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# Chapter 8

# How Has the Myanmar Garment Industry Evolved?*

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**Abstract**

This chapter explores how the Myanmar garment industry has grown and declined over the previous two decades amidst the changing international economic environment and fragile availability of market access. This chapter also examines the international competitiveness of the Myanmar garment industry, comparing location advantages and disadvantages. Myanmar's economy is suitable for a labor-intensive garment industry, and it has successfully exhibited growth potential. However, the garment industry in Myanmar has long faced several challenges, such as rapidly increasing wages due to the strong local currency and high production costs that include electricity and transport charges. To date, the Myanmar garment industry has grown through the private sector's efforts without much government support. However, such growth has a limit, and a reduction in production costs and an appropriate exchange rate for the local currency are necessary for sustainable development.

***Keywords:*** *Myanmar, garment industry, United States sanctions, Japanese market, investment climate, productivity, Multifibre Arrangement (MFA), China-plus-one*

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# 1 Introduction

Asia began development through garment exports (Sachs [2005:195]), and Myanmar is no exception. Here, garment sewing is the only manufacturing entity that participates in regional and global production and distribution networks. Garments represent the only exported manufactured goods in Myanmar.

Soon after the military took power in Myanmar in September 1988, the State Law and Order Restoration Council (SLORC), which was later reconstituted as the State Peace and Development Council (SPDC), abandoned a twenty-six-year long isolationist closed-door policy and initiated an open-door policy. The military government allowed private firms to engage in external trade, and the Foreign Investment Law (FIL) was enacted in November 1988. This allowed foreign investment in Myanmar.

The private sector (including both domestic and foreign firms) worked vigorously to start businesses in various sectors such as manufacturing, construction, mining, trade, tourism, retail, restaurants, and other services. The garment industry exhibited strong growth throughout the 1990s but most especially in the late 1990s and at the beginning of the new century. The garment industry is labor-intensive, export-oriented, and uses standardized technology. Such characteristics have made the garment industry the first rung on the industrialization ladder in many developing economies. Some, such as least developed countries (LDCs) like Bangladesh and Cambodia, have experienced very high output growth in this sector.

Myanmar developed its garment industry as above. Between 1990 and 2001, it multiplied its exports 69 times. The share of Myanmar's garment exports out of its total exports increased from 2.5 percent in 1990 to 39.5 percent in 2000. Thus garments became the largest exported goods of the country. The United States offered the largest market and in 2000 absorbed more than one half of Myanmar's garment exports. The European Union (EU) provided the second largest market and was the recipient of nearly forty percent in the same year. However, United States markets were lost in 2003 due to sanctions which included a trade embargo. From that time, garment firms in Myanmar started to explore Asian markets, Japan in particular. In 2008, Japan was the largest market for Myanmar garments and occupied a 34 percent share of all garment exports of Myanmar. Japan was followed by Germany (24 percent), Spain (14 percent), the United Kingdom (10 percent), and South Korea (8 percent).

Though Myanmar's garment industry is no longer growing so rapidly, it is still,

de facto, the only industry in the country that has been able to connect with global and regional production and distribution networks. An important task facing both policy makers and businesspeople in Myanmar is the continued development of this industry. In order to accomplish that, it is important to understand how the Myanmar garment industry has evolved under the changing international economic environment and fragile availability of market accesses over the previous two decades.

This chapter describes the processes and analyzes the factors involved in the growth, and decline, of the garment industry in Myanmar. Although the garment industry lost momentum owing to the economic sanctions imposed by the United States, the expectation is high that it will serve as the driving force for the development of the manufacturing sector in Myanmar for some time to come once the external environment improves. When this happens, and many anticipate that this will happen soon under the new "civilian" government in Myanmar, both its government and private sectors will have to strive to promote the development of this industry. In order to draw up effective promotional measures and business strategies, it is necessary to understand what lies behind the growth and decline of the garment industry in Myanmar.

The outline of this chapter is as follows. Section 2 provides an overview of the garment industry and discusses its role in the national economy. Section 3 depicts the pioneer days of the garment industry. For Myanmar, the garment industry is a new industry that was imported in the early 1990s. Who brought this industry into the country and who in Myanmar hosted it? Section 4 analyzes the background of the boom in the garment industry in the late 1990s and early twenty-first century when a larger number of domestic private firms entered the industry. What prompted their move and what enabled it? Section 5 describes the predicament of domestic private firms as selection and polarization progressed in the garment industry after the collapse of the boom. Section 6 investigates the source of its industrial competitiveness and identifies some challenges the Myanmar garment industry faces. In conclusion, this chapter summarizes the above discussions and presents the prospects of the industry in the newly emerging environment.

## 2 Overview of the Myanmar Garment Industry

It is generally believed that at its peak period from mid-2000 to early 2001 the Myanmar garment industry had about 400 factories with 300,000 employees generating

an export volume of US$600 million. These figures were frequently quoted by U Myint Soe, chairman of the Myanmar Garment Manufacturers Association (MGMA) and by the Burmese media, and have been commonly accepted as the established figures concerning the size of the Myanmar garment industry.

However, these estimates are not supported by reliable data, except for the value of exports, and it is difficult to grasp the actual state of industry in Myanmar owing to the absence of socio-economic statistics, and because data that is available is incorrect and/or outdated. Taking into account these limitations, this section provides an estimate of the size of the industry as correctly as possible using various sources of information, including the author's field surveys.

(1) Exports

Export trends are important for know the performance of the garment industry. In Myanmar, most firms in the garment industry operate on the basis of cutting, making, and packing (CMP) arrangements. The CMP system is a form of production on consignment in which the main raw materials (fabrics, ancillary materials, etc.) are provided by overseas buyers and imported free of charge, then cut, sewn and packed in the domestic factories, after which all of the finished products are exported.

**Figure 1** presents the export performance of the Myanmar garment industry based on two different sources of information, i.e., the United Nations' Comtrade and import data from 22 major countries that import Myanmar-made garments.[1] The former data source furnishes a longer period of data, whereas the latter provides more recent data. The two series of data do not differ much during the period in which they overlap, which means that the 22 countries represent almost all the exports of Myanmar-made garments. The figure indicates that the garment industry in Myanmar began to display steady growth starting in the mid-1990s. The export value, which exceeded US$200 million in 1997, marked a 1.5-fold increase in 1999 and an almost 2-fold increase in 2000 over the previous year, peaking at US$868 million in 2001. Then, as a result of growing consumer boycott campaigns in the United States and European countries and

[1] For the data of UN Comtrade, the World Trade Database processed by Statistics Canada based on UN Comtrade is used. For the importing countries, the data of twenty-two countries considered to be major importers of Myanmar-made clothes were collected and totaled using the World Trade Atlas database.

imposition of economic sanctions by the United States in 2003, export value took a sharp downward turn until 2005. However, the exports of Myanmar garments have gradually recovered due to increased orders from the Japanese market since 2006, reaching US$490 in 2010. The export value of 2011 is expected to be much larger than that of 2010. Since the United States sanctions, the Japanese market has become the main one for Myanmar-made garments.

Throughout the 1990s, about 90 percent of the demand for Myanmar-made clothing was provided by the markets of the United States and the EU. According to **Table 1**, the share of the United States market for Myanmar-made clothing was 45 percent in 1997 and that of the EU was 50 percent. Since then, the share of the United States market had steadily increased, reaching 54 percent in 2000.

(2) Number of firms

How many garment firms (or factories) engage in the production of garments for export? The MGMA estimates that about 400 garment firms existed at the peak of the industry, around 2000 and 2001, including about 100 small factories with a few tens of sewing machines that specialized in subcontracted work. Due to the effects of United States' sanctions, the total number has now decreased to an estimated 180. However, this information does not have supporting statistics. The author estimates the number of garment firms based on the data from the business directory and from company-wise export records.

The *Myanmar Textile and Garment Directory* (MTGD) was first published in Fiscal Year (FY) 2001 by a private research firm in cooperation with the MGMA, and FY2001, FY2002 and FY 2006 editions had become available later on. The garment factories of 293 firms were listed in FY2001, and 275 in FY2002.[2] The Survey on the Garment Industry in Myanmar of 2005 (hereafter SGIM)[3] asked garment firms whether or not they were included in MTGD in FY2001, and 86 of the 142 firms questioned

[2] Separate entries for the head office (trading division, etc.) and the factory (production division, etc.), or separate entries for more than one factory of the same firm in different locations are counted as one firm. Cases of apparent mistakes in entries (such as a spinning firm located in Mandalay) are excluded from the count.

[3] We conducted a questionnaire survey for the purpose of understanding the current state of garment firms, which is in this paper referred to as the "Survey on the Garment Industry in Myanmar of 2005."

were included while 42 had been established after the survey for MTGD of FY2001, and 14 firms were not included even though they existed at that time. This means that 14 per cent of all firms were omitted from the list. Adjusting the figures based on this ratio would indicate that there were 334 firms in FY2001 and 314 in FY2002.[4]

The number of garment firms can also be calculated based on export records. The author gathered some export data from various sources, compared it with the results of the SGIM and the visit survey, and combined this information with the data assembled during previous research by the Japan External Trade Organization (JETRO) in 1999. In this fashion, company-wise export data for the period between FY1993 and FY2004 was produced.[5] The result is shown in **Table 2**.

These figures indicate that the number of firms with exporting garments increased steadily from 12 in FY1993 to 94 in FY1997, followed by a remarkable 2.5-fold increase to 232 in FY1998. In FY1999, the number peaked at 291. These figures correspond with the sharp increase in the value of exports during this period and the advent of the boom of the garment industry. However, the number of exporting firms declined continuously starting in FY2000. It is noteworthy that a large decline occurred as early as FY2001. As is evident from the export value, the "garment bubble" in Myanmar burst two years before the United States actually imposed sanctions.

With these things considered, it would be safe to estimate that the number of garment firms was a little over 300 at its peak around 2000 and 2001. The "established" figure of 400 factories at the peak is not supported by data, and after the United States imposed sanctions, the figure may have shrunk to about 150. Since then, the number of garment firms had increased to about 180 in 2010.

(3) Employment

The garment industry is a typical labor-intensive industry which is considered to be effective in creating employment. The MGMA estimates that about 300,000 workers were employed in this industry at its peak from mid-2000 to early 2001. Due to the

[4] The directory includes firms whose export markets are not mentioned and firms with a small number of machines or employees.

[5] Non-garment firms with garment export records are excluded. Also, firms with a cumulative export value of US $10,000 or less for the period between FY1993 and FY2004 are excluded because it is doubtful whether they will sustain business as garment firms.

impact of the United States sanctions, the number of workers had decreased to between 120,000 to 130,000 by June 2005, according to estimates.[6]

The author estimated the total number of workers by focusing on the data concerning the average number of workers employed per firm, acquired from the SGIM, and multiplying these figures by the number of firms estimated above. According to the survey, the average number of workers per firm was 438 in 2002, 383 in 2003, and 335 in 2004. Supposing the average number of workers per firm was 450 and the number of firms was 300 at the peak around 2001, then the total number of workers would be about 135,000, which is far fewer than the MGMA's estimate of 300,000. Further supposing that the average number of workers per firm in 2004 was 340 and that the number of firms was about 150, the total number of workers would be about 51,000. Supposing that the number of firms and average number of workers per factory had recovered to 400 and 180, respectively, by around 2010 with the increase in orders from the Japanese and Korean markets, the total number of workers in the garment industry is estimated to be around 72,000.

Of the total employment in Myanmar, what percentage was generated by the garment industry at its peak of 135,000 workers? Statistics on employment have not been published since FY1997, when there were 18.36 million people employed in total: 11.51 million (63%) in the agricultural sector, 1.78 million (10%) in the commercial sector and 1.67 million (9%) in the processing and manufacturing sector (MNPED 1998). The total number should have increased after that time and the percentage distribution of each sector may have changed, but based on these FY1997 figures, 135,000 workers are equivalent to 0.7 per cent of the total employment and 8.1 per cent of the employment in the processing and manufacturing sector. Thus the contribution of the garment industry in terms of employment is still limited.

## 3 How Did the Myanmar Garment Industry Get Started?

The Myanmar garment industry underwent dynamic development during the 1990s and

[6] Interview with U Myint Soe, chairman of MGMA (June 2005).

into to the early twenty-first century, in contrast with other manufacturing industries in Myanmar which were stagnant. As new players entered one after another, changes in the leading players occurred, promoting competition and accelerating growth. Understanding this transformation requires knowing the major players in the industry and the policies and institutions that support them. **Table 3** presents a brief history of the Myanmar garment industry that divides the two decades (1990–2011) of this industry into five periods, i.e., the pioneer period, followed by the steady growth, high growth, stagnation, and recovery periods.

(1) JVs between state and military enterprises and Korean and Hong Kong firms

At the beginning of the 1990s, soon after the current military government embarked on its open door and economic liberalization policies, a state-owned enterprise and a military-related enterprise established joint ventures one after another with foreign firms based in South Korea and Hong Kong, and these businesses led the garment industry in its pioneer period.

The state-owned enterprise is the Myanmar Textile Industry (MTI) under the Ministry of Industry (1)[7], and the military-related enterprise is the Union of Myanmar Economic Holdings Limited (UMEHL). The MTI is one of six state-owned enterprises under the Ministry of Industry (1). The budget of the MTI is integrated into the State Fund Account along with the budgets of the administrative organizations and other state-owned enterprises. All funds necessary for its operation, such as the investment fund, are drawn from the Account, and profits earned are all transferred into the Account. The MTI is not allowed to obtain financing from external entities such as banks, nor does it have an independent managerial right to determine the sales price, volume of production, or assignment of personnel, and so on. It might be more appropriate to consider it as a part of an administrative organization rather than a business enterprise. UMEHL, which was established in 1990, is a holding company financed by the logistics department, regiments, and active and retired officers of the armed forces. In 2005 it

[7] There were two ministries of industry. Ministry of Industry (1) was in charge of light industries including the manufacture of consumer goods. Ministry of Industry (2) was in charge of heavy industries including the manufacture of capital goods. The two ministries were merged into one, i.e., the Ministry of Industry, on December 2, 2011.

had 36 subsidiary and affiliated companies. As a major company in Myanmar, it engages in wide-ranging economic activities with the aim of improving the welfare of active and retired soldiers. Since UMEHL is an economic body of the armed forces, which holds political power in the country, it receives special treatment in gaining approvals and licenses for its business activities. Thus, it might be better called a semi-governmental enterprise.[8]

These two state-owned and military-related enterprises, together with South Korean and Hong Kong firms, established eight joint ventures during 1990 to 1994 (**Table 4**). Looking at the breakdown of export by type of firm based on the export data presented in **Table 3**, about 95 percent of the garment exports from Myanmar in the pioneer period were by joint ventures involving MTI or UMEHL with South Korean and Hong Kong firms.

The Daewoo Group of South Korea, which established two firms in 1990 jointly with UMEHL, blazed a trail for the garment export industry.[9] These businesses developed the capacity to meet an order for 1 million men's shirts from Japan in 2000 and thereafter. Their success led to the expansion of Japanese orders placed to the Myanmar garment industry. At that time, these two firms had 2,500 and 2,000 employees, respectively. Both joint ventures between the Daewoo Group and UMEHL were the foundation of the garment industry in Myanmar, and many workers who acquired experience there later joined private firms.

Why did Korean and Hong Kong firms choose to establish joint ventures with the state-owned and military-related enterprises? Based on information obtained from persons concerned, there seem to be four reasons.[10] First, as it had only been a couple of years after the military government opened its door to foreign capital, foreign firms naturally had no business experience in Myanmar. In such an uncertain business environment, the state-owned and military-related enterprises appeared reliable and secure. Second, private enterprises that were capable enough to be their partners had not

[8] The national armed forces established the Myanmar Economic Corporation (MEC) in 1996 as a corporation under their direct control. However, it has not entered the garment industry.
[9] At that time, Segye Corporation was part of the Daewoo group.
[10] The account here is primarily based on the author's interviews in September 2005 with Mr. S, who is an advisor to a large private enterprise in Yangon, and Mr. W, who arrived as a chief engineer in 1991 and has become the managing director of one of the leading foreign garment firms in Myanmar.

yet developed in those days, just after the end of the planned economy era. Third, these firms expected to enjoy the quota allocation for the United States' market by forming joint ventures with the state-owned and military-related enterprises. Fourth, wholly foreign investments in the garment industry were virtually not allowed by the government. Although wholly foreign investment was legally permissible under the Foreign Investment Law of 1988, the government apparently did not allow it in practice. The first wholly foreign investment in the garment industry was made possible in 1994.

(2) 100 percent foreign investment

The first wholly foreign-owned firm in Myanmar was established by a global Hong Kong company that had been in business for 50 years and had production bases in China, Macao, Malaysia, Sri Lanka, Lesotho and Myanmar.[11] Out of concern over quota restrictions and an anticipated wage increase in China, where it had its main production base, the company marked out Myanmar as a new production base. Subsequently, other wholly foreign-owned firms were also allowed to enter the garment industry. At the time, Myanmar's government strongly leaned toward further promotion of openness, although there was no explicit shift of policy.

The move toward opening the country to foreign business and liberalizing the economy by the Myanmar government was given added impetus by the release of the National League for Democracy (NLD) leader Aung San Suu Kyi from her six-year house arrest in July 1995. At that time, a sort of investment boom in Myanmar occurred. In Japan, Myanmar was advertised as the "last frontier in Southeast Asia," and a number of investment missions visited the country. In 1996, which was designated as "Visit Myanmar Year," construction of luxury hotels and the traffic network proceeded at a fast pace. FY1996 marked a record, with 78 applications for direct foreign investment approved amounting to US$2,814 million (Kudo 1997).

In the garment industry, too, the presence of foreign firms became larger. Since then, most foreign investment in the garment industry has been made independently by overseas firms, mainly 100 percent foreign-owned firms, although there are some joint ventures involving domestic private firms. The collaboration established in 1995

[11] According to the website of Yangtzekiang Garment Manufacturing Co., Ltd., at http://www.ygm.com.hk/ [at the time of January 31, 2006].

between the MTI and a Singapore firm was the last such arrangement involving a state-owned or military-related enterprise, and all but one of the joint ventures involving the MTI had been dissolved by 2005. With respect to UMEHL, two joint ventures with the Daewoo Group continued to do well, though the one with a Hong Kong firm was dissolved. In short, the era of MTI and UMEHL had come to the end.

The garment industry is, de facto, the only industry in Myanmar involved in global production and distribution networks. However, the role of foreign investment in the industry is smaller than that seen in other countries such as Cambodia, where foreign-owned firms dominate the industry. This is because, in practice, foreign investment is often treated unfavorably compared to domestic investment. Accordingly, many foreign-affiliated firms do business under the names of domestic private firms, making them so-called “sleeping partners”.

Where does foreign direct investment come from? Of 45 foreign-affiliated firms identified by the author in 2006, nine are joint ventures with state-owned or military-related enterprises, five are joint ventures with private firms, and 31 are wholly owned by foreign firms. By country of the parent firm, South Korea (17 firms) and Hong Kong (13 firms) make up the majority. Next come Singapore and Thailand, each with 3 firms, followed by Japan with 2 firms. However, Taiwanese firms do not appear on the official list of foreign investors in spite of the apparently strong presence of Taiwanese firms and businesspeople in Myanmar’s garment industry.

## 4 Garment boom in Yangon

In the late 1990s, the industry broadened its base by attracting domestic private firms, creating a boom that lasted from the end of the 1990s to 2001. This section analyzes the background of the garment industry boom created mainly by Myanmar firms, clarifying the factors that attracted local firms to this imported industry and the conditions that made their participation possible.

(1) Strategy for survival of Myanmar firms after the Asian economic crisis

The Myanmar garment industry reached a turning point in 1998, when growth at a

stable pace ended with a dramatic increase of garment firms. The so-called garment boom had arrived, supported by the active entry of domestic private firms. Why did this take place? The reasons are closely related to changes in the economic and policy environment and the strategy adopted by Myanmar firms to survive such changes.

At the time, demand for imported garments was increasing in the United States and the EU, reflecting their strong economy, and garment firms there had initiated a "China Plus One" strategy to cope with the increases in the labor costs and quota limitations in China under the Multifibre Arrangement (MFA) regime. Myanmar was one of the candidate targets for this strategy, but the Asian economic crisis adversely affected the country and the business climate was deteriorating rapidly in the middle of 1997. Under the open door and market economy policy introduced in 1988, the private sector was allowed to engage in economic activities, and the domestic demand which had been suppressed under the planned economy was released. Private sector manufacturing and construction firms prospered in the first half of the 1990s, but the collapse of the construction boom and land bubble left them in a difficult situation after 1997 (Kudo [2009: 75–6]).

As these domestic-oriented industries began to stagnate after the Asian economic crisis, Myanmar entrepreneurs sought new business opportunities. They had accumulated a certain amount of capital from trade and domestic-oriented business, and many had purchased land in industrial parks created by the government in the 1990s.[12] Entrepreneurs purchased lots in these parks as a speculative investment and without any concrete business plan, but they were required to construct factories within a time limit imposed by the authorities managing the industrial parks. When the land bubble burst, these entrepreneurs had little prospect of reselling the land and needed to start new businesses to salvage their investments. This situation led many of them to become involved in the export-oriented garment industry at the same time.

The policy environment surrounding business management changed greatly after the Asian economic crisis in the middle of 1997. The trade deficit increased and

[12] Starting from the development of the Shwe Pyi Thar industrial zone in a suburb of Yangon in 1990, industrial parks were constructed throughout the country. See the feature article "Industrial Development (1)–(17)" in New Light of Myanmar, the state-run English-language newspaper (published serially from September 17, 2001, to January 25, 2002).

Myanmar's foreign exchange position deteriorated rapidly. The government established a Trade Policy Council (TC) headed by the second-ranked person in the military junta, tightened import restrictions,[13] and adopted an "Export First Policy" under which only those who have gained "export earnings" are allowed to import. The demand for imported commodities remained strong and was even growing, and large profits were expected once an import license was obtained. Import licenses became a lifeline for firms in Myanmar, defining their growth potential.

A CMP consignment processing business ("CMP business") developed, exploiting a loophole in import restrictions. In a CMP business, overseas buyers procure all materials (for example, fabrics, interlining cloths, lining materials, buttons, and fasteners) and supply them to Myanmar garment firms for free. These firms manufacture garments using the imported materials and re-export all of the goods produced to overseas buyers. The only payment required in this process is the processing charge from the overseas buyers to the garment industries in Myanmar. In other words, it was possible for the CMP business to import raw materials without any "export earnings." The CMP method systematically supported the development of the garment industry by providing a way to avoid foreign exchange settlement, which is the most difficult problem involved in importation in the business environment in Myanmar.[14]

As one can imagine, some private businesses apparently misused this system. The government frequently issued notices prohibiting illegal imports using the CMP arrangement for goods other than those materials necessary for garment sewing,[15] an indication that some firms doing CMP business also imported goods not directly related to their production. This means that some entrepreneurs entered the garment business for the sake of "imports."

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[13] See Kudo (2001) for a detailed discussion about the tightening of restrictions on trade and investment in response to the deteriorated foreign exchange position.

[14] See Kudo (2009: 81–3) for details of the discussion which points out that the CMP method created a kind of "enclave" and thereby helped realize rapid growth of the garment industry.

[15] News Letter 14/97 (December 9, 1997) issued by Department of Trade, Ministry of Commerce, News Letter 2/98 (April 27, 1998), News Letter 8/98 (July 24, 1998), etc. Irritated by persistent illegal import activities, the Ministry of Commerce issued a notice requiring applications for import licenses to be submitted for the cases of CMP business approved by the Myanmar Investment Commission (MIC), although import licenses had not been required before (News Letter 3/2001, July 23, 2001).

In those days, import of equipment by deferred payment in combination with a CMP business was also permitted. Under this arrangement, overseas buyers provide Myanmar firms with special machines necessary for production and receive repayment of the price little by little from production charges. This system enabled Myanmar firms with weak financial capabilities to install the equipment necessary to meet the demand of overseas buyers and take orders. Because the overseas buyers are committed to making relation-specific investments, Myanmar firms can expect to receive orders over a long term on a stable basis. This system helped reduce the investment cost of the garment industry, but the government prohibited the import of equipment by deferred payment in 2001. Although no reason was given, it is likely that deferred payment was used to import equipment and sell it through illegal channels.

Those who obtained approval for CMP business from the Myanmar Investment Commission (MIC) were also allowed to import motor vehicles. In Myanmar, there is a strong demand for vehicles, but import restrictions are particularly strict and permission is given only to a limited number of privileged persons. Import licenses for vehicles are traded in the parallel market at a high price, often exceeding the cost of the vehicles, but obtaining an import license promises a huge profit. One garment firm owner who received approval for investment from the MIC said that he was allowed to import four vehicles in total: one automobile at the start of the construction of the factory, one van upon completion of construction, and two trucks at the start of operations.[16] Importation of vehicles was permitted on the assumption that they were to be used for production activities, but some were sold on the parallel market or through illegal channels, and in certain cases the purpose of investing in a garment firm seems to have been to secure import permits for vehicles.

Thus, under the tightened trade restrictions in the wake of the Asian economic crisis, access to imported goods became a way of bringing even greater profit to firms. Entry into the garment industry provided a formal channel for foreign exchange earnings through the export of garments, and also offered ways of arranging imports by exploiting loopholes available to those engaging in the CMP business. In this sense, the garment industry boom was symptomatic of the state of the Myanmar economy, which

[16] Interview at Company M in September 2005.

was experiencing severe distortions and restrictions.

(2) Role of Korea, Hong Kong, and Taiwan firms

Myanmar firms with no experience in the garment industry needed market information and technology to get started in the business. These elements were supplied by foreign firms' owners and engineers. In the early 1990s, some of the businesspersons and engineers who worked for the Korean and Hong Kong firms that established joint ventures with the state-owned and military-related enterprises later provided Myanmar firms with technology and know-how. In particular, the staff of the Daewoo Group, which established two major garment factories jointly with UMEHL, left their firms one after another when the Daewoo conglomerate broke up in Korea as a consequence of the Asian economic crisis, and some of them remained in Myanmar to start garment businesses, either independently or jointly with local private firms. According to Mr. S, who served as the president of Myanmar Daewoo from 1993 to 2000, around 10 ex-employees of Daewoo founded and actively manage garment firms, although the nominal owners are Myanmar nationals.[17] They account for around one third of 30 or so Korean-owned/related companies in this industry. These so-called "spin-out" Korean businesspersons and engineers bolstered the rapid growth of private firms in Myanmar. According to Mr. S, about 80 per cent of the private garment firms in Myanmar were managed by foreign firms or individuals in one way or another. These foreigners whose names do not appear on formal documents were called "sleeping partners."

Taiwanese buyers seeking to establish production bases in several counties to get around quota restrictions and wage increases in China also played an active role in providing market information and obtaining orders, particularly for products destined for the United States. Unlike foreign-affiliated firms that received orders from their parent firms, local Myanmar firms had to get orders on their own, and Taiwanese buyers served as intermediaries in taking orders. Instead of constructing factories by direct investment, Taiwanese firms or businesspersons found local private businesspeople to be their counterparts, providing management support by supplying funds, leasing equipment, sending engineers, placing orders and so on. The reason why they chose

[17] Interview with Mr. S (September 2005).

such a form of management is unclear. It could be that this management decision reflected the deteriorating business environment for foreign investment, or that this was a management method unique to the Taiwanese.[18]

The above discussion about the background factors of the garment industry boom in the late 1990s may be summarized as follows. The boom was created not only by external factors, such as the market (demand) and orders under the MFA regime, but also by internal factors such as changes in the business environment both at home and abroad, and the entrepreneurs' responses to such changes, which interacted in a complex way. Like many other "booms" with a bubble-like nature, the garment industry boom in Myanmar allowed participation of firms and business owners who otherwise would not have entered this industry. They were all destined to go through a difficult trial soon, though.

## 5 After the Feast

When the Congress of the United States was moving to enact legislation to ban the import of Myanmar products in 2001, buyers stopped purchasing made-in-Myanmar garments for the United States market. This situation, coupled with a fall in demand for imported clothing in the United States and the EU owing to the economic slowdown, brought a drastic change to the market environment of the Myanmar garment industry in late 2001.[19] However, other factors, such as taxation and tightening of regulations by the Myanmar government, also contributed to the recession that struck the Myanmar garment industry.

(1) Increased tax and tightened regulations

[18] There is no doubt that Taiwanese buyers were playing an important role in the garment industry in Myanmar. However, their actual state is little known. As mentioned before, they were sleeping partners who mostly stayed in the background, and the author could not interview them. They were not mere buyers who place orders but rather active players who operate and manage factories and firms. Tied with the local Chinese-Myanmar, they were doing business as if they were citizens of Myanmar. Clarification of the actual situation is a subject for future research.

[19] For the impact of the United States' sanctions on the Myanmar garment industry, see Kudo (2008).

Whenever an industry begins to earn foreign exchange, the Myanmar government, which suffers from foreign exchange shortages, always seeks to acquire a share in the profit of such an industry. In May 2001, by which time garment production had grown into a major foreign exchange earning industry, the government issued a notice requiring that the CMP processing charge be converted at the public foreign exchange center at the quasi-official exchange rate of 450 kyat/dollar. The rate of the parallel foreign exchange market at that time was around 700 kyat/dollar, and the difference between them was tantamount to a tax increase for garment firms. Then, in October 2003, the export tax was raised from 2 per cent to 10 per cent.[20] With this, the CMP processing charge was officially recognized as a source of foreign exchange earnings from exports.[21] However, this substantial tax increase immediately following the imposition of economic sanctions by the United States inflicted a heavy burden on garment firms.

The government also tightened regulations on the CMP businesses. As pointed out in the preceding section, some garment firms used the CMP system as a loophole for "imports." In August 2001, the government established a "CMP Business Supervising Committee" composed of relevant ministries and the MGMA, with the Ministry of Industry (1) functioning as the secretariat. All firms engaging in CMP business were required to register with the MIC. At the time, 66 firms were said not to have the MIC approval.[22] In order to win approval, firms had to follow the prescribed procedures, which involved burdensome paperwork. One of the firms the author visited said that it took two years from the application to approval. The government also strengthened regulations governing the activities of firms approved by the MIC. For example, in March 2003 it decided to limit the value of imports for CMP to US$300,000 per import. This limit was later raised to US$600,000 in the face of fierce objections from garment firms. Still, the underlying problem has not been addressed. As mentioned before, firms

[20] The "export tax" was introduced in January 1999. It consists of the commercial tax of 8% and the income tax of 2%. In practice, a uniform tax rate of 10% is applied regardless of export item or profit margin.
[21] Previously, the CMP charge was regarded as service income, and had some restrictions on importing goods.
[22] It seems that since 1998, registration as an entity with the MIC has been a requirement for doing CMP business. Therefore, most of these 66 firms may be the trading firms that entered the garment industry before that.

approved by the MIC are given some privileges that are not directly related to the production activities of garment firms, such as being allowed to import vehicles, but these privileges did not contribute to the smooth operation of garment factories. Behind the rapid decline of the garment industry, lay taxation and the tightening of regulations by the government.

(2) Difficulties that domestic private firms faced

As the market and the policy environment deteriorated, the garment firms faced fiercer competition to obtain orders, and some went bankrupt. In order to measure the degree of inequality of the garment industry, the author calculated the Gini coefficient based on export data for individual companies.[23] The Gini coefficient for 313 firms with export records was 0.75 for FY2000 at the height of the garment industry boom. In FY2004, when the United States economic sanctions were in force, the Gini coefficient for 147 firms with export records declined to 0.60. A lower Gini coefficient generally indicates a more equal distribution. However, the decline of the Gini coefficient came about because micro and small-scale firms fell by the wayside. The number of firms with exports valued at US$10,000 or less decreased from 41 in FY2000 to 9 in FY2004. The apparent equalization in the industry indicated by the lower Gini coefficient was caused by the collapse of micro and small-scale firms, most of which entered the garment industry in the boom period.

At the same time, an increasing concentration of production and exports by top enterprises was in progress. While the top five firms accounted for 15 per cent of total exports in FY2000, their share was 20 per cent in FY2004. A similar trend can be observed in the change in the number of firms by size (number of workers). According to **Table 5**, there were 11 large-scale firms with more than 1,000 employees in both FY2003 and FY2004, but the number of medium-sized firms with 501 to 1,000 employees decreased substantially after the United States imposed the economic sanctions, falling from 22 in FY2003 to 15 in FY2004. Small-sized firms with 100 employees or less increased from 38 in FY2003 to 51 in FY2004, in part because

[23] Unlike **Table 2**, all of the firms with garment export records are covered.

medium-sized factories had downsized.[24]

Domestic private firms seem to be experiencing greater difficulties than foreign-affiliated firms. While the latter have maintained almost the same number of employees, domestic private firms have been forced to reduce their workforces. This is also confirmed by changes in shares of exports. According to **Table 2**, the share of wholly foreign-owned firms increased since 2002 when the period of stagnation began. Amid the increasingly difficult market conditions, private domestic firms with insufficient financial capacity and access to the market struggled to survive, while foreign-affiliated firms took advantage of being able to secure orders from parent firms, and benefitted from their marketing capabilities in foreign markets. In the deteriorating market environment, a growing number of Myanmar firms that had entered the garment industry riding on the boom could not survive the competition and disappeared.

## 6 Industrial Competitiveness

This section includes an assessment of the competitiveness of the garment industry in Myanmar. Advantages and disadvantages that garment firms and factories enjoy and suffer in Myanmar will be identified. This section also compare each item of production costs in Myanmar with that in other countries including Cambodia, whenever data is available.

(1) Production Costs

a. Set-Up Costs

The garment industry is suitable for less developed countries because it requires a relatively small amount of initial investment, specifically in sewing machines. One entrepreneur in September 2005[25] indicated that leather shoe factories, which are also

[24] Note again that the SGIM covers only those firms that were operating as of the time of the survey during June to September 2005. As Kudo [2005: 48] pointed out, micro- and small-sized firms were the first to disappear under the impact of the United States' economic sanctions. Since this survey does not cover those micro- and small-sized firms that had already gone out of business at the time of survey, the result does not correctly reflect the decrease in the number of micro- and small-sized firms included in the company-wise export data.

[25] The entrepreneur was interviewed by the author. He had long business experience in both the

quite labor-intensive, generally require four times the initial investment of garment factories, given the same number of workers.

This is of course good for Myanmar where domestic entrepreneurs face severe financial constraints and full-fledged foreign investment has not yet come. According to the SGIM (2005), the average ratio of equity to debt for 142 garment firms as of December 2004 was a surprisingly high 98 percent. This implies that they were mostly self-financed. There were only eight firms among the 142 that received bank loans. With very limited access to financial resources, Myanmar firms can only establish businesses that require little investment. Too, there have been few foreign investments in the garment industry in Myanmar. As of March 2005, there were 45 out of 142 garment firms (32 percent) that had foreign equity (Kudo [2008:1004]). Of these, 31 were wholly owned by foreign entities, nine were joint ventures with military-related firms, and five were joint ventures with private firms. A majority of garment firms in Myanmar had domestic investments. Garment firms in Cambodia face comparatively fewer financial constraints since a majority of them have foreign investments.[26]

b. Business Operation Costs

As in other developing economies, most garment industries in Myanmar operate on the basis of cutting, making, and packing (CMP) arrangements. Overseas buyers do everything but production; they find customers, design clothes with detailed specifications, and procure and supply raw materials to apparel factories in Myanmar. These factories do the cutting, sewing, and packing only. They then re-export all products to overseas markets (Kudo [2009:79]). The business operation of garment factories with CMP arrangements thus includes production costs only, and these consist of items such as wages, electricity and diesel, transportation, communication, factory and office rental, maintenance and repair of sewing machines, and administrative expenses.

Wages of workers naturally dominate the operation costs of garment factories.

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garment and footwear industries in Myanmar.

[26] As of 2006, there were 295 member firms in the Garment Manufacturers Association in Cambodia (GMAC). Of these, 80 had investments from China, 78 from Taiwan, 40-50 from Hong Kong and Macao, and only three or four had Cambodian domestic investments (JCFA[2007:36]).

This is why the garment industry has shifted to countries where wages are lower. The average wage of Myanmar workers is very low, even when compared to those in Cambodia. Thus, garment factories can reduce labor costs by relocating to Myanmar.

However, factories must pay more for electricity and diesel. Electricity in Myanmar is by far the poorest of infrastructural services. According to the aforementioned Garment Survey of 2005, the shortage and unreliability of the electricity supply has been seen as a severe obstacle for garment production (**Table 6**). In the same survey, 69 out of 139 respondents answered that they had experienced power interruptions more than three times a day, and these had often lasted more than three hours. As a consequence, 134 out of 141 respondents used or shared their own generators.

The electricity supply has not improved much since that time. In the ERIA-CLMV Survey of 2008,[27] firms were asked to rate infrastructure services using a five point scale where 1 means "very poor" and 5 means "excellent." The average rating of electricity in Myanmar was considerably lower than that in Cambodia (**Table 7**). However, firms in each country answered the questionnaire independently, and most may not have known situations in other countries. Nevertheless, the average rating of electricity in Myanmar was significantly lower than the average rating of other infrastructure services in this country. Thus, the poor electricity supply can be identified as one of the most serious obstacles for manufacturers in Myanmar.

One garment factory interviewed in April 2008 is 100 percent foreign-owned (Hong Kong) and has 1,050 workers. At that time, wages were US $40,000 (US $38 per capita) per month, but electricity costs were US $7,000 per month. Diesel for running a generator when the factory had power failures was US $4,000 per month. As a result, expenses for electricity and diesel were about 30 percent of the labor costs in this factory. The electricity supply of this particular factory was better than that of other private factories because it was located in a plot of land leased from the Ministry of

[27] A survey was conducted by the ERIA-CLMV study team in November-December, 2008 to assess the business and investment environment in Cambodia, Lao PDR, Myanmar, and Vietnam. Sixty firms were surveyed in Myanmar. Of these, 30 were located in Yangon, 20 in Mandalay, and 10 in Myeik. Ten firms were garment industries; nine of these were located in Yangon and one in Mandalay. There were 76 firms surveyed in Cambodia; 62 of these were in Phnom Penh.

Industry (1)[28]. A nearby garment factory suffered a much more severe shortage of electricity. They experienced a three-hour blackout each day during the rainy season and had only three-hours of electricity each day during the dry season.

Another example is a Myanmar domestic garment factory with 415 workers. Wages were US $18,400 (US $44 per capita) per month. Electricity was US $960, and the cost for diesel was US $6,100. The total of these costs was equivalent to 38 percent of the labor costs. This may represent a more general and prevalent situation than does the first case because this factory was located in an industrial zone along with many other similar garment factories. According to the Garment Survey of 2005, the ratio of electricity and diesel costs to wages was 39 percent. Thus, expenses for electricity and diesel easily outweigh any reduction in production costs that result from the inexpensive wages paid to Myanmar workers.

c. Service Link Costs

By relocating to Myanmar, garment factories must pay additional service link costs that include transportation and communication. Due to underdevelopment of upstream and supporting industries, garment factories in Myanmar must generally import all raw materials and auxiliary items with the probable exception of carton boxes and plastic bags. After sewing and assembling, all products are again exported to overseas markets. International buyers placing orders to garment factories in Myanmar by CMP arrangements must bear these transportation costs. A negative aspect for them is that transportation fees to ship cargo to and from Yangon are more than other major cities in neighboring countries.

**Table 8** shows freight charges for vessels shipping from Yangon Port in Myanmar, Leam Chabang Port in Thailand, and Singapore Port. Freight charges for outgoing vessels from Yangon Port are more expensive than other major ports such as Bangkok/Leam Chabang. According to the author's interviews, if a garment firm in Yangon shipped one 20-foot container to Tokyo/Yokohama in March of 2008, it cost US

[28] There are two Ministries of Industry. One is primarily in charge of light industries such as those manufacturing consumer goods. The other is in charge of heavy industries such as those manufacturing capital goods.

$1,300 and took about 20 days.[29] Conversely, it cost US $1,340 to transport a 40-foot container from Leam Chabang Port to Tokyo/Yokohama Port and took eight to nine days. This is due to economies of scale in transportation, and Leam Chabang Port has a much larger number of calling vessels. World Bank [2009:172] reports that its costs about US $400 to ship a container to the United States from China, about US $800 to ship from India, and US $1,300 to ship from Sierra Leone. China's enormous trade is a major reason for low transport costs, and these falling transport costs have encouraged countries to move production to China. Leam Chabang Port also provides more reliable transport and handling services than does Yangon Port.

Freight charges for outbound vessels from Yangon Port fluctuated widely between March 2007 and March 2008. This was a seasonal factor. According to a freight forwarder in Yangon, about two thirds of Myanmar's exports from Yangon Port in 2007 were agricultural produce such as beans, pulses, and rice; most of the remaining exports were garments. As agricultural produce exports peak between February and May after harvesting, freight charges for outbound vessels tend to increase.

In addition to this seasonal factor, a wide fluctuation of freight charges also result from the small number of vessels calling at Yangon Port. The volume of container handling of all ports in Myanmar (including Yangon, Sittway, and Mawlamyine) was only 165,384 TEU[30] in FY 2005[31]. Leam Chabang Port alone handled 3.76 million TEU containers.[32] Only small vessels call at Yangon Port and are moving cargo to Singapore Port, Port Klang, or Bangkok/Laem Chanbang Port. At these ports, shipments are aggregated into much larger and faster ships for longer hauls. There are only five liners at Yangon Port. These include Myanmar Five Star (a national flag carrier) and four foreign liners. The capacity of calling vessels is small due to the shallow depth of the river which is about 400 TEU in the rainy season and 300 TEU in the dry season. There are few vessels calling at Yangon Port. A sharp increase of freight charges in March

[29] The author interviewed a manager of a freight forwarder in Yangon on April 30, 2008.
[30] TEU stands for "20-foot equivalent units," which is the measure of a box 20 feet long and 8 feet wide with a maximum gross mass of 24 metric tons (WB [2009:178]).
[31] FY stands for "fiscal year," a year starting from April and ending in March.
[32] The figure for Myanmar comes from the Myanmar Port Authority; the one for Laem Chabang is from Ootaka [2007:57].

2008 resulted when some liners were stopped from calling at Yangon Port.[33] Around this time, exporters from Myanmar had to make a booking for cargo space on a vessel at least ten days before its departure. It is thus obvious that garment firms located in Bangkok and its suburbs have an advantage in logistics over those in Yangon and its suburbs.

Communication services are also poor in Myanmar. **Table 9** shows access to telephone, mobile phones, and the internet in CLMV, Bangladesh, and China. As of 2005, Myanmar had by far the lowest values in all indicators. What is worse, perhaps, is that the gap between Myanmar and others grew wider following 2000. Myanmar fell behind those countries that vigorously invested in their telecommunication infrastructure in the last five years.

Reasons for such failure include the Myanmar governmental restrictions as well as a government monopoly on the provision of telecommunication services. The Myanmar Post and Telecommunication Enterprise (MPT) is a state-owned enterprise (SEE) that falls under the jurisdiction of the Ministry of Communications, Posts, and Telegraphs. It monopolizes telephone services, and services provided are notorious for frequent disconnection, lengthy waiting time for connection, and high prices in the parallel market (Kudo [2009:94-95]). Mobile phones are scarce and only for privileged customers. Mobile phones are occasionally sold to specially designated groups such as military cadres and those of high ranking government officials. Mobile phones are then sold in the parallel market where actual customers have to pay extravagant prices.[34]

Other than the MPT, the government has allowed only one quasi-private company to enter the market of internet providers. Internet accessibility in Myanmar lags far behind Cambodia, Lao PDR, and Bangladesh. The “internet café” is still a phenomenon found only in major cities, and internet access through personal computers at home is beyond the means of a majority of the population. The Myanmar government is aware that participation of the private sector would significantly improve telecommunication services, but officials have been cautious about liberalizing and

[33] Based on the author’s interview with the Myanmar International Freight Forwarders Association (MIFFA) on February 20, 2009.

[34] A mobile phone traded at about US $2,000 in the parallel market in 2008. This is why the first launch of pre-paid mobile phones of US $10 and $20 SIM cards in December 2008 had become fanatic news in Myanmar. People made haste in purchasing them.

privatizing this sector because of their concern about security. Even fax machines must be registered with authorities in this country. The Myanmar government has and will sacrifice better telephone and internet connections in order to control information.

Institutional service link costs are also high in Myanmar. Garment firms in Yangon must apply for export and import licenses for every transaction. To do so they must go as far as Naypyidaw, the new capital located about 300 kilometers north of Yangon. It usually takes about two to three weeks to obtain an export or import license because the Trade Policy Council, a higher authority above related ministries, must give sanction to each case.[35] Cargo is often kept at port for a long time in order to receive inspection and customs clearances. This makes lead time for garment production in Yangon longer and prohibits sewing seasonal and fashion apparel items which require quick response.

(2) Location Advantages

a. Labor

One of the most obvious location advantages of Myanmar is the availability of abundant, cheap, and relatively well-educated labor. The working-age population (15-59 years of age) increased from 20.6 million (56 percent of the total population) in FY 1985 to 32.7 million (59 percent of the total) in FY 2005 (CSO [2006:15-19]). It is reasonable to believe that there are a large number of un-employed and under-employed workers in the labor markets of Myanmar, especially in rural areas. Fujita [2009:250] has estimated that agricultural labor households with no tillage right of land constituted 20-40 percent of households in rural Myanmar. He also indicates that their real wage rate in rice terms (rice wage) has declined to 50-60 percent during the last two to three decades (Fujita [2009:260]). This part of the population could be mobilized to become garment workers once industrialization and urbanization is accelerated.

According to the aforementioned ERIA-CLMV Survey of 2008, the average monthly wage of general workers in Yangon is US $35 (**Table 10**). The average monthly wage of general workers in Phnom Penh was found to be US $80. Average wages of Myanmar workers were lower than the Cambodian minimum wage of US $50

[35] This is based on the author's interview with a manager of freight forwarder in Yangon on April 30, 2008.

for garment and footwear workers in Phnom Penh. In addition to unskilled labor, the salaries of middle management and engineers in Myanmar were found to be lower than in Cambodia, even though the quality and qualification of those human resources were unknown and may not be exactly comparable.

Myanmar people are relatively well-educated, and the literacy rate is considerably higher than that of Cambodia, Lao PDR, and Bangladesh (**Table 11**). The literacy rate for women is equally high in Myanmar. This is good for the garment industry in Myanmar since women constitute a majority of the labor force in this sector. School enrollment rates in primary, secondary, and tertiary education also appear better than the other three countries.

According to the ERIA-CLMV Survey of 2008, the education level of Myanmar general workers is significantly higher than that of Cambodia (**Table 12**). Most workers in Myanmar have formal schooling, but about 20 percent of Cambodian workers have none. Nearly a half of Myanmar workers have received a middle-high school education, but only about 30 percent of Cambodian workers have received this level. About ten percent of Myanmar workers have received college and/or university level education, but there were virtually no Cambodian workers who have received such education.

Education level may be considered a representation of human capital. All else being equal, the labor productivity of workers in Myanmar thus seems higher than that of Cambodian workers. Compared to that of Myanmar, the garment industry in Cambodia has been rapidly growing and has kept its competitiveness in the United States and EU markets in spite of its relatively poor human capital. However, the garment industry in Myanmar should have a good opportunity to compete in global markets and also to grow once other obstacles are removed.

There are also emerging challenges that may erode advantages discussed above. One is the rapid increase of worker wages in Myanmar. The average monthly wage of sewing-machine-operators in Myanmar was about US $20 between late 2000 and mid-2005 (Kudo [2008:1014]).[36] From mid-2005, Myanmar garment worker wages

[36] In general, international buyers of garment products pay more attention to wages denominated in US dollars than to those denominated in local currencies. They also compare US dollar-denominated wages with other potential production sites. In this research, the author

were denominated in US dollars and had almost doubled by April 2008. According to interviews with eight garment firms in Yangon in April 2008,[37] average monthly wages were US $38 and ranged from US $32 to US $43. Such wage estimates have also been supported by data from the ERIA-CLMV Survey of 2008 (**Table 10**).

Actually, real wages of garment workers in Myanmar decreased during this period. From June 2005 to April 2008, inflation was comparatively high, and the consumer price index (CPI) increased 2.0 times. However, wages of garment workers were denominated in kyats and increased only 1.7 times.[38] Thus, the rise of garment worker wages lagged behind inflation.

A sharp appreciation of the real exchange rate of the kyat appears to have been responsible for the sharp rise in garment worker wages in US dollar terms. Exchange rates for the kyat were relatively stable for the period. The yearly average exchange rates of the kyat in unofficial parallel exchange markets were 1,049 kyats per US dollar in 2005, 1,251 kyats per US dollar in 2006, 1,299 kyats per US dollar in 2007, and 1,195 kyats per US dollar in 2008. Since inflation rates were high throughout the period, the real exchange rate of the kyat increased from 983 kyats per US dollar in June 2005 (base period) to 557 kyats per US dollar in April 2008.[39] Kubo [2007] attributed such sharp appreciation of the kyat to an improved balance of payment (BOP) mainly due to large exports of natural gas to Thailand.[40] Whatever the reasons, a sharp rise in worker wages in US dollars can weaken competitiveness of the garment industry unless it is accompanied by improved productivity. However, there is no evidence to indicate a rise in the productivity of this industry.

Another challenge that may erode advantages discussed earlier is the occasional shortage of a local labor force in Yangon despite a nation-wide surplus of

converted Myanmar worker wages in kyats into US dollars using parallel exchange rates.

[37] See Kudo ed. [2008] for detailed interviews.

[38] Average wages of garment workers in Myanmar were 33,600 kyats (equivalent to US $38 as converted by the parallel exchange rate) in April 2008, and they were 20,000 kyats (equivalent to US $20) in mid-2005.

[39] Real exchange rates should be calculated from differences in inflation rates between Myanmar and the United States. However, the inflation rate in Myanmar has been much higher than that in the United States. The author assumed a zero inflation rate in the United States for convenience of calculation in this research.

[40] It has been argued that such an appreciation of the kyat is a symptom of Dutch Disease. However, Kubo [2007] has opposed this proposition.

labor. There are two possible factors responsible for such shortages. One is the loss of garment workers to rural areas in Myanmar or to foreign countries. Due to the increased living cost in Yangon and a slow rise in wages, many garment workers quit their jobs and go back to hometowns and villages or go abroad to seek jobs with higher wages. The garment industry in Yangon has failed to mobilize a large scale labor force from nation-wide labor markets and rural areas in particular. This is due to the low wages they can offer. Many garment workers, particularly ones with experience, appear to have gone to Mae Sot, a Thai border town where many garment factories have congregated (Kudo and Kuroiwa [2009 forthcoming]). Unless the garment industry in Myanmar increases its productivity and wages paid to workers, it will continue to lose workers to foreign countries and may thus face sporadic and localized labor shortages amid prevalent un-employment and under-employment in the national labor market.

A third challenge involves the high labor turnover in the garment industry. High labor turnover can be an obstacle for workers who want to gain knowledge and acquire skills. The ERIA-CLMV Survey of 2008 showed that the average rating of ten garment firms in Myanmar regarding labor turnover was lower than that of the total sixty firms surveyed (**Table 13**). Compared to other industries, garment firms also had difficulty recruiting workers. This indicates that it had become difficult to retain workers in the garment industry. All three of these challenges may eventually erode the primary location advantage of Myanmar, the availability of an abundant, cheap, and well-educated labor force.

b. LDC Privileges

Special and preferential treatment of exports from LDCs makes a difference in success. For example, the African Growth and Opportunity Act (AGOA) offers preferential access to United States markets for imports from Sub-Saharan African countries and helps to create urban-based manufacturing employment in beneficiary countries (Sachs [2005:195]). However, since 1997, Myanmar's exports have been deprived the status that can be enjoyed under the EU generalized system of preferences (GSP). Further, since 2003, the United States has banned all imports from Myanmar. The Myanmar military government is under these western trade sanctions because of its poor human rights record and delayed democratization.

Myanmar's garment exports still enjoy tariff exemptions from Japan. Japan offers a scheme of special preferential treatment for LDCs. For example, while China and Vietnam have to bear a 7.4 to 10.0 percent tariff on woven shirts and blouses, Myanmar along with other LDCs such as Cambodia, Lao PDR, and Bangladesh does not have to pay such tariffs as long as it meets the requirement of "rule of origin". The tariff exemption has promoted garment exports to Japan from Myanmar. Japan was the largest market for such exports in 2008 and occupied about one third of total garment exports from Myanmar. Japan's tariff exemption on imports from Myanmar is an obvious location advantage of Myanmar.[41]

c. FDI Incentives

Myanmar's Foreign Investment Law (FIL) was created in 1988 and offers foreign investors various privileges. FIL permits 100 percent ownership by foreign companies and allows joint ventures with SEEs or private firms. For joint ventures, the foreign capital must be at least 35 percent of total capital. A build-operate-transfer (BOT) scheme is applicable for hotel and real estate projects, and production sharing contracts are allowed for extractive industries (including the exploitation of natural gas) (Thandar Khine [2008:22-23]). With the exception of twelve sectors reserved for SEEs only, all economic activities are open to foreign investment.[42] However, foreign investors may also enter these restricted sectors with approval of the Myanmar government. The FIL also provides various benefits such as exemption from the three-year income tax, allowance of accelerated depreciation, and exemption (or relief) from customs duty and other internal taxes such as those on machinery, equipment, and spare parts. The FIL is liberal and comparable to laws of advanced ASEAN members.

In reality, however, there are many disadvantages for foreign investment in Myanmar. The Myanmar Investment Commission (MIC) requires a minimum capital

[41] Firms in Myanmar must pay a ten percent tax on exports. This can easily offset the benefits derived from Japan's special preferential treatment.

[42] The State-owned Enterprises Law of 1989 stipulates the twelve sectors that are reserved for SEEs only. These include extraction of teak, petroleum, natural gas, pearls, jade and precious stones, postal and telecommunication services, generation of electricity, broadcasting and television services, and manufacture of products related to security and defense.

investment of US $500,000 for any manufacturing firm.[43] Such an amount is often more than labor-intensive garment firms can afford. It is generally believed that the minimum capital for foreign investment is set by the FIL and other documents. However, none include a clause that explicitly stipulates the amount.

There are many discrepancies between written clauses and actual practices in FDI. Chapter III of the FIL gives foreign investors the right to transfer foreign currency abroad. However, in actuality it is difficult to get permission to transfer profits abroad (JBCTIF [2008:183]). Issuance of import licenses for machinery, spare parts, and automobiles is arbitrary, limited, and often delayed. Foreign capital brought into Myanmar is converted to kyats with an official exchange rate of about six kyats per US dollar. This is grossly overvalued compared to the unofficial parallel exchange rate which is about 1,200 kyat per US dollar. In joint ventures, foreign partners that bring foreign capital must bear an inequitable burden.

Attractive incentives for foreign investment are written on paper. However, actual practices are poor and incompatible with stipulated clauses. It is widely believed that there are many foreign firms disguised as Myanmar indigenous entities. Such foreign firms are called “sleeping partners;” they do not appear in any official documents. They enjoy the legal status of being indigenous entities and avoid explicit and implicit disadvantages that accompany being a foreign entity. This may be a reason for the dominance of indigenous firms in Myanmar’s garment industry. Conversely, foreign firms dominate the garment industry in Cambodia where they enjoy actual benefits from government incentives on FDI.

Location advantages of Myanmar include: (1) the availability of abundant, cheap, and relatively well-educated labor, (2) preferential treatment for “Made-in-Myanmar” product exports offered in Japan, and (3) FDI incentives provided by the host government. However, garment firms must pay set-up costs and additional operating costs for such things as expensive utilities and transportation fees. Further, garment firms that have relocated to Myanmar suffer from an unreliable electricity supply, poor telephone, fax, internet and e-mail connections, rough road conditions, a small capacity for and an infrequent number of vessels calling at Yangon Port, and

[43] A minimum capital investment of US $300,000 is required for foreign investors in the service sector.

cumbersome and time consuming administrative procedures. Thus, there are both advantages and disadvantages for garment firms that relocate to Myanmar. Firms make the decision to locate or not locate based on a calculation of costs and benefits.

The simple way to attract more garment firms to Myanmar is to enhance location advantages and reduce disadvantages for potential investors, either foreign or domestic. However, implementation of such is anything but simple. The most important location advantage of Myanmar is the availability of cheap labor. However, it is difficult for the government to manipulate worker wages by policy intervention. Wages are principally determined by market forces, and the government has little leeway to intervene in labor markets and change wages. The government may try to restrain wages by prohibiting or restricting workers from organizing labor unions. However, such policy intervention can be short-lived, and market-driven wages may prevail in the long term. The real exchange rate of the kyat will decide the internationally comparable level of wages for workers in Myanmar. The Myanmar government is powerless to control the real exchange rate.[44]

However, the Myanmar government can reduce costs such as those for set-up, operations, and service links. It can improve infrastructure services by instituting better public policy and promoting more public investment. The electricity supply should be the first priority. A sufficient and reliable electricity supply is necessary for the garment industry and other manufacturing sectors as well.

The rehabilitation and improvement of Yangon Port is critically important for reducing transport costs and time. Transport services tend to enjoy economies of scale, so the Myanmar government should attract more business establishments and plants (foreign and domestic) to Yangon. As demand for transport services increases, agglomerated firms will enjoy better transport services with cheaper prices and more frequency. This will enhance the competitiveness of firms located in Yangon and will eventually attract more firms to that area. Thus, a virtuous cycle starts to evolve. Yangon should determine how to get rapid, frequent, cheaper, and more reliable access to

[44] The Myanmar government may be able to constrain the inflation rate by instituting a more disciplined fiscal and monetary policy, and this may eventually depreciate the real exchange rate of the kyat. Assessment of such fiscal and monetary policy is beyond the scope of this paper. See Kubo [2007] for further discussion.

Singapore Port. This port is a major Asian hub from which "Made-in-Myanmar" products can be exported to global markets. Providing better feeder services from Yangon to Singapore should have a priority over construction of a new deep sea port located somewhere along the Myanmar coast. Such an investment in construction will be too big a burden for national finance and may result in failure due to shortage of cargo.

Institutional service link costs should also be reduced. There are many inefficient, unpredictable, and lengthy administrative procedures related to such matters as exports and imports, foreign investments, exchange rates, remittance of foreign currency, and visas for foreigners.[45] Along with the poor transport infrastructure, such administrative inefficiency makes it difficult for garment firms in Myanmar to produce seasonal and fashionable clothes with shorter product cycles.

## 7 Concluding remarks

Myanmar is a country suitable for labor-intensive industries, including the garment industry, and it can attract more firms from among the advanced ASEAN members and China, where workers' wages have risen. However, the wage gap alone is not wide enough to attract firms to Myanmar. For example, wage differences between garment workers in Ho Chi Minh, Vietnam, and those in Yangon, Myanmar, were about twofold around August 2011. This appears to be quite wide in terms of workers' living standards, but it is not wide enough for garment firms in Vietnam to relocate to Myanmar, considering the Myanmar workers' lower productivity, Myanmar's higher utilities costs and longer lead time for delivery. Myanmar obviously has low wages; however, location advantages derived from labor costs can easily be offset by other disadvantages such as electricity shortages, transport costs, communication costs, administrative red tape and lack of skilled labor and supporting business services.

To date, the garment industry in Myanmar has grown through the efforts of the private sector without much government support. However, such growth has a limit, and

[45] See JBCTIF [2008:182-189] for details.

reductions in production costs (other than those for labor) have become more important for maintaining the competitiveness of the garment industry in Myanmar. Here, the government must play a larger role. It must carefully examine the obstacles and bottlenecks facing garment firms in Myanmar and launch a comprehensive and consistent program to overcome them. Garment manufacturing will then be an activity that leads the Myanmar economy in its further climb up the industrial ladder.

# References

**English**


Fujita, Koichi [2009] "Agricultural Laborers in Myanmar during the Economic Transition: Views from the Study of Selected Villages," in Koichi Fujita, Fumiharu Mieno, and Ikuko Okamoto eds., *The Economic Transition in Myanmar after 1988: Market Economy versus State Control*, Kyoto CSEAS Series on Asian Studies 1, Center for Southeast Asian Studies: Singapore, NUS Press, pp. 246-280.

Kimura, Fukunari [2008] "The Mechanics of Production Networks in Southeast Asia: The Fragmentation Theory Approach," in Ikuo Kuroiwa and Toh Mun Heng eds. *Production Networks and Industrial Clusters: Integrating Economies in Southeast Asia*, Singapore: IDE-JETRO and ISEAS, pp.33-53.

Kubo, Koji [2007] "Determinants of Parallel Exchange Rate in Myanmar", *ASEAN Economic Bulletin*, Vol.24, No.3, December 2007, pp.289-304.

Kudo, Toshihiro [2008] "The Impact of United States Sanctions on Garment Industry in Myanmar," *Asian Survey*, Vol.XLVIII, No.6, November/December 2008, pp.997-1017.

---------- [2009] "Industrial Policies and the Development of Myanmar's Industrial Sector," in Koichi Fujita, Fumiharu Mieno, and Ikuko Okamoto eds., *The Economic Transition in Myanmar after 1988: Market Economy versus State Control*, Kyoto CSEAS Series on Asian Studies 1, Center for Southeast Asian Studies: Singapore, NUS Press, pp. 66-102.

Kudo, Toshihiro and Kuroiwa, Ikuo [2009 forthccoming] “Border Industry in Myanmar: Plugging into Production Networks through Border Industry,” in Ikuo Kuroiwa ed., *Plugging into Production Networks: Industrialization Strategy in Less Developed Southeast Asian Countries*, Singapore: Institute of Southeast Asian Studies (ISEAS).

Moe Kyaw [2001] “Textile and Garment Industry: Emerging Export Industry,” in Toshihiro Kudo ed. *Industrial Development in Myanmar: Prospects and Challenges,* ASEDP No.60, Chiba: Institute of Developing Economies, JETRO.

Nishikimi, Koji [2008] "Specialization and Agglomeration Forces of Economic Integration," in Masahisa Fujita, Satoru Kumagai, and Koji Nishikimi eds., *Economic Integration in East Asia: Perspectives from Spatial and Neoclassical Economics*, Cheltenham, UK: Edward Elgar, pp.43-73.

Sachs, D. Jeffrey [2005] *The End of Poverty: Economic Possibilities for Our Time*, New York: The Penguin Press.

Thandar Khine [2008] “Foreign Direct Investment Relations between Myanmar and ASEAN,” IDE Discussion Paper Series No.149, Institute of Developing Economies, JETRO, available at http://www.ide.go.jp/English/index4.html.

World Bank [2009] *World Development Report 2009: Reshaping Economic Geography*, Washington D.C.: World Bank.

**Japanese**

大高俊記[2007]「東アジアの海運と港湾インフラ」（池上寛・大西康雄編『東アジア物流新時代：グローバル化への対応と課題』アジ研選書 No.8、アジア経済研究所、51～70 ページ）。

Otaka, Toshiki [2007] “Marine Transport and Port Infrastructure in East Asia,” in Hiroshi Ikegami and Yasuo Onishi eds, The *New Age of East Asia’s Logistics: Responses and Challenges for Globalization*, IDE Selection No.8, Chiba: Institute of Developing Economies, JETRO, pp.51-70.

工藤年博編[2008]『ミャンマーにおける縫製産業の現状と発展可能性―日本市場への参入を中心として―』貿易研修センター、メコン総合研究所。

Kudo, Toshihiro ed. [2008] *Growth Potential of the Garment Industry in Myanmar: How to Penetrate into Japan's Market*, Institute for International Studies and Training (IIST) and Greater Mekong Initiative (GMI).

ジェトロ[2008]『ASEAN 物流ネットワーク・マップ 2008』ジェトロ（日本貿易振興機構）。

JETRO [2008] *ASEAN Logistics Network Map 2008*, JETRO.

日本化学繊維協会[2007]『繊維産業におけるチャイナプラスワン調査報告書』2007 年 7 月。

Japan Chemical Fibers Association (JCFA), *China+1 Strategy in the Textile Industry*, July 2007.

貿易・投資円滑化ビジネス協議会[2008]『2008 年版各国・地域の貿易・投資上の問題点と要望』日本機械輸出組合、2008 年 5 月。

Japan Business Council for Trade and Investment Facilitation (JBCTIF), *Issues and Requests Relating to Foreign Trade and Investment in 2008*, Japan Machinery Center for Trade and Investment, May, 2008.

**Statistics**

Central Statistical Organization (CSO), *Statistical Yearbook* 2006.

UN Comtrade, available at http://comtrade.un.org/db/default.aspx.

UNFPA [2007] *State of the World Population Report, 2007*.

World Bank [2008] *World Development Indicators 2008*, CD-R, Washington D.C.: World Bank.

Figure 1 Myanmar's garment exports

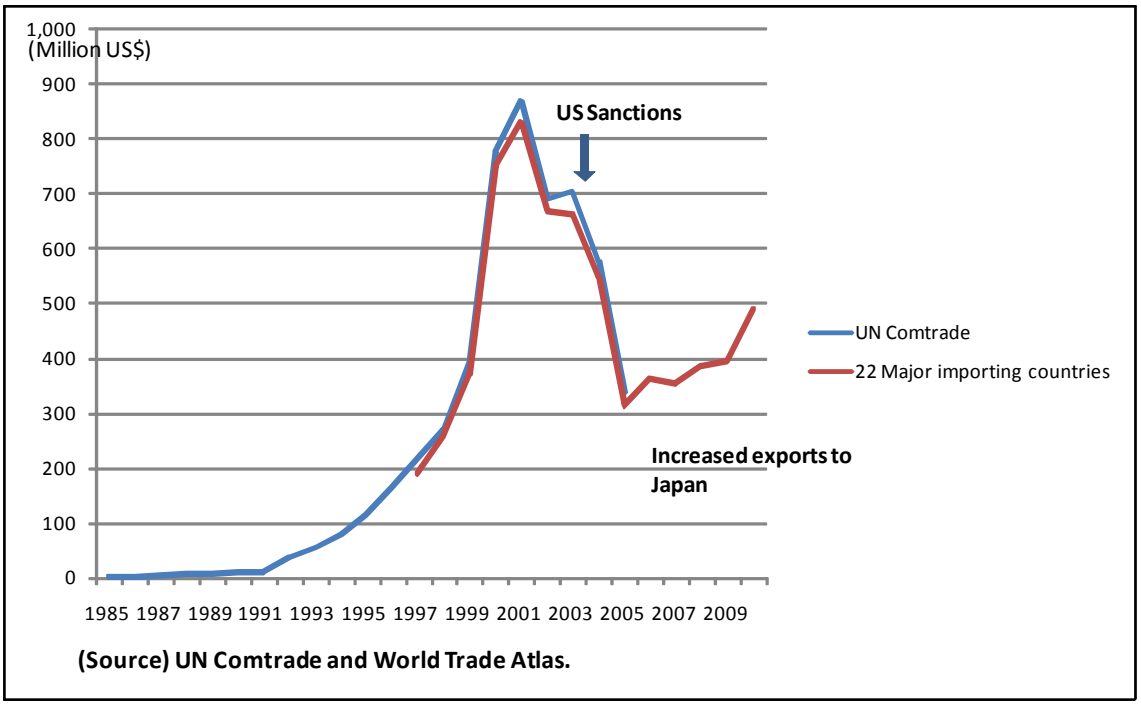

Table 1 Myanmar's garment export share by country

(%)

| | 1997 | 2000 | 2003 | 2004 | 2005 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|
| United States | 44.9 | 54.1 | 35.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| EU (15 countries) | 49.6 | 37.0 | 51.4 | 83.5 | 75.8 | 44.2 | 35.7 |
| Japan | 0.6 | 0.6 | 4.9 | 8.2 | 16.8 | 37.8 | 37.5 |
| South Korea | 0.0 | 0.1 | 0.8 | 1.1 | 2.4 | 13.7 | 25.3 |
| Others | 0.8 | 0.3 | 0.0 | 0.1 | 0.1 | 2.6 | 0.6 |
| Total (22 major imp | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Growth (%) | – | 102.0 | −1.0 | −17.2 | −42.9 | 2.5 | 24.1 |

(Note) The figures include both HS61(knit apparel) and HS62 (woven apparel).

(Source) World Trade Atlas.

Table 2 Number of garment firms with export records (up to FY2004)

| FY | State-owned Enterprises | Foreign JVs | | 100% Foreign Firms | Domestic Private Firms | Total |
|---|---|---|---|---|---|---|
| | | with MTI/UMEH | with Private Firms | | | |
| 1993 | 1 | 6 | 0 | 0 | 5 | 12 |
| 1994 | 1 | 8 | 1 | 0 | 15 | 25 |
| 1995 | 1 | 9 | 1 | 4 | 28 | 43 |
| 1996 | 1 | 9 | 1 | 5 | 55 | 71 |
| 1997 | 1 | 9 | 1 | 6 | 77 | 94 |
| 1998 | 0 | 8 | 2 | 9 | 213 | 232 |
| 1999 | 0 | 8 | 3 | 10 | 270 | 291 |
| 2000 | 1 | 7 | 5 | 18 | 248 | 279 |
| 2001 | 1 | 7 | 5 | 23 | 194 | 230 |
| 2002 | 0 | 6 | 4 | 27 | 180 | 217 |
| 2003 | 0 | 6 | 4 | 27 | 165 | 202 |
| 2004 | 0 | 4 | 4 | 22 | 112 | 142 |

(Note) Excluding non-garment firms and firms that exported US$10,000 and less in accumulation from FY 1993 and FY 2004.

(Source) The Author.

Table 3 Brief history of the garment industry in Myanmar

| Period | Major Players | Policy Environment | Export Destination | Global Economic Environment | Export by Type of Firm |
|---|---|---|---|---|---|
| 1)<br>Pioneer Period<br>(1990–3) | JVs between state-owned and military-related enterprises and Korean and Hong Kong firms | Virtual prohibition of 100% foreign ownership;<br>Monopoly of quotas by state-owned and military-related enterprises | United States 65%<br>EU 10%<br>Others 25% | MFA regime;<br>No sanctions by United States and EU | State-owned and military-related JVs 95%<br>100% foreign owned 0%<br>Domestic private 5% |
| 2)<br>Steady Growth Period<br>(1994–7) | JVs between state-owned and military-related enterprises and Korean and Hong Kong firms;<br>100% foreign-owned firms | Monopoly of quotas by state-owned and military-related enterprises;<br>Lifting of prohibition on 100% foreign ownership | United States 55%<br>EU 30%<br>Others 15% | MFA regime;<br>No sanctions by United States and EU | State-owned and military-related JVs 90%<br>100% foreign-owned 5%<br>Domestic private 5% |
| 3)<br>High Growth Period<br>(1998–2001) | Domestic private firms;<br>“Spin out” Korean and Hong Kong businesses;<br>Taiwanese buyers | Allocation of quotas to private firms;<br>Expansion and misuse of CMP;<br>Privileges of MIC approved firms;<br>Import of equipment by deferred payment | United States 45%<br>EU 45%<br>Others 10% | MFA regime;<br>Brisk markets in United States and EU;<br>Worsening trade relations with United States and EU;<br>Expansion of consumer boycott campaigns;<br>ILO warning of sanctions | State-owned and military-related JVs 15%<br>100% foreign 20%<br>Domestic private 65% |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4) Stagnation Period (2002–5) | Foreign-affiliated firms; Widening disparity among firms | Obligation to register with MIC; Tightening of regulations and taxation | United States 0%<br>EU 80%<br>Japan 10%<br>Others 10% | Slowdown of United States market;<br>Abolition of MFA regime (January 2005);<br>United States economic sanctions (from July 2003);<br>Disappearance of major EU buyers | State-owned and military-related JVs 10%<br>100% foreign 25%<br>Domestic private 65% |
| 5) Recovery Period (2006–11) | Foreign-affiliated firms | Same as 4) | United States 0%<br>EU 35%<br>Japan 40%<br>Korea 25% | No access to United States market;<br>China-plus-one orders from Japan and Korea | State-owned and military-related JVs 10%<br>100% foreign 25%<br>Domestic private 65% |

(Source) Prepared by the author.

(Note) Shares by export destination and those by type of firms are rounded off.

Table 4 Garment foreign joint ventures with MTI and UMEHL

| Joint Venture | Myanmar Firm | Foreign Firm (Partner) | Equity Ratio(M-F) | Products | Year of Establishment | Present Status |
|---|---|---|---|---|---|---|
| Yangon Garment Manufacturing Co., Ltd. | MTI | Value Industries Ltd. (HK) | 45:55 | Garments | 1990 | Operating |
| Yangon Knit Garment Manufacturing Co., Ltd. | MTI | Yangon Industries Ltd. (HK) | 50:50 | Knit Garments | 1993 | Withdrawn（2005） |
| Myanma Knitwear Manufacturing Co., Ltd. | MTI | Value Knitwear Pte Ltd. (Singapore) | 50:50 | Knitwear | 1995 | Withdrawn（2005） |
| Myanma Euroworld International Co., Ltd. | MTI | Myanmar Industrial Holdings Co., Ltd. (HK) | 50:50 | Knit Garments | 1994 | Withdrawn（2005） |
| Yangon Sportswear Manufacturing Co., Ltd. | MTI | Value Industries Ltd. (HK) | | Garments | 1994 | Withdrawn |
| Myanmar Winner Garment Manufacturing | MTI | Winner Co (Garment) (HK) | | Garments | 1992 | Withdrawn（1997） |
| Myanmar Daewoo International Ltd. | UMEHL | Daewoo Corporation (Korea) | 45:55 | Garments | 1990 | Operating |
| Myanmar Segye International Ltd. | UMEHL | Segye Corporation (Korea) | 40:60 | Garments | 1990 | Operating |
| Myanmar Unimix Ltd. | UMEHL | Unimix (Myanmar) Ltd. (HK) | | Garments | 1992 | Withdrawn（2003） |

*Source:* Compiled by the author based on pamphlets of Ministry of Industry (1), newspapers, magazines, and journals, etc.

*Note：* As of September 2005.

Table 5 Distribution of garment firms by size of workers

| | 2003 | | 2004 | |
|---|---|---|---|---|
| | Foreign (100%&JV) | Domestic | Foreign (100%&JV) | Domestic |
| <= 100 | 1 | 37 | 1 | 50 |
| 101 - 300 | 4 | 41 | 5 | 36 |
| 301 - 500 | 4 | 18 | 4 | 20 |
| 501 - 1000 | 8 | 14 | 7 | 8 |
| 1001+ | 5 | 6 | 5 | 6 |
| Total | 22 | 116 | 22 | 120 |

(Source) SGIM, 2005.

Table 6 Garment firm assessment of infrastructure services in Yangon, 2005

| | Very Severe Obstacle | Major Obstacle | Moderate Obstacle | Minor Obstacle | No Problem |
|---|---|---|---|---|---|
| Telecommunications | 3 | 18 | 30 | 34 | 56 |
| Electricity | 53 | 55 | 17 | 8 | 8 |
| Transportations | 0 | 2 | 20 | 35 | 84 |

(Note) These are mupliple answers of 141 respondents.

(Source) SGIM, 2005.

Table 7 Average firm rating of infrastructure, 2008

| | Myanmar | | Cambodia | |
|---|---|---|---|---|
| | National (60 Firms) | Yangon (30 Firms) | National (76 Firms) | Phnom Penh (62 Firms) |
| Electricity | 2.2 | 2.2 | 3.0 | 3.0 |
| Water | 3.5 | 3.7 | 3.3 | 3.4 |
| Gas/Fuel | 3.2 | 3.5 | 3.3 | 3.3 |
| Transportation | 3.3 | 3.2 | 3.4 | 3.3 |
| Telecommunication | 3.1 | 2.8 | 3.4 | 3.5 |
| Industrial estates | 2.9 | 2.7 | 3.5 | 3.5 |
| Accommodation for foreigners | 3.3 | 3.0 | 3.7 | 3.7 |
| Average | 3.1 | 3.0 | 3.4 | 3.4 |

(Notes) Ratings utilize the following scale: 1=very poor, 2=poor, 3=fair, 4=good and 5=excellent

(Source) ERIA-CLMV Survey of 2008.

Table 8 Freight charges for 20-foot containers

(US$)

| From Yangon Port to | | | | | From Leam Chabang Port to | | From Singapore to | |
|---|---|---|---|---|---|---|---|---|
| Port of Destination | Freight Charges | | | Travel Time | Freight Charges | Travel Time | Freight Charges | Travel Time |
| | 2007 March | 2007 September | 2008 March | | 2008 February | | 2008 February | |
| Singapore | 480 | 265 | 1050 | 6 days | 450 | 2 days | - | - |
| Bangkok | 685 | 475 | 1250 | 14 days | 80 | 0-1day | 450 | 2 days |
| Port Klang | 580 | 400 | 1038 | 5 days | 400 | 3-5 days | - | 1 day |
| Jakarta & Surabaya | 800 | 460 | 1050 | 5 days | 700 | 5-8 Days | 200 | 2 days |
| Yokohama | (All vessels go to Japan via Singapore or Port Klang.) | | | | 1340(40 FCL)* | 8-9 days | 940(40 FCL)* | 7 days |
| Calcutta | 925 | 940 | 1725 | 14 days | | | | |
| Qingdao | 900 | 655 | 1350 | 10 days | | | | |
| Cebu | 1150 | 800 | 1300 | 14 days | | | | |

(Note) *Freight charges from Leam Chabang/Singapore -Yokohama are for 40-foot containers that are "full container loaded" (FCl
(Source) Freight charges for vessels departing from Yangon Port are from MIFFA. Freight charges for vessels departing from Leam Chabang Port and Singapore are from JETRO [2008:262-263].

Table 9 Telecommunication access in 2005

| | Myanmar | Cambodia | Lao PDR | Vietnam | Bangladesh | China |
|---|---|---|---|---|---|---|
| Fixed Line and Mobile Phones Subscribers | 1.3 | 7.8 | 12.6 | 30.6 | 6.6 | 57.0 |
| Mobile Phone Subscribers | 0.3 | 7.6 | 11.3 | 11.5 | 5.9 | 30.2 |
| Internet Users | 0.07 | 0.32 | 0.44 | 12.89 | 0.24 | 8.51 |

(Note) Measures are based on 100 people.
(Source) World Bank, *World Development Indicators*, 2008.

Table 10 Average monthly wages, 2008

(US$)

| | Myanmar | | Cambodia | |
|---|---|---|---|---|
| | National (60 Firms) | Yangon (30 Firms) | National (76 Firms) | Phnom Penh (62 Firms) |
| Worker | 36.1 | 35.0 | 79.0 | 80.0 |
| Middle Management | 110.6 | 118.4 | 209.0 | 217.0 |
| Engineer | 111.3 | 116.6 | 464.0 | 467.0 |

(Note) Wages for Myanmar were converted from kyats to US dollars with the parallel exchange rate of 1,250 kyats per US dollar as of November, 2008.
(Source) ERIA-CLMV Survey of 2008.

Table 11 Literacy rate and school enrollment rate

| | Literacy Rate | | School Enrollment | | | GDP per Capita (2006) |
|---|---|---|---|---|---|---|
| | (% of People Ages 15 and Above) | (% of Females Ages 15 and Above) | (Primary; % net) | (Secondary ; % net) | (Tertiary; % gross) | (Constant 2000 US$) |
| Myanmar | 89.9 (2000) | 86.4 (2000) | 99.6 (2006) | 45.7 (2006) | 11.9 (2002) | 234.0* |
| Cambodia | 73.6 (2004) | 64.1 (2004) | 89.9 (2006) | 23.9 (2005) | 4.5 (2006) | 444.8 |
| Lao PDR | 68.7 (2001) | 60.9 (2001) | 83.7 (2006) | 34.9 (2006) | 9.1 (2006) | 439.0 |
| Vietnam | n.a. | n.a. | 84.5 (2006) | 68.9 (2006) | 15.9 (2005) | 575.8 |
| Bangladesh | 47.5 (2001) | 40.8 (2001) | 88.9 (2004) | 41.0 (2004) | 6.0 (2005) | 419.4 |
| China | 90.9 (2000) | 86.5 (2000) | n.a. | n.a. | 21.6 (2006) | 1597.8 |

(Notes) Figures in parentheses indicate the year. *The figure is based on UNFPA (2007).
(Source) World Bank, *World Development Indicators*, 2008.

Table 12 Educational background of workers, 2008

(%)

| | Myanmar | | Cambodia | |
|---|---|---|---|---|
| | National (60 Firms) | Yangon (30 Firms) | National (76 Firms) | Phnom Penh (62 Firms) |
| No Formal Schooling | 0.4 | 0.8 | 21.0 | 21.3 |
| Elementary School | 21.6 | 19.7 | 27.0 | 27.3 |
| Middle-High School | 46.5 | 45.1 | 27.8 | 27.8 |
| High School | 18.9 | 18.9 | 17.9 | 17.1 |
| Technical/Vocational School | 1.8 | 2.0 | 5.6 | 5.6 |
| College/University | 10.9 | 13.6 | 0.8 | 0.9 |
| Graduate School | 0.0 | 0.0 | 0.0 | 0.0 |

(Source) ERIA-CLMV Survey of 2008.

Table 13 Average firm rating on labor, 2008

| | Myanmar | | Cambodia | |
|---|---|---|---|---|
| | National (60 Firms) | Garment (10 Firms) | National (76 Firms) | Phnom Penh (62 Firms) |
| Quality of Workers | 3.3 | 3.2 | 3.2 | 3.2 |
| Quality of Middle Management | 3.4 | 3.6 | 3.4 | 3.3 |
| Quality of Engineers | 3.5 | 3.6 | 3.3 | 3.3 |
| Labor Cost | 3.1 | 3.2 | 3.3 | 3.3 |
| Ease of Recruitment Workers | 3.5 | 3.1 | 3.3 | 3.2 |
| Labor Turnover | 3.4 | 2.7 | 3.1 | 3.0 |
| Labor Relations | 3.6 | 3.7 | 3.1 | 3.0 |
| Average | 3.4 | 3.3 | 3.2 | 3.2 |

(Notes) Ratings utilize the following scale: 1=very poor, 2=poor, 3=fair, 4=good and 5=excellent.
Out of 62 firms in Phnom Penh, 52 deals with garments.
(Source) ERIA-CLMV Survey of 2008.

## Appendix: Surveys on Garment Industry in Myanmar (SGIM), 2005 and 2011

### 1. SGIM, 2005

The author conducted a survey of garment firms in Myanmar in 2005 with the aim of gaining an understanding of the current situation of the garment-manufacturing sector following implementation of United States sanctions. The questionnaire was prepared and tested by the author, and a market research company, in collaboration with MGMA, collected data.

The survey was designed to cover all export-oriented garment firms including those engaged in sub-contracting work. With the cooperation of MGMA and a market research company in Yangon, an attempt was made to construct a complete list of existing garment firms in mid-2005. Original information gathered for the latest version of Myanmar Textile and Garment Directory (MTGD), now under compilation, was used. As a result, 165 garment firms were identified as operating firms. However, the actual survey was done on 142 firms, because 22 firms declined to answer the questionnaire, and one firm was already under liquidation.

Trained staff of the market research company conducted actual surveys for data collection for the period between June and September 2005. The author joined the survey administration twice in June and September 2005. The author conducted interviews with garment owners, managers, and workers during these surveys. These interviews were used in this paper.

[Profile of Firms Surveyed]

a. Location

| | | | |
|---|---|---|---|
| Yangon | 141 | Bago | 1 |

b. Type of Firms

| | |
|---|---|
| Domestic Private | 120 |
| 100% Foreign-Owned | 16 |
| Foreign Joint Ventures | 6 |
| (with MTI) | (1) |
| (with UMEHL) | (1) |
| State-Owned Enterprise | 0 |

c. Year of Establishment

| | |
|---|---|
| Before 1989 | 2 |
| 1990 – 1993 | 2 |
| 1994 – 1997 | 30 |
| 1998 – 2001 | 84 |
| 2002 – June 2005 | 24 |

## 2. SGIM 2011

### Objectives and methodology

SGIM (2011) has verified the vital importance of effective combinations between internal and external resources for achieving innovations. The survey focused on measuring the capability for managing internal and external resources. It is important to study how the industries in Myanmar acquire new technology and link with markets. The survey was conducted from mid-November 2011 until the end of January 2012 in the Yangon and Bago areas.

The main objective of this survey was to deepen the understanding of the situation of garment exports in Myanmar. SGIM covered items such as the profile of company, production and export, employment and wages, financial data and investment climate. In order to achieve the objectives and meet the requirements of the survey, the following procedures were applied.

a. Select industrial areas (survey area) in Yangon and Bago to conduct a questionnaire survey;
b. Collect the total number of garments by types located in the respective industrial zones and others areas;
c. Translate the questionnaire drafted in English into the Myanmar language;
d. Contact the Myanmar Garment Manufacturing Association (MGMA) to select the required samples;
e. Conduct the survey;
f. Construct a dataset in the Excel format and deliver to the Coordinator; and
g. Produce a paper on the progress of the survey, including methodologies for sampling, collection of replies, obstacles to collection and results.

The survey design was developed based on the list of garment factories from MGMA and the Yangon Directory. According to the data for 2011, there were 229 members in MGMA. Samples are proportionately selected by types then adjusted in order to select the required sample of 150.

Sample Size of SGIM 2011

| City | Total | Interviewed | Small & Local | Refused |
|---|---|---|---|---|
| Yangon | 207 | 143 | 48 | 16 |

| | | | | |
|---|---|---|---|---|
| Bago | 3 | 3 | - | - |
| Total | 210 | 146 | 48 | 16 |

In the Yangon area, the government has established industrial zones, and 4,058 industrial firms are currently operating in 18 industrial zones. Out of those firms, 169 factories in Yangon area were selected, and interviewed.

Samples by Type

| Type of factory | Total | Completed Sample |
|---|---|---|
| CMP | 98 | 89 |
| Subcontract | 40 | 28 |
| Local | 72 | 29 |
| | 210 | 146 |