economies are competitors in producing and exporting similar types of products, such as Malaysia, Indonesia, and the Philippines. ASEAN exporters have concentrated on exporting to MFA markets where they can acquire quota rents resulting from import restrictions.

Although the ASEAN market for Thai exports is small, some small and medium size locally owned clothing and textile firms are interested in expanding their exports to this market. Reasons given include the slump in the world market, and the restrictions imposed by the MFA that lead firms to look for ways of diversifying their export markets to the ASEAN market.

Exporting firms that have joint ventures with foreign economies have not shown much interest in the ASEAN market. This could be due to the objective of the investment that was to export to a quota market to capture the quota rent.

Additionally, the quota allocation system, where historical performance is the criteria, provides little incentive for large exporting firms to diversify their exports to other markets. Exporting to markets like those in ASEAN will not be as profitable as exporting to MFA markets.

However, some firms that specialised in producing a particular type of product, such as women's lingerie, are now exporting to the ASEAN markets. These firms have established their own market niche within the region.

It is expected that Indonesian firms will be the main competitor to Thai firms in the future due to: 1) the larger capacity of their textile production; 2) lower wages among Indonesian workers; and 3) the lower level of tariff protection on inputs such as textiles and petrochemical products. These factors provide Indonesian firms with some advantages over the Thai firms. This is particularly true in the lower end of the product range where competition with small scale Thai textile factories is more direct.

Response of Local Firms

The following case studies illustrate common experiences in the Thai textile and clothing industry to changing conditions both in domestic and export markets:

- upgrading machinery to raise productivity;
- better use of machinery and lower loss rates on production processes;
- improved skills training for all workers;
- greater attention to customer relations, including attempts to select market niches more carefully;
- better understanding of MFA arrangements, including rules of quota allocations.

Thai Garment Export Company [2]

At the Nonthaburi factory of Thai Garment Export Company, machines in early 1998 were running close to full capacity to meet a surge in orders for its high-end apparel. The firm's goods are now very competitive in world markets due to the devaluation of the baht.

Director Somboon Juasathirattana said the company exported goods worth $US 144 million (7.7 billion baht at current rates) last year, with growth this year expected at 8 percent. The company is moving to increase its 7,000 staff and bring in new production technology to bolster production capacity.

Success has come from pursuing the high-end of markets.

The Thai Garment Company produces shirts and jackets for a variety of top brand names: LL Bean, JC Penney, Calvin Klein, The Gap, Banana Republic, Land's End, Greg Norman, Four Seasons and Talbot's.

Established three decades ago by a consortium of local and Hong Kong business people, the company has always focused on custom orders for the premium market. Mr Soonboon explained, that in the garment industry, there are no barriers to entry at the low end. Low wages win market share. However, at the high end, the game is played differently. "[P]remium customers are not price-sensitive… But many producers can't live up to their customers' expectations."

JC Penney, a large US department store chain, requires suppliers to have internal computer systems capable of linking with the chain's electronic data interchange (EDI) networks to ensure efficient processing of orders. Going online eliminates overheads associated with the manual entry of purchase orders, invoices and shipping bills. Time and human error are minimised. JC Penney also requires suppliers to comply with legal and ethical business practices, as well as a code on product safety and quality.

Suppliers seeking orders from the retail giant Marks and Spencer face an even more rigorous task. The British chain requires a "metal-free" workplace for its children's clothing suppliers. Broken needles have to be returned before workers can request a new one. Further, metal clips and staplers are not allowed in the sewing area. Finished clothing will pass through a metal scanning-machine, to ensure goods will be safe for consumers.

Fifty-one percent of the Thai Garment Export Company is held by Thai investors. The balance is held by the Hong Kong based TAL Apparel.

While TAL Apparel helps the Thai Garment Export Company acquire materials and place orders, Thai Garment executives still expect to take an active role in marketing and dealing directly with customers.

Mr Somboon said streamlining techniques have been introduced by companies within the TAL Group, which have operations in China, Chinese Taipei, Hong Kong as well as Thailand. Work is delegated to specific plants with expertise in a particular field. This helps ensure efficient use of export quotas granted to the lucrative US market.

The Thai Garment Export Company also stands out in its use of technology on the production line. At the company's new plant in Prachin Buri, the introduction of a hanger system on the assembly line has resulted in time savings of up to 30 percent in manufacturing. Computer marking design (CMD) keeps waste during cutting at below 8 percent.

At TAL's Hong Kong office, the EDI systems allow the company to maintain inventory at US retail outlets at optimal levels. Production systems can transfer information on product size, colour and style requirements from customers to the plant within one day.

According to Mr Soonboon, the systems ultimately will enable customers to manage inventories more effectively, saving time and money. For example, the lead time for orders on a typical coat has been pared down from six months to four hours.

"But machinery alone doesn't make a successful company," Mr Somboon said. Workers are encouraged to continue their education. The company works together with the Non-Formal Education Centre to help employees complete secondary and further education programs. Scholarships are offered for staff to take advanced courses to attain a certificate or diploma. Training for newcomers stresses human relations and teamwork, instead of output as the bottom line.

4 Extracted from the Bangkok Post, "Backing labels with quality", Jan 28, 1998, by Apisit Buranakanonda.

Jong Pattana Co. (JPC)

Jong Pattana Co. makes dyed fabrics for apparel (65% of operations) and non-apparel (35% of operations) manufacturers. The company acquires cotton yarn locally, then weaves the fabric, dyes, finishes and prints it. Forty percent of the company's clients then export their products to MFA markets.

JPC was established in 1983 with only 30 weaving machineries in operation. In the view of Managing Director, Teeraparb Eowpittayakul, low labour costs plus managerial skills in production and marketing during the early period of its operation helped the company earn high margins over sales and contributed to its growth. By 1998, annual turnover was 548 million baht (about $US 14 million), up from 318m baht in 1990.

In 1990, the Thai economy was affected by the eruption of the Gulf War. The domestic economy showed signs of a slow down. The firm was prompted to consider ways to raise productivity in order to supply quality products to apparel and non-apparel industries, which could compete in the MFA market.

After the policy changes and increasing openness in the industry, the annual average growth of sales was 4-5 percent. This growth rate was achieved as the company moved into high-end products and secured contracts to supply cotton fabrics to clothing factories producing brand name products. The value-added share of output of the company's products increased to 30-35 percent.

The rise in value-added was facilitated by the replacement of old weaving machinery. To date, 80 percent of its original plant has been replaced. However, the crisis of the Thai economy and the declining purchasing power of its consumers, has intensified the need for the firm to diversify its product base.

Items	Strategies Adopted
1. Product choices	• Diversifying products to meet demand of different segments, by adjusting material usage, treatment of products in dyeing and printing.
2. Marketing	• Paying more attention to foreign clients, by visiting them, or participating in the international trade fairs. • Exploring possibilities of marketing products under the company's own brand name or international brand names.
3. Product differentiation	• Utilising flexible production management in making products according to the need of customers.
4. Pricing	• Adjusting the prices and term of payments, according to the classified group of customers.
5. Staff training	• Concentrating on technical staff, select on the basis of their technical background and loyalty to the firm, then dispatch them to training courses.
6. Cost management	• Seeking business alliances in sub-contracting works, like dyeing and printing, in order to save time and cost.

Apart from driving up the share of value added in output, other strategies adopted are outlined in the above table .

Mr Teeraparb says the MFA quota allocation system in Thailand favours large exporting firms. It is difficult for new firms to obtain quotas as some of criteria are difficult to meet. Small firms usually do not have integrated spinning and weaving production system, and are not able to produce high quality products to compete with the large exporting firms.

JPC concentrates on non-MFA markets where competition in quality is not as strong as price.

JPC has overcome the following challenges:

- Modernisation of its weaving machinery by replacing its shuttle looms with air-jet type shuttleless looms to improve production efficiency:
- Reorganisation of technical staff, including dispatching them to foreign countries (particularly to Germany) where the company has ordered weaving machineries;
- Employment of foreign experts to train technical staff in dyeing, printing and finishing processes;
- Reacting to the slowdown in consumer demand in Thailand, especially in textile and garment products, by taking the advantage of small scale business and adjusting the quality of products to meet the demand in the local market.

Phiphatanakit Textile Co. Ltd.

The Phiphatanakit Textile Co. Ltd. is a medium sized firm in the spinning and weaving industry. It was established 52 years ago, to supply woven fabrics to war torn countries. The machinery was brought in from Shanghai. In 1964, PTC imported new weaving machinery for the production of grey fabrics that were sold mainly in the domestic market.

Using the second-hand shuttle-loom weaving machineries installed more than 20 years earlier, the firm experienced increasing costs. Its products were rendered less competitive even in the domestic market. The firm then decided to change to shuttleless-loom weaving, and thus was able to start exporting products in 1988. Products were shipped to MFA markets (USA, Europe).

Since 1988, the firm has experienced high export growth rates of almost 20 percent per annum. Overall exports from Thailand to MFA markets were allocated with higher quotas every year.

By 1993-94, the value of exports of grey fabrics accounted for 50-60 percent of total production capacity. Since 1995, the firm has gradually replaced its old machinery (more than 50 percent of spinning machinery, and one-third of weaving machinery).

With the increased capacity, the firm was able to export fibre yarn in 1996, and greatly improve the quality of its products in 1997.

Turnover in 1997 was over 1 billion baht and the firm employs over 900 people. It sells its products locally and exports more than 60 percent of its production to MFA markets, in particular to dyeing factories in those countries.

The firm's goal is to improve production efficiency to increase value added in its products and raise its margin. It is now subjected to increased competition in local and export markets.

During the boom period, 1989 – 1994, PTC decided to replace its old weaving machine with shuttleless looms imported from Europe. This proved beneficial to the firm in the longer run.

The firm's administration and personnel manager, Mr Teerasak Pinyawat, predicts a decline in the competitiveness of spinning industry of Bangkok, and argues the business should be relocated to the BOI-promoted zones.

Mr Teerasak said that the firm is concerned with the MFA quota allocation system in which export performance leads to bonus quotas. The firm has been forced to cut prices in order to keep the export level up to the allotted quota.

Competitive strategies recently adopted by PTC are outlined in the above table.

Items	Strategies Adopted
1. Product choices	• Concentrate on a smaller range of products (grey fabrics) and fabric yarns, to avoid any loss that might arise from the changes in production line.
2. Marketing	• Use both direct sales and sales agents (50% each) • Make contact more frequently with the clients in order to learn more about consumer's tastes and behaviour.
3. Product differentiation	• Concentrate more on the technical knowledge of the mixing process of fibre (yarn) and the adaptation of machinery utilisation to ensure high quality products.
4. Staff training	• Concentrate on improving of technical skills for operating and maintaining the machinery.
5. Cost management	• As the key strategy adopted to maintain competitiveness, the company will introduce a price monitoring system for natural fibres, and better raw material inventory management.

To better compete in the market place, PTC has set up a quality monitoring unit to create and adopt follow-up measures to solve problems. Moreover, under new management (the son of the founder) the company is accessing high quality natural fibres and has improved its production process.

When asked to list the challenges that the company has overcome, the administrative director of PTC, mentioned the following:

- Better quality raw materials used in the production process;
- Improved management of raw material procurement, helping to ensure higher quality and lower costs;
- Better trained workers; and
- Implementation of the ISO-9002 in order to standardise work instructions and minimise losses incurred by uncoordinated work process.

Amornthep Knitting Factory Co Ltd.

Amornthep is a relatively small firm in the garment industry. It makes knitted products. Turnover is about 80 million baht. It is an export oriented company. The Managing Director is Mr Porn Lertamornthep.

Prior to 1994, AKF exports fluctuated due to cycles in the textile and clothing business. Sales peaked in 1991 (55 million baht) but the firm lost competitiveness in 1993-94 as sales dropped to 39.5 million baht. The fall was attributed to declining competitiveness of wages, which increased from 80 baht to 100 baht per day.

The firm started exporting low quality knitwear products to the US market in 1973. Although the price range was as low as $US 1.80-2.00, the margin on sales was in 25-30 percent. The products were made under the wholesaler's brand-name, and expanded at a high rate during 1983-1993.

In 1994, the firm experienced a drop in sales. The company reduced its number of workers and explored opportunity for product improvement. By purchasing new machinery, improving the skills of the remaining workers, and setting up new factories in urban areas, the firm returned to a high export figure of 60 million baht in 1997. It is expected to reach 80 million baht in 1998.

Competitive strategies of the firm are outlined in the above table.

Mr. Porn describes what he sees as the factors contributing to the failure of small firms in the industry in recent years:

1. Lack of knowledge about garments combined with hasty decisions to increase production, but with no plan to improve quality;
2. Lack of attention to core business issues;
3. Poor customer relations.

Items	Strategies Adopted
1. Product choices	• Replace the low-quality products with high quality products with a higher sales margin.
2. Marketing	• Seek out niche markets. Obtain high-grade exporter qualifications from the Department of Export Promotion (Ministry of Commerce), which enable the firm to get orders from importers in MFA markets. Provide services to customers, such as recommendations on raw materials, dyeing and other in production process.
3. Product differentiation	• Promote quality assurance • Promote experienced and highly motivated workers in the production process.
4. Pricing	• Charge higher prices at the high end of the market.
5. Staff training	• Provide machinery operators with training courses in Europe • Give experienced workers incentives to train other workers.
6. Modernisation of production capacity	• Install new computer aided sewing machines: (8 units have already been installed.) The firm has a policy to modernise its machinery by replacing the old every 3-5 years.
7. Cooperation with	• Seek support from the Garment Support Foundation in other firms establishing a training centre in the provinces. SMEs will send their workers to train at the centre where they can share working experiences in order to improve working attitudes.

Amornthep Knitting has opted to promote the productivity of workers as the ultimate solution to the problem of maintaining competitiveness. This involves the promotion of systems in the factory which will lower loss rates and minimise the damage to machinery and equipment. One challenge is to improve the loss rate which at present is 6-7 percent. The firm intends to lower it to 2-3 percent through the implementation of the ISO 9002 standard system next year.

Working conditions in the factory are considered to be relatively good, but Mr Porn believes that with the planned adaptation of ISO 14000, the working environment should be greatly improved.

Mr Porn also expressed concern about the quota allocation system that prevents many small firms from exporting to the MFA market. He believes that the Ministry of Commerce should consider an adjustment of quota system to strengthen the technical capability of small firms in the long-run.

Future Challenges

Locally owned plants in Thailand, particularly in the textile sector, are relatively old. Worldwide, the weaving industry is entering an era of shuttleless production. However, in Thailand, more than 80 percent of weaving firms still use shuttles. Similarly, the average age of machinery in the spinning sector is predominantly more than 10 years old. If dyeing machines were replaced, costs of production at current wage rates could be reduced. The environmental impact of the industry could also be reduced since the newer machines use less water. In the whole of the garment industry, which constitutes thousands of firms, it is reported that there are only 2 computerised cutting machines, 87 computerised pattern and design machines and 190 computerised conveyor systems.

The Thai government has responded to problem by borrowing from the Asian Development Bank and the World Bank to finance industrial rehabilitation. The Thai Textile Institute has been set up to manage the distribution of funds in the form of soft loans to finance renovation.

At different times, the Finance Ministry has proposed cuts in tariffs on raw material imports which supply products to the textile industry. The petrochemical industry, a major consumer of raw materials, has not committed itself to passing on the lower costs to its textile sector customers. Instead, the petrochemical sector has drawn attention to infrastructure sector competition policy. The petrochemical sector would prefer to see the government increase the efficiency of the operations of the electricity generating system, and to pass on those costs cuts in terms of lower prices. Additionally, the petrochemical sector asked the government to end the monopoly of Thai Tank on the storage of raw materials. The debate highlights the pressure to maintain the escalating tariff structure.

A further challenge in the textile industry involves the training of workers and managers. The introduction of new technology on the production floor will change the work practices and skills required in the industry's labour force. Modern technology, and the movement towards the high value end of the market, raises other challenges for management, including the introduction and maintenance of more customer oriented production and distribution systems.

Challenges and opportunities also exist in the international environment. Although the MFA is being phased out, Thailand will confront many issues in the process. The benefits remain either uncertain or delayed. On the other hand, the industry now is looking to the regional market. Production adjustment among ASEAN economies could take place as some economies become more specialised in producing products which suit their skills and resource endowment. Export expansion could take place on intermediate inputs and final products ranging from synthetic fibre to clothing. In the case of Thailand, where labour costs have become more expensive, adjustment could be made to produce more sophisticated products or upgrade the products at the labour intensive end of the industry. This will not occur, however, if the rules of origin applied under the free trade arrangements are too restrictive.